

Implementing the Phase II Storm Water Permit

A Non-traditional Small MS4 Perspective



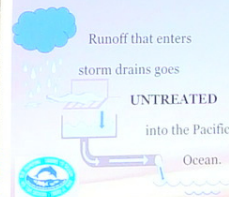
Differences between a Traditional MS4 and a Non-Traditional MS4 (UC San Diego)



Public Education and Outreach Campus Community



Did You Know???



Common pollutants from urban runoff include...

- Litter
- Oil and Grease
- Chemicals (pesticides, detergents)
- Bacteria (trash/ pet waste)
- Metals (vehicle break pads and tire wear)
- Sediment (erosion and construction)
- Wash Water

Be the Solution to Storm Water Pollution!

UCSD's Efforts to Help

Urban Runoff Biofilter:

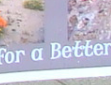
Urban Runoff Biofilters have been installed at UCSD to protect the ocean by removing pollutants from urban run-off before it reaches the beach.



The native vegetation on the slopes also helps keep urban runoff from reaching the ocean and reduces erosion.



UCSD also collects storm water and ocean water samples and conducts marine studies to test for pollutants.



A Clean Ocean Makes for a Better Planet!

How YOU Can Help

- Don't dump anything into storm drains
- Help pick up trash
- Pick up after your pet
- Don't throw cigarette butts onto the ground
- Wash your car where the wash water won't get into a storm drain
- Make sure your car doesn't leak oil/fluids
- Minimize fertilizer/pesticide use
- Store materials that can cause pollution indoors or under cover
- Collect roof run-off in a rain barrel and use it to water plants

For more information, visit: <https://link.ucsd.edu/go/stormwater>



Partnership with Think Blue



Did You Know??

Runoff that enters storm drains goes **UNTREATED** into the Pacific Ocean.

Runoff from **Urban Runoff Biofilters** that have been installed at UCSD to prevent the ocean by removing pollutants from urban runoff before it reaches the beach.

The water is filtered through a special blend of rocks that clean it, then some of the water infiltrates into the ground, instead of flowing to the ocean.

UCSD also collects storm water and ocean water samples and conducts marine studies to test for pollutants.

Storm Water

Be the Solution... Not the Pollution

UCSD's efforts to Help

Urban Runoff Biofilters

The water is filtered through a special blend of rocks that clean it, then some of the water infiltrates into the ground, instead of flowing to the ocean.

UCSD also collects storm water and ocean water samples and conducts marine studies to test for pollutants.

How YOU Can Help

- Do not dump anything into storm drains
- Help pick up trash
- Pick up after your pet
- Do not throw cigarette butts onto the ground
- Wash your car where the wash water doesn't get into a storm drain
- Make sure your car doesn't leak oil/ fluids
- Minimize fertilizer/ pesticide use
- Store materials that can cause pollution indoors or under cover
- Collect roof run-off in a rain barrel and use it to water plants

For more information, visit <http://think.ucsd.edu/go/stormwater>



Storm Drain Markers

Staff Education and Outreach





<http://stormwater.ucsd.edu>

FACULTY & STAFF

UC San Diego

Search This Site All UCSD Sites

Find Faculty/Staff

[A-Z Sites](#) [Department Index](#) [Find People - Advanced Search](#)



[Blink Topics](#) [Personal Tools](#) [Business Tools](#) [Instruction Tools](#) [Research Tools](#)

[Blink Home](#) > [Safety](#) > [Environment](#) > [Environmental Protection](#) > [Storm Water Management Program](#)

Blink Topics Safety

Environmental Protection

[Air Pollution Control Permits](#)

[Asbestos Control](#)

[Formerly Used Defense Site at UCSD](#)

[Lead-Based Paint](#)

[Oil Spill Prevention, Control, & Countermeasures](#)

[Refrigerant Compliance Program](#)

[Sewer System Management Plan](#)

[Storage Tanks](#)

Storm Water Management Program

[Treatment Control Best Management Practices](#)

[Source Control Best Management Practices](#)

Search Blink

Departments
[Environment, Health & Safety](#)

See Also
[Hazardous Materials Emergency Response Team](#)
[Oil Spill Prevention, Control, and Countermeasures](#)
[Sewer Disposal: What Can Go Down the Drain?](#)
[Wash and Rinse Water Disposal](#)

Storm Water Management Program

Last updated May 14, 2012 8:34:11 AM PDT [Give more feedback](#)

Learn how UC San Diego's Storm Water Management Program helps prevent water pollution.

All outdoor drains are storm drains and are meant **only for rain**. Everything that flows into a UCSD storm drain goes untreated directly into nearby waterways such as the Pacific Ocean, Rose Canyon Creek, and Los Peñasquitos Lagoon. Pollutants picked up by storm water can prevent recreational use of waterways and harm the habitat for fish, other aquatic organisms, and wildlife.

Anything that discharges into a storm drain that is not composed entirely of storm water is a non-storm water discharge (e.g., irrigation water runoff, clean tap water).

- **Report non-storm water discharges** into UCSD storm drains:
 - During business hours:
 - [Environment, Health & Safety](#), (858) 534-3660
 - After business hours:
 - UCSD Police, (858) 534-HELP (4357)

UCSD Storm Water Management Plan

UC San Diego's [Storm Water Management Plan](#) (PDF) aims to prevent or reduce the potential discharge of pollutants into UCSD storm drains.

The plan describes:

- Pollution prevention requirements (see below)
- Best management practices (BMPs)
 - [Source controls](#) for outdoor activities that may release pollutants into storm drains
 - [Treatment controls](#) measures implemented to prevent coastal water pollution
- [Monitoring locations and constituents analyzed](#) (PDF)
- Emergency spill response procedures

Pollution prevention requirements

- Do not discharge anything into a storm drain, including clean tap water. Only rain is permitted in a storm drain.
- Keep outdoor work and storage areas clean and orderly.
- Cover or protect storm drain inlets from outdoor work activities as needed.
- Maintain spill control and cleanup materials and clean up outdoor spills immediately.
- Do not store machinery, equipment, or vehicles over storm drains.
- Keep outdoor trash cans and bins closed.
- If water is used to clean, do not allow wash water to get into a storm drain.
- Fueling activities must be overseen by the equipment operator at all times.
- Use drip pans under leaking equipment.

Contractor and visitor responsibilities

Contractors, service providers, and non-employee visitors at UCSD are responsible for reviewing the [UCSD Storm Water Pollution Prevention Best Management Practices Handbook](#) (PDF) to ensure outdoor work

Public Involvement and Participation





Campus Watershed Clean-up with Coastkeeper and Community Volunteers



Dry Weather Flow Reporting Program







Blink Topics
Safety

Environmental Protection

- [Air Pollution Control Permits](#)
- [Asbestos Control](#)
- [Formerly Used Defense Site at UCSD](#)
- [Lead-Based Paint](#)
- [Oil Spill Prevention, Control, & Countermeasures](#)
- [Refrigerant Compliance Program](#)



Storm Water Management Program

- [Treatment Control Best Management Practices](#)
- [Source Control Best Management Practices](#)

Departments

[Environment, Health & Safety](#)

See Also

- [Hazardous Materials Emergency Response Team](#)
- [Oil Spill Prevention, Control, and Countermeasures](#)
- [Sewer Disposal: What Can Go Down the Drain?](#)
- [Wash and Rinse Water Disposal](#)

Storm Water Management Program

Last updated May 14, 2012 8:34:11 AM PDT

[Give more feedback](#)

Learn how UC San Diego's Storm Water Management Program helps prevent water pollution.

All outdoor drains are storm drains and are meant **only for rain**. Everything that flows into a UCSD storm drain goes untreated directly into nearby waterways such as the Pacific Ocean, Rose Canyon Creek, and Los Peñasquitos Lagoon. Pollutants picked up by storm water can prevent recreational use of waterways and harm the habitat for fish, other aquatic organisms, and wildlife.

Anything that discharges into a storm drain that is not composed entirely of storm water is a non-storm water discharge (e.g., irrigation water runoff, clean tap water).

- **Report non-storm water discharges** into UCSD storm drains:
 - During business hours:
 - [Environment, Health & Safety](#), (858) 534-3660
 - After business hours:
 - UCSD Police: (858) 534-HELP (4357)

UCSD Storm Water Management Plan

UC San Diego's [Storm Water Management Plan](#) (PDF) aims to prevent or reduce the potential discharge of pollutants into UCSD storm drains.

The plan describes:

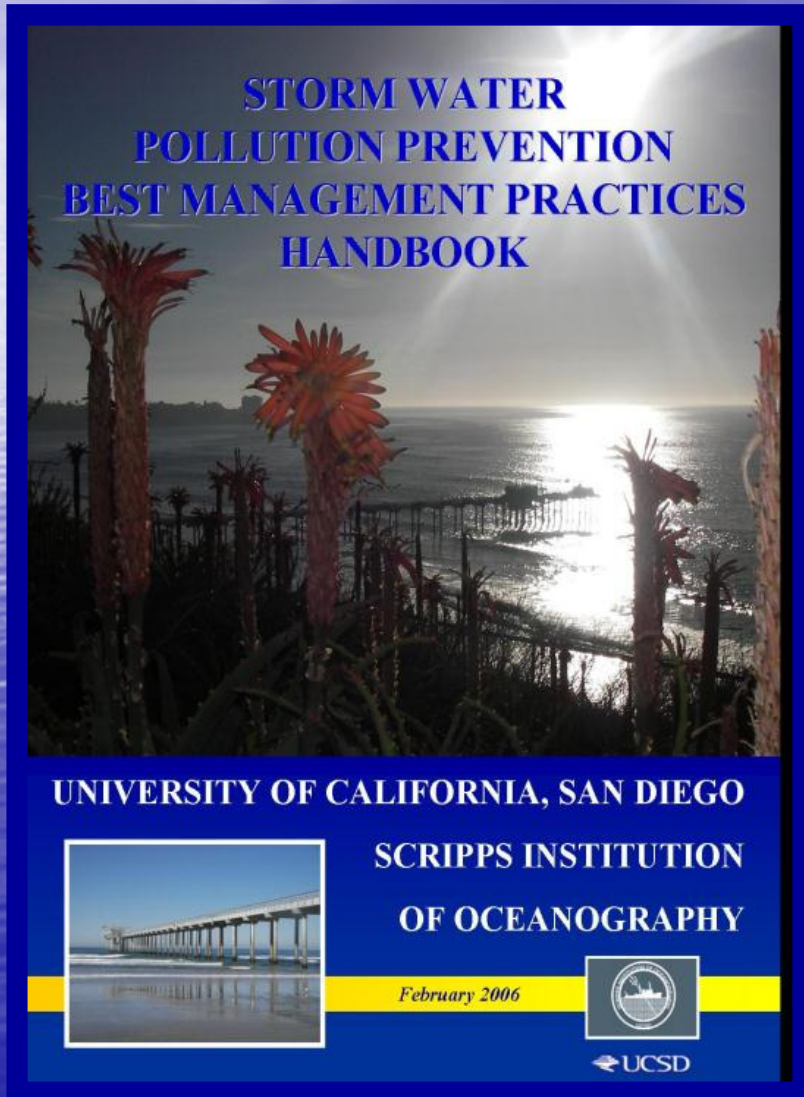
- Pollution prevention requirements (see below)
- Best management practices (BMPs)
 - [Source controls](#) for outdoor activities that may release pollutants into storm drains
 - [Treatment controls](#) measures implemented to prevent coastal water pollution
- [Monitoring locations and constituents analyzed](#) (PDF)
- Emergency spill response procedures

Pollution prevention requirements

- Do not discharge anything into a storm drain, including clean tap water. Only rain is permitted in a storm drain.
- Keep outdoor work and storage areas clean and orderly.
- Cover or protect storm drain inlets from outdoor work activities as needed.
- Maintain spill control and cleanup materials and clean up outdoor spills immediately.
- Do not store machinery, equipment, or vehicles over storm drains.
- Keep outdoor trash cans and bins closed.
- If water is used to clean, do not allow wash water to get into a storm drain.
- Fueling activities must be overseen by the equipment operator at all times.
- Use drip pans under leaking equipment.



Pollution Prevention / Good Housekeeping



FACULTY & STAFF UC San Diego

Search This Site All UCSD Sites Find Faculty/Staff

Blink Blink Topics Personal Tools Business Tools Instruction Tools Research Tools

Blink Home > Safety > Environment > Environmental Protection > Storm Water Management Program > Source Control Best Management Practices

Storm Water Pollution Prevention Source Control Best Management Practices

Follow source control best management practices for outdoor activities that may potentially release pollutants into UCSD storm drains.

UC San Diego's best management practices (BMPs) for storm water pollution prevention include 5 categories related to campus and SIO outside work activities. Common pollutants addressed in the BMPs include:

- Oil and grease from roadways and parking lots
- Wash water from outdoor cleaning activities
- Pesticides and fertilizers from grounds maintenance
- Sediment from construction sites and erosion
- Discarded trash such as cigarette butts, paper wrappers, and plastic bottles
- Metals from roadway runoff (e.g., tires and brake pads) and aerial deposition
- Bacteria

Review BMPs for your work area (all files are PDF):

Outdoor work area management

- BMP A01: Housekeeping
- BMP A02: Spill control and cleanup
- BMP A03: Marine activities

Vehicle, equipment, and boat management

- BMP B01: Outdoor washing/cleaning
- BMP B02: Fueling operations
- BMP B03: Equipment, vehicle, and boat maintenance

Material and waste management

- BMP C01: Trash management
- BMP C02: Hazardous materials management
- BMP C03: Hazardous waste management
- BMP C04: Onsite transportation of materials/waste
- BMP C05: Food service management
- BMP C06: Sanitary sewer overflows/cleanup

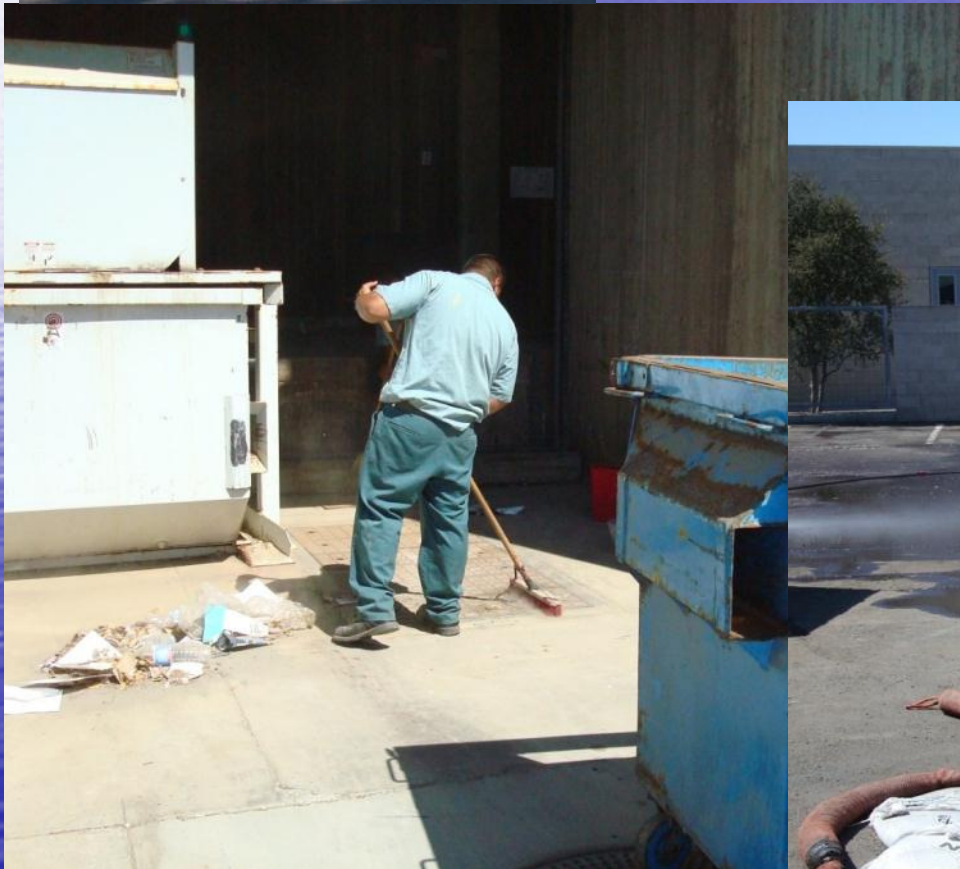
Facilities and grounds management

- BMP D01: Storm water conveyance system inspection and management
- BMP D02: Landscape management
- BMP D03: Surface cleaning/pressure washing
- BMP D04: Water system flushing and outdoor fountain, water tank, and emergency ewewash and shower cleaning
- BMP D05: Outdoor painting and sandblasting

Housing-Dining-Hospitality

- HDH: Dock cleaning

For more information, contact EH&S Environmental Affairs.



Post Construction Storm Water Management



La Jolla Shores Area of Special Biological Significance (ASBS) Dry Weather Flow and Pollution Control Program

Funding for this project has been provided in full or in part by the American Recovery and Reinvestment Act of 2009 and the Clean Water State Revolving Fund, through agreement with the State Water Resources Control Board.



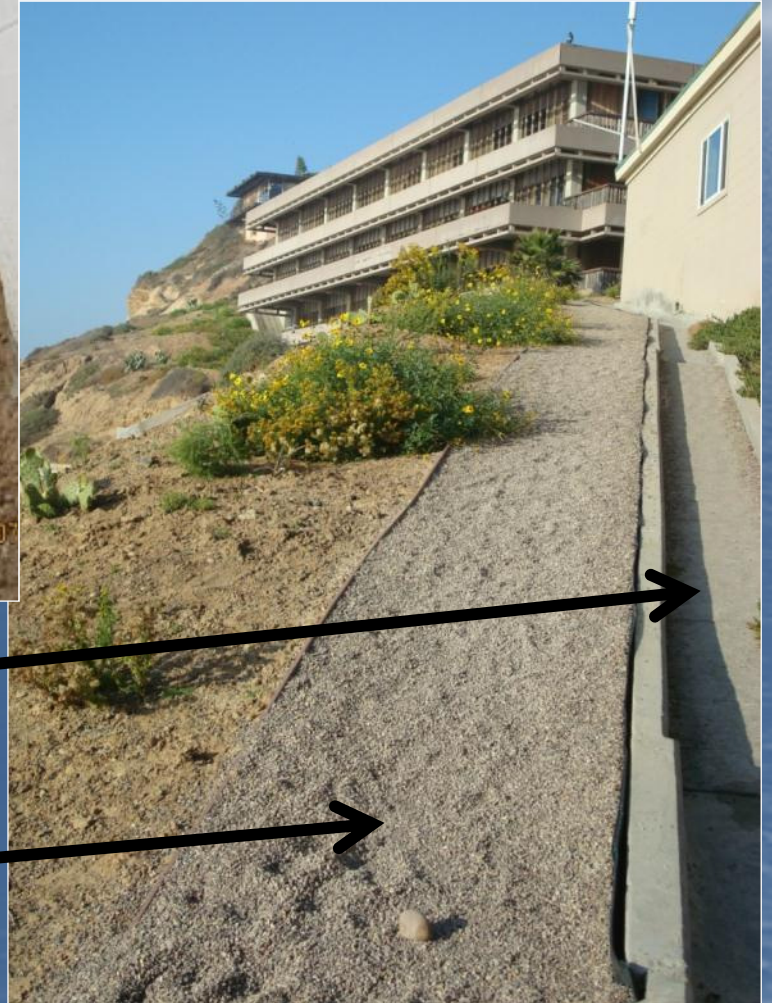
Clean Water
State Revolving Fund



STATE WATER RESOURCES CONTROL BOARD
REGIONAL WATER QUALITY CONTROL BOARDS

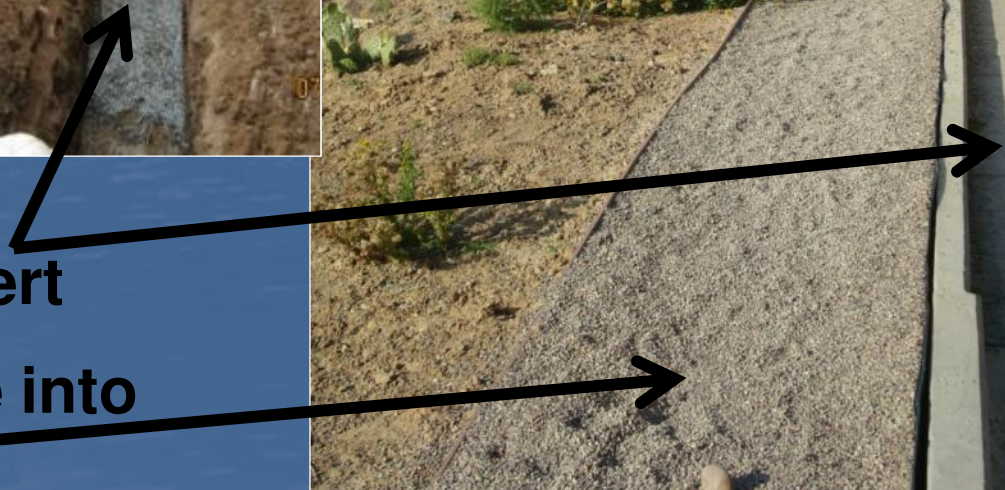


Dry Weather Flow Controls



Construction of pervious concrete conveyance culvert

Dry weather flows infiltrate into a gravel bed



Parking Lot Retrofits



Before



After

Sediment Controls



Before



After

Sediment Controls

Before



During Construction

After

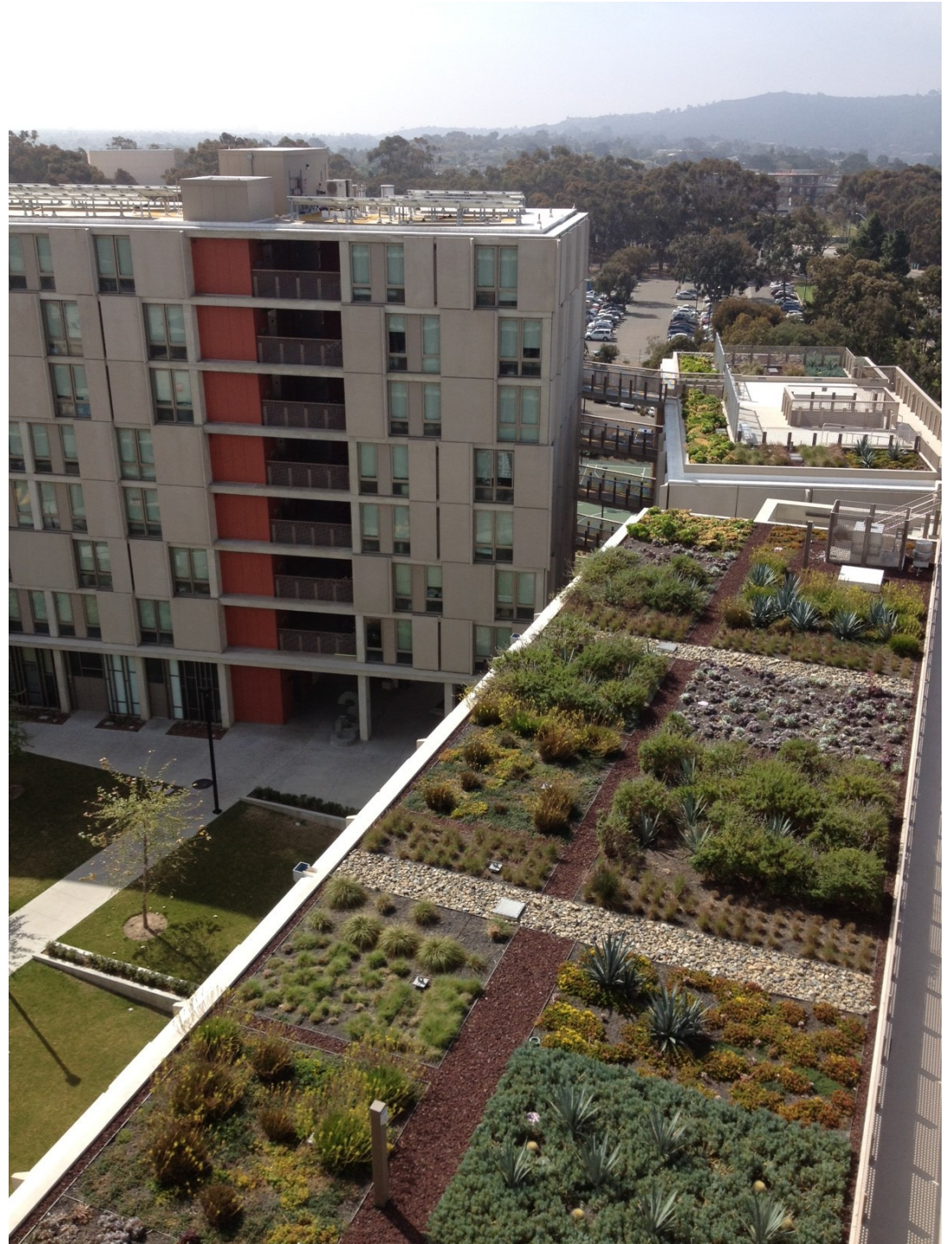


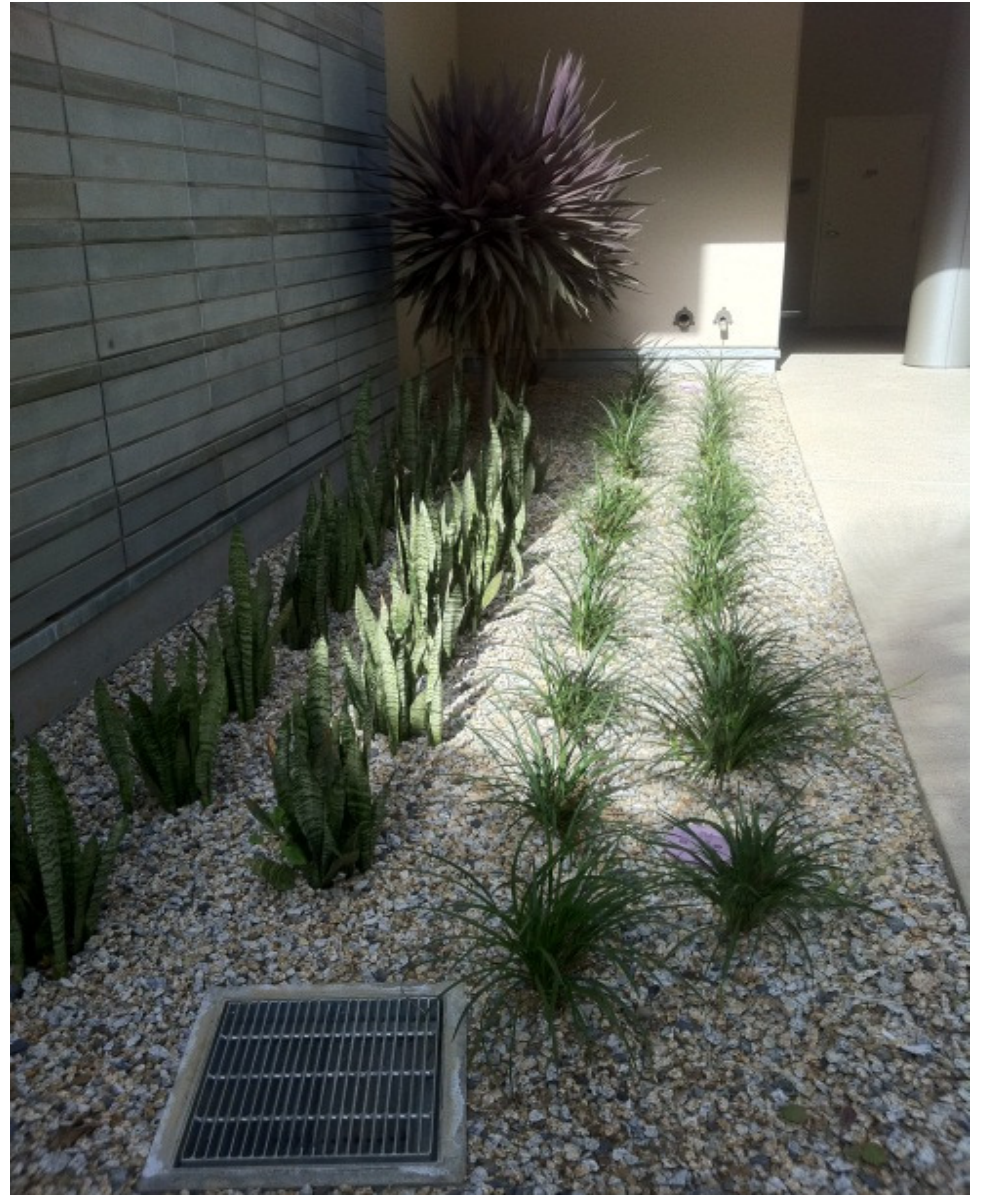
Cobble Rain Gardens



Rain Barrel System at SIO









Ecology Embankments / Media Filters

Large Media Filters



Small Media Filters

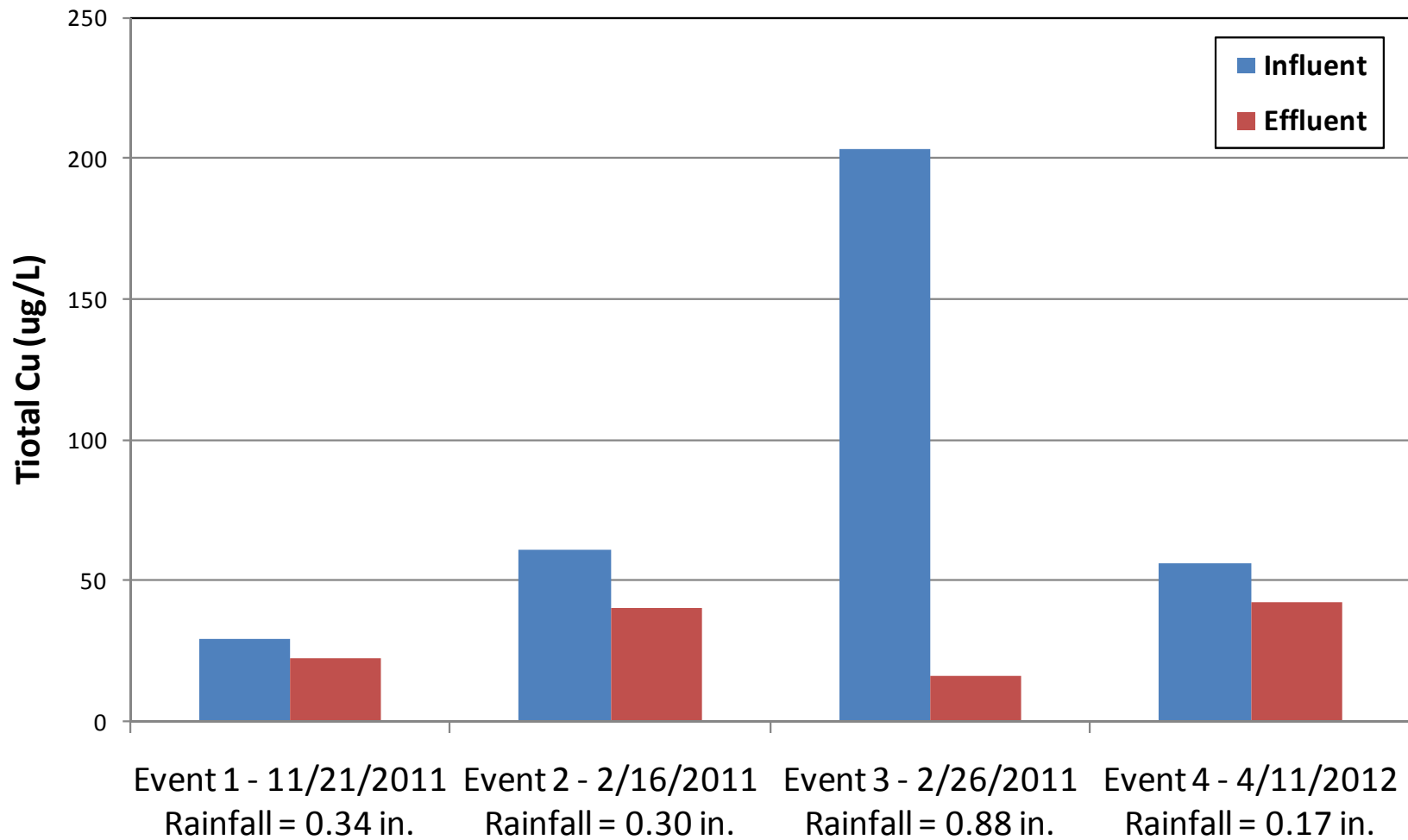
MEDIA FILTER EFFECTIVENESS MONITORING



Monitoring Results

Total Copper

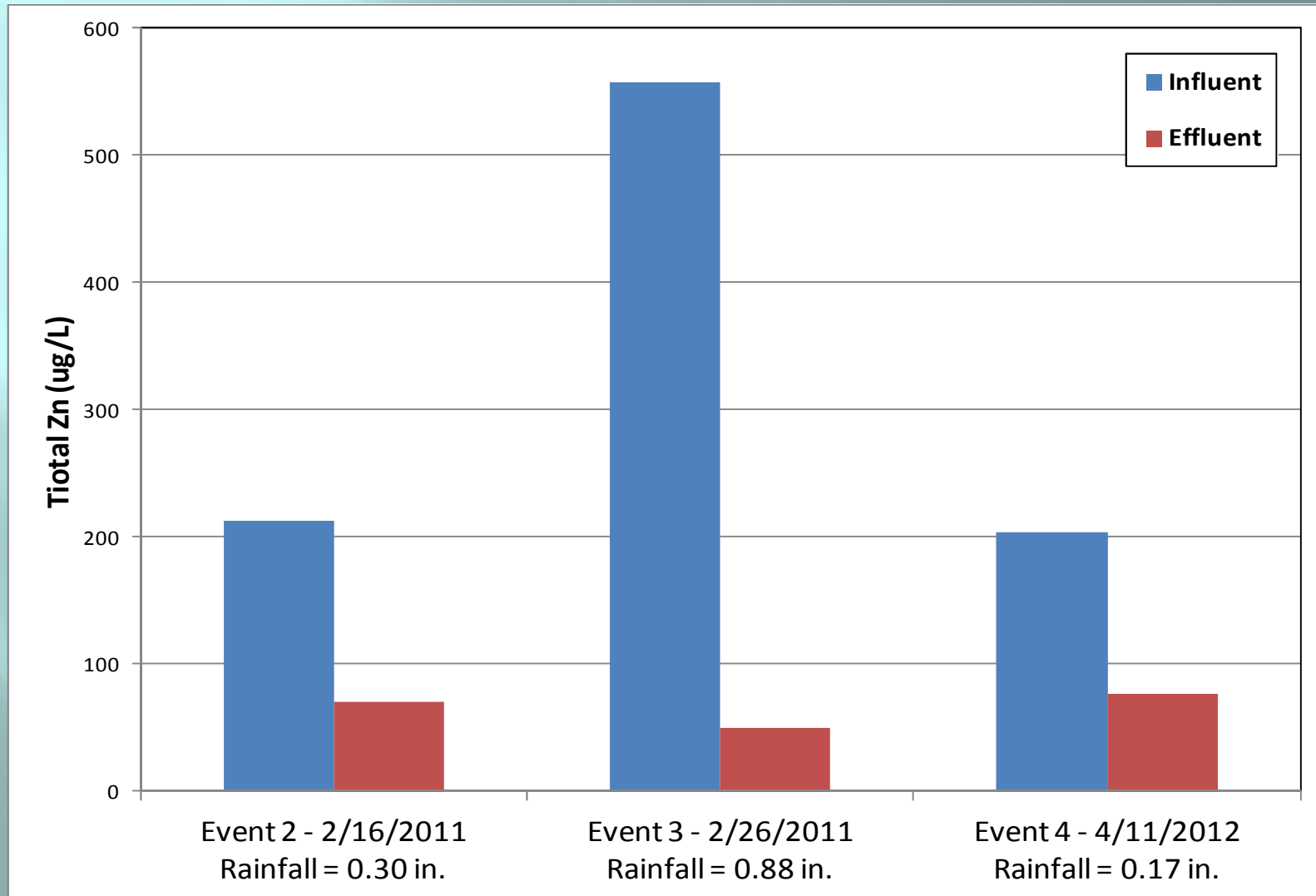
Large Media Filter



Monitoring Results

Total Zinc

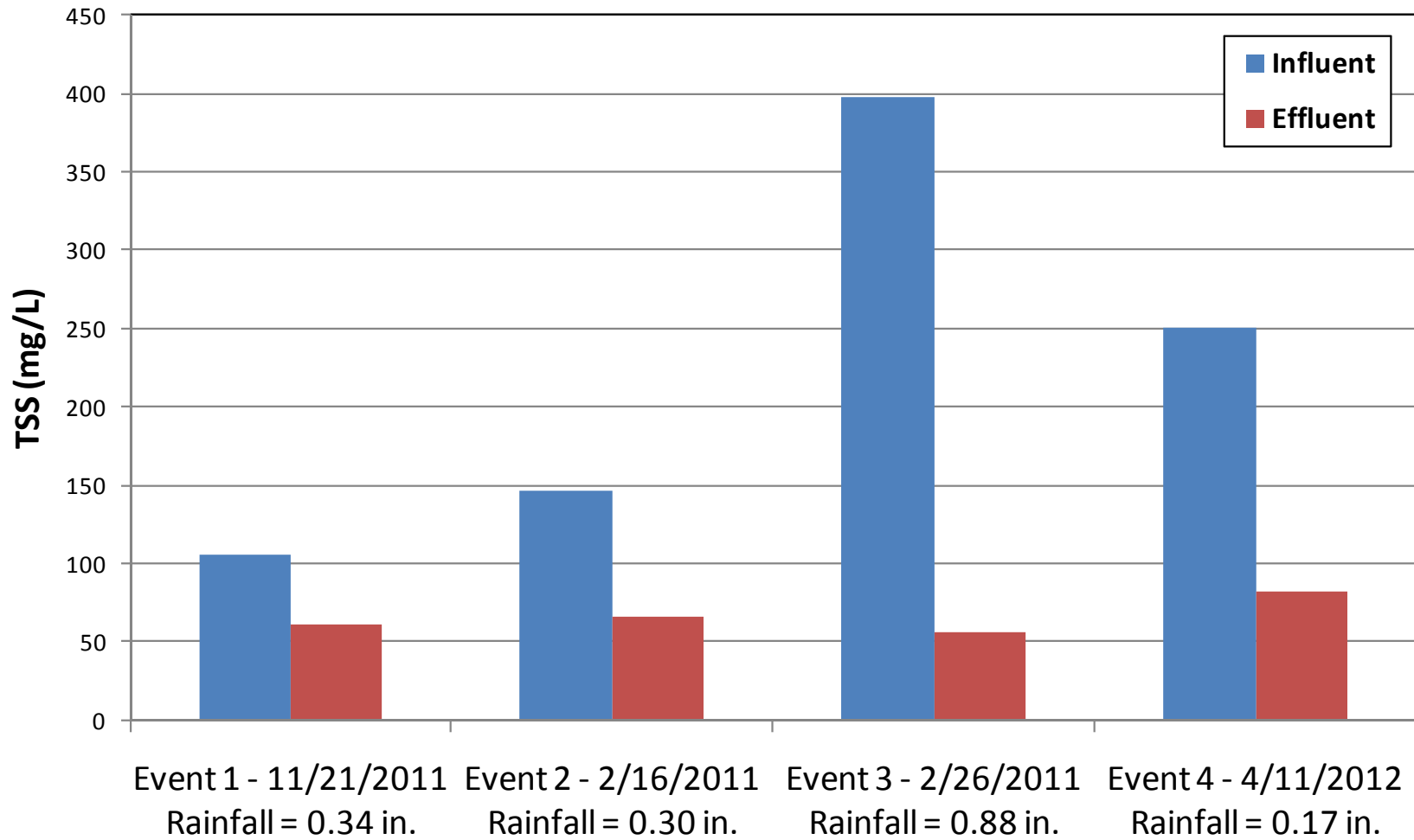
Large Media Filter



Monitoring Results

Total Suspended Solids

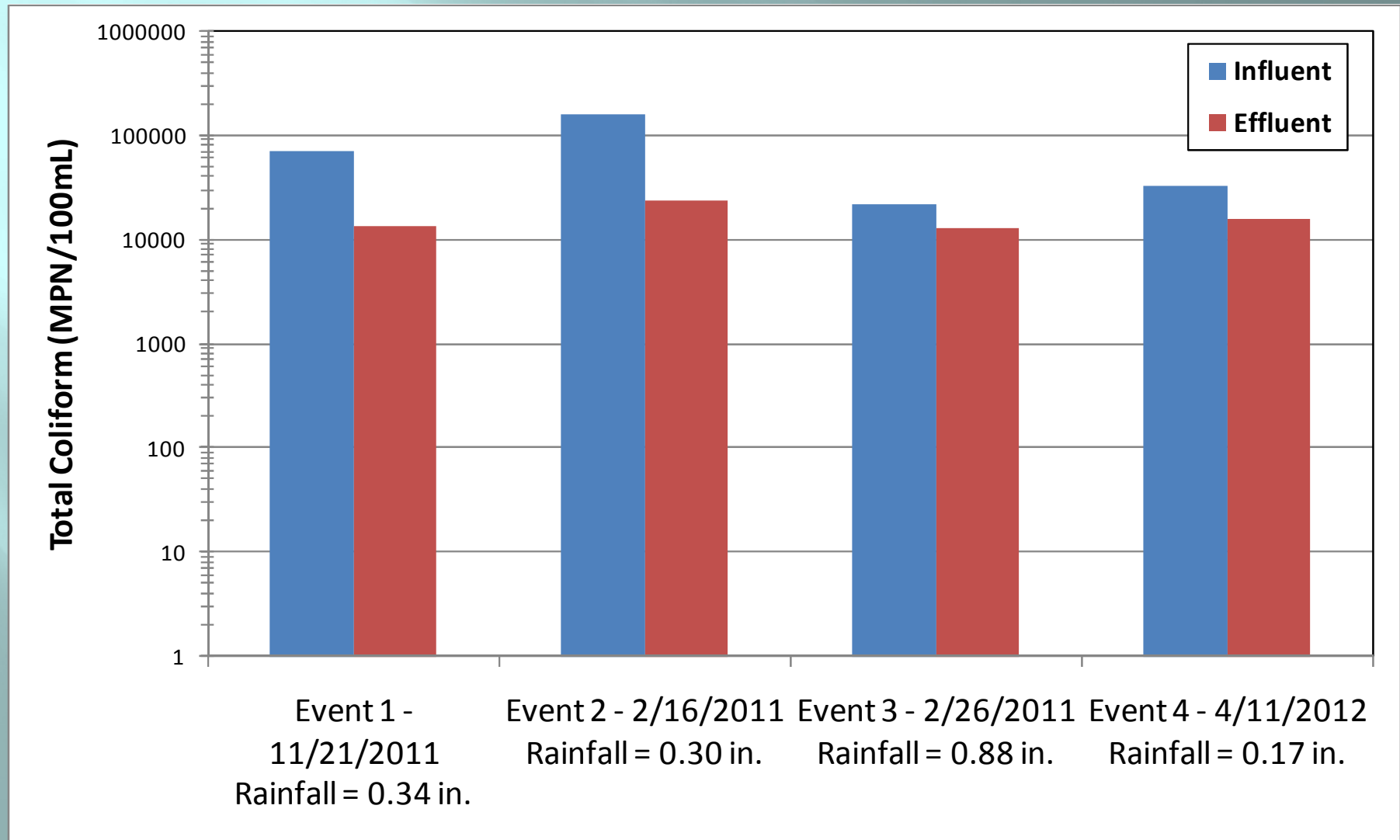
Large Media Filter



Monitoring Results

Total Coliform

Large Media Filter



The ocean adjacent to Scripps has been designated as one of 34 Areas of Special Biological Significance (ASBS) in California by the State Water Resources Control Board



Storm Water Monitoring

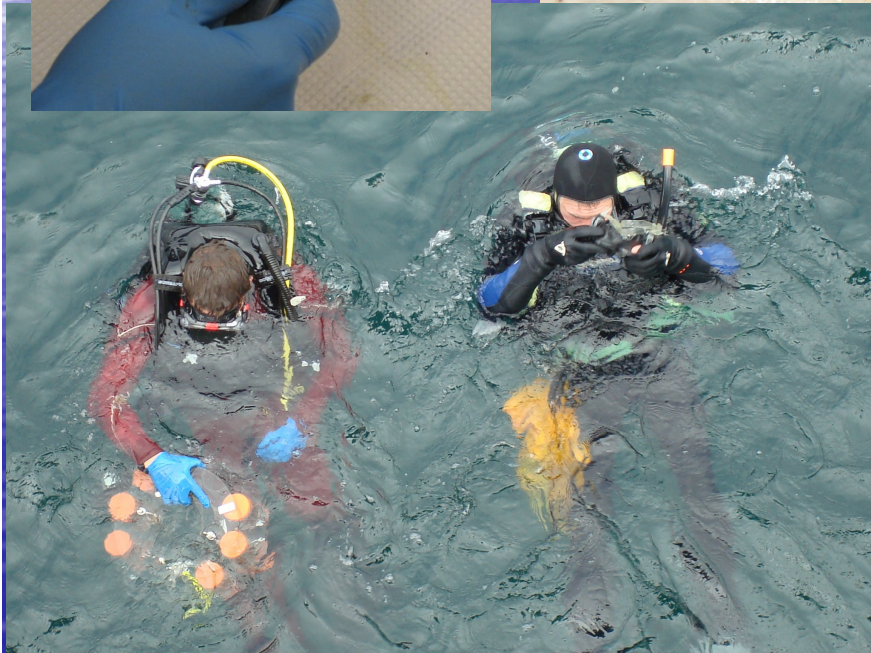
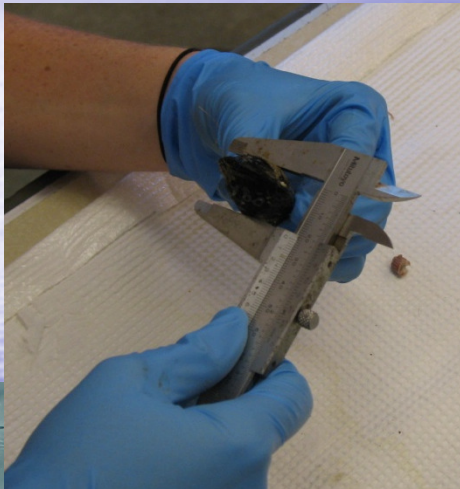


11/30/2007 14:08

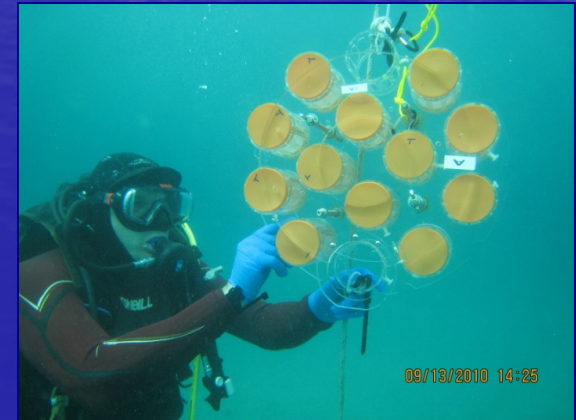
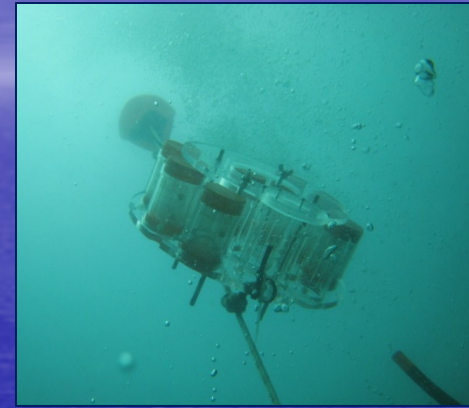
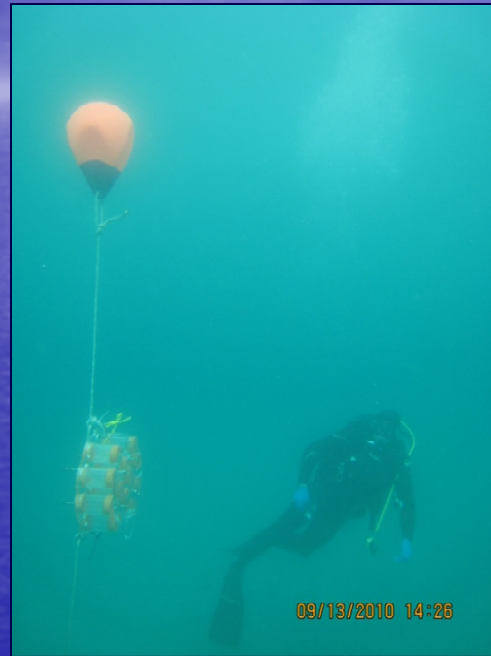
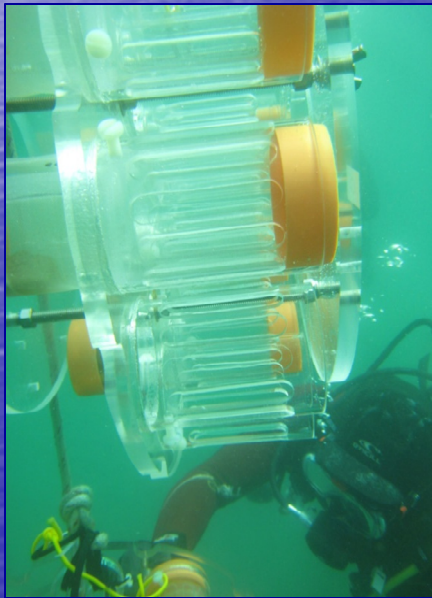
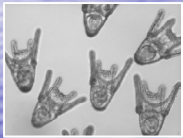
Receiving Water Monitoring



Ecosystem Assessment: biological community monitoring, bioaccumulation studies, public use studies, and toxicity evaluations near storm drain outfalls



Pilot study to perform "real time" toxicity testing in the receiving water



**The La Jolla Shores Coastal
Watershed Management Plan**

Final Report

Submitted For:

Proposition 50,
Chapter 8 IRWM Planning Grant
Integrated Coastal
Watershed Management Plan

January 31, 2008





Questions?

