

**UNIVERSITY OF CALIFORNIA, SANTA BARBARA  
STORMWATER MANAGEMENT PROGRAM  
GUIDANCE DOCUMENT**



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## **1.0 INTRODUCTION**

As stormwater runs over roads, rooftops, and compacted lands, it collects pollutants such as trash, metals, sediment, pesticides, nutrients, pathogens, etc., and flows to the nation's waterways. In addition to transporting pollutants, stormwater discharge poses a physical hazard to aquatic habitats and stream function due to the increase in water velocity and volume that result from naturally vegetated areas being converted to impervious surfaces such as roads, parking lots, and buildings.

In California, the State Water Resources Control Board (State Water Board) has determined urban stormwater runoff is a leading cause of pollution throughout the state and has identified certain entities to implement stormwater pollution control measures. The University of California, Santa Barbara (UCSB, University) was designated a non-traditional small municipal separate storm sewer system (MS4) and required to comply with the State Water Board's stormwater regulations.

The UCSB community greatly values the environment and views stormwater as a resource rather than a waste product, and will continue to implement best management practices (BMPs) to prevent pollution and restore the integrity of local water bodies.

### **1.1 Purpose**

The UCSB Stormwater Management Program Guidance Document will serve as a framework for identifying, assigning, and implementing strategies and BMPs intended to reduce the discharge of pollutants from the MS4 and protect downstream water quality. In addition to these primary objectives, this Guidance Document will:

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

In order to protect and restore the physical, chemical, and biological integrity of our nation's waterways, the University will reduce and eliminate discharges of pollutants to waters of the U.S., prevent pollutants entering stormwater by emphasizing pollutant reduction and source control, and meet the maximum extent practicable (MEP) standard by:

- Implementing a variety of technically appropriate and economically feasible BMPs
- Ensuring that the most appropriate BMPs are implemented in the most effective manner
- Making changes to BMPs as necessary

### **1.2 Regulatory Overview**

In 1972 the Federal Water Pollution Control Act, known as the Clean Water Act, was enacted, establishing the baseline goal of attaining fishable, swimmable waters throughout the United States. In recognition of the increase in polluted runoff, in 1987 the United States Congress modified the Clean Water Act and mandated the United States Environmental Protection Agency (U.S. EPA) to control certain stormwater discharges under the National Pollutant Discharge Elimination System (NPDES). Section 402 was added to the Clean Water Act which established a framework for regulating discharges from MS4s as a special category of point source discharges.

In 1990, the U.S. EPA established Phase I of the NPDES permitting program requiring states to issue permits to operators of medium and large MS4s to control polluted discharges. In 1999, Phase II of the NPDES permitting program was established requiring states to issue permits to operators of small MS4s, those with a population less than 100,000. In addition, the term Small MS4 also includes systems similar to separate storm sewer systems in municipalities such as systems at military bases, universities, highways, etc. These entities are referred to as Non-traditional Small MS4s.

The Phase II Final Rule promulgated by the U.S. EPA prompted the California State Water Resources Control Board (State Water Board) to adopt Water Quality Order No. 2003-0005-DWQ, NPDES General Permit CAS000004 WDRs for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (2003 General Permit) on April 30, 2003, included in **Appendix A, SWRCB 2003 Phase II MS4 General Permit**. The 2003 General Permit required designated MS4s to develop a Stormwater Management Plan (SWMP) which identified and assigned BMPs to be implemented to reduce the discharge of pollutants to the MEP.

In 2013, the State Water Board revised the 2003 General Permit and adopted Water Quality Order No. 2013-0001-DWQ, NPDES General Permit CAS000004 WDRs for Storm Water Discharges from Small MS4s (2013 General Permit), included in **Appendix B, SWRCB 2013 Phase II MS4 General Permit**. With the adoption of the 2013 General Permit, minimum requirements are known at the time of permit issuance and not left to be determined later through Regional Water Quality Control Board (Regional Water Board) review and approval of SWMPs. Instead of developing a SWMP, MS4s are required to develop a Guidance Document specific to each MS4 to provide planning and guidance for each program area and to identify responsible implementing parties. Additionally, MS4s previously enrolled by Regional Water Boards to comply with the 2003 General Permit must address in their Guidance Document all BMPs that are more protective of stormwater from their most recent SWMP.

### *Regulatory Timeline*

1972	U.S. Congress enacted the Federal Clean Water Act
1987	U.S. Congress identified stormwater discharges as a concern that should be covered by the Clean Water Act
1990	U.S. EPA established Phase I of the NPDES stormwater program, pertaining to operators of medium and large MS4s (populations of 100,000 or greater)
1999	U.S. EPA established Phase II of the NPDES stormwater program, pertaining to operators of small and non-traditional MS4s (populations less than 100,000)
2003	CA State Water Board adopted the Phase II MS4 General Permit
2013	CA State Water Board revised the Phase II MS4 General Permit

### **1.3 Historical Progress**

The State Water Board identified UCSB as a Non-Traditional Small MS4 requiring coverage under the 2003 General Permit. In March 2003, UCSB submitted its original Stormwater Management Plan (SWMP) to the Central Coast Regional Water Quality Control Board (Central Coast Water Board) and implemented pollution prevention practices, even though they were not officially enrolled until 2008. On February 15, 2008, UCSB was required to enroll in the State Water Board's MS4 General Permit and to revise the existing UCSB Stormwater Management Plan, which was later adopted by the Central Coast Water Board in June of 2009. **Appendix C, UCSB Annual Report for Year 1**, includes examples of

BMPs implemented during UCSB's first year of SWMP implementation. UCSB's 2010 revision of the SWMP was approved by the Executive Officer on May 27, 2010.

In April of 2011, the U.S. EPA and the Central Coast Water Board audited the UCSB MS4 Stormwater Management Program. They reviewed documents, conducted interviews, and performed inspections of the entire campus, focusing on all areas of compliance, especially construction sites and good housekeeping practices. In December of 2011, UCSB received an audit report from the U.S.EPA that listed a few deficiencies including not having consistent practices at construction projects and not having a central location to store all compliance documents, such as a database. The Central Coast Water Board letter dated December 5, 2011 summarizing the EPA limited audit of the UCSB Stormwater Management Program is included in **Appendix D, Results of Limited Compliance Audit, Central Coast Water Board Letter dated December 5, 2011**. However, the U.S. EPA also noted that UCSB had achieved a great deal of progress with the Municipal Stormwater Program in the two years the University was enrolled under the program and the audit team observed a high level of awareness of stormwater issues among University staff.

#### **1.4 University Departments and Coordination**

UCSB resembles a small city in that it is a complex mix of land uses including housing and dining, office space, instruction and research facilities, roads and parking lots, athletic fields, and significant open spaces and natural reserve areas. The UCSB Stormwater Management Program Guidance Document will be implemented in coordination with other University departments and groups including, but not limited to, those described below.

##### ***Campus Sustainability***

Campus Sustainability is a conglomeration of efforts from key faculty, administrators, students, and staff across the campus that works in a decentralized manner with the overarching goals of improving the University's effect on the environment and reducing the dependence on non-renewable resources. The UCSB Sustainability Office has helped foster a culture of environmental awareness at UCSB by supporting campus-wide sustainability efforts, coordinating sustainability program development, and publicizing the sustainability work of staff, faculty, and students on campus.

##### ***Cheadle Center for Biodiversity and Ecological Restoration***

The Cheadle Center for Biodiversity and Ecological Restoration (CCBER) is a UCSB campus facility dedicated to education, research, and outreach and is the driving force in the University's efforts to provide stewardship of campus natural resources and maintain an environment rich in biodiversity. Through the ecological restoration program, CCBER encourages and facilitates land restoration throughout the UCSB campus.

##### ***Environmental Health and Safety***

The Department of Environmental Health and Safety (EH&S) is responsible for promoting a safe and healthful environment for research, instruction, and campus community life and assists the campus in meeting its obligations for compliance with federal, state, and local regulations. Examples of services provided by EH&S staff that directly affect water quality on campus include the development and implementation of the UCSB Stormwater Management Program, oversight of compliance with the MS4 General Permit and the Construction General Permit, and advising on incorporation of Low Impact Development (LID) elements into new development projects.

### ***Facilities Management***

The mission of all Campus Design and Facilities units is to design, build, operate, maintain, and renew the physical environment required to support the University's instructional, research, and public service mission. Units under the Facilities Management umbrella that affect water reduction and water quality include:

- **Campus Planning & Design (Planning)**  
The responsibilities of Campus Planning include providing guidance for capital project design, maintaining and implementation of the Long Range Development Plan, ensuring California Coastal Commission and California Environmental Quality Act (CEQA) compliance, and implementation of the UC Sustainability Practices policy. During the CEQA process, mitigation measures directly affecting water usage and water quality are identified and included in new development projects.
- **Design & Construction Services (D&CS)**  
D&CS staff is responsible for implementation and oversight of UCSB's major and minor capital improvement projects including managing the design of the project, development of bidding documents, bidding, and construction. D&CS staff directly affects water quality by incorporating stormwater treatment features and water efficiency devices such specialized irrigation systems into the design of new development projects.
- **Physical Facilities (PF)**  
Physical Facilities is comprised of skilled trades people organized in multiple groups such as Custodial, Energy & Utility Services, Grounds, Maintenance, and Recycling. Physical Facilities staff affects water usage and water quality by conducting routine maintenance and repairs of campus buildings, water mains, sewer and storm drains, and sidewalks and roadways. Physical Facilities also houses the UCSB LEED program which greens the campus' building portfolio and develops and implements sustainable operations.

### ***Housing and Residential Services***

Housing and Residential Services (H&RS) provides housing and associated residential life services for UCSB's undergraduate student, graduate student and faculty population. Similar to Campus Facilities Management, Housing and Residential Services is responsible for day-to-day operations and maintenance of University owned housing facilities and the associated landscaping features.

## 2.0 CAMPUS OVERVIEW

UCSB 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. According to the Long Range Development Plan, approximately 22,000 students attend the University and the faculty consists of 1,050 members with support from 3,600 staff members. Revised projections from the 2010 Draft UCSB Long Range Development Plan estimate the UCSB population for the school year 2025/2026 to be 30,000.

The campus facilities include, but are not limited to, housing, dining services, lecture halls and classrooms, office buildings, science and research laboratories, aquarium and marine science laboratories, athletic fields, aquatics and swimming pools, grounds and maintenance facilities, and parking facilities. In addition to the campus facilities, UCSB is also responsible for seven natural reserves including the Coal Oil Point Natural Reserve which is included in the contiguous UCSB property. The Coal Oil Point Natural Reserve protects a wide variety of shoreline and estuarine habitats and is home to many ongoing restoration projects that aim to improve the biological functioning of the reserve.

### 2.1 Campus Description

The 1,055-acre (approximately 1.6-square mile) University is located on the South Coast of Santa Barbara County, California. Property included within the boundaries of UCSB is divided into four principal campuses:

1. Main Campus (422 acres), acquired in 1948, comprises academic uses for teaching and research, administrative and support services, student housing and dining, recreation, and natural areas such as the Campus Lagoon and the bluff areas
2. Storke Campus (184 acres), acquired in 1962, includes additional athletic and service facilities, student housing, and natural areas such as Storke Campus Wetlands
3. West Campus (273 acres), acquired partly in 1967 and partly in 2007, contains faculty housing, the Orfalea Family Children's Center, Devereux, and the Coal Oil Point Natural Reserve
4. North Campus (174 acres), acquired in 1994, includes faculty housing, student housing, the Ocean Meadows open space, and the proposed Sierra Madre Housing project

The University also owns two apartment buildings in Isla Vista (El Dorado and Westgate) and two academic buildings (Embarcadero Hall and Isla Vista Theater). **Figure 2.1-1, Map of UCSB from the LRDP**, illustrates the four main campuses including the buildings located in Isla Vista. Through all of its land holdings, UCSB currently occupies nearly 8 million California Adjusted Gross Square Feet of built-out-space.



**Figure 2.1-1**  
**Map of UCSB from the LRDP 2010**



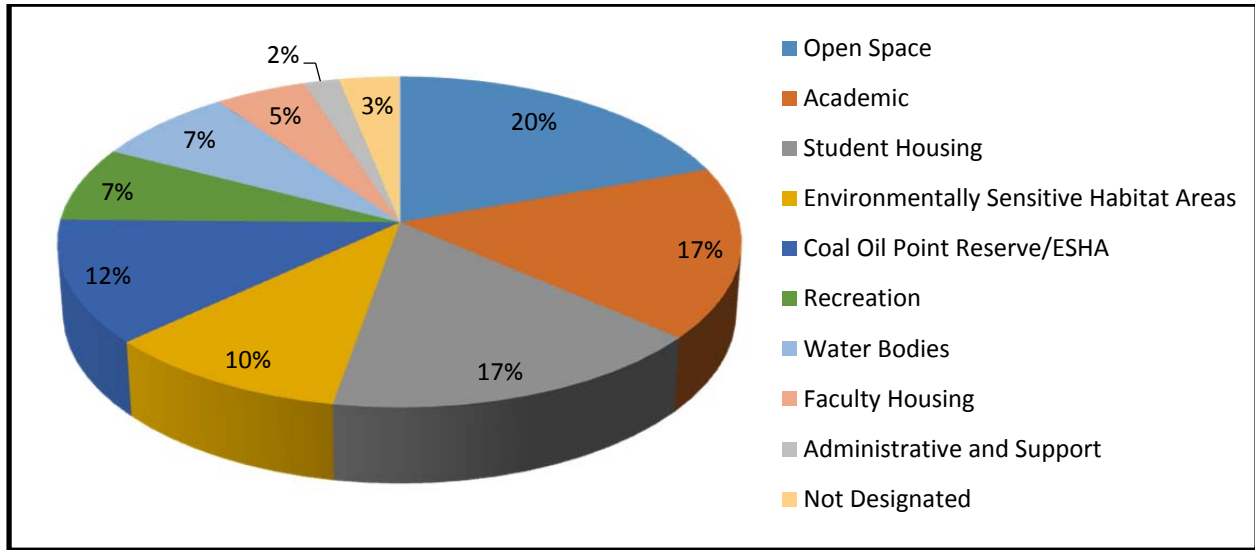
Past and planned land use for the 2010 school year and the 2025 school year are listed in **Table 2.1-1, Summaries of UCSB Land Use**. In addition, **Figure 2.1-2, Land Use on UCSB Campus in 2010**, illustrates the land uses as of 2010 at UCSB.

**Table 2.1-1**  
**Summaries of UCSB Land Use**

<b>In 2010</b>			<b>Proposed in 2025</b>		
<b>Use</b>	<b>Acres</b>	<b>% of Total</b>	<b>Use</b>	<b>Acres</b>	<b>% of Total</b>
Open Space	206	20	Open Space	276	26
Academic	177	17	Housing	255	24
Student Housing	174	16	Academic & Support	195	18
Environmentally Sensitive Habitat Areas (ESHA)	110	10	Coal Oil Point Reserve	170	16
Coal Oil Point Reserve/ESHA	127	12	Recreation	81	8
Recreation	77	7	Water Bodies	78	7
Water Bodies	79	7	<b>Total</b>	<b>1,055</b>	<b>100</b>
Faculty Housing	51	5			
Administrative and Support	20	2			
Not Designated	34	3			
<b>Total</b>	<b>1,055</b>	<b>100</b>			

Source: Draft UC Santa Barbara Long Range Development Plan, July 2010

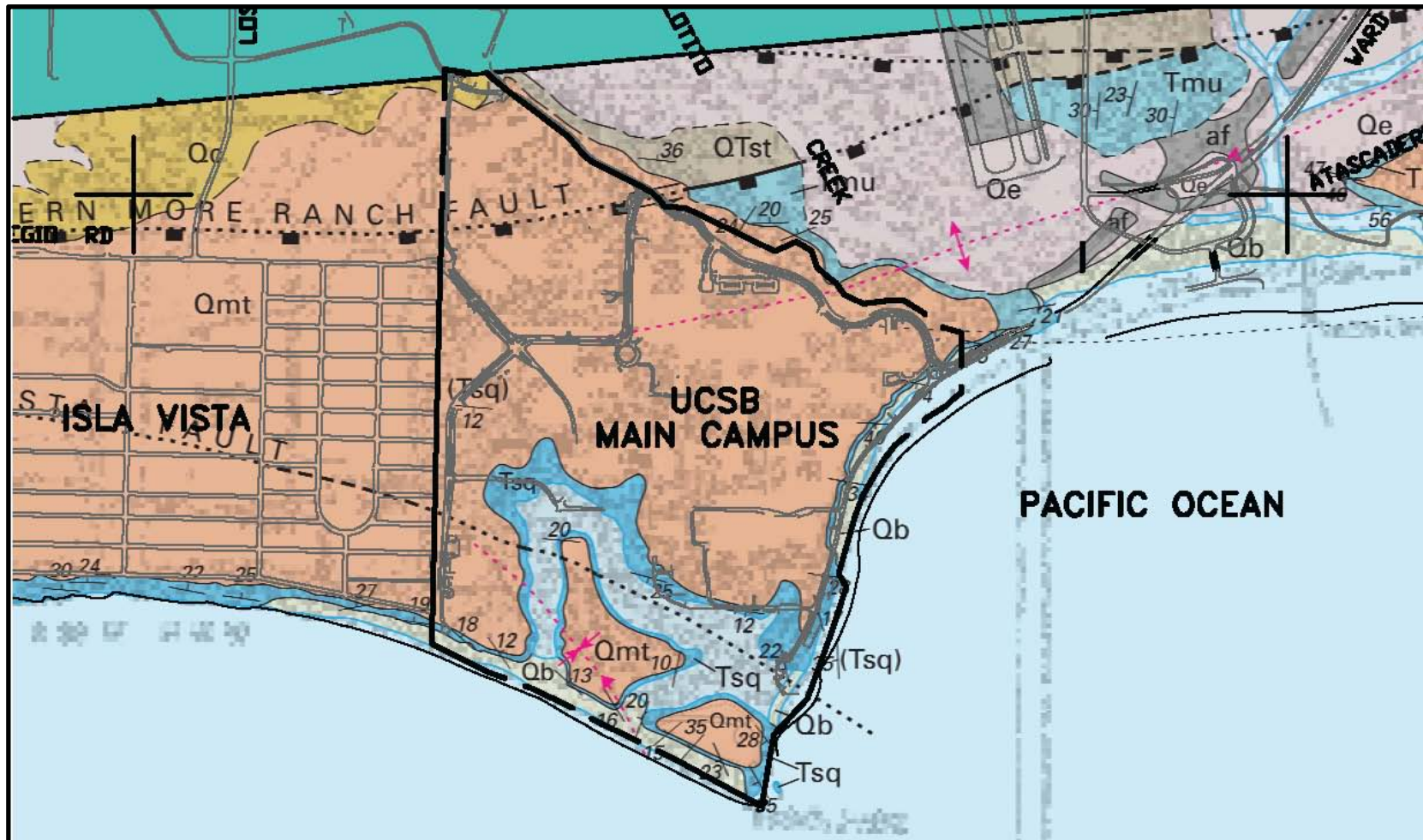
**Figure 2.1-2**  
**Land Use on UCSB Campus in 2010**



***Main Campus Geology***

The UCSB Main Campus lies south of the Santa Barbara Municipal Airport on a portion of land elevated roughly 40-50 feet above the Pacific Ocean. The bulk of the Main Campus is underlain by marine terrace deposits and Sisquoc bedrock formation. The marine terrace deposits rest on elevated marine wave cut platforms and form single terraces or flights of terraces and are identified as Quaternary. The Sisquoc formation is distinguished by thick beds of conglomerate containing angular clasts derived from the Monterey Formation, and is identified as Tertiary. This subterranean formation, which is visible in layers when viewed along the marine bluffs, is overlain by a layer of permeable soil. Because this Sisquoc layer is highly impermeable, any infiltrated water will pass through the soil layer and flow along the Sisquoc formation before discharging at the face of the marine bluff; an erosive process that has led to on-going bluff retreat threatening University access and ultimately the integrity of campus buildings. The geology of the UCSB Main Campus is shown in **Figure 2.1-3, Map of UCSB Geology and Watershed.**

**Figure 2.1-3**  
**Map of UCSB Geology and Watershed**



Map Credit: Penfield & Smith

- Existing groundwater basin location derived from U.S. Geological Survey
- Qmt Marine-terrace deposits (upper Pleistocene)
- Tsq Sisquoc Formation (lower Pliocene and upper Miocene)
- Property Line

## Natural Areas

Located along the coast of Santa Barbara County, UCSB is not only unique because of its location but also because it encompasses many rare and often environmentally sensitive habitats that are available for research, teaching, and public enjoyment. It is essential to the community that UCSB act as a steward for the natural areas and environmentally sensitive habitats by protecting and restoring impacted resources.

## 2.2 Climate

The climate in the vicinity of UCSB is representative of a Mediterranean climate with mild, moist winters and moderately warm, generally rainless summers. Temperatures range from average low of 40 degrees Fahrenheit in December to an average high of 74 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 17.87 inches. **Table 2.2-1, Goleta, California, Temperature and Precipitation Data 1981 to 2010**, presents average temperature and precipitation data for Goleta, California, which is adjacent to UCSB.

**Table 2.2-1**  
**Goleta, California, Temperature and Precipitation Data 1981 to 2010**

Month	Temperature (°F)			Precipitation (Inches)
	Average High	Mean Average	Low Average	
January	64	53	41	3.50
February	64	54	44	4.09
March	65	56	46	3.18
April	67	58	48	1.00
May	69	60	51	0.34
June	71	63	54	0.07
July	73	66	58	0.01
August	74	66	58	0.12
September	74	65	56	0.26
October	72	62	51	0.81
November	68	56	44	1.55
December	64	52	40	2.94

Source: The Weather Channel, 2013

## 2.3 Surface Water and Hydrology

UCSB is located within in the 240,720-acre South Coast Hydrologic Area (Hydrologic Unit 315), which is made up of small, coastal watersheds (Central Coast Ambient Monitoring Program [CCAMP] 2007). The UCSB campus comprises approximately 0.4 percent of the Hydrologic Area. UCSB is situated on a promontory, Goleta Point, which is bordered by five surface water bodies: Devereux Slough, Goleta Slough, Campus Lagoon, Pacific Ocean, and Storke Wetlands.

### *Devereux Slough*

The Devereux Slough is located on the West Campus and is managed by the UCSB'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.

### *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.

### *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 UCSB'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.

### *Campus Lagoon*

The Campus Lagoon is a 31-acre brackish pond, thought to once be a historic stream channel, 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 a 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 UCSB'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 UCSB Marine Science Laboratories. The lagoon also receives stormwater runoff from the University, which contributes substantial amounts of water to the system during rain events.

## 2.4 Summary of Campus Plans

Numerous plans have been developed for campus planning and the protection of water resources and environmental assets. Some of these plans are summarized below.

- Campus Sustainability Plan (2008, updated 2013)
  - The Campus Sustainability Plan defines eleven functional areas of campus along with associated incremental goals, objectives, and benchmarks that are necessary to achieve sustainability in campus

operations. The Plan was originally developed in April of 2008 with a goal of creating a roadmap to achieving sustainability within 20 years. The Plan was updated in 2013 to incorporate an evaluation of current practices and to identify next steps in becoming more sustainable. The updated Plan emphasizes short and long term goals to achieve positive change within each identified functional area of campus.

- **Ellwood-Devereux Open Space and Habitat Management Plan (2004)**  
The Ellwood-Devereux Open Space and Habitat Management Plan is a joint effort between the City of Goleta; UCSB; and County of Santa Barbara to provide for a comprehensive planning approach to resolve land use and environmental conflicts and protect sensitive environmental resources while allowing reasonable development under the jurisdiction of each agency. The Plan outlines a set of linked and comprehensive actions for residential development, open space and resource protection, and public access on one of the last remaining open coastal lands in western Goleta.
- **Goleta Slough Ecosystem Management Plan (1997)**  
The Goleta Slough Ecosystem Management Plan is a product of the Goleta Slough Management Committee which is composed of numerous public, private, regulatory, and non-governmental organizations including UCSB, most of which border the Goleta Slough or have jurisdictions extend into the ecosystem. The Plan was adopted by the City of Santa Barbara in 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. In September 2012, the City approved a proposal to develop an updated Plan which includes a sea level rise vulnerability assessment at the request of the California Coastal Commission.
- **UCSB Campus Lagoon Management Plan (1992)**  
The Campus Lagoon Management Plan is a supplement to the UCSB Landscape Master Plan Part III: Natural Areas (UCSB 1992). This was prepared in response to requirement of the current 1990 UCSB LRDP and is intended to specifically review the historical physiographic setting, hydrology, land use, and the biota of the 57 acre UCSB 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.
- **UCSB Campus Plan (2003)**  
The UCSB Campus Plan creates a roadmap with specific design principles and proposed maps, to improve upon the physical setting of the UCSB campus. Goals of the Campus Plan include emphasis on UCSB'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 UCSB 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 (UCSB 2003).
- **UCSB Campus Wetlands Management and Restoration Plan**  
The UCSB campus Wetlands Management and Restoration Plan consists of four volumes of 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 (UCSB 1987-1991).
- **UCSB Long Range Development Plan (1990, updated 2010)**  
The 1990 UCSB Long Range Development Plan (LRDP) and the 2008 Draft LRDP incorporate 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 (UCSB 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.

- UCSB Sewer System Management Plan (updated regularly)

The UCSB Sewer System Management Plan (SSMP) includes measures to prevent and reduce sanitary sewer overflows, to ensure efficient and effective response to overflows, and to control and minimize the introduction of oil and grease into the sanitary sewer. The SSMP is regularly updated to address changes in campus facilities and changes in regulations.

- UCSB Spill Prevention, Control, and Countermeasure Plan (updated regularly)

The UCSB Spill Prevention, Control, and Countermeasure (SPCC) Plan describes the safeguards and procedures that are in place at UCSB to prevent an accidental release of oil to the environment. The SPCC Plan also includes a list of contacts and procedures for containing and cleaning up a spill if one should occur. The SPCC Plan is regularly updated to address changes in campus facilities and changes in regulations.

## 2.5 Potential Sources of Pollution

Stormwater runoff can have many negative impacts on plants, fish, animals, and people because it collects pollutants from the surfaces it comes in contact with. A pollutant is a substance introduced into the environment that adversely effects the environment. In order to develop an effective stormwater management program it is important to understand pollutants, their sources, and their impacts. **Table 2.5-1, Pollutant Sources and Impacts** includes information about pollutants that could impair the UCSB MS4 and the local watershed.

The first step to protecting the local watershed is to prevent pollution; the second step is cleaning up the pollution that does occur. **Table 2.5-2, Potential Pollutants from University Activities** lists day-to-day activities at the University, the types of pollutants that could be generated, and examples of BMPs that will be implemented to protect the UCSB MS4.



**Table 2.5-1**  
**Pollutant Sources and Impacts**

<b>Pollutant</b>	<b>Pollutant Type</b>	<b>Example / Description</b>	<b>Sources</b>	<b>Impacts</b>
Sediment	Physical	<ul style="list-style-type: none"> <li>• Sand</li> <li>• Silt</li> <li>• Clay</li> <li>• Other soil particles</li> </ul>	<ul style="list-style-type: none"> <li>• Construction sites</li> <li>• Urban environment</li> <li>• Landscape practices</li> <li>• Atmospheric deposition</li> <li>• Streambank erosion</li> </ul>	<ul style="list-style-type: none"> <li>• Reduced light transmission</li> <li>• Smothering of habitat</li> <li>• Recreational use impairment</li> <li>• Transport of other pollutants</li> <li>• Increase of turbidity</li> </ul>
Water Temperature	Physical	Degradation of water quality by any process that changes ambient water temperature	<ul style="list-style-type: none"> <li>• Removal of trees along streams (no shade)</li> <li>• Runoff from warm impervious surface</li> </ul>	<ul style="list-style-type: none"> <li>• Decreases the level of dissolved oxygen in water</li> <li>• Threat to stream insects and fish</li> <li>• Increases algal growth</li> </ul>
Gross solids	Physical	<ul style="list-style-type: none"> <li>• Trash and litter from human activities</li> <li>• Leaves and large coarse sediment</li> </ul>	<ul style="list-style-type: none"> <li>• Daily human activities</li> <li>• Construction sites</li> <li>• Large gatherings or events</li> </ul>	<ul style="list-style-type: none"> <li>• Threat to aquatic life</li> <li>• Leach harmful pollutants</li> <li>• Cause unpleasant odors</li> <li>• Impaired recreational uses</li> <li>• High cost clean-up/removal</li> </ul>
Nutrients	Chemical	<ul style="list-style-type: none"> <li>• Nitrogen</li> <li>• Phosphorous</li> <li>• Potassium</li> <li>• Ammonia</li> </ul>	<ul style="list-style-type: none"> <li>• Atmospheric deposition</li> <li>• Fertilizers (landscaping, golf courses, agriculture, etc.)</li> <li>• Septic or sewer leaks</li> </ul>	<ul style="list-style-type: none"> <li>• Algae blooms – Eutrophication</li> <li>• Reduces oxygen in water</li> <li>• Changes water chemistry and pH</li> </ul>
Metals	Chemical	<ul style="list-style-type: none"> <li>• Copper</li> <li>• Zinc</li> <li>• Lead</li> <li>• Chromium</li> <li>• Cadmium</li> </ul>	<ul style="list-style-type: none"> <li>• Streets, highways</li> <li>• Building materials</li> <li>• Atmospheric deposition</li> <li>• Batteries</li> <li>• Fuels</li> <li>• Paints</li> </ul>	<ul style="list-style-type: none"> <li>• Toxic to all life at very low levels</li> <li>• Bioaccumulation</li> </ul>
Hydrocarbons	Chemical	<ul style="list-style-type: none"> <li>• Oil and grease</li> <li>• Fuels</li> <li>• Hydraulic fluids</li> <li>• PAH's</li> </ul>	<ul style="list-style-type: none"> <li>• Streets, highways</li> <li>• Fueling sites, emissions</li> <li>• Illegal dumping</li> <li>• Leakages (vehicles/equipment)</li> </ul>	<ul style="list-style-type: none"> <li>• Threat to aquatic life</li> <li>• Threat to human health</li> <li>• 1 quart of oil can make 1,000 gallons of water unusable</li> </ul>

<b>Pollutant</b>	<b>Pollutant Type</b>	<b>Example / Description</b>	<b>Sources</b>	<b>Impacts</b>
Organic compounds	Chemical	<ul style="list-style-type: none"> <li>• Paint thinners</li> <li>• Solvents</li> <li>• Degreasing agents, curing agents, sealing compounds</li> </ul>	<ul style="list-style-type: none"> <li>• Construction sites</li> <li>• Illicit discharges</li> <li>• Poor storage and handling of materials</li> </ul>	<ul style="list-style-type: none"> <li>• Threat to aquatic life</li> <li>• Bioaccumulation</li> <li>• Human health risk</li> </ul>
Pesticides	Chemical	<ul style="list-style-type: none"> <li>• Pesticides</li> <li>• Herbicides</li> <li>• Rodenticides</li> <li>• Insecticides</li> </ul>	<ul style="list-style-type: none"> <li>• Urban landscaping</li> <li>• Agriculture</li> </ul>	<ul style="list-style-type: none"> <li>• Threat to aquatic life</li> <li>• Bioaccumulation</li> <li>• Human health risk</li> </ul>
Biological	Chemical	<ul style="list-style-type: none"> <li>• Pathogens</li> <li>• Bacteria</li> <li>• Viruses</li> </ul>	<ul style="list-style-type: none"> <li>• Leaking septic/sewer systems</li> <li>• Illicit connections</li> <li>• Animal waste</li> </ul>	<ul style="list-style-type: none"> <li>• Threat to aquatic life</li> <li>• Human health risk</li> <li>• Beach closures</li> </ul>

**Table 2.5-2**  
**Potential Pollutants from University Activities**

<b>Activity</b>	<b>Department or Group Involved</b>	<b>Pollutants of Concern</b>	<b>Target Audience BMP</b>	<b>MS4 Coordinator Support</b>
Construction projects (large, medium, small)	<ul style="list-style-type: none"> <li>• Contractor</li> <li>• DCS</li> <li>• FM</li> <li>• HRS</li> </ul>	<ul style="list-style-type: none"> <li>• Biological (pathogens, indicator bacteria)</li> <li>• Gross solids (litter, trash, debris)</li> <li>• Hydrocarbons</li> <li>• Metals</li> <li>• Nutrients</li> <li>• Organic compounds</li> <li>• Pesticides</li> <li>• Sediment</li> <li>• Increased water temperature</li> </ul>	<ul style="list-style-type: none"> <li>• Prevent pollution at construction sites</li> <li>• Comply with all Construction General Permit Requirements</li> <li>• Implement necessary corrective actions</li> </ul>	<ul style="list-style-type: none"> <li>• Providing BMP recommendation and guidance</li> <li>• Review and provide recommendation regarding contractor generated SWPPP</li> <li>• Retain regulatory required documentation</li> <li>• Review and advise on initial BMP installation</li> <li>• Conduct initial, periodic, and final site inspections</li> <li>• Identify and advise on necessary corrective action</li> </ul>
Maintaining UCSB facilities (outdoor maintenance, painting, trenching, etc.)	<ul style="list-style-type: none"> <li>• Contractor</li> <li>• DCS</li> <li>• FM</li> <li>• HRS</li> </ul>	<ul style="list-style-type: none"> <li>• Biological (pathogens, indicator bacteria)</li> <li>• Gross solids (litter, trash, debris)</li> <li>• Hydrocarbons</li> <li>• Metals</li> <li>• Nutrients</li> <li>• Organic compounds</li> <li>• Pesticides</li> <li>• Sediment</li> <li>• Increased water temperature</li> </ul>	<ul style="list-style-type: none"> <li>• Prevent pollution</li> <li>• Conduct periodic sweeping of hardscape areas</li> <li>• Maintain storm drains</li> <li>• Properly handle and store and hazardous materials</li> <li>• Implement necessary corrective actions</li> </ul>	<ul style="list-style-type: none"> <li>• Providing BMP recommendation and guidance</li> <li>• Retain regulatory required documentation</li> <li>• Review and advise on structural BMP installation</li> <li>• Identify and advise on necessary corrective action</li> </ul>

Activity	Department or Group Involved	Pollutants of Concern	Target Audience BMP	MS4 Coordinator Support
Road and parking lot maintenance (paving, patching, resurfacing, striping)	<ul style="list-style-type: none"> <li>• Contractor</li> <li>• DCS</li> <li>• FM</li> <li>• HRS</li> <li>• TPS</li> </ul>	<ul style="list-style-type: none"> <li>• Gross solids (litter, trash, debris)</li> <li>• Hydrocarbons</li> <li>• Metals</li> <li>• Organic compounds</li> <li>• Sediment</li> <li>• Increased water temperature</li> </ul>	<ul style="list-style-type: none"> <li>• Prevent pollution in roadways and parking lots</li> <li>• Conduct periodic street and parking lot sweeping</li> <li>• Properly handle and store and hazardous materials</li> <li>• Implement necessary corrective actions</li> </ul>	<ul style="list-style-type: none"> <li>• Providing BMP recommendation and guidance</li> <li>• Retain regulatory required documentation</li> <li>• Review and advise on structural BMP installation</li> <li>• Identify and advise on necessary corrective action</li> </ul>
Vehicle and equipment maintenance (fleet servicing, off-road equipment servicing)	<ul style="list-style-type: none"> <li>• Contractor</li> <li>• DCS</li> <li>• FM Grounds</li> <li>• HRS Grounds</li> <li>• TPS</li> </ul>	<ul style="list-style-type: none"> <li>• Gross solids (litter, trash, debris)</li> <li>• Hydrocarbons</li> <li>• Metals</li> <li>• Organic compounds</li> </ul>	<ul style="list-style-type: none"> <li>• Prevent pollution</li> <li>• Properly handle and store and hazardous materials</li> <li>• Implement necessary corrective actions</li> </ul>	<ul style="list-style-type: none"> <li>• Providing BMP recommendation and guidance</li> <li>• Retain regulatory required documentation</li> <li>• Review and advise on structural BMP installation</li> <li>• Identify and advise on necessary corrective action</li> </ul>
Grounds maintenance	<ul style="list-style-type: none"> <li>• Contractor</li> <li>• DCS</li> <li>• FM Grounds</li> <li>• HRS Grounds</li> </ul>	<ul style="list-style-type: none"> <li>• Biological (pathogens, indicator bacteria)</li> <li>• Gross solids (litter, trash, debris)</li> <li>• Hydrocarbons</li> <li>• Metals</li> <li>• Nutrients</li> <li>• Organic compounds</li> <li>• Pesticides</li> <li>• Sediment</li> </ul>	<ul style="list-style-type: none"> <li>• Prevent pollution</li> <li>• Store and apply pesticides, nutrients, and other hazardous materials in accordance with relevant environmental and safety regulations</li> <li>• Implement necessary corrective actions</li> </ul>	<ul style="list-style-type: none"> <li>• Providing BMP recommendation and guidance</li> <li>• Retain regulatory required documentation</li> <li>• Review and advise on structural BMP installation</li> <li>• Identify and advise on necessary corrective action</li> </ul>

Activity	Department or Group Involved	Pollutants of Concern	Target Audience BMP	MS4 Coordinator Support
Delivering goods to UCSB (loading docks)	<ul style="list-style-type: none"> <li>• Academic Research</li> <li>• HRS</li> <li>• UCen</li> <li>• Vendors</li> </ul>	<ul style="list-style-type: none"> <li>• Gross solids (litter, trash, debris)</li> <li>• Hydrocarbons</li> <li>• Metals</li> </ul>	<ul style="list-style-type: none"> <li>• Prevent pollution</li> <li>• Implement necessary corrective actions</li> </ul>	<ul style="list-style-type: none"> <li>• Providing BMP recommendation and guidance</li> <li>• Retain regulatory required documentation</li> <li>• Review and advise on structural BMP installation</li> <li>• Identify and advise on necessary corrective action</li> </ul>
Operation of food facilities	<ul style="list-style-type: none"> <li>• HRS</li> <li>• UCen</li> </ul>	<ul style="list-style-type: none"> <li>• Gross solids (litter, trash, debris)</li> <li>• Hydrocarbons</li> <li>• Nutrients</li> <li>• Organic compounds</li> <li>• Increased water temperature</li> </ul>	<ul style="list-style-type: none"> <li>• Prevent pollution</li> <li>• Implement necessary corrective actions</li> </ul>	<ul style="list-style-type: none"> <li>• Providing BMP recommendation and guidance</li> <li>• Retain regulatory required documentation</li> <li>• Review and advise on structural BMP installation</li> <li>• Identify and advise on necessary corrective action</li> </ul>
Illegal dumping or stockpiling unwanted items	Any UCSB community member	<ul style="list-style-type: none"> <li>• Biological (pathogens, indicator bacteria)</li> <li>• Gross solids (litter, trash, debris)</li> <li>• Hydrocarbons</li> <li>• Metals</li> <li>• Nutrients</li> <li>• Organic compounds</li> <li>• Pesticides</li> <li>• Sediment</li> <li>• Increased water temperature</li> </ul>	<ul style="list-style-type: none"> <li>• Prevent pollution</li> <li>• Avoid illegal dumping or stockpiling</li> <li>• Implement necessary corrective actions</li> </ul>	<ul style="list-style-type: none"> <li>• Identify and advise on necessary corrective action</li> </ul>

<b>Activity</b>	<b>Department or Group Involved</b>	<b>Pollutants of Concern</b>	<b>Target Audience BMP</b>	<b>MS4 Coordinator Support</b>
Trash or spills generated by community members working/teaching at UCSB, attending class, visiting UCSB	Any UCSB community member	<ul style="list-style-type: none"> <li>• Biological (pathogens, indicator bacteria)</li> <li>• Gross solids (litter, trash, debris)</li> <li>• Hydrocarbons</li> <li>• Metals</li> <li>• Nutrients</li> <li>• Organic compounds</li> <li>• Pesticides</li> <li>• Sediment</li> <li>• Increased water temperature</li> </ul>	<ul style="list-style-type: none"> <li>• Prevent pollution</li> <li>• Take cautionary measures to avoid trash or spills</li> <li>• Implement necessary corrective actions</li> </ul>	<ul style="list-style-type: none"> <li>• Conduct required spill notifications to regulatory agencies</li> <li>• Generate required spill reports to regulatory agencies</li> <li>• Identify and advise on necessary corrective action</li> </ul>

### 3.0 NON-TRADITIONAL SMALL MS4 PROVISIONS AND BMPS

Based on the U.S. EPA NPDES Phase II Final Rule, the State Water Board's 2003 General Permit described six minimum control measures that operators of regulated Small MS4s must incorporate into stormwater management programs. However, in the 2013 General Permit the State Water Board expanded on the six minimum control measures and, in an attempt to simplify assessment of compliance and streamline program implementation, established provisions that included more specificity than the 2003 General Permit and stated the minimum acceptable program elements and tasks. Each provision established the required task description, minimum implementation levels, and reporting elements to substantiate that the regulated MS4 meets the implementation levels.

Pursuant to the 2003 and 2013 General Permit, University staff identified strategies and practices that will be implemented over the 5-year permit term by staff and outside contractors. The BMPs described in the following sections include a variety of technically appropriate and economically feasible controls and strategies that will be implemented in the most effective manner. As BMPs are implemented, staff will make observations, collect data, and assess the overall program and implementation effort to ensure the best approach is taken to prevent and reduce the discharge of pollutants. Because this is a living document, modifications will be made as necessary to continually improve the UCSB MS4 Stormwater Management Program.

The 2013 General Permit Provisions and UCSB's proposed actions necessary to prevent stormwater pollution to the MEP are described in the following sections.

#### 3.1 UCSB Municipal Stormwater Program Management

In order to meet the requirements of the 2013 General Permit, UCSB staff will implement, revise, or adopt regulatory mechanisms, to the extent allowable under state law, to ensure adequate implementation and enforcement of the UCSB Municipal Stormwater Management Program. Within the second year of the permit term, the State Water Board requires UCSB to:

- Effectively prohibit non-stormwater discharges through the MS4
- Detect and eliminate illicit discharges and illegal connections to the MS4
- Respond to spills and prohibit dumping or disposal of materials other than stormwater into the MS4
- Require vendors, contractors, and operators of commercial facilities to minimize the discharge of pollutants to the MS4
- Ensure construction site or industrial facility operators provide a Waste Discharge Identification Number for coverage under the CGP or IGP and comply with the appropriate permit
- Review designs and proposals for new development and redevelopment to determine whether adequate BMPs will be installed, implemented, and maintained during construction and after final stabilization (post-construction)
- Promptly cease and desist discharges and/or cleanup and abate a discharge, including the ability to:
  - Effectively require the discharger to abate and clean up their discharge, spill, or pollutant release within 72 hours of notification
  - Require abatement, within 30 days of notification, for uncontrolled sources of pollutants that could pose an environmental threat or perform the cleanup and abatement work and bill the responsible party, if necessary

Required provisions and identified responsible departments pertaining to the Program Management element of the 2013 General Permit are included in **Table 3.1-1, Requirements of the 2013 MS4 General Permit**.

**Table 3.1 – 1**  
**Requirements of the 2013 MS4 General Permit**

Program Section and Element		Permit Year	Responsible Department
<b>F.5.a Program Management Element</b>			
F.5.b.1	Legal Authority		
	Permittee shall review, revise or adopt new relevant policies, contractual provisions, base orders, resolutions or other regulatory mechanisms to ensure the legal authority to protect stormwater quality.	2 (2015)	<ul style="list-style-type: none"> <li>• VC of Admin Services</li> <li>• EHS</li> </ul>



### 3.2 UCSB Community Education and Training Program

The 2013 MS4 General Permit requires UCSB to develop and implement a public education strategy that establishes education tasks based on water quality problems, target audiences, and anticipated task effectiveness. The purpose of identifying target audiences is to focus education and training efforts towards community groups who would benefit the greatest from an education program and from whose implementation of pollution prevention BMPs would yield the great reduction of stormwater pollution risk.

UCSB took a two staged approach in identifying target audiences that will be the focus of the stormwater public education and outreach program. The first step was to identify the activities conducted on campus that have the highest likelihood of affecting stormwater quality. These activities have been listed on Tables 2.5-1 and 2.5-2 and include construction activity, vehicle and equipment maintenance, grounds maintenance, waste management, hazardous materials storage and handling, building maintenance, and operation of food facilities, among others. The next step was to identify which community groups were the most likely to be involved with the identified potential pollution causing activities. These groups include Facilities Management, Housing and Residential Services, Design and Construction Services, Parking and Transportation Services, and contractors.

Unlike Traditional MS4s where the daily operation of residential, commercial, and industrial properties are managed by members of the public, all property within UCSB's MS4 is maintained and operated by UCSB staff and is under the sole ownership and control of UCSB management. As such, the community groups who have the greatest potential impact on stormwater quality through their involvement with potential pollution generating activities are UCSB staff involved in the daily operation of campus.

UCSB will continue to disseminate a general stormwater pollution prevention message to the student community, however, the majority of the focus of the public education and outreach program will be directed towards UCSB staff.

Required provisions and identified responsible departments pertaining to the Education and Outreach element of the 2013 General Permit are included in **Table 3.2-1, Requirements of the 2013 MS4 General Permit**. UCSB's Education and Outreach Program is summarized on **Table 3.2-2, UCSB Stormwater Education and Outreach Program**. This Education and Outreach Program fulfills the current requirements of the 2013 General Permit and continues BMPs from UCSB's 2010 SWMP which are considered to be more protective of stormwater quality.

#### **Program Planning**

Develop and implement a comprehensive stormwater education and outreach program designed to inform target groups within the campus about the importance of protecting stormwater quality for the benefit of the environment and human health.

#### **High Priority Pollutants**

High priority pollutants include, but are not limited to, sediment, nutrients, hydrocarbons, bacteria, oil and grease, and litter.

#### **High Priority BMPs**

Provide training to University staff about the importance of stormwater quality, ways to prevent pollution, and how to implement good housekeeping techniques.

**Table 3.2 – 1**  
**Requirements of the 2013 MS4 General Permit**

Program Section and Element		Permit Year	Responsible Department
<b>F.5.b Education and Outreach Program</b>			
F.5.b.1	Compliance Participation Options		
	Notify Regional Water Board of compliance participation option.	1 (2014)	• EHS
F.5.b.2	Public Education and Outreach		
	a Develop and implement a comprehensive education and outreach program.	2 (2015)	• CSC • DCS • EHS • FM • HRS • OSL
	b Gauge level of awareness and effectiveness of tasks.	2 (2015)	
	c Develop and convey a stormwater message (pollutants of concern, target audience, water quality issues).	2 (2015)	
	d Develop and disseminate education materials to target audiences and translate as appropriate.	2 (2015)	
	e Distribute educational materials.	2 (2015)	
	f Provide guidance to staff about water-friendly landscape.	2 (2015)	
	g Utilize information from stormwater-friendly landscaping programs (if appropriate).	2 (2015)	
	h Provide guidance to staff about reducing illicit discharges.	2 (2015)	
	i Provide guidance to staff about pesticide and fertilizer use.	2 (2015)	
	j Provide materials to school children (if applicable).	2 (2015)	
	k Provide guidance to staff about pressure washing and landscape irrigation.	2 (2015)	
	l Provide guidance about community car washes (if applicable).	2 (2015)	
	m Provide guidance to staff in illicit discharge flow areas.	2 (2015)	
F.5.b.3	Staff Site Operator Training and Education Illicit Discharge Detection and Elimination Training		
	Develop and implement a training program that includes the following:		
	a Identification of an illicit discharge or illegal connection.	3 (2016)	• EHS • FM • HRS
	b Procedures for reporting and responding to an illicit discharge.	3 (2016)	
	c As needed follow-up training to review changes in procedure, techniques or staffing.	3 (2016)	
	d Annual assessment of trained staff knowledge of illicit discharge response. Provide refresher training as needed.	3 (2016)	

Program Section and Element			Permit Year	Responsible Department
	e	Training new staff who may come into contact with an illicit discharge.	3 (2016)	
	f	Include contact information for reporting illicit discharges in each fleet vehicle used by field staff.	3 (2016)	
F.5.b.4	Staff Pollution Prevention and Good Housekeeping			
	Develop and implement a biennial training program that includes the following:			
	a	General stormwater education including permit requirements and appropriate BMPs to be implemented during O&M activities.	3 (2016)	<ul style="list-style-type: none"> <li>• DCS</li> <li>• EHS</li> <li>• FM</li> <li>• HRS</li> </ul>
	b	An assessment of trained staff's knowledge of pollution prevention and good housekeeping. Information to be used to revise and target training as needed.	3 (2016)	
	c	Requirement that any contractors responsible for O&M activities be contractually required to comply with all applicable BMPs.	3 (2016)	
	d	Oversight to be provided to ensure O&M contractors are implementing appropriate BMPs.	3 (2016)	

**Table 3.2 – 2**  
**UCSB Stormwater Education and Outreach Program**

<b>MS4 Program and Action</b>	<b>Responsible for Action</b>	<b>Target Audience</b>	<b>Old Permit Requirement</b>	<b>New Permit Requirement</b>	<b>Frequency</b>
UCSB will continue to implement a comprehensive stormwater public education and training program designed to inform the UCSB community about stormwater pollution and steps that can be taken to reduce stormwater pollution. UCSB’s Community Education and Training Program will focus on target audiences but will continue to assess other community groups to determine the best way to education them regarding local pollutants of concern and regional water quality issues. The community groups that have a higher potential to contribute to stormwater pollution discharges, and have thus been identified as target audiences, include groups involved in activities such as: construction, vehicle and equipment maintenance, grounds maintenance, waste management, hazardous materials storage and handling, building maintenance, operation of food facilities, etc. These activities have a higher potential to generate stormwater pollutants and are therefore the priority of the UCSB Community Education and Training Program. This education program will be periodically evaluated to assess awareness and effectiveness of tasks.	-	-	PE-3.3	F.5.b.2.a F.5.b.2.b	-
Continue to provide guidance and distribute educational materials to target audiences and translate into applicable languages when appropriate. The following are specific examples:	-	-	PE-4.1	-	-
<ul style="list-style-type: none"> <li>Integrate stormwater awareness messages and information on the UCSB stormwater webpage.</li> </ul>	EHS	UCSB community	PE-2.2	F.5.b.2.c F.5.c.b	Annually
<ul style="list-style-type: none"> <li>Encourage students to play stormwater public service announcements on the UCSB student-run radio station during the rainy season.</li> </ul>	AS EAB EHS Sustainability	UCSB community	PE-3.3	F.5.b.2.c	Annually
<ul style="list-style-type: none"> <li>Provide stormwater awareness information to new students via the student orientation packets.</li> </ul>	AS EAB EHS HRS Sustainability	UCSB students	PE-4.1 PE-4.2	F.5.b.2.d F.5.b.2.e	Annually

MS4 Program and Action	Responsible for Action	Target Audience	Old Permit Requirement	New Permit Requirement	Frequency
<ul style="list-style-type: none"> <li>Provide stormwater awareness information to UCSB employees through the employee listserve.</li> </ul>	EHS Sustainability	UCSB employees	PE-5.1 PE-5.2	F.5.b.2.c	Annually
<ul style="list-style-type: none"> <li>Provide stormwater awareness information to UCSB employees through New Employee Orientation.</li> </ul>	EHS HR	UCSB employees	PE-5.3	F.5.b.2.c	Bimonthly
<ul style="list-style-type: none"> <li>Provide stormwater awareness information to UCSB employees through the EH&amp;S Guide to Services.</li> </ul>	EHS	UCSB employees	PE-5.6	F.5.b.2.c	Annually As needed
<ul style="list-style-type: none"> <li>Provide two stormwater awareness brochures annually on the UCSB stormwater website.</li> </ul>	AS EAB EHS HRS Sustainability	UCSB community	PE-6.2	F.5.b.2.d F.5.b.2.e	Annually As needed
<ul style="list-style-type: none"> <li>Encourage students to include stormwater awareness information in the Daily Nexus.</li> </ul>	AS EAB EHS HRS Sustainability	UCSB community	PE-8.1	F.5.b.2.c	Annually
<ul style="list-style-type: none"> <li>Provide guidance and educational materials to student groups that organize environmental awareness events.</li> </ul>	AS EAB EHS HRS Sustainability	UCSB community	PE-9.3 PE-9.4	F.5.b.2.d F.5.b.2.e	Annually As needed
<ul style="list-style-type: none"> <li>Facilitate or promote stormwater lectures or presentations to the UCSB community. Retain records of the stormwater lectures and/or presentations.</li> </ul>	AS EAB EHS Sustainability	UCSB community	PP-4.1 PP-4.2	F.5.b	Annually As needed
<ul style="list-style-type: none"> <li>Provide guidance and educational materials about construction stormwater pollution prevention to the UCSB community involved in the construction of new development and redevelopment projects at UCSB.</li> </ul>	EHS	Contractors DCS FM HRS	CS-1.2	Exceeds new permit F.5.e	Annually As needed

MS4 Program and Action	Responsible for Action	Target Audience	Old Permit Requirement	New Permit Requirement	Frequency
<ul style="list-style-type: none"> <li>Provide guidance and educational materials about Low Impact Development (LID) best management practices (BMPs) to the UCSB community involved in design of new development and redevelopment projects at UCSB. Document all outreach and training events.</li> </ul>	EHS	Contractors DCS FM HRS	PC-1.2 PC-1.3 PC-1.4 PC-1.5	Exceeds new permit F.5.e	Annually As needed
<ul style="list-style-type: none"> <li>Provide guidance and examples of best management practices regarding hazardous materials storage, handling, and disposal.</li> </ul>	EHS	EHS FM Grounds HRS TPS	GH-1.17	Exceeds new permit F.5.b.2.h	Annually As needed
<ul style="list-style-type: none"> <li>Provide information about campus waste management and recycling programs.</li> </ul>	EHS Grounds HRS Sustainability	UCSB Community	GH-6.4	Exceeds new permit F.5.b.2	Annually As needed
<p>Continue to provide stormwater awareness training to target audiences. The following are specific examples:</p>	-	-	-	-	-
<ul style="list-style-type: none"> <li>Provide employee self-scheduling via the UCSB Learning Center and advertise training opportunities that will increase stormwater awareness. Track and periodically evaluate all relevant training.</li> </ul>	EHS IT	UCSB employees	PE-5.5 ID-3.3 ID-3.4 ID-3.5	-	Continuously
<ul style="list-style-type: none"> <li>Train relevant staff about the illicit discharge detection and elimination (IDDE) program and best management practices.</li> </ul>	EHS	FM Grounds HRS TPS	ID-3.2	F.5.b.2.h F.5.b.2.m F.5.b.3.a F.5.b.3.b F.5.b.3.c F.5.b.3.d F.5.b.3.e F.5.b.3.f	Annually As needed
<ul style="list-style-type: none"> <li>Train relevant staff about construction site stormwater pollution prevention, erosion and sediment control BMPs, and the Construction Stormwater General Permit.</li> </ul>	EHS	DCS FM HRS	CS-2.1 CS-2.2	Exceeds new permit F.5.e	Biennially

MS4 Program and Action	Responsible for Action	Target Audience	Old Permit Requirement	New Permit Requirement	Frequency
<ul style="list-style-type: none"> <li>Train relevant staff about good housekeeping practices for indoor and outdoor maintenance activities and best management practices concerning spill response and avoiding potential discharges to the stormdrain system.</li> </ul>	EHS	EHS FM Grounds HRS TPS UCen	GH-1.16	F.5.b.4.a	Annually
<ul style="list-style-type: none"> <li>Train relevant staff about best management practices to be implemented at food facilities.</li> </ul>	EHS	HRS UCen	GH-5.1	Exceeds new permit F.5.b.4.a	Annually
<ul style="list-style-type: none"> <li>Survey the campus community on the effectiveness of stormwater public education and outreach efforts.</li> </ul>	AS EAB EHS HRS Sustainability	UCSB Community	PE-7.3	F.5.h	Annually As needed
<p>Continue to install signage throughout the MS4 where appropriate to convey the importance of stormwater pollution prevention and healthy watersheds. The following are specific examples:</p>	-	-	-	-	-
<ul style="list-style-type: none"> <li>Label stormdrains located in roadways, parking areas, loading docks, and service areas throughout the UCSB MS4.</li> </ul>	EHS FM/TPS HRS	UCSB community	PE-1.2	F.5.c.a	Annually
<ul style="list-style-type: none"> <li>Inspect the stormdrain labels or signs annually and replace those which may have been damaged or removed.</li> </ul>	EHS FM/TPS HRS	UCSB community	PE-1.3	Exceeds new permit F.5.c.a	Annually
<ul style="list-style-type: none"> <li>Label newly installed or constructed stormdrain.</li> </ul>	DCS EHS	UCSB community	PE-1.3	Exceeds new permit F.5.c.a	Annually

MS4 Program and Action	Responsible for Action	Target Audience	Old Permit Requirement	New Permit Requirement	Frequency
<ul style="list-style-type: none"> <li>Assess high priority stormdrain inlets and include a label, stencil, or other effective method (e.g., clearly visible sign strategically placed in an area of high pedestrian activity) of communicating a stormwater awareness message such as “only rain in the drain”.</li> </ul> <p>UCSB will use a variety of methods to label high priority storm drains, ensure that the most appropriate labelling method is used to suit the different types of storm drains in the various high priority areas throughout campus, and will assess labelling efforts and make changes when necessary to improve efforts.</p> <p>High priority storm drains are those that accumulate a significant amount of sediment, trash and/or debris; receive a large volume of runoff; receive runoff from areas that don’t regularly receive sweeping; and/or receive runoff from areas with exposed or disturbed soil. This BMP modification will not result in increased pollutant discharges because storm drains associated with a higher potential to discharge pollutants in stormwater will be the focus of labeling efforts and resources.</p>	<p>CCBER EHS FM/TPS HRS Sustainability</p>	<p>UCSB community</p>	<p>PE-1.4</p>	<p>F.5.c.a</p>	<p>Annually</p>



### 3.3 UCSB Community Involvement and Participation Program

The goal of the Public Involvement and Participation (PIP) element is to raise public awareness about urban runoff pollution through public involvement and participation in UCSB's Municipal Stormwater Management Program. Additionally, UCSB hopes to involve the public in the development and implementation process to secure "buy in" and to generate public support for UCSB's water quality protection efforts.

The following BMPs will involve participation by several campus departments, campus groups, and students in order to raise awareness and gain the community's input as it relates to the UCSB Municipal Stormwater Management Program, water quality challenges, and implementation efforts.

Required provisions and identified responsible departments pertaining to the Public Involvement and Participation Program element of the 2013 General Permit are included in **Table 3.3-1, Requirements of the 2013 MS4 General Permit**. UCSB's Public Involvement and Participation Program is summarized on **Table 3.3-2, UCSB Stormwater Public Involvement and Participation Program**. This Public Involvement and Participation Program fulfills the current requirements of the 2013 General Permit and continues BMPs from UCSB's 2010 SWMP which are considered to be more protective of stormwater quality.

#### Program Planning

Involve the campus community in the development and implementation of activities related to the stormwater management program. Implementation of the stormwater management program will be coordinated among several University departments and groups.

#### High Priority Pollutants

Sediment, nutrients, hydrocarbons, bacteria, oil and grease

#### High Priority BMPs

Communicating stormwater awareness to the University community through an educational website and by labeling or clearly identifying high priority storm drain inlets.

**Table 3.3 – 1**  
**Requirements of the 2013 MS4 General Permit**

Program Section and Element		Permit Year	Responsible Department
<b>F.5.c Public Involvement and Participation Program</b>			
F.5.c.1	Public Involvement and Participation Program		
	Involve the MS4 public in the development and implementation of the activities related to the program, such as:		
	a Label high priority storm drain inlets.	3 (2016)	<ul style="list-style-type: none"> <li>• CSC</li> <li>• EHS</li> </ul>
	b Integrate stormwater awareness information on a publicly accessible website.	3 (2016)	<ul style="list-style-type: none"> <li>• HRS</li> <li>• OSL</li> </ul>

**Table 3.3 – 2**

**UCSB Stormwater Public Involvement and Participation Program**

<b>MS4 Program and Action</b>	<b>Responsible for Action</b>	<b>Target Audience</b>	<b>Old Permit Requirement</b>	<b>New Permit Requirement</b>	<b>Frequency</b>
The UCSB community will continue to be involved in the development and implementation of activities related to the stormwater management program. The following are specific examples:	-	-	-	-	-
<ul style="list-style-type: none"> <li>Update the UCSB Stormwater Management Program Guidance Document, post it on the UCSB stormwater webpage, provide copies to the UCSB community when requested, record comments received regarding the document, and respond to comments within 30 days.</li> </ul>	EHS	UCSB community	PP-1.1 PP-1.2	Exceeds new permit A.1.b.4	Annually As needed
<ul style="list-style-type: none"> <li>Discuss stormwater pollution prevention ideas during meetings of the campus water working group.</li> </ul>	AS EHS FM HRS Sustainability	Campus water working group	PP-2.2	F.5.c	Biannually
<ul style="list-style-type: none"> <li>Meet with neighboring municipalities and regularly attend the Santa Barbara County Association of MS4 Managers.</li> </ul>	EHS	-	PP-2.4 PP-3.1	F.5.c	Quarterly As needed
<ul style="list-style-type: none"> <li>Provide a phone number and website to the UCSB community for reporting illicit discharges.</li> </ul>	EHS FM	UCSB community	ID-5.3	F.5.b.3.b	Continuously
<ul style="list-style-type: none"> <li>Provide a phone number and website to the UCSB community for reporting stormwater pollution from UCSB construction activities.</li> </ul>	DCS EHS FM	UCSB community	CS-3.1	Exceeds new permit F.5.e	Continuously

### 3.4 Illicit Discharge Detection and Elimination Program

An illicit discharge is defined as “a point source discharge of pollutants to an MS4 which is not composed entirely of stormwater and not authorized by an NPDES permit.” Non-stormwater discharges that are not specifically exempted by the 2013 General Permit are prohibited. Discharge sources must be controlled and illegal behavior prohibited.

The goal of the IDDE program is to prevent the discharge of pollutants to receiving waters by eliminating illicit discharges to UCSB’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 sewer 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.

UCSB 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. Within the second year of the 2013 permit term, Permittees are required to develop written procedures for conducting investigations into the sources of all non-stormwater discharges suspected to be illicit discharges, including approaches to require such discharges to be eliminated, and procedures to implement corrective actions.

Required provisions and identified responsible departments pertaining to the Illicit Discharge Detection and Elimination element of the 2013 General Permit are included in **Table 3.4-1, Requirements of the 2013 MS4 General Permit**. UCSB’s Illicit Discharge Detection and Elimination Program is summarized on **Table 3.4-2, UCSB Illicit Discharge Detection and Elimination Program**. This Illicit Discharge Detection and Elimination Program fulfills the current requirements of the 2013 General Permit and continues BMPs from UCSB’s 2010 SWMP which are considered to be more protective of stormwater quality.

#### Program Planning

Develop and implement an illicit discharge detection and elimination program to detect, investigate, and eliminate illicit discharges into the storm drain system.

#### High Priority Pollutants

Sediment, nutrients, bacteria, hydrocarbons, oil and grease, sanitary sewer wastewater, and chlorinated water from pools.

#### High Priority BMPs

Developing an outfall map including receiving water bodies and inspecting all accessible outfalls.

**Table 3.4 – 1**  
**Requirements of the 2013 MS4 General Permit**

Program Section and Element		Permit Year	Responsible Department
<b>F.5.d Illicit Discharge Detection and Elimination Program</b>			
F.5.d.1	Outfall Mapping		
	Create and maintain an outfall map that contains the following:		
a	Locations of outfalls, drainage areas, and receiving water bodies. Assign all outfalls a unique identification number. Take photographs or utilize an electronic database to track O&M needs and baseline information.	2 (2015)	• DCS • EHS • FM
b	Locations and names of all water bodies receiving direct discharge from outfall pipes.	2 (2015)	
F.5.d.2	Field Sampling to Detect Illicit Discharges		
	If while conducting the outfall inventory specified in Section F.5.d., an outfall is flowing or ponding and it has been more than 72 hours since the last rain event, the Permittee shall complete the following:		
a	Conduct field sampling for indicator parameters identified on Table 1.	2 (2015)	• EHS • FM
b	Verify action level concentrations for indicator parameters on Table 2 have not been exceeded.	2 (2015)	
c	If action levels are exceeded, conduct follow-up investigation per section F.5.d.3.	2 (2015)	
F.5.d.3	Illicit Discharge Detection and Elimination Source Investigations and Corrective Actions		
	Develop written procedures for conducting investigations into the source of all non-stormwater discharges suspected to be illicit discharges. The permittee shall conduct an investigation into any identified illicit discharge within 72 hours of identification. The investigation shall include the following:		
a	Report any dry weather flow suspected to be a threat to human health or the environment to local Health Department.	2 (2015)	• EHS • FM
b	Determine and document source of discharge. If discharge source is permitted though NPDES permit, no further action.	2 (2015)	
c	Notify department responsible for discharge.	2 (2015)	
d	Report discharge suspected of being sanitary sewage and/or significantly contaminated to downstream MS4.	2 (2015)	

**Table 3.4 – 2**  
**UCSB Illicit Discharge Detection and Elimination Program**

<b>MS4 Program and Action</b>	<b>Responsible for Action</b>	<b>Target Audience</b>	<b>Old Permit Requirement</b>	<b>New Permit Requirement</b>	<b>Frequency</b>
UCSB will continue to implement an Illicit Discharge Detection and Elimination program to detect, investigate, and eliminate illicit discharges, including illegal dumping, into the UCSB MS4. The following are specific examples:	-	-	-	-	-
<ul style="list-style-type: none"> <li>Audit campus activities that have the potential to cause non-stormwater discharges and take necessary steps to eliminate those that contribute pollutants to the UCSB MS4.</li> </ul>	EHS FM HRS Sustainability	UCSB community	ID-1.2	F.5.d.3.b	Annually
<ul style="list-style-type: none"> <li>Maintain a GIS layer of the campus stormwater conveyance system, including locations of outfalls, drainage areas, and receiving water bodies, and post the map on the UCSB stormwater webpage.</li> </ul>	EHS FM HRS Sustainability	UCSB community	ID-2.1 ID-2.2	F.5.d.1.a	Annually
<ul style="list-style-type: none"> <li>Document O&amp;M needs of stormwater conveyance system</li> </ul>	EHS FM HRS	-	-	F.5.d.1.a	Annually As needed
<ul style="list-style-type: none"> <li>Conduct and document visual inspections of outfalls. Eliminate all illicit discharges.</li> </ul>	EHS FM HRS	-	ID-4.2	Exceeds new Permit F.5.d.3	Annually As needed
<ul style="list-style-type: none"> <li>Develop and maintain an inventory of campus facilities that have the potential to adversely affect water quality. Conduct and document inspections at identified facilities within the Main, Storke, North, and West Campuses.</li> </ul>	EHS FM	-	ID-4.3	Exceeds new Permit F.5.d.1 F.5.d.3	Annually As needed
<ul style="list-style-type: none"> <li>Develop written procedures for conducting investigations into the source of all non-stormwater discharges suspected to be illicit discharges. Track and document illicit discharges and their resolutions.</li> </ul>	EHS FM HRS	-	ID-4.4 GH-1.4	F.5.d.3.b F.5.d.3.c	As needed
<ul style="list-style-type: none"> <li>Continue to identify educational opportunities and ways to improve the IDDE program.</li> </ul>	EHS FM HRS	-	ID-4.5	F.5.b.3.d	Annually As needed

<b>MS4 Program and Action</b>	<b>Responsible for Action</b>	<b>Target Audience</b>	<b>Old Permit Requirement</b>	<b>New Permit Requirement</b>	<b>Frequency</b>
<ul style="list-style-type: none"> <li>Promptly respond to all reports of illicit discharges, whether from phone calls, emails, or other forms of notifications. Document all reports of illicit discharge and evaluate annually.</li> </ul>	EHS FM Grounds HRS UCen	UCSB community	ID-5.4 ID-6.3	F.5.d.3	Continuously

### 3.5 Construction Stormwater Pollution Prevention Program

The purpose of the Construction Stormwater Pollution Prevention Program is to prevent sediment, construction materials, and wastes from leaving the site and entering the stormwater drainage system. Sediment is usually the main pollutant of concern; 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.

Based on the long term goals proposed in UCSB's Draft LRDP, the campus has plans to significantly expand in the coming years.. Due to this increase in development, it is imperative that UCSB have an effective program that regulates discharges from construction and development sites while maintaining a positive working relationship with the development community. Within the first year of the 2013 permit term, Permittees are required to develop and implement contract language ensuring all outside contractors comply with the CGP and implement appropriate BMPs.

Required provisions and identified responsible departments pertaining to the Construction Site Stormwater Runoff Control Program element of the 2013 General Permit are included in **Table 3.5-1, Requirements of the 2013 MS4 General Permit**. UCSB's Construction Site Stormwater Runoff Control Program is summarized on **Table 3.5-2, UCSB Construction Site Stormwater Runoff Control Program**. This Construction Site Stormwater Runoff Control Program fulfills the current requirements of the 2013 General Permit and continues BMPs from UCSB's 2010 SWMP which are considered to be more protective of stormwater quality.

#### Program Planning

Develop, implement, and enforce a program to prevent construction site discharges of pollutants and impacts on beneficial uses of receiving waters.

#### High Priority Pollutants

Sediment, nutrients, bacteria, hydrocarbons, litter, construction debris, heavy metals, concrete washwater, and pesticides.

#### High Priority BMPs

Developing enforceable mechanisms such as contract language to ensure compliance with the Construction General Permit.



**Table 3.5 – 1**  
**Requirements of the 2013 MS4 General Permit**

Program Section and Element		Permit Year	Responsible Department
<b>F.5.e Construction Site Stormwater Runoff Control Program</b>			
F.5.e.1	Construction Site Stormwater Runoff Control Program		
	Develop, implement, and enforce a program to prevent construction site discharges of pollutants and impacts on beneficial uses of receiving waters. Include CGP compliance requirements in construction contract language for all projects greater than or equal to one acre.	1 (2014)	<ul style="list-style-type: none"> <li>• DCS</li> <li>• EHS</li> <li>• FM</li> <li>• HRS</li> </ul>

**Table 3.5 – 2****UCSB Construction Site Stormwater Runoff Control Program**

<b>MS4 Program and Action</b>	<b>Responsible for Action</b>	<b>Target Audience</b>	<b>Old Permit Requirement</b>	<b>New Permit Requirement</b>	<b>Frequency</b>
UCSB will continue to implement and enforce a construction stormwater pollution prevention program to prevent construction site discharges of pollutants and impacts on beneficial uses of receiving waters. The following are specific examples:	-	-	-	-	-
<ul style="list-style-type: none"> <li>• Include the stormwater pollution prevention standard in contract documents for applicable projects and track compliance.</li> </ul>	DCS EHS FM HRS	Contractors	CS-1.1 CS-1.2	F.5.e F.5.a.1	Continuously
<ul style="list-style-type: none"> <li>• Conduct inspections at priority construction sites using UCSB EHS checklist or equivalent. Assure site deficiency resolution within 24 hours and utilize the three-step method of violation enforcement.</li> </ul>	DCS EHS FM	Contractors	CS-2.2 CS-2.3 CS-2.4	Exceeds new permit F.5.e	Weekly
<ul style="list-style-type: none"> <li>• Promptly respond to all reports of stormwater pollution from campus construction activities, whether from phone calls, emails, or other forms of notification. Document all reports of construction related stormwater pollution.</li> </ul>	DCS EHS FM	Contractors	CS-3.2	Exceeds new permit F.5.e	Continuously
<ul style="list-style-type: none"> <li>• Review stormwater pollution prevention plans (SWPPPs) developed by Contractors for UCSB new development and redevelopment projects and provide recommendations when necessary.</li> </ul>	EHS	Contractors DCS	CS-4.2 CS-4.3	Exceeds new permit F.5.e	As needed

### **3.6 Post Construction Stormwater Management Program**

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 element 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 Central Coast Regional Water Quality Control Board has adopted post-construction requirements that are more stringent than the 2013 General Permit. Therefore, UCSB's Post Construction Stormwater Management Program must comply with the required provisions of Order R3-2012-0025. UCSB's Construction Site Stormwater Runoff Control Program is summarized on **Table 3.6-1, UCSB Post Construction Stormwater Management Program**. This Post Construction Stormwater Management Program fulfills the requirements of Order R3-2012-0025 and continues BMPs from UCSB's 2010 SWMP which are considered to be more protective of stormwater quality.

#### **Program Planning**

During the planning and design stages of new development and redevelopment projects, incorporate stormwater quality site and design considerations and prioritize the use of LID, site design measures, and hydromodification requirements.

#### **High Priority Pollutants**

Sediment, nutrients, bacteria, hydrocarbons, pesticides

#### **High Priority BMPs**

Developing enforceable mechanisms such as contract language and design standards to ensure new development and redevelopment projects include stormwater management features and prioritize the use of LID and hydromodification requirements.

**Table 3.6 – 1**  
**UCSB Post Construction Stormwater Management Program**

<b>MS4 Program and Action</b>	<b>Responsible for Action</b>	<b>Target Audience</b>	<b>Old Permit Requirement</b>	<b>New Permit Requirement</b>	<b>Frequency</b>
UCSB will continue to develop and implement a post-construction stormwater management program to reduce impacts from runoff from development. New development and redevelopment projects will be designed to implement measures for site design, source control, runoff reduction, stormwater treatment, and baseline hydromodification management. The following are specific examples:	-	-	-	-	-
<ul style="list-style-type: none"> <li>Incorporate design standards related to the use of buffer zones in applicable new development and redevelopment projects. Track projects proposed near riparian areas, wetlands, and buffer zones.</li> </ul>	DCS EHS	Contractors DCS	PC-2.1 PC-2.3	Exceeds new permit R3 specific	Continuously
<ul style="list-style-type: none"> <li>Incorporate campus policies, engineering and construction specification, and hydromodification control criteria defined within the Regents approved Final Long Range Development Plan and the water quality mitigation measures within the Final EIR in applicable new development and redevelopment projects.</li> </ul>	DCS EHS	Contractors DCS	PC-3.1 PC-3.4 PC-6.1	Exceeds new permit R3 specific	Continuously
<ul style="list-style-type: none"> <li>Starting March 6, 2014, all applicable UCSB new development and redevelopment projects will comply with the UCSB Post-Construction Stormwater Design Standards. UCSB will document project compliance with the UCSB Post-Construction Stormwater Design Standards.</li> </ul>	DCS EHS	Contractors DCS	PC-5.1 PC-5.2 PC-6.1 PC-7.1 PC-7.2	Exceeds new permit R3 specific	Continuously
<ul style="list-style-type: none"> <li>Document project compliance with the UCSB Post-Construction Stormwater Design Standards and ensure 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.</li> </ul>	DCS EHS	Contractors DCS	PC-6.2 PC-6.3	Exceeds new permit R3 specific	Continuously
<ul style="list-style-type: none"> <li>Update the inventory of structural BMPs throughout the UCSB MS4.</li> </ul>	DCS EHS FM Grounds HRS	-	PC-4.1	F.5.g.4.b F.5.g.4.c	Annually As needed

<b>MS4 Program and Action</b>	<b>Responsible for Action</b>	<b>Target Audience</b>	<b>Old Permit Requirement</b>	<b>New Permit Requirement</b>	<b>Frequency</b>
<ul style="list-style-type: none"> <li>Update the GIS map of structural BMPs throughout the UCSB MS4.</li> </ul>	DCS EHS FM Grounds HR	-	PC-4.2	F.5.g.4.b F.5.g.4.c	Annually As needed
<ul style="list-style-type: none"> <li>Implement the maintenance schedule for every structural BMP throughout the UCSB MS4.</li> </ul>	EHS FM Grounds HR	-	PC-4.3	F.5.g.4.d	Annually

### **3.7 Pollution Prevention for UCSB Facility Operations Program**

The purpose of the Pollution Prevention for UCSB Facility Operations Program is to ensure that UCSB's delivery of educational, housing, and community services occurs in a manner protective of water quality. In this way, UCSB 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 operations and maintenance activities by University staff. The measurable goals associated with the maintenance and operation of campus walkways, streets, and roads define the level of implementation that UCSB must attain to demonstrate that their local operational activities reduce pollutants in stormwater to the MEP.

Required provisions and identified responsible departments pertaining to the Pollution Prevention/Good Housekeeping for Permittee Operations Program element of the 2013 General Permit are included in **Table 3.7-1, Requirements of the 2013 MS4 General Permit**. UCSB's Pollution Prevention/Good Housekeeping Program is summarized on **Table 3.7-2, UCSB Pollution Prevention/Good Housekeeping Program**. This Pollution Prevention/Good Housekeeping Program fulfills the current requirements of the 2013 General Permit and continues BMPs from UCSB's 2010 SWMP which are considered to be more protective of stormwater quality.

#### **Program Planning**

Develop and implement a program to prevent or reduce adverse water quality impacts from operations and maintenance activities.

#### **High Priority Pollutants**

Sediment, nutrients, bacteria, hydrocarbons, litter, construction debris, heavy metals, pesticides, sanitary sewer wastewater, and chlorinated water from pools.

#### **High Priority BMPs**

Developing an inventory of all University owned facilities and all University activities that are a potential threat to water quality. Maintaining all high priority storm drains. Conducting regular inspections of all high priority areas.

**Table 3.7 – 1**  
**Requirements of the 2013 MS4 General Permit**

Program Section and Element		Permit Year	Responsible Department
<b>F.5.f Pollution Prevention/Good Housekeeping for Permittee Operations Program</b>			
F.5.f.1	Inventory of Permittee-Owned and Operated Facilities		
	Develop and maintain inventory of all permittee owned or operated facilities that are a potential threat to water quality.	2 (2015)	<ul style="list-style-type: none"> <li>• CCBER</li> <li>• DCS</li> <li>• DS</li> <li>• EHS</li> <li>• FM</li> <li>• HRS</li> <li>• TPS</li> <li>• Ucen</li> </ul>
F.5.f.2	Map of Permittee-owned or Operated Facilities		
	Develop a map of all Permittee owned and operated facilities. The map shall include the following:	2 (2015)	
	Identification of the stormwater drainage system corresponding to each facility as well as the receiving waters.	2 (2015)	<ul style="list-style-type: none"> <li>• CCBER</li> </ul>
	Inclusion of contact information for the manager of each facility.	2 (2015)	<ul style="list-style-type: none"> <li>• DCS</li> <li>• DS</li> <li>• EHS</li> <li>• FM</li> <li>• HRS</li> <li>• TPS</li> <li>• Ucen</li> </ul>
F.5.f.3	Facility Assessment		
	Permittee shall conduct an annual review and assessment of all facilities to determine their potential to impact water quality. The assessment shall include:		
	a Identification of pollutant hotspots based on assessment. Factors to consider include: type and volume of materials stored onsite, presence of improperly stored materials, activities that should not be performed outside, proximity to water bodies, or poor housekeeping practices. Hot spots must include, at a minimum: maintenance yards, hazardous waste facilities, and fuel storage locations.	3 (2016)	<ul style="list-style-type: none"> <li>• DS</li> <li>• EHS</li> <li>• FM</li> <li>• HRS</li> </ul>
	b Documentation of assessment procedure and results.	3 (2016)	<ul style="list-style-type: none"> <li>• TPS</li> <li>• UCen</li> </ul>

Program Section and Element		Permit Year	Responsible Department
F.5.f.4	Stormwater Pollution Prevention Plans		
	Develop a SWPPP for all identified hotspots. An existing Hazardous Materials Business Plan or SPCC Plan may be used if it includes all SWPPP required elements as listed below:		
	a Develop a set of stormwater BMPs to be installed, implemented and maintained at the facility.	4 (2017)	<ul style="list-style-type: none"> <li>• DS</li> <li>• EHS</li> <li>• FM</li> <li>• HRS</li> <li>• TPS</li> <li>• Ucen</li> </ul>
	b SWPPP shall be kept onsite and updated as necessary.	4 (2017)	
	c The SWPPP shall address: 1) Facility information 2) Purpose of the document 3) Key staff contacts 4) Site drainage map 5) Identification of significant materials handled and sorted at the facility that have the potential to be exposed to stormwater 6) Description of potential pollutant sources 7) BMPs implemented at the facility 8) Spill control and cleanup measures and equipment	4 (2017)	
F.5.f.5	Inspections, Visual Monitoring, and Remedial Action		
	The Permittee shall conduct inspections on a regular basis. A log for all facility inspections as well as any inspection reports must be kept with the facilities SWPPP. The inspection reports shall include any identified deficiencies and correction actions.		
	a Quarterly hotspot visual inspections. Visual inspections to ensure materials and equipment are clean and orderly, to minimize the potential for pollutant discharge and to ensure implementation of BMPs.	5 (2018)	<ul style="list-style-type: none"> <li>• DS</li> <li>• EHS</li> <li>• FM</li> <li>• HRS</li> <li>• TPS</li> <li>• UCen</li> </ul>
	b Quarterly hotspot comprehensive inspections. Comprehensive inspections to ensure all BMPs are being performed with special attention paid to waste storage areas, dumpsters, vehicle and equipment maintenance/fueling areas, material handling areas, and similar potential pollutant-generating areas. Quarterly inspection results shall be documented and kept with SWPPP.	5 (2018)	
	c Quarterly hotspot visual observation of stormwater and non-stormwater discharges. Document any identified discharges and observations.	5 (2018)	
	d Non-Hotspots - Inspect each inventoried facility that is not a hotspot once during permit term. Assessment shall include items a-c above.	5 (2018)	
F.5.f.6	Storm Drain System Assessment and Prioritization		
	ii Assess and assign a priority to maintenance of storm drain system infrastructure based on accumulation of sediment, trash and/or debris. Assign high priority to storm drains/catch basins meeting the following: 1) Catch basins known to accumulate a significant amount of sediment, trash, and/or debris 2) Catch basins collecting large volumes of runoff 3) Catch basins collecting runoff from areas not receiving regular sweeping 4) Catch basins collecting runoff from areas with exposed or disturbed soils	2 (2015)	<ul style="list-style-type: none"> <li>• EHS</li> <li>• FM</li> <li>• HRS</li> </ul>



Program Section and Element		Permit Year	Responsible Department
	5) Catch basins that receive complaints/reports		
F.5.f.7	Maintenance of Storm Drain System		
	Implement a high priority storm drain maintenance program that includes, at a minimum:		
	a Develop strategy to inspect storm drains based on priority. At a minimum, inspect high priority catch basins annually prior to rainy season.	3 (2016)	<ul style="list-style-type: none"> <li>• EHS</li> <li>• FM</li> <li>• HRS</li> </ul>
	b Implement a schedule for cleaning storm drains based on priority level.	3 (2016)	
	c Inspect surface drainage structures (channels, detention basins, etc.) to identify priority areas. At a minimum, clean trash and debris from drainage structures annually.	3 (2016)	
	d Develop procedure to dewater and dispose of waste materials removed from catch basins.	3 (2016)	
F.5.f.8	Permittee Operations and Maintenance Activities (O&M)		
	Develop a program to assess O&M activities for potential to discharge pollutants and inspect all O&M BMPs quarterly. On a quarterly basis, the Permittee shall:		
	a Assess O&M activities for the potential to discharge pollutants in stormwater.	3 (2016)	<ul style="list-style-type: none"> <li>• CCBER</li> <li>• DCS</li> <li>• DS</li> <li>• EHS</li> <li>• FM</li> <li>• HRS</li> <li>• TPS</li> <li>• UCen</li> </ul>
	b Identify material that could be discharged from these activities.	3 (2016)	
	c Develop and implement BMPs to reduce discharge of pollutants from identified activities.	3 (2016)	
	d Evaluate BMPs on an annual basis.	3 (2016)	
F.5.f.9	Pesticide, Herbicide, and Fertilizer Application and New Landscape Design and Maintenance Management		
	Implement a landscape design and maintenance program to reduce the amount of water, pesticides and fertilizers used. The program shall include, at a minimum:		
	a Evaluate pesticide, herbicide, and fertilizer use to identify pollution prevention and source control opportunities.	2 (2015)	<ul style="list-style-type: none"> <li>• CCBER</li> <li>• CSC</li> <li>• DCS</li> <li>• EHS</li> <li>• FM</li> <li>• HRS</li> <li>• UCen</li> </ul>
	b Implement BMPs to reduce pesticides and fertilizers discharges. At a minimum: 1) Educate applicators of stormwater issues 2) Implement IPM program 3) Properly dispose of unused pesticides and fertilizers 4) Minimize irrigation run-off	2 (2015)	

**Table 3.7 – 2**  
**UCSB Pollution Prevention/Good Housekeeping Program**

<b>MS4 Program and Action</b>	<b>Responsible for Action</b>	<b>Target Audience</b>	<b>Old Permit Requirement</b>	<b>New Permit Requirement</b>	<b>Frequency</b>
UCSB will continue to implement a program to prevent or reduce the amount of pollutant runoff from UCSB facilities operations. UCSB will continue to identify and train employees on how to incorporate pollution prevention and good housekeeping techniques into UCSB facilities operations. The program will be audited and revised, as necessary. The following are specific examples:	-	-	GH-1.6	-	-
<ul style="list-style-type: none"> <li>Sweep roads, parking lots, and bike paths within the UCSB MS4.</li> </ul>	Grounds HRS	-	GH-1.1	Exceeds new permit F.5.f	Monthly
<ul style="list-style-type: none"> <li>Promptly respond to maintenance issues reported to Ground Staff in PF and HRS.</li> </ul>	Grounds HRS	-	GH1.2	Exceeds new permit F.5.f	Continuously
<ul style="list-style-type: none"> <li>Annually performing maintenance of high-priority storm drains/outfalls. Medium and Low priority structural BMPs that have become ineffective (degraded, damaged, contaminated, etc.) will be identified for replacement or repair.</li> </ul>	FM Grounds HRS	-	GH-1.3	F.5.f.6 F.5.f.7	Annually
<ul style="list-style-type: none"> <li>Incorporate pollution prevention and good housekeeping practices for facilities operations and maintenance activities.</li> </ul>	FM Grounds HRS TPS	-	GH-1.5	F.5.f.8	Continuously
<ul style="list-style-type: none"> <li>Implement best management practices for outdoor maintenance such as painting and paint removal operations, cleaning hardscape, pressure washing activities, cleaning rain gutters, pouring concrete, repaving surfaces, etc..</li> </ul>	FM Grounds HRS TPS	-	GH-1.7 GH-1.10 GH-1.11	F.5.f.8	Continuously
<ul style="list-style-type: none"> <li>Implement best management practices for indoor maintenance such as discharging wash water to the sanitary sewer, properly storing all cleaning agents, handling trash, and inspecting storage areas.</li> </ul>	FM HRS	-	GH-1.8 GH-1.10	F.5.f.8	Continuously

MS4 Program and Action	Responsible for Action	Target Audience	Old Permit Requirement	New Permit Requirement	Frequency
<ul style="list-style-type: none"> <li>Discharge swimming pool water, landscaping water features, and boiler/air conditioning condensate to the sanitary sewer.</li> </ul>	FM Grounds HRS Rec Cen	-	GH-1.12	F.5.f.8	Continuously
<ul style="list-style-type: none"> <li>Implement best management practices for landscaping activities.</li> </ul>	Grounds HRS	-	GH-1.13	F.5.f.8	Continuously
<ul style="list-style-type: none"> <li>Implement best management practices for vehicle and equipment maintenance.</li> </ul>	HRS TPS	-	GH-1.14	F.5.f.8	Continuously
<ul style="list-style-type: none"> <li>Conduct inspections of hazardous materials storage areas and promptly correcting deficiencies.</li> </ul>	EHS FM Grounds HRS TPS UCen	-	GH-1.15	F.5.f.5	Annually
<ul style="list-style-type: none"> <li>Implement best management practices concerning spill response and avoiding potential discharges to the stormdrain system.</li> </ul>	EHS FM Grounds HRS TPS UCen	-	GH-1.16	F.5.f.8	Continuously
<ul style="list-style-type: none"> <li>Implement best management practices for handling, storing, and disposing of pesticides. Ensure pesticides are applied by a licensed Field Representative overseen by a Qualified Applicator. Document pesticide application information: date, time, product name, amount applied, method of application, location, applicator name (company if a vendor), and weather conditions for each application occurrence.</li> </ul>	Grounds HRS	-	GH-2.1	F.5.f.9	Continuously
<ul style="list-style-type: none"> <li>Implement alternative pest management strategies in order to reduce the amount of pesticides used within the UCSB MS4.</li> </ul>	Grounds HRS	-	GH-2.2	F.5.f.9	Continuously

MS4 Program and Action	Responsible for Action	Target Audience	Old Permit Requirement	New Permit Requirement	Frequency
<ul style="list-style-type: none"> <li>Implement strategies from the Sewer System Management Plan such as properly maintaining the sanitary sewer system, preventing sewer system overflows (SSOs), reporting SSOs that occur, inspecting facilities, implementing good practices at food facilities with regards to proper handling of waste cooking oil, etc..</li> </ul>	DCS FM HRS UCen	-	GH-3.1	Exceeds new permit F.5.f	Continuously
<ul style="list-style-type: none"> <li>Implement pet waste discharge prohibitions included in the Stormwater Quality Policy.</li> </ul>	EHS CCBER FM Grounds HRS	UCSB Community	GH-4.1	Exceeds new permit F.5.f	
<ul style="list-style-type: none"> <li>Inspect food facilities and promptly correct deficiencies.</li> </ul>	EHS	HRS UCen	GH-5.1 GH-5.3	F.5.f.5	Annually
<ul style="list-style-type: none"> <li>Document relevant information about the hazardous waste collection center.</li> </ul>	EHS	-	ID-7.2	F.5.f.5	Continuously
<ul style="list-style-type: none"> <li>Implement best management practices at food facilities such as properly maintaining and cleaning food service equipment, ensuring washing activities discharge to the sanitary sewer, maintaining spill materials in relevant areas, etc..</li> </ul>	HRS UCen	-	GH-5.1	F.5.f.8	Continuously
<ul style="list-style-type: none"> <li>Assess the UCSB MS4 and determine the need to install additional trash receptacles and Mutt Mitt dispensers. Install additional trash receptacles and Mutt Mitt dispensers as necessary.</li> </ul>	CCBER FM Grounds HRS	-	ID-7.3 GH-4.2 GH-4.3 GH-6.1 GH-6.2	Exceeds new permit F.5.f	Annually
<ul style="list-style-type: none"> <li>Maintain recycling program and conduct waste audits.</li> </ul>	FM Grounds HRS Sustainability	-	ID-7.3 GH-6.3	Exceeds new permit F.5.f	Continuously

<b>MS4 Program and Action</b>	<b>Responsible for Action</b>	<b>Target Audience</b>	<b>Old Permit Requirement</b>	<b>New Permit Requirement</b>	<b>Frequency</b>
<ul style="list-style-type: none"> <li>Review contracts and purchase agreements and include language to prevent stormwater pollution where appropriate.</li> </ul>	Business Services Contracts EHS FM HRS UCen	UCSB Community	GH-7.1 GH-7.2	F.5.a.1	Annually As needed

### **3.8 Determining Program Effectiveness and Documenting Compliance**

Measurable program evaluations are critical to the development, implementation, and adaptation of effective stormwater management programs. By the second year of the 2013 General Permit, University staff will develop and implement a Program Effectiveness Assessment and Improvement Plan that tracks short-term and long-term progress of the UCSB Municipal Stormwater Management Program. Due to the fact that measurable improvement in water quality will take time to demonstrate, UCSB staff will take an iterative approach of short-term and long-term effectiveness assessments to ensure progress achieving broader program goals is continually made.

The Program Effectiveness Assessment and Improvement Plan shall:

- Assist University staff to adaptively manage the Municipal Stormwater Management Program and make necessary modifications to the program
- Identify the strategy used to gauge the effectiveness of prioritized BMPs and program implementation as a whole
- Include effectiveness assessments that build upon each other from one year to the next

Required provisions pertaining to the Program Effectiveness Assessment element of the 2013 General Permit are included in **Table 3.8-1, Requirements of the 2013 MS4 General Permit.**

#### **Program Planning**

Develop and implement a program effectiveness assessment program to evaluate the stormwater management program.

**Table 3.8 – 1**  
**Requirements of the 2013 MS4 General Permit**

Program Section and Element		Permit Year	Responsible Department
<b>F.5.h Program Effectiveness Assessment</b>			
F.5.h.1	Program Effectiveness Assessment and Improvement Plan		
	Develop a Program Effectiveness Assessment and Improvement Plan that tracks short and long-term goals. This Plan is to be submitted annually with the Annual Report. At a minimum the plan shall include:		
	1 Implementation of stormwater program elements, including: -Identify strategy used to gauge the effectiveness of prioritized BMPs -Document Permittees compliance with permit conditions -Identify modifications to the program to improve effectiveness	2 (2015)	• CSC • EHS • HRS • OSL
	2 Identification and targeting of Target Audiences.	2 (2015)	
F.5.h.2	Storm Water Program Modifications		
	The Permittee shall identify program modifications to include:		
	a Improving upon BMPs that didn't accomplish goals.	5 (2018)	• CSC
	b Continuing and expanding upon BMPs that proved to be effective.	5 (2018)	• EHS
	c Discontinuing BMPs that are no longer productive and replacing with more effective BMPs.	5 (2018)	• HRS
	d Shifting priorities to make more effective use of resources.	5 (2018)	

### **3.9 Total Maximum Daily Loads Compliance Requirements**

The 2013 General Permit requires Permittees identified in Attachment G of the General Permit to comply with all applicable TMDLs approved pursuant to 40 CFR subsection 130.7. UCSB was not identified in Attachment G of the 2013 General Permit and therefore are not required to comply with a TMDL.



### **3.10 Annual Reporting Program**

UCSB staff is required to prepare and submit an annual report to the State Water Board via SMARTS. The purpose of this report is to conduct an annual performance review of program implementation efforts including an evaluation of the effectiveness of UCSB Municipal Stormwater Management Program, BMP implementation, and ways BMPs and the overall program may be improved.

The annual report will focus on a summary of progress and discuss any proposed changes to the program which University staff sees as necessary in order to achieve the MEP standard. Pursuant to the General Permit, the University will retain stormwater records for 5 years. Each department responsible for implementing substantive elements of the program will be instructed to keep their records for 5 years. These records will be the source of compiled data contained in the annual report.

Required provisions pertaining to the Annual Reporting Program element of the 2013 General Permit are included in **Table 3.10-1, Requirements of the 2013 MS4 General Permit.**

#### **Program Planning**

Comply with all reporting requirements.

**Table 3.10 – 1**  
**Requirements of the 2013 MS4 General Permit**

Program Section and Element	Permit Year	Responsible Department
<b>F.5.j Annual Reporting Program</b>		
F.5.j.2 Use SMARTS to report and certify.	All years	• EHS
F.5.j.3 Complete and retain annual reports and make available to RWQCB if directed.	All years	• EHS
F.5.j.4 Submit detailed written or oral report to RWQCB if directed.	All years	• EHS
F.5.j.5 May coordinate reporting if regional programs.	All years	• EHS