UNIVERSITY OF CALIFORNIA, SANTA BARBARA
STORMWATER MANAGEMENT PLAN

Photo: Courtesy of University of California, Santa Barbara, 2001

June 2008
Revised June 2009

Contact:
University of California, Santa Barbara
Environmental Health and Safety
Santa Barbara, CA 93106-5132
(805) 893-7534 / Fax: (805) 893-8659
Email: EHSdesk@ehs.ucsb.edu

CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is true, accurate, and complete.

I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

_____ _____

Ali Aghayan Date
Environmental Health Program Manager

TABLE OF CONTENTS

APPENDICES

LIST OF FIGURES

LIST OF TABLES

1.0 INTRODUCTION

The University of California, Santa Barbara (UC Santa Barbara, or University) must comply with federal and state regulations related to environmental protection. One of the primary environmental laws impacting UC Santa Barbara is the federal Clean Water Act (CWA, U.S. Senate 2002) and associated implementing regulations. The purpose of the CWA is to protect and restore the physical, chemical, and biological integrity of our nation's waterways by controlling and limiting discharges of pollutants to these waterways.

In California, the State Water Resources Control Board (SWRCB) has determined that urban runoff is a leading cause of pollution throughout the state and that it contributes pollutants of concern such as sediments, non-sediment solids, nutrients, pathogens, oxygen-demanding substances, petroleum hydrocarbons, heavy metals, polycyclic aromatic hydrocarbons (PAHs), trash, and pesticides to waterways. In addition, the impervious nature (i.e., pavement and hardscape) of most urban communities has resulted in stormwater discharges that have greater volumes, velocity, and pollutant loads than pre-development runoff.

The impacts of these changes include damaging effects on both human health and aquatic ecosystems. However, when water quality impacts are considered during the planning stages of a project, new development, or many redevelopment projects, the University can more efficiently incorporate measures to protect water quality.

The SWRCB identified University of California, Santa Barbara as a "non-traditional" small municipal separate storm sewer system (MS4) requiring coverage under the National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (MS4s), Water Quality Order No. 2003-0005-DWQ (General Permit, Central Coast Regional Water Quality Control Board 2003).

A requirement of the General Permit is development of a Stormwater Management Program designed to reduce the discharge of pollutants to the Maximum Extent Practicable (MEP) and to protect water quality. The General Permit also requires the development and implementation of Best Management Practices (BMPs) to address six Minimum Control Measures (MCMs), which are (1) Public Education and Outreach on Stormwater Impacts, (2) Public Involvement and Participation, (3) Illicit Discharge Detection and Elimination, (4) Construction Site Stormwater Runoff Control, (5) Post-Construction Stormwater Management in New Development and Redevelopment, and (6) Pollution Prevention/Good Housekeeping for Municipal Operations.

1.1 PURPOSE

This Stormwater Management Plan (SWMP) has been prepared by UC Santa Barbara pursuant to the General Permit and describes the associated program to comply with the General Permit. More importantly, this SWMP will serve as a framework for identifying, assigning, and implementing control measures and BMPs intended to reduce the discharge of pollutants from the MS4 and protect downstream water quality. In addition to these primary objectives, this SWMP will:

- Serve as a planning and guidance document to be used by UC Santa Barbara's regulatory body, all University departments, contractors, and the general public throughout the UC Santa Barbara community, which includes students, faculty, staff, and visitors;
- Be dynamic and adaptively managed to address changes in General Permit requirements, organizational structure, responsibilities, and goals;
- Define techniques and measurable goals for measuring BMP effectiveness; and
- Define a five-year schedule for Stormwater Management Program implementation to comply with the requirements of the General Permit.

1.2 STORM WATER MANAGEMENT PLAN ORGANIZATION

Section 1.0 introduces the background and requirements associated with the General Permit and summarizes the purpose of this SWMP; Section 2.0 provides an overview of UC Santa Barbara, including current land use, University facilities, the watershed, waterbodies, and water quality challenges; Section 3.0 describes the SWMP implementation; and Sections 4.0 through 9.0 identify and describe the BMPs and associated measurable goals that will fulfill the requirements of the six MCMs outlined in the General Permit. Acronyms and references are listed in Sections 10.0 and 11.0.

1.3 REGULATORY BACKGROUND

1.3.1 Stormwater

In 1972 the Federal Water Pollution Control Act, known as the Clean Water Act, was enacted. The CWA established the baseline goal of attaining fishable, swimmable waters throughout the United States. In 1987, the CWA was amended to add Section 402, which established a framework for regulating discharges from MS4s as a special category of point source discharges under the NPDES Program. In 1990, the United States Environmental Protection Agency (U.S. EPA) promulgated regulations for permitting MS4s serving a population of 100,000 or more. These regulations, known as the Phase I regulations, require operators of medium and large MS4s to obtain stormwater permits. The U.S. EPA adopted the Phase II Final Rule in December 1999. The Phase II regulations address stormwater discharges from MS4s with a population of less than 100,000 (Small MS4s).

The SWRCB administers both the Phase I and Phase II programs in California, as established by the Porter-Cologne Water Quality Control Act of 1962 and regulated under Title 23 of the California Code of Regulations (CCR 2003). The Phase II Final Rule promulgated by the U.S. EPA prompted the SWRCB to adopt the General Permit for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems, Water Quality Order No. 2003-0005-DWQ on April 30, 2003. A copy of this General Permit is included as **Appendix A, Municipal Stormwater General Permit and Central Coast Regional Water Quality Control Board Letter Dated February 15, 2008.**

The Central Coast Regional Water Quality Control Board (CCRWQCB, or Water Board) is one of nine RWQCBs in California and has jurisdiction over a 300-mile-long by 40-mile-wide section of California's Central Coast. Its geographic area includes UC Santa Barbara and, therefore, the Water Board is responsible for the coordination and control of water quality locally, including compliance oversight associated with the General Permit.

A SWMP for UC Santa Barbara has been prepared in response to requirements of the General Permit. The General Permit requires applicable dischargers to prepare and implement a SWMP in order to:

- Reduce the discharge of pollutants to the MEP;
- Protect water quality; and
- Satisfy the appropriate water quality requirements of the CWA and CCRWQCB Basin Plan.

1.3.2 Surface Water and Groundwater

The Central Coast Water Board has developed numeric and narrative water quality standards for surface waters and groundwater in the Central Coast Regional Water Quality Control Plan (Basin Plan, Central Coast Water Board 1994). In addition to these somewhat "generic" standards, the CCRWQCB has designated beneficial uses and associated water quality standards for specific water bodies.

In accordance with the CWA, the SWRCB maintains a list of impaired waterbodies, titled CWA Section 303(d) List of Water Quality Limited Segments (303[d] List). Waterbodies on this list do not meet water quality standards defined within the Basin Plan, even after the minimum required levels of pollution control technology have been installed at point sources of pollution. The only 303d listed water bodies UC Santa Barbara discharges to are the Goleta Slough/Estuary and the Pacific Ocean at Goleta Beach. The impairments for the Goleta Slough/Estuary and the Pacific Ocean at Goleta Beach are summarized in Section 2.4.4.1 of this Plan.

1.3.3 Water Quality Protection Conditions

In a letter dated February 15, 2008, and titled "Notification to Traditional, Small MS4s on Process for Enrolling Under the State's General Permit for Storm Water Discharges" (CCRWQCB 2008, included in Appendix A), the CCRWQCB defined a newly established process and schedule for SWMP approval and described expectations for SWMP content necessary for General Permit compliance. The 24 un-enrolled MS4s in region 3 were grouped into eight enrollment cycles by the Water Board and are shown in **Table 1-1, Enrollment Cycle for MS4s**.

Table 1-1
Enrollment Cycle for MS4s

Cycle	MS4 Group	Group Members	Projected Start Date for Enrollment Cycle	Projected Executive Officer SWMP Approval	Projected Board SWMP Approval
1	Santa Maria/ Lompoc	Santa Maria Lompoc	Jan. 22, 2008	July 28, 2008	Sept. 5, 2008 San Luis Obispo
2	Coastal Santa Barbara County	Goleta Carpenteria Santa Barbara UC Santa Barbara	Jan. 29, 2008	September 2, 2008	Oct. 17, 2008 Santa Barbara
3	Santa Cruz Mountains and Coast	Santa Cruz County Capitola Soquel Aptos Ben Lomond Boulder Creek Live Oak Felton Coralitos Watsonville City of Santa Cruz Scotts Valley UC Santa Cruz	Mid February 2008	October 20, 2008	Dec. 5, 2008 San Luis Obispo
4	Coastal San Luis Obispo County	Arroyo Grande Grover Beach Pismo Beach Oceano Morro Bay Baywood – Los Osos	Mid April 2008	January 2009	2009 – 1st Quarter San Luis Obispo

Table 1-1 (Continued)
Enrollment Cycle for MS4s

Cycle	MS4 Group	Group Members	Projected Start Date for Enrollment Cycle	Projected Executive Officer SWMP Approval	Projected Board SWMP Approval
5	Upper Salinas	King City Templeton Atascadero	Early June 2008	February 2009	2009 – 1st Quarter Salinas
6	City of San Luis Obispo	City of San Luis Obispo	Early September 2008	April 2009	2009 – 2nd Quarter San Luis Obispo
7	Upper Pajaro	Gilroy San Martin Santa Clara	Early November 2008	August 2009	2009 – 3rd Quarter Watsonville
8	Santa Ynez	Buellton Solvang Vandenberg AFB	Mid November 2008	August 2009	2009 – 3rd Quarter San Luis Obispo

In particular, UC Santa Barbara's SWMP is required to include an array of BMPs to achieve four additional water quality protection conditions not specifically defined within the General Permit. These conditions and their associated implementation requirements are as follows:

1. Maximize Infiltration of Clean Stormwater, and Minimize Runoff Volume and Rate

This condition requires UC Santa Barbara to present a schedule for developing and adopting control standards for hydromodification. The schedule for adopting hydromodification control standards is required to include:

- Numeric criteria for controlling stormwater runoff volume and rates from new development and redevelopment;
- Numeric criteria for stream stability required to protect downstream beneficial uses and prevent physical changes to downstream channels that would adversely affect the physical structure, biologic condition, and water quality of streams;
- Specific applicability criteria, land disturbance acreage thresholds, and exemptions;
- Performance criteria for control BMPs and an inspection program to ensure proper long-term functioning; and
- Education requirements for appropriate University staff on hydromodification and low-impact development.

2. Protect Riparian Areas, Wetlands, and Their Buffer Zones

This condition requires UC Santa Barbara to present a strategy to adopt and implement BMPs and/or other control measures to establish and maintain a minimum 30-foot buffer zone for riparian areas and wetlands.

3. Minimize Pollutant Loading

This condition requires UC Santa Barbara to develop a strategy to reduce pollutant loading using BMPs and/or other control measures including volume- and/or flow-based treatment criteria.

4. Provide Long-Term Watershed Protection

This condition requires UC Santa Barbara to present a strategy to develop a watershed-based Hydromodification Management Plan (HMP). The CCRWQCB recommends the HMP incorporate Low Impact Development (LID) strategies with the goal of post-construction stormwater management that achieves an effective impervious area of no more than 3 to 10 percent of watershed area within UC Santa Barbara's jurisdiction, depending on local conditions.

1.4 UNIVERSITY DEPARTMENTS AND COORDINATION

Implementation of this SWMP must be coordinated among several University departments. Dedicated efforts stem from the Director of the Office of Environmental Health and Safety (EH&S) and EH&S staff, Facilities Management (FM), Transportation and Parking (TPS) Services, the Director and staff of the Housing and Residential Services Department (HRS), the Budget and Planning (B&P) Department, and Associated Students (AS). The Program will be managed by EH&S with support from the FM, HRS, TPS, and the Office of Planning and Design. Contact information for those directly involved in the implementation and planning is provided in **Table 1-2, UC Santa Barbara Staff Contacts (Area Code 805)**. The main contact is Stacey Callaway, Environmental Compliance Specialist in EH&S, and her phone number is (805) 893-7014.

Table 1-2
UC Santa Barbara Staff Contacts (Area Code 805)

Department/Organization	Name	Title	Number
Administrative Services	Marc Fisher	Senior Associate Vice Chancellor of Administrative Services	893-5883
Administrative Services	Ron Cortez	Associate Vice Chancellor of Administrative Services	893-8291
Environmental Health and Safety	Ali Aghayan	Environmental Health Program Manager	893-8533
	Stacey Callaway *	Environmental Program Specialist	893-7014
	Bruce Carter	Hazardous Waste Program Manager	893-3293
Design and Construction Services	Ray Aronson, P.E.	Associate Director	893-4535
	Jack Wolever	Director, Design and Construction Services	893-4581
	Erich Brown	Architect, University Representative	893-4128
Facilities Management	Ray Aronson	Associate Director	893-2661
	Paul Bartsch	GIS & Mapping Specialist	893-4460
	Jon Cook	Environmental Landscaping Manager	893-2661
	Anna Galanis	Design and Construction Contractor	893-3298
	Mary Ann Hopkins	Integrated Pest Manager	893-2661
	Dave McHale	Associate Director, Utility & Energy	893-2661
	Jackie Treadway	Director, Physical Facilities	893-2661

Table 1-2 (Continued)
UC Santa Barbara Staff Contacts (Area Code 805)

Department/Organization	Name	Title	Number
Housing & Residential Services	Tom Beland	Assistant Director, Custodial & Landscape Services	893-7265
	Mark Rousseau	Energy & Environmental Manager	893-3092
	Jeff Monteleone	Assistant Director, Maintenance	893-5011
Planning and Design	Tye Simpson	Director	893-4244
	Shari Hammond	Senior Planner	893-3796
Coal Oil Point Reserve	Cristina Sandoval, PhD	Reserve Director	893-5092
Cheadle Center for Biodiversity & Ecological Restoration	Lisa Stratton, Ph.D.	Natural Areas Director	893-4158

Note: * Primary point of contact for implementation of the Stormwater Management Plan.

1.4.1 Development and Implementation of BMPs

The BMPs presented in this SWMP will be implemented by UC Santa Barbara students, faculty, and staff. Implementation will be the responsibility of specific campus groups and departments, which are listed below along with their abbreviated names, as applicable. Each BMP is associated with one or more of these groups/departments or similar departments.

- Associated Students (AS)
- Office of Budget and Planning (B&P)
- Contracting Services (CS)
- Campus Design and Facilities Department (CD&F)
- Campus Planning and Design (Planning)
- Design & Construction Services (D&CS)
- Environmental Health and Safety (EH&S)
- Housing and Residential Services (HRS)
- Media
- Physical Facilities (PF)
- Physical Facilities/Ground Services (PF Grounds)
- Public Affairs (PA)
- Transportation and Parking Services (TPS)
- Department Safety Representatives (DSRs)
- Daily Nexus
- Cheadle Center for Biodiversity & Ecological Restoration (CCBER)
- Coal Oil Point Reserve

1.5 TIMELINE

The UC Santa Barbara's original SWMP was submitted to the CCRWQCB on March 6, 2003, in accordance with the timeline established by the Phase II Final Rule. The Phase II Final Rule required UC Santa Barbara to submit a Notice of Intent (NOI) and SWMP to the CCRWQCB on or before March 10, 2003.

UC Santa Barbara is awaiting approval of its SWMP from the CCRWQCB. During the interim, the 2003 SWMP has been available for comment by the UC Santa Barbara academic and administrative communities. Specifically, a student group named Students for the Overhaul of Rainwater Management (StORM) submitted a paper to the CCRWQCB in 2006, which raised several specific concerns about stormwater pollution prevention needs not addressed in the 2003 SWMP or by campus policy. This 2008 revision of the SWMP endeavors to address those concerns, the Water Quality Protection Conditions detailed in Section 1.3.3, as well as to incorporate stormwater management innovations developed at other University of California campuses, such as UC Santa Cruz, as well as other MS4s.

The SWMP will be implemented over the term of the permit coverage as described in Section 5.0. Each MCM and its associated BMPs have its own implementation schedule based on program priorities.

1.6 LEGAL AUTHORITY AND ENFORCEMENT

In order to carry on its work of teaching, research, and public service, the University has an obligation to maintain conditions under which the work of the University can go forward freely, in accordance with the highest standards of quality, institutional integrity, and freedom of expression, with full recognition by the University community. UC Santa Barbara campus regulations address the rights and responsibilities of members of the University community and provide campus-wide standards for implementing regulations as a means of sustaining this community. UC Santa Barbara is committed to enforcing the SWMP, campus regulations, and policies.

The University of California system is governed by a 26-member board known as "The Regents," as established under Article IX, Section 9 of the California Constitution. The UC Santa Barbara Chancellor is appointed by the Board of Regents. The Chancellor is "responsible for the organization and operation of the campus [and] its internal administration" and has the ability to delegate authority to various university departments (University of California 1969). Various departments at UC Santa Barbara have been organized to effectively implement and oversee implementation of the University's educational and business related objectives. To adequately protect natural resources throughout the campus, various departments have established policies for its protection and are ultimately responsible for assuring adherence to those policies.

The UC Santa Barbara Design and Construction Services (D&CS) Department is responsible for inspecting all construction sites and facilitating any enforcement actions that may result. Physical Facilities (PF) is responsible for inspecting UC Santa Barbara educational and industrial facilities, both on and off campus. Housing and Residential Services (HRS) is responsible for inspecting existing UC Santa Barbara residential facilities, both on and off campus. Whenever suspect activity has been reported in residential areas of campus, the reports are investigated within 24 hours.

The Office of Campus Planning and Design is responsible for physical planning, environmental assessment, regulatory approvals, community planning, and long range development planning. The Long Range Development Plan, which defines a number of policies for new development and redevelopment projects, is prepared by this office. In addition, they are responsible for assuring adherence to such policies.

The UC Santa Barbara Campus Police Department has statewide jurisdiction under Section 830.2 of the California Penal Code. Campus Police operates 24-hours a day throughout the year. Coordination will occur between UC Santa Barbara departments and Campus Police to enforce existing and future water protection policies.

2.0 UC SANTA BARBARA OVERVIEW

2.1 CAMPUS DESCRIPTION

The Santa Barbara campus is one of ten UC campuses governed by the Regents of the University of California and is an internationally recognized public teaching and research institution. Approximately 20,000 students attend the University and the faculty consists of 1,054 members, with support from 3,631 staff members. The campus facilities include, but are not limited to, housing, food services, lecture halls/classrooms, science and research laboratories, aquarium/marine science laboratories, athletic fields, aquatics/swimming pool, grounds maintenance facility, and parking facilities.

The 1,055-acre (approximately 1.6-square-mile) University is located on the South Coast of Santa Barbara County, California, as shown in Figure B-1 in **Appendix B, Maps**. Property included within the boundaries of UC Santa Barbara is divided into four principal campuses (Appendix B, Figure B-2):

1. Main Campus (422 acres), comprising the academic, administrative, service departments, dormitories, and natural areas such as the Campus Lagoon;
2. Storke Campus (184 acres), which includes additional athletic and service facilities, student housing, a construction area which will yield San Clemente housing (scheduled for completion in 2008, with a possible addition before 2025 [UC Santa Barbara 2008]), and natural areas such as Storke Campus Wetlands;
3. West Campus (273 acres), which includes faculty housing, the Child Care Center, West Campus Stables, Santa Catalina dormitories, and natural areas such as Devereux Slough (part of Coal Oil Point Natural Reserve, an ecological reserve that is one of 32 such sites located throughout California and included within the University of California Natural Reserve System); and
4. North Campus (174 acres), which is a mostly open space and surrounds the Ocean Meadows Golf Course but will also include the proposed Sierra Madre Housing and Faculty Housing. A joint proposal for a comprehensive planning approach to resolve land use and environmental conflicts in the North Campus Ellwood-Devereux Coast is currently being reviewed. This Joint Proposal would provide for the protection of sensitive environmental resources while allowing reasonable development. This proposal is a collaborative effort by the City of Goleta, UC Santa Barbara, and County of Santa Barbara.

In addition to the four principal campuses, this SWMP also addresses offsite facilities in Isla Vista: Westgate Apartments (Building 949), the El Dorado Apartments (Building 945), and the I.V. Theater (Building 948).

The UC Santa Barbara campus MS4 borders three other MS4 jurisdictions: Santa Barbara County, the City of Goleta, and the City of Santa Barbara. The four campuses nearly surround Isla Vista, an unincorporated Santa Barbara County community, where many UC Santa Barbara students live. The County of Santa Barbara SWMP addresses the discharge of pollutants from Isla Vista. The City of Goleta abuts the campus property on the north and west sides. The City of Santa Barbara owns and operates the Santa Barbara Municipal Airport, which lies north of the Goleta Slough.

2.1.1 Topography

The Santa Ynez Mountains are oriented in an east/west direction north of the university, which lies on a coastal mesa and adjacent lowlands that form the Goleta Valley. Numerous drainages extend from the mountains to the Pacific Ocean, south of the University. The topography slopes in a southern direction towards bluffs above the Pacific Ocean.

2.1.2 Land Use

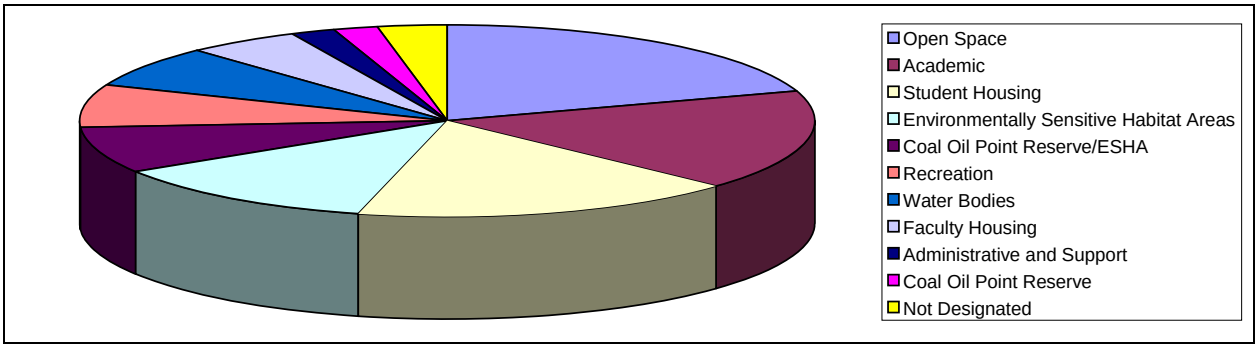
Past and planned land use for the 2006/2007 school year and the 2025/2026 school year are listed in **Table 2-1, Summaries of UC Santa Barbara Land Use**. In addition, **Figure 2-1, Land Use on UC Santa Barbara Campus in 2007**, illustrates the land uses as of 2007 on the UC Santa Barbara Campus.

2.2 CLIMATE

The climate in the vicinity of UC Santa Barbara is typically mild year-round, influenced by the Pacific Ocean. Temperatures range from average low of 40 degrees Fahrenheit in December to an average high of 79 degrees Fahrenheit in September. The lowest temperature recorded was 20 degrees Fahrenheit in December 1990. The highest temperature recorded was 109 degrees Fahrenheit in July 1985 and again in June 1990.

Precipitation usually occurs in the late fall, through the winter, and into the early spring, with the majority of rain occurring from November to April. The summer is generally dry; however some precipitation may occur from fog, which is common during the summer months. The average annual precipitation is 16.93 inches. **Table 2-2, Goleta, California, Temperature and Precipitation Data 1941 to 2008,** presents average temperature and precipitation data for Goleta, California, which is adjacent to UC Santa Barbara.

Figure 2-1
Land Use on UC Santa Barbara Campus in 2007



Source: Draft UC Santa Barbara Long Range Development Plan, March 2008

Table 2-1
Summaries of UC Santa Barbara Land Use

In 2007			Proposed in 2025		
Use	**Acres**	**Percent of Total**	**Use**	**Acres**	**Percent of Total**
Open Space	210	20	Open Space	446	42
Academic	177	17			
Student Housing	174	17	Housing	255	24
Environmentally Sensitive Habitat Areas	125	12			
Coal Oil Point Reserve/ESHA	87	8	Academic & Support	195	19
Recreation	77	7			
Water Bodies	79	7	Recreation	81	8
Faculty Housing	51	5			
Administrative and Support	23	2	Water Bodies	78	7
Coal Oil Point Reserve	18	2			
Not Designated	34	3			
Total	**1,055**	**100**	**Total**	**1,055**	**100**

Notes: ESHAEnvironmentally Sensitive Habitat Area
Source: Draft UC Santa Barbara Long Range Development Plan, March 2008

Table 2-2
Goleta, California, Temperature and Precipitation Data 1941 to 2008

Month	Temperature (degrees Fahrenheit)			Precipitation
	Average High	Mean	Average Low	Average (inches)
January	65	53	41	3.57
February	66	55	44	4.28
March	67	57	46	3.51
April	70	59	48	0.63
May	71	61	50	0.23
June	74	64	54	0.05
July	77	67	57	0.03
August	79	69	58	0.11
September	78	67	57	0.42
October	75	64	52	0.52
November	71	58	44	1.32
December	66	53	40	2.26

Source: The Weather Channel 2008

2.3 ENROLLMENT GROWTH AND PLANNING

The 2006/2007 school year population—which included 21,082 students, 4,489 faculty and staff, visiting scholars, researchers and visitors—was approximately 25,571. The draft population projection for 2010/2011 (as of 2003) was 27,682. Revised projections from the March 2008 draft of UC Santa Barbara's Long Range Development Plan (LRDP, UC Santa Barbara 2008a) population estimates for the 2025/2026 school year are a combined total of 31,431. Growth summaries are provided in **Table 2-3, Expected Growth of UC Santa Barbara Campus Services, Facilities, and Personnel from the 2006/2007 School Year to the 2025/2026 School Year**, and **Table 2-4, Summary of UC Santa Barbara Space Needs from the 2006/2007 School Year to the 2025/2026 School Year**. More information regarding the Draft LRDP is presented in section 2.4.

UC Santa Barbara employs maintenance, custodial, and grounds staff for day-to-day University operations. This includes building maintenance (cleaning, painting, repairs), completion of department work requests, daily cleaning of common buildings, grounds maintenance, small construction projects, and various repair and maintenance activities. University staff and outside contractors perform electrical, plumbing, utility, roofing, and asphalt repairs; exterior building painting; sewer line cleaning; and janitorial duties. The University staff that performs these tasks are in the PF and HRS departments.

Table 2-3
Expected Growth of UC Santa Barbara Campus Services, Facilities, and Personnel from the 2006/2007 School Year to the 2025/2026 School Year

	Current	2008-2025 LRDP	Total
Enrollment[1]	20,000 students	5,000 additional students at 1% per year	25,000 students
Faculty and Staff	1,054 faculty 3,631 staff	336 additional faculty 1,400 additional staff	1,400 faculty 5,031 staff
Building Space SF	2.7 M ASF	1.8 M ASF additional	4.5 M ASF
Housing	5,679 bedspaces +973 bedspaces[2]	5,443 net additional bedspaces	11,122 single student bedspaces
	553 student family units +151 student family units[3]	239 net additional student family units	943 student family units
	65 faculty units +161 faculty units[4]	1,874 additional faculty and staff units	2,100 faculty and staff units
Play Fields	26 acres	5 additional acres	31 acres
Parking Spaces	6,700 spaces (non-housing) 3,880 constructed or planned (housing) 10,580 total spaces	5,100 spaces replaced 3,650 net additional spaces constructed	14,230 total spaces

Notes:
1 Three-quarters on-campus average head count
2 Pending the completion of San Clemente housing
3 Pending the completion of Sierra Madre housing
4 Pending the completion of North Campus housing
M Million
ASF Assignable Square Feet

Source: Draft UC Santa Barbara Long Range Development Plan, March 2008

Table 2-4
Summary of UC Santa Barbara
Space Needs from the 2006/2007 School Year to the 2025/2026 School Year

Area	ASF Need	Percent of Total
Instruction and Research	930,000	52
Organized Research Units	305,000	17
Library	120,000	8
Public Services	115,000	6
Academic Support	110,000	6
Student Services	110,000	6
Institutional Services	85,000	5
Total	**1,775,000**	**100**

Note: ASF: Assignable Square Feet
Source: Draft UC Santa Barbara Long Range Development Plan, March 2008

2.4 UC SANTA BARBARA PLAN SUMMARY

Numerous plans have been developed for the protection of water resources, environmental assets, and for planning, which are listed and summarized as follows.

- The 1990 and 2008 draft UC Santa Barbara Long Range Development Plan (LRDP) incorporates data, policies, and recommendations from several sources including ecological studies of various campus areas, land use statistics, and campus growth goals, to synthesize a development plan for a specified period of time (UC Santa Barbara 2008a). The draft 2008 LRDP describes the expected growth of services, facilities, and personnel, as well as space needs by assignable square footage through 2025. Similar to the 1990 LRDP, the draft 2008 LRDP includes numerous policies for improving and protecting water quality, managing development and land use, and protecting and enhancing environmentally sensitive habitat areas. The draft LRDP is currently undergoing environmental review in accordance with California Environmental Quality Act (CEQA) guidelines. It's expected to be approved in final form by June, 2009.
- The Goleta Slough Ecosystem Management Plan is a product of numerous public, private, regulatory, and non-governmental organizations including UC Santa Barbara, most of which adjoining the Goleta Slough or whose jurisdictions extend into the ecosystem (City of Santa Barbara 1997). These agencies have worked together to combine historical, ecological, physical and biological data for the Goleta Slough to determine goals for future ecological management of the slough.
- The UC Santa Barbara campus Wetlands Management and Restoration Plan consists of three technical reports which utilize physical, historical, hydrological, and biological (botanic and vertebrate) data to set goals and baseline data for the restoration and enhancement of the Storke Wetlands (East and West) and the Devereux Slough (UC Santa Barbara 1987a, 1987b, and 1990a).
- The Campus Lagoon Management Plan is a supplement to the UC Santa Barbara Landscape Master Plan Part III: Natural Areas (UC Santa Barbara 1992). This was prepared in response to requirement of the current UC Santa Barbara LRDP and is intended to specifically review the historical physiographic setting, hydrology, land use, and the biota of the 57 acre UC Santa Barbara campus Lagoon. A primary goal of this plan included the development of recommendations for planning options which take into account the ecological value and beneficial uses of these natural areas.
- The Campus Sustainability Plan defines nine functional areas and associated incremental goals, objectives, and benchmarks that are necessary to achieve sustainability in campus operations within

20 years of its April 21, 2008 publication (UC Santa Barbara 2008b). The goals for each functional area are consistent with the UC Policy on Sustainable Practices. One functional area, the built environment, has an associated objective of protecting and maintaining the "…natural campus environment through restoration, preservation, and education while enhancing the campus as a classroom…". The plan promotes the utilization of emerging technologies while balancing economics with social and environmental impacts.

- The UC Santa Barbara Campus Plan creates a roadmap with specific design principles and proposed maps, to improve upon the physical setting of the UC Santa Barbara campus. Goals of the Campus Plan include emphasis on UC Santa Barbara's natural setting and views; arranging open space and academic buildings with a consistent look, in a coherent manner, along with pedestrian and bicycle paths placed on a logical grid; efficiency of land use; and positive relations with neighboring municipalities. The Campus Plan acknowledges that while past design and construction efforts on UC Santa Barbara have been on a case-by-case basis; beauty, coherence, and integration of the campus are to be sought through a holistic approach to overall design (UC Santa Barbara 2003).

2.5 SURFACE WATERS AND HYDROLOGY

UC Santa Barbara is located within in the 240,720 -acre South Coast Hydrologic Area (3153), which is made up of small, coastal watersheds (Central Coast Ambient Monitoring Program [CCAMP] 2007). The UC Santa Barbara campus comprises approximately 0.4 percent of the Hydrologic Area. UC Santa Barbara is situated on a promontory, Goleta Point, which is bordered by four surface water bodies: Devereux Slough, Goleta Slough, Campus Lagoon, the Pacific Ocean, and the Storke Wetlands.

2.5.1 Devereux Slough

The Devereux Slough is located on the West Campus and is managed by the University of California's Coal Oil Point Reserve. The 45-acre slough receives discharges primarily from Devereux Creek and its tributaries which encompass a 2,240-acre watershed. Land uses in the watershed include agriculture/open space in the upper reaches and residential/commercial in the lower areas. The Slough discharges to the Pacific Ocean via a tidal channel breach (a sand bar temporarily disconnects the slough and the ocean) (UC Santa Barbara 2008).

2.5.2 Storke Wetlands

The Storke Wetlands comprise approximately 20 acres along the northern perimeter of the Storke Campus. The Storke Wetlands watershed covers 347 acres and includes the northern portion of Isla Vista, the Storke Campus, and a narrow portion of the City of Goleta adjacent to Tecolotito Creek. The wetlands discharge to Goleta Slough (UC Santa Barbara 2008).

2.5.3 Goleta Slough

The 430-acre Goleta Slough comprises freshwater wetlands and tidal marsh. It is located north of and adjacent to the Main Campus. The slough receives discharges from UC Santa Barbara's Storke Campus, north-facing bluffs, and More Mesa, as well as from seven creeks within the 45 square mile watershed: Atascadero, Las Vegas, Los Carneros, Maria Ygnacio, San Jose, San Pedro, and Tecolotito. Land use in the watershed is primarily open space, but the portions nearest the slough are developed and a large portion of the slough itself has been filled and subsequently developed. The slough generally discharges to the Pacific Ocean; however, sedimentation from upland sources and littoral drift frequently prohibits discharges, which limits tidal flushing and lowers oxygen levels in the slough waters (UC Santa Barbara 2008).

2.5.4 Campus Lagoon

The Campus Lagoon is a manmade 31-acre brackish pond located in the southern portion of the Main Campus adjacent to the Pacific Ocean. The water level in the lagoon is maintained between 4 and 7 feet above sea level by an overflow weir at the western end, outfall at the eastern end, and series of berms. However, the lagoon is potentially subject to tidal and wave action which could result in unexpected draining. The lagoon's watershed comprises approximately half of UC Santa Barbara's Main Campus, which includes open space and bluffs at the lagoon perimeter. The primary source of water supporting the lagoon is the seawater discharged from the UC Santa Barbara Marine Science Laboratories. The lagoon also receives stormwater runoff from the University, which contributes substantial amounts of water to the system during rain events (UC Santa Barbara 2008).

Surface Water Impairments

Among the water bodies which UC Santa Barbara discharges to directly, the Goleta Slough/Estuary and the Pacific Ocean are the only ones listed on the 2006 Clean Water Act Section 303(d) List of Water Quality Limited Segments Requiring TMDLs (Total Maximum Daily Loads). The Slough is listed for 1) pathogens with urban runoff and storm sewers cited as a potential source, and 2) priority organics with non-point source runoff cited as a potential source (US EPA 2006). The University will prioritize these issues from potential stormwater pollutant sources and will make revisions to the SWMP to continue to address the TMDL requirements for the Goleta Slough.

2.5.5 Potential Sources of Pollution

In order to aid in the identification of pollutant sources, information on historical stormwater issues as well as knowledge of day-to-day operations was utilized to identify activities and sources of potential pollutants of concern. The BMPs to address the pollutant sources and activities described in **Table 2-5, Pollutant Activity/Sources,** will be developed and implemented as described in Sections 4.0 through 9.0.

Table 2-5
Pollutant Activity/Sources

Land Use	Generating Site	Potential Pollutant Activities/Source	POC Groups	BMP Cross-Reference
Residential	• Dormitories • Staff/family housing	• Driveway and sidewalk cleaning • Dumping/spills • Vehicle and equipment maintenance and washing • Landscape maintenance and irrigation • Sewer system maintenance • Swimming pool and spa discharges • Illicit connections • Sump dewatering • Painting • Household hazardous waste • Urban runoff	• Sediment • Nutrients (P, N, NO3, NO2) • Pathogens (indicator bacteria) • Hydrocarbons (O&G, lubricants) • Pesticides • Gross pollutants (litter, trash, debris) • Toxics (organics, hazardous waste, etc.)	PE-1, PE-2, PE-3, PE-4, PE-5, PE-6, PE-8, PE-9 PP-1, PP-4 ID-1, ID-2, ID-3, ID-4, ID-5, ID-6, ID-7 PC-4, PC-7 GH-1, GH-2, GH-3, GH-4, GH-6
Commercial	• Restaurants and cafeterias	• Dumping and spills • Outdoor material use and storage • Wash-down of greasy equipment and grease traps • Illicit connections • Sump dewatering • Carpet cleaning, car washing and detailing, painting, power washing	• Sediment • Nutrients (P, N, NO3, NO2) • Hydrocarbons (O&G, lubricants) • Metals • Gross pollutants (litter, trash, debris) • Detergents • Toxics (organics, hazardous waste, etc.)	PE-1, PE-2, PE-3, PE-5, PE-6, PE-8, PE-9 PP-1, PP-3, PP-4 ID-1, ID-2, ID-4, ID-5, ID-6, ID-7 GH-1, GH-6, GH-7

Table 2-5 (Continued)
Pollutant Activity/Sources

Land Use	Generating Site	Potential Pollutant Activities/Source	POC Groups	BMP Cross-Reference
Institutional	• Science laboratories • Marine lab and aquarium • Athletic fields and common lawn areas • Swimming pool • Health Center • Roads, bike paths, and parking lots • Outdoor eating areas • Maintenance yard and janitorial storage • Landscaping • Sanitary sewer system • Campus buildings	• Building and parking lot maintenance (e.g., power washing) • Dumping and spills • Swimming pool discharge • Irrigation • Vehicle accidents • Fleet vehicle washing • Illicit connections • Sump dewatering • Urban runoff	• Sediment • Pathogens (indicator bacteria) • Hydrocarbons (oil and grease, lubricants) • Pesticides • Nutrients (fertilizers) • Gross pollutants (litter, trash, debris) • Chlorinated water	PE-1, PE-2, PE-3, PE-5, PE-6, PE-9 PP-1, PP-2, PP-3 ID-1, ID-2, ID-3, ID-4, ID-5, ID-7 ID-6 PC-1, PC-2, PC-3, PC-4, PC-5, PC-6, PC-7 GH-1, GH-2, GH-3, GH-4, GH-5, GH-6, GH-7
Other/All	• Construction sites • Unknown	• New development and redevelopment • Operations and maintenance • Erosion and sedimentation from land moving/clearing activities • Homeless encampments • Dieldrin, chlorodane*	• Sediment • Pathogens (indicator bacteria) • Hydrocarbons (O&G, lubricants) • Metals • Gross Pollutants (litter, trash, debris) • Detergents • Toxics (organics, hazardous waste, etc.) • Pesticides	PE-1, PE-2, PE-3, PE-4, PE-5, PE-6, PE-8 PP-1, PP-3, PP-4 ID-1, ID-2, ID-4, ID-5, ID-6 CS-1, CS-2, CS-3, CS-4 PC-1, PC-2, PC-3, PC-4, PC-5, PC-6, PC-7 GH-1, GH-6

Note: *Dieldrin and chlorodane are insecticides that were once widely used, but are now banned in the United States because they are extremely persistent in the environment. The sources of these chemicals are unknown; however, UC Santa Barbara intends to assure potential sources of these chemicals will be eliminated from operations and activities.

3.0 STORMWATER MANAGEMENT PLAN IMPLEMENTATION

3.1 MINIMUM CONTROL MEASURES AND BMPS

"Minimum Control Measures" is the term used by the U.S. EPA for the six MS4 program elements aimed at achieving improved water quality. The General Permit specifies that the SWMP must include BMPs to address requirements of the following six minimum measures:

- Public Education and Outreach on Storm Water Impacts;
- Public Involvement/Participation;
- Illicit Discharge Detection and Elimination;
- Construction Site Storm Water Runoff Control;
- Post-construction Storm Water Management in New Development and Redevelopment; and
- Pollution Prevention/Good Housekeeping for Municipal Operations.

Best Management Practices have been developed pursuant to General Permit requirements and to reduce the discharge of pollutants to the campus stormdrain system. BMPs presented in this SWMP include treatment controls, operating procedures, and practices to control site runoff, spills and leaks, sludge or waste disposal, or drainage from raw material storage. BMPs will be updated as appropriate to comply with any additions or changes to NPDES permit requirements, as well as those to campus policy.

The BMPs described in Sections 4.0 through 9.0 will be implemented by UC Santa Barbara staff and outside contractors. Whenever UC Santa Barbara staff or contractors perform work at UC Santa Barbara, procedures outlined for each relevant BMP, or other proven technique that reaches the same goal, must be used in order to ensure compliance with stormwater discharge regulations.

UC Santa Barbara has already initiated many of the BMPs listed in Sections 4.0 through 9.0 of this SWMP. In some cases, the measure has not been formally documented as a written plan or program. These BMPs are documented here along with additional BMPs to be implemented. Full development and implementation of BMPs will be completed through the 5-year implementation plan as presented in the following sections.

3.2 RECORD KEEPING

3.2.1 SWMP Updating

The SWMP will be reviewed annually, and UC Santa Barbara will update the SWMP whenever changes in activities or operations occur that may significantly affect the discharge of stormwater pollutants.

3.2.2 SWMP Public Access

This SWMP is a public document and is intended for use by UC Santa Barbara students, faculty, and staff. Copies of the SWMP can be obtained either from the UC Santa Barbara Environment Health & Safety website at http://ehs.ucsb.edu/units/envhlth/ehrsc/ucsbstrmpro.htm or by calling 805-893-7014.

3.2.3 SWMP Annual Reports and Record Keeping

UC Santa Barbara is required to prepare and submit an annual report to the CCRWQCB. The purpose of this report is to conduct an annual performance review of program implementation efforts including an evaluation of (1) the SWMP's effectiveness, (2) the implementation of the SWMP, (3) the status of measurable goals, (4) the effectiveness of BMPs, and (5) improvement opportunities.

The State has provided an Annual Report Guidance Document (March 5, 2004) to assist Small MS4s with evaluating their stormwater programs and reporting the status of measurable goals. The guidance document offers specific direction on completing the suggested Annual Report Form; however use of the provided form is not a requirement, as MS4s may choose to comply with the General Permit's annual report requirements by using their own format. UC Santa Barbara intends to provide summaries of data in tabular form. Data such as number of employees trained, number of educational materials distributed, and number of construction sites inspected will be presented in summary tables. EH&S will solicit student volunteers on the Community Affairs Board, Volunteer Action website to assist with data collection.

The General Permit requires UC Santa Barbara to report:

- The status of compliance with permit conditions;
- An assessment of the appropriateness and effectiveness of the identified BMPs;
- The status of the identified measurable goals;
- Results of information collected and analyzed, including monitoring data, if any, during the reporting period;
- A summary of the stormwater activities planned during the next reporting cycle;
- Any proposed change(s) to the SWMP along with a justification of why the change(s) are necessary; and
- A change in the person or persons implementing and coordinating the SWMP.

The annual report will focus on a summary of progress and discuss any proposed changes to the SWMP which UC Santa Barbara sees as necessary in order to achieve the MEP standard. Changes to the annual reporting format from year to year will be appropriately explained with the goal being to clearly present program effectiveness and progress, discuss program adjustments, and provide response to challenges in implementing the SWMP.

Pursuant to the General Permit, UC Santa Barbara will retain stormwater records for 5 years. Each department responsible for implementing substantive elements of the SWMP will be instructed to keep their records for 5 years. These records will be the source of compiled data contained in the annual report.

3.3 MEASURING PROGRAM EFFECTIVNESS

In accordance with the requirements of the General Permit, UC Santa Barbara intends to conduct periodic assessments and reporting on the effectiveness of its Storm Water Program. Due to the fact that measurable improvement in water quality will take time to demonstrate, UC Santa Barbara proposes an iterative approach of short-term and long-term effectiveness assessments to ensure progress achieving broader program goals is continually made. UC Santa Barbara will specifically utilize the guidance within the Municipal Stormwater Program Effectiveness Assessment Guide (California Stormwater Quality Association [CASQA], 2007) as a framework for conducting future program effectiveness assessments. UC Santa Barbara is confident that using the approach and strategy defined within the CASQA guide will assist the University achieve its goals efficiently and cost-effectively.

3.3.1 Short Term Effectiveness Assessment

During the first year of program implementation, UC Santa Barbara will develop a defined strategy for assessing program and BMP effectiveness. The University will initially establish the purpose or focus of the assessment and conduct a thorough evaluation of measurable goals specified within this SWMP for their ability to adequately support the assessment of six "Outcome Levels" defined within the CASQA guide.

Outcome Levels are intended to categorize and describe the desired results or goals of programs and minimum control measures. They include:

- Level 1: Documenting activities
- Level 2: Raising awareness
- Level 3: Changing behavior
- Level 4: Reducing loads from sources
- Level 5: Improving runoff quality
- Level 6: Protecting receiving water quality

During this evaluation, UC Santa Barbara will identify specific water quality and implementation "Assessment Methods" it will utilize to assess program and BMP effectiveness. CASQA identifies the following Assessment Methods for potential use: confirmation, tabulation, surveys, inspections, quantification, and monitoring. For the purpose of supporting long-term effectiveness assessments, reference or baseline conditions will also be established. Where necessary, additional measurable goals will be incorporated into the SWMP and their inclusion noted within the University's Annual Report. UC Santa Barbara will make an effort to include more quantifiable measures of BMP and program effectiveness.

During the second and third year of program implementation, UC Santa Barbara will continue to implement the BMPs identified within this SWMP. The University will also continue to assess BMP and program effectiveness using the effectiveness assessment methods defined during the first year of program implementation. During the second and third year greater attention will be given to integrating the results of implementation efforts and water quality monitoring (CCBER, City, County, State, and non-profit) efforts for the purpose of identifying opportunities for program modification. The need for program modification will only be necessary if the results of the integrated assessment determine that chosen BMPs, which constitute the University's program, are ineffective at achieving their intended outcome. Proposed program modifications will always be noted within the Annual Reports.

3.3.2 Long-Term Effectiveness Assessment

During the fourth and fifth year of program implementation UC Santa Barbara will continue to implement the effectiveness strategy established during the first year. UC Santa Barbara will continue to conduct an annual integrated assessment of program implementation efforts as described within the CASQA guide. More specifically, the University intends to determine relationships between program implementation assessments and water quality assessments with the ultimate goal of establishing whether or not program implementation is protecting or improving water quality. UC Santa Barbara intends to consider the various factors which could present challenges for continued assessment including participation rate, spatial and temporal scales, implementation of multiple activities, rainfall and runoff characteristics, and costs. Given the University's finite budget and resources, but commitment to protecting and improving water quality, long-term effectiveness will be a critical step for UC Santa Barbara to achieve its goals efficiently and cost-effectively.

3.4 WATER QUALITY MONITORING

The UC Santa Barbara campus currently discharges to four main wetlands: Campus Lagoon Wetlands, Storke Wetlands, wetlands of Goleta Slough, and wetlands of Devereux Slough. Only Goleta Slough is a CWA 303(d) listed water body. Each of these wetlands is recognized as ecologically sensitive habitat and supports a diversity of vertebrate and invertebrate fauna as well as a suite of plant species unique to the region (City of Santa Barbara 1997; UC Santa Barbara 1987a, 1987b, and 1990a; UC Santa Barbara 1992). Nutrient loading and excessive flows which exceed the normal hydrograph for an area have the effect of supporting excessive growth of macro algae, phytoplankton, and submerged aquatic vegetation. As these plants respire and

decompose they can significantly reduce dissolved oxygen in the waterway and create anoxic conditions that no longer support benthic invertebrates, fish, and other aquatic organisms as well as impacting the diversity of plant and algal species (Glasgow and Burkholder 2000). These unsightly, and occasionally odiferous, blooms reflect a state of eutrophication often associated with development and waterways.

The University is in a unique position to contribute to the science and practice of Best Management Practices associated with reducing stormwater nutrients, pollutants, and overall runoff volume because of its academic focus and because of several restoration and land management groups on campus. CCBER manages the Campus Lagoon and Storke Wetlands, and Coal Oil Point Reserve manages Devereux Slough. With specific support to implement regular water quality studies to assess nutrients, bacteria, and eutrophication (e.g., dissolved oxygen, chlorophyll a, temperature, salinity), these two groups, or similar groups, can assist with long-term monitoring and support integrating results into the academic arms of the University, Facilities Management, and into regular monitoring reports. CCBER currently conducts project-specific and grant-funded monitoring of the Campus Lagoon in order to facilitate mechanisms for improving water quality and biodiversity within this resource.

During the 5-year BMP implementation period of this Plan, groups such as CCBER and Coal Oil Point Reserve will coordinate and develop a work plan describing future water quality monitoring projects intended to evaluate (1) the continued health of the aforementioned waterbodies, and (2) the quality of stormwater runoff from campus facilities. Monitoring projects identified in the work plan will be considered for implementation if funds become available. CCBER will actively recruit students and faculty to support and participate with water quality monitoring implementation. Completed monitoring projects will provide UC Santa Barbara with an opportunity to evaluate the effectiveness of Stormwater Management Plan implementation and provide further insight into opportunities for improved water quality. All monitoring reports will be included with annual reports submitted to the CCRWQCB.

CCBER and Coal Oil Point Reserve, or similar groups, could identify campus opportunities for implementing hydromodification management controls (i.e., low impact designs) with the goal of improved water quality within the Campus Lagoon, Storke Wetlands, Goleta Beach bluffs, Goleta Slough, and Devereux Slough. Recommendations will be based on the results of past and future water quality monitoring efforts. Recommendations will be documented and presented, as necessary, to the members of the Water Quality Working Group during regularly scheduled meetings.

Through these measures and many others described within this Plan, UC Santa Barbara intends to enhance opportunities for infiltration of clean stormwater, and minimize runoff volume and rate; protect riparian areas, wetlands, and their buffer zones; minimize pollutant loading; and provide long-term watershed protection.

4.0 PUBLIC EDUCATION AND OUTREACH ON STORMWATER IMPACTS

The first of the six MCMs described in this SWMP is Public Education and Outreach (PEO). The goal of this MCM is to ensure greater public awareness and compliance for the storm water management program. Specifically, this MCM is intended to educate the UC Santa Barbara community of students, faculty, staff, and visitors (hereafter referred to as "the public") about the importance of protecting storm water quality for the benefit of the environment and human health. The General Permit requires UC Santa Barbara to implement a public education program to distribute educational materials to the community or conduct equivalent outreach activities about the impacts of storm water discharges on water bodies and the steps that the public can take to reduce pollutants in storm water runoff.

Public education and outreach is crucial to fostering community interest and support for UC Santa Barbara's storm water management program. Community interest and support for the Program will greatly assist with efforts to implement this SWMP, and will subsequently assist UC Santa Barbara reduce the discharge of pollutants to the MEP and protect water quality. A UC Santa Barbara community educated in the need for the stormwater management program will ensure greater compliance with the General Permit. As members of the public become aware of what is expected of them and others in the community, they will be more likely to support the program.

UC Santa Barbara's PEO goals are to:

- Provide a consistent message for the length of time necessary to change community behavior;
- Change specific behaviors which adversely affect water quality; and
- Increase the community awareness and understanding of the individual actions that can be taken to protect and improve the quality of surrounding waterbodies.

The following BMPs will be implemented by UC Santa Barbara within 5 years of SWMP approval to satisfy the MCMs of Public Education. Where appropriate, the selected BMPs will specifically address UC Santa Barbara's current water quality challenges (i.e., pollutants of concern) as described in Table 2-5 of this SWMP. UC Santa Barbara will utilize existing federal, state, and University-developed stormwater public education and outreach materials whenever possible. When necessary, new materials will be created. Where feasible, community-based social marketing strategies and techniques will be utilized to develop public education and outreach materials. Additionally, given the large student population at UC Santa Barbara and the goals of the University, a great deal of emphasis will be placed on student education and subsequent involvement with various aspects of Program implementation. The PEO BMPs are presented in the following subsections, and then summarized in **Table 4-1, Public Education and Outreach BMPs, Descriptions, and Measurable Goals,** at the end of this section.

4.1 PE-1 STORMDRAIN LABELING

Implementation Details

UC Santa Barbara EH&S, PF, PF Grounds, and HRS staff in coordination with student volunteer groups will label stormdrains with symbols recognizable to the public. These symbols will indicate the need to prevent pollution from entering the stormdrain, because the storm conveyance system contributes to surface water bodies and waterways. Spray-painted stencils, plastic labels affixed with concrete adhesive, or metal labels drilled and mounted into the concrete may be used. These labels will have phrases such as "No Dumping: Drains to Ocean" or "Only Rain in the Drain" to convey the intended message to the public. Because the UC Santa Barbara campus is extensive and spread out over four distinct areas, stormdrain labeling will be enacted over several dry season phases and maintained in an ongoing manner. Maintenance will become necessary

due to natural wear and vandalism. Inspection of existing markers for possible replacement will be conducted by MS4 maintenance or EH&S staff during scheduled MS4 maintenance activities as described in GH-1. Labels will be replaced as needed by MS4 maintenance staff or student volunteer groups.

Measurable Goals

- Coordinate with student volunteer organizations to accomplish stormdrain labeling, inspection, and replacement (Year 1).
- Label 100% of stormdrains in Main Campus (between Ocean Road and Lagoon Road), Storke Campus (between South Los Carneros Road and Ocean Road), and West Campus (Year 1).
- Check the stormdrain labels every year and replace those which may have been damaged or removed and label any newly installed stormdrains (Years 1–5).

4.2 PE-2 UC SANTA BARBARA STORMWATER PROGRAM WEBSITE

Implementation Details

EH&S staff will develop and implement a website targeted to young adult and adult students featuring educational materials specific to stormwater and the reasons for and methods of stormwater pollution prevention. The website will be updated by EH&S to include details of the UC Santa Barbara stormwater management program, including hyperlinks allowing public comment on the UC Santa Barbara's SWMP, to applicable State and Federal regulatory agencies, and to sources for stormwater pollution prevention education. SWMP Annual Reports and associated CCRWQCB comments will be posted to the website upon submittal and receipt, respectively. The UC Santa Barbara Stormwater Technical Assistance Line will be included on the website, enabling the public an opportunity to communicate their concerns, questions, and viewpoints regarding the SWMP and associated stormwater management policies. This website will be mentioned as a resource, complete with website address, in each PEO material distributed or conveyed to the public.

Access to these web pages will be counted by installation of a web statistics application. In addition, in order to facilitate interactive learning and comment on each of the issues presented on these pages, a form for email response will be designed and implemented by EH&S. This email response form will allow visitors to the website to respond with questions, concerns, comments, and ideas, which EH&S staff will address.

Measurable Goals

- Design and implement a stormwater web page. Install a web statistics application. Design and implement a web email response form, which will allow visitors to UC Santa Barbara's stormwater educational pages to respond with questions, concerns, comments, and ideas to be addressed by EH&S staff (Year 1).
- Review quarterly, develop improvements to increase the utility of the website, and redesign web page as necessary. Document reasons for changes, and maintain electronic copies of all versions of such pages. Publish the website address on all stormwater program materials. Document numbers of website visitors via the web statistics application, and increase hits to the website by 10% per year. Address and retain electronic copies of all web email form responses by visitors to the website (Years 1–5).

4.3 PE-3 RAINY SEASON PUBLIC SERVICE ANNOUNCEMENTS ON UC SANTA BARBARA CAMPUS RADIO

Implementation Details

EH&S will work with AS and the UC Santa Barbara Campus Radio Station to create Public Service Announcements (PSAs) specifically timed to address the importance of stormwater pollution prevention during the rainy season on the UC Santa Barbara campus. The target population will be faculty, staff, and University students. The message will be tailored based on public survey results and input from AS and the Campus Radio Station.

A selection of Rainy Season PSAs will be created or selected for reprisal every rainy season for the duration of the permit and at least one will be played daily on the UC Santa Barbara Campus Radio Station, from the beginning of the first regular term in school, to the end of the rainy season.

Measurable Goals

- Develop one rainy season PSA in English and one in Spanish (Years 1, 3, and 5).
- Maintain electronic copies of all PSAs created for rainy season awareness to be aired on UC Santa Barbara Campus Radio (Years 1–5).
- Play at least one Rainy Season PSA in English and one in Spanish per day on UC Santa Barbara Campus Radio during the rainy season. Advertise the UC Santa Barbara Stormwater Program website and provide a survey to determine how many individuals heard the PSA and at what time (Years 2–5).

4.4 PE-4 STUDENT EDUCATION

Implementation Details

EH&S staff, AS staff, and HRS staff will collaborate to update the Student Orientation Packet with stormwater pollution prevention information, to be distributed by HRS to new students at the beginning of each term. The update will describe the need for stormwater pollution prevention; the UC Santa Barbara stormwater program, including applicable regulations, enforcement actions, and possible penalties; and will provide the web link for the UC Santa Barbara Stormwater Website as well as the UC Santa Barbara Stormwater Technical Assistance Line.

The Student Orientation Packet will be updated as necessary to address new areas of campus, new procedures, or new stormwater program implementation.

Measurable Goals

- Update the Student Orientation Packet to include information about the UC Santa Barbara stormwater pollution prevention program, including regulations, enforcement actions, penalties, the web link to the UC Santa Barbara Stormwater website, and the Stormwater Technical Assistance Line (Year 2).
- Distribute updated Student Orientation Packet to 100% of new students and record the number distributed. Advertise the UC Santa Barbara Stormwater Program website and provide a survey to determine if they learned of the website from the student orientation packets. Offer an evaluation of the stormwater information included in the student orientation packet to assess the level of success of the handout in transmitting the concept of stormwater pollution prevention. Report the results from the surveys in the annual report and use the results to revise the student orientation packet information as needed (Years 2–5).

4.5 PE-5 EMPLOYEE EDUCATION

Implementation Details

4.5.1 Employee Newsletter

The UC Santa Barbara Public Affairs department publishes an employee newsletter that is disseminated to faculty and staff. EH&S will develop an annual stormwater awareness article for the newsletter in the issue directly preceding the beginning of the wet season on October 1st. The articles will describe the need for and methods of stormwater pollution prevention throughout the UC Santa Barbara campus.

Measurable Goals

- Submit stormwater awareness articles to employee newsletter for inclusion in the issue directly preceding October 1st; track the number of copies of the issue with the stormwater article distributed. Advertise the UC Santa Barbara Stormwater Program website and provide a survey to determine if they learned of the website from the employee newsletter. Offer an evaluation of the stormwater information included in the employee newsletter to assess the level of success of the handout in transmitting the concept of stormwater pollution prevention. Report the results from the surveys in the annual report and use the results to revise the employee newsletter as needed (Years 2–5).
- Rewrite article as necessary, before the October 1 publishing deadline (Years 4–5).

4.5.2 Staff and Faculty Training

Staff and faculty will be provided with training material in order to increase stormwater awareness and pollution prevention. All training materials will be available on the EH&S website. Stormwater training is currently included in the campus "New Employee Orientation" program, which is conducted twice a month; however, during the first year of permit coverage, EH&S will develop a list of potential training arenas, such as the Wastewater Working Group (see GH-3), UC Santa Barbara Working Group (see PP-2), and departmental and faculty meetings for additional staff and faculty stormwater training. At this time EH&S will also identify which department's activities have the greatest potential to pollute stormwater, the associated activities primary pollutants of concern, key staff to receive training, and a training schedule.

Beginning in Year 2, stormwater awareness and pollution prevention information will be integrated into selected meetings at least once per year. Staff and faculty training will introduce basic concepts of the MS4 and permit, as well as provide examples of common pollutants and pollutant-discharging activities, such as vehicle and equipment maintenance and washing activities, facility and housing maintenance, custodial tasks, landscaping activities, food services activities, waste/recycling management, new construction and land disturbance, and MS4 and sanitary sewer operations and maintenance. Applicable trainees will also be instructed on how to conduct inspections at specific facilities. . Every department will receive training on illicit discharge and dumping detection and the reporting process if an illicit discharge is observed.

All training sessions will incorporate time for feedback from attendees regarding additional BMPs that may be implemented on campus to further improve water quality. Trainees will receive a certificate verifying attendance and will be asked to fill out class evaluation forms. EH&S will utilize comments from attendees to improve the training program in the following years if necessary. Brochures with information pertaining to each group will be distributed (see PE-6) and additional materials provided by U.S. EPA, SWRCB, and CCRWQCB may be utilized.

Measurable Goals

- Continue to implement stormwater training with the "New Employee Orientation" program and document all attendance. Administer pre-and post training evaluations to assess the level of success

of the training in transmitting the concept of stormwater pollution prevention. Report the results from these evaluations in the annual report and use the results to revise the presentation content as needed (Years 1-5).

- Assess potential UC Santa Barbara staff to receive training, identify forums to perform training, identify department activities that have the greatest potential to contribute pollution to stormwater, identify potential pollutants of concern, and develop a training schedule. Develop and implement stormwater pollution prevention training program for applicable UC Santa Barbara staff; establish trainers responsible for implementation efforts within each UC Santa Barbara department (Year 1).
- Provide faculty and staff self-scheduling via the internet using the EH&S "on-line sign-up" feature. Post training materials on the EH&S website. Distribute applicable brochures (see PE-6) during each 2-hour training session; assess the success of 100% of training sessions based on class assessment sheets annually; revise the training program as necessary; offer department trainers the ability to attend more advanced training programs hosted by, but not limited to, the SWRCB, RWQCBs California Storm Water Quality Association, U.S. EPA, and California Department of Transportation. Schedule and track attendance of all training sessions on EH&S website at http://EH&S.ucsb.edu/4DAction/WebCourseSessionList (Years 2–5).

4.5.3 EH&S Guide to Services

EH&S currently makes available a Guide to Services (GTS) pamphlet to UC Santa Barbara employees, which gives contact information for various health and safety concerns on campus. This pamphlet is available at the EH&S office, and online at http://EH&S.ucsb.edu/homepage/hprsc/EH&S_GTS_08.pdf. It will be updated with information regarding the Stormwater Program website, as well as the Stormwater Technical Assistance Line (805-893-3194), a 24-hour, 7-day a week service, and email address. Upon update it will be further distributed to all UC Santa Barbara departments.

Measurable Goals

- Update and maintain the EH&S Guide to Services to include contact information for stormwater services on the UC Santa Barbara campus (Years 1–5).

4.6 PE-6 STORMWATER AWARENESS BROCHURES AND POSTERS

Implementation Details

Stormwater pollution prevention brochures and posters will be developed by EH&S, AS, DSRs, and students and will target the general student and faculty population by addressing the range of individual/residential sources of stormwater pollution, such as pet waste, lawn and garden care, car washing, and household hazardous waste. Brochures will be specific to potential pollutant sources, such as automotive fueling, maintenance, and washing; food service activities; trash control; and maintenance and custodial operations. Posters will be developed to raise awareness of stormwater protection and pollution prevention tips and will be posted throughout campus. Topics may include the hazardous waste collection and recycling programs, UC Santa Barbara's stormwater program, and stormwater pollution prevention information.

Brochures will be posted on the UC Santa Barbara Stormwater Program website by EH&S. AS will print the brochures for distribution at campus environmental awareness events, staff and faculty orientations, and training events (see PE-5) and will print brochures to post in the University Center and other areas on campus. Brochures will be distributed at University-wide events as well as the student center and other gathering places. One educational poster will be distributed during implementation Years 2-5. The areas in which the posters are posted will be documented.

Measurable Goals

- Develop two stormwater awareness brochures annually specific to potential pollutant sources, such as automotive fueling, maintenance, and washing; food service activities; trash control; and maintenance and custodial operations. Develop stormwater pollution prevention posters. Retain electronic copies of all brochures and posters and track their distribution (Year 1).
- Distribute two brochures annually on the UC Santa Barbara website and distribute at new employee orientation and staff/faculty training events. Post one poster throughout campus and document where the posters are posted. (Years 2–5).

4.7 PE-7 PUBLIC SURVEY

Implementation Details

EH&S will develop an annual survey to be conducted by AS in and around common areas of the UC Santa Barbara campus. The focus on the survey will be on public perception of the effectiveness of UC Santa Barbara's Stormwater Management Program. The survey will consist of no more than 10 questions and the survey interview will take less than 5 minutes. Any member of the UC Santa Barbara community, including students, parents, educational staff, facilities staff, and visitors may elect to participate in the survey. Participation will be voluntary and anonymous. At either the conclusion of the survey interview, or upon refusal of the interview by the potential respondent, survey personnel will provide that respondent with a copy of the current stormwater awareness brochure (PE-6). Survey personnel will track the number of survey respondents, as well as numbers of printed materials accepted. Survey personnel will also track the number of refusals for both the survey and printed information. UC Santa Barbara will analyze and utilize the results of the survey to tailor its public education efforts.

Measurable Goals

- Conduct a baseline public survey within the first six months of Program Implementation to support development of educational materials and establish a reference for future evaluation of program effectiveness (Year 1).
- Develop public survey and protocol for distribution and evaluation and utilize the survey results to tailor public education efforts (Year 2).
- Conduct an annual public survey during the first week of second term. Maintain records of respondents' answers and demographic information, as well as records of refusal to respond or to accept printed information. Report the results from these surveys in the annual report and use the results to revise the presentation content as needed. (Years 2–5).

4.8 PE-8 STORMWATER AWARENESS ARTICLES AND CAMPUS PUBLICATIONS

Implementation Details

EH&S, in coordination with the Daily Nexus and PA, will publish one article semi-annually on various aspects of stormwater awareness, in campus publications such as the Daily Nexus. These articles will address aspects of stormwater awareness ranging from illicit discharge detection and elimination, to erosion and sedimentation, to profiles of individual water bodies around campus.

Measurable Goals

- Submit one article semi-annually to a campus publication; document and track its publishing. Advertise the UC Santa Barbara Stormwater Program website and provide a survey to determine if they learned of the website from the awareness articles and campus publications. Report the results

from the surveys in the annual report and use the results to revise the employee newsletter as needed (Years 2–5).

4.9 PE-9 COMMUNITY ENVIRONMENTAL AWARENESS EVENTS

Implementation Details

As a member of the greater Santa Barbara and Central Coast California communities, UC Santa Barbara will participate in three campus environmental awareness events annually, such as Earth Day (April 22). UCSB also participates yearly in the annual UC Conference on Sustainability (yearly in February at various UC campuses) and will occasionally host the event, which gives students, staff, and faculty the opportunity to address stormwater quality issues and educate the campus community about UCSB's stormwater program. Student volunteers will be solicited to support event staffing using the AS Community Affairs Board Volunteer Action Center website. In addition, EH&S, HRS, and AS will collaborate annually to identify a time and location for tabling of stormwater pollution prevention materials in the University Center and within campus housing areas. This will also take place annually.

EH&S will ensure stormwater pollution prevention concepts, LID techniques, etc. are provided for the public at all events. EH&S will also ensure all events which are utilized to promote stormwater management and pollution prevention are advertised on its website.

Measurable Goals

- Identify two awareness events in addition to the UC Conference on Sustainability and Earth Day during which EH&S in cooperation with HRS and AS can promote stormwater pollution prevention (Year 1).
- Coordinate and develop a plan for tabling in the University Center and within campus housing. Administer surveys to assess the level of understanding of stormwater pollution prevention. Report the results from these surveys in the annual report and use the results to revise the presentation content as needed (Year 1).
- Annually participate in three awareness events. Provide public comment forms at all events; respond to public comments within 30 days (Years 2–5).
- Facilitate tabling at the University Center and within campus housing once annually. Provide public comment forms at each tabling event; respond to public comments within 30 days (Years 2–5).

Table 4-1
Public Education and Outreach BMPs, Descriptions, and Measurable Goals

No.	BMP	Description	Measurable Goals	Dept.	Year				
					1	2	3	4	5
PE-1	**Stormdrain Labeling**	Label stormdrains throughout UC Santa Barbara Campuses, mapping in year 1 and completed by year 5.	1.) Coordinate with student volunteer organizations to accomplish stormdrain labeling, inspection, and replacement.	EH&S **PF** PF Grounds HRS	X				
			Label 100% of stormdrains in Main Campus (between Ocean Road and Lagoon Road), Storke Campus (between South Los Carneros Road and Ocean Road), and West Campus.		X				
			2.) Check the stormdrain labels every year and replace those which may have been damaged or removed and label any newly installed stormdrains.		X	X	X	X	X
PE-2	**Online Stormwater Education Materials**	Add stormwater website page(s) to the EH&S website.	1.) Design and implement a stormwater web page. Install a web statistics application. Design and implement a web email response form, which will allow visitors to UC Santa Barbara's stormwater educational pages to respond with questions, concerns, comments, and ideas to be addressed by EH&S staff.	**EH&S**	X				
			2.) Review quarterly, develop improvements to increase the utility of the website, and redesign web page as necessary. Document reasons for changes, and maintain electronic copies of all versions of such pages. Publish the website address on all stormwater program materials. Document numbers of website visitors via the web statistics application, and increase hits to website by 10% each year. Address and keep electronic copies of all web email form responses by visitors to website.		X	X	X	X	X

Table 4-1 (Continued)
Public Education and Outreach BMPs, Descriptions, and Measurable Goals

No.	BMP	Description	Measurable Goals	Dept.	Year				
					1	2	3	4	5
PE-3	**Rainy Season Public Service Announcements (PSAs) on UC Santa Barbara Campus Radio**	Create PSAs to reach members of the UC Santa Barbara community who listen to the radio with regard to the need for stormwater pollution prevention during the rainy season.	1.) Develop one rainy season PSA in English and one in Spanish.	**EH&S** AS Campus Radio	X		X		X
			2.) Maintain electronic copies of all PSAs created for rainy season awareness to be aired on UC Santa Barbara Campus Radio.		X	X	X	X	X
			3.) Play at least one Rainy Season PSA in English and in Spanish per day on UC Santa Barbara Campus Radio during the rainy season. Advertise the UC Santa Barbara Stormwater Program website and provide a survey to determine how many individuals heard the PSA and at what time.			X	X	X	X
PE-4	**Student Education**	Student Orientation Packet. Include stormwater awareness material. Update will consist of a brief paragraph and links to the UCSB Stormwater Program website.	1.) Update the Student Orientation Packet to include information about the UC Santa Barbara stormwater pollution prevention program, including regulations, enforcement actions, penalties, the web link to the UC Santa Barbara Stormwater website, and the Stormwater Technical Assistance Line.	**EH&S** AS			X		
			2.) Distribute updated Student Orientation Packet to 100% of new students and record the number of packets distributed. Advertise the UC Santa Barbara Stormwater Program website and provide a survey to determine if they learned of the website from the student orientation packets. Offer an evaluation of the stormwater information included in the student orientation packet to assess the level of success of the handout in transmitting the concept of stormwater pollution prevention. Report the results from the surveys in the annual report and use the results to revise the student orientation packet information as needed.			X	X	X	X

Table 4-1 (Continued)
Public Education and Outreach BMPs, Descriptions, and Measurable Goals

No.	BMP	Description	Measurable Goals	Dept.	Year				
					1	2	3	4	5
PE-5	**Employee Education**	EH&S will develop an annual stormwater awareness article for the newsletter in the issue directly preceding the beginning of the wet season. A UC Santa Barbara stormwater pollution prevention training program will be instituted.	1.) Submit stormwater awareness articles to employee newsletter for inclusion in the issue directly preceding October 1st; track the number of copies of the issue with the stormwater article distributed. Advertise the UC Santa Barbara Stormwater Program website and provide a survey to determine if they learned of the website from the employee newsletter. Offer an evaluation of the stormwater information included in the employee newsletter to assess the level of success of the handout in the annual report and use the results to revise the employee newsletter as needed.	**EH&S** PA		X	X	X	X
			2.) Rewrite article as necessary, before the October 1 publishing deadline.					X	X
			3.) Continue to implement stormwater training with the "New Employee Orientation" program and document all attendance. Administer pre- and post-training evaluations to assess the level of success of the training in transmitting the concept of stormwater pollution prevention. Report the results from these evaluations in the annual report and use the results to revise the presentation content as needed.		X	X	X	X	X
			4.) Assess potential UC Santa Barbara staff to receive training, identify forums to perform training, identify department activities that have the greatest potential to contribute pollution to stormwater, identify potential pollutants of concern, and develop a training schedule. Develop and implement stormwater pollution prevention training program for applicable UC Santa Barbara staff; establish trainers responsible for implementation efforts within each UC Santa Barbara department.		X				

Table 4-1 (Continued)
Public Education and Outreach BMPs, Descriptions, and Measurable Goals

No.	BMP	Description	Measurable Goals	Dept.	Year				
					1	2	3	4	5
PE-5	**Employee Education**	EH&S will develop an annual stormwater awareness article for the newsletter in the issue directly preceding the beginning of the wet season. A UC Santa Barbara stormwater pollution prevention training program will be instituted.	5.) Provide faculty and staff self-scheduling via the internet using the EH&S "on-line sign-up" feature. Post training materials on the EH&S website. Distribute applicable brochures (see BMP PE-6) during each 2-hour training session; assess the success of 100% of training sessions based on class assessment sheets annually; revise the training program as necessary; offer department trainers the ability to attend more advanced training programs hosted by, but not limited to, the SWRCB, RWQCBs California Storm Water Quality Association, U.S. EPA, and California Department of Transportation. Schedule and track attendance of all training sessions on the EH&S website.			X	X	X	X
			6.) Update and maintain the EH&S Guide to Services to include contact information for stormwater services on the UC Santa Barbara campus.		X	X	X	X	X
PE-6	**Stormwater Awareness Brochures and Posters**	Develop stormwater awareness brochure. Post on UC Santa Barbara Stormwater Program website, distribute at campus environmental awareness events, to students, employees, housing representatives.	1.) Develop two stormwater awareness brochures annually specific to potential pollutant sources, such as automotive fueling, maintenance, and washing; food service activities; trash control; and maintenance and custodial operations. Develop stormwater pollution prevention posters. Retain electronic copies of all brochures and posters and track their distribution.	**EH&S** AS DSRs	X				
			2.) Distribute two brochures annually on the UC Santa Barbara website and distribute at new employee orientation and staff/faculty training events. Post one poster throughout campus and document where the posters are posted.			X	X	X	X

Table 4-1 (Continued)
Public Education and Outreach BMPs, Descriptions, and Measurable Goals

No.	BMP	Description	Measurable Goals	Dept.	Year				
					1	2	3	4	5
PE-7	**Public Survey**	Survey the public on the effectiveness of Public Education and Outreach efforts.	1.) Conduct a baseline public survey within the first six months of Program Implementation to support development of educational materials and establish a reference for future evaluation of program effectiveness.	**EH&S** AS	X				
			2.) Develop public survey and protocol for distribution and evaluation and utilize the results to tailor pubic education efforts.			X			
			3.) Conduct an annual public survey during first week of second term. Maintain records of respondents' answers and demographic information, as well as records of refusal to respond or to accept printed information. Report the results from these surveys in the annual report and use the results to revise the presentation content as needed.			X	X	X	X
PE-8	**Stormwater Awareness Articles and Campus Publications**	Write articles for the public on different aspects of stormwater awareness. Articles will be published in the *Daily Nexus*.	1.) Submit one article semi-annually to a campus publication; document and track its publishing. Advertise the UC Santa Barbara Stormwater Program website and provide a survey to determine if they learned of the website from the awareness articles and campus publications. Report the results from the surveys in the anneal report and use the results to revise the employee newsletter as needed.	**EH&S** Nexus PA		X	X	X	X

Table 4-1 (Continued)
Public Education and Outreach BMPs, Descriptions, and Measurable Goals

No.	BMP	Description	Measurable Goals	Dept.	Year				
					1	2	3	4	5
PE-9	**Community Environmental Awareness Events**	UC Santa Barbara will participate in two campus environmental awareness events annually, and table storm water pollution prevention materials in the University Center and within campus housing areas.	1.) Identify two awareness events in addition to the UC Conference on Sustainability and Earth Day during which EH&S in cooperation with HRS and AS can promote stormwater pollution prevention.	**EH&S** HRS AS	X				
			2.) Coordinate and develop a plan for tabling in the University Center and within campus housing. Administer surveys to assess the level of understanding of stormwater pollution prevention. Report the results from these surveys in the annual report and use the results to revise the presentation content as needed.		X				
			3.) Annually participate in three awareness events. Provide public comment forms at all events; respond to public comments within 30 days.			X	X	X	X
			4.) Facilitate tabling at the University Center and within campus housing once annually. Provide public comment forms at each tabling event; respond to public comments within 30 days.			X	X	X	X

Notes: **Bold** formatting within the "Dept." column indicates the lead department for BMP implementation.

5.0 PUBLIC INVOLVEMENT AND PARTICIPATION

The goal of the Public Involvement and Participation (PIP) control measure is to raise public awareness about urban runoff pollution through public involvement and participation in UC Santa Barbara's Stormwater Management Program. Additionally, UC Santa Barbara hopes to involve the public in the development and implementation process to secure "buy in" and to generate public support for UC Santa Barbara's water quality protection efforts. More specifically, student involvement with implementation of the SWMP will be sought. It is UC Santa Barbara's intent that the following BMPs support the overall program in generating public participation, fostering support for the purpose and goals of the program, and ultimately reducing the discharge of pollutants to the MEP. The General Permit requires UC Santa Barbara to at minimum, comply with state and local public notice requirements when implementing a public involvement/participation program.

The following BMPs will be implemented by UC Santa Barbara within 5 years. These BMPs will involve participation by several campus departments, students, and campus groups in order to raise awareness and gain the community's input as it relates to UC Santa Barbara's SWMP, water quality challenges, and implementation efforts. The Public Participation (PP) BMPs are presented in the following subsections and summarized in **Table 5-2, Public Involvement and Participation BMPs, Descriptions, and Measurable Goals**, at the end of this section.

5.1 PP-1 SWMP PUBLIC REVIEW

Implementation Details

EH&S staff, working with staff at the Daily Nexus, will notify the public regarding periods of comment. Not only will notification be made in issues of the Santa Barbara News-Press and the Daily Nexus, but EH&S will post it on the UC Santa Barbara Stormwater Program website. Public comment will be welcome. Public participation and involvement associated with the public review of the SWMP will be assessed annually for increased involvement. It will be the goal of UCSB to increase participation during the 5-year permit period. Any revisions to the SWMP based on public comment will comply with General Permit requirements. The Water Quality Working Group, described in BMP PP-2, is the forum for conducting public meetings related to the update/revision of the SWMP. Notification will be made via email, campus newspaper, and on the EH&S website.

UC Santa Barbara will allow 30 days of public review and hold a single public workshop during which the public is informed of the UC Santa Barbara storm water program details, progress, future goals, and proposed updates. Public comments will be incorporated into the Annual Report as an appendix.

Measurable Goals

- Notify the public via the Santa Barbara News-Press and the Daily Nexus, upon revisions to the SWMP; post revised SWMP on the UC Santa Barbara Stormwater Program website (Years 1–5).
- Track all comments received and provide a response to all comments within 30 days (Years1–5).

5.2 PP-2 UC SANTA BARBARA CAMPUS WATER QUALITY WORKING GROUP

Implementation Details

UC Santa Barbara will reinstate a Water Quality Working Group (WQWG), which will meet quarterly to review the progress and effectiveness of BMP implementation, discuss active construction sites and new development or redevelopment, and other stormwater topics which affect any and all departments, personnel, students, and visitors of UC Santa Barbara. Attendance of and procurement of minutes for this meeting by EH&S staff is an indispensable way to exchange ideas, coordinate BMP implementation efforts, and organize

UC Santa Barbara's Stormwater Program and compliance with the General Permit. UC Santa Barbara Departments responsible for attending Water Quality Working Group meetings will include the organizations listed in **Table 5-1, UC Santa Barbara Water Quality Working Group Attendees**.

Table 5-1
UC Santa Barbara Water Quality Working Group Attendees

Organization	Current Point of Contact
CCBER	Lisa Stratton
Coal Oil Point Reserve	Cristina Sandoval
Design & Construction Services	Ray Aronson and Erich Brown
Environmental Health & Safety	Ali Aghayan and Stacey Callaway*
UC Santa Barbara Faculty	Rotating
AS Environmental Affairs Board	To Be Determined
Housing and Residential Services	Mark Rousseau
Physical Facilities	Dave McHale
Planning and Design	Shari Hammond

Note:* - Water Quality Working Group Coordinator

UC Santa Barbara will also establish a Stormwater Stakeholder Association which will meet quarterly. The Stormwater Stakeholder Association will be hosted by the Water Quality Working Group coordinator and will allow an opportunity for stakeholders not included within the WQWG to participate in Program implementation, assessment, and planning. UC Santa Barbara's goal for this meeting is greater public participation and awareness regarding the University's stormwater program. UC Santa Barbara intends to use this meeting as an opportunity to partner with other organizations, students, staff, and faculty to accomplish the goals of the stormwater program and ultimately reduce the discharge of pollutants to the MS4. Heal the Ocean, the Santa Barbara Channelkeeper, and other not-for-profit organizations will be invited to attend the quarterly meetings. Invitations to UCSB staff, departments, students, etc. will also be made based on the focus and goals of the coming quarterly meeting. Meeting announcements and invitations will be made via the EH&S website and electronic mail. A summary of the meeting will be presented at the quarterly WQWG meetings.

Measurable Goals

- Establish, facilitate, and attend quarterly Water Quality Working Group meetings. Modify the format of WQWG meetings as necessary to create more efficient exchange of BMP implementation, ideas, and information. Track all meeting agendas and minutes (Years 1–5).
- Establish a Stormwater Stakeholder Association; publicize the meeting dates on the EH&S website; meet quarterly; and present a summary of the meeting at the quarterly WQWG meetings (Years 1-5).

5.3 PP-3 SANTA BARBARA COUNTY PHASE II INTERGOVERNMENTAL MEETINGS

Currently, representatives from each Phase II municipality in Santa Barbara County are invited to the regular Intergovernmental Meeting hosted by the County of Santa Barbara to allow for regional coordination of SWMP implementation efforts, provide an opportunity to share resources, and foster discussion of the University's status with regards to compliance. A representative from UC Santa Barbara will attend these meetings and the minutes will be retained by the University.

Measurable Goals

- Attend 100% of regular Santa Barbara County Phase II Intergovernmental Meetings annually. Track number of meetings held and attended by University staff; obtain and retain a copy of each meeting's agenda (Years 1–5).

5.4 PP-4 STORMWATER LECTURES

Implementation Details

EH&S, in coordination with PF, D&CS, B&P, AS, and PA, will provide and/or promote an annual lecture or presentation to the public regarding the process and importance of Stormwater Management. Subjects for the lectures may include residential stormwater awareness for the UC Santa Barbara campus; LID principles and techniques; landscaping to improve stormwater infiltration and reduce runoff volume and rate; reducing/eliminating chemicals in landscaping; recycling programs; "green building;" erosion and sediment control concepts; watershed management; an introduction to illicit discharge detection and elimination; and a question and answer session for the public to interface and become involved with community action groups concerned with stormwater pollution. Student volunteer opportunities will be promoted at the end of each lecture/presentation.

Lectures will be advertised throughout the Bren School, Environmental Engineering Department, and other environment-oriented courses of study, as well as published in the Daily Nexus, and posted in the University Center. EH&S will also post all stormwater lectures on its website and will coordinate with campus media to advertise the annual events. When necessary, PA will coordinate the time and space for these lectures.

Measurable Goals

- Facilitate and/or promote an annual stormwater lecture or presentation and track attendance. Administer pre- and post lecture surveys to assess the level of success of the lecture in transmitting the concept of stormwater pollution and how to reduce it. Report the results from these surveys in the annual report and use the results to revise the lecture content as needed. (Years 3-5).
- Retain electronic copies of all presentations and handouts, and provide all lecture information on the EH&S stormwater website (Years 3–5).

Table 5-2
Public Involvement and Participation BMPs, Descriptions, and Measurable Goals

No.	BMP	Description	Measurable Goals	Dept.	Year				
					1	2	3	4	5
PP-1	**SWMP Public Review**	Post SWMP on the EH&S website and advertise the plan is up for review in the *Santa Barbara News Press* and *Daily Nexus*.	1.) Notify the public via the *Santa Barbara News Press* and the *Daily Nexus*, upon revisions to the SWMP; post revised SWMP on the UC Santa Barbara Stormwater Program website.	EH&S Nexus	X	X	X	X	X
			2.) Track all comments received and provide a response to all comments within 30 days.		X	X	X	X	X
PP-2	**UC Santa Barbara Campus Water Quality Working Group**	Quarterly meeting of WQWG. The group will review progress of BMPs, active construction site status, new development, and other stormwater topics.	1.) Establish, facilitate and attend quarterly WQWG meetings. Modify the format of WQWG meetings as necessary to create more efficient exchange of BMP implementation, ideas, and information. Track all meeting agendas and minutes.	**EH&S** PF PF Grounds HRS D&C PA	X	X	X	X	X
			2.) Establish a Storm Water Stakeholder Association; publicize the meeting dates on the EH&S website; meet quarterly; and present a summary at the quarterly WQWG meetings.	B&P CCBER Media	X	X	X	X	X
PP-3	**Santa Barbara County Phase II Intergovernmental Meeting**	As a non-traditional MS4, UC Santa Barbara is obligated to attend the quarterly Santa Barbara County Phase II Intergovernmental Meetings.	1.) Attend 100% of regular Santa Barbara County Phase II Intergovernmental Meetings annually. Track number of meetings held; obtain a copy of each meeting's agenda.	**EH&S**	X	X	X	X	X
PP-4	**Stormwater Lectures**	Facilitate an annual stormwater lecture to the UC Santa Barbara public regarding various aspects of stormwater management. Lecturers may be campus or invited industry experts.	1.) Facilitate and/or promote an annual stormwater lecture or presentation and track attendance. Administer pre- and post lecture surveys.	**EH&S** D&C B&P			X	X	X
			2.) Retain electronic copies of all presentations and handouts, and provide all lecture information on the EH&S stormwater website.	AS PA Nexus Media CCBER			X	X	X

Notes: **Bold** formatting within the "Dept." column indicates the lead department for BMP implementation.

6.0 ILLICIT DISCHARGE DETECTION AND ELIMINATION

An illicit discharge is defined as "a point source discharge of pollutants to a MS4 which is not composed entirely of stormwater and not authorized by an NPDES permit." Discharge sources must be controlled and illegal behavior prohibited.

The goal of the IDDE MCM is to prevent the discharge of pollutants to receiving waters by eliminating illicit discharges to UC Santa Barbara's stormwater conveyance system. U.S. EPA studies have shown that pollutant levels from illicit discharges can be high enough to significantly degrade receiving water quality and threaten aquatic life, wildlife, and human health. Typical sources of illicit discharges include sanitary wastewater, effluent from septic tanks, car wash wastewaters, improper used oil disposal, radiator flushing disposal, laundry wastewaters, roadway spills, and the improper disposal of auto and household chemicals.

UC Santa Barbara intends to gain a thorough awareness of its MS4, ultimately providing better opportunity for determining the types and sources of illicit discharges entering the MS4. A better awareness of the MS4 will also assist with establishing appropriate legal, technical, and educational means to eliminate these discharges.

The General Permit requires UC Santa Barbara to:

- Develop, implement, and enforce a program to detect and eliminate illicit discharges (as defined by 40 CFR Section 122.26[b][2], CFR 2007a) into the regulated small MS4.
- Develop a storm sewer system map showing the location of all outfalls and the names and locations of all Waters of the United States and other MS4s that receive discharges from those outfalls.
- To the extent allowable under state or local law, effectively prohibit through ordinance or other regulatory mechanism non-stormwater discharges into the MS4 and implement appropriate enforcement procedures and actions.
- Develop and implement a plan to detect and address non-stormwater discharges, including illegal dumping, to the system that are not authorized by a separate NPDES Permit.
- Inform staff, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste.
- Address the following categories of non-stormwater discharges or flows (i.e., authorized non-stormwater discharges) only where they are identified as significant contributors of pollutants to the Small MS4:
    - Water line flushing;
    - Landscape irrigation;
    - Diverted stream flow;
    - Rising ground waters;
    - Uncontaminated groundwater infiltration (as defined in 40 CFR §35.2005[20], CFR 2007b) to separate storm sewer systems;
    - Uncontaminated pumped groundwater;
    - Potable water discharges;
    - Foundation drains;
    - Air conditioning condensation;
    - Irrigation water;
    - Springs;
    - Water from crawl space pumps;

- Footing drains;
- Lawn watering;
- Individual residential car washing;
- Flows from riparian habitats and wetlands; and
- De-chlorinated swimming pool discharges.

Discharges or flows from firefighting activities are excluded from the effective prohibition against non–stormwater, and need only be addressed when they are identified as significant sources of pollutants to Waters of the United States.

The following BMPs will be implemented by UC Santa Barbara within 5 years. The Illicit Discharge (ID) BMPs are presented in the following subsections and then summarized in Table at the end of this section.

6.1 ID-1 NON-STORMWATER DISCHARGES

Implementation Details

Potential non-stormwater discharges and pollutant sources/activities at UC Santa Barbara are identified in Table 2-5, many of which are addressed by BMPs presented within this SWMP. Additionally, EH&S has undergone a preliminary evaluation of non-stormwater discharges or flows authorized by the General Permit (i.e. authorized non-stormwater discharges) to determine whether any exist and are significant contributors of pollutants.

UC Santa Barbara believes the following authorized non-storm water discharges are currently not a significant contributor of pollutants to the MS4: water line flushing; landscape irrigation; diverted stream flows; rising ground waters; uncontaminated groundwater infiltration; uncontaminated pumped groundwater; potable water discharges; foundation drains; air conditioning condensation; springs; water from crawl space pumps; footing drains; lawn watering; individual residential car washing; flows from riparian habitats and wetlands; and de-chlorinated swimming pool discharges.

Authorized non-stormwater discharges will require regular review and evaluation by EH&S during the implementation period of this SWMP to ensure they do not become a significant contributor of pollutants. As such, EH&S will examine authorized non-stormwater discharges at UC Santa Barbara for potential contribution of pollutants to the MS4. Where an authorized non-stormwater discharge is identified as a significant contributor of pollutants, either by way of visual observation or water quality monitoring, it will be eliminated and violations appropriately enforced using the measures identified in ID-6.

Measurable Goals

- Develop inventory of non-stormwater discharges at UC Santa Barbara (Year 1).
- Review inventory of non-stormwater discharges on campus for compliance with the General Permit and eliminate those considered to be a significant contributor of pollutants to the MS4. Utilize the appropriate enforcement measures where violations of campus regulations are identified. Track all inventory and enforcement efforts, include this information in the annual report, and use it to help prevent future non-stormwater discharges (Year 1).

6.2 ID-2 UC SANTA BARBARA STORMWATER CONVEYANCE MAP

Implementation Details

In order to track IDs and potential pollutants at UC Santa Barbara, it is necessary to know where within the stormwater conveyance system pollutants may enter, travel within the system, and discharge. An accurate

map of the MS4 is also essential for PF and HRS to utilize for the continued operation and maintenance of the system. UC Santa Barbara will develop a stormwater conveyance map.

D&C will survey the stormwater conveyance system and its individual features. The data will be stored and maintained utilizing a geographic information system (GIS), including the storage and appropriate labeling of features such as catch basins, fossil filters, detention basins, silt separators, stormdrains, stormwater outfalls, and stormwater conduits between such features. Size, diameter, and material of all below-ground features should also be included in the labeling of GIS features and the rendering of the map.

PF and HRS staff who notice placement or feature description discrepancies upon use of the map should report them to D&CS for data validation. It is likely that revisions will be necessary during the 5-year implementation period of this Plan, as UC Santa Barbara is scheduled to undergo a major utility infrastructure upgrade that includes replacing and upsizing the storm sewer system.

The data found in the GIS survey will be used to create a data layer which may be integrated with other maps of the UC Santa Barbara campus, such as infrastructure, which includes buildings, athletic fields, roads, sidewalks, and walking paths. The stormwater layer will be separable and searchable for individual features and conduits.

Measurable Goals

- Survey Main Campus, Storke Campus, North Campus, and West Campus and maintain a GIS data file with all features and labels for integration with other layers of campus maps. Prepare the UC Santa Barbara stormwater conveyance map and post on the UCSB Stormwater Program website for public reference (Year 1).
- Revise campus maps upon physical change to the MS4 as necessary and repost on the UCSB Stormwater Program website for public reference (Years 2–5).

6.3 ID-3 Department Safety Representative IDDE Training

Implementation Details

The detection and elimination of illicit discharges is a priority at UC Santa Barbara. In order to minimize and work towards eliminating stormwater pollution, it is necessary to detect and eliminate IDs to the stormwater conveyance system. EH&S will train DSRs from the PF, PF Grounds, and HRS departments in the procedures necessary to detect, report, and eliminate IDs. DSRs will incorporate IDDE information into current departmental training programs to disseminate to all staff annually.

Measurable Goals

- Assess existing training programs and revise to appropriately incorporate IDDE education (Year 1).
- Add IDDE awareness training to current environmental training schedule programs for DSRs in the PF, PF Grounds, and HRS departments (Years 2–5).
- Schedule and track environmental training for DSRs on the EH&S website at http://EH&S.ucsb.edu/4DAction/WebCourseSessionList (Years 2–5).
- Assess the effectiveness of IDDE awareness training for DSRs in the PF, PF Grounds, and HRS departments, based on number of accurately completed ID reports. Maintain scanned copies of all such reports and a database or spreadsheet tracking accuracy. Report these findings in the annual report and use this information to revise the training accordingly (Years 3–5).
- Revise training for DSRs as necessary, and maintain electronic copies of revised training program and all attendance records (Years 3–5).

6.4 ID-4 VISUAL INSPECTIONS: DRY WEATHER OUTFALL MONITORING AND FACILITY INSPECTIONS

Implementation Details

In order to identify and eliminate IDs and connections to the UC Santa Barbara MS4, EH&S, PF, PF Grounds, and HRS staff will collaborate to establish and maintain a visual monitoring program for all stormwater outfalls. This visual monitoring will occur annually during the dry season, so that any flow through the storm conveyance system can be noted and tracked to its source. Illicit discharges will be eliminated.

In addition to the visual monitoring of outfalls during the dry season, departments such as EH&S, PF, PF Grounds and HRS staff will collaborate to establish and maintain a campus-wide Facility Inspection Program. This program will enact inspections for every facility located within the boundaries of the Main, Storke, North, and West Campuses. EH&S will coordinate with PF, PF Grounds and HRS to develop a facility inventory and establish inspection priorities based on each facilities potential to discharge pollutants to the MS4. All facilities will be inspected a minimum of annually with high priority facilities inspected quarterly. In the event an illicit discharge is identified PF, PF Grounds, and HRS staff will be required to trace the source of the discharge and eliminate the discharge for their respective facilities. Facilities for which a referral or complaint is received will be inspected within 24 hours and a follow-up inspection will occur within one week following the first inspection. The Facility Inspection Program will be tailored over time based on results of previous inspections and tracking complaints made to the Stormwater Technical Assistance Line. Additionally, all ID documentation will be utilized to track any patterns of violations and to identify repeat offenders.

Measurable Goals

- Develop an outfall visual inspection protocol, which includes procedures for tracing the sources of illicit discharges, and an inspection checklist for both the outfall monitoring and facility inspections; maintain an electronic copy and revise as necessary (Year 1).
- Conduct visual inspections of outfalls in accordance with protocol developed during Year 1 annually and eliminate all IDs. Scan hard copies of visual inspection forms and maintain data electronically (Years 2–5).
- Develop a facility inventory and establish inspection priorities (Year 1). Conduct facility inspections within the Main, Storke, North, and West Campuses according to the facility prioritization established in Year 1; document all inspection findings electronically and eliminate all identified IDs (Years 1, 3, and 5).
- Report any IDs to EH&S for follow-up. Track the number, placement, and resolution of identified IDs and maintain electronic records. Use these findings to help prevent IDs in the future (Years 2–5).
- EH&S will identify opportunities to improve public education and outreach, and provide recommendations for appropriate procedural modifications to eliminate pollution. The Facility Inspection Program will be tailored over time based on results of previous inspections and by tracking complaints made to the Stormwater Technical Assistance Line (Years 2–5).

6.5 ID-5 STORMWATER TECHNICAL ASSISTANCE LINE

Implementation Details

EH&S will provide its existing Technical Assistance Line, an automated 24-hour, 7-day a week phone line– and email address to the public for the purpose of notifying EH&S about illicit discharges or stormwater concerns that may exist. The Stormwater Technical Assistance Line and email address will be publicized on stormwater public education and outreach materials, in the campus phone book, on the EH&S website, and

within the phone directory of the UC Santa Barbara general website. The public will be encouraged both by the text introducing the Stormwater Technical Assistance Line and the email address in education, outreach and training literature, as well as by the outgoing message on the Stormwater Technical Assistance Line, to be as specific as possible about the place, time and character of the perceived stormwater pollution they observe. In addition, respondents will be encouraged, but not required, to provide their own contact information, so that EH&S personnel can follow up on details necessary for locating and characterizing potential sources of pollution. Claims of pollution to the Stormwater Technical Assistance Line and email address will be investigated within 24 hours.

These two tools for community members to report perceived stormwater pollution will enable personnel properly trained by the Environmental Health & Safety department to visit the area reported and investigate for the possibility of illicit discharge. Additionally, EH&S will track the number of calls as well as time, location, nature of illicit discharges reported, and enforcement actions. EH&S will analyze data annually for patterns and utilize the information to focus its future IDDE efforts.

Measurable Goals

- Provide the Stormwater Technical Assistance Line and email address to members of the UC Santa Barbara community, so they may contact EH&S regarding stormwater concerns and illicit discharges 24-hours a day, 7-days a week (Year 1).
- Ensure the Stormwater Technical Assistance Line is listed in the UC Santa Barbara campus phone book, on the EH&S website, and within the phone directory of the UC Santa Barbara general website (Year 1).
- Ensure the Stormwater Technical Assistance Line and email address are included in all stormwater education, outreach, and training documents (Years 2–5).
- Respond to all calls and emails within 24 hours; maintain a spreadsheet or database of all calls and emails, along with their resolutions (Years 2–5).
- Track all email correspondence and calls to the Technical Assistance Line via database or spreadsheet; record the number of illicit discharges reported including any pertinent details of the discharge. Maintain electronic copies of all email correspondence. Analyze data annually for patterns and utilize the information to focus its future IDDE efforts (Years 2–5).

6.6 ID-6 STORMWATER QUALITY POLICY AND ENFORCEMENT

Implementation Details

The goal of any stormwater management program includes reducing the amount of pollution which enters stormwater, in order to avoid adverse effects to human health or aquatic life. Just as this goal is specific, the policies put in place to achieve this also need to be stated explicitly. While existing UC Santa Barbara policies specifically prohibit the destruction and inappropriate use of University property, they do not specifically address the discharge of pollutants to the MS4. Therefore, EH&S will develop a policy prohibiting unauthorized non–stormwater discharges (NSWDs), and will work with applicable DSRs, University Police, and the County Fire Department to adequately enforce this policy.

Storm Water Quality Policy

Certain unauthorized NSWDs are already expressly forbidden on UC Santa Barbara campus by parking and residential agreements; however EH&S with the assistance of the Administrative and Auxiliary Services, will draft a policy that prohibits NSWDs into the UC Santa Barbara MS4, with the exception of those authorized in the General Permit. This policy will become a tool for UC Santa Barbara to meet the stormwater management requirements of the NPDES regulations and safeguard the public, protect campus property, and prevent damage to the environment. It will be written with the intent to: promote the health, safety, and

public welfare of UC Santa Barbara faculty, staff, and students by guiding, regulating, and controlling the quality of stormwater runoff; protect the University-owned stormwater collection facilities from degradation or disrepair caused by illegal and harmful discharges to the stormdrain system; protect UC Santa Barbara open space from contamination caused by polluted storm water discharges; protect and enhance the water quality of the Goleta Slough, Campus Lagoon, Storke Wetlands, Devereux Slough, Pacific Ocean, and groundwater in a manner pursuant to and consistent with the federal CWA by effectively prohibiting NSWDs to the stormdrain system.

UC Santa Barbara will utilize the following process for adoption of a Stormwater Quality Policy:

- EH&S will develop a draft Stormwater Quality Policy and facilitate internal circulation (Vice Chancellor's staff, various functional areas) and review by the WQWG.
- Revise the draft policy according to the previous review.
- Allow for consultation and review of the draft policy by the Chancellor, Vice Chancellors, Academic Senate, Academic and Administrative Officers, faculty and staff (via the D-List) and by undergraduate and graduate students. Provide public notification of policy development via the Daily Nexus and the Santa Barbara News-Press, and solicit comment.
- Revise the draft policy according to the previous consultations and review.
- Post the draft Stormwater Quality Policy on the EH&S Stormwater Program website, and promote participation and input regarding the content of the Policy.
- Facilitate adoption of the final Stormwater Quality Policy, codify as an EH&S policy, and notify the campus community.

Policy Enforcement

Given the Stormwater Phone Line and email address, the responsibility of certain DSRs to report IDs, and the dry season visual monitoring, EH&S will have many procedures, tools, and personnel in place to detect IDs. In addition, the Campus Operations and Maintenance Program (BMP GH-1) will serve to identify potential IDs. When IDs are detected, EH&S and its trained DSRs will coordinate, identify, and implement methods to eliminate the discharge.

The methods for elimination will be as varied as the sources, types, and possibly, the individual instances of detection for each. Within one business day of confirming detection of an ID, DSRs and EH&S staff will begin investigation as to the best method to address the ID. If possible, IDs will be eliminated immediately. If it will require more than 48 hours to eliminate an ID, EH&S will coordinate with the applicable DSR responsible for addressing the ID, develop a work plan for eliminating the ID, and notify the CCRWQCB with a timeframe for its elimination. Interim measures of ID treatment, collection, and disposal will be utilized until a final solution can be devised.

Currently, a series of enforcement procedures is codified within the UCSB Campus Regulations Applying to Campus Activities, Organizations, and Students and the "Red Binder"-UCSB Policies & Procedures on Academic Personnel for UCSB students and employees respectively. They will continue to be used in all cases of illicit discharge enforcement.

Enforcement procedures for UCSB employees (staff and faculty) include:

1. Informal resolution: (a) oral counseling, (b) letters of concern;
2. Corrective action: (a) written warning, (b) notice of intent for serious corrective action; and
3. Investigatory leave or termination.

Students are subject to University discipline and afforded procedural due process for proper enforcement of University policies and campus regulations. The Chancellor has established procedures that are appropriate for adjudicating charges against students while providing a full range of sanctions to ensure appropriate options in response to each case. Violations of regulations concerning the time, place and manner of the use of University grounds, buildings, or other facilities by individuals and campus groups are reported to the Student Judicial Affairs Office, which may refer the case to the Student-Faculty Committee on Student Conduct. Violations of campus regulations within the residential community as well as violations of conditions contained in housing contracts are reported to the Associate Director, Housing (Apartment Living or Residential Life), or appropriate designee.

The Student-Faculty Committee on Student Conduct is responsible for hearing cases arising out of acts of student misconduct as outlined in Section 102.00 of the University of California Policies Applying to Campus Activities, Organizations and Students, and of the general conduct provisions applying to students and campus organizations outlined in all pertinent chapters of UCSB Campus Regulations. In the event of a violation, a review of charges and formal hearing are conducted. In the event individuals are found guilty of violating University policies and/or campus regulations, they may receive the following sanctions:

- Warning: Written reprimand for violations of specified University policies or campus regulations, including notice to the student that continued or repeated violations of specified University policies or campus regulations may be cause for further disciplinary action, normally in the form of Loss of Privileges and Exclusion from Activities, Suspension, or Dismissal.
- Disciplinary Probation: Suspension of a recommended sanction for a stated period of time during which any other violation of campus regulations resulting in a finding of guilt would be cause for immediate implementation of the previously suspended sanction in addition to sanctions arising from the new charges.
- Loss of Privileges and Exclusion from Activities: Exclusion from participation in designated privileges and extracurricular activities for a specified academic term or terms.
- Suspension: Termination of student status from UCSB for a specified academic term or terms with reinstatement thereafter usually certain.
- Dismissal: Termination of student status from UCSB for an indefinite period.
- Exclusion from Areas of the Campus: Exclusion of a student from specified areas of the campus when there is reasonable cause to believe that the student's presence there will lead to physical abuse, threats of violence, or conduct that threatens the health or safety of any person on University property or at official University functions, or other disruptive activity incompatible with the orderly operation of the campus.
- Interim Suspension: Exclusion from classes, or from other specified activities or areas of the campus, as set forth in the Notice of Interim Suspension, before final determination of an alleged violation.
- Restitution: Reimbursement for damage to or misappropriation of University property may be imposed either exclusively or in combination with other disciplinary action. Such reimbursement may take the form of monetary payment or appropriate service to repair or otherwise compensate for damages.
- An administrative fee may be imposed on students and campus organizations in conjunction with sanctions for any violations.

Violations associated with Section 102.07 (all policies, rules and regulations contained in the Residential Handbooks) are heard by the Residential Review Boards with the exception of those that are serious enough to invoke a penalty of suspension or dismissal from the University. Such violations shall go directly to the Student-Faculty Committee on Student Conduct unless otherwise determined by the Student Judicial Affairs

Office in consultation with the Director, Housing and Residential Services (or designee). Enforcement procedures instituted by the Residential Review Boards are identical to those provided above.

Finally, the Regents of the University of California intend to promulgate under California Education Code section 92440.5 regulations addressing the conduct of persons who are not students, officers, or employees of the University of California (i.e. non-affiliates) when that conduct is a threat to persons or property or constitutes interference with functions or activities of the University. The Regents of the University of California have recently drafted Proposed Regulations Governing Conduct of Non-Affiliates in the Buildings and on the Grounds of the University of California. It is the Regents intent that these regulations will be enforced by an officer or employee authorized to maintain order on the campus or facility. It is currently proposed that the officer or authorized employee make a reasonable attempt to warn and advise a non-affiliate to cease the prohibited conduct or activity before citing and/or arresting the non-affiliate for violating UCSB regulations, except where the conduct reasonably appears to create a threat to or endanger health, safety, or property.

EH&S will handle all stormwater violation and intends to coordinate with the University Police as necessary. The State of California Education Code, Section 92600 gave The Regents of the University of California the authority to establish the University of California Police Department. The authority vested in University peace officers extends throughout the state of California as conferred within the State of California Penal Code, Section 830.2. EH&S will maintain an electronic record of all IDs detected, complete with their location, source, resolution, and enforcement actions. Records will be used annually by EH&S to evaluate trends and possibly prevent future IDs from occurring.

Measurable Goals

- Develop a draft Stormwater Quality Policy; facilitate internal circulation and review by the WQWG; provide public notification and solicit comment; post on the UC Santa Barbara Stormwater Program website (Year 1).
- Facilitate adoption of the final Stormwater Quality Policy (Year 2).
- Enforce the policy, maintain IDDE records, and evaluate annually for trends (Years 1–5).

6.7 ID-7 COMMUNITY HAZARDOUS WASTE COLLECTION CENTER

Implementation Details

UC Santa Barbara and Santa Barbara County work jointly to maintain and manage a hazardous waste collection center at the EH&S building on campus for campus employees, residents, and the surrounding community, visited by approximately 200 people each week. In addition, they also manage a hazardous material recycling program for the laboratories on campus. The facility hours, location, materials accepted, and directions on how to transport materials are provided in the following manner:

- *Flyer*: A flyer printed in both English and Spanish is distributed by the County at public events such as Earth Day, disseminated at apartment complexes, and provided for visitors of the Community Hazardous Waste Collection Center, and available online at http://www.EH&S.ucsb.edu/units/hw/hwrsc/hhw/HHW_Residential_Flyer.pdf.
- *Website*: Information about the program is available online at the UC Santa Barbara EH&S website, http://www.EH&S.ucsb.edu/units/hw/hw.html. Links are provided on the website to request a hazardous waste pickup or a chemical exchange for on-campus laboratories, to the University's Hazardous Waste Minimization Plan, and other links to regulatory background, procedural guides, and the UCSB staff training course list, including courses regarding hazardous waste handling.

- *Phone*: Phone numbers for both the UC Santa Barbara (805-893-7250) and the County of Santa Barbara (805-882-3602) are available for the public to inquire about the Community Hazardous Waste Collection Center and feature an outgoing message with facility information.
- *Media*: The County is responsible for promoting the use of the Community Hazardous Waste Collection Center, both on campus and throughout the surrounding Santa Barbara Community in the media. However, UC Santa Barbara will continue to advertise the program on the EH&S website (address listed above).

Measurable Goals

- Provide a hyperlink on the UC Santa Barbara Stormwater Program website to details of the Community Hazardous Waste Collection Center on the EH&S website (Year 1).
- Track the number of pounds of hazardous waste collected monthly. Maintain the data in an electronic spreadsheet or database (Years 1–5).
- Conduct a Campus waste audit to determine effectiveness of the Community Hazardous Waste Collection Center advertising and availability; share the audit results with the County of Santa Barbara and revise advertising and operations as necessary (Year 3).

Table 6-1
Illicit Discharge Detection and Elimination BMPs, Descriptions, and Measurable Goals

No.	BMP	Description	Measurable Goals	Dept.	Year				
					1	2	3	4	5
ID-1	**Non-Stormwater Discharges**	EH&S will examine authorized non-stormwater discharges at UC Santa Barbara for potential contribution of pollutants to the MS4. Where an authorized non-stormwater discharge is identified as a significant contributor of pollutants, either by way of visual observation or water quality monitoring, it will be eliminated and violations appropriately enforced using the measures identified in ID-6.	1.) Develop inventory of non-stormwater discharges at UC Santa Barbara.	**EH&S**	X				
			2.) Review inventory of non-stormwater discharges on campus for compliance with the General Permit and eliminate those considered to be a significant contributor of pollutants to the MS4. Utilize the appropriate enforcement measures where violations of campus regulations are identified. Track all inventory and enforcement efforts. Track all inventory and enforcement efforts, include this information in the annual report, and use it to help prevent future non-stormwater discharges.	**EH&S**	X				
ID-2	**UC Santa Barbara Stormwater Conveyance Map**	Map/digitize stormwater as-builts; include locations of catch basins (CBs), fossil filters, detention basins and silt separators. Stormdrain outfalls will be identified and numbered.	1.) Survey Main Campus, Storke Campus, North Campus, and West Campus and maintain a GIS data file with all features and labels for integration with other layers of campus maps. Prepare the UC Santa Barbara stormwater conveyance map and post on the UC Santa Barbara Stormwater Program website for public reference.	**D&CS** CCBER EH&S	X				
			2.) Revise campus maps upon physical change to the MS4 as necessary and repost to the UC Santa Barbara Stormwater Program website for public reference.			X	X	X	X

Table 6-1 (Continued)
Illicit Discharge Detection and Elimination BMPs, Descriptions, and Measurable Goals

No.	BMP	Description	Measurable Goals	Dept.	Year				
					1	2	3	4	5
ID-3	**Department Safety Representatives IDDE Training**	EH&S will train DSRs from PF, PF Grounds, and HRS departments in the procedures necessary to detect, report, and eliminate IDs. DSRs will incorporate IDDE information into current departmental training programs to disseminate to all staff.	1.) Assess existing training programs and revise to appropriately incorporate IDDE education.	**EH&S**	X				
			2.) Add IDDE awareness training to current environmental training schedule programs for DSRs in PF, PF Grounds, and HRS.			X	X	X	X
			3.) Schedule and track environmental training for DSRs on the EH&S website.			X	X	X	X
			4.) Assess effectiveness of IDDE awareness training for DSRs in PF, PF Grounds, and HRS departments, based on the number of accurately completed ID reports. Maintain scanned copies of all reports and a database or spreadsheet tracking accuracy. Report these findings in the annual report and use this information to revise the training accordingly.				X	X	X
			5.) Revise training for DSRs as necessary, and maintain electronic copies of revised training program and all attendance records.				X	X	X
ID-4	**Visual Inspections: Dry Weather Outfall Monitoring and Facility Inspections**	EH&S, PF, PF Grounds, and HRS staff will collaborate to establish and maintain a dry weather visual monitoring program for all stormwater outfalls, as well as a campus-wide Pollutant Source and Facility Inspection Program.	1.) Develop an outfall visual inspection protocol, which includes procedures for tracing the sources of illicit discharges, and an inspection checklist for both the outfall monitoring and facility inspections; maintain an electronic copy and revise as necessary.	EH&S **PF** PF Grounds HRS	X				
			2.) Conduct visual inspections of outfalls in accordance with protocol developed during Year 1 and eliminate all IDs. Take digital photos, scan hard copies of visual inspection forms and maintain data electronically.			X	X	X	X

Table 6-1 (Continued)
Illicit Discharge Detection and Elimination BMPs, Descriptions, and Measurable Goals

No.	BMP	Description	Measurable Goals	Dept.	Year				
					1	2	3	4	5
ID-4	**Visual Inspections: Dry Weather Outfall Monitoring and Facility Inspections**	EH&S, PF, PF Grounds, and HRS staff will collaborate to establish and maintain a dry weather visual monitoring program for all stormwater outfalls, as well as a campus-wide Pollutant Source and Facility Inspection Program.	3.) Develop a facility inventory and establish inspection priorities (Year 1). Conduct facility inspections within the Main, Storke, North, and West Campuses according to the facility prioritization established in Year 1; document all inspection findings electronically and eliminate all identified IDs.		X		X		X
			4.) Report any IDs to EH&S for follow-up; track the number, placement, and resolution of identified IDs and maintain electronic records.		X	X	X	X	X
			5.) EH&S will identify opportunities to improve public education and outreach, and provide recommendations for appropriate procedural modifications to eliminate pollution. The Facility Inspection Program will be tailored over time based on results of previous inspections and tracking complaints made to the Stormwater Technical Assistance Line.			X	X	X	X
ID-5	**Stormwater Technical Assistance Line**	EH&S will utilize its existing Technical Assistance Line and email address for the public to inform EH&S of illicit discharges.	1.) Provide the Stormwater Technical Assistance Line and email address to the public, so they may contact EH&S regarding stormwater concerns and illicit discharges 24-hours a day, 7-days a week.	**EH&S**	X				
			2.) Ensure the Stormwater Technical Assistance Line is listed in the UC Santa Barbara campus phone book, on the UC Santa Barbara Stormwater Program website, and within the phone directory of the UC Santa Barbara general website.		X				
			3.) Ensure the Stormwater Technical Assistance Line and email address are included in all stormwater education, outreach, and training documents.			X	X	X	X

Table 6-1 (Continued)
Illicit Discharge Detection and Elimination BMPs, Descriptions, and Measurable Goals

No.	BMP	Description	Measurable Goals	Dept.	Year				
					1	2	3	4	5
ID-5	**Stormwater Technical Assistance Line**	EH&S will utilize its existing Technical Assistance Line and email address for the public to inform EH&S of illicit discharges.	4.) Respond to all calls and emails within 24 hours; maintain a spreadsheet or database of all calls and emails.			X	X	X	X
			5.) Track all email correspondence and calls to the Technical Assistance line via database or spreadsheet; record the number of illicit discharges reported including any pertinent details of the discharge. Maintain electronic copies of all email correspondence. Analyze data annually for patterns and utilize the information to focus its future IDDE efforts			X	X	X	X
ID-6	**Stormwater Quality Policy and Enforcement**	Develop a Stormwater Quality Policy.	1.) Develop a draft Stormwater Quality Policy; facilitate internal circulation and review by the WQWG; provide public notification and solicit comment; post Policy on the UCSB Stormwater Program website.	**EH&S** Planning D&CS PF	X				
			2.) Facilitate adoption of the final Stormwater Quality Policy.			X			
			3.) Maintain IDDE records and evaluate annually.		X	X	X	X	X
ID-7	**Community Hazardous Waste Collection Center**	UC Santa Barbara and the County of Santa Barbara manage the hazardous waste collection center at the EH&S Building on campus for university employees, residents, and the surrounding community; laboratory hazardous materials are also collected.	1.) Provide a hyperlink on the UC Santa Barbara Stormwater Program website to details of the Community Hazardous Waste Collection Center on the EH&S website.	**EH&S**	X				
			2.) Track the number of pounds of hazardous waste collected monthly. Maintain the data in an electronic spreadsheet or database.		X	X	X	X	X
			3.) Conduct a campus waste audit to determine effectiveness of the Community Hazardous Waste Collection Center advertising and availability; share the audit results with the County of Santa Barbara and revise advertising and operations as necessary.				X		

Notes: **Bold** formatting within the "Dept." column indicates the lead department for BMP implementation.

7.0 CONSTRUCTION SITE STORMWATER RUNOFF CONTROL

The purpose of the Construction Site Stormwater Runoff Control MCM is to prevent soil and construction materials and wastes from leaving the site and entering the stormwater drainage system. Sediment is usually the main POC; during a short period of time, construction sites can contribute more sediment to waterways than can be deposited naturally over several decades. The resulting siltation, along with the contribution of other pollutants from construction sites, can cause physical, biological, and chemical harm to local waterways.

The General Permit requires UC Santa Barbara to develop and implement at a minimum:

- An ordinance or other regulatory mechanism to require stormwater quality controls, as well as sanctions, or other effective mechanisms, to ensure compliance, to the extent allowable under state or local law;
- Requirements for construction site operators to implement appropriate stormwater quality control BMPs;
- Requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter, sanitary waste, etc. at the construction site that may cause adverse impacts to stormwater quality;
- Procedures for site plan review which incorporate consideration of potential stormwater quality impacts;
- Procedures for receipt and consideration of information submitted by the public; and
- Procedures for site inspection and enforcement of control measures.

It is evident that UC Santa Barbara has plans to grow extensively (Section 2.3). Due to this increase in development, it is imperative that UC Santa Barbara have an effective program that regulates discharges from construction and development sites while maintaining a positive working relationship with the development community.

The following BMPs will be implemented by UC Santa Barbara within 5 years. Pollutants of concern specifically targeted by the BMPs established in this section include sediment, solid and sanitary wastes, phosphorous, nitrogen, pesticides, oil and grease, concrete truck washout wastewater, construction chemicals, and construction debris. The Construction Site (CS) BMPs are presented in the following subsections and are summarized in **Table 7-1, Construction Site Runoff Control BMPs, Descriptions, and Measurable Goals**, at the end of this section.

7.1 CS-1 DEVELOP AND ADOPT A STORMWATER POLLUTION PREVENTION STANDARD

Implementation Details

Minimizing erosion and sediment runoff from construction sites is one of the primary ways to minimize the discharge of pollutants to the MS4. For construction projects covering an area greater than or equal to one acre, the Construction Storm Water General Permit (Water Quality Order No. 99-08-DWQ) will be obtained, a site-specific Storm Water Pollution Prevention Plan (SWPPP) will be developed and implemented, regular inspections will be performed, and reporting to the CCRWQCB will be completed. Any construction contractor for UC Santa Barbara is contractually obligated to manage site permitting.

The General Permit requires UC Santa Barbara to implement "An ordinance or other regulatory mechanism to require erosion and sediment controls, as well as sanctions, or other effective mechanisms, to ensure compliance, to the extent allowable under State, or local law." Therefore, D&CS will examine policies within

the draft LRDP related to erosion and sediment control for incorporation into a single Erosion and Sediment Control Standard. D&CS will ensure the standard establishes prescriptive language regarding stormwater quality control, and will also consider the following for inclusion into the standard:

- Specific grading and drainage criteria;
- Definitions that conform to those utilized within the General Permit;
- Guidance on the use of approved BMP specifications;
- Authority of construction inspectors as well as site inspection and enforcement procedures;
- Specific requirements and documentation for construction site operators to control and contain waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site.

D&CS, in cooperation with EH&S, will utilize a similar process for review and consultation as that provided for the Stormwater Quality Policy (see BMP ID-6) prior to adoption of the Stormwater Pollution Prevention Standard. Contractor adherence to the Stormwater Pollution Prevention Standard will be a provision of all relevant construction contracts. Enforcement of the Stormwater Pollution Prevention Standard will be conducted through the implementation of onsite construction inspections (See CS-2).

Measurable Goals

- Develop and adopt a Stormwater Pollution Prevention Standard. Utilize a similar process of review and consultation described for the Stormwater Quality Policy, and distribute the standard to the Water Quality Working Group within three months of adoption (Year 1).
- Track compliance with the adopted Stormwater Pollution Prevention Standard (Years 2–5).

7.2 CS-2 CONSTRUCTION SITE INSPECTIONS AND INSPECTOR TRAINING

Implementation Details

Construction site inspections are one of the key components of a successful Stormwater Management Program. Inspections accomplish the following:

- Ensure detailed onsite knowledge of the development activities and progress.
- Allow UC Santa Barbara additional opportunities to provide guidance and education regarding a construction site's runoff control inadequacies and areas for improvement.
- Enable UC Santa Barbara to establish a relationship with the contractor(s).
- Enable UC Santa Barbara to issue immediate warnings and/or assess penalties.
- Enhance UC Santa Barbara MS4 protection efforts.
- Ensure construction BMPs are properly installed and maintained.
- Ensure post-construction stormwater controls (structural and non-structural) are appropriately constructed and installed.

D&CS construction inspectors currently inspect construction sites at UC Santa Barbara to ensure compliance with building and plumbing codes, contract provisions, etc. EH&S will collaborate with D&CS, to ensure these inspectors receive additional training and are performing inspections for stormwater-related elements. Specifically, inspectors will be trained to ensure that the construction SWPPP is present and being adhered to, construction contract specifications are being adequately addressed, and that appropriate stormwater quality control BMPs are implemented and maintained.

D&CS will be responsible for enforcing implementation of appropriate stormwater quality control BMPs. In addition, D&CS will be responsible for enforcing controls to manage construction waste, including discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality. Lastly, D&CS construction inspectors as well as site project managers will assure post-construction stormwater controls (structural and non-structural) are appropriately constructed and/or installed. By way of contract, D&CS has the authority to enforce these requirements and terminate contracts if a contractor is found to be in violation of the Construction Storm Water General Permit or UC Santa Barbara stormwater quality control and waste control policies and/or contract provisions.

D&CS will develop and use a checklist to improve the inspection and enforcement process. Buffer zone inspection requirements will be incorporated into the initial development of the construction inspection checklist. D&CS will also utilize a three-step method of enforcement. Emphasis will first be placed on education and verbal communication of stormwater violations. If education and verbal communication is insufficient to rectify construction site issues, D&CS will utilize more formal methods of notification including stop work orders. Ultimately, D&CS will have the capability to terminate construction contracts and notify the CCRWQCB for continued violation of the Construction Storm Water General Permit, and UC Santa Barbara contract provisions and policies. If the contractor continues construction after a contract has been terminated, D&CS will enlist University Police to shut down construction operations and escort contractors and workers from campus.

UC Santa Barbara construction inspectors will conduct inspections at a minimum frequency of weekly. During grading activities and beginning a week before an anticipated rain event, UC Santa Barbara construction inspectors will heighten their inspection frequency to a daily requirement. If possible, the inspectors will remain onsite until a correction is made; otherwise a written or verbal Notice to Comply will be provided to the developer/contractor with a time schedule for return to compliance.

The construction SWPPP complete with all construction inspections, including stormwater violations and associated corrective actions, will be provided to EH&S upon projection completion. If there is a stormwater violation, EH&S and D&CS will collaborate with the contractor to rectify the problems. All recurring violations will be forwarded to the CCRWQCB for their enforcement support.

Measurable Goals

- Train UC Santa Barbara construction inspectors regarding the Construction Storm Water General Permit requirements, UC Santa Barbara grading and erosion policies, and applicable stormwater quality controls. Document and track all training attendance, and assure hard copies of the training materials are available to all staff (Years 1, 3, and 5).
- Develop and use a checklist to improve the inspection and enforcement process; obtain U.S. EPA stormwater educational materials for distribution to construction contractors where stormwater violations are identified (Year 1).
- Conduct construction inspections at least weekly; heighten frequency to daily a week before an anticipated rain event and during grading activities; utilize the three-step method of violation enforcement (Years 1–5).
- Document all inspection activities including construction site deficiencies, illicit discharges, and required BMP improvements; assure site deficiency resolution within 24 hours (Years 1–5).

7.3 CS-3 RECEIPT AND CONSIDERATION OF INFORMATION SUBMITTED BY THE PUBLIC

Implementation Detail

If proper construction site BMPs are not installed or maintained properly, site discharges are a potential source of stormwater pollution. Information provided by the public can be a tool to eliminate polluted discharges from construction sites, especially on weekend and holidays when site workers are not in the field. ID-5 (the Stormwater Technical Assistance Line and its associated email address) creates a mechanism for the public to report IDs and unauthorized NSWDs observed on campus 24 hours a day, seven days a week.

Therefore, D&CS will post a copy of the permit with applicable contact information allowing the CCRWQCB an opportunity to provide comment and notification to D&CS if the discharge of pollutants is occurring. Public comment regarding construction site deficiencies can be made via use of the proposed IDDE feature on the EH&S website. Receipt of comment and notification related to construction sites will be tracked by D&CS and investigated within 24 hours of notification. D&CS will investigate notifications for compliance with the applicable contract and construction specifications, the Construction Storm Water General Permit, and UC Santa Barbara policies. Compliance will be evaluated by construction site inspectors, EH&S, and D&CS. D&CS will utilize the same three-phase enforcement process outlined in CS-2.

Measurable Goals

- Include in the design for the Stormwater Technical Assistance Line (available 24 hours a day, seven days a week) and email address, a specific tracking system for all calls and emails regarding potential violations at campus construction sites (Year 2).
- Respond to all calls and emails within 24 hours; maintain a spreadsheet or database of all calls and emails, along with their resolutions (Years 3–5).
- Track all email correspondence and calls to the Stormwater Technical Assistance Line via database or spreadsheet and obtain the number of illicit discharges reported. Maintain electronic copies of all email correspondence (Years 3–5).

7.4 CS-4 SWPPP TEMPLATE

Implementation Details

Contractors are required to develop and submit a SWPPP for any construction project that disturbs an area greater than or equal to one acre. Although this is a contractor responsibility, EH&S will work with D&CS to develop and/or approve a standard template SWPPP, which any contractor is required to use to develop their own plan. The template will be similar to that prepared by the California Stormwater Quality Association (CASQA); however, it will be more specific to the needs and policies of UC Santa Barbara.

The Construction General Storm Water Permit is currently being revised by the SWRCB. The SWPPP template will be updated following SWRCB adoption of the revised permit.

Measurable Goals

- Develop a construction SWPPP template for use by UC Santa Barbara construction contractors and provide a web link to the template on the EH&S website (Year 1).
- Track the number of construction SWPPPs submitted to UC Santa Barbara that were prepared utilizing the template; evaluate construction SWPPP compliance and determine effectiveness of UC Santa Barbara SWPPP template annually (Years 2–5).
- Revise the template upon SWRCB adoption of the revised Construction Storm Water General Permit (Year 3).

Table 7-1
Construction Site Runoff Control BMPs, Descriptions, and Measurable Goals

No.	BMP	Description	Measurable Goals	Dept.	Year				
					1	2	3	4	5
CS-1	**Develop and Adopt a Stormwater Pollution Prevention Standard**	Develop and adopt a construction standard to address stormwater pollution prevention at construction sites.	1.) Develop and adopt a stormwater pollution prevention standard. Utilize a similar process of review and consultation described for the Stormwater Quality Policy, and distribute the standard to stakeholders within three months of adoption.	**D&CS** EH&S Planning	X				
			2.) Track compliance with the adopted stormwater pollution prevention standard.			X	X	X	X
CS-2	**Construction Site Inspections and Inspector Training**	Enhance existing construction inspections to include stormwater elements. Supplement inspector training to address Construction Stormwater General Permit requirements, UC Santa Barbara construction contract specifications, erosion and sediment control BMPs.	1.) Train UC Santa Barbara construction inspectors regarding the Construction Stormwater General Permit requirements, UC Santa Barbara grading and erosion policies, and applicable stormwater quality controls. Document and track all training attendance, and assure hard copies of the training materials are available to all staff.	**D&CS** EH&S	X		X		X
			2.) Develop and implement the use of a checklist to improve the inspection and enforcement process; obtain U.S. EPA stormwater educational materials for distribution to construction contractors where stormwater violations are identified.		X				
			3.) Conduct construction inspections at least weekly; prior to an anticipated rain or grading event, heighten frequency to daily; utilize the three-step method of violation enforcement.		X	X	X	X	X
			4.) Document all inspection activities, including construction site deficiencies, illicit discharges, and required BMP improvements; assure site deficiency resolution within 24 hours.		X	X	X	X	X

Table 7-1 (Continued)
Construction Site Runoff Control BMPs, Descriptions, and Measurable Goals

No.	BMP	Description	Measurable Goals	Dept.	Year 1	2	3	4	5
CS-3	**Receipt and Consideration of Information Submitted by the Public**	EH&S will utilize the Stormwater Technical Assistance Line and email address (ID-5) to respond to and track public disclosure of the potential for stormwater pollution at campus construction sites, as observed by the public.	1.) Include in the design for the Stormwater Technical Assistance Line and email address, a specific tracking system for all calls and emails regarding potential violations at campus construction sites.	**EH&S** D&CS		X			
			2.) Respond to all calls and emails within 24 hours, during business hours; maintain a spreadsheet or database of all calls and emails, along with their resolutions.				X	X	X
			3.) Track all email correspondence and calls to the Stormwater Technical Assistance Line via database or spreadsheet; retain the number of illicit discharges reported. Maintain electronic copies of all email correspondence.				X	X	X
CS-4	**SWPPP Template**	EH&S will develop a site-specific SWPPP template, and the construction contractor will use the template to develop the site specific SWPPP.	1.) Develop a Construction SWPPP template for use by UC Santa Barbara construction contractors, and provide a web link to the template on the EH&S website.	EH&S D&CS CCBER	X				
			2.) Track the number of Construction SWPPPs submitted to UC Santa Barbara that utilized the UC Santa Barbara template; evaluate Construction SWPPP compliance annually and determine effectiveness of UC Santa Barbara template.			X	X	X	X
			3.) Revise the template upon SWRCB adoption of the revised Construction Storm Water General Permit.				X		

Notes: **Bold** formatting within the "Dept." column indicates the lead department for BMP implementation.

8.0 POST-CONSTRUCTION STORMWATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT

One of the best opportunities to reduce non-point source pollution is through informed project planning and design. Once construction is complete, rectifying stormwater quality problems can become significantly more complex and expensive to correct. The Post-Construction Stormwater Management MCM focuses on site and design considerations as they relate to stormwater quality, which are most effective when addressed in the planning and design stages of project development. The General Permit requires UC Santa Barbara to:

- Develop, implement, and enforce a program to address stormwater runoff from new development and redevelopment projects that disturb greater than or equal to 1 acre, including projects less than 1 acre that are part of a larger common plan of development or sale, and that discharge into the Non-Traditional MS4 by ensuring that controls are in place that would prevent or minimize water quality impacts.
- Develop and implement strategies which include a combination of structural and/or non-structural BMPs appropriate for the community.
- Use an ordinance or other regulatory mechanism to address post-construction runoff from new development and redevelopment projects to the extent allowable under state or local law.
- Ensure adequate long-term operation and maintenance of BMPs.

The following BMPs will be implemented by UC Santa Barbara within 5 years. The Post-Construction (PC) BMPs are presented in the following subsections and summarized in **Table 8-1, Post-Construction Stormwater Management BMPs, Descriptions, and Measurable Goals**, at the end of this section.

8.1 PC-1 DESIGN PROFESSIONALS TRAINING

Implementation Details

It is necessary to train CD&F staff who design and conduct plan reviews for new development and redevelopment projects such as buildings, roads, walkways, athletic fields, and stormwater conveyance systems in the principles of post-construction stormwater management and LID. UC Santa Barbara design professionals will be trained in site planning measures, LID, and post-construction stormwater controls to minimize stormwater pollution. The utilization and design of specific sustainable building and runoff management practices such as pervious pavements, greenways, green roofs, and bioretention cells will be the focus of the subject training. A review of non-structural and structural stormwater controls will also be a focus of the training. Upon development of the Hydromodification Management Plan, the training will be revised to include pertinent details of UC Santa Barbara hydromodification control criteria including applicability criteria, exemptions, etc.

Measurable Goals

- Identify and/or develop post-construction stormwater management training opportunities for UC Santa Barbara design professionals (Year 1).
- Assure 100% of D&CS design professionals attend one post-construction stormwater management training session every two years; track attendance, and assure hard copies of the training materials are available to all staff. All new D&CS design professionals will attend one post-construction stormwater management training session at the start of their employment (Years 1, 3, 5).

8.2 PC-2 RIPARIAN, WETLAND, AND ENVIRONMENTALLY SENSITIVE HABITAT AREA PROTECTION

Implementation Details

UC Santa Barbara clearly acknowledges the value and necessary protection of its natural setting, including riparian, wetland, and environmentally sensitive habitat areas, as documented within the Campus Plan and the current and draft LRDP. The University's goals and objectives for long term protection through the implementation of buffer zones around these areas are most evident in the policies presented within the 1990 and draft LRDP, presented in **Appendix C, 1990 Long Range Development Plan Policies as Amended.** Current policies, as well as those presented in the draft LRDP, address a range of natural resources and will provide protection of riparian, wetland, and environmentally sensitive habitat areas to the MEP. A minimum 100-foot wetland buffer and 50-foot riparian buffer will be adhered to. Additionally, the widths associated with buffer zones vary in size and have been developed to include consideration and prioritization of local conditions, such as habitat degradation, water quality, and land management practices. This consideration and prioritization is clearly acknowledged within the current and draft LRDP policies.

University policies related to the protection of riparian, wetland, and environmentally sensitive habitat areas are utilized at the time of a project's site and environmental review conducted by Planning staff. Proposed projects which may impact a riparian, wetland, or environmentally sensitive area at UC Santa Barbara are conditioned according to the policies established within the LRDP. The California Coastal Commission also reviews a proposed project's potential to impact riparian, wetland, and environmentally sensitive habitat areas. This review may result in additional setbacks and buffering if it is determined necessary. UC Santa Barbara, D&CS, and Planning will ensure all policies are adhered to and that the appropriate buffer zones are adequately designed and constructed into projects. Furthermore, D&CS will ensure construction site inspectors examine potential impacts to prescribed buffer zones and their associated riparian, wetland, and environmentally sensitive habitat areas during construction activities. Buffer zone inspection requirements will be incorporated into the initial development of the construction inspection checklist.

Measurable Goals

- Upon adoption of the final LRDP, assure all policies related to the use of buffer zones are adequately incorporated into a projects design (Years 1-5).
- Update the construction site checklist referred to in CS-2 to include a mandatory review of site prescribed buffer zones to assure there is no impact to riparian, wetland, and environmentally sensitive habitat areas (Year 1).

8.3 PC-3 LONG RANGE DEVELOPMENT PLAN AND UNIVERSITY OF CALIFORNIA, OFFICE OF THE PRESIDENT POLICY ON GREEN BUILDING DESIGN AND CLEAN ENERGY STANDARDS

Implementation Details

UC Santa Barbara is currently engaged in preparing a LRDP that will significantly affect new development and storm water management of the four principal campuses: Main, Storke, West, and North Campus. In addition, the Regents have adopted the UC Policy on Sustainable Practices (University of California, Office of the President 2007), which also affects stormwater management.

The draft LRDP identifies and describes the physical development needed to achieve the campus's academic goals through 2025. It is a land use plan for the development of future campus facilities; however it does not commit the University to the construction of any particular project. The draft LRDP is based upon a number of key principles, one of which is to Integrate Sustainable Practices, which ultimately includes minimizing impact to the environment by "defining and protecting environmentally sensitive areas of the campus,

including coastal resources" and "continuing to expand an enhancement program for the surrounding natural environment: the sloughs, Campus Lagoon, and shoreline."

Campus policies have been incorporated throughout the draft LRDP to address stormwater runoff from new development and redevelopment, including the requirements for controls to prevent or minimize water quality impacts. A summary of these campus policies which directly and indirectly address the protection of water quality can be found in Appendix C or at the following website: http://www.ucsbvision2025.com/downloads.html.

The draft Environmental Impact Report (EIR) for the draft LRDP is currently undergoing public review. Mitigation measures within the draft EIR for further protection of downstream water quality include the following:

- Stormwater Pollution Prevention Plans (SWPPPs) prepared for specific projects will include measures to particularly address known pollutants of concern on campus. These include metals such as copper and zinc, nitrates, phosphorous, and pesticides. Potential sources of these pollutants shall be identified for each phase of construction, including the post-construction scenario, and measures will be included, implemented and monitored to ensure the potential for these pollutants to reach surface or ground water, including ocean waters, is reduced to the maximum extent practicable. Measures may include, but are not limited to:
  - Limiting or prohibiting application of copper and other decorative finishes.
  - Limiting or eliminating sandblasting or pressure washing where copper or zinc finishes are present.
- The University shall install and maintain technologies effective at removing sediments and otherwise treating runoff, including Continuous Deflective Separation devices or similar technologies. Technologies selected shall reduce particulate matter.
- Proposed stormdrain improvements shall be sized appropriately to convey runoff resulting from a 25-year storm after buildout of the 2008 LRDP has occurred. Proposed sewer line improvements shall accommodate buildout of the 2008 LRDP.

The UC Policy on Sustainable Practices requires UC Santa Barbara to design and build all new laboratory buildings to the equivalent of Laboratories for the 21st Century (Labs21) Environmental Performance Criteria (EPC), build all other new buildings to the equivalent of a LEEDTM 2.1 certified rating, and to apply sustainability principles to any significant renovation projects (University of California, Office of the President 2003). These sustainable design principles are applicable to all new buildings submitted for first formal scope and budget approval after July 1, 2004.

Stormwater quality design standards derived from the draft LRDP and the UC Policy on Sustainable Practices will be coordinated with the SWMP and incorporated into the Campus Standards (University of California, Office of the President 2003).

Measurable Goals

- Adopt the Final LRDP and ensure all new development and redevelopment projects adhere to the campus policies defined within the Regents approved Final LRDP and the water quality mitigation measures within the Final EIR. Revise the SWMP to include all applicable hydrology and water quality mitigation measures established within the Final EIR (Years 2–5).
- Revise the UC Santa Barbara Campus Standards to incorporate stormwater-related design requirements identified in the Final LRDP, the associated Final EIR, those developed from

preparation of the Hydromodification Management Plan (see BMP PC-5), and to comply with the General Permit (Year 2-5).

- Apply applicable sustainable design principles to all new buildings (Years 1–5).

8.4 PC-4 INVENTORY AND MAINTENANCE OF STRUCTURAL STORMWATER BMPS

Implementation Details

As a non-traditional MS4, UC Santa Barbara is the final owner of nearly all structural BMPs. Various structural stormwater BMPs have been implemented throughout the UC Santa Barbara Main Campus since 1990, with the intention to reduce or eliminate stormwater pollution and protect downstream water quality. Examples of these utilized on campus include Continuous Deflection Separation (CDS) Systems and drain inlet filtration devices which capture trash/debris and sediment. Retention ponds and bioswales, which slow the velocity of stormwater allowing it to infiltrate and thus reduce runoff, have also been effectively utilized near some of the residential facilities, such as San Clemente housing and the Manzanita Village.

The appropriate construction, operation, and maintenance of these structural controls is critical to ensuring long-term operation, improved downstream water quality, and protection of groundwater. D&CS will continue to conduct the inspection of installed structural and non-structural stormwater controls for adherence to approved design specifications and to ensure that they are installed and continue to function effectively and as required. To properly maintain existing and future structural BMPs, PF and HRS will develop an inventory of these features and will continually update it as necessary. Details related to their size, model, manufacturer, installation date, and maintenance requirements will be documented. The location of structural BMPs will also be noted and will be integrated into the MS4 Map (ID-2) as a dedicated GIS layer. Structural stormwater controls will be inspected as specified in BMP GH-1.

The responsibility for inventory & maintenance of structural BMPs will depend on its location. Just as PF and PF Grounds are responsible for the maintenance of academic and administrative facilities and their surroundings, so will they be responsible for the inventory and maintenance of structural BMPs within these areas. HRS and its grounds division will likewise be responsible for the inventory and maintenance of structural BMPs at the residential facilities they serve. Departments such as PF, PF Grounds, and HRS will coordinate to develop a master list of structural BMPs which will be maintained by entities such as PF.

In the event an illicit discharge or connection is identified during the process of structural BMP maintenance, EH&S will be notified immediately. Illicit discharge response procedures and tracking will be followed as described within BMP ID-6.

Measurable Goals

- Coordinate, develop, and maintain an inventory of structural BMPs throughout the Main, Storke, West, and North Campuses and update annually (Years 1–5).
- Integrate this inventory as a dedicated GIS layer of the UC Santa Barbara MS4 map and update annually (Years 2–5)
- Establish and implement a maintenance schedule for every structural BMP on campus (Years 1–5).

8.5 PC-5 HYDROMODIFICATION MANAGEMENT PLAN

Implementation Details

In response to the February 15, 2008 letter from the CCRWQCB regarding hydromodification control requirements, UC Santa Barbara has established a strategy to develop a watershed-based Hydromodification

Management Plan (HMP). The goal of the HMP development process is to determine an economically viable and practicable hydromodification management strategy that will provide protection of water resources (i.e., water quality, beneficial uses, biological and physical integrity of watersheds and aquatic habitats) at the University to the MEP.

Although hydromodification is considered by the CCRWQCB to be a substantial issue in the central coast region, this phenomenon may not play a significant role on the UCSB campus. Due to several unique characteristics of this site, it is anticipated that hydromodification control requirements similar to the interim standards proposed in the CCRWQCB February 15, 2008 letter would not be technically feasible and could unnecessarily limit development. Conditions such as highly impermeable soils, susceptibility to bluff erosion, downstream proximity within the watershed, and minimal presence of substantial streams may diminish or preclude the need to implement hydromodification management techniques.

For example, several local soil investigations have documented a shallow impermeable soil horizon on campus. This impermeable layer will limit the effectiveness of infiltration techniques and may even contribute to increased erosion by causing the stormwater to daylight at the nearby bluffs. Additionally, since the primary intent of the interim standards proposed in the CCRWQCB February 15, 2008 letter is to eliminate in-stream erosion, it should be noted that the majority of the campus drains directly to the Campus Lagoon via hardened stormwater drains or channels. The ephemeral streams to which the remainder of the campus drains can be measured in units of feet, rather than miles. For most of these stream lengths, the hydrologic (and associated erosive energy) contributions of the campus land are very small compared to the upstream contributions.

It is expected that a balance must be struck between maximizing infiltration to the extent practicable and revetment of the remaining (if any) short stream lengths that may be at risk of erosion due to future development. The purpose of this proposed HMP will be to investigate different management strategies and determine the most appropriate approach that will protect the beneficial uses of streams and other downstream waterbodies on campus.

The process will consider how implementation of different runoff volume and rate control techniques, Low Impact Development (LID) strategies, and riparian buffer zones might impact local stream stability and water quality. Primary focus will be placed upon examining impacts to receiving waterbodies such as the Campus Lagoon and Devereux Slough. The HMP will achieve the following objectives:

- Establish numeric criteria for runoff rate and volume control for development and redevelopment projects;
- Establish numeric criteria for stream stability impacts for development and redevelopment projects;
- Identify areas within campus where these criteria must be met;
- Specify performance and monitoring criteria for installed hydromodification control infrastructure; and
- Establish a strategy for education of the appropriate University staff on LID and hydromodification control concepts.

It is the University's intent that implementation of the HMP will meet the goals identified in the February 15, 2008 letter from the CCRWQCB by (1) maximizing infiltration and minimizing runoff volume and rate, (2) protecting riparian areas with buffer zones, (3) minimizing pollutant loading, and (4) providing long-term watershed protection.

An outline of the preliminary work plan for development of UC Santa Barbara's HMP follows:

1. Develop Problem Statement and Objectives
2. Review Literature and Data Availability
3. Characterize Watershed and Future Development Patterns
4. Determine Preliminary Assessment Methodology
5. Establish Interim Hydromodification Control Criteria
6. Refine Assessment Methodology
7. Adopt/Develop Guidance for Hydromodification Control Selection, Design, Monitoring, Maintenance, and Inspection
8. Develop Implementation Strategy

The following describes each task in detail:

8.5.1 Task 1: Develop Problem Statement and Objectives

Objective: Describe the problem and objectives.

Scope: The stormwater management concerns and regulatory background that led to the issuance of the HMP requirements will be summarized and the scope of the hydromodification management objectives described. The goals of the HMP and the development process will be presented.

Output: Short technical memorandum.

8.5.2 Task 2: Review Literature and Data Availability

Objective: Summarize pertinent literature and data sources.

Scope: The literature review will identify and summarize relevant technical documents on the following subjects:

- Watershed characterization data (precipitation, acreage, soils, streams, sloughs, wetlands, riparian areas, effective impervious area (EIA), hydrology);
- Assessment methodologies (hydrologic, water quality, EIA, buffer zones, stream stability); and
- Hydromodification design guidance.

Output: Technical memorandum and database of references.

8.5.3 Task 3: Characterize Watershed and Future Development Patterns

Objective: Document baseline watershed conditions and future development plans.

Scope: Based upon information identified in Task 2 and supplemented with field surveys, key characteristics of the watershed will be documented in terms of hydrology, hydraulics, geomorphology, and water quality. This may include watershed geology, stream characteristics (e.g., sediment sources, erosion and depositional zones, slope, stream type, discharge magnitude), drainage system functionality, land use patterns, and general water quality issues. The methods employed for this task will include a review and collation of existing information (e.g., maps, reports, aerial photographs) and brief observational field assessments. Stream segments and receiving waterbodies will be classified into categories such as type, size, water quality, or other

criteria and will be mapped using GIS. Anticipated future development areas will be overlaid on this map and a preliminary assessment of at-risk and exempt stream segments and receiving waterbodies will be performed.

Output: Technical memorandum and GIS database.

8.5.4 Task 4: Determine Preliminary Assessment Methodology

Objective: Evaluate preliminary assessment alternatives and select a method.

Scope: Based upon the findings of Task 2, the University will evaluate simplified methods for assessing the results of urbanization on the watershed and determining the effectiveness of proposed control measures. This evaluation will include assessment methods that are well understood or currently used by other governing agencies. The methods will be compared and the most appropriate method selected.

Output: Technical memorandum.

8.5.5 Task 5: Establish Interim Hydromodification Control Criteria

Objective: Develop interim standards for hydromodification management.

Scope: The University will utilize the preliminary assessment method determined in Task 4 to predict impacts of watershed urbanization based upon different levels of hydromodification controls. Controls may include limits on maximum runoff rates and effective impervious area. An assessment of project applicability and exceptions will be accomplished. Interim hydromodification criteria will be established. UC Santa Barbara will allow the CCRWQCB a minimum of 3 weeks for review of the interim hydromodification control criteria.

In a June 8, 2009 Notice of Enrollment letter received by the University, the Central Coast Regional Water Quality Control Board required the University to develop interim hydromodification criteria. Within one year of enrollment under the General Permit, the University will have adequate development review and permitting procedures to impose conditions of approval, or other enforceable mechanisms, to implement quantifiable measures (numeric criteria) for hydromodification control on projects whose applications are deemed complete after the first anniversary of enrollment under the General Permit.

Attached to the Notice of Enrollment letter was the CCRWQCB's Final Table of Required Revisions, which includes three options for the development of interim hydromodification criteria: Option 1, Option 2, and Option 3. The University selected the methodology in Option .3:

- Identify a range of runoff flow rates for which post-project runoff flow rates and durations shall not exceed pre-development runoff rates and durations, where the increased discharge rates and durations will result in offsite erosion or other significant adverse impacts to beneficial uses. Pre-development refers to the soil type, vegetation, and amount of impervious surface existing on the site (as opposed to operations or uses on the site) prior to the development project or redevelopment project.
- Establish numeric criteria for development projects to maximize infiltration onsite and approximate natural infiltration levels to the maximum extent practicable and to effectively implement applicable Low Impact Development (LID) strategies.
- Identify the projects, including project type, size, and location, to which the University will apply the interim criteria. The projects to which the University will apply the interim criteria will include all those projects that will cause offsite erosion or other significant adverse impacts to beneficial uses.
- Identify methods to be used by project proponents to demonstrate compliance with the interim discharge rate and duration criteria, including continuous simulation of the entire rainfall record.

- Identify methods to be used by project proponents to demonstrate compliance with the interim infiltration criteria, including analysis of site imperviousness.

The University did not select Option 1, which states:

The proposed criteria may include the following types of requirements which provide a high degree of assurance of effective hydromodification control without regard to the nuances of individual watersheds:

- For new and redevelopment projects, Effective Impervious Area shall be maintained at less than five percent (5%) of total project area.
- For new and redevelopment projects that create and/or replace 5,000 square feet or more of impervious surface, the post-construction runoff hydrographs shall match within one percent (1%) the pre-construction runoff hydrographs, for a range of events with return periods from 1-year to 10-years.
- For projects whose disturbed project area exceeds two acres, preserve the pre-construction drainage density (miles of stream length per square mile of watershed) for all drainage areas serving a first order stream or larger, and ensure that post-project time of concentration is equal or greater than pre-project time of concentration.

Nor did the University select Option 2, which states:

- Adopt and implement hydromodification criteria developed by another local municipality and approved by the Water Board, such as the criteria the Water Board adopted for the City of Salinas, as interim criteria.

Output: Technical memorandum.

8.5.6 Task 6: Refine Assessment Methodology

Objective: Refine assessment methodology.

Scope: Building upon the results of the previous tasks, the University will refine the methods for assessing the results of urbanization on the watershed and determining the effectiveness of proposed control measures. This process may include the development or refinement of hydrologic models and BMP selection tools. Assessment methods will address the following issues:

- Estimate hydrograph modification (volume, duration, and rate);
- Accommodate a wide range of flow events (e.g., 1- to 10-year return period);
- Evaluate EIA;
- Evaluate downstream affects;
- Estimate buffer zone requirements; and
- Estimate water quality impacts.

Output: Technical memorandum.

8.5.7 Task7: Adopt/Develop Guidance for Hydromodification Control Selection, Design, Monitoring, Maintenance, and Inspection

Objective: Adopt/Develop requirements and guidance to assist project proponents in the selection, design, and maintenance of hydromodification control measures.

Scope: Guidance for selection, design, monitoring, maintenance, and inspection of hydromodification control measures will be developed under this task. Findings from the previous tasks will form the foundation for this portion of the HMP and will ensure that the recommendations included in the HMP will meet the objectives of protecting water resources at the University to the maximum extent practicable. The following objectives will be achieved under this task:

- Establish numeric criteria for runoff rate and volume control for development and redevelopment projects;
- Establish numeric criteria for stream stability impacts for development and redevelopment projects;
- Identify areas on campus where these criteria must be met;
- Specify performance and monitoring criteria for installed hydromodification control infrastructure; and
- Establish riparian buffer zone requirements.

Development of an appropriate hydromodification control strategy will primarily focus on minimizing negative impacts on the receiving waterbodies. Control measures may include LID concepts (bioswales, check dams to slow velocity, directing roof and hardscape runoff to landscaped areas), on-site hydrologic and water quality controls, in-stream controls, and regional facilities to meet future development conditions. It is the University's intent that implementation of these guidelines will result in improved water quality throughout the watershed.

Output: HMP final document and an amendment to the UC Santa Barbara Campus Design Standards (i.e. revision to Division 01 or development of new Division within the Campus Design Standards).

8.5.8 Task 8: Develop Implementation Strategy

Objective: Provide an implementation plan.

Scope: Under this task, an implementation plan will be developed to address the roles and responsibilities of the University and others in carrying out the plan. This will include a program evaluation plan to ensure that data gleaned from inspections, monitoring, and other follow-up activities are evaluated and used to improve the HMP over time. Additionally, an education program will be developed to ensure that key parties are informed and aware of HMP concepts and requirements.

Output: Technical memorandum.

Measurable Goals

- Ensure Tasks 1 through 5 of the HMP work plan are accomplished. These efforts shall result in the following: a brief technical memorandum stating the problem and objectives; a literature review and data availability report; a watershed characterization report; and a technical memorandum summarizing the interim requirements and preliminary assessment methodology (Year 1).
- Based upon the findings of Tasks 1 through 5, CD&F will ensure Tasks 6 through 8 are accomplished. These efforts shall result in the development of a report describing the assessment methodology, numeric criteria, and areas of applicability. Tasks 6 and 8 will result in a final HMP,

an amendment to the UC Santa Barbara Campus Design Standards, and an implementation strategy in the form of a technical memorandum (Year 2).

8.6 PC-6 IMPROVED PROJECT PLANNING, DESIGN, AND APPROVAL PROCESS

Implementation Details

Water quality protection and the goals of post-construction stormwater management must be considered at every step of the new development and redevelopment process, so that post-construction stormwater management solutions can be fully integrated into the finished product. The project planning, design, and approval process followed by UC Santa Barbara will be used during the 5-year implementation period of this Plan to incorporate controls that will prevent or minimize water quality impacts.

Project Design

CD&F coordinates the development of preliminary plans and conceptual designs for a proposed project. The inclusion of post-construction stormwater management considerations, such as the minimization of contiguous impervious pavement surface to reduce runoff, and inclusion of retention ponds and/or wetlands to treat runoff and allow for infiltration is critical to the successful protection of downstream surface waters. Once all parties agree to the design concept, CD&F administers and distributes requests for proposals to consultants, which reference applicable design and engineering specifications (which will include hydromodification control criteria developed at the end of implementation Year1 and Year 2). Design plans prepared by consultants will only be deemed complete by CD&F if applicable post-construction BMP selection, sizing, and siting, as defined in the Hydromodification Management Plan, are incorporated. Non-adherence to University criteria and specifications will result in a breach of contract and will be referred to General Counsel of the University of California Office of the President (UCOP).

UC Regents and the Design Review Committee also approve the consultant-prepared designs and plans. Members of the Design Review Committee include the Associate Vice Chancellor for Design, Construction, and Facilities Management who will receive post-construction stormwater control training as specified in BMP PC-1. All departments associated with the implementation and maintenance of post-construction stormwater management strategies will be provided an opportunity to comment. UC Santa Barbara also intends to circulate applicable projects (those which require the use of post-construction stormwater controls) to WQWG members and solicit comments related to post-construction stormwater management.

Project Planning and Oversight

University projects require extensive planning and independent reviews prior to their entering the formal approval process. Project items to be reviewed include design and cost, site, seismic activity, and environmental impact. A campus facility must prepare environmental documentation for all projects (UCOP, 1994). UC Santa Barbara currently uses the CEQA checklist to conduct an initial review of the project and to identify environmental and water quality impacts. The CEQA checklist can be found at: http://www.ucop.edu/facil/pd/CEQA-Handbook/uc_ceqaw.doc. The CEQA checklist specifically examines the potential for impact to water quality and land use, of which the latter addresses potential "conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the LRDP, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect." During this review the Office of Campus Planning and Design will also analyze the project/design for conformance with the applicable hydromodification (see BMP PC-5) exemptions, applicability criteria, performance criteria, and thresholds established.

Based on the potential environmental impacts of a project, the Office of Campus Planning and Design will determine if a project is CEQA exempt, requires preparation of a Mitigated Negative Declaration or Environmental Impact Report. Post-construction stormwater runoff quality and quantity are addressed in the

hydrology analysis of a project and is based on pre-project conditions and design. Based on the post-construction analysis within the applicable environmental document, the necessary mitigation measures and conditions will be appropriately applied. If inadequate post-construction controls are incorporated into a project/design, project amendments or design revisions will be requested with specific reference to the hydromodification control criteria. EH&S, PF, PF Grounds, HRS, and D&CS have traditionally served as stakeholders during the environmental review and design review process. Grounds Maintenance has also been included in aspects of the design review process.

After the independent reviews (design, cost, and seismic) are completed, a project requiring Regents' approval or Senior Vice President's approval may be submitted. This process involves the preparation of an Action Item, the review of the project with the Office of the President, and a presentation to the Regents (University of California, Office of the President 1989). Site approval is delegated to chancellors, provided the site is in general accordance with an approved LRDP. Once the project has been developed to a sufficient level of detail, and after all necessary campus design approvals have been obtained, a project may be accepted and construction begun (University of California, Office of the President 2008).

Project Tracking

Currently, UC Santa Barbara utilizes a series of spreadsheets for general tracking of a construction project's progress. A current inventory of projects can be found on the UC Santa Barbara D&CS website (http://facilities.ucsb.edu/projects_and_information/major/default.asp). D&CS will revise its current system of project tracking to ensure the precise location; contractor; size in acres; proximity to natural and man-made hydrologic features; project start and anticipated completion dates; required inspection frequency; items to be inspected at each inspection; inspection results; complaints or reports submitted by the public; all violations and associated enforcement actions taken; and any follow-up inspections to insure correction. The spreadsheet will also denote whether post-construction stormwater quality and adherence to hydromodification control criteria are adequately addressed during the various phases of project planning, design, and approval. Finally, the tracking system will be updated to ensure all appropriate University stakeholders, including members of the WQWG, are notified in a timely manner to review a project's proposed post-construction stormwater management controls.

Student Award

Students will be encouraged to participate in and learn about post-construction development practices. After the HMP is developed (Year 2), students will be solicited for innovative post-construction stormwater projects and concepts that could be potentially implemented on campus. EH&S in coordination with CD&F will judge submitted projects and EH&S will award a winning project. Winning projects will be judged for their potential future incorporation into a UC Santa Barbara redevelopment or new development project as well as for the project to have the greatest probability of improving runoff water quality. CD&F will later ascertain if designs can be incorporated into current or future projects.

Measurable Goals

- Include appropriate post-construction stormwater controls into conceptual designs produced by PF, D&CS and consultants; ensure applicable LRDP policies, engineering and construction specifications, and hydromodification control criteria (interim and final) are adhered to for all campus development or redevelopment projects (Years 1–5).
- Revise project tracking system to ensure basic site information is documented; post-construction stormwater controls are adequately addressed during all phases of project planning, design, and approval; and appropriate campus stakeholders are provided timely notification for opportunities to review proposed post-construction stormwater management controls (Years 2–5). Maintain records

of all projects and the post-construction stormwater controls implemented; ensure the project files are available to the public (Years 2–5).

- Solicit student post-construction stormwater control conceptual designs; award one student annually with an award for the conceptual design with the greatest potential to be incorporated into a UC Santa Barbara redevelopment or new development project and which also has the greatest chance of improving runoff water quality (Years 4–5).

8.7 PC-7 POST-CONSTRUCTION STORMWATER POLICY

Implementation Details

EH&S with the assistance of CD&F, will develop a Post-Construction Stormwater Policy intended to address post-construction runoff from new development and redevelopment projects. The purpose of this Policy shall be the establishment of minimum post-construction stormwater management requirements and controls to protect water quality, receiving waters, and the watershed. The Policy will be developed with the following considerations:

- Minimize increases in stormwater runoff from any new development or significant redevelopment in order to reduce flooding, siltation and stream bank erosion, and maintain the integrity of stream channels;
- Minimize increases in non-point source pollution caused by stormwater runoff from new development and significant redevelopment which would otherwise degrade local water quality;
- Minimize the volume of surface water runoff and discharge rate that flows from any specific site during and following new development and significant redevelopment to not exceed the pre-development hydrologic regime to the MEP; and
- Reduce stormwater runoff rates and volumes, soil erosion and non-point source pollution, wherever possible, through stormwater management controls and to ensure that these management controls are properly maintained and pose no threat to public safety.

The aforementioned considerations are intended to reduce the impact of storm water on receiving waters although the University at the time of Policy development will use its own discretion and authority to refine its list of considerations based on priority water quality and habitat issues.

UC Santa Barbara will review and consider new methods of pollution controls for the Policy, such as:

- Minimizing impervious surfaces of newly developed urbanized areas and, where possible, disconnecting impervious surfaces allowing for natural onsite infiltration of water.
- Mechanical or structural stormwater treatment devices (drain filters/inserts).
- Vegetative treatments (such as: bioswales, rain gardens, stormwater planters, etc.).
- Native vegetation protection (where applicable).

Measurable Goals

- Adopt a Post-Construction Stormwater Policy intended to address post-construction runoff from new development and redevelopment projects (Year 2).
- Enforce the Post-Construction Stormwater Policy adopted in Year 2 and track all stormwater runoff pollution prevention enforcement actions (Years 2–5).

Table 8-1
Post-Construction Stormwater Management BMPs, Descriptions, and Measurable Goals

No.	BMP	Description	Measurable Goals	Dept.	Year				
					1	2	3	4	5
PC-1	**Design Professional Training**	UC Santa Barbara design professionals will be trained in site planning measures, LID, and post-construction stormwater controls to minimize post-construction stormwater pollution.	1.) Identify and/or develop post-construction stormwater management training opportunities for UC Santa Barbara design professionals.	**D&CS**	X				
			2.) Assure 100% of D&CS design professionals attend one post-construction stormwater management training session every two years. Track attendance and assure hard copies of the training materials are available to all staff. All new D&CS design professionals will attend one post-construction stormwater management training session at the start of their employment.		X		X		X
PC-2	**Riparian, Wetland, and Environmentally Sensitive Habitat Area Protection**	CD&F will ensure all campus policies are adhered to and that the appropriate buffer zones are adequately designed into projects. Furthermore, D&CS will ensure construction site inspectors examine potential impacts to prescribed buffer zones and their associated riparian, wetland, and environmentally sensitive habitat areas during construction activity.	1.) Upon adoption of the final LRDP assure all policies related to the use of buffer zones are adequately incorporated into a projects design.	**Planning** D&CS EH&S B&P	X	X	X	X	X
			2.) Update the construction site checklist (CS-2) to include a mandatory review of site prescribed buffer zones to assure there is no impact to riparian, wetland, and environmentally sensitive habitat areas.		X				
PC-3	**Long Range Development Plan and UC Policy on Sustainable Practices**	Stormwater design standards derived from the draft LRDP and the UC Policy on Sustainable Practices will be coordinated with the SWMP and incorporated into the Campus Standards.	1.) Adopt Final LRDP and ensure all new development and redevelopment projects adhere to the campus policies defined within the Regents approved Final LRDP and the water quality mitigation measures within the Final EIR. Revise the SWMP to include all applicable hydrology and water quality mitigation measures established within the Final EIR.	**D&CS Planning** EH&S B&P		X	X	X	X

Table 8-1 (Continued)
Post-Construction Storm Water Management BMPs, Descriptions, and Measurable Goals

No.	BMP	Description	Measurable Goals	Dept.	Year 1	2	3	4	5
PC-3	**Long Range Development Plan and UC Policy on Sustainable Practices**	Stormwater design standards derived from the draft LRDP and the UC Policy on Sustainable Practices will be coordinated with the SWMP and incorporated into the Campus Standards.	2.) Revise the UC Santa Barbara Campus Standards to incorporate stormwater related design requirements identified in the Final LRDP, the Final EIR, those developed from preparation of the Hydromodification Management Plan, and to comply with the General Permit.			X	X	X	X
			3.) Apply applicable sustainable design principles to all new buildings		X	X	X	X	X
PC-4	**Inventory and Maintenance of Structural Stormwater BMPs**	PF and HRS will develop an inventory of structural BMPs and will continually update as necessary.	1.) Coordinate, develop, and maintain an inventory of structural BMPs throughout campus, and update annually.	**PF** **HRS** D&CS EH&S PF Grounds	X	X	X	X	X
			2.) Integrate this inventory as a dedicated GIS layer of the UC Santa Barbara MS4 map and update annually.			X	X	X	X
			3.) Establish and implement a maintenance schedule for every structural BMP on campus.		X	X	X	X	X
PC-5	**Hydromodification Management Plan**	UC Santa Barbara has established a strategy to develop a watershed-based *Hydromodification Management Plan* (HMP) to determine an economically viable and practicable hydromodification management strategy that will provide protection of stormwater at the University to the maximum extent practicable.	1.) Ensure Tasks 1 through 5of the HMP work plan are accomplished. These efforts shall result in the following: a brief technical memorandum stating the problem and objectives; a literature review and data availability report; a watershed characterization report; and a technical memorandum summarizing the interim requirements and preliminary assessment methodology.	**D&CS** Planning EH&S	X				
			2.) Based upon the findings of the Tasks 1 through 5, CD&F will ensure Tasks 6 through 8 are accomplished. These efforts shall result in the development of a report describing the assessment methodology, numeric criteria, and areas of applicability. Tasks 6 through 8 will result in a final HMP, an amendment to the UC Santa Barbara Campus Design Standards, and an implementation strategy in the form of a technical memorandum.			X			

Table 8-1 (Continued)
Post Construction Storm Water Management BMPs, Descriptions, and Measurable Goals

No.	BMP	Description	Measurable Goals	Dept.	Year 1	2	3	4	5
PC-6	**Improved Project Planning, Design, and Approval Process**	The project planning, design, and approval process followed by UC Santa Barbara will be used during the 5-year implementation period of this Plan to incorporate controls that will prevent or minimize water quality impacts.	1.) Include appropriate post-construction stormwater controls into conceptual designs produced by PF, D&CS, and consultants; ensure applicable LRDP policies, engineering and construction specifications, and hydromodification control criteria are adhered to for all campus development or redevelopment projects.	**CD&F** Planning B&P	X	X	X	X	X
			2.) Revise project tracking system to ensure basic site information is documented; post-construction stormwater controls are adequately addressed during all phases of project planning, design, and approval; and appropriate campus stakeholders are provided timely notification for opportunities to review proposed post-construction stormwater management controls.			X	X	X	X
			3.) Maintain records of all projects and the post-construction stormwater controls implemented; make these project files available to the public.			X	X	X	X
PC-7	**Post-Construction Stormwater Policy**	EH&S with the assistance of CD&F and Planning, will develop a Post-Construction Stormwater Policy intended to address post-construction runoff from new development and redevelopment projects.	1.) Adopt a Post-Construction Stormwater Policy intended to address post-construction runoff from new development and redevelopment projects.			X			
			2.) Enforce the Post-Construction Stormwater Policy adopted in Year 2 and track all storm water runoff pollution prevention enforcement actions.			X	X	X	X

Notes: **Bold** formatting within the "Dept." column indicates the lead department for BMP implementation.

9.0 POLLUTION PREVENTION/GOOD HOUSEKEEPING FOR FACILITIES OPERATION AND MAINTENANCE

The purpose of this MCM for Pollution Prevention and Good Housekeeping practices is to ensure that UC Santa Barbara's delivery of educational, housing, and community services occurs in a manner protective of water quality. In this way, UC Santa Barbara will serve as a model to the public with which it interacts.

The goal of municipal operation control measures is to reduce or eliminate adverse water quality impacts from construction, operations, and maintenance activities by municipal agencies. The campus walkways, streets, and road operations and maintenance measurable goal defines the level of implementation that UC Santa Barbara must attain to demonstrate that their local operations and maintenance activities reduce pollutants in storm water to the MEP. This measurable goal will be used as the basis for assessing the effectiveness of each municipal agency's premises, walkway, street, and/or road operation and maintenance activities.

The General Permit states that the Permittee must develop and implement an operations and maintenance plan that will prevent or reduce pollutants in runoff from municipal operations. The minimum requirements for the Pollution Prevention and Good Housekeeping MCM are:

- Develop and implement an operation and maintenance program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations.
- Use training materials that are available from the U.S. EPA, the state, or other organizations. The program must include employee training to prevent and reduce stormwater pollution from activities such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and stormwater system maintenance.

The following BMPs are either existing or will be implemented by UC Santa Barbara within the next 5 years, upon approval of this SWMP, to satisfy the minimum requirements of the Pollution Prevention/Good Housekeeping control measure and will either have a direct or indirect effect on water quality. The BMPs below are identified as GH (Good Housekeeping) BMPs. The GH BMPs are described in the following subsections and summarized in **Table 9-1, Pollution Prevention/Good Housekeeping BMPs, Descriptions, and Measurable Goals**, at the end of this section

9.1 GH-1 CAMPUS OPERATIONS AND MAINTENANCE PROGRAM

UC Santa Barbara intends to revise its current Campus Operations and Maintenance Program to improve stormwater pollution prevention efforts. Maintenance activities are tracked via a web-based system, "Web Work," which will be assessed and adapted for better resolution of issues. The web-based program will also be utilized to track potential stormwater concerns and their associated resolution. In addition, UC Santa Barbara's Work Order Program allows the administration of day-to-day maintenance based on demand, or "trouble calls." The following summarizes revisions to the Campus O&M program (Sections 9.1.1 through 9.1.8).

9.1.1 Street Sweeping

Implementation Details

To prevent trash, debris, and sediment from being discharged to the MS4, roads, parking lots, and bike baths are swept monthly. PF, PF Grounds, and HRS utilize UC Santa Barbara's two sweepers to sweep parking lots and an outside contractor sweeps the roads and bike paths. Sweeping will be performed as needed before and after anticipated rain events. A single receptacle is used for debris collected with sweepers and the volume of waste discarded is tracked by the sweepers and recorded by EH&S.

Measurable Goals

- Conduct street sweeping of all roads, parking lots, and bike paths monthly and as needed prior to and after rain events. Ensure property owned by UCSB but not managed by UCSB is regularly swept by the third party developer or the responsible entity. Document the volume of debris collected and the number of curb miles swept annually for inclusion into the annual report. Utilize the data to evaluate effectiveness of other best management practices (Years 1–5).

9.1.2 Parking Lot Inspections

In addition, PF, PF Grounds, T&P, and HRS all administer a parking lot inspection program on an ongoing basis. Whenever the need for any stormdrain maintenance is noted, a request is forwarded to Grounds. Reasons for stormdrain maintenance may include stormdrain clogging, vandalism or wear to a stormdrain label, growth of plant matter in the stormdrain conveyance system, or in extreme cases, destruction of a stormwater conveyance feature. Grounds is able to handle all but the most extreme cases with clog removal, label replacement, and removal of plant matter by force rather than by chemical means. In extreme cases, Grounds will refer to EH&S and D&CS in order to commission replacement of destroyed stormwater conveyance features.

Measurable Goals

- Track the number of maintenance issues reported to Grounds. Track number of times an extreme issue has needed to escalate to include EH&S and D&CS. Respond to 100 percent of maintenance issues (Years 1–5).

9.1.3 MS4 Maintenance Program

Implementation Details

Critical to successful implementation of UC Santa Barbara's MS4 Maintenance Program is the appropriate management and disposal of accumulated wastes within the MS4. Cleaning operations remove plant debris, trash, and sediment from the MS4. Currently, UC Santa Barbara implements an MS4 Preventive Maintenance Program that is coordinated by EH&S and implemented by the Landscape, Environmental, and Custodial Services division of PF. Standard maintenance activities include recurring cleaning, repair, and inspection of University-owned underground and open drainage conveyances, stormdrain inlets, basins, and culverts. The Preventive Maintenance Program is intended for larger academic facilities with complicated systems (i.e., utilities, drainage, boilers) and is implemented based on an annual schedule. Through both the Preventive Maintenance Program and the Work Order Program (described in Section 9.1), the MS4 associated with academic facilities is regularly assessed and maintained. The programs will continue to be implemented year-round.

In addition, HRS maintains the MS4 in areas pertaining to their department. HRS staff implements the following practices:

- Performs an annual survey of stormdrains within the housing areas,
- Replaces stormdrain markers, and
- Performs routine maintenance of stormdrains.

Using the stormwater conveyance map (BMP ID-2), EH&S, PF, PF Grounds, and HRS will coordinate to update the master list of stormwater conveyance features, establish maintenance priorities and schedule, and initiate additional maintenance.

PF and HRS staff will inspect for illicit discharges and connections during maintenance activities. In the event an illicit discharge is identified PF, PF Grounds, and HRS staff will be required to trace the source of the discharge and eliminate the discharge for their respective facilities. Facilities for which a referral or complaint is received will be inspected within 24 hours and a follow-up inspection will occur within one week following the first inspection. IDs will be tracked in a similar manner to those identified during the Facility Inspection Program (see BMP ID-4). All ID documentation will be utilized to track any patterns of violations and to identify repeat offenders of UC Santa Barbara policies.

Staff training and coordination is also a necessary component of UC Santa Barbara's MS4 Maintenance Program. EH&S administers a training program intended to communicate basic stormwater pollution prevention and MS4 maintenance program BMPs to all new UC Santa Barbara employees twice a month. Department-specific training will also be developed by those departments conducting MS4 maintenance activities with the goal of training staff to utilize the appropriate field paperwork, inspection protocols, and maintenance procedures necessary to accomplish MS4 maintenance. MS4 Maintenance Program coordination between EH&S and other University departments and divisions will occur regularly via telephone and email, but will also be addressed as necessary at the quarterly Water Quality Working Group meetings (BMP PP-2).

Measurable Goals

- Establish a maintenance schedule/plan which identifies all MS4 drainage facilities, including structural stormwater controls, and categorizes them as high, medium, or low priority based on the University's existing understanding of water quality and flood control needs. The University will continue to utilize its existing MS4 maintenance strategy until the maintenance schedule/plan is completed. (Year 1).
- Perform maintenance to 100% of high-priority MS4 drainage facilities annually. During MS4 maintenance activities, inspect drainage facilities for IDs and eliminate when identified. Document and track all maintenance, ID inspection, and ID elimination efforts. Utilize documentation to track patterns of violations, recurring maintenance issues, and to identify repeat offenders of UC Santa Barbara policies (Years 1-5).
- Develop and begin implementing both the basic MS4 Maintenance Program training, intended for all UC Santa Barbara staff, as well as the department-specific training intended for applicable MS4 maintenance staff. The training program will include basic stormwater pollution prevention BMPs, BMPs specific to MS4 Maintenance Program activities, solid waste accumulation and disposal BMPs, illicit discharge detection and reporting procedures, and field documentation efforts. Training will be provided annually (Years 2–5).
- Revise MS4 Maintenance Program as necessary and notify the CCRWQCB of revisions within the University's Annual Report (Years 3–5).

9.1.4 Facility and Housing Operations and Maintenance Program

Implementation Details

Through both the Preventive Maintenance Program and the Work Order Program (described in Section 9.1), academic facilities are regularly assessed and maintained. The Preventive Maintenance Program is intended for larger academic facilities with complicated systems (i.e., utilities, drainage, boilers) and is implemented based on an annual schedule.

PF and HRS staff will conduct an inventory of maintenance activities and will assess each for the potential to discharge pollutants. For those activities considered a potential threat BMPs will be identified and developed in Year 2 to address the potential pollutant discharge.

Spills and leaks will be cleaned up in an expedient manner with spill absorbents. PF and HRS staff will receive annual spill control and stormwater pollution prevention training (see PE-5).

Measurable Goals

- Outdoor Maintenance: paint chips, debris, and other maintenance waste will always be swept or vacuumed to ensure they do not enter the MS4. Graffiti removal products and thinners will be used sparingly and never washed to streets or stormdrains. All painting equipment (i.e., brushes, cans, rollers, etc.) will only be washed in a location that is connected to the sanitary sewer. Wastewater from maintenance activities, such as pressure washing, rain gutter wash water, concrete or asphalt cutting slurry will be collected and discarded into the sanitary sewer or other applicable disposal site. Stormdrains adjacent to the maintenance locations will be protected while activities are performed (Years 1–5).
- Indoor Maintenance: Custodial Services will discard all wash water at a location that is connected to the sanitary sewer. All cleaning agents will be stored indoors. If cleaning agents are used outdoors, the area will be rinsed and the wash water collected and appropriately disposed of. Storage areas will be inspected to ensure cleaning products are sealed and free of leaks. Trash will be discarded according to BMP GH-6 (Years 1–5).
- Conduct an inventory of maintenance activities and assess each for the potential to discharge pollutants (Year 1).
- Develop and implement BMPs to address maintenance activities identified as a potential threat to water quality and which are not appropriately managed (Years 2–5).
- Ensure 100% of PF and HRS staff receives annual spill control and stormwater pollution prevention training (Years 1–5).

9.1.5 Chlorinated Water Management

Implementation Details

Currently, swimming pool water, landscaping water features, and boiler and air conditioning condensate are discharged to the sanitary sewer system (Goleta Sanitary District) on the UC Santa Barbara campus. This practice will be continued to ensure that chlorinated water is not discharged to the MS4.

Measurable Goals

- Continue to discharge 100% of swimming pool water, landscaping water features, and boiler/air conditioning condensate to the sanitary sewer. Document these occurrences and the volume of water discharged (Years 1–5).

9.1.6 Landscaping

Implementation Details

Approximately 188 acres of land are irrigated and intensively maintained landscape on campus, including green space; recreational facilities; and housing, educational facility, and parking lot landscaping. The following pollution prevention practices have been implemented at UC Santa Barbara:

- Water conservation: Two irrigation specialists ensure that minimal irrigation is applied to prevent runoff and conserve water.
- Runoff reduction/elimination: UC Santa Barbara campus policy prohibits pooling, or discharge to stormdrain inlets, of irrigation water.

- Reduction/elimination of fertilizers: Reclaimed water distributed by the Goleta Water District is used exclusively for landscaping irrigation on campus. Reclaimed water contains background levels of nitrogen and other salts, which eliminates the need for applying additional fertilizer to ornamental plants.
- Reduction/elimination of pesticides: Occasionally, low-toxicity herbicides are utilized in situations in which avoiding their use may create a health risk.
- Mulching and composting: Mulching mowers are utilized and green waste is collected for composting.
- Landscaping training: Landscaping personnel attend training annually where they receive technical updates.

Measurable Goals

- Continue to attend and track attendance for annual training sessions and implement the following landscaping practices (Years 1–5):
  - Minimize the volume of irrigation applied to eliminate runoff and conserve water.
  - Use reclaimed water for 100% of irrigation needs.
  - Avoid applying fertilizer or pesticides on ornamental plants.
  - Use mulching mowers and compost green waste; record the volume of green waste composted annually.
  - Ensure that 100% of landscaping managers attend training annually. Document attendance.

9.1.7 University Vehicle and Equipment Fueling, Maintenance, and Cleaning

Implementation Details

University-owned vehicles are maintained, fueled, and washed at UC Santa Barbara Fleet Services. The Fleet Services maintenance shop was recognized in April 2005 by the California Department of Toxic Substances Control as a "Model Pollution Prevention Shop." BMPs are currently implemented to significantly reduce or eliminate the discharge of pollutants, such as performing all maintenance indoors, containing fuel and oil in double-walled containers, and maintaining a supply of spill absorbents. The vehicle wash area is covered and discharges to a three-stage treatment system before discharging to the sanitary sewer. Fleet Services will continue to implement these practices and will document their implementation via daily inspection sheets annually.

Fleet Services staff will receive annual training on spill control and stormwater pollution prevention (see BMP PE-5).

Measurable Goals

- Ensure 100% of maintenance is performed indoors and 100% of washing is performed in the covered area that discharges to the sanitary sewer. Ensure spill absorbents are available onsite at all times. Ensure 100% of Fleet Services staff receives spill control and stormwater pollution prevention training annually. Document the implementation of pollution prevention BMPs via daily inspection sheets; retain copies of training sign-in sheets (Years 1–5).

9.1.8 Hazardous Materials Management

Implementation Details

Hazardous materials are handled and stored on the UC Santa Barbara campus. To prevent the discharge of these materials to the MS4, proper handling (loading, unloading, transport, and use), storage, and spill response BMPs will be utilized. Currently, the following BMPs are implemented at UC Santa Barbara with regards to the storage and handling of hazardous materials:

- Hazardous laboratory materials are stored in small volumes (containers less than 5 gallons) and are stored in laboratories within secondary containment within the appropriate acid, base, or flammable cabinets. Laboratories are equipped with floor drains discharging to the sanitary sewer system.
- Quantities of hazardous maintenance materials on hand do not exceed 55 gallons and are stored within secondary containment (i.e., maintenance shed or double-walled aboveground storage tank). Where necessary, they are stored with overhead coverage.
- Hazardous waste is disposed of at the Community Hazardous Waste Collection Facility (see ID-7).

In addition, EH&S will perform a survey to inventory all hazardous wastes stored or used on campus. Storage facilities will be inspected to ensure they provide 100% protection from contact with stormwater or other runoff. Hazardous materials spill response training will be adjusted where necessary to specifically address the issue of potential discharges to the MS4. A BMP fact sheet related to the appropriate storage, handling, and disposal of hazardous wastes will be developed. The fact sheet will be distributed to all facilities and staff that house or handle hazardous waste, retained in an obvious location at each storage location, and will be disseminated at PF training events.

Measurable Goals

- Inventory 100% of hazardous materials and storage areas. Perform an annual inspection of storage areas. Document the number and type of inspection findings; ensure 100% of deficiencies are rectified (Years 1–5).
- Adjust hazardous materials spill response training where necessary to specifically address the issue of potential discharges to the MS4 (Year 1).
- Develop a BMP fact sheet for hazardous materials storage, handling, and disposal (Year 2); distribute to all facilities and staff that house or handle hazardous waste, retain in an obvious location at each storage location, and distribute at 100% of PF training events (Years 2–5).

9.2 GH-2 PESTICIDE MANAGEMENT

Implementation Details

Integrated Pest Management (IPM) is a set of principles developed to reduce or eliminate pesticide use while minimizing pest damage. The strategy employs a combination of tactics including, but not limited to, sanitation, monitoring, habitat modification, biological control, and modification of cultural practices. Minimal use of pesticides for spot treatment is considered only after monitoring indicates that, according to established guidelines, they are needed. Treatments are applied with the goal of removing only the target pest. Pest control materials are selected and applied in a manner that minimizes risks to human health, other creatures, and the environment.

UC Santa Barbara policy (5435) states, "Integrated Pest Management (IPM) shall be practiced in and outside of all UCSB [UC Santa Barbara] buildings and structures." EH&S and the IPM Committee for Consistency with IPM Principles reviews all proposed uses of pesticides inside and outside UC Santa Barbara facilities, including:

- Type of pesticide used;
- Method of application;
- Circumstances of use; and
- Training of applicators.

Campus policy prohibits spraying or broadcast treatment of pesticides inside campus buildings except under extraordinary circumstances for spot treatment and then only with the specific authorization of EH&S. Use of approved baits is allowed in buildings. If EH&S and the IPM Committee authorize the use of a pesticide, its application will be in strict conformity to the specifications on the label. All pesticide application will be inspected and overseen by qualified (received training regarding pesticide application and IMP methods) PF staff and conducted by a certified applicator. All applicators will receive training in pesticide application, handling, and disposal (at minimum, hold a Field Representative license). Application will follow the University's 7-point Standard Operating Procedure and will not occur prior to or during a rain event or during high wind conditions.

Pesticide applicators and wood-destroying pest investigators are approved by the University through a vendor qualification process, which includes the use of a pre-qualification form. The vendor must meet training requirements, including IPM training, hold a pest control operator's license, and be registered with the County of Santa Barbara Agricultural Commissioner's office. Vendor contracts reflect these requirements.

As per Title 7, Chapter 6, Subchapter II, of the Federal Insecticide, Fungicide, and Rodenticide Act, restricted use pesticides may only be applied by authorized and certified applicators who shall maintain record of the application for two years (product name, amount, date, and location of application). However, it is highly unlikely that restricted use pesticides will be applied, given the use of IPM principles and strict application policy at the University. In addition to obtaining authorization from EH&S and the IPM Committee, any application of pesticides in campus animal quarters or vivaria must be under the supervision of the Central Vivarium Director or Campus Veterinarian.

Pesticide application date, time, product name, amount applied, method of application, location, applicator name (company if a vendor), certification, and weather conditions will be recorded for each occurrence. All required reporting to the County of Santa Barbara Agricultural Commissioner's office will be conducted by applicable PF staff and contractors, and copies of reports maintained by PF and EH&S. A Material Safety Data Sheet (MSDS) for each pesticide that is used will be obtained by the applicator and retained in the applicator's department. The user will assure that a copy of the MSDS for each product is provided to EH&S. EH&S will review all new products proposed for use on campus for their appropriateness prior to their acquisition. Pesticides and pesticide containers maintained at UC Santa Barbara will be stored with the appropriate and required secondary containment and overhead coverage. Pesticides and pesticide containers will also be disposed of according to instructions on the label and at the Community Hazardous Waste Facility (BMP ID-7).

Measurable Goal

- Continue to implement the IPM principles and campus policy with regard to pesticide management. Ensure 100% of pesticides are applied by a licensed Field Representative overseen by a Qualified Applicator; pesticide application is recorded and overseen by PF staff; and EH&S approves all new

pesticides and potential applications and retains MSDSs for all pesticides used on campus. Document pesticide application information: date, time, product name, amount applied, method of application, location, applicator name (company if a vendor), certification, and weather conditions for each application occurrence (Years 1-5).

- Reduce the use of fertilizers, herbicides, rodenticides, and other pesticides as feasible and in accordance with the goals of IPM and the Campus Sustainability Plan (Years 1-5).

9.3 GH-3 SANITARY SEWER MAINTENANCE AND POLLUTION PREVENTION

Implementation Details

The UC Santa Barbara Sewer System Management Plan (SSMP) is implemented to reduce sanitary sewer overflows (UC Santa Barbara 2009). The WCSMP provides a plan and schedule to properly manage, operate, and maintain all parts of the sanitary sewer system. In order to facilitate SSMP implementation and monitoring, UC Santa Barbara created a Water Quality Working Group (WQWG), which consists of representatives from key departments and facilities, including staff from EH&S. The WQWG meets quarterly and provides a forum for EH&S to coordinate the implementation of BMPs stipulated in the SSMP that assist in the prevention of sanitary sewer overflows from entering the MS4. These include the following:

Overflow Emergency Response Plan (UC Santa Barbara 2009, SSMP, Appendix B) establishes guidelines and measures to protect public health and the environment in case of an accidental overflow. The plan includes the regulatory criteria for notification if a sanitary sewer overflow occurs.

The Fats, Oils, and Grease Program was developed to reduce the amounts of fats, oils, and grease discharged into the wastewater collection system to prevent the accumulation of these materials in the sewer system. The program includes a public education outreach program that promotes the proper disposal of grease and fats on campus.

Regular maintenance of the UC Santa Barbara sanitary sewer system is an effective measure to prevent sanitary sewer overflows. Operation and maintenance of the sewer system includes inspection and maintenance of all lines, lift stations, force mains, and the Sanitary Sewer Supervisory Control and Data Acquisition System, which monitors system equipment, flows, wet well levels and concentrations of hydrogen sulfide. The system allows for immediate notification to the campus emergency dispatch center in the event of an equipment failure. Regular operation and maintenance of the UC Santa Barbara sewer system includes the following: scheduled inspections of the targeted portions of the system (lift stations, emergency generators, and manholes); and routine maintenance including root control, odor control, and annual cleaning of targeted areas using either a hydrojet or vacuum pump. Self inspection of operational procedures and management practices occur quarterly.

UC Santa Barbara will continue to implement the SSMP and associated BMPs. All sanitary sewer overflows will be handled according to the Overflow Emergency Response Plan (UC Santa Barbara 2009, SSMP Appendix B) to ensure wastewater does not discharge to the MS4.

Measurable Goals

- EH&S staff will attend quarterly WQWG meetings to present information about the protection of the MS4 in the event of a sanitary sewer overflow. Any overflows that discharge to Waters of the United States will be documented in UC Santa Barbara's Municipal Storm Water Annual Report, along with a summary of rectification efforts. The SSMP will be implemented, including quarterly self inspections of operational procedures and management practices and the annual inspection of all lines, lift stations, force mains, and the Sanitary Sewer Supervisory Control and Data Acquisition System (Years 1–5).

9.4 GH-4 PET WASTE CONTROL

Implementation Details

Pets are not permitted in campus housing, with the exception of small caged animals (hamsters, turtles, small birds) and fish in tanks smaller than 30 gallons. In addition, the UC Santa Barbara "Dogs on Campus" Policy 5415 maintains that dogs be kept on a leash at all times, are prohibited from bike paths and from entering campus buildings(research and seeing-eye animals are excluded), and may not be tied up. Although there are few dogs and cats on campus, UC Santa Barbara will conduct a survey to assess which areas on campus would benefit from the installation of a Mutt Mitt station (a dispenser of pet waste disposal bags). A trash receptacle will be installed at each station if one is not present. PF Grounds will be responsible for ensuring the station is stocked with bags and that trash receptacles are emptied.

EH&S will also incorporate into the Stormwater Quality Policy (see BMP ID-6) provisions that prohibits the discharge of pet waste to stormwater. EH&S will examine County of Santa Barbara Ordinance No. 3708 and other pet waste policies and ordinances to assure all potential issues are addressed within the Stormwater Quality Policy.

Measurable Goals

- Incorporate pet waste discharge prohibitions into the Stormwater Quality Policy (Year 1).
- Survey all portions of campus where dogs are permitted to assess the need (i.e., the presence of dog waste) and potential installation of Mutt Mitt stations (Year 2).
- Install two Mutt Mitt stations and associated trash receptacles annually. Stock the stations with bags as needed and ensure trash receptacles are emptied regularly (Years 3–5).

9.5 GH-5 FOOD SERVICE OPERATIONS

Implementation Details

Food services, including food distribution, catering, and sales at UC Santa Barbara are provided exclusively by Campus Dining Services (University Center Dining and Housing & Residential Concessions Services) and The Faculty Club as per "Food Services Interim Policy" (6005). University Children's Center serves snacks and limited lunches only and students, clubs, and departments may serve food at special events or meetings. The following BMPs will be followed to prevent discharge of pollutants, such as fats, oils, grease; food waste; and receptacle leaks into the MS4.

- Waste, recycling, and fats/oils/grease receptacles will be emptied in an expedient manner; containers will be stored with the lids shut, away from stormdrains; dumpsters will be inspected daily for leaks and spills; and receptacles and dumpsters will be cleaned only in an area that drains to the sanitary sewer. Waste and recycling receptacles shall be repaired immediately if they are found to be leaking.
- Fats/oils/grease have the potential to clog sanitary sewer drains; therefore, all fats, oils, and grease should be disposed of in waste receptacles. Cooking surfaces, hoods, and grease traps will be scraped to remove excess fats/oils/grease prior to washing. Grease traps will be inspected weekly and maintained. Fats/oils/grease storage containers will be stored with the lids closed indoors or under cover.
- Outdoor washing: kitchen floor mats and outdoor dining areas will be washed only in an area that discharges to the sanitary sewer; solvents will not be used outdoors; and sidewalks and patios will be swept, as opposed to washing down.
- Indoor washing: all wash water and mop water will be discharged to the sanitary sewer and at no time, to the MS4. Cleaning products will be used indoors, in an area that drains to the sanitary sewer, or where wash and rinse water are collected and discharged to the sanitary sewer.

- Spills and leaks will be cleaned up in an expedient manner. Absorbent materials will be kept on site at all times. Staff will be trained on the use and proper disposal of absorbents.
- Loading/unloading areas will be inspected daily for spills and debris. The areas will be cleaned as necessary by sweeping or other "dry" manner to prevent pollution discharge to the MS4.
- All permanent Campus Dining Services staff will receive spill response and pollution prevention training annually. Training materials will be provided in both English and Spanish. Training will detail basic protocols and requirements for addressing spills including containment, treatment, notification, and disposal. Basic stormwater pollution prevention strategies as they pertain to restaurant operations will also be covered.

In addition, EH&S along with HRS and University Center Dining Services (UCen) will continue to implement the Food Facility Inspection Program intended to ensure that campus food facilities are in compliance with the California Uniform Retail Food Facilities Law. Food facility inspections are conducted at each food facility a minimum of once per year and evaluation of liquid waste disposal methods, plumbing adequacy, refuse disposal methods, and maintenance of refuse facilities. The food facility inspection checklist will be updated to include a requirement for evaluating drainage facilities (stormdrains, retention basins, channels, etc). Inspectors will be prompted to ensure drainage facilities are not being used in a manner that violates the Stormwater Quality Policy or the UC Santa Barbara Sewer System Management Plan.

UC Santa Barbara will continue to utilize existing enforcement procedures for food facility violations in accordance with the UC Santa Barbara Food Quality and Safety Standards (2006). Basic violations require the food facility manager to review the food facility inspection report and ensure all violations/deficiencies are corrected. Minor violations or the repeat of a basic violation (upon the Round 2 inspection) results in a corrective notice to the food facility manager with a time of approximately 1-10 days. Major violations require the food facility manager to correct the deficiency immediately and typically result in follow-up inspections. Immediate danger to public health or safety (unless the problem is immediately corrected), food-borne illness outbreak, and repeated failure to operate the facility in a safe and sanitary manner may warrant a food facility closure. Closures require the approvals of EH&S and the Director of Dining Services.

Measurable Goals

- Food facility staff will inspect dumpsters and loading/unloading docks daily for spills and debris; inspect grease traps weekly. Perform regular cleaning and maintenance on food service equipment to prevent sanitary sewer overflows from fats/oils/grease build-up. Ensure 100% of washing activities discharge to the sanitary sewer. Ensure a supply of spill absorbent materials is readily on hand at all times. Ensure 100% of permanent Campus Dining Services staff receives spill response and pollution prevention training annually (Years 1–5).
- Update the food facility inspection checklist to require an evaluation of use and maintenance of stormwater drainage facilities (Year 1).
- Implement the Food Facility Inspection Program and enforce violations according to the established Food Quality and Safety Standards (2006). Inspect all food facilities a minimum of once annually. Document all inspections using the checklist. Document and track all violation and review data annually for trends in violations. Adjust training and public education and outreach efforts when necessary (Years 1-5).

9.6 GH-6 TRASH CONTROL AND RECYCLING

Implementation Details

Currently, trash is removed from all campus trash receptacles daily by UC Santa Barbara staff and from common areas by volunteer groups coordinated by PF. All outdoor waste and recycling bins will be equipped with a lid to avoid contact with stormwater and prevent animals from removing the contents and distributing trash. EH&S, PF, PF Grounds, and HRS will assess existing and potential refuse bin locations, areas of trash accumulation, the need for additional bins with lids or overhead coverage, and sources of trash. Based on the assessment, PF and HRS will identify the need for installation or relocation of trash bins and/or signage.

UC Santa Barbara has implemented a recycling program since the 1980s. Recycling is performed by PF and by UC Santa Barbara's Associated Students. A new commingling recycling program was initiated in March 2008 and is coordinated by PF and Custodial Services. The commingling program will be implemented for a trial period at selected campus facilities. PF also recycles universal waste, such as batteries and light bulbs. Fleet Services recycles used oil, tires, antifreeze, vehicles parts, and more. PF currently records the volume of materials recycled at UC Santa Barbara annually and posts this data online as a link on the PF website.

PF will monitor developments in the materials capacity of local recycling processors by conducting an annual survey at least one month prior to the annual training sessions. PF will incorporate any changes to the list of materials accepted by processors for recycling into both PF recycling training and into the UC Santa Barbara community recycling program it administers.

Measurable Goals

- Assess existing and potential refuse bin locations, areas of trash accumulation, the need for additional bins with lids or overhead coverage, and sources of trash (Year 1).
- Identify the need for installation or relocation of trash receptacles and/or signage (Year 2).
- Continue recycling programs; document and report the volume of materials recycled at UC Santa Barbara annually (Years 1-5).
- Track contact records with local recycling processors. Retain electronic copies of all versions of trash/recycling training materials and recycling public outreach materials, including recycling container labels (Years 2–5).

9.7 GH-7 PURCHASING AND CONTRACTS

Implementation Details

The UC Santa Barbara Business Services, Contracts, and Property staff in coordination with applicable Departments entering into an outside contract, will be responsible to review existing boiler plate contract and purchasing specifications for the incorporation of language within them intended to protect stormwater quality and reduce the discharge of pollutants. Potentially affected services and contracts may include housekeeping, painting, landscaping, new development and redevelopment design, and construction. Where necessary, contracts specifications will be updated to include specific language addressing stormwater pollution prevention and in some cases shall require specific BMPs related to the activities of a particular service. Applicable contracts will be revised to require compliance with the Stormwater Quality Control Standard, revised Campus Standards that include hydromodification control criteria, and the Stormwater Quality Policy. Contracts will also be revised as necessary to contain indemnity provisions expressly obligating contractors to pay for costs of compliance and/or enforcement should violations occur.

The UC Santa Barbara Business Services, Contracts, and Property staff is responsible for ensuring the language and details of all contracts and purchasing agreements for outside services are developed to ensure,

to the extent possible, that contingencies are covered by the University's Risk Management & Insurance Programs so that the costs associated with losses, should they occur, are not borne by the University. More specifically it is the intent of UC Santa Barbara and the Regents' Standing Orders to prohibit the University from entering into any contract that provides for the University assuming third party liability. In the event of contract or purchasing agreement violation UC Regents are required to refer the violation to the General Counsel of the UCOP.

Measurable Goals

- Review all boiler plate contract specifications for inclusion of stormwater requirements and indemnity provisions, and update them accordingly (Year 2).
- Conduct quality assurance audits for 25% of contracts with stormwater pollution prevention specifications during the time services are being performed to ensure the applicable stormwater requirements are being addressed; refer all contract violations pertaining to stormwater quality to the UCOP General Counsel for enforcement (Years 3–5).

Table 9-1
Pollution Prevention/Good Housekeeping BMPs, Descriptions, and Measurable Goals

No.	BMP	Description	Measurable Goals	Dept.	Year				
					1	2	3	4	5
GH-1	**Campus Operations and Maintenance Program**	UC Santa Barbara will revise its Campus Operations and Maintenance Program to ensure pollution of stormwater is eliminated, including street sweeping; parking lot inspections; MS4 Maintenance Program; Facility Operations and Maintenance Program; chlorinated water management; landscaping; university vehicle and equipment fueling, maintenance, and cleaning; and hazardous materials management. Maintenance and repairs will be conducted through the Work Order Program as well. Tracking of maintenance activities will continue with the use of the "Web Work" program.	1.) Conduct street sweeping of all roads, parking lots, and bike paths monthly and as needed prior to and after rain events. Ensure property owned by UCSB but not managed by UCSB is regularly swept by the third party developer or the responsible entity. Record the volume of waste collected and the number of curb miles swept; utilize the data to assess the effectiveness of other best management practices.	**PF** **PF Grounds** **HRS**	X	X	X	X	X
			2.) Track the number of maintenance issues reported to PF Grounds. Track the number of times an extreme issue has needed to escalate to include EH&S and D&CS. Respond to 100% of maintenance issues.		X	X	X	X	X
			3.) Establish a maintenance schedule/plan which identifies all MS4 drainage facilities, including structural stormwater controls, and categorizes them as high, medium, or low priority based on the University's understanding of water quality and flood control needs. The University will continue to utilize its existing MS4 maintenance strategy until the maintenance schedule/plan is completed. Perform maintenance of 100% of high-priority stormdrains/outfalls.		X				

Table 9-1 (Continued)
Pollution Prevention/Good Housekeeping BMPs, Descriptions, and Measurable Goals

No.	BMP	Description	Measurable Goals	Dept.	Year				
					1	2	3	4	5
GH-1	**Campus Operations and Maintenance Program (Continued)**	UC Santa Barbara will revise its Campus Operations and Maintenance Program to ensure pollution of stormwater is eliminated, including street sweeping; parking lot inspections; MS4 Maintenance Program; Facility Operations and Maintenance Program; chlorinated water management; landscaping; university vehicle and equipment fueling, maintenance, and cleaning; and hazardous materials management. Maintenance and repairs will be conducted through the Work Order Program as well. Tracking of maintenance activities will continue with the use of the "Web Work" program.	4.) Perform maintenance to 100% of high-priority MS4 drainage facilities annually. During MS4 maintenance activities, inspect drainage facilities for IDs and eliminate when identified. Document and track all maintenance, ID inspection, and ID elimination efforts. Utilize documentation to track patterns of violations, recurring maintenance issues, and to identify repeat offenders of UC Santa Barbara policies.		X	X	X	X	X
			5.) Develop and begin implementing both the basic MS4 Maintenance Program training, intended for University staff, as well as the department-specific training intended for applicable MS4 maintenance staff. The training program will include basic stormwater pollution prevention BMPs, BMPs specific to MS4 Maintenance Program activities, solid waste accumulation and disposal BMPs, illicit discharge detection and reporting procedures, and field documentation efforts. Training will be provided annually.	**EH&S**		X	X	X	X
			6.) Revise MS4 Maintenance Program as necessary and notify the CCRWQCB of revisions within the University's Annual Report.	**PF** **PF Grounds** **HRS**			X	X	X

Table 9-1 (Continued)
Pollution Prevention/Good Housekeeping BMPs, Descriptions, and Measurable Goals

No.	BMP	Description	Measurable Goals	Dept.	Year				
					1	2	3	4	5
GH-1	**Operation and Maintenance Program (Continued)**	UC Santa Barbara will revise its Campus Operations and Maintenance Program to ensure pollution of stormwater is eliminated, including street sweeping; parking lot inspections; MS4 Maintenance Program; Facility Operations and Maintenance Program; chlorinated water management; landscaping; university vehicle and equipment fueling, maintenance, and cleaning; and hazardous materials management. Maintenance and repairs will be conducted through the Work Order Program as well. Tracking of maintenance activities will continue with the use of the "Web Work" program.	7.) Outdoor Maintenance: paint chips, debris, and other maintenance waste will be always be swept or vacuumed to ensure they do not enter the MS4. Graffiti removal products and thinners will be used sparingly and never washed to stormdrains. All painting equipment (i.e., brushes, cans, rollers, etc.) will only be washed in a location that is connected to the sanitary sewer. Wastewater from maintenance activities, such as pressure washing, rain gutter wash water, concrete or asphalt cutting slurry will be collected and discarded into the sanitary sewer or other applicable disposal site. Stormdrains adjacent to the maintenance locations will be protected while activities are performed.	**PF** **PF Grounds** **HRS**	X	X	X	X	X
			8.) Indoor Maintenance: Custodial Services will discard all wash water at a location that is connected to the sanitary sewer. All cleaning agents will be stored indoors. If cleaning agents are used outdoors, the area will be rinsed and the wash water collected and appropriately disposed of. Storage areas will be inspected to ensure cleaning products are sealed and free of leaks. Trash will be discarded according to BMP GH-6	**PF**	X	X	X	X	X
			9.) Conduct an inventory of maintenance activities and assess each for the potential to discharge pollutants.	**EH&S**	X				
			10.) Develop and implement BMPs to address maintenance activities identified as a potential threat to water quality and which are not appropriately managed.	**EH&S** PF HRS		X	X	X	X
			11.) Ensure 100% of PF and HRS staff receives annual spill control and stormwater pollution prevention training.	**EH&S** PF HRS	X	X	X	X	X

Table 9-1 (Continued)
Pollution Prevention/Good Housekeeping BMPs, Descriptions, and Measurable Goals

No.	BMP	Description	Measurable Goals	Dept.	Year				
					1	2	3	4	5
GH-1	**Operation and Maintenance Program (Continued)**	UC Santa Barbara will revise its Campus Operations and Maintenance Program to ensure pollution of stormwater is eliminated, including street sweeping; parking lot inspections; MS4 Maintenance Program; Facility Operations and Maintenance Program; chlorinated water management; landscaping; university vehicle and equipment fueling, maintenance, and cleaning; and hazardous materials management. Maintenance and repairs will be conducted through the Work Order Program as well. Tracking of maintenance activities will continue with the use of the "Web Work" program.	12.) Continue to discharge 100% of swimming pool water, landscaping water features, and boiler/air conditioning condensate to the sanitary sewer. Document these occurrences and the volume of water discharged.	**PF** **PF Grounds** EH&S HRS	X	X	X	X	X
			13.) Continue to attend and track attendance for annual training sessions and implement the following landscaping practices: o Minimize the volume of irrigation applied to eliminate runoff and conserve water. o Use reclaimed water for 100% of irrigation needs. o Avoid applying fertilizer or pesticides on ornamental plants. o Use mulching mowers and compost green waste; record the volume of green waste composted annually. o Ensure that 100% of landscaping managers attend training annually. Document attendance.	**PF Grounds**	X	X	X	X	X
			14.) Ensure 100% of vehicle and equipment maintenance is performed in the covered area that discharges to the sanitary sewer. Ensure spill absorbents are available onsite at all times. Ensure 100% of Fleet Services staff receives spill control and stormwater pollution prevention annually. Document the implementation of pollution prevention BMPs via daily inspection sheets; retain copies of training sign-in sheets.	**T&P**	X	X	X	X	X

Table 9-1 (Continued)
Pollution Prevention/Good Housekeeping BMPs, Descriptions, and Measurable Goals

No.	BMP	Description	Measurable Goals	Dept.	Year 1	2	3	4	5
GH-1	**Operation and Maintenance Program (Continued)**	UC Santa Barbara will revise its Campus Operations and Maintenance Program to ensure pollution of stormwater is eliminated, including street sweeping; parking lot inspections; MS4 Maintenance Program; Facility Operations and Maintenance Program; chlorinated water management; landscaping; university vehicle and equipment fueling, maintenance, and cleaning; and hazardous materials management. Maintenance and repairs will be conducted through the Work Order Program as well. Tracking of maintenance activities will continue with the use of the "Web Work" program.	15.) Inventory 100% of hazardous materials and storage areas. Perform an annual inspection of storage areas. Document the number and type of inspection findings; ensure 100% of deficiencies are rectified.	**EH&S** PF PF Grounds HRS	X	X	X	X	X
			16.) Adjust hazardous materials spill response training where necessary to specifically address the issue of potential discharges to the MS4.	**EH&S**	X				
			17.) Develop a BMP fact sheet for hazardous materials storage, handling, and disposal (Year 2); distribute to all facilities and staff that house or handle hazardous waste, retain in an obvious location at each storage location, and distribute at 100% of PF training events.	**EH&S**		X	X	X	X
GH-2	**Pesticide Management**	Manage storage, handling, and disposal of pesticides in order to prevent their release to the environment and the MS4.	1.) Continue to implement IPM principles and campus policy with regards to pesticide management. Ensure 100% of pesticides are applied by a licensed Field Representative overseen by a Qualified Applicator; application is recorded and overseen by PF staff; and EH&S approves all new pesticides and potential applications and retains MSDS sheets for all pesticides used on campus. Document pesticide application information: date, time, product name, amount applied, method of application, location, applicator name (company if a vendor), certification, and weather conditions for each application occurrence.	**PF** PF Grounds EH&S	X	X	X	X	X

Table 9-1 (Continued)
Pollution Prevention/Good Housekeeping BMPs, Descriptions, and Measurable Goals

No.	BMP	Description	Measurable Goals	Dept.	Year				
					1	2	3	4	5
GH-2	**Pesticide Management (Continued)**	Manage storage, handling, and disposal of pesticides in order to prevent their release to the environment and the MS4.	2.) Reduce the use of fertilizers, herbicides, rodenticides, and other pesticides as feasible and in accordance with goals of IPM and the Campus Sustainability Plan.	**PF** PF Grounds EH&S	X	X	X	X	X
GH-3	**Sanitary Sewer Maintenance and Pollution Prevention**	UC Santa Barbara will continue to implement the *Sewer System Management Plan* and associated BMPs. All sanitary sewer overflows will be handled according to the *Overflow Emergency Response Plan* to ensure wastewater does not discharge to the MS4.	1.) EH&S staff will attend quarterly WQWG meetings to present information about the protection of the MS4 in the event of a sanitary sewer overflow. Document SSOs in UC Santa Barbara's Municipal Stormwater Annual Report, along with a summary of rectification efforts. The SSMP will be implemented, including quarterly self inspections of operational procedures and management practices and the annual inspection of all lines, lift stations, force mains, and the Sanitary Sewer Supervisory Control and Data Acquisition System.	**EH&S** PF	X	X	X	X	X
GH-4	**Pet Waste Control**	UC Santa Barbara will assess which areas on campus would benefit from the installation of a Mutt Mitt station. A trash receptacle will be installed at each station if one is not present. PF Grounds will be responsible for ensuring the station is stocked with bags and trash receptacles are emptied	1.) Incorporate pet waste discharge prohibitions into the Stormwater Quality Policy. 2.) Survey all Campuses where dogs are permitted to assess the need (i.e., the presence of dog waste) and potential installation of Mutt Mitt stations. 3.) Install two Mutt Mitt stations and associated trash receptacles annually. Stock the stations with bags as needed and ensure trash receptacles are emptied regularly.	**EH&S** PF Grounds	X	X	X	X	X

Table 9-1 (Continued)
Pollution Prevention/Good Housekeeping BMPs, Descriptions, and Measurable Goals

No.	BMP	Description	Measurable Goals	Dept.	Year				
					1	2	3	4	5
GH-5	**Food Service Operations (Continued)**	Campus Food Services will implement BMPs to ensure proper waste, recycling, and fats/oils/grease storage, management, and disposal. All permanent Campus Dining Services staff will receive spill response and pollution prevention training annually. Implement the Food Facility Inspection Program and enforce violations accordingly.	1.) Food facility staff will inspect dumpsters and loading/unloading docks daily for spills and debris daily; inspect grease traps weekly. Perform regular cleaning and maintenance on food service equipment to prevent sanitary sewer overflows from fats/oils/grease build-up. Ensure 100% of washing activities discharge to the sanitary sewer. Ensure a supply of spill absorbent materials is readily on hand at all times. Ensure 90% of permanent Campus Dining Services staff receives spill response and pollution prevention training annually.	**Food Services**	X	X	X	X	X
			2.) Update the food facility inspection checklist to require an evaluation of use and maintenance of stormwater drainage facilities.		X				
			3.) Implement the Food Facility Inspection Program and enforce violations according to the established *Food Quality and Safety Standards* (2006). Inspect all food facilities a minimum of once annually. Document all inspections using the checklist. Document and track all violation and review data annually for trends in violations. Adjust training and public education and outreach efforts when necessary.	**Food Services HRS UCen**	X	X	X	X	X

Table 9-1 (Continued)
Pollution Prevention/Good Housekeeping BMPs, Descriptions, and Measurable Goals

No.	BMP	Description	Measurable Goals	Dept.	Year				
					1	2	3	4	5
GH-6	**Trash Control and Recycling**	Currently, trash removal is performed daily by UC Santa Barbara staff and volunteer groups. Outdoor waste and recycling receptacles will be stored shut, if equipped with a lid, to avoid contact with stormwater and prevent animal intrusion; existing and potential refuse bin locations, areas of trash accumulation, and sources of trash will be assessed. B on the assessment, PF will identify the need for installation or relocation of trash receptacles and/or signage.	1.) Assess existing and potential refuse bin locations, areas of trash accumulation, the need for additional bins with lids or overhead coverage, and sources of trash. 2.) Identify the need for installation or relocation of trash receptacles and/or signage. 3.) Continue recycling programs; document and report the volume of materials recycled at UC Santa Barbara annually. 4.) Track contact records with local recycling processors. Retain electronic copies of all versions of trash/recycling training materials and recycling public outreach materials, including recycling container labels.	**PF** PF Grounds EH&S HRS	X X X 	 X X X	 X X	 X X	 X X
GH-7	**Purchasing and Contracts**	The UC Santa Barbara Business Services, Contracts and Property staff in coordination with applicable Departments entering into an outside contract, will be responsible to review existing boiler plate contract and purchasing specifications for the addition of language intended to protect stormwater quality and reduce the discharge of pollutants.	1.) Review all boiler plate contract specifications for inclusion of stormwater requirements and indemnity provisions, and update them accordingly. 2.) Conduct quality assurance audits for 25% of contracts with stormwater pollution prevention specifications during the time services are being performed to ensure the applicable stormwater requirements are being addressed; enforce as necessary.	**Business Services** EH&S	 	X 	 X	 X	 X

Notes: **Bold** formatting within the "Dept." column indicates the lead department for BMP implementation.

10.0 ACRONYMS

AS	Associated Students
Basin Plan	Central Coast Basin Water Quality Control Plan
BMP	Best Management Practice
B&P	Budget and Planning Department
CASQA	California Stormwater Quality Association
CCAMP	Central Coast Ambient Monitoring Program
CCBER	Cheadle Center for Biodiversity and Ecological Restoration
CCR	California Code of Regulations
CCRWQCB	Central Coast Regional Water Quality Control Board
CD&F	Campus Design and Facilities Department
CDS	Continuous Deflection Separation
CEQA	California Environmental Quality Act
CS	Construction Site
CWA	Clean Water Act
D&C	Design and Construction Services
DSR	Department Safety Representative
EH&S	Environmental Health and Safety
EIA	Effective Impervious Area
EIR	Environmental Impact Report
EPC	Environmental Performance Criteria
FCD	Flood Control District
General Permit	*Water Quality Order No. 2003-0005-DWQ*
GH	Good Housekeeping
GIS	Geographic Information System
GTS	Guide to Services
HMP	Hydromodification Management Plan
HRS	Housing and Residential Services
ID	Illicit Discharge
IDDE	Illicit Discharge Detection and Elimination
IPM	Integrated Pest Management
Labs21	Laboratories for the 21st Century
LDRP	Long Range Development Plan
LID	Low Impact Development
MCM	Minimum Control Measure
MEP	Maximum Extent Practicable
MSDS	Material Safety Data Sheet
MS4	Municipal Separate Storm Sewer System
NOI	Notice of Intent

NPDES	National Pollutant Discharge Elimination System
NSWD	Non–Storm Water Discharge
PA	Public Affairs Department
PAH	Polycyclic Aromatic Hydrocarbon
PC	Post-Construction
PE	Public Education
PEO	Public Education and Outreach
PF	Physical Facilities Department
D&CS	Design and Construction Division of Physical Facilities Department
PF Grounds	Grounds Services Division of Physical Facilities Department
PIP	Public Involvement and Participation
PP	Public Participation
PSA	Public Service Announcement
SSMP	Sewer System Management Plan
StORM	Students for the Overhaul of Rainwater Management
SWMP	Stormwater Management Plan
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
T&P	Transportation and Parking
UC Santa Barbara	University of California, Santa Barbara
U.S. EPA	United States Environmental Protection Agency
WQWG	Water Quality Working Group

11.0 REFERENCES

Ali Aghayan
2008 University of California, Santa Barbara Environmental Health and Safety Department. Personal communication. May 6. Santa Barbara.

California Code of Regulations (CCR)
2004 *Title 23: Waters*. September 2004. http://government.westlaw.com/linkedslice/default.asp?li=%7B5F46ACE0-6569-4DE8-96C3-368A4663D10E%7D&RS=GVT1.0&VR=2.0&SP=CCR-1000 and http://www.waterboards.ca.gov/water_issues/programs/ust/electronic_submittal/docs/text_regs.pdf.

Central Coast Ambient Monitoring Program (CCAMP)
2007 *Central Coast Ambient Monitoring Program Hydrologic Unit Report for the 2001-02 South Coast Watershed Rotation Area*. http://ccamp.org/ccamp/documents/HU315_report_final.pdf.

Central Coast Regional Water Quality Control Board (CCRWQCB)
1994 *Water Quality Control Plan (Basin Plan)*. September 8. http://www.waterboards.ca.gov/centralcoast/BasinPlan/Index.htm.

Central Coast Regional Water Quality Control Board (CCRWQCB)
2003 *General Permit for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (MS4s)*, Water Quality Order No. 2003-0005-DWQ. March 10. Available online at http://www.waterboards.ca.gov/water_issues/programs/stormwater/docs/final_ms4_permit.pdf.

Central Coast Regional Water Quality Control Board (CCRWQCB)
2008 *Notification to Traditional, Small MS4s on Process for Enrolling Under the State's General Permit for Storm Water Discharges*. February 15.

City of Santa Barbara
1997 *Goleta Slough Ecosystem Management Plan*. December. Available online at http://www.goletaslough.org/

Code of Federal Regulations (CFR)
2007a *EPA Administered Permit Programs: The National Pollutant Discharge System*. U.S. Environmental Protection Agency, 40 CFR 122.32 and 122.26, 2007 edition. Office of the Federal Register, National Archives and Records Service, General Services Administration, U.S. Government Printing Office, Washington D.C.

Code of Federal Regulations (CFR)
2007b *State and Local Assistance*. U.S. Environmental Protection Agency, 40 CFR 35.2005, 2007 edition. Office of the Federal Register, National Archives and Records Service, General Services Administration, U.S. Government Printing Office, Washington D.C.

Glasgow, H.B. Jr. & J.M. Burkholder
2000 Water quality trends and management implications from a five-year study of a eutrophic estuary. *Ecological Applications* 10: 1024-1046.

Science Applications International Corporation
1996 Goleta Slough ecosystem management plan (working draft): Appendix L to the Santa Barbara Airport facilities plan, EIR/EIS. Santa Barbara, California.

State Water Resources Control Board (SWRCB)
2008 *Porter-Cologne Water Quality Control Act*. January 1. http://www.waterboards.ca.gov/water_laws/docs/portercologne.pdf

University of California, The Regents
1969 Standing Order No. 100.6, *Duties of the Chancellors*.

University of California, Office of the President
1989 *Guide to the Preparation of Regents' Materials*. Coordination & Review, Oakland, CA. August 1989 (and succeeding editions).

University of California, Office of the President
1994 *UC CEQA Handbook*. Compiled on the Internet in 2002. http://www.ucop.edu/facil/pd/CEQA-Handbook/index.html.

University of California, Office of the President
2003 *Green Building Policy and Clean Energy Standard*. July 17.

University of California, Office of the President
2008 *Facilities Manual*. February 1. http://www.ucop.edu/facil/fmc/facilman/.

University of California, Santa Barbara
1987a *University of California Santa Barbara Campus Wetlands Management Plan: Part 1 - Technical Report on the Botanical Resources of West and Storke Campus Wetlands*. The Herbarium, Environmental Report No. 12.

University of California, Santa Barbara
1987b *University of California Santa Barbara Campus Wetlands Management Plan: Part 3 - Technical Report on the Vertebrate Resources of West and Storke Campus Wetlands.* Department of Biological Sciences, Environmental Report No. 1.

University of California, Santa Barbara
1990a *University of California Santa Barbara Campus Wetlands Management Plan: Part 2 - Technical Report on the Hydrology, Water Quality, and Sedimentation of West and Storke Campus Wetlands*.

University of California, Santa Barbara
1990b *Long Range Development Plan*. University of California, Santa Barbara, Office of Campus Planning and Design.

University of California, Santa Barbara
1992 *Landscape Master Plan Part III: Natural Areas* and supplement: *Campus Lagoon Management Plan*.

University of California, Santa Barbara
2003 *Campus Plan*. Prepared by Urban Design Associates.

University of California, Santa Barbara
2006 *Wastewater Collection System Management Plan*. Prepared for UCSB EH&S. Prepared by Tetra Tech, Inc., Santa Maria, CA. 12 December.

University of California, Santa Barbara
2008a *Draft Vision 2025: Long Range Development Plan*. University of California, Santa Barbara, Office of Campus Planning and Design. Plan dated March.

University of California, Santa Barbara
2008b *Campus Sustainability Plan*. University of California, Campus Planning Committee. April 22, 2008. http://sustainability.ucsb.edu/plan/docs/sustainability_plan_workingdoc4.08.pdf.

U.S. Senate
2002 *Federal Water Pollution Control Act*. November 27. http://epw.senate.gov/water.pdf.

The Weather Channel
2008 *Monthly Averages for Goleta, CA – weather.com*. April 29. http://www.weather.com/outlook/recreation/boatandbeach/wxclimatology/monthly/USCA0429.