Storm Water Management Plan

1st Revision, January2006

California State University, Sacramento
6000 J Street
Sacramento, CA 95819

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1.0 Introduction

1.01 Regulatory Background

This Storm Water Management Plan (SWMP) is required under Federal Environmental Protection Agency Phase II storm water regulations, promulgated under the Clean Water Act. These regulations require California State University, Sacramento to apply for a National Pollution Discharge Elimination System (NPDES) permit and submit a SWMP.

Polluted storm water runoff is often transported to municipal separate storm sewer systems (MS4s) and ultimately discharged into local waterways (rivers, streams, lakes, and bays) without treatment. EPA's Storm Water Phase II Rule establishes an MS4 storm water management program that is intended to improve the nation's waterways by reducing the quantity of pollutants that storm water picks up and carries into storm sewer systems during storm events. Common pollutants include oil and grease from roadways and parking lots, pesticides from lawns, sediment from construction sites, and carelessly discarded trash, such as cigarette butts, paper wrappers and plastic bottles. These pollutants are deposited into nearby waterways, discouraging recreational use of the resource, and interfering with the habitat for fish, other aquatic organisms, and wildlife.

In 1990, EPA promulgated rules establishing Phase I of the NPDES storm water program. The Phase I program for MS4s requires operators of "medium" and "large" MS4s, that is, those that generally serve populations of 100,000 or greater, to implement a storm water management program as a means to control polluted discharges from these MS4s. The Storm Water Phase II Rule extends coverage of the NPDES storm water program to certain "small" MS4s but takes a slightly different and simplified approach to how the storm water management program is developed and implemented.

NPDES Phase II regulations require operators of small MS4s to develop a program in order to:

- Reduce the discharge of pollutants to the "maximum extent practicable" (MEP);
- Protect water quality; and
- Satisfy the appropriate water quality requirements of the Clean Water act and Regional Water Quality Control Board Basin Plan

1.02 Purpose of the SWMP

This document has been developed to comply with Federal Environmental Protection Agency Phase II National Pollutant Discharge Elimination System requirements promulgated under the Clean Water Act.

The purpose of the SWMP is: (1) to identify pollutant sources potentially affecting the quality and quantity of storm water discharges; (2) to provide Best Management Practices (BMPs) for municipal and small construction activities implemented by California State University, Sacramento staff and contractors and; (3) provide measurable goals for the implementation of this SWMP to reduce the discharge of the identified pollutants into the storm drain system and associated water ways.

This SWMP covers California State University, Sacramento's main campus and its off-site aquatic facilities situated in urban areas.

1.03 SWMP Development Committee

The SWMP was developed with input from representatives from various campus departments with a potential to impact surface water quality. Included are off-site facilities at the Aquatic Center. The campus committee members ranged from departmental directors to operations personnel.

California State University, Sacramento

Main Campus Participants

- *Design & Construction - Capital Projects, Project Management, Inspection Services (PDD)*
- *Environmental Health & Safety(EHS)*
- *Intercollegiate Athletics & Recreational Sports(IA)*
- *Parking & Transportation (UTAPS)*
- *Physical Plant - Utilities, Refuse and Recycling, Trades, Gardeners, Custodial Services, Pest Management (FM)*
- *Residential and Associated Student Services (RL)*
- *CSUS Foundation (FND)*

Off-site Participants

- *Aquatic Center (AQC)*

2.0 Site Information

2.01 Facility Description

California State University, Sacramento (CSUS), is one of twenty three CSU campuses governed by the Chancellor of the California State University System and is an internationally recognized public teaching and research institution.

The California State University, Sacramento main campus is situated in Sacramento, California, Sacramento County. The facility is generally bounded by J Street to the north, the Union Pacific Railway easement to the west, Folsom Blvd. to the south, and the American River to the east.

This SWMP covers facilities in urbanized areas operated by California State University, Sacramento (such as the Main Campus and dormitories). Off-site facility operations are located at the Aquatic Center and not all BMPs in this SWMP will apply to the off-site location. Specific facility information is attached in Appendix 1.

The current 2002-2003 population, which includes students, faculty, and staff, is approximately 38,000. An estimated growth rate of less than 7% over the next ten years does not trigger the Standard Urban Storm Water Mitigation Plan (SUSMP) requirements for new construction projects.

2.02 Facility Operation

California State University, Sacramento employs maintenance, custodial, and grounds staff for day-to-day operations. This includes building maintenance (cleaning, painting, repairs), completion of department work requests, daily cleaning of common buildings, grounds maintenance, small construction jobs, and various repair and maintenance activities. Campus Facilities Management staff and outside contractors do electrical, plumbing, roofing, asphalt, painting, sewer line cleaning, utility repairs, vehicle repairs, pool maintenance and janitorial duties.

3.0 Description of Potential Sources of Pollution

Potential Pollutant Activity or Sources List

In order to aid in the identification of pollutant sources, the working group that developed this SWMP utilized information on historic spills as well as knowledge on the day to day operations to identify activities and sources of potential pollutants of concern.

Best Management Practices (BMP) to address the pollutant sources and activities described below will be developed as described in the Minimum Control Measures (Section 4.03).

Activity/Source	Pollutants of Concern
Building maintenance (washing, graffiti abatement)	Wash water, paint chips, cleaning products, dirt and sediment
Chemical spills	Various- cleaning compounds, diesel, paint, hazardous materials, vehicle fluids
Construction activities	Concrete, drywall, paint, sediment
Erosion	Sediment, organic matter
Food service operations	Wash-water, food residue, oil and grease
Grounds maintenance	Green waste, fuel, oil, pesticides, herbicides, sediment
Impervious areas	Increased flows and pollutant loading
Litter and debris	Litter and debris
Loading/unloading areas	Petroleum products, fertilizers, pesticides, herbicides, cleaning solutions, paint

Outdoor storage of raw materials	Sand, asphalt, soil, pesticides, herbicides, fertilizer, paint, solvents, fuel
Painting (indoor)	Paint or rinse water (oil and water based), paint thinner
Painting (outdoor)	Paint or rinse water (oil and water based), paint thinner
Parking lot runoff	Oil/grease, litter, heavy metals
Roof runoff	Particulate matter and associated pollutants
Sewer line blockages	Raw sewage
Sewer line seepage	Raw sewage
Trash storage areas	Organic materials, litter and debris
Vehicle and equipment washing	Cleaning products, oil/grease, vehicle fluids
Utility line maintenance and repairs (water/ irrigation/ sewer)	Chloramines, chlorine, sediment, adhesive cements, primers & fire protection system water
Animal feces	Coliform bacteria
Swimming Pool	Chlorinated water, pool chemicals
Fleet Maintenance & Repair	Oil, grease, antifreeze

4.0 Minimum Control Measures

4.01 What are Minimum Control Measures, MEP, and BMPs

"Minimum Control Measures" is the term used by the EPA for the six MS4 program elements aimed at achieving improved water quality through NPDES Phase II requirements listed below:

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

The goal of the SWMP is to reduce the discharge of pollutants to the Maximum Extent Practicable (MEP), as defined by the EPA, and to identify activities or structural improvements that help reduce the quantity and improve the quality of the storm water runoff. Best Management Practices (BMPs) have been developed for the SWMP to reduce the discharge of pollutants to the storm drain system to the MEP. BMPs include treatment controls, engineering controls, operating procedures, and practices to control site runoff, spills and leaks, sludge or waste disposal, or drainage from raw material storage. BMPs will be updated as appropriate to comply with any additions or changes to NPDES permit requirements.

4.02 How to use BMPs to Meet MEP Requirements

The BMPs described in this document in the measurable goals section are to be implemented by California State University, Sacramento staff and outside contractors. Whenever CSUS staff or contractors perform work on the campus or associated areas, steps outlined in each relevant BMP, or other proven technique that reaches the same goal, must be used in order to ensure compliance with storm water discharge regulations.

California State University, Sacramento has already initiated many of the BMPs listed in the Minimum Control Measures in this SWMP. In some cases the measure has not been formalized into a written plan or program. The SWMP will formalize and document these Minimum Control measures and associated BMPs. Full development and implementation of BMPs will be completed through the five-year implementation plan as presented in the measurable goals for each Minimum Control Measure in the following sections.

4.03 Minimum Control Measures

4.03.1 Public Education and Outreach on Storm Water Impacts

The goal of this minimum control measure is to develop and distribute educational materials and perform outreach to inform students, faculty, and staff about the impact of polluted storm water runoff discharges, and that their actions can make a positive impact on water quality.

Maximum Extent Practicable (MEP) Standards

- Implement a public education program to distribute educational materials to the community, or conduct equivalent outreach activities about the impacts of storm water discharges on local water bodies and the steps that can be taken to reduce storm water pollution;
- Determine the appropriate best management practices (BMPs) and measurable goals for this minimum control measure. Some program implementation approaches BMPs (i.e., the program actions/activities).

Measurable Goals to Meet MEP Requirements

Year	Dept.	Public Education and Outreach on Storm water Impacts Goals
1	EHS	• Develop storm water pollution prevention educational materials for faculty and staff.
	EHS	• Develop poster to educate students regarding storm water pollution prevention.
	FM	• Stencil: "Flows to River" at all accessible campus storm drains.
	EHS	• Develop storm water pollution prevention information for EH&S website.
2	FM	• Maintain campus storm drain stencils and replace as needed.
	EHS	• Distribute educational material to faculty and staff.
	EHS	• Post storm water pollution prevention information on EH&S website.
	EHS	• Increase storm water pollution prevention outreach to surrounding community.
3	FM	• Continue stenciling campus storm drains as needed.
	EHS	• Distribute educational material to students.
	EHS	• Sponsor and/or participate in storm water pollution prevention events such as campus clean-ups.
4	FM	• Continue stenciling campus storm drains as needed.
	EHS	• Continue sponsoring and/or participating in storm water pollution prevention events such as campus and levee clean-ups.
	EHS	• Outreach to faculty/academic programs for possible guest lecture opportunities.
5	FM	• Continue stenciling campus storm drains as needed.
	EHS	• Continue sponsoring and/or participating in storm water pollution prevention events such as campus and levee clean-ups.
	EHS	• Write articles on storm water program for campus publications and newsletters.
	EHS	• Include educational information in new student and new employee orientation packets.
	EHS	• Give guest lectures on storm water runoff impacts/pollution prevention at community events.

4.03.2 Public Involvement / Participation

The goal of this minimum control measure is to provide opportunities for students, faculty, and staff to participate in program development and implementation on a storm water management working-group.

MEP Standards

- Interact, comply and insure consistency with applicable State, and local public program requirements;
- Determine the appropriate best management practices (BMPs) and measurable goals for this minimum control measure.

Measurable Goals to Meet MEP Requirements

Year	Dept.	Public Involvement / Participation Goals
1	EHS	• Establish on-going storm water working group and conduit for public comment.
	EHS	• Establish rapport with the campus Office of Water Programs and explore opportunities for future joint projects/events.
	EHS	• Establish and maintain working relationship with the joint City/County Storm Water Program
	EHS	• Make copies of the SWMP available at EH&S office and website.
	EHS	• Place e-mail link on EH&S website to report storm water pollution concerns.
	EHS	• Attend storm water workshops to learn about BMP'S
2	EHS	• Contact campus community environmental event organizers.
	EHS	• Convene campus storm water working group.
	EHS	• Use media and publications to promote program and participation.
3	EHS	• Participate in campus storm water pollution prevention event(s).
	EHS	• Continue to convene campus storm water working group.
4	EHS	• Organize and sponsor campus volunteer clean-up event.
	EHS	• Continue to convene campus storm water working group.
5	EHS	• Organize and sponsor another campus volunteer clean-up event.
	EHS	• Participate in campus storm water pollution prevention event(s).
	EHS	• Continue to convene campus storm water working group.

4.03.3 Illicit Discharge Detection and Elimination

The goal of this minimum control measure is to develop and implement a plan to detect and eliminate non-storm water discharges (illicit discharges) such as process water, wash water, chemical spills, and other non-rainwater discharges to the storm drain system (not applicable to exempt discharges).

MEP Standards

- Have a storm sewer system map, showing outfall locations and the names and location of all waters of the United States that receive discharges from those outfalls;
- Through management, contracting, or other mechanism, prohibit (to the extent allowable under State, or local law) non-storm water discharges into the MS4, and establish appropriate enforcement procedures and actions;
- Have a plan to detect and address non-storm water discharges, including illegal dumping, into the MS4;
- Educate the campus community about the hazards associated with illegal discharges and improper disposal of waste;
- Determine the appropriate best management practices (BMPs) and measurable goals for this minimum control measure.

Measurable Goals to Meet MEP Requirements

Year	Dept.	Illicit Discharge Detection and Elimination Goals
1	FM SWG EHS	• Review and revise campus facilities storm drain maps as needed. • Review and update campus notification system for sewage spills and other non-storm water discharges. • Develop a storm drain sump and outfall monitoring program to visually identify dry weather flows into the storm drain system.
2	FM SWG UTAPS EHS EHS	• Update campus storm drain maps as necessary. • Implement updated campus notification system for sewage spills and other non-storm water discharges. • Provide drain blockers and related training to campus police and parking staff. • Implement the storm drain sump and outfall monitoring program. • Develop educational materials on the hazards of illegal discharges and improper disposal of wastes to the storm drains.
3	SWG EHS SWG EHS EHS EHS FM	• Develop a campus policy that includes prohibiting non-storm water discharges or improper disposal of wastes to the storm drains. • Continue to implement storm drain sump and outfall monitoring program. • Develop an inspection and enforcement program for illegal discharges/improper disposal. The enforcement program will include a plan for escalation in penalties depending on the severity of the act and the number of offenses. • Train all employees of the hazards associated with illegal discharges/improper disposal. • Provide educational materials on the hazards of illegal storm water discharges at environmental events on campus and in the local community. Make educational materials available on the EHS website. • Conduct a storm drain assessment to identify potential sources of non-storm water discharges. Categorize those sources by major functions on campus. • Update campus storm drain map as necessary to reflect any changes found through the storm drain assessment.
4	EHS EHS SWG SWG FM	• Implement an inspection/enforcement program for illegal discharge/improper disposal. • Evaluate the results of the storm drain assessment. Assign risk factors to the potential sources and develop a matrix by area on campus. Develop a prioritization scheme to identify those units that are exposed to the greatest risk. • Develop a list of procedural and physical BMPs to be used as measures to control non-storm water discharges. • Develop an action plan to re-route any illicit connections identified in the assessment. Determine any interim measures necessary to prevent illicit discharges from contaminating storm water.
5	FM EHS FM FM FM	• Update campus storm drain map as necessary to reflect any changes implemented. • Continue to implement the inspection/enforcement program for illegal discharge/disposal. • Implement procedural and physical BMPs to reduce risk of illegal discharges and improper disposal to storm drains. • Implement any interim measures to reduce the risk of illicit discharges from cross-connection until permanent re-routing takes place. • Develop a long-term sanitary sewer maintenance/upgrade program.

4.03.4 Pollution Prevention / Good Housekeeping for Facilities Operation and Maintenance

The goal of this minimum control measure is to develop and implement a program to prevent or reduce pollutant runoff from facilities operation and maintenance activities. The program must include training to relevant staff on pollution prevention measures and techniques (e.g., regular street sweeping, reduction in the use of pesticides, or frequent sump grate cleaning).

MEP standards

- Have a program with the ultimate goal of preventing or reducing pollutant runoff from facilities and maintenance operations into the storm sewer system;
- Include employee training on how to incorporate pollution prevention/good housekeeping techniques into facilities operation and maintenance such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and storm water system maintenance. To minimize duplication of effort and conserve resources, the MS4 operator can use training materials that are available from EPA, their State, or relevant organizations;
- Determine the appropriate best management practices (BMPs) and measurable goals for this minimum control measure.

Measurable Goals to Meet MEP Requirements

Year	Dept.	Pollution Prevention / Good Housekeeping for Facilities Operation and Maintenance Goals
1	SWG	• Review and evaluate Best Management Practices (BMPs) for major campus physical operations (grounds; facilities maintenance; physical plant/utilities; fleet services; custodial services; housing and dining services).
	EHS	• Develop a multi-level training program for Facilities Management staff. The first level would cover the basics on sources of storm water pollution. The second level would cover campus storm water policies/procedures and the implementation of the BMP's.
	FM	• Create a maintenance schedule for periodic cleaning of storm water system sump grates.
2	SWG	• Select appropriate BMPs for major campus physical operations and use them as the basis to develop a Storm Water Pollution Prevention Plan (SWPPP) for each major campus physical operation.
	EHS	• Continue to develop the multi-level training program on the sources of storm water pollution and how to implement selected BMPs.
	FM	• Implement the sump grate cleaning program.
3	EHS	• Implement the multi-level storm water training program.
	FM	• Begin implementation of the Storm Water Pollution Prevention Plan (SWPPP) for major campus physical operations.
	EHS	• Develop an inspection program for compliance with BMPs.
	FM	• Continue sump grate cleaning schedule.
4	FM	• Continue implementation of SWPPP with selected operational BMPs.
	EHS	• Implement an inspection program for compliance with BMPs.
	EHS	• Continue implementation of the multi-level storm water training program.
	FM	• Continue sump grate cleaning schedule.
5	FM	• Continue implementation of SWPPP with selected operational BMPs.
	EHS	• Continue implementation of the multi-level storm water training program.
	EHS	• Continue implementation of an inspection program for compliance with BMPs.
	FM	• Continue sump grate cleaning schedule.

4.03.5 Construction Site Storm water Runoff Control

The goal of this minimum control measure is to develop, implement, and enforce an erosion and sediment control program for construction activities.

MEP Standards

- Have a management, contracting, or other mechanism requiring the implementation of proper erosion and sediment controls, and controls for other wastes, on applicable construction sites;
- Have procedures for site plan review of construction plans that consider potential water quality impacts;
- Have procedures for site inspection and enforcement of control measures;
- Have sanctions to ensure compliance (established in management, contracting, or other mechanism);
- Establish procedures for the receipt and consideration of information submitted by the public;
- Determine the appropriate best management practices (BMPs) and measurable goals for this minimum control measure.

Measurable Goals to Meet MEP Requirements

Year	Dept.	Construction Site Storm water Runoff Control Goals
1	SWG	• Review and evaluate construction contract sediment and erosion control BMP specifications and site pollution control requirements.
	SWG	• Review and evaluate construction contract sanctions/penalties for violations of storm water sediment and erosion runoff controls.
	SWG EHS	• Review and evaluate construction site inspection procedures for BMPs.
		• Develop training for construction project managers/inspectors.
	EHS	• Develop training for contractors and sub-contractors.
2	SWG	• Develop a campus policy statement regarding storm water runoff controls for minimizing sediment and erosion impacts from construction sites.
	SWG	• Develop formal review procedures and checklists to document site plan, including pollutant source assessment for pre-construction campus site plan and BMP review process.
	PDD	• Incorporate construction sanctions/penalties where needed in construction contract language.
	PDD	• Include revised storm water BMP specifications in large construction projects with the potential to impact water quality.
	PDD EHS	• Train project managers and inspectors on the campus storm water policy and how the procedures will be incorporated into the construction project planning and contract development. The implication of violations and the importance of the enforcement of storm water specifications will be stressed.
	PDD EHS	• Train contractors and sub-contractors at pre-construction meetings regarding storm water issues related to the job site and the Storm Water Pollution Prevention Plan (SWPPP) for the construction project.
	EHS	• Develop construction site inspection procedures.
3	PDD	• Incorporate pollutant source assessment into pre-construction campus site plan and BMP review process.
	PDD	• Implement campus BMP enforcement procedures and responsibilities.
	PDD	• Implement construction site inspection procedures.

4	PDD PDD PDD SWG	• Include storm water specifications in smaller projects (less than $50,000) including Physical Plant, JOC and other departments' minor construction activities. • Continue implementation of construction site inspection procedures. • Conduct pollutant source assessment during site plan and BMP review. • Develop standard procedures to receive and respond to public and/or campus reporting/incidents regarding storm water runoff impacts from construction sites.
5	EHS FM PDD PDD	• Implement standard procedures to receive and respond to public and/or campus reportings/incidents regarding storm water runoff impacts from construction sites. • Continue implementation of construction site inspection procedures. • Continue to conduct pollutant source assessment during site plan and BMP review.

4.03.5.1 Construction Projects Greater than One Acre

Construction projects that encompass an area greater than one acre (including Small Linear Underground/Overhead Projects) must develop a specific Storm Water Pollution Prevention Plan (SWPPP). A Notice of Intent (NOI) and fee must be submitted to the State Water Resources Control Board (SWRCB) in Sacramento. The SWPPP shall conform to the California Storm water Quality Association's SWPPP Template and shall include appropriate BMP's related to the specific project. At project completion, a Notice of Completion will be submitted to the SWRCB. All inspection and monitoring records will be retained for three years.

4.03.5.2 Construction Projects Less than One Acre

Construction projects that encompass an area less than one acre shall follow the guidelines for Construction Project Storm Water Pollution Prevention. These guidelines are outlined in Appendix 3 of this document and shall include appropriate BMP's related to the specific project. All inspection and monitoring records obtained during the project timeframe will be retained for three years.

4.03.6 Post-construction Storm water Management in New Development and Redevelopment

The goal for this minimum control measure is to develop, implement, and enforce a program to address discharges of post-construction storm water runoff from new development and redevelopment areas.

Post-construction storm water management controls include permanent structural and non-structural best management practices (BMPs) (e.g. conservation of natural and permeable areas, permeable pavers, rooftop runoff infiltration galleries, and mechanical storm drain filters) that remain in place after the project is completed and prevent pollution from the new development in the long-run.

MEP standards

- Develop and implement strategies which include a combination of structural and/or non-structural post-construction BMPs;
- Have a management, contracting, or other mechanism requiring the implementation of post-construction runoff controls,
- Ensure adequate long-term operation and maintenance of controls;
- Determine the appropriate BMPs and measurable goals for this minimum control measure.

Measurable Goals to Meet MEP Requirements

Year	Dept.	Post-construction Storm water Management in New Development and Redevelopment Goal
1	SWG	• Review and evaluate current procedures for developing structural and non-structural post-construction BMPs for both new development and re-development projects.
	SWG	• Review current procedures for transitioning responsibility of BMPs from construction phase into long term maintenance.
2	SWG	• Develop a campus policy/enforcement program regarding post-construction storm water controls for new development and re-development project sites.
	SWG	• Develop standard specifications for selected structural and non-structural post-construction BMPs.
	SWG	• Develop procedures to incorporate inspection of new development and re-development project facilities into overall campus storm water inspection program.
3	PDD	• Incorporate post-construction structural and non-structural BMP requirements into site planning and review process.
	EHS	• Provide training for construction staff on post-construction BMP site planning, design, implementation, and inspection/enforcement protocols.
	EHS	• Develop procedures for a post-construction audit of the effectiveness of structural and non-structural BMP's.
	PDD	• Develop procedures for long-term operation and maintenance of BMPs.
	EHS	• Develop inspection program for long-term operation and maintenance of BMPs.
4	PDD	• Include post-construction BMP requirements/procedures and the long-term site BMP maintenance transition process in new construction site plans.
	EHS	
	EHS	• Implement inspection and enforcement program for post-construction structural and non-structural BMP's.
	EHS	• Begin post-construction audits of BMP effectiveness and incorporate any findings into the BMP specifications.
		• Provide training for operations and maintenance staff for long-term site BMPs
5	EHS	• Implement procedures for transitioning long-term site BMPs into campus storm water inspection program.
	FM	• Implement procedures for the long-term operation and maintenance of BMPs.

5.0 Record Keeping

5.01 SWMP Updating

The SWMP will be reviewed annually and California State University, Sacramento will update the SWMP whenever a change in activities or operations occur which may significantly affect the discharge of storm water pollutants.

5.02 SWMP Public Access

This SWMP is meant for use by California State University, Sacramento and California State University, Sacramento staff and is a public document. Any request for a copy of the SWMP by the RWQCB, other governmental agency, or citizen is to be forwarded to the California State University, Sacramento, Office of Environmental, Health & Safety (EH&S), 6000 J Street, CA 95819-6085.

5.03 SWMP Annual Reports

EH&S will complete and submit annual reports regarding the implementation of the SWMP and measurable goals to the Central Valley Regional Water Resources Control Board.

6.0 Certifications and Signatures

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

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

_____ _____

Michael Christensen Date
Assistant Vice President for Risk Management Services

7.0 Appendices

7.01 Appendix 1
Main Campus Facility Information

Main Campus

Location Description
The California State University, Sacramento main campus is situated in Sacramento, California, in Sacramento County. The facility is generally bounded by J Street to the north, the Southern Pacific easement to the east, Folsom Blvd. to the south, and the American River. to the west.

Facility Operations
The California State University, Sacramento main campus employs skilled trades, grounds, and custodial staff for day to day operations. Typical duties include building maintenance, plumbing and electrical repairs, clogged sewer line clean-outs, and grounds maintenance**.**

Climate and Rainfall
Meteorological conditions at California State University, Sacramento are influenced by its proximity to the Sacramento River delta. The prevailing winds are southeasterly and southwesterly.

Climate

Month	Temp | Rain | Humidity
January	53° | 3.2" | 83%
April	72° | 1.24" | 64%
July	93° | 0.06" | 53%
October	81° | 0.27" | 61%
Annual	76° | 18.61" | 66%

Source: National Weather Service

Facility Drainage
There are approximately 170 point sources that discharge into the storm drain system from the main campus. These point sources drain areas such as streets, parking lots, loading docks, roofs, landscaped areas and any other surfaces that receive rainwater. When the storm water leaves campus it flows into the campus storm drain system which has discharge points either to a drainage ditch on the western boundary or one of several large sumps which subsequently discharge to the American River.

General Watershed Description

The CSU Sacramento campus lies within the Lower Sacramento River watershed. The American River borders the site to the east. The campus abuts the base of the American River levee which is maintained by the US Corps of Engineers and the American River Flood Control District.

Local Geology

CSUS is located on the Riverbank Formation (formerly called the "Victor Formation"). It is a mixture of sand, silt and clay, and was formed by glacial outwash from the Sierra Nevada Mountains. There is a layer of coarser cobbles about 20 ft deep, and this appears intermittently

near the river and the library. The Riverbank Formation is unconsolidated (meaning that individual grains aren't cemented together to form resistant rocks) instead, it consists of loose sediments, and has high porosity. The water table is about 25 ft deep under most of campus. The water table rises toward the surface near the American River, and estimated to be at least 15 ft below the ground surface right up to the levee.

Land Use

The developed area in the watershed is dominated by institutional activities. The California State University, Sacramento main campus accounts for most of this area. The main campus consists of buildings, parking lots, outdoor dining, landscaped areas, as well as roadways and walkways.

Recreational land uses consist of large turf areas such as football, soccer, baseball, and track areas. Open space refers to the arboretum, outdoor theatre lawns and large landscaped areas.

Land Use / Land Cover Type	**Acres (%)**
Institutional (Buildings)	*180 (60%)*
Residential (Dormitories)	*25 (8%)*
Recreational	*35 (12%)*
Open Space	*60 (20%)*
TOTAL	**300 (100%)**

Existing Sampling Data

Limited sampling and limited wet and dry weather observations indicate the water quality on main campus is generally good.

7.02 Appendix 2
Off-Site Facility Information

CSUS Aquatic Center

Location
The CSUS Aquatic Center is located on Lake Natoma. Its street address is 1901 Hazel Avenue, Rancho Cordova, CA.

Facility Description
The Aquatic Center includes a classroom/office building that is two stories tall, boat houses, surrounding parking lots, walkways, picnic area, boat docks and adjacent beach. The site covers approximately 5 acres. The population including faculty, staff and students is approximately 100.

Facility Operations
Skilled trades, grounds, and custodial staff for day to day operations are managed by the Aquatic Center. Typical duties include custodial support, interior priming and painting, minor plumbing and electrical repairs, sewer maintenance, grounds maintenance, and trash pick-up.

Campus Facilities Management staff and outside contractors do electrical, plumbing, roofing, asphalt, exterior building painting, sewer line cleaning and utility repairs.

Climate and Rainfall
Meteorological conditions at the CSUS Aquatic Center are influenced by its proximity to the Lake Natoma, and the surrounding hills.

The prevailing winds are southeasterly and southwesterly.

Climate

Month	Temp | Rain | Humidity
January	53° | 3.2" | 83%
April	72° | 1.24" | 64%
July	93° | 0.06" | 53%
October	81° | 0.27" | 61%
Annual	76° | 18.61" | 66%

Source: National Weather Service

Drainage Description
Surface water, which is collected and conveyed by the onsite storm drain system, generally flows through open concrete ditches which discharge into Lake Natoma.

Local Geology

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7.03 Appendix 3
Construction Projects Less than 1 Acre

CSU Sacramento will follow applicable portions of the California Stormwater Quality Association "Stormwater Best Management Practice Handbook – Construction" for projects smaller than one acre.