UNIVERSITY OF CALIFORNIA, MERCED

SEWER SYSTEM MANAGEMENT PLAN

NOVEMBER 2012

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1.0 GOAL

1.1 REGULATORY BACKGROUND

This Sewer System Management Plan (SSMP) is required under Waste Discharge Requirements (WDR) Order No. R3-2006-0003-DWQ, adopted by the State Water Resources Control Board (SWRCB) on May 2, 2006. The WDR stipulates that the permittees, which include the University of California, Merced (UC Merced), must develop and implement a Management Plan in order to reduce Sanitary Sewer Overflows (SSOs). Additionally, the Management Plan provides measures to ensure efficient and effective response to overflows, and implement source control measures to minimize the introduction of grease and oils, and other materials that may cause blockages.

The SWRCB developed this WDR to promote uniformity in the management of California's wastewater collection systems and reduce SSOs. The SWRCB found that districts that have implemented SSMPs similar to this have been effective not only in improving spill reporting, but also in mitigating SSO impacts. Data also supported the conclusion that better collection system management will benefit water quality and prolong the life of sanitary sewer systems.

The SWRCB may regulate sanitary sewer overflows based on authority in the Federal Clean Water Act (EPA 2002) and the Porter-Cologne Water Quality Control Act, Section 13263 (California Water Code of Regulation 2006).

1.2 PURPOSE AND GOALS OF THE SSMP

This document has been developed to comply with WDR Order No. R3-2006-0003-DWQ, which is included in **Appendix A** and sets specific wastewater collection system requirements for all permittees and upholds State water quality standards. The WDR requires permittees to prepare and implement a SSMP in order to:

- Provide a plan and schedule to properly manage, operate, and maintain all parts of the sanitary sewer system in order to provide reliable service in the future;
- Minimize infiltration/inflow (I/I) Reduce and prevent SSOs;
- Help mitigate any SSOs that do occur.

Sanitary sewer overflows are overflows from sanitary sewer systems of domestic, industrial, and/or commercial wastewater. SSOs may cause a public nuisance, particularly when untreated wastewater is discharged to waters designated for contact recreation. Many SSOs can be prevented with adequate and appropriate facilities, source control measures, and operation and maintenance of the sanitary sewer system.

2.0 ORGANIZATION

2.1 ADMINISTRATION AND MAINTENANCE ORGANIZATION

The administrative responsibility for the UC Merced sanitary sewer system is shared among several departments including EH&S, Facilities Management, Central Plant, Communications, Campus Dining, Physical Planning Design and Construction. The responsibilities of each department are summarized below, and an organizational chart is included as Figure 2-1.

EH&S: The implementation of permit requirements and reporting to regulatory agencies is the responsibility of EH&S, including tracking and initial 2-hr and 24-hr reporting of all SSOs as well as development and implementation of the SSMP. EH&S also provides support to all parts of operation and oversees enforcement actions.

Facilities Management / Central Plant: Facilities Management is responsible for the overall operation and maintenance of the system including contractor oversight making repairs on the system.

Campus Dining: Campus Dining is responsible for the maintenance and proper use of grease interceptors located at their respective facilities.

Physical Planning Design and Construction (PPD&C): PPD&C is responsible for the management of the design and construction of additions, rehabilitations, or modifications to the sanitary sewer system.

2.2 MONITORING SYSTEM AND REPORTING SSOs

UC Merced utilizes the CCTV testing method to monitor the status of the sanitary sewer system. Monitoring tests are conducted annually on the existing systems. All new construction installations are monitored by CCTV to insure nothing is damaged or missed before the system is turned over to the water operations department. The monitoring is on DVD and there are reports for findings or corrections. The reports are inputted in maintenance software that keeps the records on file.

In addition, there is a sewer flow meter at the point of discharge, which sends data every two hours to a web based program and trends all the data.

Members of the University community who observe an SSO may call any of the following numbers to report SSOs:

- Status Line: (866) 993-0969
- Police Department: (209) 228-2677 (CAT-COPS) or 911
- EH&S: (209) 228-4234
- Facilities trouble call: (209)228-2986, after hours (209)228-4218

The Chain of Communication for Sanitary Sewer Overflows is outlined in **Figure 2.2**. Emergency response procedures for SSOs are described in **Appendix E, the Overflow Emergency Response Plan**.

2.3 FACILITY DESCRIPTION

The UC Merced campus is one of ten University of California campuses governed by the Regents of the University of California. UC Merced has long term goals of expanding the campus to include more students. As of Fall 2011, student enrollment was 5,198. It is expected the UC Merced increase its number of undergraduate / graduate student population steadily in the upcoming years. Long-range enrollment projections estimate that fall enrollments will exceed 10,000 by 2020. The property included within the boundaries of UC Merced and served by the Campus sanitary sewer system is shown on the map provided in **Appendix D**.

Soils at UC Merced generally consist of poorly sorted gravel, sand, silt and clay. The soils are generally gravelly, acidic and have low fertility. Clay hardpan within 3 feet of the surface is common.

The average annual rainfall for the Merced area is approximately 12 inches.

Figure 2.1 Administrative and Maintenance Responsibilities of UC Merced Sanitary Sewer System

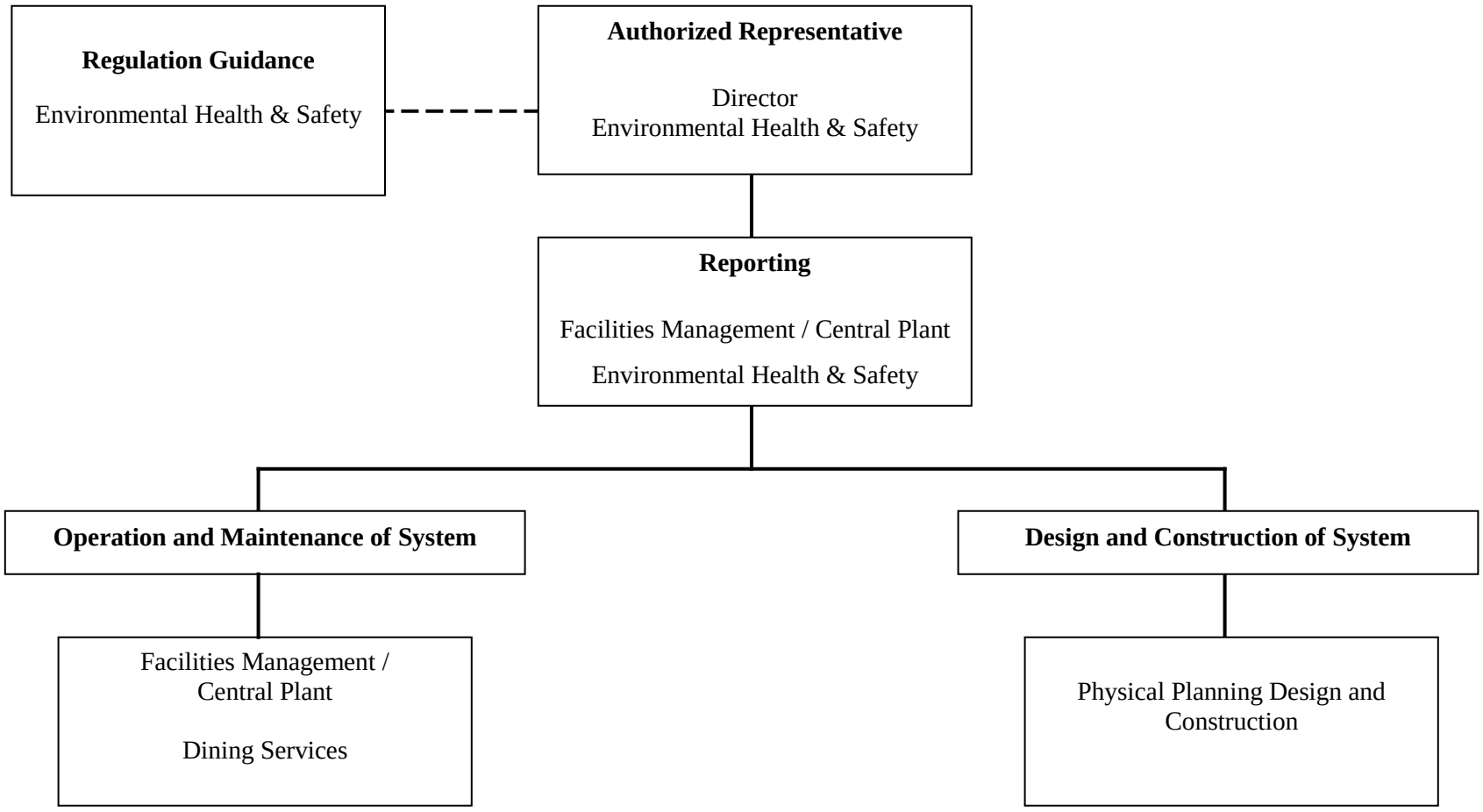
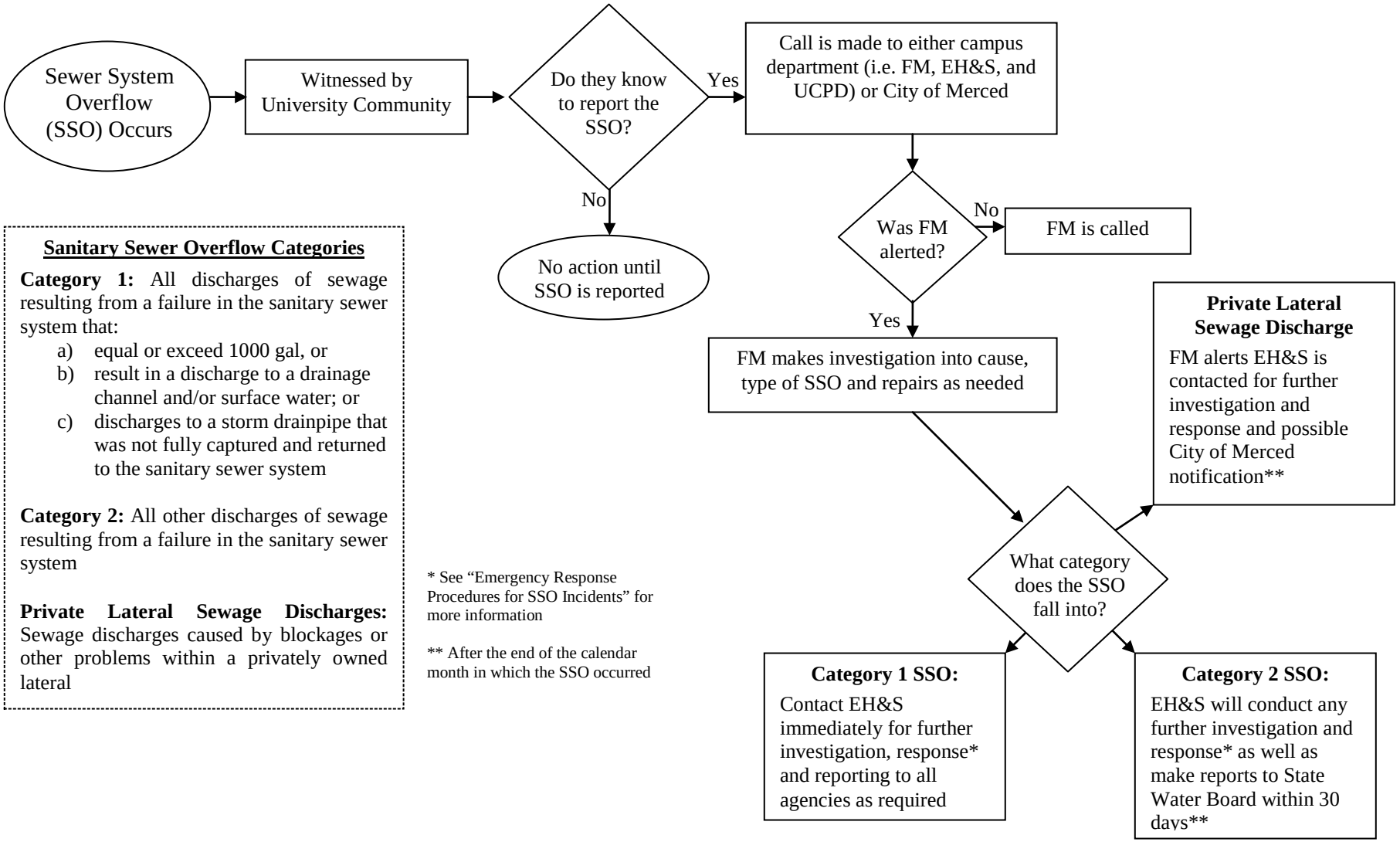


Figure 2.2 Chain of Communication for Sanitary Sewer Overflows, UC Merced Sanitary Sewer System



Sanitary Sewer Overflow Categories

Category 1: All discharges of sewage resulting from a failure in the sanitary sewer system that:

a) equal or exceed 1000 gal, or
b) result in a discharge to a drainage channel and/or surface water; or
c) discharges to a storm drainpipe that was not fully captured and returned to the sanitary sewer system

Category 2: All other discharges of sewage resulting from a failure in the sanitary sewer system

Private Lateral Sewage Discharges: Sewage discharges caused by blockages or other problems within a privately owned lateral

* See "Emergency Response Procedures for SSO Incidents" for more information

** After the end of the calendar month in which the SSO occurred

2.4 SANITARY SEWER SYSTEM DESCRIPTION

The Campus sanitary sewer system connects with the City of Merced wastewater collection and treatment system by way of a sanitary sewer line in Bellevue Road that connects to the City of Merced's sewer system at an existing 27-inch trunk line on G Street near Merced College**.** The sewer pipeline under Bellevue Road is sized to serve the full development of the campus, and the existing 27-inch sewer pipeline on G Street has the capacity to serve a campus with up to 10,000 FTE students and associated faculty and staff.

The UC Merced sanitary sewer system serves the majority of the campus. The UC Merced campus and the areas served by the UC Merced sanitary sewer system are shown on the map provided in Appendix D.

The sanitary sewer system at UC Merced has been in use since approximately 2000 and comprises of over 1.5 miles of gravity sewers. The piping consists of a combination of RCP (reinforced concrete pipe), clay pipe and plastic pipe. Sanitary sewage is collected from campus buildings that house administration, classroom, research, residential and dining hall facilities. The system ultimately feeds to the City of Merced's wastewater treatment plant (WWTP).

There are no lift stations in our sewer system. However, there is one lift station for a service lateral for the Science & Engineering Building (S&E) that lifts into the start of our sewer system. It is located in the basement of S&E.

There are two grease interceptors located on the main campus. UC Merced currently does not have any grease traps. **Table 2-1** summarizes the grease interceptor sizes, locations and the departments that are responsible for their maintenance.

Table 2-1
Grease Interceptors

Location	Size and Type	Responsible Organization
Bobcat Lane NW of the Yablokoff-Wallace Dining Center	3000-gallon grease interceptor	Dining Services
Yablokoff Wallace Dining Center, Building number 214	1500-gallon grease interceptor	Dining Services

3.0 LEGAL AUTHORITY

The Reagents of the University of California is a Constitutional Corporation, organized under Article IX, Section 9 of the California Constitution, with full authority over governance and management of the University operations. Under this authority, the University of California has legal authority to:

- Control infiltration and connections from inflow sources, including satellite systems.
- Require that sewers and connections be properly designed and constructed.
- Ensure proper installation, testing, and inspection of new and rehabilitated sewers (such as new or rehabilitated collector sewers and new or rehabilitated laterals).
- Limit fats and greases and other debris that may cause blockages in the collection system.
- Prevent illicit discharges into its system (e.g., stormwater or chemical dumping).
- Ensure access for maintenance, inspection, or repairs of all portions of the system operated by UC Merced.
- Implement the national pretreatment program authorities specified under 40 CFR 403.8(f)(1).

4.0 OPERATION AND MAINTENANCE PROGRAM

In order to reduce and prevent SSOs, the SSMP establishes measures and activities to facilitate the proper management, operation, and maintenance of all parts of the sanitary sewer system. Measures and activities include maintaining system maps, scheduling routine maintenance, identifying, and addressing system deficiencies, providing public education, and describing fiscal resources and training.

At the present time the system does not have any hydraulic deficiencies. UC Merced during routine maintenance will determine any areas of our sewer system that could potentially have deficiencies, as an area of concern, and at that time determine what steps are needed to repair or revitalize the system.

Table 4-1 presents the required operation and maintenance elements for the SSMP. The table identifies each element and the person or position at UC Merced that is responsible for that element.

Table 4-1
Operation and Maintenance Program

UC Merced Operation and Maintenance Program	Responsible Party	Point of Contact	Telephone Number
A. Operations and Maintenance			
"Provide adequate operations and maintenance of facilities and equipment." Operation and maintenance of the sanitary sewer is the responsibility of the UC Merced Facilities Management. This includes maintaining all lines, force mains, and alarm systems. The department is also the first responder to sanitary sewer overflows.	Central Plant / Facilities Management	Louie O.	(209) 228-4308
B. Update Maps			
"Maintain an up-to-date map of the collection system showing all gravity line segments and manholes, pumping facilities, pressure pipes and valves, and storm water conveyance systems." The maps of the sanitary sewer system are either in AutoCAD, PDF or hard copy format. • Sanitary sewer maps are located in the Water Operations Department in the Central Plant either on the Water Operations server or in the Facilities Building B Mapping Room.	Central Plant / Facilities Management	Louie O.	(209) 228-4308
C. Maintain Information for Establishing Priorities			
"Maintain relevant information to establish and prioritize appropriate SSMP activities such as the elimination of overflows and identify and illustrate trends in overflows." The Water Operations Department is responsible for maintaining records regarding SSOs. All records are on the Water Operations Department software database with hard copies on file. Overflows of any amount of wastewater are reported to EH&S. FM tracks overflows and assesses the frequency and volume of overflows and works with EH&S to reduce and prevent SSOs.	Executive Director of Central Plant / Facilities Management	Sajid Mian	(209) 228-2970

Table 4-1 (Continued)
Operation and Maintenance Program

UC Merced Operation and Maintenance Program	Responsible Party	POC	Telephone Number
D. Preventative Maintenance			
"Routine preventative maintenance O&M activities by staff and contractors." UC Merced has measures in place in order to keep the system in good repair and prevent excessive infiltration/inflow, service interruptions, and system failures. This is done through scheduled regular maintenance and cleaning of the collection system, which is summarized below.	Central Plant / Facilities Management	Louie O.	(209) 228-4308
Routine Inspections: • Inspections of the sewer system is done quarterly, which include the manholes, sewer cleanouts and the flow meter.			
Routine Maintenance: • Routine maintenance is performed every six months by an outside contractor. The current contractor is Applegate Teeples. The maintenance work performed consists of hydro flushing all mains and laterals, insuring there are no clogs / backups, vacuuming out all major debris, CCTV all mains and laterals to insure no lines have failed or backed-up.	Applegate Teeples	Jeremiah	(209) 568-8470
• Maintenance of sewer flow meter is done in house and re-calibrated once a year.	Applegate Teeples	Jeremiah	(209) 568-8470

Table 4-1 (Continued)
Operation and Maintenance Program

UC Merced Operation and Maintenance Program	Responsible Party	POC	Telephone Number
E. Scheduled Inspections and Condition Assessment			
"Identify and prioritize structural deficiencies and implement short-term and long-term rehabilitation actions to address each deficiency."	Executive Director of Central Plant / Facilities Management	Sajid Mian	(209) 228-4234
Long term planning:			
• UC Merced is continually monitoring the infrastructure of the campus, including the sanitary sewer. The sanitary sewer system was evaluated and long-term planning recommendations made by Stantech Engineering in 2010, presented in *University of California, Merced, Utility Infrastructure Assessment, Sanitary Sewer Study*. Long term action to be implemented as needed: • Reverse grade and root intrusion corrections as needed • Manhole replacement as needed • Identification and replacement of laterals as needed			
Short term actions:			
Short term actions are taken on an as-needed-basis depending on information gathered during inspections. Facilities Management will work with Physical Planning, Construction & Design and EH&S as necessary to develop short-term project scope and subsequently implement the project, all to be documented. Short term action implemented through this method could include: • Grease interceptor installation			

Table 4-1 (Continued)
Operation and Maintenance Program

UC Merced Operation and Maintenance Program	Responsible Party	POC	Telephone Number
F. Training			
"Provide training on a regular basis for staff collection system operations, maintenance and monitoring and determine if contractors' staffs are properly trained."	EH&S *and* Executive Director of Central Plant / Facilities Management	David Ott Sajid Mian	(209) 228-4234 (209)228-4234
Training is conducted by both EH&S and FM. The two departments are responsible for training staff in the following areas: ***EH&S:*** • Provides regular exposure control training for Facilities Management staff. • All EH&S training is documented through the UC Learning Center. ***Facilities Management:*** • Provides regular technical training for FM staff responding to sewer spills; most training is on the job and is not officially documented. • Provides technical training when new systems are installed to operators of system. Training on new systems is documented. • Responsible for overseeing operations of contractors. UC Merced utilizes a service agreement contract for outside contractors to perform maintenance on the sewer system. The service agreement contract stipulates that contractor's staff must be properly trained; this is documented through the language in the contract. • Training is provided to staff in-house. Staff attends training yearly with CWRA, AWWA, and CDPH. • Those who hold a waste water collections certification must receive training yearly to retain certifications.			

G. Equipment			
"Provide equipment and replacement parts inventories, including identification of critical replacement parts."	Executive Director of Central Plant / Facilities Management	Sajid Mian	(209) 228-2970
A stock parts and equipment, including emergency pumps, lights, and generators is maintained. Repairs that require equipment or materials beyond existing capabilities are executed by an outside contractor via a service agreement contract. Currently, a service agreement is maintained with Applegate Teeples. Replacement parts are kept in a warehouse on site located at Facilities Building A.	Applegate Teeples	Jeremiah	(209) 568-8470

Table 4-1, page 4 of 7

Table 4-1 (Continued)
Operation and Maintenance Program

UC Merced Operation and Maintenance Program	Responsible Party	POC	Telephone Number
H. Public Education Outreach Program			
"Establish an implementation plan and schedule for public education outreach program that promotes the proper disposal of grease and fats."	Environmental Health & Safety	David Ott	(209) 228-4234
Since the sewer system at UC Merced is not a public system, the university has direct control over any facility that disposes of grease and fats into the sanitary sewer. Policies adopted in this plan, specifically in **Section 7, Source Control Program**, are adopted by all entities on campus. The additional items below comprise the outreach program to the campus community. The following measures are adopted in order to foster the successful implementation of the SSMP and disposal of grease and fats by organizations on campus: • A copy of the UC Merced SSMP will be posted on the UC Merced EH&S website (http://ehs.ucmerced.edu/). • Signs listing the best management practices for working with fats, oils and grease will be posted in the work areas of employees who use the grease traps or interceptors on campus. A copy of these signs is also posted on the UC Merced EH&S website. • Inspections for proper disposal of grease and fats as well as regular maintenance on grease interceptors will be included in routine inspections by the Environmental Health and Safety team. These inspections are documented by EH&S and maintained in electronic format on the EH&S server.			

Table 4-1, page 5 of 7

Table 4-1 (Continued)
Operation and Maintenance Program

UC Merced Operation and Maintenance Program	Responsible Party	POC	Telephone Number
I. Private Property Overflow Plan			
All of UC Merced's sanitary sewer system is located on campus property. For private property overflows, UC Merced will alert the entity who owns the sewer lines and or property involved and assists in the response coordination, as necessary.	Environmental Health & Safety	David Ott	(209) 228-4234

Table 4-1, page 6 of 7

Table 4-1 (Continued)
Operation and Maintenance Program

UC Merced Operation and Maintenance Program	Responsible Party	POC	Telephone Number
L. Staffing for System Operations			
"Describe staffing available to ensure system operation including developing, implementing and revising the SSMP." The responsibility for system operation is Central plant/ water operations departments and is summarized in Figure 2-1, Administrative Responsibilities for UC Merced Sanitary Sewer System. There are qualified Facilities Management staff members that operate the sanitary sewer system as a whole, and qualified Facilities Management staff members which assist in the operation of the sewer system inside University buildings. Staff is available 24 hours a day, 365 days to operate the system. The SSMP revision and implementation will be accomplished by Environmental Health & Safety, in cooperation with Facilities Management. Together, these departments ensure the operation of the sanitary sewer system.	Environmental Health & Safety	David Ott	(209) 228-4234

Table 4-1, page 7 of 7

5.0 DESIGN AND PERFORMANCE PROVISIONS

The University of California, Merced has established a Mechanical, Electrical, Plumbing Specification (MEP) for all new construction. Standards for sanitary sewer installation, rehabilitation and repair are included in this specification.

The master MEP specification is available from the Physical Planning, Design & Construction Department (PPD&C). PPD&C is responsible for ensuring the design standards are implemented on campus. There are two categories of design and performance provisions specified in WDR No. R3-2004-0130, discussed below.

5.1 STANDARDS FOR INSTALLATION, REHABILIATION AND REPAIR

The MEP specification outlines construction specifications for installing new sewer systems and for rehabilitation and repair of existing sewer systems. Design criteria include specifications for items such as pipe materials, minimum sizes, minimum cover, strength, minimum slope, trench and backfill, structure standards, and other factors. Any new construction, rehabilitation or repair of the sanitary sewer system will adhere to the specifications. It is required that all developers and design consultants reference and use our standards in the design of new, repaired and rehabilitated sewer construction projects.

The specifications are periodically updated and the master MEP specifications are currently being updated as of September 2012. UC Merced's Technical Advisory Committee is charged with review and evaluation. Currently, the Technical Advisory Committee meets on a monthly basis. UC Merced's review process is currently on a project by project basis; however, a new mechanism of review will be detailed in the design standards by the end of 2012.

5.2 STANDARDS FOR INSPECTION AND TESTING OF NEW AND REHABILITATED FACILITIES

Inspection and testing of new or rehabilitated facilities ensures that the established standards are being implemented in the field. UC Merced has compliance standards for new, rehabilitation and repair construction and testing is performed based upon the requirements of the 2010 California Plumbing Code (CPC) and the 2010/2011 American Water Works Association. UC Merced has in-house International Code Council (ICC) & Division State Architects (DSA) inspectors that perform code compliance and quality assurance tasks. Acceptance testing for gravity sewers can include: low pressure air test or water test to identify leakage, mandrel test to identify deflection of flexible pipe, water or vacuum test of manholes to identify leakage, and television inspection to identify grade variations or other construction defects.

Performance bonds are required on all new projects exceeding $25,000. In addition, a principle construction inspector is assigned to each project to ensure compliance with applicable code and design specifications.

6.0 OVERFLOW EMERGENCY RESPONSE PLAN

6.1 OBJECTIVE AND PURPOSE

The Overflow Emergency Response Plan, titled "Sewer Spill Reponses Procedures for Releases or Threatened Releases to Campus Storm Drains or Waterways", is attached as **Appendix E** to this Sanitary Sewer Management Plan and has the purpose of establishing guidelines and measures to protect public health and the environment in case of an accidental sewer overflow.

In the case of an overflow, UC Merced shall dispatch the appropriate crews to investigate, identify the cause, and provide appropriate service to minimize the effects of the overflow on public health and quality of surface waters. The Overflow Emergency Response Plan further specifies the required notification and reporting that is necessary for local and state agencies.

All utility personnel are required to read the Overflow Emergency Response Plan and familiarize themselves with the procedures. Training is made available for all utility personnel on the Overflow Emergency Response Plan. The plan is posted on the Environmental Health & Safety website to allow easy access for all utility personnel and the general public.

6.2 OVERFLOW EMERGENCY RESPONSE PLAN UPDATE

The Overflow Emergency Response Plan is reviewed on an annual basis by EH&S and FM. Interim changes are incorporated into the document by EH&S on an as needed basis.

Comments, updates, and other relevant information should be submitted to the EH&S for review, consideration, and incorporation.

7.0 FOG CONTROL PROGRAM

The fats, oil and grease (FOG) control program has been developed as part of the UC Merced SSMP, and builds upon the on-going FOG Best Management Fact Sheet that UC Merced has in place (Attached as **Appendix B**). The purpose of the program is to reduce the amount of fats, oils and grease discharged to the wastewater collection system.

7.1 CURRENT INFRASTRUCTURE

There are two grease interceptors on the main campus. The locations of these grease interceptors are listed in Table 2-1. These systems are:

- UC Merced Dining Services (3000-gallon grease interceptor)
- UC Merced Dining Services (1500-gallon grease interceptor)

There are other food service facilities on the main campus which currently do not have grease traps. During future renovations or additions, UC Merced plans to install grease traps and interceptors as necessary. Current restaurants are required to follow the FOG Best Management Practices Fact Sheet, posted on the EH&S website.

7.2 ELEMENTS OF FOG CONTROL PROGRAM

The elements of the FOG control program include identification of grease blockages, maintenance, BMPs, record keeping practices, and inspections. The details are provided in Table 7-1.

Table 7-1
FOG Control Program

FOG Control Measures	Responsible Party	POC	Telephone Number
A. Identification of Grease Blockages and Maintenance Requirements			
Grease blockages are identified through routine inspections of the sanitary sewer system. The inspections are conducted as part of the regular scheduled maintenance and cleaning of the system, which is outlined in Table 4-1, Measures and Activities, Parts D and E. System maintenance includes both preventive maintenance and maintenance of parts of the system determined to be in need of cleaning during routine inspections. Preventive maintenance procedures are outlined in Table 4-1, Part D.	Executive Director of Central Plant / Facilities Management	Sajid Mian	(209) 228-2970
B. Installation of New Grease Traps or Interceptors			
Installation of a new grease trap or interceptor may be recommended based on inspection and maintenance of the system. Installations of new grease traps or interceptors will conform to Campus design specifications. Design plans for new grease traps and interceptors will be reviewed by Physical Plant – Campus Services and EH&S.	Environmental Health & Safety	David Ott	(209) 228-4234
C. Best Management Practices (BMP)			
BMPs are in place to prevent the introduction of grease and fats into the sanitary sewer. Training occurs upon hiring by the kitchen manager. The purpose is to protect Storm Drains in the vicinity of Kitchen areas that could be impacted by overflow.	Director, Environmental Health & Safety	David Ott	(209) 228-4234
• Kitchen staff is trained upon hiring on BMPs to ensure that they are implemented. This needs to be documented			
• Kitchen staff is trained upon hiring on bulk grease practices. Bulk grease is not washed into the sanitary sewer. Additionally, grease in pans is not washed down the drain. This needs to be documented • Excess grease that is generated from grilling or frying is collected in a dedicated container. The grease is disposed of by a grease hauler.	Director – Dining Services, Campus Dining	Jason Souza	(209) 228-3463

Table 7-1 (Continued)
FOG Control Program

Source Control Measures	Responsible Party	POC	Telephone Number
C. Best Management Practices (continued)			
• Grease interceptors are cleaned once per three month period, at a minimum, by an approved grease hauler. • If a grease interceptor is not working properly, FM is contacted.	Director – Dining Services, Campus Dining	Jason Souza	(209) 228-3463
D. Record Keeping			
Invoice records for pumping of grease interceptors are kept by the Dining Services. They are reviewed to ensure the contractor is maintaining the inspection schedule and pumping out the grease interceptors when necessary.	Director – Dining Services, Campus Dining	Jason Souza Eddie Dabbs	(209) 228-3463 (209) 228-6911
E. Inspection			
Each restaurant is responsible for routine inspections to ensure proper maintenance of the grease traps. Grease traps are also inspected by EH&S on an annual basis, at minimum.	Director - Dining Services, Campus Dining	Jason Souza	(209) 228-3463
	Director, Environmental Health & Safety	David Ott	(209) 228-4234

Table 8-1, page 2 of 2

8.0 SYSTEM EVALUATION AND CAPACITY ASSURANCE PLAN

At this point, UC Merced is not experiencing any hydraulic deficiencies or SSO's. Therefore, a capacity assurance plan and a capital improvement plan is not required at this time. However, UC Merced is planning a long-range infrastructure rehabilitation initiative that will address potential shortfalls and deficiencies within the sanitary sewer system and upgrade key components as necessary to meet loads associated with future growth expectations.

8.1 SYSTEM EVALUATION AND CAPACITY ENHANCEMENT MEASURES

UC Merced is continually monitoring the infrastructure of the campus, including the sanitary sewer. The sanitary sewer system was evaluated and long-term planning recommendations made by, *Sanitary Sewer System Study, Final Report* (Stantech Engineering in 2010).

DESIGN CRITERIA

Facilities Management and Environmental Health & Safety are involved in plan review for projects on campus involving infrastructure upgrades and construction projects which may have an environmental or infrastructure impact. During plan review, EH&S and FM ensure that sanitary sewer design meet best practices.

8.2 SCHEDULE

UC Merced will continually monitor and inspect the sanitary sewer system, UC Merced will address rehabilitation and replacement of sewer pipes as needed due to pipe deficiencies.

9.0 MONITORING, MEASUREMENT AND PROGRAM MODIFICATIONS

Environmental Health & Safety and Facilities Management will monitor the effectiveness and implementation of the SSMP. Members of EH&S and FM will regularly communicate with each other in order to monitor plan implementation. This can occur with a meeting or by e-mail. The purpose of this mid-year communication is to monitor how efficiently the SSMP is working and is being implemented.

During the biennial audit described in **Section 10**, EH&S and members of Facilities Management, specifically the Water Operations Department, will evaluate the effectiveness of each element of the SSMP. UC Merced will determine if all elements of the SSMP are effective and are being implemented. Program elements will be updated, as appropriate, based upon monitoring or performance evaluation. The plan will be available for audit at all times.

10.0 SSMP PROGRAM AUDITS

As part of the SSMP, UC Merced shall conduct periodic internal audits, appropriate to the size of the system and the number of SSOs. At a minimum, these audits must occur every two years and a report must be prepared and kept on file. This audit shall focus on evaluating the effectiveness of the SSMP and UC Merced's compliance with the SSMP requirements identified in subsection (D13) of order 2006-0003-DWQ, including identification of any deficiencies in the SSMP and steps to correct them.

During these biennial audits, EH&S will assess the effectiveness of the SSMP in coordination with Facilities Management (FM) and will make updates annually as needed.

11.0 COMMUNICATION PROGRAM

11.1 COMMUNICATING PLAN INFORMATION AND UPDATES

Environmental Health & Safety will communicate with the campus community regarding the development, implementation, and performance of the SSMP. The Plan will be posted on the UC Merced EH&S website for the campus community to review and comment on.

The SSMP will be reviewed and updated as needed, as identified through the biennial audit process, or at a minimum of every five years, to describe any significant changes in proposed actions or implementation schedules. The update will include available information on the performance of measures that have been implemented. UC Merced will communicate annually with interested parties regarding implementation and performance of the SSMP. Interested parties include:

- City of Merced
- Merced County
- RWQCB
- Facilities Management
- Campus faculty, staff, and students

APPENDIX A:

WASTE DISCHARGE REQUIREMENTS (WDR) ORDER NO. 2006-0003-DWQ

STATE WATER RESOURCES CONTROL BOARD
ORDER NO. 2006-0003-DWQ

STATEWIDE GENERAL WASTE DISCHARGE REQUIREMENTS FOR SANITARY SEWER SYSTEMS

The State Water Resources Control Board, hereinafter referred to as "State Water Board", finds that:

1. All federal and state agencies, municipalities, counties, districts, and other public entities that own or operate sanitary sewer systems greater than one mile in length that collect and/or convey untreated or partially treated wastewater to a publicly owned treatment facility in the State of California are required to comply with the terms of this Order. Such entities are hereinafter referred to as "Enrollees".

2. Sanitary sewer overflows (SSOs) are overflows from sanitary sewer systems of domestic wastewater, as well as industrial and commercial wastewater, depending on the pattern of land uses in the area served by the sanitary sewer system. SSOs often contain high levels of suspended solids, pathogenic organisms, toxic pollutants, nutrients, oxygen-demanding organic compounds, oil and grease and other pollutants. SSOs may cause a public nuisance, particularly when raw untreated wastewater is discharged to areas with high public exposure, such as streets or surface waters used for drinking, fishing, or body contact recreation. SSOs may pollute surface or ground waters, threaten public health, adversely affect aquatic life, and impair the recreational use and aesthetic enjoyment of surface waters.

3. Sanitary sewer systems experience periodic failures resulting in discharges that may affect waters of the state. There are many factors (including factors related to geology, design, construction methods and materials, age of the system, population growth, and system operation and maintenance), which affect the likelihood of an SSO. A proactive approach that requires Enrollees to ensure a system-wide operation, maintenance, and management plan is in place will reduce the number and frequency of SSOs within the state. This approach will in turn decrease the risk to human health and the environment caused by SSOs.

4. Major causes of SSOs include: grease blockages, root blockages, sewer line flood damage, manhole structure failures, vandalism, pump station mechanical failures, power outages, excessive storm or ground water inflow/infiltration, debris blockages, sanitary sewer system age and construction material failures, lack of proper operation and maintenance, insufficient capacity and contractor-caused damages. Many SSOs are preventable with adequate and appropriate facilities, source control measures and operation and maintenance of the sanitary sewer system.

SEWER SYSTEM MANAGEMENT PLANS

5. To facilitate proper funding and management of sanitary sewer systems, each Enrollee must develop and implement a system-specific Sewer System Management Plan (SSMP). To be effective, SSMPs must include provisions to provide proper and efficient management, operation, and maintenance of sanitary sewer systems, while taking into consideration risk management and cost benefit analysis. Additionally, an SSMP must contain a spill response plan that establishes standard procedures for immediate response to an SSO in a manner designed to minimize water quality impacts and potential nuisance conditions.

6. Many local public agencies in California have already developed SSMPs and implemented measures to reduce SSOs. These entities can build upon their existing efforts to establish a comprehensive SSMP consistent with this Order. Others, however, still require technical assistance and, in some cases, funding to improve sanitary sewer system operation and maintenance in order to reduce SSOs.

7. SSMP certification by technically qualified and experienced persons can provide a useful and cost-effective means for ensuring that SSMPs are developed and implemented appropriately.

8. It is the State Water Board's intent to gather additional information on the causes and sources of SSOs to augment existing information and to determine the full extent of SSOs and consequent public health and/or environmental impacts occurring in the State.

9. Both uniform SSO reporting and a centralized statewide electronic database are needed to collect information to allow the State Water Board and Regional Water Quality Control Boards (Regional Water Boards) to effectively analyze the extent of SSOs statewide and their potential impacts on beneficial uses and public health. The monitoring and reporting program required by this Order and the attached Monitoring and Reporting Program No. 2006-0003-DWQ, are necessary to assure compliance with these waste discharge requirements (WDRs).

10. Information regarding SSOs must be provided to Regional Water Boards and other regulatory agencies in a timely manner and be made available to the public in a complete, concise, and timely fashion.

11. Some Regional Water Boards have issued WDRs or WDRs that serve as National Pollution Discharge Elimination System (NPDES) permits to sanitary sewer system owners/operators within their jurisdictions. This Order establishes minimum requirements to prevent SSOs. Although it is the State Water Board's intent that this Order be the primary regulatory mechanism for sanitary sewer systems statewide, Regional Water Boards may issue more stringent or more

prescriptive WDRs for sanitary sewer systems. Upon issuance or reissuance of a Regional Water Board's WDRs for a system subject to this Order, the Regional Water Board shall coordinate its requirements with stated requirements within this Order, to identify requirements that are more stringent, to remove requirements that are less stringent than this Order, and to provide consistency in reporting.

REGULATORY CONSIDERATIONS

12. California Water Code section 13263 provides that the State Water Board may prescribe general WDRs for a category of discharges if the State Water Board finds or determines that:

    - The discharges are produced by the same or similar operations;
    - The discharges involve the same or similar types of waste;
    - The discharges require the same or similar treatment standards; and
    - The discharges are more appropriately regulated under general discharge requirements than individual discharge requirements.

    This Order establishes requirements for a class of operations, facilities, and discharges that are similar throughout the state.

13. The issuance of general WDRs to the Enrollees will:
    a) Reduce the administrative burden of issuing individual WDRs to each Enrollee;
    b) Provide for a unified statewide approach for the reporting and database tracking of SSOs;
    c) Establish consistent and uniform requirements for SSMP development and implementation;
    d) Provide statewide consistency in reporting; and
    e) Facilitate consistent enforcement for violations.

14. The beneficial uses of surface waters that can be impaired by SSOs include, but are not limited to, aquatic life, drinking water supply, body contact and non-contact recreation, and aesthetics. The beneficial uses of ground water that can be impaired include, but are not limited to, drinking water and agricultural supply. Surface and ground waters throughout the state support these uses to varying degrees.

15. The implementation of requirements set forth in this Order will ensure the reasonable protection of past, present, and probable future beneficial uses of water and the prevention of nuisance. The requirements implement the water quality control plans (Basin Plans) for each region and take into account the environmental characteristics of hydrographic units within the state. Additionally, the State Water Board has considered water quality conditions that could reasonably be achieved through the coordinated control of all factors that affect

water quality in the area, costs associated with compliance with these requirements, the need for developing housing within California, and the need to develop and use recycled water.

16. The Federal Clean Water Act largely prohibits any discharge of pollutants from a point source to waters of the United States except as authorized under an NPDES permit. In general, any point source discharge of sewage effluent to waters of the United States must comply with technology-based, secondary treatment standards, at a minimum, and any more stringent requirements necessary to meet applicable water quality standards and other requirements. Hence, the unpermitted discharge of wastewater from a sanitary sewer system to waters of the United States is illegal under the Clean Water Act. In addition, many Basin Plans adopted by the Regional Water Boards contain discharge prohibitions that apply to the discharge of untreated or partially treated wastewater. Finally, the California Water Code generally prohibits the discharge of waste to land prior to the filing of any required report of waste discharge and the subsequent issuance of either WDRs or a waiver of WDRs.

17. California Water Code section 13263 requires a water board to, after any necessary hearing, prescribe requirements as to the nature of any proposed discharge, existing discharge, or material change in an existing discharge. The requirements shall, among other things, take into consideration the need to prevent nuisance.

18. California Water Code section 13050, subdivision (m), defines nuisance as anything which meets all of the following requirements:
    a. Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property.
    b. Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal.
    c. Occurs during, or as a result of, the treatment or disposal of wastes.

19. This Order is consistent with State Water Board Resolution No. 68-16 (Statement of Policy with Respect to Maintaining High Quality of Waters in California) in that the Order imposes conditions to prevent impacts to water quality, does not allow the degradation of water quality, will not unreasonably affect beneficial uses of water, and will not result in water quality less than prescribed in State Water Board or Regional Water Board plans and policies.

20. The action to adopt this General Order is exempt from the California Environmental Quality Act (Public Resources Code §21000 et seq.) because it is an action taken by a regulatory agency to assure the protection of the environment and the regulatory process involves procedures for protection of the environment. (Cal. Code Regs., tit. 14, §15308). In addition, the action to adopt

this Order is exempt from CEQA pursuant to Cal.Code Regs., title 14, §15301 to the extent that it applies to existing sanitary sewer collection systems that constitute "existing facilities" as that term is used in Section 15301, and §15302, to the extent that it results in the repair or replacement of existing systems involving negligible or no expansion of capacity.

21. The Fact Sheet, which is incorporated by reference in the Order, contains supplemental information that was also considered in establishing these requirements.

22. The State Water Board has notified all affected public agencies and all known interested persons of the intent to prescribe general WDRs that require Enrollees to develop SSMPs and to report all SSOs.

23. The State Water Board conducted a public hearing on February 8, 2006, to receive oral and written comments on the draft order. The State Water Board received and considered, at its May 2, 2006, meeting, additional public comments on substantial changes made to the proposed general WDRs following the February 8, 2006, public hearing. The State Water Board has considered all comments pertaining to the proposed general WDRs.

IT IS HEREBY ORDERED, that pursuant to California Water Code section 13263, the Enrollees, their agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted hereunder, shall comply with the following:

A. DEFINITIONS

1. **Sanitary sewer overflow (SSO)** - Any overflow, spill, release, discharge or diversion of untreated or partially treated wastewater from a sanitary sewer system. SSOs include:
   (i) Overflows or releases of untreated or partially treated wastewater that reach waters of the United States;
   (ii) Overflows or releases of untreated or partially treated wastewater that do not reach waters of the United States; and
   (iii) Wastewater backups into buildings and on private property that are caused by blockages or flow conditions within the publicly owned portion of a sanitary sewer system.

2. **Sanitary sewer system** – Any system of pipes, pump stations, sewer lines, or other conveyances, upstream of a wastewater treatment plant headworks used to collect and convey wastewater to the publicly owned treatment facility. Temporary storage and conveyance facilities (such as vaults, temporary piping, construction trenches, wet wells, impoundments, tanks, etc.) are considered to be part of the sanitary sewer system, and discharges into these temporary storage facilities are not considered to be SSOs.

For purposes of this Order, sanitary sewer systems include only those systems owned by public agencies that are comprised of more than one mile of pipes or sewer lines.

3. **Enrollee** - A federal or state agency, municipality, county, district, and other public entity that owns or operates a sanitary sewer system, as defined in the general WDRs, and that has submitted a complete and approved application for coverage under this Order.

4. **SSO Reporting System** – Online spill reporting system that is hosted, controlled, and maintained by the State Water Board. The web address for this site is http://ciwqs.waterboards.ca.gov. This online database is maintained on a secure site and is controlled by unique usernames and passwords.

5. **Untreated or partially treated wastewater** – Any volume of waste discharged from the sanitary sewer system upstream of a wastewater treatment plant headworks.

6. **Satellite collection system** – The portion, if any, of a sanitary sewer system owned or operated by a different public agency than the agency that owns and operates the wastewater treatment facility to which the sanitary sewer system is tributary.

7. **Nuisance** - California Water Code section 13050, subdivision (m), defines nuisance as anything which meets all of the following requirements:
    a. Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property.
    b. Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal.
    c. Occurs during, or as a result of, the treatment or disposal of wastes.

B. APPLICATION REQUIREMENTS

1. Deadlines for Application – All public agencies that currently own or operate sanitary sewer systems within the State of California must apply for coverage under the general WDRs within six (6) months of the date of adoption of the general WDRs. Additionally, public agencies that acquire or assume responsibility for operating sanitary sewer systems after the date of adoption of this Order must apply for coverage under the general WDRs at least three (3) months prior to operation of those facilities.

2. Applications under the general WDRs – In order to apply for coverage pursuant to the general WDRs, a legally authorized representative for each agency must submit a complete application package. Within sixty (60) days of adoption of the general WDRs, State Water Board staff will send specific instructions on how to

apply for coverage under the general WDRs to all known public agencies that own sanitary sewer systems. Agencies that do not receive notice may obtain applications and instructions online on the Water Board's website.

3. Coverage under the general WDRs – Permit coverage will be in effect once a complete application package has been submitted and approved by the State Water Board's Division of Water Quality.

C. PROHIBITIONS

1. Any SSO that results in a discharge of untreated or partially treated wastewater to waters of the United States is prohibited.

2. Any SSO that results in a discharge of untreated or partially treated wastewater that creates a nuisance as defined in California Water Code Section 13050(m) is prohibited.

D. PROVISIONS

1. The Enrollee must comply with all conditions of this Order. Any noncompliance with this Order constitutes a violation of the California Water Code and is grounds for enforcement action.

2. It is the intent of the State Water Board that sanitary sewer systems be regulated in a manner consistent with the general WDRs. Nothing in the general WDRs shall be:

    (i) Interpreted or applied in a manner inconsistent with the Federal Clean Water Act, or supersede a more specific or more stringent state or federal requirement in an existing permit, regulation, or administrative/judicial order or Consent Decree;
    (ii) Interpreted or applied to authorize an SSO that is illegal under either the Clean Water Act, an applicable Basin Plan prohibition or water quality standard, or the California Water Code;
    (iii) Interpreted or applied to prohibit a Regional Water Board from issuing an individual NPDES permit or WDR, superseding this general WDR, for a sanitary sewer system, authorized under the Clean Water Act or California Water Code; or
    (iv) Interpreted or applied to supersede any more specific or more stringent WDRs or enforcement order issued by a Regional Water Board.

3. The Enrollee shall take all feasible steps to eliminate SSOs. In the event that an SSO does occur, the Enrollee shall take all feasible steps to contain and mitigate the impacts of an SSO.

4. In the event of an SSO, the Enrollee shall take all feasible steps to prevent untreated or partially treated wastewater from discharging from storm drains into

flood control channels or waters of the United States by blocking the storm drainage system and by removing the wastewater from the storm drains.

5. All SSOs must be reported in accordance with Section G of the general WDRs.

6. In any enforcement action, the State and/or Regional Water Boards will consider the appropriate factors under the duly adopted State Water Board Enforcement Policy. And, consistent with the Enforcement Policy, the State and/or Regional Water Boards must consider the Enrollee's efforts to contain, control, and mitigate SSOs when considering the California Water Code Section 13327 factors. In assessing these factors, the State and/or Regional Water Boards will also consider whether:

   (i) The Enrollee has complied with the requirements of this Order, including requirements for reporting and developing and implementing a SSMP;

   (ii) The Enrollee can identify the cause or likely cause of the discharge event;

   (iii) There were no feasible alternatives to the discharge, such as temporary storage or retention of untreated wastewater, reduction of inflow and infiltration, use of adequate backup equipment, collecting and hauling of untreated wastewater to a treatment facility, or an increase in the capacity of the system as necessary to contain the design storm event identified in the SSMP. It is inappropriate to consider the lack of feasible alternatives, if the Enrollee does not implement a periodic or continuing process to identify and correct problems.

   (iv) The discharge was exceptional, unintentional, temporary, and caused by factors beyond the reasonable control of the Enrollee;

   (v) The discharge could have been prevented by the exercise of reasonable control described in a certified SSMP for:
   - Proper management, operation and maintenance;
   - Adequate treatment facilities, sanitary sewer system facilities, and/or components with an appropriate design capacity, to reasonably prevent SSOs (e.g., adequately enlarging treatment or collection facilities to accommodate growth, infiltration and inflow (I/I), etc.);
   - Preventive maintenance (including cleaning and fats, oils, and grease (FOG) control);
   - Installation of adequate backup equipment; and
   - Inflow and infiltration prevention and control to the extent practicable.

   (vi) The sanitary sewer system design capacity is appropriate to reasonably prevent SSOs.

(vii) The Enrollee took all reasonable steps to stop and mitigate the impact of the discharge as soon as possible.

7. When a sanitary sewer overflow occurs, the Enrollee shall take all feasible steps and necessary remedial actions to 1) control or limit the volume of untreated or partially treated wastewater discharged, 2) terminate the discharge, and 3) recover as much of the wastewater discharged as possible for proper disposal, including any wash down water.

   The Enrollee shall implement all remedial actions to the extent they may be applicable to the discharge and not inconsistent with an emergency response plan, including the following:

   (i) Interception and rerouting of untreated or partially treated wastewater flows around the wastewater line failure;
   (ii) Vacuum truck recovery of sanitary sewer overflows and wash down water;
   (iii) Cleanup of debris at the overflow site;
   (iv) System modifications to prevent another SSO at the same location;
   (v) Adequate sampling to determine the nature and impact of the release; and
   (vi) Adequate public notification to protect the public from exposure to the SSO.

8. The Enrollee shall properly, manage, operate, and maintain all parts of the sanitary sewer system owned or operated by the Enrollee, and shall ensure that the system operators (including employees, contractors, or other agents) are adequately trained and possess adequate knowledge, skills, and abilities.

9. The Enrollee shall allocate adequate resources for the operation, maintenance, and repair of its sanitary sewer system, by establishing a proper rate structure, accounting mechanisms, and auditing procedures to ensure an adequate measure of revenues and expenditures. These procedures must be in compliance with applicable laws and regulations and comply with generally acceptable accounting practices.

10. The Enrollee shall provide adequate capacity to convey base flows and peak flows, including flows related to wet weather events. Capacity shall meet or exceed the design criteria as defined in the Enrollee's System Evaluation and Capacity Assurance Plan for all parts of the sanitary sewer system owned or operated by the Enrollee.

11. The Enrollee shall develop and implement a written Sewer System Management Plan (SSMP) and make it available to the State and/or Regional Water Board upon request. A copy of this document must be publicly available at the Enrollee's office and/or available on the Internet. This SSMP must be approved by the Enrollee's governing board at a public meeting.

12. In accordance with the California Business and Professions Code sections 6735, 7835, and 7835.1, all engineering and geologic evaluations and judgments shall be performed by or under the direction of registered professionals competent and proficient in the fields pertinent to the required activities. Specific elements of the SSMP that require professional evaluation and judgments shall be prepared by or under the direction of appropriately qualified professionals, and shall bear the professional(s)' signature and stamp.

13. The mandatory elements of the SSMP are specified below. However, if the Enrollee believes that any element of this section is not appropriate or applicable to the Enrollee's sanitary sewer system, the SSMP program does not need to address that element. The Enrollee must justify why that element is not applicable. The SSMP must be approved by the deadlines listed in the SSMP Time Schedule below.

Sewer System Management Plan (SSMP)

(i) **Goal**: The goal of the SSMP is to provide a plan and schedule to properly manage, operate, and maintain all parts of the sanitary sewer system. This will help reduce and prevent SSOs, as well as mitigate any SSOs that do occur.

(ii) **Organization**: The SSMP must identify:

(a) The name of the responsible or authorized representative as described in Section J of this Order.

(b) The names and telephone numbers for management, administrative, and maintenance positions responsible for implementing specific measures in the SSMP program. The SSMP must identify lines of authority through an organization chart or similar document with a narrative explanation; and

(c) The chain of communication for reporting SSOs, from receipt of a complaint or other information, including the person responsible for reporting SSOs to the State and Regional Water Board and other agencies if applicable (such as County Health Officer, County Environmental Health Agency, Regional Water Board, and/or State Office of Emergency Services (OES)).

(iii) **Legal Authority:** Each Enrollee must demonstrate, through sanitary sewer system use ordinances, service agreements, or other legally binding procedures, that it possesses the necessary legal authority to:

(a) Prevent illicit discharges into its sanitary sewer system (examples may include I/I, stormwater, chemical dumping, unauthorized debris and cut roots, etc.);

(b) Require that sewers and connections be properly designed and constructed;

(c) Ensure access for maintenance, inspection, or repairs for portions of the lateral owned or maintained by the Public Agency;

(d) Limit the discharge of fats, oils, and grease and other debris that may cause blockages, and

(e) Enforce any violation of its sewer ordinances.

(iv) **Operation and Maintenance Program**. The SSMP must include those elements listed below that are appropriate and applicable to the Enrollee's system:

(a) Maintain an up-to-date map of the sanitary sewer system, showing all gravity line segments and manholes, pumping facilities, pressure pipes and valves, and applicable stormwater conveyance facilities;

(b) Describe routine preventive operation and maintenance activities by staff and contractors, including a system for scheduling regular maintenance and cleaning of the sanitary sewer system with more frequent cleaning and maintenance targeted at known problem areas. The Preventative Maintenance (PM) program should have a system to document scheduled and conducted activities, such as work orders;

(c) Develop a rehabilitation and replacement plan to identify and prioritize system deficiencies and implement short-term and long-term rehabilitation actions to address each deficiency. The program should include regular visual and TV inspections of manholes and sewer pipes, and a system for ranking the condition of sewer pipes and scheduling rehabilitation. Rehabilitation and replacement should focus on sewer pipes that are at risk of collapse or prone to more frequent blockages due to pipe defects. Finally, the rehabilitation and replacement plan should include a capital improvement plan that addresses proper management and protection of the infrastructure assets. The plan shall include a time schedule for implementing the short- and long-term plans plus a schedule for developing the funds needed for the capital improvement plan;

(d) Provide training on a regular basis for staff in sanitary sewer system operations and maintenance, and require contractors to be appropriately trained; and

(e) Provide equipment and replacement part inventories, including identification of critical replacement parts.

(v) **Design and Performance Provisions**:

(a) Design and construction standards and specifications for the installation of new sanitary sewer systems, pump stations and other appurtenances; and for the rehabilitation and repair of existing sanitary sewer systems; and

(b) Procedures and standards for inspecting and testing the installation of new sewers, pumps, and other appurtenances and for rehabilitation and repair projects.

(vi) **Overflow Emergency Response Plan -** Each Enrollee shall develop and implement an overflow emergency response plan that identifies measures to protect public health and the environment. At a minimum, this plan must include the following:

(a) Proper notification procedures so that the primary responders and regulatory agencies are informed of all SSOs in a timely manner;

(b) A program to ensure an appropriate response to all overflows;

(c) Procedures to ensure prompt notification to appropriate regulatory agencies and other potentially affected entities (e.g. health agencies, Regional Water Boards, water suppliers, etc.) of all SSOs that potentially affect public health or reach the waters of the State in accordance with the MRP. All SSOs shall be reported in accordance with this MRP, the California Water Code, other State Law, and other applicable Regional Water Board WDRs or NPDES permit requirements. The SSMP should identify the officials who will receive immediate notification;

(d) Procedures to ensure that appropriate staff and contractor personnel are aware of and follow the Emergency Response Plan and are appropriately trained;

(e) Procedures to address emergency operations, such as traffic and crowd control and other necessary response activities; and

(f) A program to ensure that all reasonable steps are taken to contain and prevent the discharge of untreated and partially treated wastewater to waters of the United States and to minimize or correct any adverse impact on the environment resulting from the SSOs, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the discharge.

(vii) **FOG Control Program:** Each Enrollee shall evaluate its service area to determine whether a FOG control program is needed. If an Enrollee determines that a FOG program is not needed, the Enrollee must provide justification for why it is not needed. If FOG is found to be a problem, the Enrollee must prepare and implement a FOG source control program to reduce the amount of these substances discharged to the sanitary sewer system. This plan shall include the following as appropriate:

(a) An implementation plan and schedule for a public education outreach program that promotes proper disposal of FOG;

(b) A plan and schedule for the disposal of FOG generated within the sanitary sewer system service area. This may include a list of acceptable disposal facilities and/or additional facilities needed to adequately dispose of FOG generated within a sanitary sewer system service area;

(c) The legal authority to prohibit discharges to the system and identify measures to prevent SSOs and blockages caused by FOG;

(d) Requirements to install grease removal devices (such as traps or interceptors), design standards for the removal devices, maintenance requirements, BMP requirements, record keeping and reporting requirements;

(e) Authority to inspect grease producing facilities, enforcement authorities, and whether the Enrollee has sufficient staff to inspect and enforce the FOG ordinance;

(f) An identification of sanitary sewer system sections subject to FOG blockages and establishment of a cleaning maintenance schedule for each section; and

(g) Development and implementation of source control measures for all sources of FOG discharged to the sanitary sewer system for each section identified in (f) above.

(viii) **System Evaluation and Capacity Assurance Plan**: The Enrollee shall prepare and implement a capital improvement plan (CIP) that will provide hydraulic capacity of key sanitary sewer system elements for dry weather peak flow conditions, as well as the appropriate design storm or wet weather event. At a minimum, the plan must include:

(a) **Evaluation**: Actions needed to evaluate those portions of the sanitary sewer system that are experiencing or contributing to an SSO discharge caused by hydraulic deficiency. The evaluation must provide estimates of peak flows (including flows from SSOs

that escape from the system) associated with conditions similar to those causing overflow events, estimates of the capacity of key system components, hydraulic deficiencies (including components of the system with limiting capacity) and the major sources that contribute to the peak flows associated with overflow events;

(b) **Design Criteria:** Where design criteria do not exist or are deficient, undertake the evaluation identified in (a) above to establish appropriate design criteria; and

(c) **Capacity Enhancement Measures:** The steps needed to establish a short- and long-term CIP to address identified hydraulic deficiencies, including prioritization, alternatives analysis, and schedules. The CIP may include increases in pipe size, I/I reduction programs, increases and redundancy in pumping capacity, and storage facilities. The CIP shall include an implementation schedule and shall identify sources of funding.

(d) **Schedule:** The Enrollee shall develop a schedule of completion dates for all portions of the capital improvement program developed in (a)-(c) above. This schedule shall be reviewed and updated consistent with the SSMP review and update requirements as described in Section D. 14.

(ix) **Monitoring, Measurement, and Program Modifications:** The Enrollee shall:

(a) Maintain relevant information that can be used to establish and prioritize appropriate SSMP activities;

(b) Monitor the implementation and, where appropriate, measure the effectiveness of each element of the SSMP;

(c) Assess the success of the preventative maintenance program;

(d) Update program elements, as appropriate, based on monitoring or performance evaluations; and

(e) Identify and illustrate SSO trends, including: frequency, location, and volume.

(x) **SSMP Program Audits** - As part of the SSMP, the Enrollee shall conduct periodic internal audits, appropriate to the size of the system and the number of SSOs. At a minimum, these audits must occur every two years and a report must be prepared and kept on file. This audit shall focus on evaluating the effectiveness of the SSMP and the

Enrollee's compliance with the SSMP requirements identified in this subsection (D.13), including identification of any deficiencies in the SSMP and steps to correct them.

(xi) **Communication Program** – The Enrollee shall communicate on a regular basis with the public on the development, implementation, and performance of its SSMP. The communication system shall provide the public the opportunity to provide input to the Enrollee as the program is developed and implemented.

The Enrollee shall also create a plan of communication with systems that are tributary and/or satellite to the Enrollee's sanitary sewer system.

14. Both the SSMP and the Enrollee's program to implement the SSMP must be certified by the Enrollee to be in compliance with the requirements set forth above and must be presented to the Enrollee's governing board for approval at a public meeting. The Enrollee shall certify that the SSMP, and subparts thereof, are in compliance with the general WDRs within the time frames identified in the time schedule provided in subsection D.15, below.

    In order to complete this certification, the Enrollee's authorized representative must complete the certification portion in the Online SSO Database Questionnaire by checking the appropriate milestone box, printing and signing the automated form, and sending the form to:

    State Water Resources Control Board
    Division of Water Quality
    Attn: SSO Program Manager
    P.O. Box 100
    Sacramento, CA 95812

    The SSMP must be updated every five (5) years, and must include any significant program changes. Re-certification by the governing board of the Enrollee is required in accordance with D.14 when significant updates to the SSMP are made. To complete the re-certification process, the Enrollee shall enter the data in the Online SSO Database and mail the form to the State Water Board, as described above.

15. The Enrollee shall comply with these requirements according to the following schedule. This time schedule does not supersede existing requirements or time schedules associated with other permits or regulatory requirements.

Sewer System Management Plan Time Schedule

Task and Associated Section	**Completion Date**			
	Population > 100,000	Population between 100,000 and 10,000	Population between 10,000 and 2,500	Population < 2,500
Application for Permit Coverage ***Section C***	6 months after WDRs Adoption			
Reporting Program ***Section G***	6 months after WDRs Adoption[1]			
SSMP Development Plan and Schedule ***No specific Section***	9 months after WDRs Adoption[2]	12 months after WDRs Adoption[2]	15 months after WDRs Adoption[2]	18 months after WDRs Adoption[2]
Goals and Organization Structure ***Section D 13 (i) & (ii)***	12 months after WDRs Adoption[2]		18 months after WDRs Adoption[2]	
Overflow Emergency Response Program ***Section D 13 (vi)***	24 months after WDRs Adoption[2]	30 months after WDRs Adoption[2]	36 months after WDRs Adoption[2]	39 months after WDRs Adoption[2]
Legal Authority ***Section D 13 (iii)***				
Operation and Maintenance Program ***Section D 13 (iv)***				
Grease Control Program ***Section D 13 (vii)***				
Design and Performance ***Section D 13 (v)***	36 months after WDRs Adoption	39 months after WDRs Adoption	48 months after WDRs Adoption	51 months after WDRs Adoption
System Evaluation and Capacity Assurance Plan ***Section D 13 (viii)***				
Final SSMP, incorporating all of the SSMP requirements ***Section D 13***				

1. In the event that by July 1, 2006 the Executive Director is able to execute a memorandum of agreement (MOA) with the California Water Environment Association (CWEA) or discharger representatives outlining a strategy and time schedule for CWEA or another entity to provide statewide training on the adopted monitoring program, SSO database electronic reporting, and SSMP development, consistent with this Order, then the schedule of Reporting Program Section G shall be replaced with the following schedule:

Reporting Program ***Section G***	
Regional Boards 4, 8, and 9	8 months after WDRs Adoption
Regional Boards 1, 2, and 3	12 months after WDRs Adoption
Regional Boards 5, 6, and 7	16 months after WDRs Adoption

If this MOU is not executed by July 1, 2006, the reporting program time schedule will remain six (6) months for all regions and agency size categories.

2. In the event that the Executive Director executes the MOA identified in note 1 by July 1, 2006, then the deadline for this task shall be extended by six (6) months. The time schedule identified in the MOA must be consistent with the extended time schedule provided by this note. If the MOA is not executed by July 1, 2006, the six (6) month time extension will not be granted.

E. WDRs and SSMP AVAILABILITY

1. A copy of the general WDRs and the certified SSMP shall be maintained at appropriate locations (such as the Enrollee's offices, facilities, and/or Internet homepage) and shall be available to sanitary sewer system operating and maintenance personnel at all times.

F. ENTRY AND INSPECTION

1. The Enrollee shall allow the State or Regional Water Boards or their authorized representative, upon presentation of credentials and other documents as may be required by law, to:

    a. Enter upon the Enrollee's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order;

    b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order;

c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order; and

d. Sample or monitor at reasonable times, for the purposes of assuring compliance with this Order or as otherwise authorized by the California Water Code, any substances or parameters at any location.

G. GENERAL MONITORING AND REPORTING REQUIREMENTS

1. The Enrollee shall furnish to the State or Regional Water Board, within a reasonable time, any information that the State or Regional Water Board may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order. The Enrollee shall also furnish to the Executive Director of the State Water Board or Executive Officer of the applicable Regional Water Board, upon request, copies of records required to be kept by this Order.

2. The Enrollee shall comply with the attached Monitoring and Reporting Program No. 2006-0003 and future revisions thereto, as specified by the Executive Director. Monitoring results shall be reported at the intervals specified in Monitoring and Reporting Program No. 2006-0003. Unless superseded by a specific enforcement Order for a specific Enrollee, these reporting requirements are intended to replace other mandatory routine written reports associated with SSOs.

3. All Enrollees must obtain SSO Database accounts and receive a “Username” and “Password” by registering through the California Integrated Water Quality System (CIWQS). These accounts will allow controlled and secure entry into the SSO Database. Additionally, within 30days of receiving an account and prior to recording spills into the SSO Database, all Enrollees must complete the “Collection System Questionnaire”, which collects pertinent information regarding a Enrollee’s collection system. The “Collection System Questionnaire” must be updated at least every 12 months.

4. Pursuant to Health and Safety Code section 5411.5, any person who, without regard to intent or negligence, causes or permits any untreated wastewater or other waste to be discharged in or on any waters of the State, or discharged in or deposited where it is, or probably will be, discharged in or on any surface waters of the State, as soon as that person has knowledge of the discharge, shall immediately notify the local health officer of the discharge. Discharges of untreated or partially treated wastewater to storm drains and drainage channels, whether man-made or natural or concrete-lined, shall be reported as required above.

   Any SSO greater than 1,000 gallons discharged in or on any waters of the State, or discharged in or deposited where it is, or probably will be, discharged in or on any surface waters of the State shall also be reported to the Office of Emergency Services pursuant to California Water Code section 13271.

H. CHANGE IN OWNERSHIP

1. This Order is not transferable to any person or party, except after notice to the Executive Director. The Enrollee shall submit this notice in writing at least 30 days in advance of any proposed transfer. The notice must include a written agreement between the existing and new Enrollee containing a specific date for the transfer of this Order's responsibility and coverage between the existing Enrollee and the new Enrollee. This agreement shall include an acknowledgement that the existing Enrollee is liable for violations up to the transfer date and that the new Enrollee is liable from the transfer date forward.

I. INCOMPLETE REPORTS

1. If an Enrollee becomes aware that it failed to submit any relevant facts in any report required under this Order, the Enrollee shall promptly submit such facts or information by formally amending the report in the Online SSO Database.

J. REPORT DECLARATION

1. All applications, reports, or information shall be signed and certified as follows:

    (i) All reports required by this Order and other information required by the State or Regional Water Board shall be signed and certified by a person designated, for a municipality, state, federal or other public agency, as either a principal executive officer or ranking elected official, or by a duly authorized representative of that person, as described in paragraph (ii) of this provision. (For purposes of electronic reporting, an electronic signature and accompanying certification, which is in compliance with the Online SSO database procedures, meet this certification requirement.)

    (ii) An individual is a duly authorized representative only if:

        (a) The authorization is made in writing by a person described in paragraph (i) of this provision; and

        (b) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity.

K. CIVIL MONETARY REMEDIES FOR DISCHARGE VIOLATIONS

1. The California Water Code provides various enforcement options, including civil monetary remedies, for violations of this Order.

2. The California Water Code also provides that any person failing or refusing to furnish technical or monitoring program reports, as required under this Order, or

falsifying any information provided in the technical or monitoring reports is subject to civil monetary penalties.

L. SEVERABILITY

1. The provisions of this Order are severable, and if any provision of this Order, or the application of any provision of this Order to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this Order, shall not be affected thereby.

2. This order does not convey any property rights of any sort or any exclusive privileges. The requirements prescribed herein do not authorize the commission of any act causing injury to persons or property, nor protect the Enrollee from liability under federal, state or local laws, nor create a vested right for the Enrollee to continue the waste discharge.

CERTIFICATION

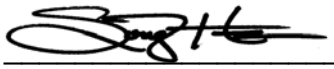
The undersigned Clerk to the State Water Board does hereby certify that the foregoing is a full, true, and correct copy of general WDRs duly and regularly adopted at a meeting of the State Water Resources Control Board held on May 2, 2006.

AYE: Tam M. Doduc
Gerald D. Secundy

NO: Arthur G. Baggett

ABSENT: None

ABSTAIN: None



Song Her
Clerk to the Board

STATE WATER RESOURCES CONTROL BOARD

MONITORING AND REPORTING PROGRAM NO. 2006-0003-DWQ
STATEWIDE GENERAL WASTE DISCHARGE REQUIREMENTS
FOR
SANITARY SEWER SYSTEMS

This Monitoring and Reporting Program (MRP) establishes monitoring, record keeping, reporting and public notification requirements for Order No. 2006-2003-DWQ, "Statewide General Waste Discharge Requirements for Sanitary Sewer Systems." Revisions to this MRP may be made at any time by the Executive Director, and may include a reduction or increase in the monitoring and reporting.

A. SANITARY SEWER OVERFLOW REPORTING

SSO Categories

1. Category 1 - All discharges of sewage resulting from a failure in the Enrollee's sanitary sewer system that:
   A. Equal or exceed 1000 gallons, or
   B. Result in a discharge to a drainage channel and/or surface water; or
   C. Discharge to a storm drainpipe that was not fully captured and returned to the sanitary sewer system.

2. Category 2 – All other discharges of sewage resulting from a failure in the Enrollee's sanitary sewer system.

3. Private Lateral Sewage Discharges – Sewage discharges that are caused by blockages or other problems within a privately owned lateral.

SSO Reporting Timeframes

4. Category 1 SSOs – All SSOs that meet the above criteria for Category 1 SSOs must be reported as soon as: (1) the Enrollee has knowledge of the discharge, (2) reporting is possible, and (3) reporting can be provided without substantially impeding cleanup or other emergency measures. Initial reporting of Category 1 SSOs must be reported to the Online SSO System as soon as possible but no later than 3 business days after the Enrollee is made aware of the SSO. Minimum information that must be contained in the 3-day report must include all information identified in section 9 below, except for item 9.K. A final certified report must be completed through the Online SSO System, within 15 calendar days of the conclusion of SSO response and remediation. Additional information may be added to the certified report, in the form of an attachment, at any time.

   The above reporting requirements do not preclude other emergency notification requirements and timeframes mandated by other regulatory agencies (local

County Health Officers, local Director of Environmental Health, Regional Water Boards, or Office of Emergency Services (OES)) or State law.

5. Category 2 SSOs – All SSOs that meet the above criteria for Category 2 SSOs must be reported to the Online SSO Database within 30 days after the end of the calendar month in which the SSO occurs (e.g. all SSOs occurring in the month of January must be entered into the database by March 1st).

6. Private Lateral Sewage Discharges – All sewage discharges that meet the above criteria for Private Lateral sewage discharges may be reported to the Online SSO Database based upon the Enrollee's discretion. If a Private Lateral sewage discharge is recorded in the SSO Database, the Enrollee must identify the sewage discharge as occurring and caused by a private lateral, and a responsible party (other than the Enrollee) should be identified, if known.

7. If there are no SSOs during the calendar month, the Enrollee will provide, within 30 days after the end of each calendar month, a statement through the Online SSO Database certifying that there were no SSOs for the designated month.

8. In the event that the SSO Online Database is not available, the enrollee must fax all required information to the appropriate Regional Water Board office in accordance with the time schedules identified above. In such event, the Enrollee must also enter all required information into the Online SSO Database as soon as practical.

Mandatory Information to be Included in SSO Online Reporting

All Enrollees must obtain SSO Database accounts and receive a "Username" and "Password" by registering through the California Integrated Water Quality System (CIWQS). These accounts will allow controlled and secure entry into the SSO Database. Additionally, within thirty (30) days of receiving an account and prior to recording SSOs into the SSO Database, all Enrollees must complete the "Collection System Questionnaire", which collects pertinent information regarding an Enrollee's collection system. The "Collection System Questionnaire" must be updated at least every 12 months.

At a minimum, the following mandatory information must be included prior to finalizing and certifying an SSO report for each category of SSO:

9. Category 2 SSOs:

   A. Location of SSO by entering GPS coordinates;
   B. Applicable Regional Water Board, i.e. identify the region in which the SSO occurred;
   C. County where SSO occurred;
   D. Whether or not the SSO entered a drainage channel and/or surface water;
   E. Whether or not the SSO was discharged to a storm drain pipe that was not fully captured and returned to the sanitary sewer system;

F. Estimated SSO volume in gallons;
G. SSO source (manhole, cleanout, etc.);
H. SSO cause (mainline blockage, roots, etc.);
I. Time of SSO notification or discovery;
J. Estimated operator arrival time;
K. SSO destination;
L. Estimated SSO end time; and
M. SSO Certification. Upon SSO Certification, the SSO Database will issue a Final SSO Identification (ID) Number.

10. Private Lateral Sewage Discharges:

A. All information listed above (if applicable and known), as well as;
B. Identification of sewage discharge as a private lateral sewage discharge; and
C. Responsible party contact information (if known).

11. Category 1 SSOs:

A. All information listed for Category 2 SSOs, as well as;
B. Estimated SSO volume that reached surface water, drainage channel, or not recovered from a storm drain;
C. Estimated SSO amount recovered;
D. Response and corrective action taken;
E. If samples were taken, identify which regulatory agencies received sample results (if applicable). If no samples were taken, NA must be selected.
F. Parameters that samples were analyzed for (if applicable);
G. Identification of whether or not health warnings were posted;
H. Beaches impacted (if applicable). If no beach was impacted, NA must be selected;
I. Whether or not there is an ongoing investigation;
J. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the overflow and a schedule of major milestones for those steps;
K. OES control number (if applicable);
L. Date OES was called (if applicable);
M. Time OES was called (if applicable);
N. Identification of whether or not County Health Officers were called;
O. Date County Health Officer was called (if applicable); and
P. Time County Health Officer was called (if applicable).

Reporting to Other Regulatory Agencies

These reporting requirements do not preclude an Enrollee from reporting SSOs to other regulatory agencies pursuant to California state law. These reporting requirements do not replace other Regional Water Board telephone reporting requirements for SSOs.

1. The Enrollee shall report SSOs to OES, in accordance with California Water Code Section 13271.

Office of Emergency Services
Phone (800) 852-7550

2. The Enrollee shall report SSOs to County Health officials in accordance with California Health and Safety Code Section 5410 et seq.

3. The SSO database will automatically generate an e-mail notification with customized information about the SSO upon initial reporting of the SSO and final certification for all Category 1 SSOs. E-mails will be sent to the appropriate County Health Officer and/or Environmental Health Department if the county desires this information, and the appropriate Regional Water Board.

B. Record Keeping

1. Individual SSO records shall be maintained by the Enrollee for a minimum of five years from the date of the SSO. This period may be extended when requested by a Regional Water Board Executive Officer.

3. All records shall be made available for review upon State or Regional Water Board staff's request.

4. All monitoring instruments and devices that are used by the Enrollee to fulfill the prescribed monitoring and reporting program shall be properly maintained and calibrated as necessary to ensure their continued accuracy;

5. The Enrollee shall retain records of all SSOs, such as, but not limited to and when applicable:

   a. Record of Certified report, as submitted to the online SSO database;
   b. All original recordings for continuous monitoring instrumentation;
   c. Service call records and complaint logs of calls received by the Enrollee;
   d. SSO calls;
   e. SSO records;
   f. Steps that have been and will be taken to prevent the SSO from recurring and a schedule to implement those steps.
   g. Work orders, work completed, and any other maintenance records from the previous 5 years which are associated with responses and investigations of system problems related to SSOs;
   h. A list and description of complaints from customers or others from the previous 5 years; and
   i. Documentation of performance and implementation measures for the previous 5 years.

6. If water quality samples are required by an environmental or health regulatory agency or State law, or if voluntary monitoring is conducted by the Enrollee or its agent(s), as a result of any SSO, records of monitoring information shall include:

a. The date, exact place, and time of sampling or measurements;
b. The individual(s) who performed the sampling or measurements;
c. The date(s) analyses were performed;
d. The individual(s) who performed the analyses;
e. The analytical technique or method used; and,
f. The results of such analyses.

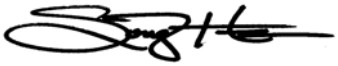
C. Certification

1. All final reports must be certified by an authorized person as required by Provision J of the Order.
2. Registration of authorized individuals, who may certify reports, will be in accordance with the CIWQS' protocols for reporting.

Monitoring and Reporting Program No. 2006-0003 will become effective on the date of adoption by the State Water Board.

CERTIFICATION

The undersigned Clerk to the Board does hereby certify that the foregoing is a full, true, and correct copy of a resolution duly and regularly adopted at a meeting of the State Water Board held on May 2, 2006.



Song Her
Clerk to the Board

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

ORDER NO. WQ 2008-0002-EXEC

ADOPTING AMENDED MONITORING AND REPORTING REQUIREMENTS FOR STATEWIDE GENERAL WASTE DISCHARGE REQUIREMENTS FOR SANITARY SEWER SYSTEMS

The State of California, Water Resources Control Board (State Water Board) finds:

1. The State Water Board is authorized to prescribe statewide general waste discharge requirements for categories of discharges that involve the same or similar operations and the same of similar types of waste pursuant to Water Code 13263, subdivision (i).

2. The State Water Board on May 2, 2006, adopted Statewide General Waste Discharge Requirements for Sanitary Sewer Systems, Order No. 2006-0003-DWQ, pursuant to that authority.

3. The State Water Board on May 2, 2006, adopted Monitoring and Reporting Requirements to implement the General Waste Discharge Requirements for Sanitary Sewer Systems.

4. State Water Board Order No. 2006-0003-DWQ, paragraph G.2., and the Monitoring and Reporting Requirements, both provide that the Executive Director may modify the terms of the Monitoring and Reporting Requirements at any time.

5. The time allowed in those Monitoring and Reporting Requirements for the filing of the initial report of an overflow is too long to adequately protect the public health and safety or the beneficial uses of the waters of the state when there is a sewage collection system spill. An additional notification requirement is necessary and appropriate to ensure the Office of Emergency Services, local public health officials, and the applicable regional water quality control board are apprised of a spill that reaches a drainage channel or surface water.

6. Further, the burden of providing a notification as soon as possible is de minimis and will allow response agencies to take action as soon as possible to protect public health and safety and beneficial uses of the waters of the state.

IT IS HEREBY ORDERED THAT:

Pursuant to the authority delegated by Resolution No. 2002-0104 and Order No. 2006-0003-DWQ, the Monitoring and Reporting Requirements for Statewide General Waste Discharge Requirements for Sanitary Sewer Systems No. 2006-0003-DWQ is hereby amended as shown in Attachment A, with new text indicated by double-underline.

Dated: February 20, 2008

Dorothy Rice
Executive Director

ATTACHMENT A

STATE WATER RESOURCES CONTROL BOARD
MONITORING AND REPORTING PROGRAM NO. 2006-0003-DWQ
(AS REVISED BY ORDER NO. WQ 2008-0002-EXEC)

STATEWIDE GENERAL WASTE DISCHARGE REQUIREMENTS
FOR
SANITARY SEWER SYSTEMS

This Monitoring and Reporting Program (MRP) establishes monitoring, record keeping, reporting and public notification requirements for Order No. 2006-2003-DWQ, "Statewide General Waste Discharge Requirements for Sanitary Sewer Systems." Revisions to this MRP may be made at any time by the Executive Director, and may include a reduction or increase in the monitoring and reporting.

NOTIFICATION

Although State and Regional Water Board staff do not have duties as first responders, this Monitoring and Reporting Program is an appropriate mechanism to ensure that the agencies that do have first responder duties are notified in a timely manner in order to protect public health and beneficial uses.

1. For any discharges of sewage that results in a discharge to a drainage channel or a surface water, the Discharger shall, as soon as possible, but not later then two (2) hours after becoming aware of the discharge, notify the State Office of Emergency Services, the local health officer or directors of environmental health with jurisdiction over affected water bodies, and the appropriate Regional Water Quality Control Board.

2. As soon as possible, but no later then twenty-four (24) hours after becoming aware of a discharge to a drainage channel or a surface water, the Discharger shall submit to the appropriate Regional Water Quality Control Board a certification that the State Office of Emergency Services and the local health officer or directors of environmental health with jurisdiction over the affected water bodies have been notified of the discharge.

A. SANITARY SEWER OVERFLOW REPORTING

SSO Categories

1. Category 1 - All discharges of sewage resulting from a failure in the Enrollee's sanitary sewer system that:
   A. Equal or exceed 1000 gallons, or
   B. Result in a discharge to a drainage channel and/or surface water; or
   C. Discharge to a storm drainpipe that was not fully captured and returned to the sanitary sewer system.

2. Category 2 – All other discharges of sewage resulting from a failure in the Enrollee's sanitary sewer system.

3. Private Lateral Sewage Discharges – Sewage discharges that are caused by blockages or other problems within a privately owned lateral.

SSO Reporting Timeframes

4. Category 1 SSOs – Except as provided above, all SSOs that meet the above criteria for Category 1 SSOs must be reported as soon as: (1) the Enrollee has knowledge of the discharge, (2) reporting is possible, and (3) reporting can be provided without substantially impeding cleanup or other emergency measures. Initial reporting of Category 1 SSOs must be reported to the Online SSO System as soon as possible but no later than 3 business days after the Enrollee is made aware of the SSO. Minimum information that must be contained in the 3-day report must include all information identified in section 9 below, except for item 9.K. A final certified report must be completed through the Online SSO System, within 15 calendar days of the conclusion of SSO response and remediation. Additional information may be added to the certified report, in the form of an attachment, at any time.

   The above reporting requirements are in addition to do not preclude other emergency notification requirements and timeframes mandated by other regulatory agencies (local County Health Officers, local Director of Environmental Health, Regional Water Boards, or Office of Emergency Services (OES)) or State law.

5. Category 2 SSOs – All SSOs that meet the above criteria for Category 2 SSOs must be reported to the Online SSO Database within 30 days after the end of the calendar month in which the SSO occurs (e.g. all SSOs occurring in the month of January must be entered into the database by March 1st).

6. Private Lateral Sewage Discharges – All sewage discharges that meet the above criteria for Private Lateral sewage discharges may be reported to the Online SSO Database based upon the Enrollee's discretion. If a Private Lateral sewage discharge is recorded in the SSO Database, the Enrollee must identify the sewage discharge as occurring and caused by a private lateral, and a responsible party (other than the Enrollee) should be identified, if known.

7. If there are no SSOs during the calendar month, the Enrollee will provide, within 30 days after the end of each calendar month, a statement through the Online SSO Database certifying that there were no SSOs for the designated month.

8. In the event that the SSO Online Database is not available, the enrollee must fax all required information to the appropriate Regional Water Board office in

accordance with the time schedules identified above. In such event, the Enrollee must also enter all required information into the Online SSO Database as soon as practical.

Mandatory Information to be Included in SSO Online Reporting

All Enrollees must obtain SSO Database accounts and receive a "Username" and "Password" by registering through the California Integrated Water Quality System (CIWQS). These accounts will allow controlled and secure entry into the SSO Database. Additionally, within thirty (30) days of receiving an account and prior to recording SSOs into the SSO Database, all Enrollees must complete the "Collection System Questionnaire", which collects pertinent information regarding an Enrollee's collection system. The "Collection System Questionnaire" must be updated at least every 12 months.

At a minimum, the following mandatory information must be included prior to finalizing and certifying an SSO report for each category of SSO:

9. Category 2 SSOs:

    A. Location of SSO by entering GPS coordinates;
    B. Applicable Regional Water Board, i.e. identify the region in which the SSO occurred;
    C. County where SSO occurred;
    D. Whether or not the SSO entered a drainage channel and/or surface water;
    E. Whether or not the SSO was discharged to a storm drain pipe that was not fully captured and returned to the sanitary sewer system;
    F. Estimated SSO volume in gallons;
    G. SSO source (manhole, cleanout, etc.);
    H. SSO cause (mainline blockage, roots, etc.);
    I. Time of SSO notification or discovery;
    J. Estimated operator arrival time;
    K. SSO destination;
    L. Estimated SSO end time; and
    M. SSO Certification. Upon SSO Certification, the SSO Database will issue a Final SSO Identification (ID) Number.

10. Private Lateral Sewage Discharges:

    A. All information listed above (if applicable and known), as well as;
    B. Identification of sewage discharge as a private lateral sewage discharge; and
    C. Responsible party contact information (if known).

11. Category 1 SSOs:

A. All information listed for Category 2 SSOs, as well as;
B. Estimated SSO volume that reached surface water, drainage channel, or not recovered from a storm drain;
C. Estimated SSO amount recovered;
D. Response and corrective action taken;
E. If samples were taken, identify which regulatory agencies received sample results (if applicable). If no samples were taken, NA must be selected.
F. Parameters that samples were analyzed for (if applicable);
G. Identification of whether or not health warnings were posted;
H. Beaches impacted (if applicable). If no beach was impacted, NA must be selected;
I. Whether or not there is an ongoing investigation;
J. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the overflow and a schedule of major milestones for those steps;
K. OES control number (if applicable);
L. Date OES was called (if applicable);
M. Time OES was called (if applicable);
N. Identification of whether or not County Health Officers were called;
O. Date County Health Officer was called (if applicable); and
P. Time County Health Officer was called (if applicable).

Reporting to Other Regulatory Agencies

These reporting requirements do not preclude an Enrollee from reporting SSOs to other regulatory agencies pursuant California state law. These reporting requirements do not replace other Regional Water Board telephone reporting requirements for SSOs.

1. The Enrollee shall report SSOs to OES, in accordance with California Water Code Section 13271.

Office of Emergency Services
Phone (800) 852-7550

2. The Enrollee shall report SSOs to County Health officials in accordance with California Health and Safety Code Section 5410 et seq.

3. The SSO database will automatically generate an e-mail notification with customized information about the SSO upon initial reporting of the SSO and final certification for all Category 1 SSOs. E-mails will be sent to the appropriate County Health Officer and/or Environmental Health Department if the county desires this information, and the appropriate Regional Water Board.

B. Record Keeping

1. Individual SSO records shall be maintained by the Enrollee for a minimum of five years from the date of the SSO. This period may be extended when requested by a Regional Water Board Executive Officer.

[2. Omitted.]

3. All records shall be made available for review upon State or Regional Water Board staff's request.

4. All monitoring instruments and devices that are used by the Enrollee to fulfill the prescribed monitoring and reporting program shall be properly maintained and calibrated as necessary to ensure their continued accuracy;

5. The Enrollee shall retain records of all SSOs, such as, but not limited to and when applicable:

   a. Record of Certified report, as submitted to the online SSO database;
   b. All original recordings for continuous monitoring instrumentation;
   c. Service call records and complaint logs of calls received by the Enrollee;
   d. SSO calls;
   e. SSO records;
   f. Steps that have been and will be taken to prevent the SSO from recurring and a schedule to implement those steps.
   g. Work orders, work completed, and any other maintenance records from the previous 5 years which are associated with responses and investigations of system problems related to SSOs;
   h. A list and description of complaints from customers or others from the previous 5 years; and
   i. Documentation of performance and implementation measures for the previous 5 years.

6. If water quality samples are required by an environmental or health regulatory agency or State law, or if voluntary monitoring is conducted by the Enrollee or its agent(s), as a result of any SSO, records of monitoring information shall include:

   a. The date, exact place, and time of sampling or measurements;
   b. The individual(s) who performed the sampling or measurements;
   c. The date(s) analyses were performed;
   d. The individual(s) who performed the analyses;
   e. The analytical technique or method used; and,
   f. The results of such analyses.

C. Certification

1. All final reports must be certified by an authorized person as required by Provision J of the Order.
2. Registration of authorized individuals, who may certify reports, will be in accordance with the CIWQS' protocols for reporting.

Monitoring and Reporting Program No. 2006-0003 will become effective on the date of adoption by the State Water Board. The notification requirements added by Order No. WQ 2008-0002-EXEC will become effective upon issuance by the Executive Director.

CERTIFICATION

The undersigned Clerk to the Board does hereby certify that the foregoing is a full, true, and correct copy of an order amended by the Executive Director of the State Water Board.

Jeanine Townsend
Clerk to the Board

APPENDIX B:

BEST MANAGEMENT PRACTICES FOR FATS, OILS AND GREASE FACT SHEET

A FACT SHEET FOR

Best Management Practices for Fats, Oils, and Grease

Residual fats, oils, and grease (FOG) are by-products that food service establishments must constantly manage. Typically, FOG enter a facility's plumbing system from ware washing, floor cleaning, and equipment sanitation. Sanitary sewer systems are neither designed nor equipped to handle the FOG that accumulates on the interior of the municipal sewer collection system pipes. Over 30% of WES's 2000 sanitary sewer blockages were the result of pipe buildup from FOG accumulation from residential, institutional and commercial sources. The best way to manage FOG is to keep the material out of the plumbing systems. The following are suggestions for proper FOG management.

Dry Clean-Up

Practice dry cleanup. Remove food waste with "dry" methods such as scraping, wiping, or sweeping before using "wet" methods that use water. Wet methods typically wash the water and waste materials into the drains where it eventually collects on the interior walls of the drainage pipes. Do not pour grease, fats or oils from cooking down the drain and do not use the sinks to dispose of food scraps. Likewise it is important to educate kitchen staff not to remove drain screens as this may allow paper or plastic cups, straws, and other utensils to enter the plumbing system during clean up. The success of dry clean up is dependent upon the behavior of the employee and availability of the tools for removal of food waste before washing. To practice dry clean up:

- Use rubber scrapers to remove fats, oils and grease from cookware, utensils, chafing dishes, and serving ware.
- Use food grade paper to soak up oil and grease under fryer baskets.
- Use paper towels to wipe down work areas. Cloth towels will accumulate grease that will eventually end up in your drains from towel washing/rinsing.

Spill Prevention

Preventing spills reduces the amounts of waste on food preparation and serving areas that will require clean up. A dry workplace is safer for employees in avoiding slip, trips, and falls. For spill prevention:

- Empty containers before they are full to avoid spills.
- Use a cover to transport interceptor contents to rendering barrel.
- Provide employees with the proper tools (ladles, ample containers, etc.) to transport materials without spilling.

Maintenance

Maintenance is key to avoiding FOG blockages. For whatever method or technology is used to collect, filter and store FOG, ensure that equipment is regularly maintained. All staff should be aware of and trained to perform correct cleaning procedures, particularly for under-sink interceptors that are prone to break down due to improper maintenance. A daily and weekly maintenance schedule is highly recommended.

- Contract with a management company to professionally clean large hood filters. Small hoods can be hand-cleaned with spray detergents and wiped down with cloths for cleaning. Hood filters can be effectively cleaned by routinely spraying with hot water with little or no detergents over the mop sink that should be connected to a grease trap. After hot water rinse (separately trapped), filter panels can go into the dishwasher. For hoods to operate properly in the removal of grease-laden vapors, the ventilation system will also need to be balanced with sufficient make-up air.

- Skim/filter fryer grease daily and change oil when necessary. Use a test kit provided by your grocery distributor rather than simply a "guess" to determine when to change oil. This extends the life of both the fryer and the oil. Build-up of carbon deposits on the bottom of the fryer act as an insulator that forces the fryer to heat longer, thus causing the oil to break down sooner.
- Collect fryer oil in an oil rendering tank for disposal or transport it to a bulk oil rendering tank instead of discharging it into a grease interceptor or waste drain.
- Cleaning intervals depend upon the type of food establishment involved. Some facilities require

monthly or once every two months cleaning. Establishments that operate a large number of fryers or handle a large amount of fried foods such as chicken, along with ethnic food establishments may need at least monthly cleanings. Full cleaning of grease traps (removing all liquids and solids and scraping the walls) is a worthwhile investment. Remember, sugars, starches and other organics accumulate from the bottom up. If sediment is allowed to accumulate in the trap, it will need to be pumped more frequently.

- Develop a rotation system if multiple fryers are in use. Designate a single fryer for products that are particularly high in deposits, and change that one more often.

Oil & Grease Collection/Recycling & Food Donations

FOG is commodities that if handled properly can be treated as a valuable resource.

- Begin thinking of oil and grease as a valuable commodity. Some rendering companies will offer services free-of-charge and others will give a rebate on the materials collected.

Use 25-gallon rendering barrels with covers for onsite collection of oil and grease other than from fryers. Educate kitchen staff on the importance of keeping outside barrels covered at all times. During storms, uncovered or partially covered barrels allow storm water to enter the barrel resulting in oil running onto the ground and possibly into storm drains, and can "contaminate" an otherwise useful by-product.

- Use a 3-compartment sink for ware washing. Begin with a hot pre-wash, then a scouring sink with detergent, then a rinse sink.
- Make sure all drain screens are installed.
- Prior to washing and rinsing use a hot water ONLY (no detergent) prerinse that is separately trapped to remove non-emulsified oils and greases from ware washing. Wash and rinse steps should also be trapped.
- Empty grill top scrap baskets or scrap boxes and hoods into the rendering barrel.
- Easy does it! Instruct staff to be conservative about their use of fats, oils and grease in food preparation and serving. Ensure that edible food is not flushed down your drains. Edible food waste may be donated to a local food bank. A local garbage feeder who will use food discards for feeding livestock can collect inedible food waste. Food donation is a win-win situation. It helps restaurants reduce disposal costs and it puts the food in the hands of those who can use it.

Grease Traps

- For grease traps to be effective, the units must be properly sized, constructed, and installed in a location to provide an adequate retention time for settling and accumulation of the FOG. If the units are too close to the FOG discharge and do not have enough volume to allow amassing of the FOG, the emulsified oils will pass through the unit without being captured. For information on properly locating, constructing, and sizing grease traps, contact your local county and city representatives and examine EPA guidance documents.
- Ensure all grease-bearing drains discharge to the grease trap. These include mop sinks, woks, wash sinks, prep sinks, utility sinks, pulpers, dishwashers, prerinse sinks, can washes, and floor drains in food preparation areas such as those near a fryer or tilt/steam kettle. No toilet wastes should be plumbed to the grease trap.
- If these suggested best management practices do not adequately reduce FOG levels, the operator may consider installing a second grease trap with flow-through venting. This system should help reduce grease effluent substantially.

Consumer Tip

Buyer beware! When choosing a method of managing your oil and grease, ensure that it does what the vendor says it will do. Some technologies or "miracle cures" don't eliminate the problem but result in grease accumulations further down the sewer line. "Out of sight" is not "out of mind." Check the vendor's references.

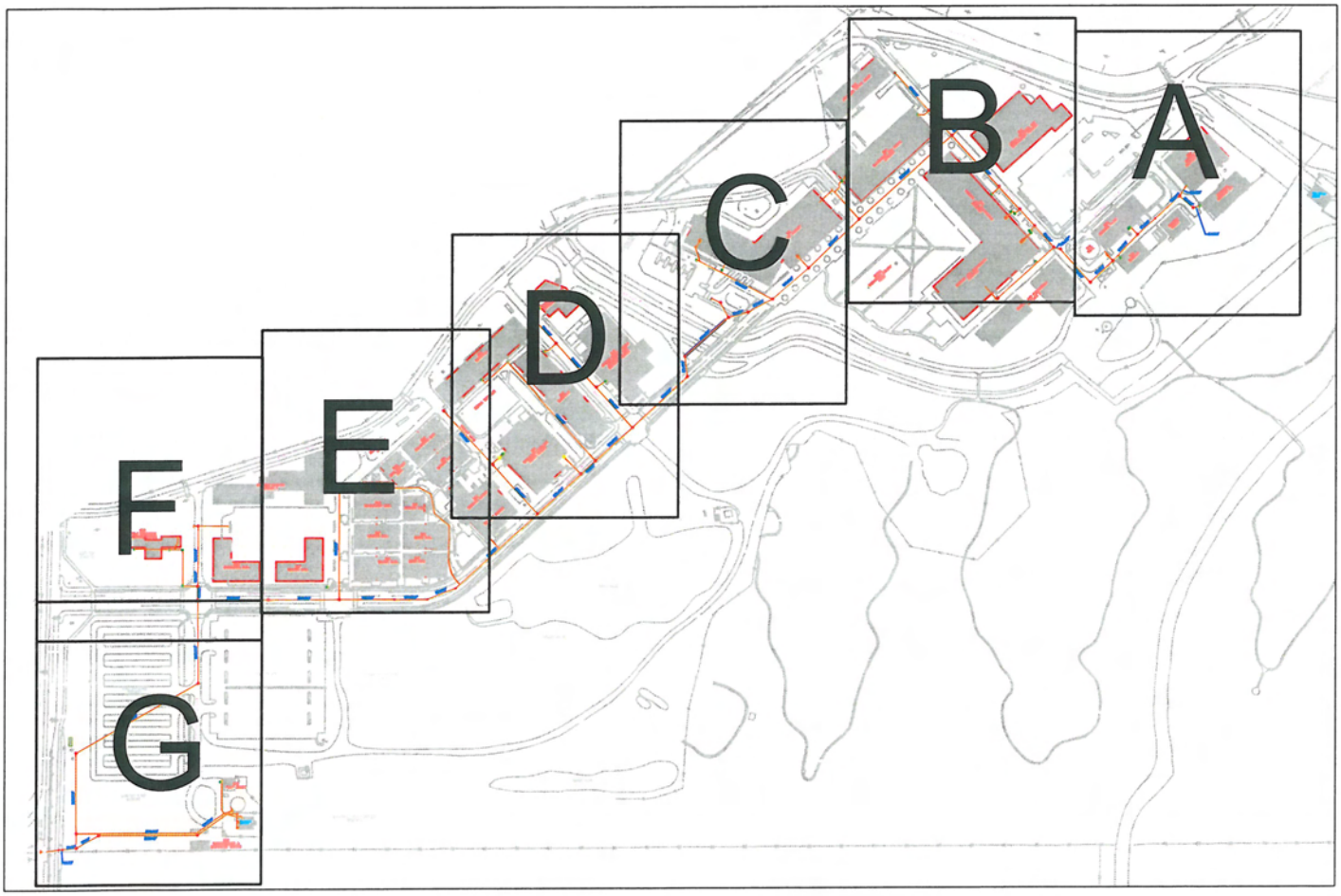
APPENDIX C:

UC MERCED PROPERTY BOUNDARY AND SANITARY SEWER SYSTEM MAP

UNIVERSITY OF CALIFORNIA
UCMERCED

DIG ALERT

SANITARY SEWER



UC Merced
University of California
Merced, California

Project Name
Sanitary Sewer Management Plan

Drawing Title
SSMP Map

Key Plan:
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Building Number:

Drawn By: S.R.
Revision Date: 7/25/2012
Plot Date: 7/25/20012
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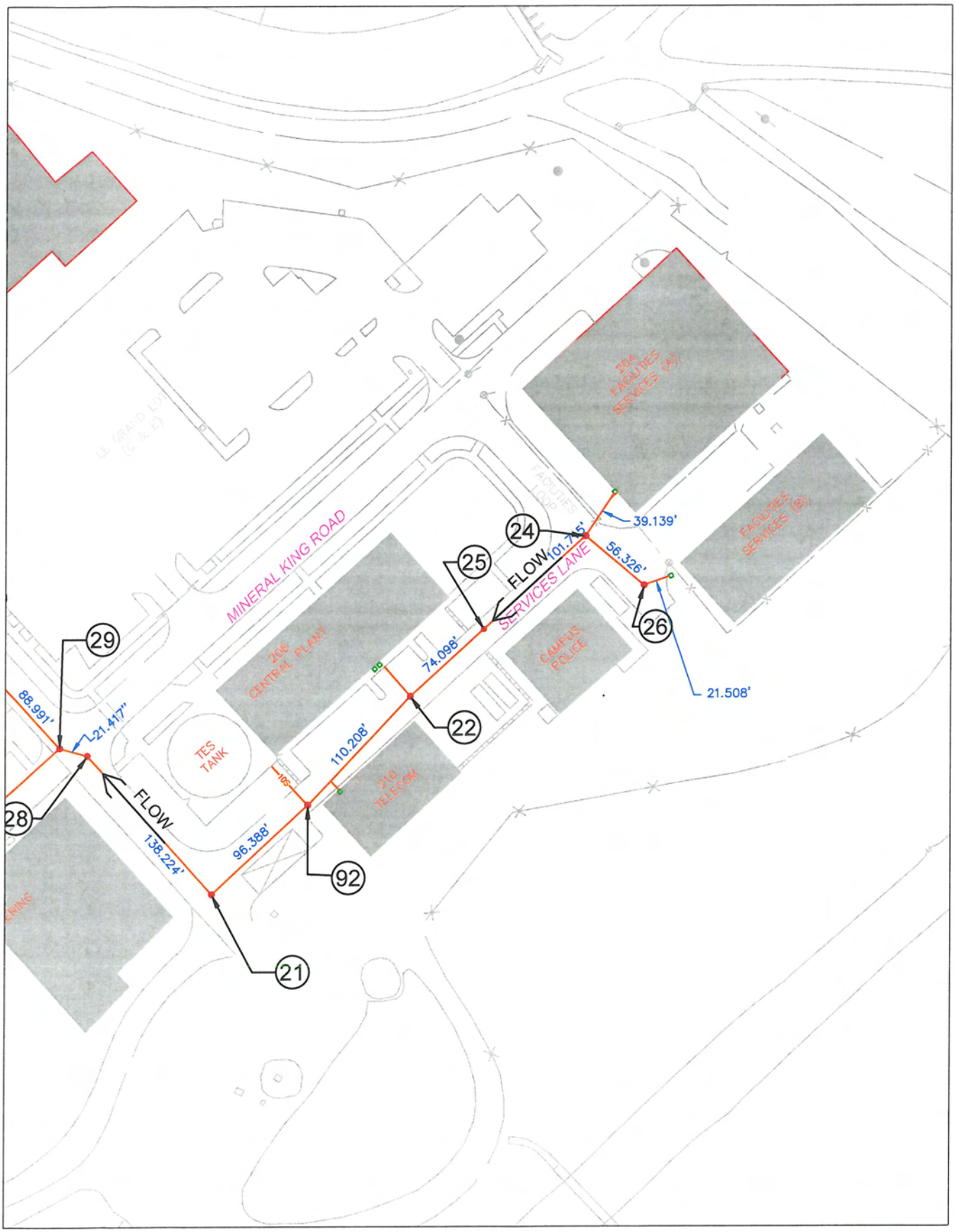

UC Merced
University of California
Merced, California

Project Name
Sanitary Sewer Management Plan

Drawing Title
SSMP Map

Key Plan:
PROJECT AREA

Building Number:

Drawn By: S.R.
Revision Date: 7/25/2012
Plot Date: 7/25/20012
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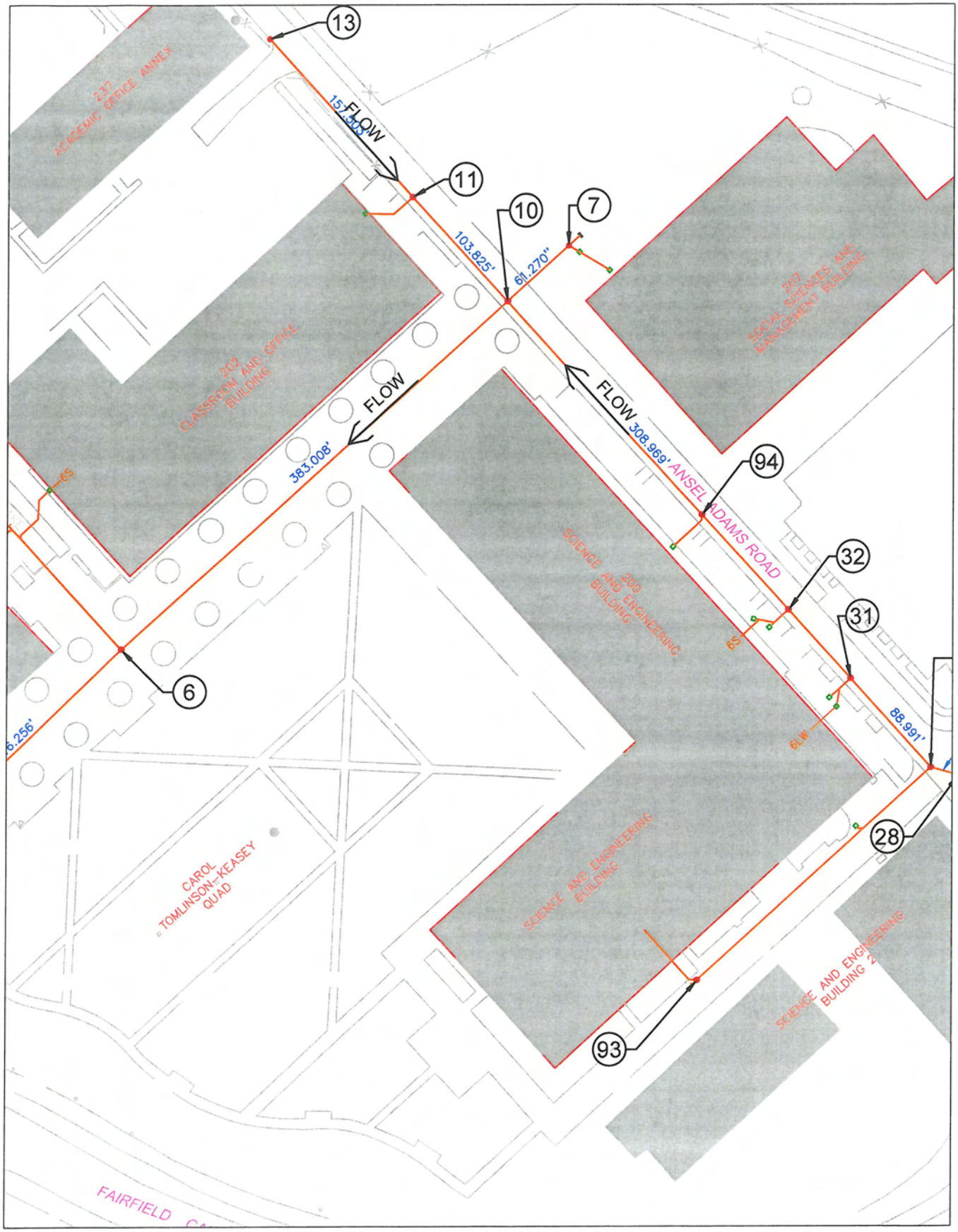

UC Merged

University of California
Merced, California

Project Name

Sanitary Sewer Management Plan

Drawing Title

SSMP Map

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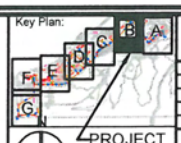

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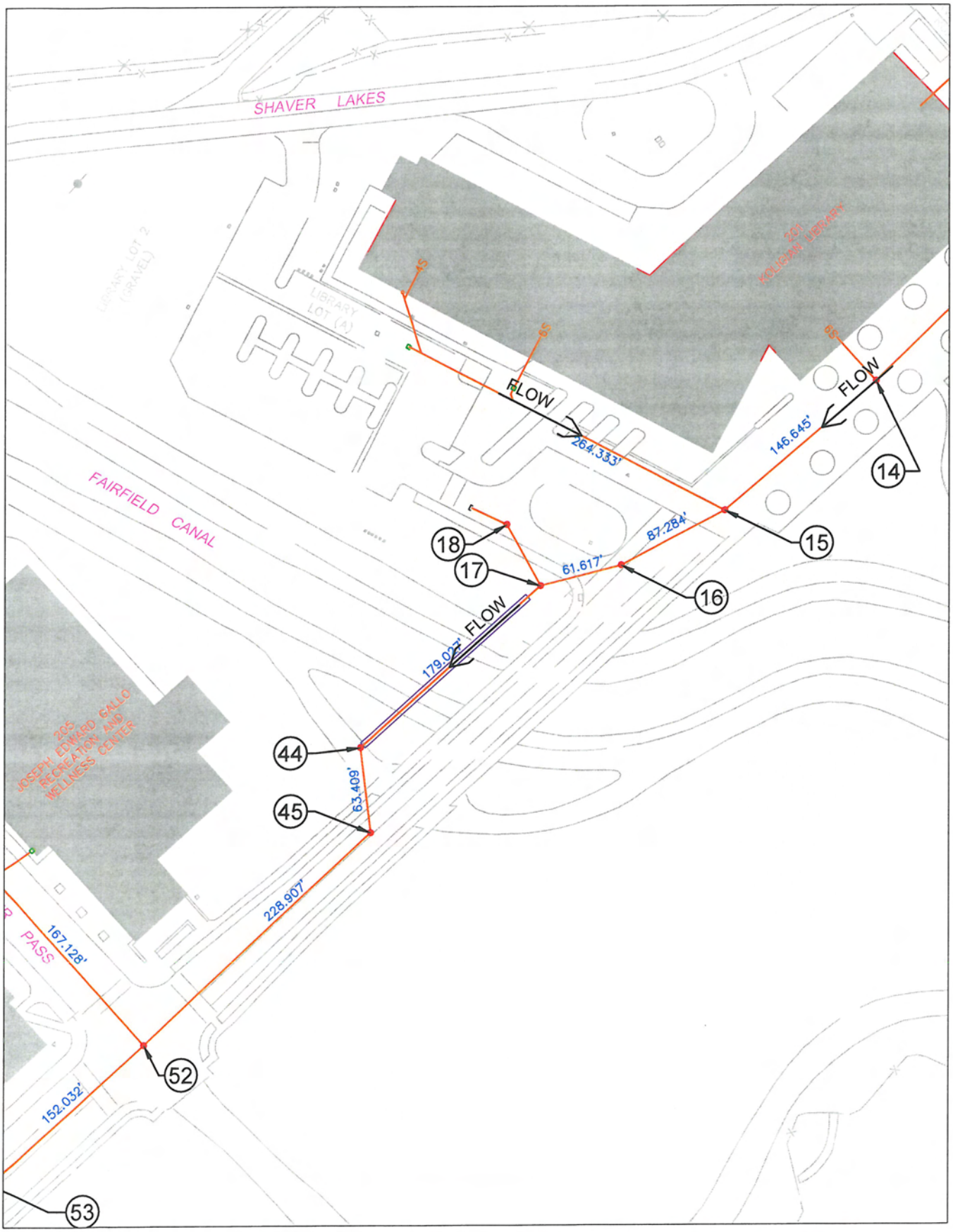

UC Merced
University of California
Merced, California

Project Name
Sanitary Sewer Management Plan

Drawing Title
SSMP Map

Key Plan:
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Building Number:

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Revision Date: 7/25/2012
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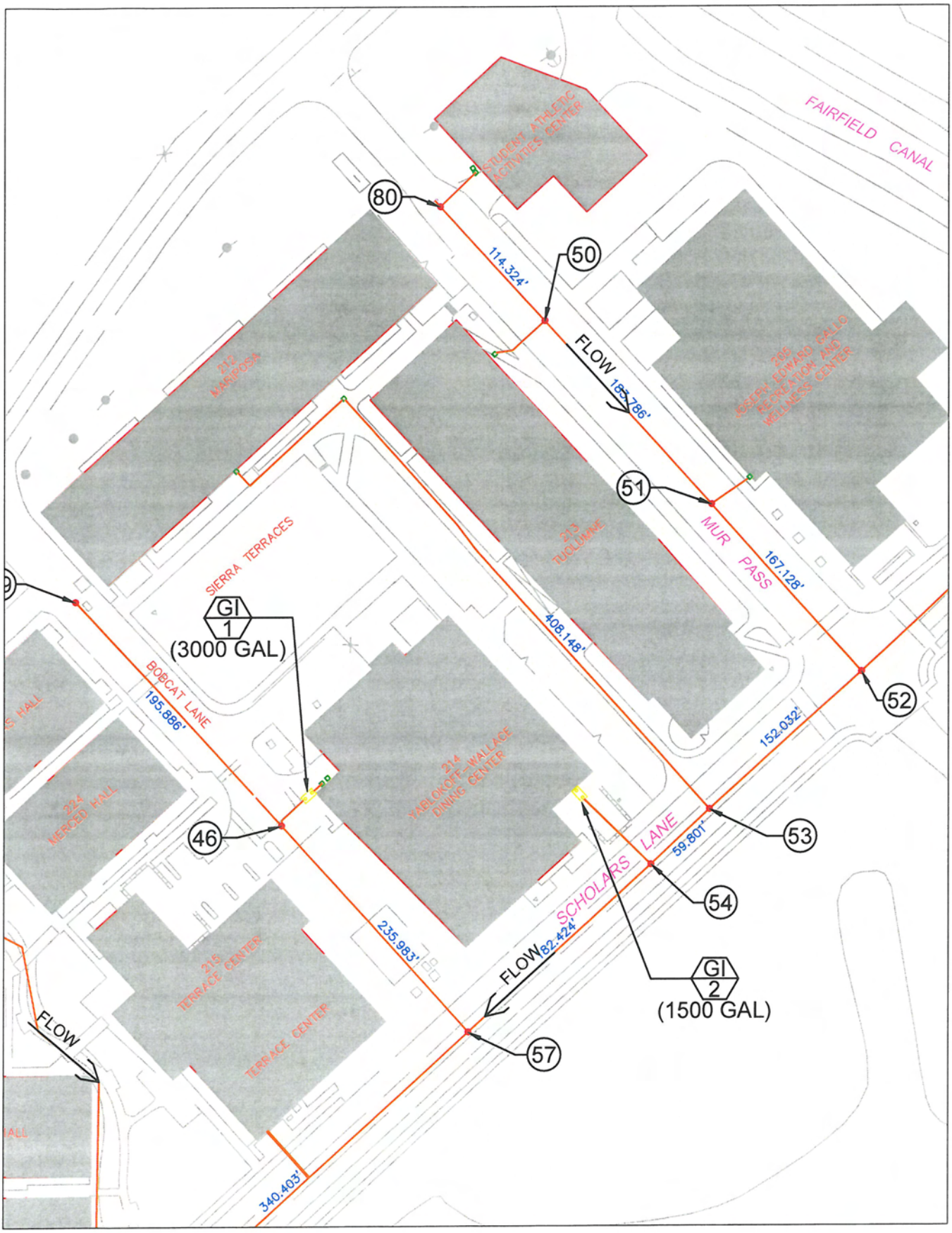

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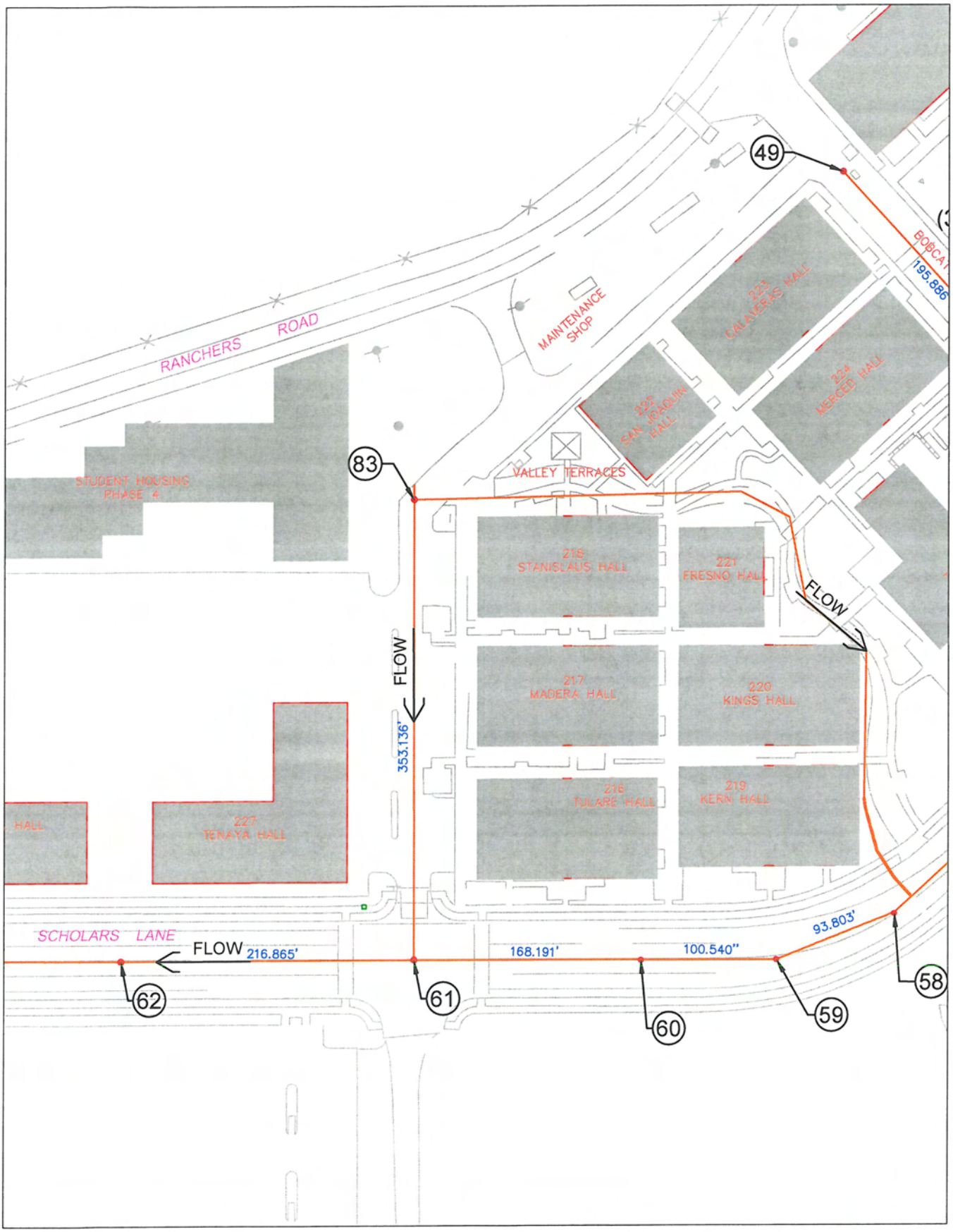

UC Merced
University of California
Merced, California

Project Name
Sanitary Sewer Management Plan

Drawing Title
SSMP Map

Key Plan:
PROJECT AREA

Building Number:

Drawn By: S.R.
Revision Date: 7/25/2012
Plot Date: 7/25/20012
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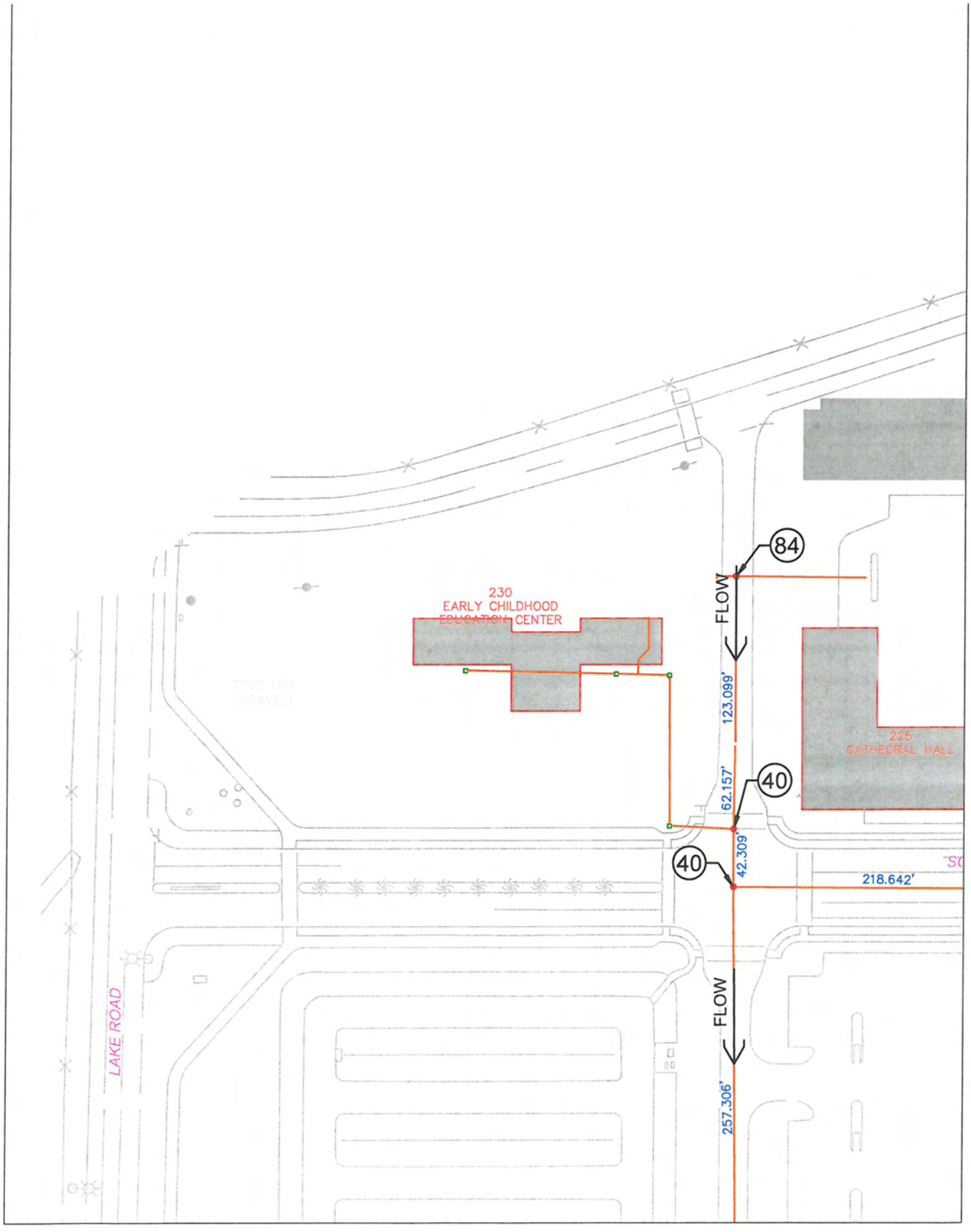

UC Merced
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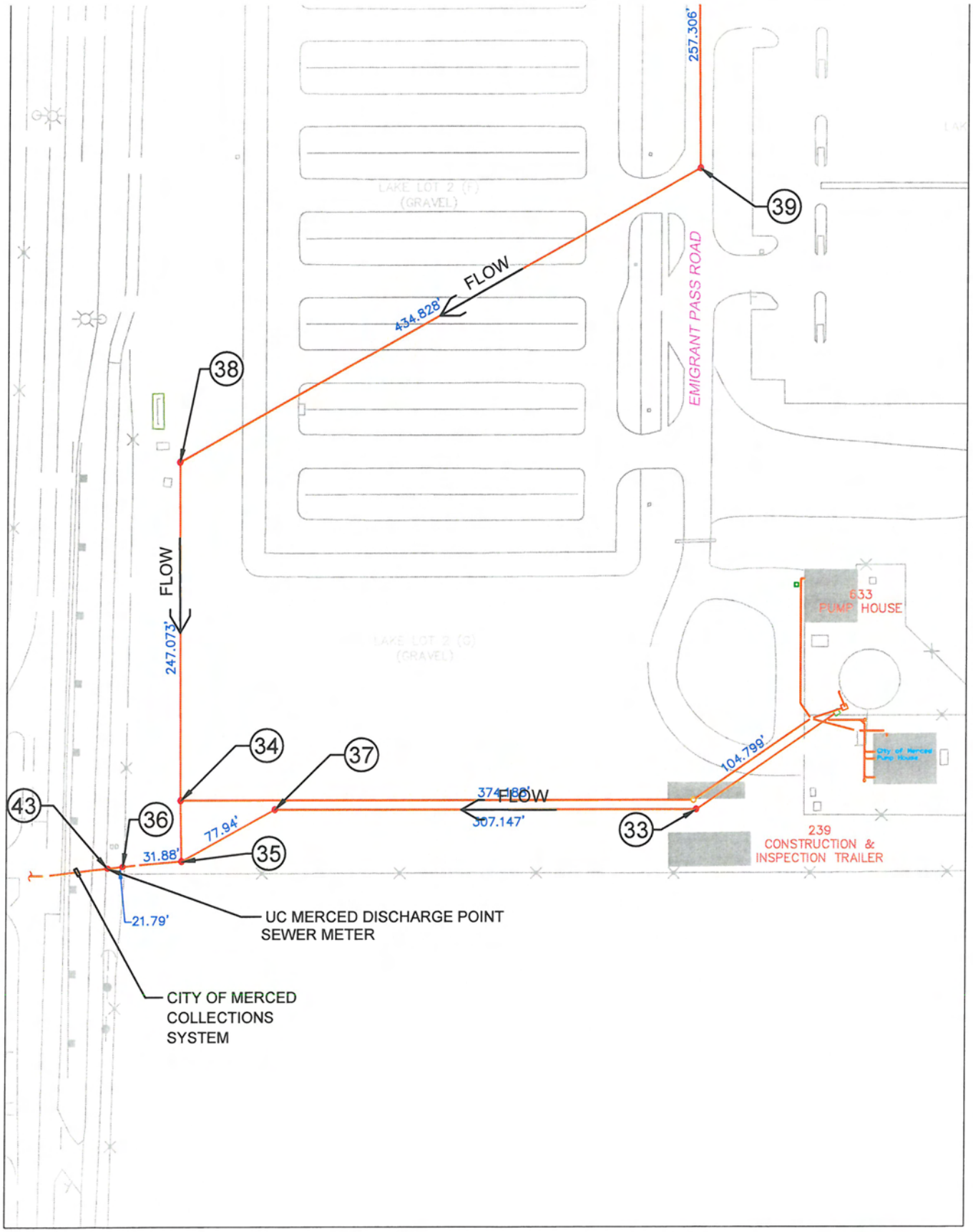

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Scale: 1"=100'
Drawing Ref:
Drawing Number:
G

APPENDIX D:

OVERFLOW EMERGENCY RESPONSE PLAN

Emergency Response Plan

Sewage Spill

Response Procedures

for Releases

or Threatened Releases

to Campus Storm Drains

or Waterways

August 2012

Environmental Health & Safety
University of California, Merced

Table of Contents

A. INTRODUCTION AND PURPOSE

Sanitary sewers on the University of California, Merced (UC Merced) campus and in the surrounding City of Merced can occasionally overflow due to breaks or blockages in the sewer lines. These overflows can result in discharges of raw sewage and / or laboratory wastewater into storm drains, lakes, ponds and canals. In order to protect public health and the environment from raw sewage and any chemicals that may be contained in the sewage, a quick, coordinated response is needed to stop the source of the overflow and to eliminate the downstream migration of sewage.

These procedures were developed to provide instruction for campus departments responsible for responding to sewage spills, in order to maximize the effectiveness of the control and cleanup of sanitary sewer discharges. In the future, UC Merced plans on collaborating with the City of Merced once their emergency procedures for sewage spills has been revised and finalized.

UC Merced's procedures for sewage spills are saved in electronic format on the Facilities Management (Water Operations Department) server and are available on the Environmental Health & Safety (EH&S) website at: http://ehs.ucmerced.edu.

B. SCOPE

These procedures apply to sanitary sewer spills that have been, or are threatened to be, released into a storm drain on the campus or bodies of water. These procedures do not apply to sewage spills that are contained in basements or landscaped areas where these is not threat of release to local waterways.

These procedures include procedures for spill clean-up, posting public health warnings and agency reporting.

C. SANITARY SEWER SYSTEM DESCRIPTION

The UC Merced sanitary sewer system is comprised of a network of pipes, sumps, pumps and manholes.

The UC Merced campus is connected to the City of Merced wastewater collection and treatment system by way of a sanitary sewer line in Bellevue Road that connects to the City of Merced's sewer system at an existing 27-inch line on G Street near Merced Collection. The sewer pipeline under Bellevue Road is sized to serve the full development of the campus, and the existing 27-inch sewer pipeline on G Street has the capacity to serve a campus with up to 10,000 FTE students and associated faculty and staff. For campus growth up to 10,000 FTE, no off-site improvements to the wastewater collection system are needed. Wastewater generated on the campus is treated at the City of Merced wastewater treatment plant (WWTP). The WWTP currently has a secondary treatment capacity of 12 million gallons per day (mgd), but is only permitted to treat up to 10 mgd. It currently treats an average flow of 8 mgd.

D. AVAILABLE RESOURCES

Response to sewage spills on the UC Merced campus is conducted by Environmental Health & Safety (EH&S) and Facilities Management (FM), specifically the Water Operations Department. Both departments have personnel, materials, supplies and equipment for the response. Often, contractor assistance is needed, especially when large equipment, such as a Vactor truck, is needed.

EH&S collaborates with FM to train personnel on use of personal protective equipment (PPE) and good hygiene practices for handling sewage. FM provides training to their personnel for emergency response and spill clean-up resources. Spill response supplies are stored at various locations on campus and near each aboveground storage tank. Additionally, outside contractors are available to aid in the repair and cleanup. Following is a list of available resources:

On-Campus Personnel

- Environmental Health & Safety (EH&S):
  - (209) 228-4234 (business hours)
- University of California, Police Department (UCPD):
  - (209) 228-8273 (business hours)
  - (209) 228-2677 (CAT COPS) (24 hours)
- Facilities Management
  - (209) 228-2986 (FM Help Desk - business hours)
  - (209) 761-9432 (after-hours)

Contract Assistance

- AppleGate Teeples
  - (209) 581-0480 (office and emergency after-hours)

Materials and Supplies

- Sandbags, available from the Water Operations Department
- Gas, electric pumps, available from the Water Operations Department

Personal Protective Equipment (PPE)

For information on PPE needed to respond to a sewage spill, see **EH&S Fact Sheet Handling Sewage and Fecal Matter Safely (Attachment 1)** and contact Environmental Health & Safety Department.

E. RESPONSIBILITIES

Sewage spills are detected and reported through a variety of channels. Often, a passerby will notice the spill and report it to EH&S, FM or UCPD. Once a spill is detected, swift action is required to minimize exposure to people and environmental receptors. Swift action is also required to reduce the downstream migration of the spill. The following are departmental responsibilities for sewage spill response:

EH&S Responsibilities

- Notify the Facilities Management (Water Operations Department) to mobilize resources to stop the source of the spill

- Report the spill to appropriate regulatory agencies
- Submit reports to RWQCB, SWQCB, and other agencies as necessary
- Provide general training and awareness for appropriate PPE and good hygiene practices related to sewage

Facilities Management (Water Operations Department) Responsibilities

- Contact EH&S when a sewage spill to storm drains or waterways has been reported
- Coordinate clean up with personnel and contact outside contractors if additional resources are needed
    - Notify Grounds Department if additional help is necessary for labor
- Mobilize resources to stop the source of the sanitary sewer discharge. Place sandbags, create dams and pump storm drains or canals to an alternate location if needed.
- Contain spill by use of sandbags and any other means deemed necessary
- Maintain up-to-date training for sewage spill responders and training on appropriate PPE
- Post warning signs and barricade the area along affect areas of the water ways using cones, caution tape, etc.
- Dismantle dams after clean-up has been confirmed
- Don proper personal protective equipment

F. EH&S RESPONSE

Immediately following a report of a sewage spill, EH&S shall:

1. CALL FOR SPILL RESPONSE RESOURCES: Contact Facilities Management (Water Operations Department) and request personnel to respond to stop the discharge and bring a pump to divert sewage. Request that they respond to contain the spill. If the point of discharge is known, provide the dispatch location. If the point of discharge is not known, evaluate where dams will need to be constructed.
2. REPORT TO THE SITE: Report to the spill site to evaluate the situation. Take a cellular phone and maps **(Attachment 2)** along.
3. Assess the situation and work with Facilities Management (Water Operations Department).
4. EH&S will contact appropriate agencies. After-hours, complete reporting as described in **Section J: Notification and Reporting Procedures.**

G. FM (WATER OPERATIONS DEPARTMENT) RESPONSE

Immediately following a report of a sewage spill, Water Operations Department shall:

1. Contact EH&S at (209) 228-4234 or UCPD after hours at (510) 642-6760. Contact FM Director.
2. Respond to the site and contain the spill. Water Operations Department and Contractor will locate the point the point of occlusion of the pipe. If possible, Water Operations Department personnel should divert the sewage to an alternate manhole (downstream or another sewer line) by pumping to eliminate the release to the storm drains, or turn off the water supply to the discharging building.

3. Correct the plumbing problem. Once the spill is contained, Water Operations Department should correct the problem. If necessary, contractors should be called for assistance.
4. Fill out field reporting form for signature and submittal to EH&S and FM. The field reporting form should be submitted as soon as possible. This field reporting form will be kept on file in the Water Operations Department software program.

I. SEWAGE SPILL RESPONSE PROCEDURES

These procedures are to be implemented by FM and EH&S staff upon discovery of a sewage spill. In most instances, the initial spill reports come from a concerned citizen or campus staff.

Health and Safety Considerations for Responders

All Facilities Management (Water Operations Department) employees have received spill cleanup training and have procedures in place for dealing with sewage. All personnel responding to sewage spills MUST be trained in the use of proper personal protective equipment and good hygiene practices. Only employees with the proper training will assist in the cleanup of the sewage spill. Contact Environmental Health & Safety for Fact Sheet or Facilities Management (Water Operations Department) for training.

Spill Response

Notification of Campus Departments (EH&S and Facilities Management)

Immediately following the discovery of a sewage spill, call the following:

- Environmental Health & Safety (EH&S):
  - (209) 228-4234 (business hours)
- University of California, Police Department (UCPD):
  - (209) 228-8273 (business hours)
  - (209) 228-2677 (CAT COPS) (24 hours)
- Facilities Management
  - (209) 228-2986 (FM Help Desk - business hours)
  - (209) 761-9432 (after-hours)

Releases with hazardous chemical from laboratories

If a sewage spill includes wastewater from a laboratory building, EH&S and FM (Water Operations Department) will collaborate to determine whether there is any potential for chemical or radiological constituents of concern in the sewage. EH&S or FM will notify the Hazardous Materials Team if more assistance is needed. In general, if drain disposal guidelines are being complied with, there are no additional hazards over and above sewage and PPE and response are the same for sewage. EH&S will evaluate the situation and recommend additional PPE and cleanup measures as necessary.

Agency reporting

EH&S will notify appropriate agencies. For details, see **Section J: Notification and Reporting Procedures.**

Waterways Posting

Facilities Management (Water Operations Department) personnel will post warning signs as soon as possible at affect areas of the canal or lakes with guidance from EH&S if necessary. For details, see **Section K: Posting Procedures.**

Wet Weather Release

FIRST PRIORITY: Contain the spill and stop the source of the leak.

Containing the spill and repairing the problem have equal priority. If the volume of flow in the line, storm drain, or body of water is so great as to be uncontainable, then all attention will be focused upon repairing the problem.

The initial call to Facilities Management (Water Operations Department) will mobilize personnel that are equipped to stop sanitary sewer overflows. Once on site, if they determine that further assistance is necessary in order to stop the spill, a contractor (currently AppleGate Teeples) should be contacted immediately. While waiting for the contractor to arrive, efforts should be aimed at containing the spill and, if possible, pumping the sewage to another nearby sanitary sewer. If possible, water supply to buildings discharging sewage should be shut off to reduce discharge (this may not be practical for some campus buildings, but may be feasible).

If the spill has entered a storm drain but has not yet migrated to the canals, the storm drain should be sandbagged down gradient from the spill and the spill diverted to the nearest sanitary sewer.

If the sewage spill has entered a waterway, the contaminated water must be pumped out to the sanitary sewer or to storage tanks. **Note: Prior approval from the City of Merced wastewater treatment plant (WWTP) must be received if creek water is also pumped into the sanitary sewer!**

In addition, while waiting for the source of the leak to be repaired, crews should attempt to pump sewage from the blockage into another nearby sanitary sewer. This will minimize the extent of downstream cleanup needed.

Pumping Procedure

A. Best method: Diverting upstream canal water around the spill.

   This method can be used if the response time is quick enough to capture the leading edge of the spill. Otherwise, go to method B.

   Dams mad out of sandbags should be placed at key locations to isolate the spill.

   Step 1: Place a dam immediately downstream of the sewage. Using a trash pump, begin pumping the sewage to an adjacent sanitary sewer.

   Step 2: Place a dam immediately upstream of the affected are, and using another trash pump, pump creek water to below the dam placed in Step 1.

B. Diverting the sewage and canal water.

Most often, spill response is not quick enough to capture the leading edge of a spill and diverting the canal is impractical due to the long distances. In this case, a downstream dam should be set up and the creek pumped to a nearby sanitary sewer. This will minimize the amount of sewage entering the City of Merced and Lake Yosemite.

Once the dams are in place, trash pumps should be used to pump the contaminated water to the sanitary sewer. Pumping should continue until clean water is flowing. If a layer of solids has been deposited on the canal bed, it will need to be flushed with water. The wash water should also be pumped to the sanitary sewer.

If the volume of flow in the line, storm drain, or canal is so great as to be uncontainable, then all attention will be focused upon repairing the problem.

SECOND PRIORITY: Clean the storm drains and canal

After the leak has been stopped, the contaminated storm drains and the area of discharge into the canal will be cleaned of all solids by Facilities Management (Water Operations Department) or an outside contractor. The drains and creek should be flushed with water from a fire hydrant or tanker truck to the downstream dam and wash water pumped to the sanitary sewer. Cleanup should continue as long as practical – care should be taken to avoid damaging natural resources.

Techniques for creek cleaning may include bypassing, damming or diking, flushing with potable water, the use of pumps / vacuum trucks, pressure washing, and discharging to intact sewer lines. EH&S will coordinate the cleanup with guidance from the Regional Water Quality Control Board and the Department of Fish and Game, as necessary.

THIRD PRIORITY: Sampling

Facilities Management (Water Operations Department) will take confirmatory samples for fecal and total coliform analyses in the dammed area after cleaning and a “background” sample will be taken upstream of the discharge. Coordination between EH&S and the Regional Water Quality Control Board to discuss the sample results will be made prior to disassembly of the sandbag dams.

Dry Weather Release

FIRST PRIORITY: Contain the spill

The first priority of the responding staff will be to contain the spill.

If the spill has entered a storm drain but has not yet migrated to the canal, the storm drain should be sandbagged down gradient from the spill and the spill diverted to the nearest sanitary sewer.

If the sewage spill has entered the canal, the contaminated water must be pumped out to the sanitary sewer or to storage tanks. **Note: Prior approval from the City of Merced wastewater treatment plan (WWTP) must be received if creek water is also pumped into the sanitary sewer!**

In addition, while waiting for the source of the leak to be repaired, crews should attempt to pump sewage from the blockage into another nearby sanitary sewer. This will minimize the extent of downstream cleanup needed.

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A. Best method: Diverting upstream canal water around the spill.

   This method can be used if the response time is quick enough to capture the leading edge of the spill. Otherwise, go to method B.

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   Once the dams are in place, trash pumps should be used to pump the contaminated water to the sanitary sewer. Pumping should continue until clean water is flowing. If a layer of solids has been deposited on the canal bed, it will need to be flushed with water. The wash water should also be pumped to the sanitary sewer.

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After the leak has been stopped, the contaminated storm drains and the area of discharge into the canal will be cleaned of all solids by Facilities Management (Water Operations Department) or an outside contractor. The drains and creek should be flushed with water from a fire hydrant or tanker truck to the downstream dam and wash water pumped to the sanitary sewer. Cleanup should continue as long as practical – care should be taken to avoid damaging natural resources.

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Facilities Management (Water Operations Department) or an outside contractor will take confirmatory samples for fecal and total coliform analyses in the dammed area after cleaning and a “background” sample will be taken upstream of the discharge. Coordination between EH&S and the Regional Water

Quality Control Board to discuss the sample results will be made prior to disassembly of the sandbag dams.

J. NOTIFICATION AND REPORTING

Federal and state laws and regulations require that sewage spills to waterways, including storm drains and canals, be reported to local or state agencies. Timely reporting is required to allow agencies to respond quickly to spills to protect public health and the environment through cleanup and posting of warning signs. The following sewage spill reporting procedures apply to spills from campus and leading to a body of water (canals, lakes, and ponds). Procedures are taken from:
http://www.waterboards.ca.gov/rwqcb5/water_issues/waste_to_surface_water/spill_13267_ltr_aug2008.pdf

Reporting procedures for campus employees & general public

Report sewage or suspect sewage spills to EH&S immediately

Any sewage spill that enters or threatens to enter a storm drain or canal needs to be reported to EH&**S** ***immediately***. Sewage spills equal to or greater than 1,000 gallons also must be reported ***immediately***. EH&S will notify the appropriate agencies.

Call EH&S: (209) 228-4234 during business hours (8 am – 5 pm)

Call UCPD: 9-911 or (209) 228-2677 (or CAT COPS) after hours (UCPD will contact EH&S)

Sewage spill reporting procedures for EH&S and Facilities Management

State regulations require reporting sewage spills to a variety of agencies, including the California Emergency Management Agency (Cal EMA), the Regional Water Quality Control Board and the State Water Quality Control Board. In addition, the Merced County Health Department should be called so that they can initiate or help coordinate spill cleanup and posting in the City of Merced.

For spills that equal or exceed 1,000 gallons AND/OR discharge to canal, lake or the storm drain system

Notify each of the following as soon as possible but ***not later than 2 hours*** after becoming aware of the sewage spill:

California Emergency Management Agency (Cal EMA) State Warning Center (formerly Office of Emergency Services, OES): 1-800-852-7550 – obtain a control number for tracking

Merced County Environmental Health Department: 1-800-734-7391

Regional Water Quality Control Board (RWQCB) – Fresno (RB5F): Phone the RWQCB at (559) 445-5116. If the telephone report is made to the RWQCB after normal business hours, leave a message regarding the spill.

Notify each of the following as soon as possible but ***not later than 24 hours*** after becoming aware of the sewage spill:

Regional Water Quality Control Board (RWQCB): Provide certification that all agencies were contacted (including Cal EMA and Merced County Environmental Health Department) by telephone (916) 464-3291 and be prepared to provide, at minimum, the following details:

- *Specific location of the spill*
- *OES Control Number*
- *Whether or not the spill entered a surface water*
- *Estimated volume in gallons (total, amount recovered, and amount entering a surface water)*
- *Time the spill was discovered*
- *Corrective action taken*
- *Whether or not samples were taken; and*
- *Which local health department was contacted*

Within ***5 business days,*** submit a report to the Regional Water Quality Board.

State Water Quality Control Board (SWQCB): http://ciwqs.waterboards.ca.gov

If spill response requires pumping sewage and canal water mix to the sanitary sewer, obtain permission from the City of Merced Wastewater and Treatment Plant prior to pumping:

Call the **City of Merced Waste Water and Treatment Plant:** (209) 385-6892

Fish kill: In case of a fish kill (regardless of size of spill):

Call: **Cal EMA (formerly, OES):** 1-800-852-7550

Department of Fish and Game (DFG) – Central Region: (559) 243-4005 ext. 151

Hazardous Materials: If the spill also involves a hazardous material:

Call: **Merced County Environmental Health Department:** 1-800-734-7391

For spills confirmed to be < 1,000 gallons that do NOT discharge to canal, lake or the storm drain system

Within ***30 calendar days after the end of the calendar month in which the spill occurred,*** submit a final report:

State Water Quality Control Board (SWQCB): Submit online final report at https://ciwqs.waterboards.ca.gov

If spill response requires pumping sewage and canal water mix to the sanitary sewer, obtain permission from the City of Merced Wastewater and Treatment Plant prior to pumping:

Call the **City of Merced Waste Water and Treatment Plant:** (209) 385-6892

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Department of Fish and Game (DFG) – Central Region: (559) 243-4005 ext. 151

Hazardous Materials: If the spill also involves a hazardous material:

Call: **Merced County Environmental Health Department:** 1-800-734-7391

Online and Written Reports, Summary

The following written reports should be completed:

- For all sewage spills to storm drains or waterways: <form on software tracking program>
- For sewage spills ≥ 1,000 gallons OR entering the storm drain system or waterways: an initial online follow-up report is required **within three business days** to the State Water Quality Control Board (SWQCB). A final report must be submitted online to the SWQCB within **15 calendar days after response activities have been completed.**
- For sewage spills ≤ 1,000 gallons AND which do NOT enter the storm drain system or the canal / lake: a final online follow-up report is required **within 30 calendar days after the end of the calendar month in which the spill occurred** to the SWQCB.
- All online reporting for the SWQCB shall be done on the following site: https://ciwqs.waterboards.ca.gov.

K. POSTING PROCEDURES

Federal and state laws and regulations require that sewage spills to waterways, including storm drains, canals and lakes, be reported to local or state agencies. Timely reporting is required to allow agencies and the University to respond quickly to spills to protect public health and the environment through cleanup and posting of warning signs. The following Public Health Warning Posting Procedures for Sewage Spills to Waterways ("posting procedures") apply to spills from campus into storm drains leading to the canals or lakes. These posting procedures are designed to be objective procedures for posting and for removing posted warnings.

Posting Procedures for Sewage Spills

Authority to post, authority to remove posting

Authority to post and remove posting at the University of California, Merced has been assigned to the Director of EH&S. The Director has delegated the posting authority within EH&S when these procedures are followed. In general, all posting is to be performed under the direction of EH&S.

When to post

Warning signs should be posted whenever a sewage spill is detected or suspected* to have entered any waterways.

* Note: Sewage spills are discovered in a number of ways. Facilities Management may become aware of discharges to waterways when investigating complaints of sewage or sewer odors in or near buildings. Often the first report of a sewage spill to Facilities Management or EH&S comes from a passerby noticing the stench or appearance of the waterway. City of Merced may notify EH&S of a sewage spill.

Public Health Warning Statement

Following is the public health warning statement that appears on signs posted along waterways on campus:

WARNING
RAW SEWAGE IN WATER

AVOID CONTACT WITH WATER

This section of water contains untreated
Sewage as a result of a sewer line failure. Do
Not drink or touch the water. Keep children
and dogs away from the waterway. The campus
is currently working on repairing the sewer.

For more information, contact
Environmental Health & Safety
(209) 228-4234

Availability of Signs

Public health warning statements will be made available when a sewer overflow occurs. All Facilities Management trailers, trucks, shops have equipment (including tape, caution signs, etc.) to blockade and prevent people from accessing the area.

Posting in the City of Merced

In the event that sewage has been discharged into the City of Merced, the Merced County Health Department must be contacted to coordinate posting in the City of Merced at open stretches of water. Generally, posting in the City of Merced is the responsibility of the Merced County Health Department, but they may request assistance, in which UC Merced signs can be posted in locations that they recommend.

Where and how to post

Signs should be placed in conspicuous areas on both sides of the canal, in general approximately every 100 feet, with an emphasis on areas where people are expected to access the waterway. Signs should be placed from the point of entry of sewage into the waterway to the point of exit of the waterway. If necessary, caution tape should be strung between signs, especially in areas where the chance of incidental contact with the waterway is greatest.

When to remove posting

Public health warning signs can be removed upon the approval of the EH&S Director or delegated EH&S staff member. Following are the criteria for removing posting:

Public Health posting following sewage spills can be removed after the spill has resolved (by active clean up, dissipation over time or flushing by storm water) based on the following observations:

1. Bacteriological levels have dropped to below the Regional Water Quality Control Board levels (to be coordinated with the Regional Water Quality Control Board).
2. A significant rainfall event (> 0.25 inches in 24 hours) has flushed the canal with storm water adequately to remove all deposited sewage. No confirmatory sampling is required in this event.