University of California, Riverside

Sewer System Management Plan

May 2014

University of California, Riverside
Environmental Health & Safety
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(951) 827-5528

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1. Goal

The goal of the UC Riverside Sewer System Management Plan (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 sanitary sewer overflows (SSOs), as well as mitigate any SSOs that do occur.

1.1 Purpose of the SSMP

This document has been developed to comply with State Water Resources Control Board (SWRCB) Order No. 2006-0003-DWQ, Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (copy attached hereto as Appendix A). To facilitate proper funding and management of sanitary sewer systems, WDR Order 2006- 0003-DWQ requires Enrollees to develop and implement a system-specific SSMP including provisions to:

- Provide proper and efficient management, operation, and maintenance of the sanitary sewer system, while taking into consideration risk management and cost benefit analysis

- Establish standard procedures for immediate response to a sewer system overflow (SSO) in a manner designed to minimize water quality impacts and potential nuisance conditions

SSOs 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.

1.2 Regulatory Background

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). The SWRCB adopted Order No. 2006-0003-DWQ on May 2, 2006. The SWRCB developed this WDR to promote uniformity in the management of California's wastewater collection systems and to reduce SSOs.

WDR Order No. 2006-0003-DWQ requires that Enrollees, including the University of California, Riverside, must develop and implement a SSMP in order to reduce SSOs. The SSMP requires Enrollees to take 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 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. This SSMP satisfies the requirements specified in WDR Order No. 2006-0003-DWQ.

On August 6, 2013 the SWRCB adopted Order No. WQ 2013-0058-EXEC, Amending Monitoring and Reporting Program for Statewide General Waste Discharge Requirements for Sanitary Sewer Systems which became effective on September 9, 2013 (copy attached hereto as Appendix B). The SWRCB developed this Order to amend the monitoring and reporting requirements provided in WDR Order No. 2006-0003 DWQ. This SSMP incorporates the amended monitoring and reporting

requirements contained in Order No. WQ 2013-0058-EXEC.

2. Organization

2.1 Legally Responsible Official

The Associate Vice Chancellor for Facilities, Transportation & Parking Services, and Environmental Health & Safety is the designated Legally Responsible Official for the University of California, Riverside sanitary sewer system.

Mike Miller
Associate Vice Chancellor, Facilities, Transportation & Parking Services, and
Environmental Health & Safety
(951) 827-3658

2.2 Administration and Maintenance Organization

The administrative responsibility for the UC Riverside sanitary sewer system is shared among several departments including Environmental Health & Safety; Facilities Maintenance, Plant Services; Housing, Dining & Residential Services; Highlander Union Building; University Extension, and Capital Resource Management, Architects & Engineers. The responsibilities of each department, and the names and telephone numbers of responsible staff are summarized below, and an organizational chart is included as Figure 2-1.

2.2.1 Environmental Health & Safety

Environmental Health & Safety is responsible for oversight and administration of the sanitary sewer system management plan, reporting to regulatory agencies, recordkeeping, and the communication program.

Russell Vernon
Director, Environmental Health & Safety
(951) 827-5119

Amanda Grey
Environmental Programs Manager
(951) 827-2416

2.2.2 Facilities Maintenance, Plant Services

Facilities Maintenance, Plant Services is responsible for the overall operation and maintenance of the system including oversight of any repair or maintenance contractors.

Kenneth Mueller
Director, Physical Plant
Operations (951) 827-4210

Mike Terry

Assistant Director, Plant
Services (951) 827-4880

Jerry Higgins
Maintenance Plumber Supervisor, Plant Services
(951) 827-7696

2.2.3 Housing, Dining & Residential Services, Highlander Union, and University Extension

Housing Operations is responsible for repairs and maintenance of sewer mains serving Canyon Crest Family Student Housing. Grease interceptors are located at Housing Services facilities, Dining Services facilities operated at the Highlander Union building, and at the University Extension building. Housing Services, Dining Services, Highlander Union, and the University Extension are responsible for the maintenance of those sections of the sanitary sewer system and grease interceptors located at their respective facilities.

Hassan Ghamlouch
Director, Housing Operations
(951) 827-4850

Eric Shuler
Assistant Director, Maintenance Operations, Housing Services
(951) 827-4849

John Peraino Maintenance Supervisor Housing Services
(951) 827-2121

Gustavo Plascencia
Lothian Senior Manager, Dining Services
(951) 827-6061

Joe Steinmeyer
Facilities Manager, Highlander Union
(951) 827-3611

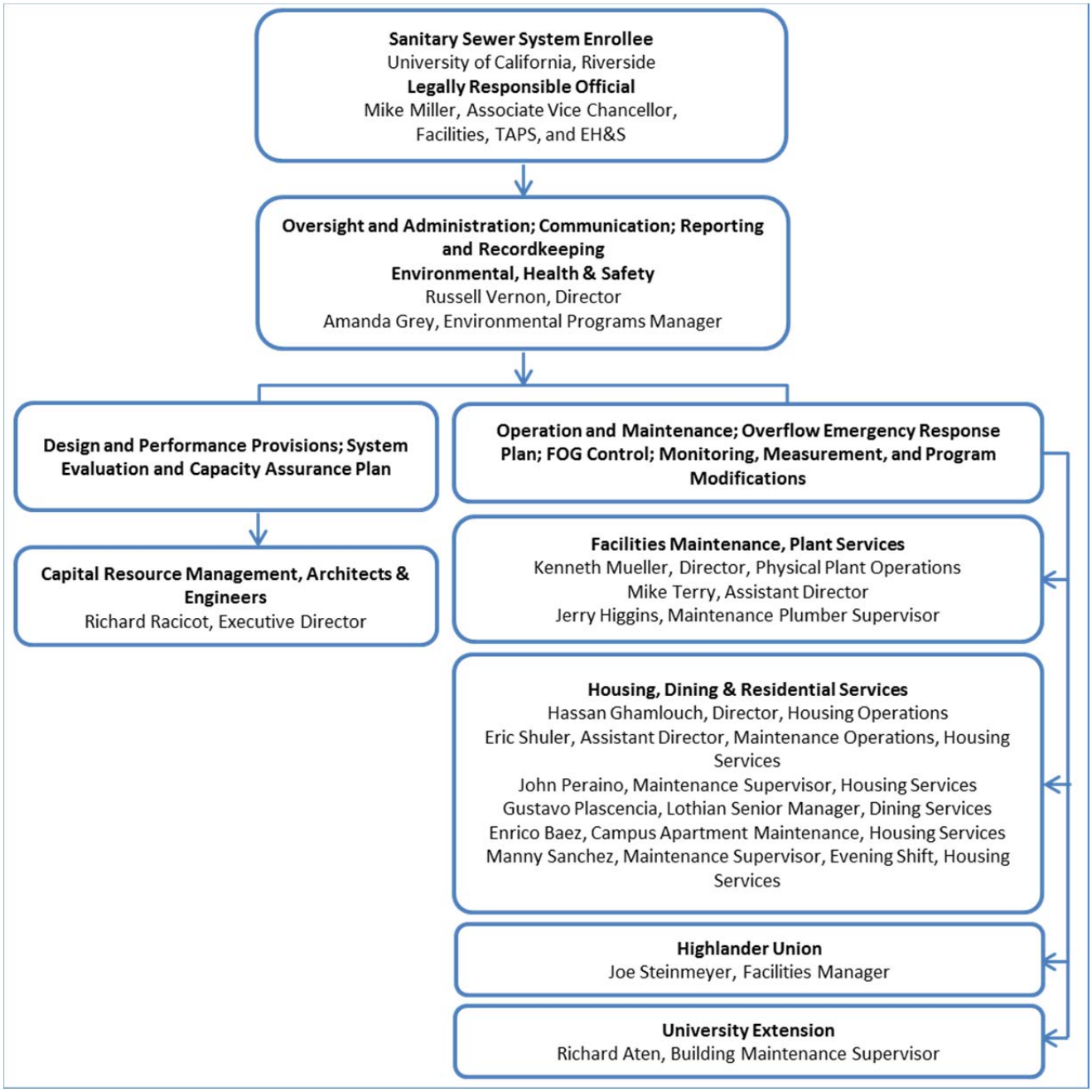
Richard Aten
Building Maintenance Supervisor, University Extension
(951) 827-1697

2.2.4 Capital Resource Management, Architects & Engineers

Architects & Engineers/Capital Resource Management is responsible for the management of the design and construction of additions, rehabilitations, or modifications to the sanitary sewer system.

Richard Racicot
Executive Director, Architects &
Engineers/Capital Resource Management
(951) 827-1277

Figure 2-1 - Administrative Responsibilities for UCR Sanitary Sewer System



2.2.5 Wastewater Working Group

The University of California, Riverside has created a Wastewater Working Group (WWG) consisting of representatives from key departments and groups to facilitate the implementation, monitoring, and updating of the SSMP. Members of the WWG include the following departments and groups:

- Environmental Health and Safety (EH&S)

- Facilities Maintenance (FM), Plant Services
- Capital Resource Management (CRM), Architects & Engineers
- Housing, Dining & Residential Services (HDRS)
- Highlander Union
- University Extension

The WWG's responsibilities include the following:

- Monitor and measure implementation of the plan and make modifications as necessary
- At least biennially, make recommendations for changes to SSMP based on the assessment of the implementation of the plan
- Review and evaluate response to overflows. As appropriate, update Overflow Emergency Response Plan

2.2.6 Sanitary Sewer System Description

The UC Riverside campus is one of ten University of California campuses governed by the Regents of the University of California, and is an internationally recognized public research and teaching institution. The 2012-2013 population, which included students, faculty, researchers, staff, and visitors, was approximately 28,000.

The UC Riverside sanitary sewer system serves the majority of the campus including the main campus, Faculty Housing, the University Child Care Center, and Family Student Housing. The UC Riverside campus and the areas served by the UC Riverside sanitary sewer system are shown on the maps provided in Appendix E.

The sanitary sewer system at UC Riverside has been in use since 1954 and comprises over 80,000 linear feet of collection pipe ranging from 4 to 15 inches in diameter. Original pipe has been replaced as upgrades or repairs have been required or new facilities have been constructed. The piping consists of a combination of vitrified clay, cast iron, polyvinyl chloride, asbestos and cement. Sanitary sewage is collected from campus buildings that house administration, classroom, research, residential, and dining hall facilities.

There are six grease interceptors and one clarifier located on the main campus. Table 2-1 summarizes the grease interceptor locations and capacities, and the departments responsible for their maintenance. The locations of the grease interceptors maintained by UC Riverside are shown on Figure 2-2. The only other food service facilities on the main campus are Aberdeen & Inverness Residential Restaurant, Sub Station, and Getaway Cafe, which currently do not have grease interceptors. The University Extension food court is managed by an outside contractor, and both Sub Station and Getaway Cafe are leased to private parties.

Additionally, sewage from the City of Riverside enters the campus from Box Springs Road to

North Campus Drive to University Avenue and discharges into the UC Riverside sanitary sewer system. This is a line connection that goes through the campus; the sewer line measures 15" in diameter and is considered a joint ownership by both the City of Riverside and UC Riverside.

Table 2-1 - Grease Interceptors Summary

Location		Capacity and Type	Location Address	Responsible Organization
1.	Highlander Union Building (HUB) Main Kitchen	10,000 gallon grease interceptor	North Campus Dr, Campus Map Bldg #191	HDRS
2.	Lothian Residential Restaurant	7,000 gallon grease interceptor	500 W Big Springs Rd, Campus Map F5	HDRS
3.	The Grill at Latitude 55	2,500 gallon grease interceptor	North Campus Dr, Campus Map D6	HDRS
4.	The Barn	1,500 gallon grease interceptor	West Campus Dr, Campus Map D6	HDRS
5.	Alumni & Visitor Center Dining	1,500 gallon grease interceptor	3701 Canyon Crest Dr, Campus Map C5	HDRS
6.	Scotty's	1,500 gallon grease interceptor	2 Pentland Way, Campus Map G4	HDRS
7.	University Extension Food Court	1,000 gallon grease interceptor	1200 University Ave, Campus Map B5	UNEX
8.	Corporation Yard, Fleet Services	1,000 gallon clarifier	3401 Watkins Dr, Campus Map F3	TAPS

3. Legal Authority

The Regents 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 University operations. Under this authority, the University of California, Riverside has legal authority to:

- Prevent illicit discharges into its system, including control of inflow and infiltration sources such as storm water, chemical dumping, or debris
- Require that sewers and connections be properly designed and constructed
- Ensure access for maintenance, inspection, or repairs of all portions of the owned or maintained by the University
- Limit the discharge of fats, oils and grease and other debris that may cause blockages
- Ensure proper installation, testing, and inspection of new or rehabilitated collector sewers, and new or rehabilitated laterals

Figure 2-2 - UC Riverside Grease Interceptor Locations

4. Operation and Maintenance Program

The SSMP establishes Operation and Maintenance Program plans and activities to facilitate the proper management, operation, and maintenance of all parts of the sanitary sewer system to reduce and prevent SSOs. The SSMP is required to include the following Operation and Maintenance Program elements:

(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 storm water 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.

Table 4-1 Operation and Maintenance Program Elements presents details for the Operations and Maintenance Program with the responsible position, department, and person responsible for implementation of tasks and activities associated with each element.

Table 4-1 - Operation and Maintenance Program Elements

Operation and Maintenance Program Element	Responsible Position, Department	Name	Telephone Number
Overall management, operation and maintenance of the sanitary sewer system.	Assistant Vice Chancellor, Facilities, TAPS, and EH&S	Mike Miller	(951) 827-3658
Management, operation and maintenance of the entire UC Riverside sanitary sewer system, with the exception of the portion serving Canyon Crest Family Student Housing, is the responsibility of the UC Riverside Facilities Maintenance Plant Services department. The Plant Services department is also the initial responder to SSOs.	Director, Physical Plant Operations	Kenneth Mueller	(951) 827-4210
	Assistant Director, Plant Services	Mike Terry	(951) 827-4880
	Maintenance Plumber Supervisor, Plant Services	Jerry Higgins	(951) 827-7696

Operation and Maintenance Program Element	Responsible Position, Department	Name	Telephone Number
Overall management, operation and maintenance of the sanitary sewer system. The Maintenance Operations, Housing Services department is responsible for repairs and maintenance to the portion of the sewer system serving Canyon Crest Family Student Housing.	Director, Housing Operations Assistant Director, Maintenance Operations, Housing Services Maintenance Supervisor, Housing Services	Hassan Ghamlouch Eric Shuler John Peraino	(951) 827-4850 (951) 827-4849 (951) 827-2121
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. Maps of the portion of the sewer system serving the main campus is in AutoCAD format. The map shows line size and material type. The map also has partial details regarding manholes including name of manhole, invert elevation, and ring elevation. Sewer system maps of Faculty Housing, the University Child Care Center, Canyon Crest Family Student Housing, and the A&I, Lothian, and Pentland Hills Residence Halls are in hard copy format. The process and procedures for maintaining the sanitary sewer system maps are integrated into the overall work processes of Capital Resource Management Services.	Maintenance Plumber Supervisor, Plant Services Executive Director, Capital Resource Management, Architects & Engineers	Jerry Higgins Richard Racicot	(951) 827-7696 (951) 827-1277
Routine preventative 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. UC Riverside has measures in place to keep the system in good repair and prevent infiltration/inflow, service interruptions, and system failures. These measures include regular scheduled inspection, maintenance, and cleaning of	Assistant Director, Plant Services Maintenance Plumber Supervisor, Plant Services Director, Housing Operations Assistant Director, Maintenance Operations,	Mike Terry Jerry Higgins Hassan Ghamlouch Eric Shuler	(951) 827-4880 (951) 827-7696 (951) 827-4850 (951) 827-4849

Operation and Maintenance Program Element	Responsible Position, Department	Name	Telephone Number
the collection system as summarized below: ***Routine Inspections:*** • Manholes: Scheduled weekly inspections target specific manholes, rotating through all the manholes on campus at least once each year. If there are any reported or identified problems in the area surrounding a specific manhole, they are addressed on a case by case basis. • Overall system: Each year all system lines > 8-inch are inspected and maintained by hydro-jetting. Where feasible, 6-inch lines are also inspected. A video inspection program was implemented during the 2012-2013 period, and 1,000 feet of sewer line video inspection was completed. Distance of sewer line video inspection is planned to increase each year. ***Routine Maintenance:*** • Root control: Maintenance for root intrusion is conducted where needed based on results of routine inspections. • Overall System: At least once each year portions of the system are cleaned using a hydro-jet or vacuum in targeted areas selected according to information obtained through routine inspections. • All grease interceptors are pumped before reaching 25% total occupied capacity. ***Grease Interceptor Self-Inspection Training:*** Grease Interceptor Self-Inspection Training has been developed in collaboration with the City of Riverside Sewerage System Division Environmental Compliance Section to ensure grease interceptors are pumped at appropriate frequencies.	Housing Services Maintenance Supervisor, Housing Services Lothian Senior Manager, Dining Services Facilities Manager, Highlander Union Building Maintenance Supervisor, University Extension	John Peraino Gustavo Plascencia Joe Steinmeyer Richard Aten	(951) 827-2121 (951) 827-6061 (951) 827-3611 (951) 827-1697

Operation and Maintenance Program Element	Responsible Position, Department	Name	Telephone Number
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. ***Long term planning:*** UC Riverside updates the infrastructure of the campus, including the sanitary sewer, on an as-needed basis. Sanitary sewer infrastructure updates address rehabilitation and replacement of sewer pipes which are at risk of collapse or are prone to more frequent blockages due to pipe deficiencies. ***Short-term actions:*** Short term actions are taken as-needed based on information developed during routine inspections. Plant Services Zone Maintenance Services will e-mail the information to Capital Resource Management Services. The two departments develop a scope and subsequently implement the project. Short term actions implemented through this method include the following: • Grease interceptor installation • Identification and installation of replacement laterals • Manhole replacement • Reverse grade and root intrusion corrections	Assistant Director, Plant Services Maintenance Plumber Supervisor, Plant Services Executive Director, Capital Resource Management, Architects & Engineers	Mike Terry Jerry Higgins Richard Racicot	(951) 827-4880 (951) 827-7696 (951) 827-1277

Operation and Maintenance Program Element	Responsible Position, Department	Name	Telephone Number
Provide training on a regular basis for staff in sanitary sewer system operations and maintenance, and require contractors to be appropriately trained. Plant Services provides annual training for staff responsible for overflow emergency response, and technical training to Plant Services staff when new sewer lines or other appurtenances are installed. UC Riverside utilizes service agreement contracts for certain sewer system repair and maintenance work, and Plant Services is responsible for overseeing operations of contractors. Service agreement contracts require that contractor staff must be appropriately trained.	Assistant Director, Plant Services Maintenance Plumber Supervisor, Plant Services	Mike Terry Jerry Higgins	(951) 827-4880 (951) 827-7696
Provide equipment and replacement parts inventories, including identification of critical replacement parts. A stock room of parts and equipment, including emergency pumps, lights, and generators is maintained. Repairs that require equipment or materials beyond existing capabilities are completed by outside contractor via a service agreement contract.	Assistant Director, Plant Services Maintenance Plumber Supervisor, Plant Services	Mike Terry Jerry Higgins	(951) 827-4880 (951) 827-7696

5. Design and Performance Provisions

Facilities Management and Capital Resource Management, Architects & Engineers are responsible for ensuring that design and performance standards are implemented on campus. There are two categories of design and performance provisions specified in WDR No. 2006-0003-DWQ, discussed below.

5.1 Standards for Installation, Rehabilitation and Repair

Capital Resource Management, Architects & Engineers current design and construction standards include construction specifications for installing new sewer systems, pump stations, and other appurtenances; and for rehabilitation and repair of existing sewer systems. These design and construction standards 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 must adhere to these design

and construction standards.

5.2 Standards for Inspection and Testing of New and Rehabilitated Facilities

Capital Resource Management, Architects & Engineers requires established standards for inspection and testing of new or rehabilitated facilities to ensure that facilities are built to construction specifications and to detect construction defects or other issues prior to final approval and acceptance. 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 video inspection to identify grade variations or other construction defects.

6. Overflow Emergency Response Plan

6.1 Purpose

The purpose of the Overflow Emergency Response Plan (OERP) is to identify measures to protect public health and the environment in case of a sanitary sewer overflow. The OERP includes the following:

(a) Proper notification procedures so that the initial 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.

6.2 OERP Roles and Responsibilities

The following departments responsible for implementing the OERP:

6.2.1 Facilities Maintenance, Plant Services

Facilities Maintenance, Plant Services is responsible for:

- Acting as initial responder to SSOs
- Managing and conducting operational aspects of the overflow response to immediately assess the SSO, determine the appropriate response, and take appropriate action to control, contain, and cleanup the SSO
- Identifying and implementing preventive measures to prevent recurrence

Facilities Maintenance, Plant Services contacts are:

Jerry Higgins
Maintenance Plumber Supervisor, Plant Services
(951) 827-7696

Mike Terry
Assistant Director, Plant Services
(951) 827-4880

6.2.2 Maintenance Operations, Housing Services

Maintenance Operations, Housing Services is responsible for:

- Acting as initial responder to SSOs at Canyon Crest Family Student Housing
- Managing and conducting operational aspects of the overflow response to immediately assess the SSO, determine the appropriate response, and take appropriate action to control, contain, and cleanup the SSO
- Identifying and implementing preventive measures to prevent recurrence

Maintenance Operations, Housing Services contacts are:

Hassan Ghamlouch
Director, Housing Operations
(951) 827-4850

Eric Shuler
Assistant Director, Maintenance Operations, Housing Services
(951) 827-4849

John Peraino
Maintenance Supervisor, Housing Services
(951) 827-2121

Enrico Baez
Campus Apartment Maintenance, Housing Services
(951) 827-3817

Manny Sanchez
Maintenance Supervisor, Evening Shift, Housing Services
(951) 786-0454

6.2.3 Environmental Health & Safety

Environmental Health & Safety is responsible for:

- Exposure/hazard assessment & control
- External agency notification
- Preparation of regulatory related documents
- Interface with regulatory agency staff

Environmental Health & Safety contacts are:

Amanda Grey
Environmental Programs Manager
(951) 827-2416

Russell Vernon
Director, Environmental Health & Safety
(951) 827-5119

6.2.4 Transportation & Parking Services (TAPS)

Transportation & Parking Services are not normally needed during a typical SSO response. Plant Services or Environmental Health & Safety may call upon TAPS to provide services only under circumstances and conditions where additional equipment and assistance is needed to ensure public health and safety. When called upon by Plant Services or Environmental Health & Safety, TAPS is responsible for providing personnel and equipment such as cones, barricades, and signage to establish:

- Site security
- Traffic control
- Crowd control

Transportation & Parking Services contacts are:

Greg Artman
Interim Director, Transportation & Parking Services
(951) 827-1283

Transportation & Parking Services (951) 827-8277
Transportation & Parking Services, After Hours
After 5:00 pm or before 7:00 am (951) 827-4133

6.3 Detection and Reporting of SSOs

6.3.1 Notification and Reporting Procedures

Internal notification and reporting procedures are described below in sections 6.3.2 through 6.3.5. Procedures for notification and reporting to external regulatory agencies are described in section 6.3.6.

6.3.2 SSOs Discovered by Plant Services Staff

SSOs are typically discovered by Plant Services staff during routine daily operations. Plant Services personnel who discover a potential or actual SSO are responsible for making immediate notifications and taking appropriate action. A number of Plant Services staff are designated as initial responders responsible for emergency overflow response 24 hours per day, 7 days per week. These Plant Services personnel are trained and responsible for making an immediate assessment of the SSO to determine the appropriate response, notifying their supervisor with SSO information, and conducting appropriate control, containment and cleanup activities. Information for all SSOs discovered by Plant Services staff shall be immediately forwarded to Environmental Health & Safety for reporting to regulatory agencies.

6.3.3 SSOs Discovered by Students, Faculty, Other Campus Staff or Visitors

Students, faculty, other campus staff or visitors who observe a potential SSO have instructions on the SSMP website to immediately call one of the following phone numbers. Response time to a reported SSO shall be less than one hour after the initial call. Students, faculty, other staff, or visitors who observe a potential SSO are instructed to immediately call one of the following phone numbers:

- Physical Plant Customer Service (951) 827-4214 or -4215
- Physical Plant Customer Service, After Hours Emergency
  After 4:30 pm or before 8:00 am (951) 827-4677
- Housing Resident Advisor or the RA On-Duty
- UC Riverside Police Department (951) 827-5222
- Environmental Health & Safety (951) 827-5528

The Physical Plant Customer Service Desk attendant immediately notifies Plant Services staff responsible for emergency overflow response. SSOs reported to the Housing Resident Advisor are immediately forwarded to Maintenance Operations, Housing Services. Any report of SSO to any of the above numbers is forwarded to either Plant Services or Housing Services staff responsible for emergency overflow response at the specific affected area. Plant Services or Housing Services Maintenance staff are responsible for immediately assessing the SSO, determining the appropriate response, and conducting appropriate control, containment, and cleanup activities. All SSOs are reported to the EH&S Program Manager, who is responsible for reporting overflows to the appropriate regulatory agencies.

6.3.4 Information Collected on Initial Report of SSO

A report of potential SSO received by Physical Plant Customer Service or After Hours Emergency will include all relevant information available including:

- Time and date the call was received
- Specific location of possible SSO
- Description of the problem, and
- Caller's name and call back phone number

Information for all reports of SSOs by the campus community shall be immediately forwarded to Environmental Health & Safety for reporting to regulatory agencies.

6.3.5 SSO Notification to Environmental Health & Safety

Information for all SSOs discovered by Plant Services staff, and all reports of SSOs by the campus community shall be immediately forwarded to Environmental Health & Safety for reporting to regulatory agencies. All required information for State Water Resources Control Board CIWQS SSO Online Database reporting shall be provided on the Sanitary Sewer Overflow (SSO) Report Form (copy attached at Appendix C):

1. Initial contact for SSO notification to EH&S
   Amanda Grey
   Environmental Programs Manager
   (951) 827-2416

2. Secondary contact for SSO notification to EH&S
   Russell Vernon
   Director, Environmental Health & Safety
   (951) 827-5119

6.3.6 SSO Reporting to Regulatory Agencies

Monitoring and Reporting Program Order No. WQ 2013-0058-EXEC establishes the monitoring, record keeping, reporting, and public notification requirements for Order No. 2006-2003-DWQ Statewide General Waste Discharge Requirements for Sanitary Sewer Systems.

NOTIFICATION REQUIREMENTS

1. For any Category 1 SSO greater than or equal to 1,000 gallons that results in a discharge to a surface water or spilled in a location where it probably will be discharged to surface water, either directly or by way of a drainage channel or MS4, the enrollee shall, as soon as possible, but not later than two (2) hours after (A) the enrollee has knowledge of the discharge, (B) notification is possible, and (C) notification can be provided without substantially impeding cleanup or other emergency measures, notify the Cal OES and obtain a notification control number.

   Office of Emergency Services
   (800) 852-7550
   County of Riverside

Department of Environmental Health
Environmental Resources Management
(951) 955-8980

2. To satisfy notification requirements for each applicable SSO, the enrollee shall provide the information requested by Cal OES before receiving a control number. Spill information requested by Cal OES may include:

   i. Name of person notifying Cal OES and direct return phone number.

   ii. Estimated SSO volume discharged (gallons).

   iii. If ongoing, estimated SSO discharge rate (gallons per minute).

   iv. SSO Incident Description:

      a. Brief narrative.

      b. On-scene point of contact for additional information (name and cell phone number).

      c. Date and time enrollee became aware of the SSO.

      d. Name of sanitary sewer system agency causing the SSO.

      e. SSO cause (if known).

   v. Indication of whether the SSO has been contained.

   vi. Indication of whether surface water is impacted.

   vii. Name of surface water impacted by the SSO, if applicable.

   viii. Indication of whether a drinking water supply is or may be impacted by the SSO.

   ix. Any other known SSO impacts.

   x. SSO incident location (address, city, state, and zip code).

3. Following the initial notification to Cal OES and until such time that an enrollee certifies the SSO report in the CIWQS Online SSO Database, the enrollee shall provide updates to Cal OES regarding substantial changes to the estimated volume of untreated or partially treated sewage discharged and any substantial change(s) to known impact(s).

REPORTING REQUIREMENTS

1. CIWQS Online SSO Database Account

   All enrollees shall obtain a CIWQS Online SSO Database account and receive a "Username" and "Password" by registering through CIWQS. These accounts allow controlled and secure entry into the CIWQS Online SSO Database.

2. SSO Mandatory Reporting Information

   For reporting purposes, if one SSO event results in multiple appearance points in a sewer system asset, the enrollee shall complete one SSO report in the CIWQS Online SSO Database which includes the GPS coordinates for the location of the SSO appearance point closest to the failure point, blockage or location of the flow condition that caused the SSO, and provide descriptions of the locations of all other discharge points associated with the SSO event.

3. SSO Categories

   i. Category 1 – Discharges of untreated or partially treated wastewater of any volume resulting from

an enrollee's sanitary sewer system failure or flow condition that:

a. Reach surface water and/or reach a drainage channel tributary to a surface water; or

b. Reach a MS4 and are not fully captured and returned to the sanitary sewer system or not otherwise captured and disposed of properly. Any volume of wastewater not recovered from the MS4 is considered to have reached surface water unless the storm drain system discharges to a dedicated storm water or groundwater infiltration basin (e.g., infiltration pit, percolation pond).

ii. Category 2 – Discharges of untreated or partially treated wastewater greater than or equal to 1,000 gallons resulting from an enrollee's sanitary sewer system failure or flow condition that does not reach a surface water, a drainage channel, or the MS4 unless the entire SSO volume discharged to the storm drain system is fully recovered and disposed of properly.

iii. Category 3 – All other discharges of untreated or partially treated wastewater resulting from an enrollee's sanitary sewer system failure or flow condition.

6.3.6.1 SSO Reporting Timeframes

4. Sanitary Sewer Overflow Reporting to CIWQS - Timeframes

i. Category 1 and Category 2 SSOs – All SSOs that meet the above criteria for Category 1 or Category 2 SSOs shall be reported to the CIWQS Online SSO Database:

a. Draft reports for Category 1 and Category 2 SSOs shall be submitted to the CIWQS Online SSO Database within three (3) business days of the enrollee becoming aware of the SSO. Minimum information that shall be reported in a draft Category 1 SSO report shall include all information identified in section 8.i.a. below. Minimum information that shall be reported in a Category 2 SSO draft report shall include all information identified in section 8.i.c below.

b. A final Category 1 or Category 2 SSO report shall be certified through the CIWQS Online SSO Database within 15 calendar days of the end date of the SSO. Minimum information that shall be certified in the final Category 1 SSO report shall include all information identified in section 8.i.b below. Minimum information that shall be certified in a final Category 2 SSO report shall include all information identified in section 8.i.d below.

ii. Category 3 SSOs – All SSOs that meet the above criteria for Category 3 SSOs shall be reported to the CIWQS Online SSO Database and certified within 30 calendar days after the end of the calendar month in which the SSO occurs (e.g., all Category 3 SSOs occurring in the month of February shall be entered into the database and certified by March 30). Minimum information that shall be certified in a final Category 3 SSO report shall include all information identified in section 8.i.e below.

iii. "No Spill" Certification – If there are no SSOs during the calendar month, the enrollee shall either 1) certify, within 30 calendar days after the end of each calendar month, a "No Spill" certification statement in the CIWQS Online SSO Database certifying that there were no SSOs for the designated month, or 2) certify, quarterly within 30 calendar days after the end of each quarter, "No Spill" certification statements in the CIWQS Online SSO Database certifying that there were no SSOs for each month in the quarter being reported on. For quarterly reporting, the quarters are Q1 - January/ February/ March, Q2 - April/May/June, Q3 - July/August/September, and Q4 - October/November/December.

If there are no SSOs during a calendar month but the enrollee reported a PLSD, the enrollee shall still certify a "No Spill" certification statement for that month.

iv. Amended SSO Reports – The enrollee may update or add additional information to a certified SSO report within 120 calendar days after the SSO end date by amending the report or by adding an attachment to the SSO report in the CIWQS Online SSO Database. SSO reports certified in the CIWQS Online SSO Database prior to the adoption date of this MRP may only be amended up to 120 days after the effective date of this MRP. After 120 days, the enrollee may contact the SSO Program Manager to request to amend an SSO report if the enrollee also submits justification for why the additional information was not available prior to the end of the 120 days.

5. SSO Technical Report

The enrollee shall submit an SSO Technical Report in the CIWQS Online SSO Database within 45 calendar days of the SSO end date for any SSO in which 50,000 gallons or greater are spilled to surface waters. This report, which does not preclude the Water Boards from requiring more detailed analyses if requested, shall include at a minimum, the following:

i. Causes and Circumstances of the SSO:

a. Complete and detailed explanation of how and when the SSO was discovered.

b. Diagram showing the SSO failure point, appearance point(s), and final destination(s).

c. Detailed description of the methodology employed and available data used to calculate the volume of the SSO and, if applicable, the SSO volume recovered.

d. Detailed description of the cause(s) of the SSO.

e. Copies of original field crew records used to document the SSO.

f. Historical maintenance records for the failure location.

ii. Enrollee's Response to SSO:

a. Chronological narrative description of all actions taken by enrollee to terminate the spill.

b. Explanation of how the SSMP Overflow Emergency Response plan was implemented to respond to and mitigate the SSO.

c. Final corrective action(s) completed and/or planned to be completed, including a schedule for actions not yet completed.

iii. Water Quality Monitoring:

a. Description of all water quality sampling activities conducted including analytical results and evaluation of the results.

b. Detailed location map illustrating all water quality sampling points.

6. Privately Owned Sewer Laterals (PLSDs) – Not Applicable

7. CIWQS Online SSO Database Unavailability

In the event that the CIWQS Online SSO Database is not available, the enrollee must fax or e-mail

all required information to the appropriate Regional Water Board office in accordance with the time schedules identified herein. In such event, the enrollee must also enter all required information into the CIWQS Online SSO Database when the database becomes available.

6.3.6.2 Mandatory Information to be Included in SSO Online Reporting

8. Mandatory Information to be Included in CIWQS Online SSO Reporting

All enrollees shall obtain a CIWQS Online SSO Database account and receive a "Username" and "Password" by registering through CIWQS which can be reached at CIWQS@waterboards.ca.gov or by calling (866) 792-4977, M-F, 8 A.M. to 5 P.M. These accounts will allow controlled and secure entry into the CIWQS Online SSO Database. Additionally, within thirty (30) days of initial enrollment and prior to recording SSOs into the CIWQS Online SSO Database, all enrollees must complete a Collection System

Questionnaire (Questionnaire). The Questionnaire shall be updated at least once every 12 months.

i. SSO Reports

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

a. Draft Category 1 SSOs: At a minimum, the following mandatory information shall be reported for a draft Category 1 SSO report:

1. SSO Contact Information: Name and telephone number of enrollee contact person who can answer specific questions about the SSO being reported.
2. SSO Location Name.
3. Location of the overflow event (SSO) by entering GPS coordinates. If a single overflow event results in multiple appearance points, provide GPS coordinates for the appearance point closest to the failure point and describe each additional appearance point in the SSO appearance point explanation field.
4. Whether or not the SSO reached surface water, a drainage channel, or entered and was discharged from a drainage structure.
5. Whether or not the SSO reached a municipal separate storm drain system.
6. Whether or not the total SSO volume that reached a municipal separate storm drain system was fully recovered.
7. Estimate of the SSO volume, inclusive of all discharge point(s).
8. Estimate of the SSO volume that reached surface water, a drainage channel, or was not recovered from a storm drain.
9. Estimate of the SSO volume recovered (if applicable).
10. Number of SSO appearance point(s).
11. Description and location of SSO appearance point(s). If a single sanitary sewer system failure results in multiple SSO appearance points, each appearance point must be described.
12. SSO start date and time.
13. Date and time the enrollee was notified of, or self-discovered, the SSO.
14. Estimated operator arrival time.
15. For spills greater than or equal to 1,000 gallons, the date and time Cal OES was called.
16. For spills greater than or equal to 1,000 gallons, the Cal OES control number.

b. Certified Category 1 SSOs: At a minimum, the following mandatory information shall be reported for a certified Category 1 SSO report, in addition to all fields in section 8.i.a :

1. Description of SSO destination(s).
2. SSO end date and time.
3. SSO causes (mainline blockage, roots, etc.).
4. SSO failure point (main, lateral, etc.).
5. Whether or not the spill was associated with a storm event.
6. Description of spill corrective action, including steps planned or taken to reduce, eliminate, and prevent reoccurrence of the overflow; and a schedule of major milestones for those steps.
7. Description of spill response activities.
8. Spill response completion date.
9. Whether or not there is an ongoing investigation, the reasons for the investigation and the expected date of completion.
10. Whether or not a beach closure occurred or may have occurred as a result of the SSO.
11. Whether or not health warnings were posted as a result of the SSO.
12. Name of beach(es) closed and/or impacted. If no beach was impacted, NA shall be selected.
13. Name of surface water(s) impacted.
14. If water quality samples were collected, identify parameters the water quality samples were analyzed for. If no samples were taken, NA shall be selected.
15. If water quality samples were taken, identify which regulatory agencies received sample results (if applicable). If no samples were taken, NA shall be selected.
16. Description of methodology(ies) and type of data relied upon for estimations of the SSO volume discharged and recovered.
17. SSO Certification: Upon SSO Certification, the CIWQS Online SSO Database will issue a final SSO identification (ID) number.

c. Draft Category 2 SSOs: At a minimum, the following mandatory information shall be reported for a draft Category 2 SSO report:

1. Items 1-14 in section 8.i.a above for Draft Category 1 SSO.

d. Certified Category 2 SSOs: At a minimum, the following mandatory information shall be reported for a certified Category 2 SSO report:

1. Items 1-14 in section 8.i.a above for Draft Category 1 SSO and Items 1-9, and 17 in section 8.i.b above for Certified Category 1 SSO.

e. Certified Category 3 SSOs: At a minimum, the following mandatory information shall be reported for a certified Category 3 SSO report:

1. Items 1-14 in section 8.i.a above for Draft Category 1 SSO and Items 1-5, and 17 in section 8.i.b above for Certified Category 1 SSO.

6.3.7 Reporting to Other Regulatory Agencies

ii. Reporting SSOs to Other Regulatory Agencies

These reporting requirements do not preclude an enrollee from reporting SSOs to other regulatory agencies pursuant to state law. In addition, these reporting requirements do not replace other Regional Water Board notification and reporting requirements for SSOs.

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

Office of Emergency Services
Phone (800) 852-7550

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

The County of Riverside Department of Environmental Health, Environmental Resource Management program receives reports of SSOs directly from the Office of Emergency Services.

County of Riverside
Department of Environmental Health
Environmental Resource Management
(951) 955-8980

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.

The County of Riverside Department of Environmental Health, Environmental Resource Management program receives reports of SSOs directly from the Office of Emergency Services.

County of Riverside
Department of Environmental Health
Environmental Resource Management
(951) 955-8980

California Regional Water Quality Control Board, Santa Ana Region
(951) 782-4130

The SSO database does not automatically generate an e-mail notification about the SSO for all Category 2 SSOs. Category 2 SSOs shall be reported directly to the Regional Water Quality Control Board, as well as through the SSO Online System.

California Regional Water Quality Control Board, Santa Ana Region
(951) 782-4130

If any SSO enters a Riverside County Flood Control District channel or facility, Riverside County Control shall be notified immediately:

Riverside County Flood Control District
(951) 955-1200

The City of Riverside Public Works Department, Sewerage Systems Division shall be notified if any SSO results in a violation of any sewer discharge limit.

City of Riverside Public Works Department
Sewerage Systems Division
(951) 341-6140

6.4 SSO Response Procedures

6.4.1 Initial SSO Response

In the event of SSO, the initial responder's responsibility is to confirm reported SSOs to the current Facilities Maintenance, Plant Services supervisor, or to Maintenance Services, Housing Operations, for SSO notifications and to coordinate containment and recovery.
The initial responder will:

1. Assess the failure of equipment or SSO release.

2. Call for assistance (if needed) including additional personnel, materials, supplies, and equipment. If the spill is larger than they can adequately respond to, an outside contractor will be called.

3. Use appropriate Personal Protective Equipment.

4. .Use appropriate safety precautionary measures including Lockout/Tag-out protocol.

5. Obtain necessary equipment to respond to spill. Facilities Maintenance, Plant Services and Maintenance Services, Housing Operations maintain supplies of materials and equipment to mitigate spills. Available materials and equipment includes sand bags, bypass pumps, hoses, sewer jet, and emergency generators.

6. Assess if the SSO occurred onto private property. Be aware that UC Riverside could face increased liability for further damages inflicted to private property during such instances.

7. Coordinate with EH&S Hazardous Materials response if there is a suspicious substance (e.g. oil sheen, foam) to be found on the ground surface or if there is a suspicious odor (e.g. gasoline) not common to the sewer system, EH&S Hazardous Materials response should

be contacted.

6.4.2 SSO Correction, Containment, and Clean-Up

The following are specific actions to be performed by the response crews during an SSO:

1. Stop the SSO, identify the source and minimize the exposure,
2. If necessary, call TAPS to secure the affected area and post warning signs. TAPS has barricades, cones, and fencing available to secure the site,
3. Contain the wastewater discharged to the maximum extent possible by utilizing spill containment devices,
4. Determine the location and cause of the SSO. Assessment will include a check of the sumps and upstream and downstream manholes,
5. Implement appropriate corrective actions. This may include the use of vacuum trucks, emergency pumps, stand-by force main, emergency generators,
6. Clean and sanitize the affected area(s),
7. Finalize the documentation for the incident,
8. Review overall response with the Responding Parties, and
9. Sample as necessary. Any sampling performed will be coordinated with the Riverside County Public Health Department/Environmental Health Services. The sampling methodology needs to be consistent with the sampling requirements outlined in the RWQCB's Sewage Spill Reporting Guidance.

6.5 Training

Training on SSO response procedures will be conducted for members of departments responsible for implementing the OERP. EH&S is responsible for providing exposure control training for Plant Services and Housing Operations staff. Facilities Maintenances, Plant Services and Maintenance Services, Housing Operations are responsible for providing technical training for their respective staff responsible for SSO response.

6.6 Overflow Emergency Response Plan Update and Distribution

The OERP will be reviewed annually by the departments responsible for implementing the OERP, and revisions incorporated as needed. Comments, updates, and other relevant information should be submitted to the EH&S Environmental Program contact. The OERP will be distributed to all persons identified as OERP Contacts for each department in Section 6.2 OERP Roles and Responsibilities.

7. Fats, Oils, and Grease (FOG) Control Program

The discharge of fats, oils, and grease (FOG) from animal and vegetable sources can create sewer

line blockages that result in SSOs. The purpose of the FOG control program is to reduce the amount of these substances discharged to the sewer system. The FOG Control Program shall include the following elements, and details of are provided in Table 7-1:

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

(b) Description of current infrastructure

(c) Procedures for identification of grease blockages; inspection and maintenance

(d) Requirements for installation of grease interceptors

(e) Best management practices and training

(f) Recordkeeping

Table 7-1 - FOG Control Program Elements

FOG Control Program Element	Responsible Position, Department	Name	Telephone Number
Establish an implementation plan and schedule for public education outreach program that promotes the proper disposal of grease and fats. The following measures are to foster the successful implementation of the SSMP, and promote proper disposal of FOG by food facilities on campus: • A copy of the UC Riverside SSMP will be posted on the UC Riverside EH&S website (http://ehs.ucr.edu). • Signs will be posted in the work areas of employees who use grease interceptors • An e-mail distribution list will be maintained to inform interested parties about the status of the UC Riverside SSMP.	Environmental Programs Manager, Environmental Health & Safety	Amanda Grey	(951) 827-2416

FOG Control Program Element	Responsible Position, Department	Name	Telephone Number
Description of current infrastructure. There are six grease interceptors and one clarifier on the main campus, listed on Table 2-1 - Grease Interceptors Summary. Locations of each of the grease interceptors and the clarifier are shown on Figure 2-2 - UC Riverside Grease Interceptor Locations.	Assistant Director, Plant Services	Mike Terry	(951) 827-4880
	Maintenance Plumber Supervisor, Plant Services	Jerry Higgins	(951) 827-7696
	Director, Housing Operations	Hassan Ghamlouch	(951) 827-4850
	Assistant Director, Maintenance Operations, Housing Services	Eric Shuler	(951) 827-4849
	Maintenance Supervisor, Housing Services	John Peraino	(951) 827-2121
	Lothian Senior Manager, Dining Services	Gustavo Plascencia	(951) 827-6061
	Facilities Manager, Highlander Union Building	Joe Steinmeyer	(951) 827-3611
	Maintenance Supervisor, University Extension	Richard Aten	(951) 827-1697

FOG Control Program Element	Responsible Position, Department	Name	Telephone Number
Procedures for identification of grease blockages; inspection and maintenance. • Grease blockages are identified and cleared as part of routine inspection and maintenance as described in Operation and Maintenance Program Elements. System maintenance includes both preventive maintenance and cleaning determined to be necessary during routine inspections. • If a grease interceptor is not working properly, either Facilities Maintenance, Plant Services, Housing Services, or Dining Services is contacted for service. • A grease interceptor self-inspection program and training has been developed in collaboration with the City of Riverside Sewerage System Division for Housing Services employees to ensure grease interceptors are pumped at appropriate frequencies. • All grease interceptors are pumped before reaching 25% total occupied capacity.	Assistant Director, Plant Services	Mike Terry	(951) 827-4880
	Maintenance Plumber Supervisor, Plant Services	Jerry Higgins	(951) 827-7696
	Director, Housing Operations	Hassan Ghamlouch	(951) 827-4850
	Assistant Director, Maintenance Operations, Housing Services	Eric Shuler	(951) 827-4849
	Maintenance Supervisor, Housing Services	John Peraino	(951) 827-2121
	Lothian Senior Manager, Dining Services	Gustavo Plascencia	(951) 827-6061
	Facilities Manager, Highlander Union Building	Joe Steinmeyer	(951) 827-3611
	Maintenance Supervisor, University Extension	Richard Aten	(951) 827-1697
	Environmental Programs Manager, Environmental Health & Safety	Amanda Grey	(951) 827-2416

FOG Control Program Element	Responsible Position, Department	Name	Telephone Number
Requirements for installation of grease interceptors. Installation of a new grease interceptor will be required of newly constructed food facilities. Replacement of existing grease interceptors may be recommended based on findings of inspection and maintenance of the system. Installations of new grease traps or interceptors shall conform to City of Riverside Public Works Department design specifications. Design plans for new grease traps and interceptors are reviewed and approved by Facilities Maintenance, Plant Services; and Capital Resource Management, Architects & Engineers.	Assistant Director, Plant Services Maintenance Plumber Supervisor, Plant Services Executive Director, Capital Resource Management, Architects & Engineers	Mike Terry Jerry Higgins Richard Racicot	(951) 827-4880 (951) 827-7696 (951) 827-1277
Best management practices and training. Best management practices are in place to prevent the introduction of FOG into the sanitary sewer. Many food facilities employees are students, therefore there is high turnover and training is critical to promoting proper disposal of FOG. • FOG training is completed by kitchen staff upon hiring on to ensure BMPs are implemented. • FOG BMP training includes bulk grease management practices. Bulk grease from deep fryers or pans is not washed into the sanitary sewer. • Signs are posted in the work areas of employees who use grease interceptors. • Food facilities are being equipped with semi-automated grease collection and storage equipment that eliminates open handling of bulk grease. • Excess grease generated from grilling or frying at those food facilities that do not	Lothian Senior Manager, Dining Services Environmental Programs Manager, Environmental Health & Safety	Gustavo Plascencia Amanda Grey	(951) 827-6061 (951) 827-2416

FOG Control Program Element	Responsible Position, Department	Name	Telephone Number
have grease interceptors is collected in containers and disposed by a grease rendering company.			
Recordkeeping. Service records and invoices for pumping of grease interceptors are kept by the Physical Plant Superintendent, Housing Services. They are available upon request.	Physical Plant Superintendent, Housing Services	Craig Kasten	(951) 827-7720

8. System Evaluation and Capacity Assurance Plan

The university is currently managing a large-scale infrastructure rehabilitation initiative that will address 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

As part of its plan to ensure adequate infrastructure capacity to support the expected increase in population over the next several years, UC Riverside continues to address areas that may pose future issues. The assessment focused on key areas of concern identified by UC Riverside staff and included observations of existing conditions, estimations of future loads, and proposed capital improvements necessary for the sanitary sewer system to meet future loads. The following deficiencies and shortfalls were identified:

- Updated mapping of older sewer lines is needed
- Root intrusion is present throughout the system
- Water metering devices are not installed at many buildings
- No hydraulic model of the sanitary sewer system exists

8.2 Design Criteria

Undertake the evaluation identified in the system evaluation above to establish appropriate design criteria.

8.3 Capacity Enhancement Measures

In 2004 the UC Riverside had a major upgrade to the sewer system although some of the above deficiencies were addressed under UC Riverside's ongoing facility maintenance programs, most will require comprehensive planning, design, and construction to address. UC Riverside has adapted the findings of the infrastructure assessment and multi-system rehabilitation project to address all of the shortfalls and deficiencies identified by the 2004 report (ME Engineers 2004). The following areas will be

considered for future development of upgrades to the system.

- Complete a video inspection of existing sanitary sewer lines 6” and larger
- Develop a hydraulic model of the sanitary sewer system to enable detailed capacity analyses and facilitate system design
- Replace and/or install sewer lines and manholes as necessary to correct root intrusion and corrosion problems, address bottlenecks, and meet future load requirements. Sizes will be determined by hydraulic modeling.

8.4 Schedule

The system upgrades identified above are scheduled to be completed to align with expected growth of the population on UC Riverside’s campus. Future plans for improvements to the system can be seen in Appendix E of the sewer system maps. The schedule will be updated on a need basis for completion of projects or proposals.

9. Monitoring, Measurement and Program Modifications

Maintain relevant information to establish and prioritize appropriate SSMP activities.

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

(b) Assess the success of the preventative maintenance program

(c) Update program elements, as appropriate, based on monitoring or performance evaluations

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

SSOs of any amount of are reported to Environmental Health & Safety. EH&S is responsible for maintaining records regarding SSOs for the purpose of tracking and assessment of trends including frequency, location, and volume. EH&S works with facilities to reduce and prevent SSOs.

The Wastewater Working Group (WWG) will meet at least annually to review the implementation and effectiveness of the SSMP. The WWG will evaluate any SSOs and make recommendations to prevent reoccurrence. The WWG will evaluate the implementation of each element of the SSMP, determine effectiveness, identify deficiencies, and recommend corrective actions or improvements.

10. SSMP Program Audits

At a minimum of every two years, periodic internal audits of the SSMP must be conducted, and a report must be prepared and kept on file. This audit shall focus on evaluating compliance with SSMP requirements, its effectiveness, identification of any deficiencies in the SSMP and steps to correct them.
The biennial audit is required to be completed by Environmental Health & Safety, and Facilities Maintenance, Plant Services. The Environmental Programs Manager will be responsible for coordinating the biennial audit, and the Maintenance Plumber Supervisor, Plant Services will be responsible for providing the information required to complete the biennial audit. A SSMP Biennial Audit Checklist will

be used to conduct the audit, and the results are used to prepare the SSMP biennial audit report. A copy of the SSMP Biennial Audit Checklist is attached hereto at Appendix D.

11. 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.

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

The SSMP will be updated as needed 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 Riverside will communicate annually with interested parties regarding implementation and performance of the SSMP. Interested parties include:

- Associated Students Environmental Affairs
- City of Riverside
- County of Riverside
- Riverside Public Works Department
- Graduate Students Association (GSA)
- Santa Ana RWQCB

11.1 SSMP Certification

The Final SSMP, incorporating all of the SSMP requirements, shall be certified to be in compliance with the general WDRs within the time frame identified in subsection D.15 of Order No. 2006-0003-DWQ for sewer systems serving population between 100,000 and 10,000 no later than 48 months after WDRs adoption, or May 2, 2010.

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

Initial certification of the UC Riverside SSMP has been completed in the Online SSO Database as required.

11.2 SSMP Update and Re-certification

The SSMP must be updated every five (5) years, and must include any significant program changes. Re-certification is required in accordance with the above certification procedures when significant updates to the SSMP are made.

To complete the re-certification process, the data shall be entered in the Online SSO Database Questionnaire and the automated form printed, signed, and mailed to the State Water Board at the above address.

Appendix A

State Water Resources Control Board Order No. 2006-0003-DWQ, Statewide General Waste Discharge Requirements for Sanitary Sewer Systems

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

<table>
<tr><td>Task and Associated Section</td><td colspan="4">Completion Date</td></tr>
<tr><td></td><td>Population > 100,000</td><td>Population between 100,000 and 10,000</td><td>Population between 10,000 and 2,500</td><td>Population < 2,500</td></tr>
<tr><td>Application for Permit Coverage
Section C</td><td colspan="4">6 months after WDRs Adoption</td></tr>
<tr><td>Reporting Program
Section G</td><td colspan="4">6 months after WDRs Adoption[1]</td></tr>
<tr><td>SSMP Development Plan and Schedule
No specific Section</td><td>9 months after WDRs Adoption[2]</td><td>12 months after WDRs Adoption[2]</td><td>15 months after WDRs Adoption[2]</td><td>18 months after WDRs Adoption[2]</td></tr>
<tr><td>Goals and Organization Structure
Section D 13 (i) & (ii)</td><td colspan="2">12 months after WDRs Adoption[2]</td><td colspan="2">18 months after WDRs Adoption[2]</td></tr>
<tr><td>Overflow Emergency Response Program
Section D 13 (vi)</td><td rowspan="3">24 months after WDRs Adoption[2]</td><td rowspan="3">30 months after WDRs Adoption[2]</td><td rowspan="3">36 months after WDRs Adoption[2]</td><td rowspan="3">39 months after WDRs Adoption[2]</td></tr>
<tr><td>Legal Authority
Section D 13 (iii)</td></tr>
<tr><td>Operation and Maintenance Program
Section D 13 (iv)</td></tr>
<tr><td>Grease Control Program
Section D 13 (vii)</td><td rowspan="3">36 months after WDRs Adoption</td><td rowspan="3">39 months after WDRs Adoption</td><td rowspan="3">48 months after WDRs Adoption</td><td rowspan="3">51 months after WDRs Adoption</td></tr>
<tr><td>Design and Performance
Section D 13 (v)</td></tr>
<tr><td>System Evaluation and Capacity Assurance Plan
Section D 13 (viii)</td></tr>
<tr><td>Final SSMP, incorporating all of the SSMP requirements
Section D 13</td><td></td><td></td><td></td><td></td></tr>
</table>

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

Appendix B

State Water Resources Control Board Order No. WQ 2013-0058- EXEC, Amending Monitoring and Reporting Program for Statewide General Waste Discharge Requirements for Sanitary Sewer Systems

STATE OF CALIFORNIA
WATER RESOURCES CONTROL BOARD
ORDER NO. WQ 2013-0058-EXEC

AMENDING MONITORING AND REPORTING PROGRAM
FOR
STATEWIDE GENERAL WASTE DISCHARGE REQUIREMENTS FOR
SANITARY SEWER SYSTEMS

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

1. The State Water Board is authorized to prescribe statewide general Waste Discharge Requirements (WDRs) for categories of discharges that involve the same or similar operations and the same or similar types of waste pursuant to Water Code section 13263(i).

2. Water Code section 13193 *et seq.* requires the Regional Water Quality Control Boards (Regional Water Boards) and the State Water Board (collectively, the Water Boards) to gather Sanitary Sewer Overflow (SSO) information and make this information available to the public, including but not limited to, SSO cause, estimated volume, location, date, time, duration, whether or not the SSO reached or may have reached waters of the state, response and corrective action taken, and an enrollee's contact information for each SSO event. An enrollee is defined as the public entity having legal authority over the operation and maintenance of, or capital improvements to, a sanitary sewer system greater than one mile in length.

3. Water Code section 13271, *et seq.* requires notification to the California Office of Emergency Services (Cal OES), formerly the California Emergency Management Agency, for certain unauthorized discharges, including SSOs.

4. On May 2, 2006, the State Water Board adopted Order 2006-0003-DWQ, "Statewide Waste Discharge Requirements for Sanitary Sewer Systems"[1] (hereafter SSS WDRs) to comply with Water Code section 13193 and to establish the framework for the statewide SSO Reduction Program.

5. Subsection G.2 of the SSS WDRs and the Monitoring and Reporting Program (MRP) provide that the Executive Director may modify the terms of the MRP at any time.

6. On February 20, 2008, the State Water Board Executive Director adopted a revised MRP for the SSS WDRs to rectify early notification deficiencies and ensure that first responders are notified in a timely manner of SSOs discharged into waters of the state.

7. When notified of an SSO that reaches a drainage channel or surface water of the state, Cal OES, pursuant to Water Code section 13271(a)(3), forwards the SSO notification information[2] to local government agencies and first responders including local public health officials and the applicable Regional Water Board. Receipt of notifications for a single SSO event from both the SSO reporter

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[1] Available for download at:
http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2006/wqo/wqo2006_0003.pdf

[2] Cal OES Hazardous Materials Spill Reports available Online at:
http://w3.calema.ca.gov/operational/malhaz.nsf/$defaultview and http://w3.calema.ca.gov/operational/malhaz.nsf

and Cal OES is duplicative. To address this, the SSO notification requirements added by the February 20, 2008 MRP revision are being removed in this MRP revision.

8. In the February 28, 2008 Memorandum of Agreement between the State Water Board and the California Water and Environment Association (CWEA), the State Water Board committed to re-designing the CIWQS[3] Online SSO Database to allow "event" based SSO reporting versus the original "location" based reporting. Revisions to this MRP and accompanying changes to the CIWQS Online SSO Database will implement this change by allowing for multiple SSO appearance points to be associated with each SSO event caused by a single asset failure.

9. Based on stakeholder input and Water Board staff experience implementing the SSO Reduction Program, SSO categories have been revised in this MRP. In the prior version of the MRP, SSOs have been categorized as Category 1 or Category 2. This MRP implements changes to SSO categories by adding a Category 3 SSO type. This change will improve data management to further assist Water Board staff with evaluation of high threat and low threat SSOs by placing them in unique categories (i.e., Category 1 and Category 3, respectively). This change will also assist enrollees in identifying SSOs that require Cal OES notification.

10. Based on over six years of implementation of the SSS WDRs, the State Water Board concludes that the February 20, 2008 MRP must be updated to better advance the SSO Reduction Program[4] objectives, assess compliance, and enforce the requirements of the SSS WDRs.

IT IS HEREBY ORDERED THAT:

Pursuant to the authority delegated by Water Code section 13267(f), Resolution 2002-0104, and Order 2006-0003-DWQ, the MRP for the SSS WDRs (Order 2006-0003-DWQ) is hereby amended as shown in Attachment A and shall be effective on September 9, 2013.

8/6/13
Date

Thomas Howard
Executive Director

[3] California Integrated Water Quality System (CIWQS) publicly available at http://www.waterboards.ca.gov/ciwqs/publicreports.shtml

[4] Statewide Sanitary Sewer Overflow Reduction Program information is available at: http://www.waterboards.ca.gov/water_issues/programs/sso/

ATTACHMENT A

STATE WATER RESOURCES CONTROL BOARD
ORDER NO. WQ 2013-0058-EXEC

AMENDING MONITORING AND REPORTING PROGRAM
FOR
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 2006-0003-DWQ, "Statewide General Waste Discharge Requirements for Sanitary Sewer Systems" (SSS WDRs). This MRP shall be effective from September 9, 2013 until it is rescinded. The Executive Director may make revisions to this MRP at any time. These revisions may include a reduction or increase in the monitoring and reporting requirements. All site specific records and data developed pursuant to the SSS WDRs and this MRP shall be complete, accurate, and justified by evidence maintained by the enrollee. Failure to comply with this MRP may subject an enrollee to civil liabilities of up to $5,000 a day per violation pursuant to Water Code section 13350; up to $1,000 a day per violation pursuant to Water Code section 13268; or referral to the Attorney General for judicial civil enforcement. The State Water Resources Control Board (State Water Board) reserves the right to take any further enforcement action authorized by law.

A. SUMMARY OF MRP REQUIREMENTS

Table 1 – Spill Categories and Definitions

CATEGORIES	DEFINITIONS [see Section A on page 5 of Order 2006-0003-DWQ, for Sanitary Sewer Overflow (SSO) definition]
CATEGORY 1	Discharges of untreated or partially treated wastewater of **any volume** resulting from an enrollee's sanitary sewer system failure or flow condition that: • Reach surface water and/or reach a drainage channel tributary to a surface water; or • Reach a Municipal Separate Storm Sewer System (MS4) and are not fully captured and returned to the sanitary sewer system or not otherwise captured and disposed of properly. Any volume of wastewater not recovered from the MS4 is considered to have reached surface water unless the storm drain system discharges to a dedicated storm water or groundwater infiltration basin (e.g., infiltration pit, percolation pond).
CATEGORY 2	Discharges of untreated or partially treated wastewater of **1,000 gallons or greater** resulting from an enrollee's sanitary sewer system failure or flow condition that **do not** reach surface water, a drainage channel, or a MS4 unless the entire SSO discharged to the storm drain system is fully recovered and disposed of properly.
CATEGORY 3	All other discharges of untreated or partially treated wastewater resulting from an enrollee's sanitary sewer system failure or flow condition.
PRIVATE LATERAL SEWAGE DISCHARGE (PLSD)	Discharges of untreated or partially treated wastewater resulting from blockages or other problems **within a privately owned sewer lateral** connected to the enrollee's sanitary sewer system or from other private sewer assets. PLSDs that the enrollee becomes aware of may be voluntarily reported to the California Integrated Water Quality System (CIWQS) Online SSO Database.

Table 2 – Notification, Reporting, Monitoring, and Record Keeping Requirements

ELEMENT	REQUIREMENT	METHOD
NOTIFICATION **(see section B of MRP)**	• Within two hours of becoming aware of any Category 1 SSO **greater than or equal to 1,000 gallons discharged to surface water or spilled in a location where it probably will be discharged to surface water**, notify the California Office of Emergency Services (Cal OES) and obtain a notification control number.	Call Cal OES at: **(800) 852-7550**
REPORTING **(see section C of MRP)**	• Category 1 SSO: Submit draft report within three business days of becoming aware of the SSO and certify within 15 calendar days of SSO end date. • Category 2 SSO: Submit draft report within 3 business days of becoming aware of the SSO and certify within 15 calendar days of the SSO end date. • Category 3 SSO: Submit certified report within 30 calendar days of the end of month in which SSO the occurred. • SSO Technical Report: Submit within 45 calendar days after the end date of any Category 1 SSO in which 50,000 gallons or greater are spilled to surface waters. • "No Spill" Certification: Certify that no SSOs occurred within 30 calendar days of the end of the month or, if reporting quarterly, the quarter in which no SSOs occurred. • Collection System Questionnaire: Update and certify every 12 months.	Enter data into the CIWQS Online SSO Database (http://ciwqs.waterboards.ca.gov/), certified by enrollee's Legally Responsible Official(s).
WATER QUALITY MONITORING **(see section D of MRP)**	• Conduct water quality sampling **within 48 hours** after initial SSO notification for Category 1 SSOs in which 50,000 gallons or greater are spilled to surface waters.	Water quality results are required to be uploaded into CIWQS for Category 1 SSOs in which 50,000 gallons or greater are spilled to surface waters.
RECORD KEEPING **(see section E of MRP)**	• SSO event records. • Records documenting Sanitary Sewer Management Plan (SSMP) implementation and changes/updates to the SSMP. • Records to document Water Quality Monitoring for SSOs of 50,000 gallons or greater spilled to surface waters. • Collection system telemetry records if relied upon to document and/or estimate SSO Volume.	Self-maintained records shall be available during inspections or upon request.

B. NOTIFICATION REQUIREMENTS

Although Regional Water Quality Control Boards (Regional Water Boards) and the State Water Board (collectively, the Water Boards) staff do not have duties as first responders, this MRP is an appropriate mechanism to ensure that the agencies that have first responder duties are notified in a timely manner in order to protect public health and beneficial uses.

1. For any Category 1 SSO greater than or equal to 1,000 gallons that results in a discharge to a surface water or spilled in a location where it probably will be discharged to surface water, either directly or by way of a drainage channel or MS4, the enrollee shall, as soon as possible, but not later than two (2) hours after (A) the enrollee has knowledge of the discharge, (B) notification is possible, and (C) notification can be provided without substantially impeding cleanup or other emergency measures, notify the Cal OES and obtain a notification control number.

2. To satisfy notification requirements for each applicable SSO, the enrollee shall provide the information requested by Cal OES before receiving a control number. Spill information requested by Cal OES may include:

    i. Name of person notifying Cal OES and direct return phone number.
    ii. Estimated SSO volume discharged (gallons).
    iii. If ongoing, estimated SSO discharge rate (gallons per minute).
    iv. SSO Incident Description:
        a. Brief narrative.
        b. On-scene point of contact for additional information (name and cell phone number).
        c. Date and time enrollee became aware of the SSO.
        d. Name of sanitary sewer system agency causing the SSO.
        e. SSO cause (if known).
    v. Indication of whether the SSO has been contained.
    vi. Indication of whether surface water is impacted.
    vii. Name of surface water impacted by the SSO, if applicable.
    viii. Indication of whether a drinking water supply is or may be impacted by the SSO.
    ix. Any other known SSO impacts.
    x. SSO incident location (address, city, state, and zip code).

3. Following the initial notification to Cal OES and until such time that an enrollee certifies the SSO report in the CIWQS Online SSO Database, the enrollee shall provide updates to Cal OES regarding substantial changes to the estimated volume of untreated or partially treated sewage discharged and any substantial change(s) to known impact(s).

4. PLSDs: The enrollee is strongly encouraged to notify Cal OES of discharges greater than or equal to 1,000 gallons of untreated or partially treated wastewater that result or may result in a discharge to surface water resulting from failures or flow conditions within a privately owned sewer lateral or from other private sewer asset(s) if the enrollee becomes aware of the PLSD.

C. REPORTING REQUIREMENTS

1. **CIWQS Online SSO Database Account:** All enrollees shall obtain a CIWQS Online SSO Database account and receive a "Username" and "Password" by registering through CIWQS. These accounts allow controlled and secure entry into the CIWQS Online SSO Database.

2. **SSO Mandatory Reporting Information:** For reporting purposes, if one SSO event results in multiple appearance points in a sewer system asset, the enrollee shall complete one SSO report in the CIWQS Online SSO Database which includes the GPS coordinates for the location of the SSO appearance point closest to the failure point, blockage or location of the flow condition that caused the SSO, and provide descriptions of the locations of all other discharge points associated with the SSO event.

3. **SSO Categories**

   i. **Category 1** – Discharges of untreated or partially treated wastewater of any volume resulting from an enrollee's sanitary sewer system failure or flow condition that:

      a. Reach surface water and/or reach a drainage channel tributary to a surface water; or

      b. Reach a MS4 and are not fully captured and returned to the sanitary sewer system or not otherwise captured and disposed of properly. Any volume of wastewater not recovered from the MS4 is considered to have reached surface water unless the storm drain system discharges to a dedicated storm water or groundwater infiltration basin (e.g., infiltration pit, percolation pond).

   ii. **Category 2** – Discharges of untreated or partially treated wastewater greater than or equal to 1,000 gallons resulting from an enrollee's sanitary sewer system failure or flow condition that does not reach a surface water, a drainage channel, or the MS4 unless the entire SSO volume discharged to the storm drain system is fully recovered and disposed of properly.

   iii. **Category 3** – All other discharges of untreated or partially treated wastewater resulting from an enrollee's sanitary sewer system failure or flow condition.

4. **Sanitary Sewer Overflow Reporting to CIWQS - Timeframes**

   i. **Category 1 and Category 2 SSOs** – All SSOs that meet the above criteria for Category 1 or Category 2 SSOs shall be reported to the CIWQS Online SSO Database:

      a. Draft reports for Category 1 and Category 2 SSOs shall be submitted to the CIWQS Online SSO Database within three (3) business days of the enrollee becoming aware of the SSO. Minimum information that shall be reported in a draft Category 1 SSO report shall include all information identified in section 8.i.a. below. Minimum information that shall be reported in a Category 2 SSO draft report shall include all information identified in section 8.i.c below.

      b. A final Category 1 or Category 2 SSO report shall be certified through the CIWQS Online SSO Database within 15 calendar days of the end date of the SSO. Minimum information that shall be certified in the final Category 1 SSO report shall include all information identified in section 8.i.b below. Minimum information that shall be certified in a final Category 2 SSO report shall include all information identified in section 8.i.d below.

ii. **Category 3 SSOs** – All SSOs that meet the above criteria for Category 3 SSOs shall be reported to the CIWQS Online SSO Database and certified within 30 calendar days after the end of the calendar month in which the SSO occurs (e.g., all Category 3 SSOs occurring in the month of February shall be entered into the database and certified by March 30). Minimum information that shall be certified in a final Category 3 SSO report shall include all information identified in section 8.i.e below.

iii. **"No Spill" Certification** – If there are no SSOs during the calendar month, the enrollee shall either 1) certify, within 30 calendar days after the end of each calendar month, a "No Spill" certification statement in the CIWQS Online SSO Database certifying that there were no SSOs for the designated month, or 2) certify, quarterly within 30 calendar days after the end of each quarter, "No Spill" certification statements in the CIWQS Online SSO Database certifying that there were no SSOs for each month in the quarter being reported on. For quarterly reporting, the quarters are Q1 - January/ February/ March, Q2 - April/May/June, Q3 - July/August/September, and Q4 - October/November/December.

If there are no SSOs during a calendar month but the enrollee reported a PLSD, the enrollee shall still certify a "No Spill" certification statement for that month.

iv. **Amended SSO Reports** – The enrollee may update or add additional information to a certified SSO report within 120 calendar days after the SSO end date by amending the report or by adding an attachment to the SSO report in the CIWQS Online SSO Database. SSO reports certified in the CIWQS Online SSO Database prior to the adoption date of this MRP may only be amended up to 120 days after the effective date of this MRP. After 120 days, the enrollee may contact the SSO Program Manager to request to amend an SSO report if the enrollee also submits justification for why the additional information was not available prior to the end of the 120 days.

5. **SSO Technical Report**

The enrollee shall submit an SSO Technical Report in the CIWQS Online SSO Database within 45 calendar days of the SSO end date for any SSO in which 50,000 gallons or greater are spilled to surface waters. This report, which does not preclude the Water Boards from requiring more detailed analyses if requested, shall include at a minimum, the following:

i. **Causes and Circumstances of the SSO:**

a. Complete and detailed explanation of how and when the SSO was discovered.

b. Diagram showing the SSO failure point, appearance point(s), and final destination(s).

c. Detailed description of the methodology employed and available data used to calculate the volume of the SSO and, if applicable, the SSO volume recovered.

d. Detailed description of the cause(s) of the SSO.

e. Copies of original field crew records used to document the SSO.

f. Historical maintenance records for the failure location.

ii. **Enrollee's Response to SSO:**

a. Chronological narrative description of all actions taken by enrollee to terminate the spill.

b. Explanation of how the SSMP Overflow Emergency Response plan was implemented to respond to and mitigate the SSO.

c. Final corrective action(s) completed and/or planned to be completed, including a schedule for actions not yet completed.

iii. **Water Quality Monitoring:**

a. Description of all water quality sampling activities conducted including analytical results and evaluation of the results.

b. Detailed location map illustrating all water quality sampling points.

6. **PLSDs**

Discharges of untreated or partially treated wastewater resulting from blockages or other problems within a privately owned sewer lateral connected to the enrollee's sanitary sewer system or from other private sanitary sewer system assets may be voluntarily reported to the CIWQS Online SSO Database.

i. The enrollee is also encouraged to provide notification to Cal OES per section B above when a PLSD greater than or equal to 1,000 gallons has or may result in a discharge to surface water. For any PLSD greater than or equal to 1,000 gallons regardless of the spill destination, the enrollee is also encouraged to file a spill report as required by Health and Safety Code section 5410 et. seq. and Water Code section 13271, or notify the responsible party that notification and reporting should be completed as specified above and required by State law.

ii. If a PLSD is recorded in the CIWQS Online SSO Database, the enrollee must identify the sewage discharge as occurring and caused by a private sanitary sewer system asset and should identify a responsible party (other than the enrollee), if known. Certification of PLSD reports by enrollees is not required.

7. **CIWQS Online SSO Database Unavailability**

In the event that the CIWQS Online SSO Database is not available, the enrollee must fax or e-mail all required information to the appropriate Regional Water Board office in accordance with the time schedules identified herein. In such event, the enrollee must also enter all required information into the CIWQS Online SSO Database when the database becomes available.

8. **Mandatory Information to be Included in CIWQS Online SSO Reporting**

All enrollees shall obtain a CIWQS Online SSO Database account and receive a "Username" and "Password" by registering through CIWQS which can be reached at CIWQS@waterboards.ca.gov or by calling (866) 792-4977, M-F, 8 A.M. to 5 P.M. These accounts will allow controlled and secure entry into the CIWQS Online SSO Database. Additionally, within thirty (30) days of initial enrollment and prior to recording SSOs into the CIWQS Online SSO Database, all enrollees must complete a Collection System Questionnaire (Questionnaire). The Questionnaire shall be updated at least once every 12 months.

i. **SSO Reports**

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

a. **Draft Category 1 SSOs**: At a minimum, the following mandatory information shall be reported for a draft Category 1 SSO report:

1. SSO Contact Information: Name and telephone number of enrollee contact person who can answer specific questions about the SSO being reported.
2. SSO Location Name.
3. Location of the overflow event (SSO) by entering GPS coordinates. If a single overflow event results in multiple appearance points, provide GPS coordinates for the appearance point closest to the failure point and describe each additional appearance point in the SSO appearance point explanation field.
4. Whether or not the SSO reached surface water, a drainage channel, or entered and was discharged from a drainage structure.
5. Whether or not the SSO reached a municipal separate storm drain system.
6. Whether or not the total SSO volume that reached a municipal separate storm drain system was fully recovered.
7. Estimate of the SSO volume, inclusive of all discharge point(s).
8. Estimate of the SSO volume that reached surface water, a drainage channel, or was not recovered from a storm drain.
9. Estimate of the SSO volume recovered (if applicable).
10. Number of SSO appearance point(s).
11. Description and location of SSO appearance point(s). If a single sanitary sewer system failure results in multiple SSO appearance points, each appearance point must be described.
12. SSO start date and time.
13. Date and time the enrollee was notified of, or self-discovered, the SSO.
14. Estimated operator arrival time.
15. For spills greater than or equal to 1,000 gallons, the date and time Cal OES was called.
16. For spills greater than or equal to 1,000 gallons, the Cal OES control number.

b. **Certified Category 1 SSOs**: At a minimum, the following mandatory information shall be reported for a certified Category 1 SSO report, in addition to all fields in section 8.i.a :

1. Description of SSO destination(s).
2. SSO end date and time.
3. SSO causes (mainline blockage, roots, etc.).
4. SSO failure point (main, lateral, etc.).
5. Whether or not the spill was associated with a storm event.
6. Description of spill corrective action, including steps planned or taken to reduce, eliminate, and prevent reoccurrence of the overflow; and a schedule of major milestones for those steps.
7. Description of spill response activities.
8. Spill response completion date.
9. Whether or not there is an ongoing investigation, the reasons for the investigation and the expected date of completion.

10. Whether or not a beach closure occurred or may have occurred as a result of the SSO.
11. Whether or not health warnings were posted as a result of the SSO.
12. Name of beach(es) closed and/or impacted. If no beach was impacted, NA shall be selected.
13. Name of surface water(s) impacted.
14. If water quality samples were collected, identify parameters the water quality samples were analyzed for. If no samples were taken, NA shall be selected.
15. If water quality samples were taken, identify which regulatory agencies received sample results (if applicable). If no samples were taken, NA shall be selected.
16. Description of methodology(ies) and type of data relied upon for estimations of the SSO volume discharged and recovered.
17. SSO Certification: Upon SSO Certification, the CIWQS Online SSO Database will issue a final SSO identification (ID) number.

c. **Draft Category 2 SSOs**: At a minimum, the following mandatory information shall be reported for a draft Category 2 SSO report:

1. Items 1-14 in section 8.i.a above for Draft Category 1 SSO.

d. **Certified Category 2 SSOs**: At a minimum, the following mandatory information shall be reported for a certified Category 2 SSO report:

1. Items 1-14 in section 8.i.a above for Draft Category 1 SSO and Items 1-9, and 17 in section 8.i.b above for Certified Category 1 SSO.

e. **Certified Category 3 SSOs**: At a minimum, the following mandatory information shall be reported for a certified Category 3 SSO report:

1. Items 1-14 in section 8.i.a above for Draft Category 1 SSO and Items 1-5, and 17 in section 8.i.b above for Certified Category 1 SSO.

ii. **Reporting SSOs to Other Regulatory Agencies**

These reporting requirements do not preclude an enrollee from reporting SSOs to other regulatory agencies pursuant to state law. In addition, these reporting requirements do not replace other Regional Water Board notification and reporting requirements for SSOs.

iii. **Collection System Questionnaire**

The required Questionnaire (see subsection G of the SSS WDRs) provides the Water Boards with site-specific information related to the enrollee's sanitary sewer system. The enrollee shall complete and certify the Questionnaire at least every 12 months to facilitate program implementation, compliance assessment, and enforcement response.

iv. **SSMP Availability**

The enrollee shall provide the publicly available internet web site address to the CIWQS Online SSO Database where a downloadable copy of the enrollee's approved SSMP, critical supporting documents referenced in the SSMP, and proof of local governing board approval of the SSMP is posted. If all of the SSMP documentation listed in this subsection is not publicly available on the Internet, the enrollee shall comply with the following procedure:

a. Submit an **electronic** copy of the enrollee's approved SSMP, critical supporting documents referenced in the SSMP, and proof of local governing board approval of the SSMP to the State Water Board, within 30 days of that approval and within 30 days of any subsequent SSMP re-certifications, to the following mailing address:

State Water Resources Control Board
Division of Water Quality
Attn: SSO Program Manager
1001 I Street, 15th Floor, Sacramento, CA 95814

D. WATER QUALITY MONITORING REQUIREMENTS:

To comply with subsection D.7(v) of the SSS WDRs, the enrollee shall develop and implement an SSO Water Quality Monitoring Program to assess impacts from SSOs to surface waters in which 50,000 gallons or greater are spilled to surface waters. The SSO Water Quality Monitoring Program, shall, at a minimum:

1. Contain protocols for water quality monitoring.

2. Account for spill travel time in the surface water and scenarios where monitoring may not be possible (e.g. safety, access restrictions, etc.).

3. Require water quality analyses for ammonia and bacterial indicators to be performed by an accredited or certified laboratory.

4. Require monitoring instruments and devices used to implement the SSO Water Quality Monitoring Program to be properly maintained and calibrated, including any records to document maintenance and calibration, as necessary, to ensure their continued accuracy.

5. Within 48 hours of the enrollee becoming aware of the SSO, require water quality sampling for, at a minimum, the following constituents:
   i. Ammonia
   ii. Appropriate Bacterial indicator(s) per the applicable Basin Plan water quality objective or Regional Board direction which may include total and fecal coliform, enterococcus, and e-coli.

E. RECORD KEEPING REQUIREMENTS:

The following records shall be maintained by the enrollee for a minimum of five (5) years and shall be made available for review by the Water Boards during an onsite inspection or through an information request:

1. General Records: The enrollee shall maintain records to document compliance with all provisions of the SSS WDRs and this MRP for each sanitary sewer system owned including any required records generated by an enrollee's sanitary sewer system contractor(s).

2. SSO Records: The enrollee shall maintain records for each SSO event, including but not limited to:
   i. Complaint records documenting how the enrollee responded to all notifications of possible or actual SSOs, both during and after business hours, including complaints that do not

result in SSOs. Each complaint record shall, at a minimum, include the following information:

a. Date, time, and method of notification.

b. Date and time the complainant or informant first noticed the SSO.

c. Narrative description of the complaint, including any information the caller can provide regarding whether or not the complainant or informant reporting the potential SSO knows if the SSO has reached surface waters, drainage channels or storm drains.

d. Follow-up return contact information for complainant or informant for each complaint received, if not reported anonymously.

e. Final resolution of the complaint.

ii. Records documenting steps and/or remedial actions undertaken by enrollee, using all available information, to comply with section D.7 of the SSS WDRs.

iii. Records documenting how all estimate(s) of volume(s) discharged and, if applicable, volume(s) recovered were calculated.

3. Records documenting all changes made to the SSMP since its last certification indicating when a subsection(s) of the SSMP was changed and/or updated and who authorized the change or update. These records shall be attached to the SSMP.

4. Electronic monitoring records relied upon for documenting SSO events and/or estimating the SSO volume discharged, including, but not limited to records from:

i. Supervisory Control and Data Acquisition (SCADA) systems

ii. Alarm system(s)

iii. Flow monitoring device(s) or other instrument(s) used to estimate wastewater levels, flow rates and/or volumes.

F. CERTIFICATION

1. All information required to be reported into the CIWQS Online SSO Database shall be certified by a person designated as described in subsection J of the SSS WDRs. This designated person is also known as a Legally Responsible Official (LRO). An enrollee may have more than one LRO.

2. Any designated person (i.e. an LRO) shall be registered with the State Water Board to certify reports in accordance with the CIWQS protocols for reporting.

3. Data Submitter (DS): Any enrollee employee or contractor may enter draft data into the CIWQS Online SSO Database on behalf of the enrollee if authorized by the LRO and registered with the State Water Board. However, only LROs may certify reports in CIWQS.

4. The enrollee shall maintain continuous coverage by an LRO. Any change of a registered LRO or DS (e.g., retired staff), including deactivation or a change to the LRO's or DS's contact information, shall be submitted by the enrollee to the State Water Board within 30 days of the change by calling (866) 792-4977 or e-mailing help@ciwqs.waterboards.ca.gov.

5. A registered designated person (i.e., an LRO) shall certify all required reports under penalty of perjury laws of the state as stated in the CIWQS Online SSO Database at the time of certification.

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 Resources Control Board.

7/30/13
Date

Jeanine Townsend
Clerk to the Board

Appendix C

Sanitary Sewer Overflow (SSO) Report Form

UCR Environmental Health & Safety

Sanitary Sewer Overflow (SSO) Report Form

Use this form to enter sanitary sewer overflow data for submittal into the State Water Resources Control Board CIWQS SSO Online Database. Refer to the SSO Notification and Reporting Procedures Flow Chart on page 3 for notification and reporting timeframes.

Date of SSO spill: _____

Identify the SSO spill type and enter below:

- Category 1 SSO – Spills of any volume that reach surface water
- Category 2 SSO – Spills greater than or equal to 1,000 gallons that do not reach surface water
- Category 3 SSO – Spills less than 1,000 gallons that do not reach surface water

SSO spill type (Check one): ☐ Category 1 ☐ Category 2 ☐ Category 3

Name *(person completing this form)*: _____ Phone: _____

Exact spill location: _____

Latitude: _____ Longitude: _____

Spill location description: _____

_____

Date/time spill was first discovered or reported to Plant Services:

Date: _____ Time: _____ : ___ am/pm

Estimated spill start date/time: Date: _____ Time: _____ : ___ am/pm

Estimated operator arrival date/time: Date: _____ Time: _____ : ___ am/pm

Estimated spill end date/time: Date: _____ Time: ____ : _____ am/pm

Final spill destination *(Check all that apply)*:

☐ Building/Structure ☐ Street Curb/Gutter ☐ Paved Surface ☐ Unpaved Surface

☐ Storm Drain ☐ Surface Water ☐ Drainage Channel

☐ Storm Water Infiltration/Retention Structure/Field ☐ Other *(specify)*: _____

Did spill discharge to land? *(Includes discharges directly to land, and discharges to a storm drain system or drainage channel that flows to a storm water infiltration/retention structure, field, or other non-surface water location)* ☐ Yes ☐ No

If Yes, estimated spill volume discharged to land: _____ gallons

Estimated spill volume recovered from discharge to land: *(Do not include water used for clean up)*:

_____ gallons

Did spill reach storm drain? ☐ Yes ☐ No

If Yes, estimated spill volume that reached storm drain : _____ gallons

Estimated spill volume recovered from storm drain: _____ gallons

UCR Environmental Health & Safety

Sanitary Sewer Overflow (SSO) Report Form

Did spill reach drainage channel? ☐ Yes ☐ No

If Yes, estimated spill volume that reached discharge channel: _____gallons

Estimated spill volume recovered from drainage channel: _____gallons

Methods used to estimate spill volumes *(Check all that apply. Use Volume Estimation Forms to document spill dimensions, shapes and other volume estimation information)*:

☐ Eyeball Method ☐ Calculations from Spill Dimensions ☐ Duration and Flow Rate
☐ Open Channel Spill Estimation ☐ Drop Bucket Method ☐ Calculations Based on Pipe Size
☐ Flow from Vent or Pick Holes ☐ Flow around Manhole Cover ☐ Flow from Manhole w/o a Cover

Number of spill appearance points: _____

Spill appearance point *(Check all that apply. See next page for complete list)*:

☐ Gravity Mainline ☐ Inside Building or Structure ☐ Manhole
☐ Other Sewer System Structure *(specify)*: _____

Spill cause *(Check all that apply. See next page for complete list)*:

☐ Debris - General ☐ Debris – Rags ☐ Root Intrusion ☐ Debris from Construction
☐ Construction Diversion Failure ☐ Collection System Maintenance Caused Spill/Damage
☐ Damage by Others Not Related to Collection System ☐ Other *(specify)* _____

Where did failure occur? *(Check all that apply. See next page for complete list)*:

☐ Gravity Mainline ☐ Manhole ☐ Inside Building or Structure ☐ Other *(specify)*: _____

Was this spill associated with a storm event? ☐ Yes ☐ No

Diameter of sewer pipe at the point of blockage or failure: ____inches

Material of sewer pipe at the point of blockage or failure: _____

Estimated age of sewer asset at the point of blockage or failure: _____years

Spill response activities *(Check all that apply)*:

☐ Cleaned-up ☐ Contained All or Portion of Spill ☐ Mitigated Effects of Spill ☐ Restored Flow
☐ Returned All of Spill to Sanitary Sewer System ☐ Other Enforcement Agency Notified
☐ Other *(specify)*: _____

Spill response completion date: _____

Spill corrective action taken: *(Check all that apply. See next page for complete list)*:

☐ Added Sewer to Preventive Maintenance Program ☐ Adjusted Schedule/Method of Preventive Maintenance ☐ Inspected Sewer Using CCTV to Determine Cause ☐ Plan Rehabilitation or Replacement of Sewer ☐ Repaired Facilities or Replaced Defect ☐ Other *(specify)* _____

Cal OES Control Number *(required for Category 1 SSOs)*: _____

Cal OES Called Date/Time *(required for Category 1 SSOs)*: Date: _____Time:____:_____am/pm

CIWQS SSO Online Database Dropdown Lists:

Spill Appearance Point

Force Main
Gravity Mainline
Inside Building or Structure
Lateral Clean-Out
Lower Lateral
Manhole
Other Sewer System Structure
Pump Station
Upper Lateral

Spill Cause

Air relief valve (ARV) Failure
Blow-off Valve (BOV) Failure
Construction Diversion Failure
CS Maintenance Caused Spill/ Damage
Damage by Others Not Related to CS
Construction/ Maintenance (specify type below)
Debris from Construction
Debris from Lateral
Debris-General
Debris- Rags
Flow Exceeded Capacity (Separate CS only)
Grease Deposition (FOG)
Inappropriate Discharge to CS
Natural Disaster
Non-Dispersibles
Operator Error
Other (specify)
Pipe Structural Problem/ Failure Installation
Pump Station Failure- Controls
Pump Station Failure- Mechanical
Pump station Failure- Lower
Rainfall Exceeded Design, Inflow and Infiltration (Separate CS Only)
Root Intrusion
Siphon Failure
Surcharged Pipe (Combined CS Only)
Vandalism

Where Did Failure Occur

Air Relief Valve (ARV)
Blow- off Valve (BOV)
Force Main
Gravity Mainline
Lower Lateral (Public)
Manhole
Other (specify below)
Pump Station- Controls
Pump Station- Mechanical
Pump Station- Power
Siphon
Upper Lateral (public)

Spill Response Activities

Cleaned-Up
Mitigated Effects of Spill
Contained All or Portion of Spill
Other (specify below)
Restored Flow
Returned All of Spill to Sanitary Sewer System
Property Owner Notified
Other Enforcement Agency Notified

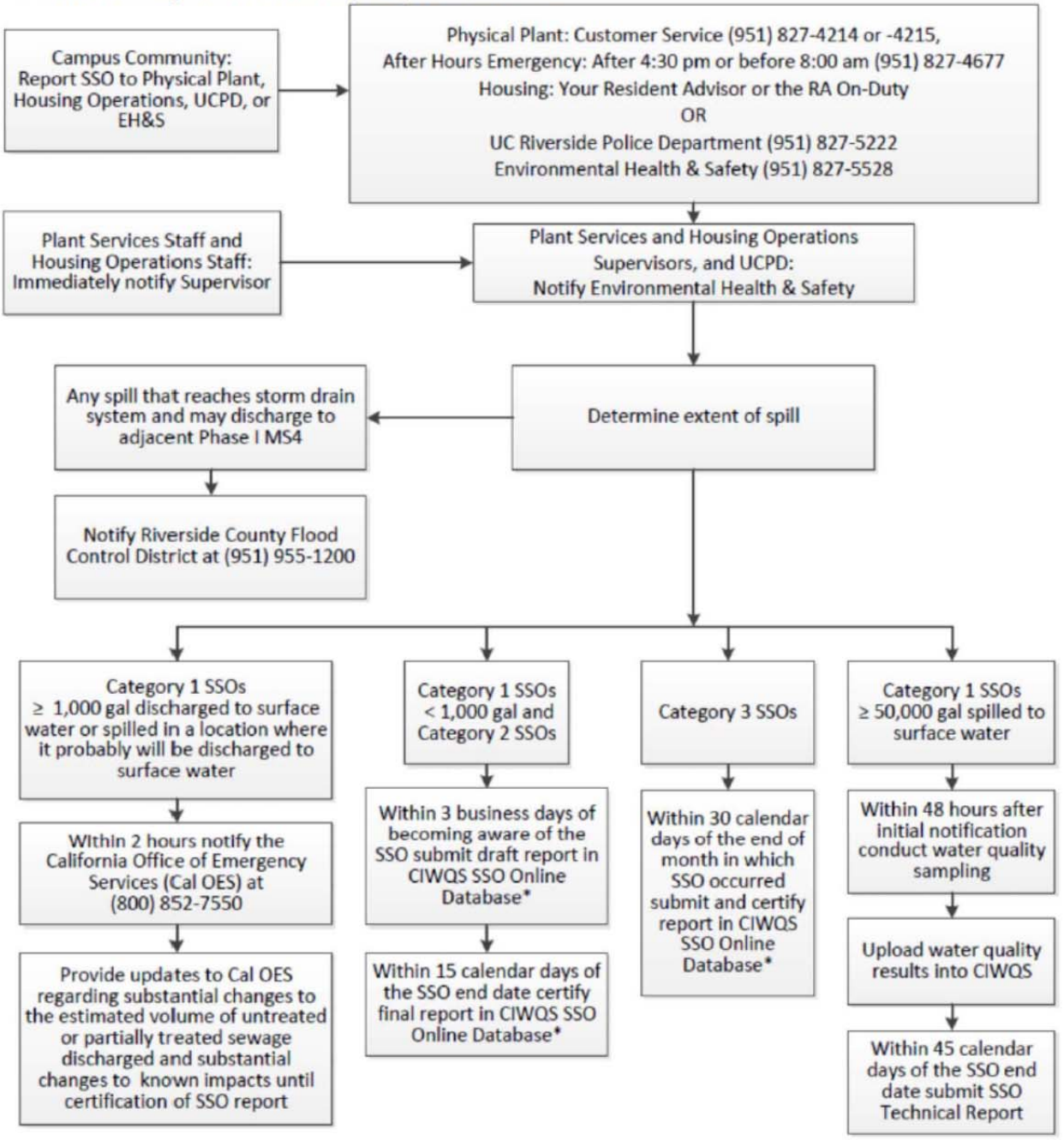
Spill Corrective Action Taken

Added Sewer to Preventative Maintenance Program
Adjusted Schedule/ Method of Preventative Maintenance
Enforcement Action Against FOG Source
Inspected Sewer Using CCTV to Determine Cause
Other (specify below)
Plan Rehabilitation or Replacement of Sewer
Repaired Facilities or Replaced Defect

UCR Environmental Health & Safety

Sanitary Sewer Overflow (SSO) Notification and Reporting Procedures

When a sanitary sewer overflow (SSO) is discovered:



*California Integrated Water Quality System Project (CIWQS) SSO Online Database. If CIWQS is not available, fax or e-mail all required information to Regional Water Quality Control Board Santa Ana Region 8 within the required time. Fax to: (951) 781-6288, e-mail to: spillreportR8@waterboards.ca.gov, and enter all required information into CIWQS SSO Online Database when it becomes available.

Rev. 4/2014

Appendix D

UCR **SSMP Biennial Audit Checklist**

University of California, Riverside
Sewer System Management Plan Audit
Period: 7/1/20xx - 6/30/20xx

Every two years a review of the Sewer System Management Plan (SSMP) must be conducted by representatives from the following departments:

- Plumbing Shop (required)
- Environment, Health and Safety (required)
- Fire Department (recommended)
- Physical Planning & Construction (recommended)
- Physical Plant (recommended)

Representatives should each have a copy of the SSMP and use the following checklist to determine if the plan is effective and in compliance with the regulatory requirements. Environment, Health and Safety shall maintain the documentation of this review for five years.

Section A - General Information

This is a review of the UC SSMP for the period from 7/1/20xx through 6/30/20xx.

This review is being conducted by the following persons:

Printed Name:	Title, Department:
Jerry Higgins	Maintenance Plumber Superviser, Plant Services
Amanda Grey	Environmental Programs Manager, Environmental Health & Safety

Section B - Performance Indicators

Plumbing shall extract data for performance indicators from Facilities Maintainence Work Order System and maintain documentation in Plumbing Shop area.

Performance Indicators

1	Number of sewer system overflows (SSOs) during the review period.	20xx-20xx: 5 Category 2 20xx-20xx: 1 Category 2
2	Indicate the location of all SSOs during the review period on a map. Utility prints documented in Plumbing Shop area.	20xx-20xx: 20xx-20xx:
3	Total volume of all SSOs during the review period.	20xx-20xx: 20xx-20xx:

4	Average volume of an SSO during the review period.	20xx-20xx: 20xx-20xx:
5	Volume of the largest SSO during the review period.	20xx-20xx: 20xx-20xx:
6	% of sewer lines without obstructions.	20xx-20xx: 20xx-20xx:
7	% of blockages cleared within 4 hours.	20xx-20xx: 20xx-20xx:
8	% of repairs completed within campus established time frames.	20xx-20xx: 20xx-20xx:
9	Miles of sanitary sewer lines cleaned.	20xx-20xx: miles (LF) 20xx-20xx: miles (LF)
10	Miles of sanitary sewer lines inspected.	20xx-20xx: miles (LF) 20xx-20xx: miles (LF)

Section C - SSMP Requirements

Requirement		Answer		
		Yes	No	N/A
1	Have there been changes to the regulations since the SSMP was last reviewed?			
	If yes, have the applicable SSMP sections been updated?			
I. Goals				
2	Are the goals stated in the SSMP still appropriate and accurate?			
	If no, have the applicable SSMP sections been updated?			
II. Organization				
3	Is the contact information for the responsible or authorized representative current?			
	If no, have the applicable SSMP sections been updated?			
4	Is the contact information for the staff responsible for implementing specific measures in the SSMP program current?			
	If no, have the applicable SSMP sections been updated?			
5	Is SSO reporting and response Chain of Communication current?			
	If no, have the applicable SSMP sections been updated?			
III. Legal Authority				
6	Does the SSMP cite the University's authority to:			
	6.1 Prevent illicit discharges?			
	6.2 Require proper design and construction of sewers and connections?			
	6.3 Ensure access for maintenance, inspection, or repairs for portions of the lateral owned or maintained by the University?			

	6.4 Limit discharge of fats, oils, grease, and other debris that may cause blockages?			
	6.5 Enforce any violation of its sewer ordinances?			
	If no, have the applicable SSMP sections been updated?			
IV. Operation and Maintenance Program				
7	Does the SSMP reference the current process and procedures for maintaining the University's sanitary sewer system maps?			
	If no, have the applicable SSMP sections been updated?			
8	Are the University's sanitary sewer system maps complete, current, and sufficiently detailed?			
	If no, have the applicable SSMP sections and/or maps been updated?			
9	Does the SSMP 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?			
	If no, have the applicable SSMP sections been updated?			
10	Does the SSMP address the need for more frequent cleaning and maintenance targeted at known problem areas?			
	If no, have the applicable SSMP sections been updated?			
11	Does the University's Preventative Maintenance program referenced in the SSMP have a system to document scheduled and conducted activities, such as work orders?			
	If no, have the applicable SSMP sections been updated?			
12	Does the University's Rehabilitation and Replacement Plan referenced in the SSMP identify and prioritize system deficiencies and implement short-term and long-term rehabilitation actions to address each deficiency?			
	If no, have the applicable SSMP sections been updated?			
13	Does the SSMP describe training expectations and programs?			
	If no, have the applicable SSMP sections been updated?			
14	Does the SSMP list the major equipment currently used in the operation and maintenance of the sanitary sewer systems and does it list the procedures for inventory management?			
	If no, have the applicable SSMP sections been updated?			
15	Are contingency equipment and replacement parts sufficient to respond to emergencies and properly conduct regular maintenance?			
V. Design and Performance Provisions				
16	Does the SSMP contain current design and construction standards for the installation of new sanitary sewer systems, pump stations, and other appurtenances and for the rehabilitation and repair of existing sanitary sewer systems?			
	If no, have the applicable SSMP sections been updated?			
17	Does the SSMP include current procedures and standards for inspecting and testing the installation of new sewers, pumps, and other appurtenances and the rehabilitation and repair of existing sewer lines?			
	If no, have the applicable SSMP sections been updated?			

University of California, Riverside
Sewer System Management Plan Audit
Period: 7/1/20xx - 6/30/20xx

VI. Overflow Emergency Response Plan				
18	Does the Overflow Emergency Response Plan establish procedures for the emergency response, notification, and reporting of SSO's?			
	If no, have the applicable SSMP sections been updated?			
19	Does the SSMP include procedures to ensure the University's staff and contractor personnel are appropriately trained on the procedures of the Overflow Emergency Response Plan?			
	If no, have the applicable SSMP sections been updated?			
20	Is the Overflow Emergency Response Plan effective in handling SSOs in order to safeguard public health and the environment?			
	If no, have the applicable SSMP sections been updated?			
21	Are all components of the Overflow Emergency Response Plan up to date?			
	If no, have the applicable SSMP sections been updated?			
VII. Fats, Oils, and Grease Control Program				
22	Does the Fats, Oils, and Grease (FOG) Control Program include efforts to educate the public on the proper handling and disposal of FOG?			
	If no, have the applicable SSMP sections been updated?			
23	Does the FOG Control Program identify sections of the sanitary sewer system subject to FOG blockages, establish a cleaning schedule and address source control measures to minimize the blockages?			
	If no, have the applicable SSMP sections been updated?			
24	Does the University have sufficient legal authority to implement and enforce the FOG Control Program?			
	If no, have the applicable SSMP sections been updated?			
25	Are requirements for grease removal devices, best management practices (BMP), record keeping, and reporting established in the FOG Control Program?			
	If no, have the applicable SSMP sections been updated?			
26	Is the current FOG Control Program effective in minimizing blockages of sewer lines resulting from discharges of FOG to the system?			
	If no, have the applicable SSMP sections been updated?			
VIII. System Evaluation and Capacity Assurance Plan				
27	Does the hydraulic capacity evaluation identify deficiencies in the sanitary sewer systems, establish sufficient design criteria and recommend both short-term and long-term capacity enhancement and improvement projects?			
	If no, have the applicable SSMP sections been updated?			
28	Does the Capital Improvement Program (CIP) establish a schedule of completion dates for both short-term and long-term improvements and is the schedule reviewed and updated to reflect current budgetary capabilities and activity accomplishment?			
	If no, have the applicable SSMP sections been updated?			

University of California, Riverside
Sewer System Management Plan Audit
Period: 7/1/20xx - 6/30/20xx

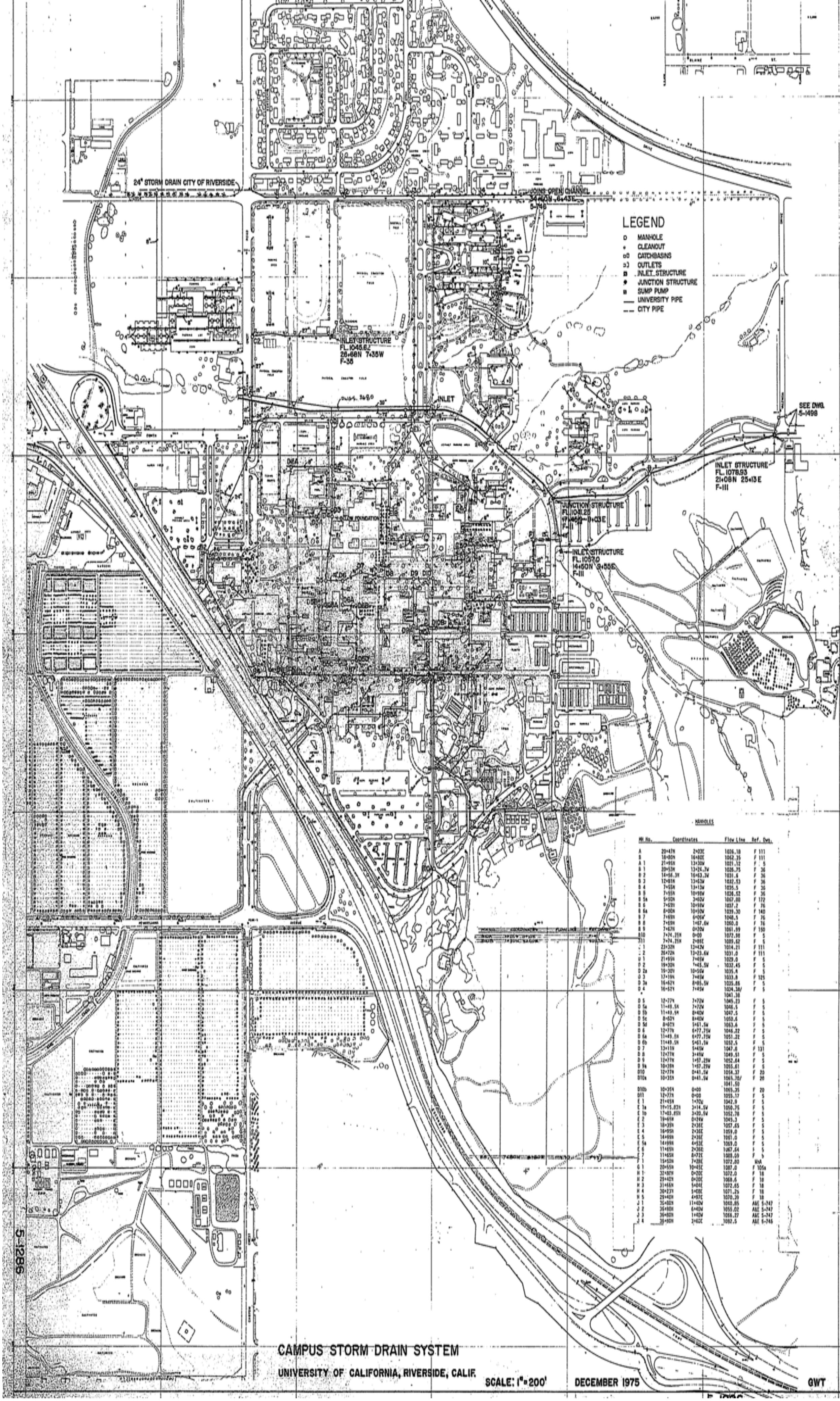
IX. Monitoring, Measurement, and Program Modifications				
29	Does the SSMP accurately portray the methods of tracking and reporting selected performance indicators?			
	If no, have the applicable SSMP sections been updated?			
30	Is the University able to sufficiently evaluate the effectiveness of SSMP elements based on relevant information?			
	If no, have the applicable SSMP sections been updated?			
X. SSMP Program Audits				
31	Is this audit occurring at an appropriate frequency based on the size of the system and the number of SSOs?			
	If no, have the applicable SSMP sections been updated?			
32	Will the audit be submitted to the Regional Water Quality Control Board?			
	If no, have the applicable SSMP sections been updated?			
33	Does this audit record changes made and/or corrective actions taken?			
	If no, have the applicable SSMP sections been updated?			
XI. Communication Program				
34	Does the University effectively communicate the performance of their sanitary sewer systems with the public?			
	If no, have the applicable SSMP sections been updated?			
35	Will the most current SSMP be posted on the University's EH&S website?			

Audit Prepared By:

Signature Date	Signature Date
Amanda Grey	Jerry Higgins
Name	Name
Environmental Programs Manager	Maintenance Plumber Supervisor
Title	Title

Appendix E

Sewer System and Storm Drain Maps

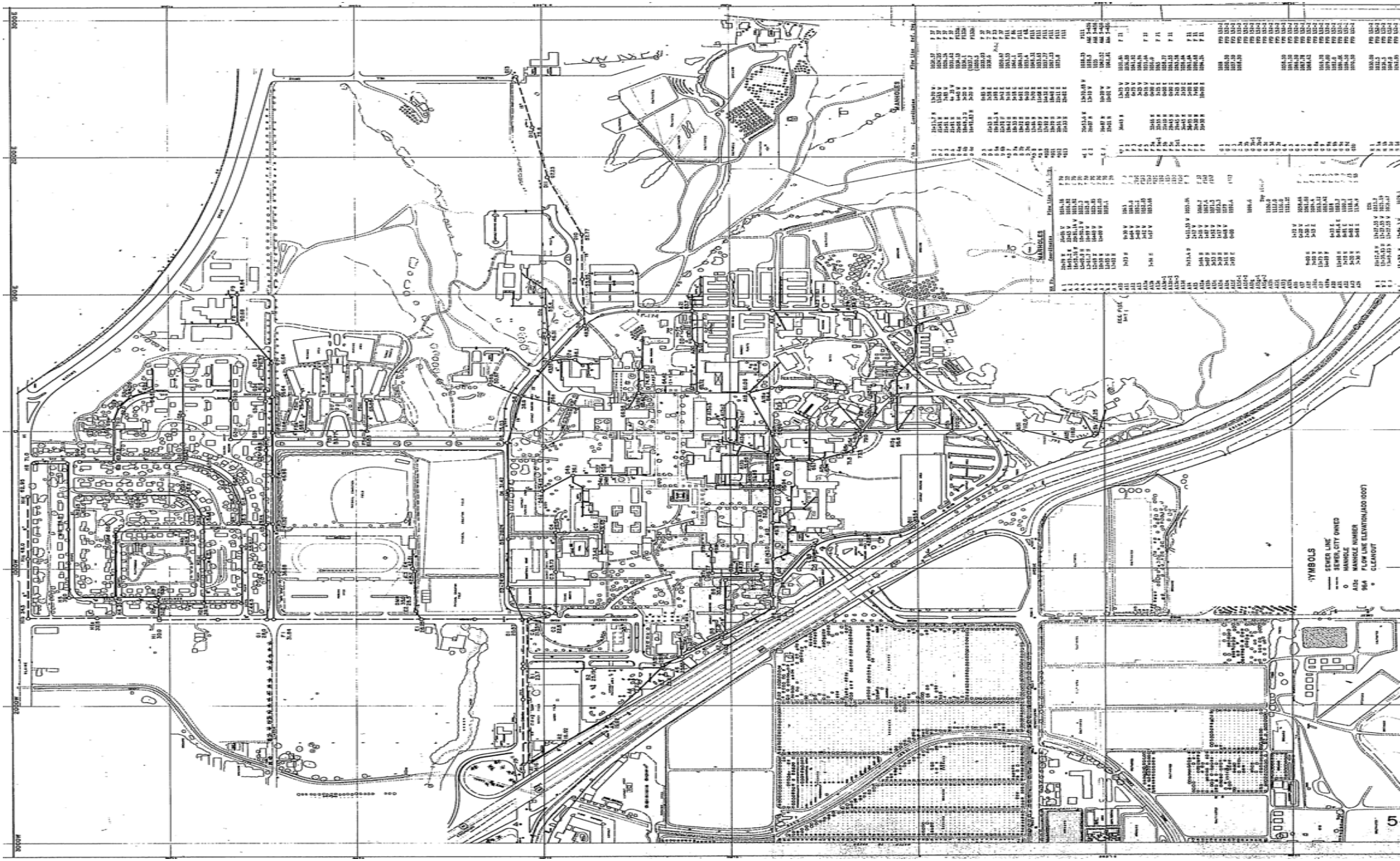


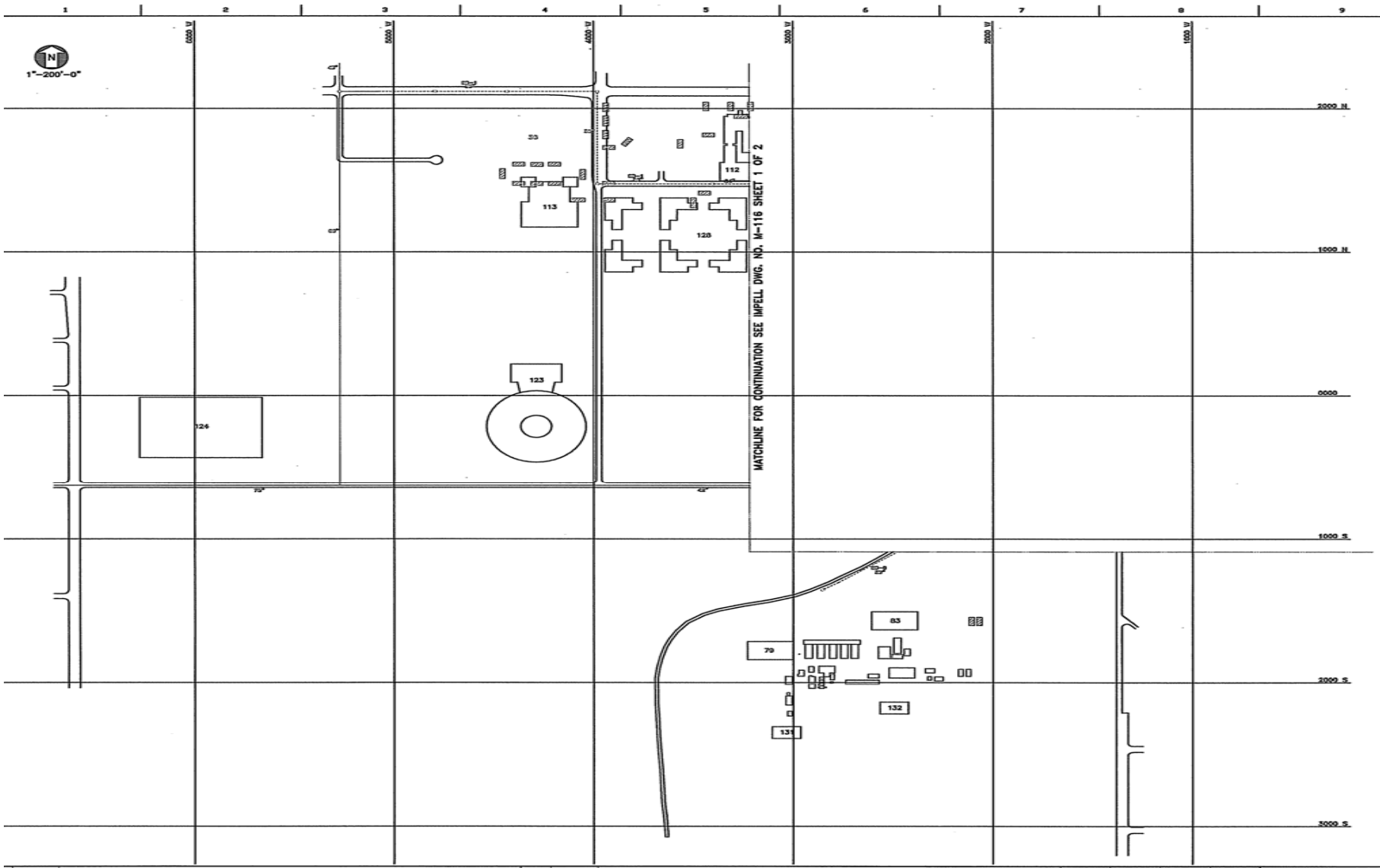
MANHOLES

MH No.	Coordinates		Flow Line	Ref. Dwg.
A	20+47N	2+03E	1026.10	F 111
B	18+80N	16+80E	1062.35	F 111
A 1	21+95N	13+30W	1021.12	F 5
B 1	20+53N	13+24.7W	1026.75	F 36
B 2	14+56.3N	16+63.3W	1031.6	F 36
B 3	12+81N	13+63W	1032.53	F 36
B 4	7+55N	13+13W	1035.5	F 36
B 5	7+55N	10+90W	1036.52	F 36
B 5a	5+50N	3+60W	1067.00	F 172
B 6	7+69N	10+90W	1037.2	F 76
B 6a	8+00N	10+50W	1039.30	F 140
B 7	7+69N	6+05W	1040.5	F 76
B 8	7+69N	1+67.6W	1060.0	F 76
B 9	7+67N	0+20W	1061.99	F 150
B10	7+74.25N	0+00	1072.98	F 5
B11	7+74.25N	2+88E	1089.62	F 5
C 1	23+32N	13+43W	1014.21	F 111
C 2	26+72N	13+23.6W	1031.0	F 111
D 1	21+95N	7+45W	1029.0	F 5
D 2	19+30N	7+45.5W	1032.45	F 5
D 2a	19+30N	10+56W	1035.8	F 5
D 3	17+19N	7+45W	1033.8	F 125
D 3a	16+62N	8+85.5W	1035.86	F 5
D 4	16+62N	7+45W	1034.38/ 1041.38	F 5
D 5	12+77N	7+72W	1045.23	F 5
D 5a	11+49.5N	7+72W	1046.5	F 5
D 5b	11+49.5N	8+40W	1047.5	F 5
D 5c	8+60N	8+40W	1050.6	F 5
D 5d	8+60N	5+61.5W	1063.6	F 5
D 6	12+77N	6+77.75W	1046.22	F 5
D 6a	11+49.5N	6+77.75W	1051.22	F 5
D 6b	11+49.5N	5+61.5W	1052.5	F 5
D 7	13+11N	5+45W	1047.0	F 131
D 8	12+77N	3+49W	1049.51	F 5
D 9	12+77N	1+57.29W	1052.64	F 5
D 9a	10+39N	1+57.29W	1055.61	F 5
D10	12+77N	0+41.5W	1054.37	F 20
D10a	10+35N	0+41.5W	1065.70/ 1041.50	F 20
D10b	10+35N	0+00	1065.35	F 20
D11	12+77N	0+00	1055.17	F 5
E 1	21+45N	1+70W	1042.9	F 5
E 1a	19+15.03N	3+14.5W	1050.75	F 5
E 1b	17+03.85N	3+20.5W	1052.78	F 5
E 2	19+65N	0+24W	1045.3	F 5
E 3	18+35N	2+36E	1057.65	F 5
E 4	16+95N	2+36E	1059.0	F 5
E 5	14+99N	2+36E	1061.0	F 5
E 5a	14+99N	4+53E	1069.0	F 5
E 6	11+65N	2+36E	1067.64	F 5
E 7	11+65N	8+72E	1088.69	F 5
F 1	15+50N	7+28E	1072.80	N/A
G 1	20+55N	10+45E	1087.0	F 105a
H 1	32+80N	0+20E	1072.0	F 18
H 2	29+40N	0+20E	1068.6	F 18
H 3	31+66N	5+04E	1072.65	F 18
H 4	30+23N	5+08E	1071.25	F 18
H 5	29+40N	4+97E	1070.39	F 18
J 1	36+80N	11+60W	1060.85	A&E 5-747
J 2	36+80N	6+40W	1055.02	A&E 5-747
J 3	36+80N	1+40W	1066.27	A&E 5-747
J 4	36+80N	3+62E	1082.5	A&E 5-746

CAMPUS STORM DRAIN SYSTEM

UNIVERSITY OF CALIFORNIA, RIVERSIDE, CALIF. SCALE: 1"=200' DECEMBER 1975 GWT


SYMBOLS
SEWER LINE
SEWER, CITY OWNED
MANHOLE
A15 MANHOLE NUMBER
964 FLOW LINE ELEVATION (ADD 1000')
CLEANOUT
5



NO.	DESCRIPTION
51	FINE ARTS BUILDING
52	PERFORMING ARTS FACILITY
53	HUMANITIES & SOCIAL SCIENCE
54	HUMANITIES & SOCIAL SCIENCE
55	HUMANITIES & SOCIAL SCIENCE
56	SOCIAL SCIENCES I
57	SOCIAL SCIENCES II
58	FINE ARTS II
69	HUMANITIES & SOCIAL SCIENCE
70	HUMANITIES & SOCIAL SCIENCE
71	SOCIAL SCIENCES III
72	SOCIAL SCIENCES IV
73	NATURAL & AGRICULTURAL SCIEN
74	NATURAL & AGRICULTURAL SCIEN
75	NATURAL & AGRICULTURAL SCIEN
76	NATURAL & AGRICULTURAL SCIEN
77	NATURAL & AGRICULTURAL SCIEN
78	NATURAL & AGRICULTURAL SCIEN
79	GREENHOUSE (WEST)
80	NATURAL & AGRICULTURAL SCIEN
80	NATURAL & AGRICULTURAL SCIEN
81	NATURAL & AGRICULTURAL SCIEN
82	NATURAL & AGRICULTURAL SCIEN
83	GREENHOUSE (WEST)
84	NATURAL & AGRICULTURAL SCIEN
85	NATURAL & AGRICULTURAL SCIEN
86	NATURAL & AGRICULTURAL SCIEN
87	NATURAL & AGRICULTURAL SCIEN
88	ENGINEERING UNIT I
89	ENGINEERING UNIT II
90	ENGINEERING UNIT III
91	EDUCATION II
92	EDUCATION I
93	GRADUATE SCHOOL OF MANAGEM
94	GRADUATE SCHOOL OF MANAGEM
95	LAW PHASE I/LIBRARY
96	LAW PHASE II
97	MEDICAL PHASE I/LIBRARY
98	MEDICAL PHASE II
99	PROFESSIONAL/GRADUATE SCHOOL/
100	PROFESSIONAL/GRADUATE SCHOOL/
101	SCIENCE LIBRARY PHASE I
102	SCIENCE LIBRARY PHASE II
103	RIVERA LIBRARY ADDITION I
104	RIVERA LIBRARY ADDITION II
105	STATISTICS-COMPUTER BUILDING
106	EXECUTIVE ADMINISTRATIVE OFFI
107	NEW ADMINISTRATION BUILDING I
108	ADMINISTRATION BUILDING II
109	ADMINISTRATION BUILDING EXPAN
110	ALUMNI/VISITOR CENTER
111	FACULTY CLUB
112	UNIVERSITY EXTENSION (WEST)
113	UNIVERSITY EXTENSION EXPANSIO
114	WETTCH STUDENT CENTER ADDITI
115	NEW STUDENT SERVICES FACILIT
116	NEW STUDENT SERVICES FACILIT
117	SALINITY LAB FACILITY
118	SALINITY LAB ADDITION
118	SALINITY LAB GREENHOUSES (3)
119	NEW CENTRAL UTILITY PLANT
120	CORPORATION YARD EXPANSION
121	STUDENT RECREATION CENTER
123	STUDENT RECREATION CENTER E
123	ATHLETICS COMPLEX (WEST)
124	ATHLETICS (WEST)
125	RESIDENCE HALLS
126	RESIDENCE HALLS
127	APARTMENTS
128	APARTMENTS
129	FAMILY HOUSING
130	FAMILY HOUSING
131	TEACHING & RESEARCH FIELDS
132	TEACHING & RESEARCH FIELDS
133	NEW CONFERENCE CENTER (WES
134	INTERIM OFFICE BUILDING, UNIT

LEGEND:

- EXISTING BUILDING
- FUTURE BUILDING (NOT TO SCA
- EXISTING BUILDING TO BE REM
- FUTURE STORM DRAIN LINE
- EXISTING STORM DRAIN LINE
- FUTURE ROAD
- EXISTING MANHOLE
- FUTURE MANHOLE
- EXISTING CATCH BASIN
- EXISTING OUTLET STRUCTURE
- xx-xx UTILITY INFRASTRUCTURE MASTE NUMBER.

0 100 2
50
GRA

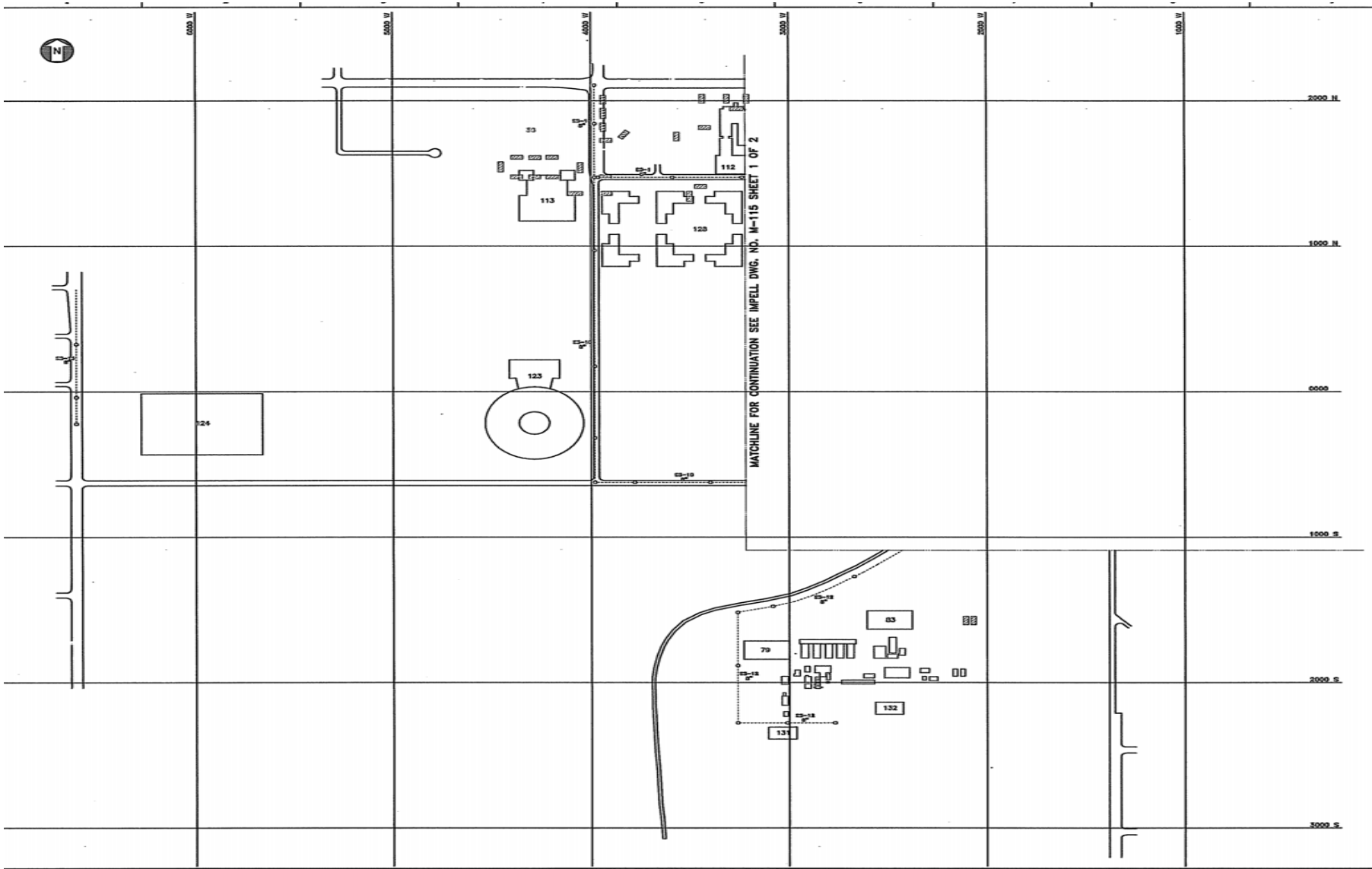
DATE	REFERENCE DRAWINGS
7-2-91	UC RIVERSIDE LRDP ILLUSTRATION MAP AND PROJECTED BUILDING SQUARE FOOTAGE INFORMATION
5-22-58	AERIAL SITE PLAN SURVEY (PLANIMETRIC)-2 SHEETS, BY AERO TECH SURVEYS AND ALBERT A. WEBB ASSOCIATES

REV.	DATE	DESCRIPTION	No'D DRAWN	DES./ENG.	CHECKED	APPROVED
0	8-7-92	ORIGINAL				

STORM DRAIN – FUTURE (2017)

UTILITY INFRASTRUCTURE MASTER PLAN PROJECT
UC RIVERSIDE CAMPUS, RIVERSIDE CA.

ABB
ABB Impell Corporation, San Ramon, California



NO.	DESCRIPTION
81	FINE ARTS BUILDING
82	PERFORMING ARTS FACILITY
83	HUMANITIES & SOCIAL SCIENCE I
84	HUMANITIES & SOCIAL SCIENCE II
85	HUMANITIES & SOCIAL SCIENCE III
86	SOCIAL SCIENCES I
87	SOCIAL SCIENCES II
88	FINE ARTS II
89	HUMANITIES & SOCIAL SCIENCE IV
70	HUMANITIES & SOCIAL SCIENCE V
71	SOCIAL SCIENCES III
72	SOCIAL SCIENCES IV
73	NATURAL & AGRICULTURAL SCIENCE
74	NATURAL & AGRICULTURAL SCIENCE
75	NATURAL & AGRICULTURAL SCIENCE
76	NATURAL & AGRICULTURAL SCIENCE
77	NATURAL & AGRICULTURAL SCIENCE
78	NATURAL & AGRICULTURAL SCIENCE
79	GREENHOUSE (WEST)
80	NATURAL & AGRICULTURAL SCIENCE
60	NATURAL & AGRICULTURAL SCIENCE
81	NATURAL & AGRICULTURAL SCIENCE
82	NATURAL & AGRICULTURAL SCIENCE
83	GREENHOUSE (WEST)
84	NATURAL & AGRICULTURAL SCIENCE
85	NATURAL & AGRICULTURAL SCIENCE
86	NATURAL & AGRICULTURAL SCIENCE
87	NATURAL & AGRICULTURAL SCIENCE
58	ENGINEERING UNIT I
59	ENGINEERING UNIT II
90	ENGINEERING UNIT III
91	EDUCATION II
92	EDUCATION I
93	GRADUATE SCHOOL OF MANAGEMEN
94	GRADUATE SCHOOL OF MANAGEMEN
95	LAW PHASE I/LIBRARY
96	LAW PHASE II
97	MEDICAL PHASE I/LIBRARY
98	MEDICAL PHASE II
99	PROFESSIONAL/GRADUATE SCHOOL(UN
100	PROFESSIONAL/GRADUATE SCHOOL(UN
101	SCIENCE LIBRARY PHASE I
102	SCIENCE LIBRARY PHASE II
103	RIVERA LIBRARY ADDITION I
104	RIVERA LIBRARY ADDITION II
105	STATISTICS-COMPUTER BUILDING A
106	EXECUTIVE ADMINISTRATIVE OFFICES
107	NEW ADMINISTRATION BUILDING I
108	ADMINISTRATION BUILDING II
109	ADMINISTRATION BUILDING EXPANSI
110	ALUMNI/VISITOR CENTER
111	FACULTY CLUB
112	UNIVERSITY EXTENSION (WEST)
113	UNIVERSITY EXTENSION EXPANSION
114	VISITOR STUDENT CENTER ADDITION
115	NEW STUDENT SERVICES FACILITY I
116	NEW STUDENT SERVICES FACILITY I
117	SALINITY LAB FACILITY
118	SALINITY LAB ADDITION
118	SALINITY LAB GREENHOUSES (2)
119	NEW CENTRAL UTILITY PLANT
120	CORPORATION YARD EXPANSION
121	STUDENT RECREATION CENTER
122	STUDENT RECREATION CENTER EXPA
123	ATHLETICS COMPLEX (WEST)
124	ATHLETICS (WEST)
125	RESIDENCE HALLS
126	RESIDENCE HALLS
127	APARTMENTS
128	APARTMENTS
129	FAMILY HOUSING
130	FAMILY HOUSING
151	TEACHING & RESEARCH FIELDS SU
152	TEACHING & RESEARCH FIELDS SU
153	NEW CONFERENCE CENTER (WEST)
154	INTERIM OFFICE BUILDING, UNIT 2

LEGEND:

- EXISTING BUILDING
- FUTURE BUILDING (NOT TO SCALE
- EXISTING BUILDING TO BE REMOVE
- FUTURE SEWER LINE
- EXISTING SEWER LINE
- EXISTING SEWER LINE (CITY OWNE
- FUTURE ROAD (APPROXIMATE LOC
- EXISTING MANHOLE
- FUTURE MANHOLE
- EXISTING CLEANOUT
- UTILITY INFRASTRUCTURE MASTER NUMBER.

0 100 200
0 50
GRAPH

REV.	DATE	REFERENCE DRAWINGS
	7-9-91	UC RIVERSIDE LRDP ILLUSTRATION MAP AND PROJECTED BUILDING SQUARE FOOTAGE INFORMATION
	6-29-88	AERIAL SITE PLAN SURVEY (PLANIMETRIC)-2 SHEETS. BY AERO TECH SURVEYS AND ALBERT A. WEBB ASSOCIATES

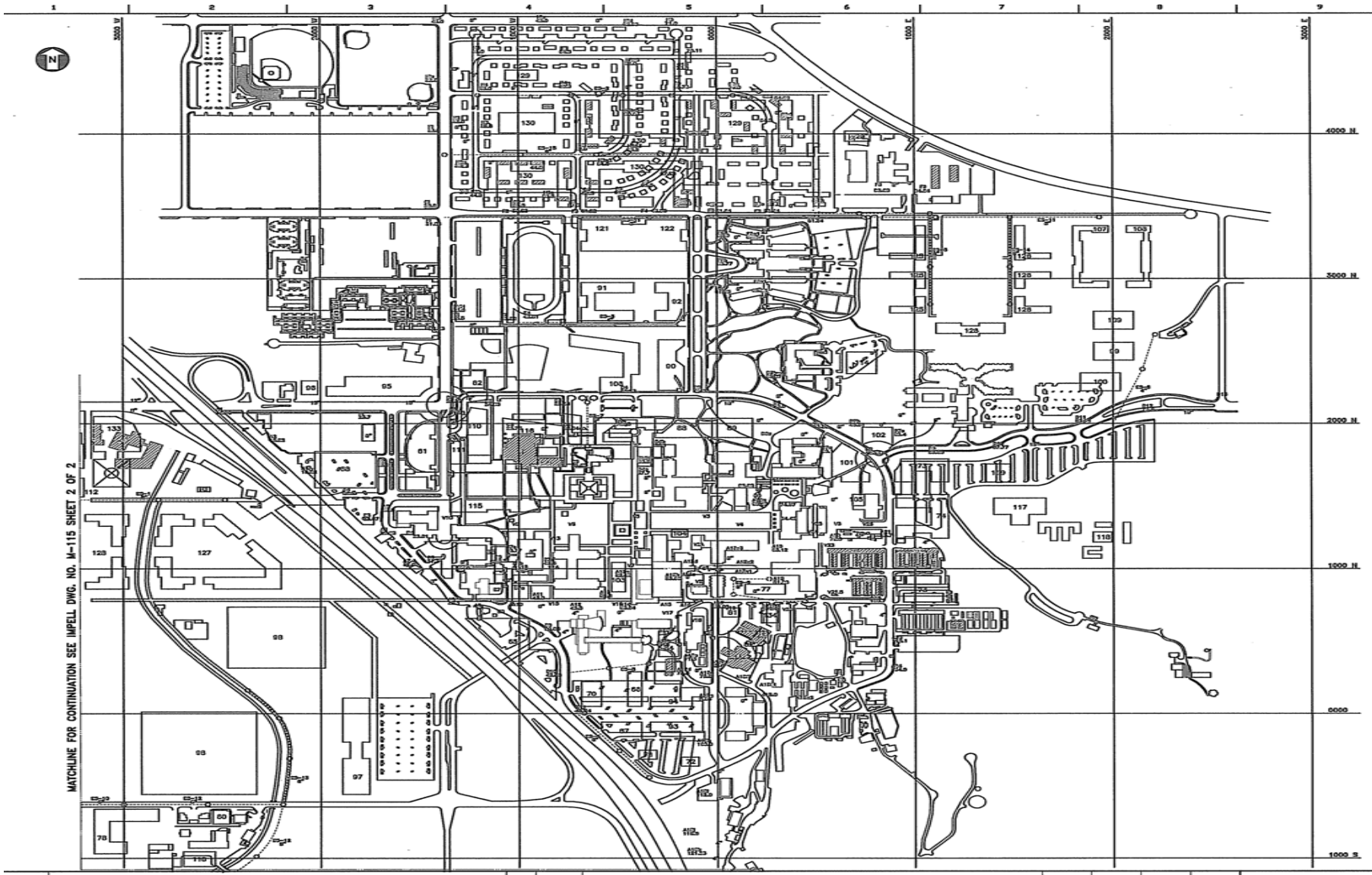
REV.	DATE	DESCRIPTION	DRAWN	DES./ENG.	CHECKED	APPROVED
0	8-7-92	ORIGINAL	MC	REK		

SANITARY SEWER – FUTURE (2017)

UTILITY INFRASTRUCTURE MASTER PLAN PROJECT
UC RIVERSIDE CAMPUS, RIVERSIDE CA.

ABB
ASEA BROWN BOVERI

ABB Impell Corporation, San Ramon, California



EXISTING BUILDIN

NO.	DESCRIPTION
1	ADMINISTRATION
2	PHYSICAL EDUCATION
3	BOOKSTORE
4	COMMONS
5	CARILLON TOWER
7	BARN GROUP
8	UNIVERSITY COTTAGE
9	SPROUL HALL
10	WATKINS HALL
11	UNIVERSITY THEATRE
12	OLMSTED HALL
13	PIERCE HALL
14	GEOLOGY
15	RIVERA LIBRARY
16	SPIETH HALL
17	CENTRAL HEATING & COOLING PLA
18	PHYSICS
19	WEBBER HALL WEST
20	WEBBER HALL EAST
21	STATISTICS-COMPUTER BUILDING
22	BATCHELOR HALL
22A	BIO-AGRICULTURAL LIBRARY
23	ENTOMOLOGY ANNEX
24	UNIVERSITY CLUB
25	BOYDEN LAB
26	ENTOMOLOGY
27	SOILS AND PLANT NUTRITION BUIL
28	FAWCETT LABORATORY
29	SURGE FACILITY
30	GREENHOUSES (VARIOUS)
31	LOTHIAN RESIDENCE HALL
32	YIFFIH STUDENT CENTER
33	ASKEW-INVERNESS RESIDENCE
34	CORPORATION YARD
35	HOUSING OFFICE
35A	KUCR RADIO STATION
38	FAMILY STUDENT HOUSING AND
--	OFF CAMPUS HOUSING SERVICES
39	UNIVERSITY ART GALLERY/WATKIN
40	TELECOMMUNICATIONS
41	AGRICULTURAL OPERATIONS
42	COLLEGE BUILDING NORTH
42A	COLLEGE BUILDING SOUTH
43	ENVIRONMENTAL HEALTH AND SAF
49	HIGHLANDER HALL
50	CUSTODIAL AND GROUNDS
51	UNIVERSITY OFFICE BUILDING

LEGEND:

- EXISTING BUILDING
- FUTURE BUILDING (NOT TO SCAL
- EXISTING BUILDING TO BE REMOV
- FUTURE SEWER LINE
- EXISTING SEWER LINE
- EXISTING SEWER LINE (CITY OWN
- FUTURE ROAD (APPROXIMATE LO
- EXISTING MANHOLE
- FUTURE MANHOLE
- EXISTING CLEANOUT
- UTILITY INFRASTRUCTURE MASTER NUMBER.

NOTES:

1. FOR FUTURE BUILDING LIST SEE DWG. M-115 SHEET 2 OF 2.

0 100 20
50
GRAP

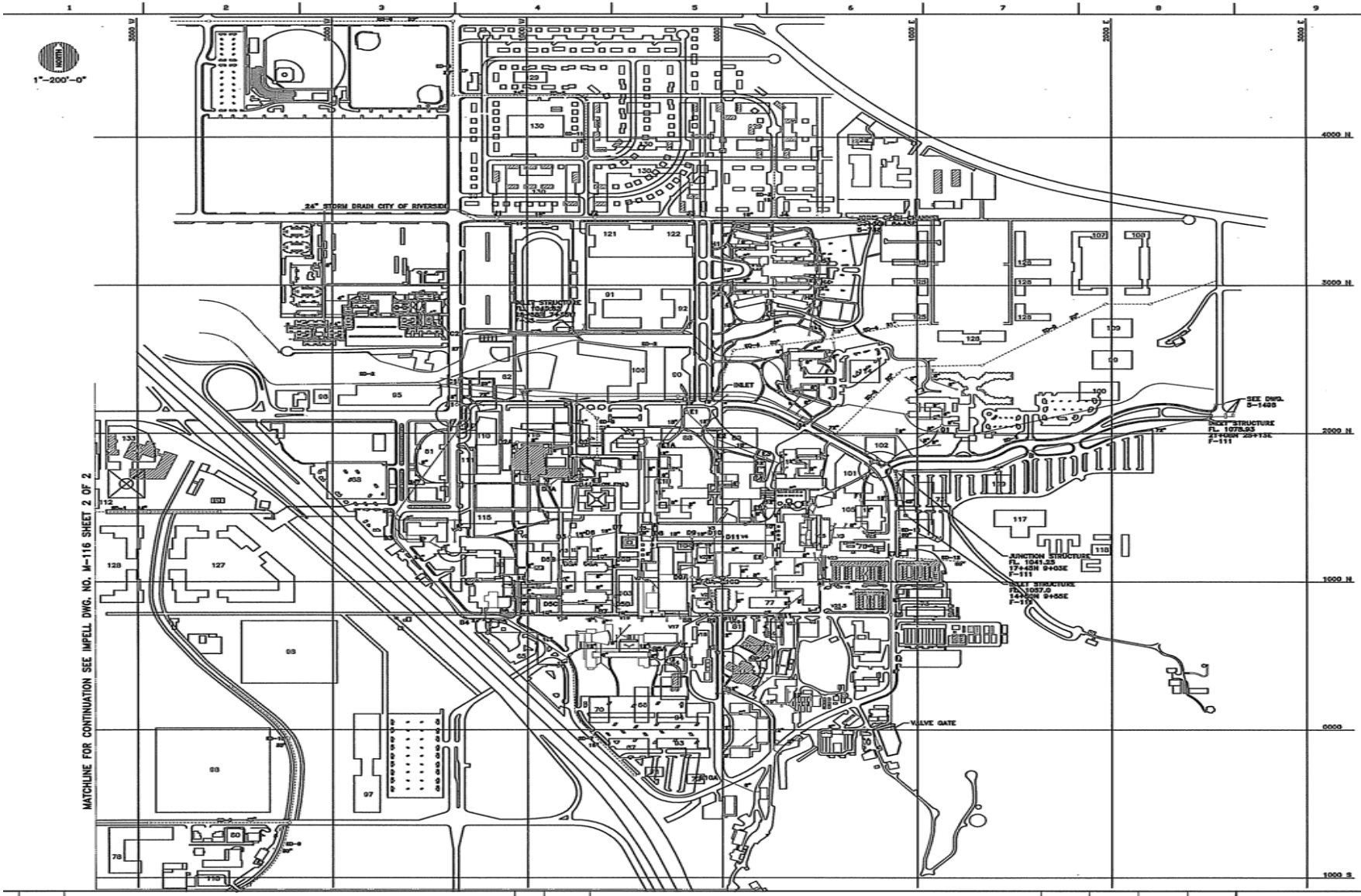
DATE	REFERENCE DRAWINGS
7-9-91	UC RIVERSIDE LRDP ILLUSTRATION MAP AND PROJECTED BUILDING SQUARE FOOTAGE INFORMATION
6-22-88	AERIAL SITE PLAN SURVEY (PLANIMETRIC)-2 SHEETS, BY AERO TECH SURVEYS AND ALBERT A. WEBB ASSOCIATES

REV.	DATE	DESCRIPTION	DRAWN	DES./ENG.	CHECKED	APPROVED
0	8-7-92	ORIGINAL	MC	REK		

SANITARY SEWER – FUTURE (2017)

UTILITY INFRASTRUCTURE MASTER PLAN PROJECT
UC RIVERSIDE CAMPUS, RIVERSIDE CA.

ABB Impell Corporation, San Ramon, California



EXISTING BUILDING LIST

NO.	DESCRIPTION
1	ADMINISTRATION
2	PHYSICAL EDUCATION
3	BOOKSTORE
4	COMMONS
5	CARILLON TOWER
7	BARN GROUP
8	UNIVERSITY COTTAGE
9	SPROUL HALL
10	WATKINS HALL
11	UNIVERSITY THEATRE
12	OLMSTED HALL
13	PIERCE HALL
14	GEOLOGY
15	RIVERA LIBRARY
16	SPIETH HALL
17	CENTRAL HEATING & COOLING PLANT
18	PHYSICS
19	WEBBER HALL WEST
20	WEBBER HALL EAST
21	STATISTICS-COMPUTER BUILDING
22	BATCHELOR HALL
22A	BIO-AGRICULTURAL LIBRARY
23	ENTOMOLOGY ANNEX
24	UNIVERSITY CLUB
25	BOTANY LAB
26	ENTOMOLOGY
27	SOILS AND PLANT NUTRITION BUILDING
28	FAIRCHILD LABORATORY
29	SURGE FACILITY
30	GREENHOUSES (VARIOUS)
31	LOTHIAN RESIDENCE HALL
32	VEITCH STUDENT CENTER
33	ABERDEEN-INVERNESS RESIDENCE HALL
34	CORPORATION YARD
35	HOUSING OFFICE
35A	KUCR RADIO STATION
36	FAMILY STUDENT HOUSING AND
–	OFF CAMPUS HOUSING SERVICES
39	UNIVERSITY ART GALLERY/WATKINS HOUSE
40	TELECOMMUNICATIONS
41	AGRICULTURAL OPERATIONS
42	COLLEGE BUILDING NORTH
42A	COLLEGE BUILDING SOUTH
43	ENVIRONMENTAL HEALTH AND SAFETY
49	HIGHLANDER HALL
50	CUSTODIAL AND GROUNDS
51	UNIVERSITY OFFICE BUILDING

LEGEND:

- EXISTING BUILDING
- FUTURE BUILDING (NOT TO SCALE)
- EXISTING BUILDING TO BE REMOVED
- FUTURE STORM DRAIN LINE
- EXISTING STORM DRAIN LINE
- PROPOSED SD-2 CHANNEL RIGHT OF WAY
- FUTURE ROAD (APPROXIMATE LOCATIONS)
- EXISTING MANHOLE
- FUTURE MANHOLE
- EXISTING CATCH BASIN
- EXISTING OUTLET STRUCTURE
- SD-XX UTILITY INFRASTRUCTURE MASTER PLAN PROJECT I.D. NUMBER.

NOTES:

1. FOR FUTURE BUILDING LIST SEE IMPELL DWG. M-116 SHEET 2 OF 2.

0 100 200 300 500
50
GRAPHIC SCALE (FEET)

REV.	DATE	REFERENCE DRAWINGS
7-6-91		UC RIVERSIDE LRDP ILLUSTRATION MAP AND PROJECTED BUILDING SQUARE FOOTAGE INFORMATION
6-28-88		AERIAL SITE PLAN SURVEY (PLANIMETRIC)-2 SHEETS. BY AERO TECH SURVEYS AND ALBERT A. WEBB ASSOCIATES

REV.	DATE	DESCRIPTION	DRAWN	DES./ENG.	CHECKED	APPROVED
0	8-7-92	ORIGINAL	MC	REK		

STORM DRAIN – FUTURE (2017)

UTILITY INFRASTRUCTURE MASTER PLAN PROJECT
UC RIVERSIDE CAMPUS, RIVERSIDE CA.

ABB
ABB Impell Corporation, San Ramon, California

SCALE: 1"=200'-0"
JOB NO.: 5330-00
DRAWING NO.
M-116
SHEET 1 OF 2