Sanitary Sewer
Management Plan
Signature Page

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1 Introduction

SLAC National Accelerator Laboratory (SLAC) prepared this Sewer System Management Plan (SSMP) in compliance with requirements of the State Water Resources Control Board (SWRCB) Order No. 2013-0058-EXEC. The SWRCB acted at its meeting on May 2, 2006, to require all public wastewater collection system agencies in California with greater than one mile of sewers to be regulated under General Waste Discharge Requirements (WDR) Order No. 2006-0003-DWQ. Order No. 2013-0058-EXEC amended the Monitoring and Reporting Program (MRP) for statewide general WDRs for sanitary sewer systems under Order No. 2006-0003-DWQ. The amended MRP established new monitoring, record-keeping, reporting and public notification requirements for Order 2006-0003-DWQ, effective September 9, 2013. The SWRCB Order requires the implementation of a system-specific SSMP and compliance with sanitary sewer overflow (SSO) electronic reporting requirements to the California Integrated Water Quality System (CIWQS) Online SSO Database.

Order No. 2013-0058-EXEC created the following categories of SSOs:

- **Category 1**: Discharge of untreated or partially treated wastewater of any volume resulting from an SSO that reaches surface water and/or reaches a drainage channel tributary to surface water.

- **Category 2**: Discharge of untreated or partially treated wastewater of 1,000 gallons or greater resulting from an SSO that does not reach surface water or a drainage channel tributary to surface water.

- **Category 3**: All other discharges of untreated or partially treated wastewater resulting from an SSO.

- **Private Lateral Sewage Discharge (PLSD)**: Discharge 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.

Per the requirements of Order No. 2013-0058-EXEC, the California Office of Emergency Services (Cal OES) must be notified within two hours of becoming aware of any Category 1 SSO greater than or equal to 1,000 gallons of discharge to surface water or spilled in a location where it probably will be discharged to surface water. Notifications to Cal OES are not required for Category 2 or 3 SSOs. However, each category of SSO has specific reporting requirements, as detailed in Appendix A of this SSMP. In addition, water quality sampling is required within 48 hours after initial SSO notification for Category 1 SSOs in which 50,000 gallons or greater are spilled to surface waters.

Prior to the release of Order No. 2013-0058-EXEC, the San Francisco Bay Regional Water Quality Control Board (RWQCB) issued a letter on October 3, 2012, informing agencies and entities that own or operate sanitary sewer systems in the San Francisco Bay Region enrolled in Order No. 2006-0003-DWQ, of the discontinuation of requirements for annual SSO reports and annual SSMP audit reports. The discontinuation of requirements also rescinded the RWQCB’s Water Code Section 13267 Orders issued on November 15, 2004, and July 7, 2005. Enrollees are still required to comply with Provision D.13(x) of Order No. 2006-0003-DWQ. Provision D.13(x) requires enrollees, regardless of the population served, to conduct an internal SSMP audit, at a
minimum of every two years, and prepare an audit report to be kept on file. The audit should focus on evaluating the effectiveness of the SSMP and the enrollee’s compliance with the SSMP requirements identified in Provision D.13, including identification of any deficiencies in the SSMP, and steps to correct them. According to the RWQCB letter dated October 3, 2012, the SLAC SSMP Audit Report covering calendar years 2012 and 2013 must be completed by August 2, 2014.
2 System Overview

The SLAC sanitary sewer system consists of 8.6 miles of gravity sewer lines and laterals. There are ten sanitary sewer lift stations. The system is owned by the Department of Energy (DOE). The SLAC sanitary sewer system is connected to the West Bay Sanitary District (WBSD) system lines which transport the wastewater to the Silicon Valley Clean Water (SVCW, formerly South Bayside System Authority) wastewater treatment plant. The majority of wastewater discharged to the SLAC sanitary sewer system enters the WBSD system at Sand Hill Road. The remainder of the wastewater is discharged at five locations to a WBSD line which flows towards Alpine Road. Flow monitoring data are collected from all of these discharge locations. The average wastewater flow from the SLAC is 64,918 gallons per day. In accordance with SLAC’s discharge permit issued by SVCW, samples for chemical analysis are collected from the Sand Hill Road discharge, the Metal Finishing Pretreatment Facility, and the Former Hazardous Waste Storage Area groundwater treatment system.
3 Goals

**SWRCB Requirement:**

The collection system agency must develop goals to properly manage, operate, and maintain all parts of its wastewater collection system in order to reduce and prevent SSOs, as well as to mitigate any SSOs that occur.

The SSMP provides 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 occur. The SSMP will accomplish the following three goals:

- Identify, prioritize, and continuously maintain, renew, and replace sewer system facilities to maintain reliable service now and in the future.
- Properly manage and operate SLAC facilities to minimize the number and impact of SSOs.
- Immediate and effective response to SSOs including mitigation, cleanup and reporting.
4 Organization

**SWRCB Requirement:**

The collection system agency’s SSMP must identify:

(a) The name of the responsible or authorized representative;

(b) The names and telephone numbers for management, administrative, and maintenance positions responsible for implementing specific measures in the SSMP program. Include lines of authority as shown in 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 California Office of Emergency Services (Cal OES).

4.1 Responsible or Authorized Representatives

The DOE is the owner of the SLAC sanitary sewer system and the DOE Site Office Manager is the Responsible Official. The DOE Site Office Manager has authorized development and implementation of the SSMP to SLAC, the contract operator of the facility. The SLAC Conventional Facilities Director and the Mechanical Group Leader are designated as authorized representatives. The names and contact information of these individuals is included in Table 4-1.

<table>
<thead>
<tr>
<th>Position</th>
<th>Name</th>
<th>Office Phone Number</th>
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<tbody>
<tr>
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<tr>
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</tr>
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4.2 Roles and Responsibilities by Position

Roles and responsibilities regarding the SLAC sanitary sewer system are as follows:

**Department of Energy Site Office**

**Site Office Manager:** The DOE is the owner of the SLAC Sanitary Sewer System and the Site Office Manager is the Responsible Official. The Site Office Manager has authorized representatives from the Conventional Facilities Division and Environmental Protection Department within ESH&Q Division to certify SSO reports and manage the SSMP.

**SLAC**

Management of the SSMP is a shared responsibility between two SLAC organizations:

**Conventional Facilities Division**

**Conventional Facilities Director:** The Conventional Facilities (CF) Director is responsible for system operation, repairs, improvements, and modifications. In addition, the CF Director manages the operating budget, secures funding for improvement/repair/survey projects, and maintains records of the underground sanitary sewer infrastructure. The CF Director is a duly authorized representative and will certify SSO reports.

**Mechanical Group Leader:** Reporting to the CF Director, the Mechanical Group Leader (MGL) operates a comprehensive maintenance program to insure a sufficient, dependable waste system that minimizes SSOs and meets the requirements of the DOE. The MGL organizes multiple maintenance efforts: including inspections, man-hole repairs/coatings, CCTV recording, and periodic high-pressure water jetting. The MGL maintains records of system inspection, maintenance, and cleaning activities. The MGL is a duly authorized representative and in the absence of the CF Director, the MGL will certify SSO reports.

**ESH&Q Division**

**Environmental Compliance Group Leader:** Plans, directs and manages the environmental compliance programs at SLAC. Oversees development and implementation of wastewater compliance programs, including this SSMP and SSO reporting.

**Wastewater Program Manager:** Reporting to the Environmental Compliance Group Leader, designs and coordinates the wastewater discharge compliance program for SLAC. Assists CF Division in interpreting and applying wastewater discharge requirements at SLAC. Provides backup support for SSO reporting.

**Spills Program Manager:** Reporting to the Environmental Compliance Group Leader, investigates spills and performs SSO reporting. Analyzes spills and spill response and works with Facilities Division to improve performance of sanitary sewer system. Performs annual spill review to evaluate the effectiveness of the SSMP.
4.3 Chain of Communication for SSO Reporting

Immediate spill response and cleanup are necessary for the protection of site personnel and the environment. All releases are reported to SLAC Security by calling x5555 and/or 911. Security notifies the Facility Manager Deputy (FMD), appropriate CF Division personnel, the Waste Management Group for spill response, as well as the spills program manager. These personnel will respond to the scene of the reported release, assess the condition and determine if it is a SSO. The FMD will notify the DOE Site Office Manager and appropriate SLAC management, as necessary.

Order No. 2013-0058-DWQ amended Order No. 2006-0003-DWQ in how notifications of SSOs are made. The initial notification of SSOs is made to the Cal OES within two hours of becoming aware of any Category 1 SSO greater than or equal to 1,000 gallons of discharge to surface water or spilled in a location where it probably will be discharged to surface water, by the spills program manager or another designated employee from the Environmental Protection Department. Notifications to Cal OES are not required for Category 2 or 3 SSOs. The spills program manager will also prepare the applicable SSO reports via the CIWQS Online SSO Database. Each category of SSO has specific reporting requirements, as detailed in Appendix A of this SSMP.

Spill information requested by Cal OES may include:

- Name and direct return phone number of person reporting the unauthorized discharge.
- Estimated quantity and duration of the unauthorized discharge.
- If ongoing, estimated SSO discharge rate (gallons per minute)
- SSO Incident Description:
  - Brief narrative.
  - On-scene point of contact for additional information.
  - Date and time enrollee became aware of the SSO.
  - Name of sanitary sewer system agency causing the SSO.
  - SSO cause (if known).
  - SSO incident locations (address, city, state and zip code).
- Indication of whether the SSO has been contained.
- Indication of whether surface water is impacted.
- Location of threatened or involved waterway(s) or storm drains.
- Indication of whether a drinking water supply is or may be impacted by the SSO.
- Any other known SSO impacts.

Communication reporting requirements are summarized in Appendix A.
5 Legal Authority

**SWRCB Requirement**

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 infiltration, inflow, storm water, 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.

The DOE owns all facilities at SLAC including the sanitary sewer system. The DOE contracts with SLAC to operate all facilities in compliance with applicable rules and regulations. All property, facilities, and equipment located at SLAC are managed and operated under the authority of SLAC staff, who are able to maintain full control over all discharges to the sanitary sewer collection system at all times.
6 Operation and Maintenance Program

**SWRCB Requirement**

(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.

6.1 Sanitary Sewer System Map

SLAC Operations and Maintenance Group works with the Infrastructure Engineering Division to maintain a facility map, at a scale of 1” = 100’, which includes a layer for the sanitary sewer system. The mapping system shows most gravity line segments, manholes, pumping facilities and pressure pipes. Sewer pipeline size and material are included on this map. The facility map also contains a layer with many storm water conveyance components including pipe size and material, catch basins, and pumping facilities. The facility map was last updated on July 18, 2012, but will be updated again in April 2014. In addition, the Infrastructure Engineering Division maintains an extensive library of drawings of the existing sanitary sewer system, some nearly 50 years old. These drawings include manhole types, locations and rim elevations, as well as pipe types and diameter. The drawings are maintained electronically in SODA (SLAC Online Drawing Access, available at [http://mdweb.slac.stanford.edu/DOC%20Control.SODA.php](http://mdweb.slac.stanford.edu/DOC%20Control.SODA.php)).
The Infrastructure Engineering Division updates the sanitary sewer map and drawings on a regular basis. Sanitary sewer updates, for new construction projects, are added to the sewer mapping system after the projects are complete. When SLAC field technicians and facilities engineering staff identify errors on the existing maps and drawings, they provide a sketch or drawing with corrections to Infrastructure Engineering Division.

6.2 Routine Preventative Operation and Maintenance Activities

The CF Division is responsible for the operation and maintenance of the sanitary sewer system. This includes all gravity and forced main piping, sewer lift stations and forced main valves. To assure continuous operation, a preventative maintenance (PM) program is utilized. This includes regular inspection and maintenance of critical sewer system components.

Key elements of the CF Division PM program include the following:

- Scheduling of Work
- Lift Station Preventative Maintenance
- Gravity Sewer Cleaning
- Root Control
- Fats, Oils and Grease (FOG) Control Equipment Maintenance

Scheduling of Work

The CF Division utilizes a computerized maintenance management system, Facility Asset Management Information System (FAMIS), to schedule and track all routine PM as well as infrequently occurring maintenance tasks. PM task forms are printed daily and given to maintenance crew leaders. PM task forms are filled out as tasks are completed. The completed forms are then reviewed and closed by a supervisor.

Lift Station Preventative Maintenance

The Mechanical Group performs PM on mechanical equipment at sanitary sewer lift stations including wastewater pumps, force mains and back-up generators. The group has a staff of mechanics and pipe fitters that can perform PM work on a majority of the sanitary sewer equipment. The Mechanical Group performs daily visual inspections of sanitary sewer lift stations. The Distributed Control System (DCS) is used to monitor the lift stations, and will send out an alarm to alert the Mechanical Group of any potential malfunction of the lift stations. PM intervals are based upon manufacturer recommendations. These intervals are adjusted based upon site conditions, visual observations and individual equipment needs.

The Mechanical Group maintains lift station system maintenance and repair manuals for each of SLAC’s lift stations. Each manual contains graphic representation of the lift station components, detailing the location of piping, valves and pumps. The manual also contains steps for routine maintenance and troubleshooting.
Gravity Sewer Cleaning

The Mechanical Group has determined that several gravity sewer line segments require periodic cleaning to maintain hydraulic capacity. An outside contractor provides quarterly cleaning of these select gravity sewer lines. Additional sewer lines are cleaned as needed. Individual line “jet” washing is done systematically to ensure that all debris is removed. The Mechanical Group also performs monthly cleaning of the flow flumes.

Root Control

The Mechanical Group maintenance contractor also provides regular root control. As part of the quarterly cleaning, root problems are identified and steps are taken to remove them.

FOG Control Equipment

SLAC maintains FOG control equipment at the cafeteria and at the transportation steam cleaner. The grease trap at the cafeteria and oil/water separator at transportation are cleaned and maintained on a regular basis to ensure performance.

6.3 Rehabilitation and Replacement Plan

Video inspections of the sanitary sewer system were completed in July 2010. CF Division staff reviewed the results of this assessment to identify and prioritize repairs and replacement of sewer line segments. SLAC will continue to use the information gathered during these inspections in conjunction with information compiled from SSO reports and the PM program to assess the condition of the sanitary sewer system. Sewer line segments in need of repair, rehabilitation, or replacement will be addressed as needed on a project by project basis.

6.4 Training

ESH&Q training is provided to all employees to comply with SLAC policy and federal, state, local, and DOE standards, and is documented in the SLAC Training Assessment (STA) database. The CF Division is reviewing and updating its in-house training program which utilizes a combination of classes, on the job training, conferences, and seminars to train its sanitary sewer staff. Appropriate training is also required of all sub-contractors working at SLAC.

6.5 Equipment

The CF Division conducts limited operation, maintenance, and SSO response activities for the sanitary sewer collection system. SLAC holds blanket contracts with sewer maintenance sub-contractors for regular preventative maintenance activities, inspections, and emergency response to sanitary sewer overflows. These sub-contractors provide their own inventory of maintenance equipment. SLAC maintains a limited inventory of critical components for the sanitary sewer lift stations because these systems are typically designed with redundant capabilities and additional replacement parts are readily available from local suppliers. This list of critical component inventory is maintained in FAMIS. SLAC purchased a camera for line inspections, and level controllers and alarms were added to the system to better detect pump failure or a level condition.
7 Design and Performance Provisions

**SWRCB Requirement**

The SSMP must identify:

(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.

SLAC follows standard industry practice for the design, construction, installation, rehabilitation, repair, inspection and testing of sanitary sewer systems, pump stations and other appurtenances. These guidelines are found in the California plumbing, electrical, and mechanical code, National Fire Protection Association standards, applicable federal regulations, and DOE directives. Where SLAC sanitary sewer systems connect with WBSD lines, SLAC follows the standards and guidance provided by WBSD.
# 8 Overflow Emergency Response Plan

## SWRCB Requirement

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 Cal OES of all Category 1 SSOs 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, in accordance with this 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.

SLAC spill response procedures are found in the SLAC ESH&Q Manual Chapter 16 Spills (available at [http://www-group.slac.stanford.edu/esh/environment/spills/policies.htm](http://www-group.slac.stanford.edu/esh/environment/spills/policies.htm)) and in Section 2.3 of this Program. The Chapter also includes spill prevention, notification procedures for primary responders and SLAC management, training requirements, and emergency procedures. Regulatory agencies are notified in accordance with Chapter 16 of the ESH&Q Manual and Section 2.3 of this Program.
9  Fats, Oils and Grease Program

SWRCB Requirement

Each Enrollee shall evaluate its service area to determine whether a fats, oils, and grease (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.

A FOG control program is not necessary at SLAC. Two locations, the cafeteria and Building 81, have been identified as having the potential to contribute FOG to the sanitary sewer system. There is currently no cafeteria at SLAC because it is being constructed. When construction is complete, it will be connected to a grease interceptor located within the building which will be regularly serviced and emptied. A steam cleaning pad adjacent to Building 81 is used to clean vehicles. The runoff from this system is collected and routed through an oil/water separator before discharge to the sanitary sewer. FOG has never been detected in significant quantities at the SLAC discharge to the WBSD system.
10 System Evaluation and Capacity Assurance Plan

SWRCB Requirement

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.

No portions of the SLAC sanitary sewer system currently experience or contribute to SSO discharges caused by hydraulic deficiency. A 1999 Sanitary Sewer Assessment did not identify any sewer segments with hydraulic deficiencies. SLAC monitors the wastewater flow at connections to the WBSD lines to ensure these flows are within the allotment granted to SLAC. SLAC will utilize capacity enhancement measures to address any hydraulic deficiencies discovered in the future.

When new construction or uses are planned, the downstream hydraulic capacity of the sewer system is evaluated. If hydraulic deficiencies are predicted, SLAC will design and implement capacity enhancement measures.
11 Monitoring, Measurement and Program Modifications

**SWRCB Requirement**

(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.

SLAC evaluates the performance of its SSMP annually as part of a facility-wide spill review. The Spills Program Manager reviews the following SSO information:

- Total number of SSOs;
- Cause of SSO (roots, grease debris, pipe failure, capacity, pump station failures, and other);
- Volume of spilled sewage discharged to surface water; and
- Portion of sewage contained and recovered.

A causal analysis is performed on each SSO to determine the root cause. These causes are categorized as human error, equipment failure, engineering, or maintenance. A sample of this spill summary sheet is included in Appendix B. These data are compared to the previous two years of SSO data to identify trends.

SLAC may also use other performance measures in its evaluation. SLAC will prioritize its actions and initiate changes to this SSMP based on the results of the evaluation.

SLAC will update critical information, such as contact numbers and the SSO response chain of communication, as needed. A comprehensive SSMP update will occur every 5 years, as required by the SWRCB. The next comprehensive SSMP update will occur in August 2018.
12 SSMP Program Audits

SWRCB Requirement

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 including identification of any deficiencies in the SSMP and steps to correct them. The SSMP Audit Report covering calendar years 2012 and 2013 must be completed by August 2, 2014.

SLAC will conduct internal audits every two years to evaluate the effectiveness of the SSMP and the compliance with the SSMP requirements. The audit team will consist of at least one member from each of the CF Division and Environmental Protection Department. The audit will cover each of the major sections of the SSMP. The Audit Checklist, based on the SWRCB requirements, is included in Appendix C.

The results of the audit, including the identification of any deficiencies and the steps taken to correct the deficiencies, will be summarized in an Audit Report which will be kept on file.
13 Communications Program

SWRCB Requirement

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 SLAC sanitary sewer system only services the SLAC facility. Its users are limited SLAC personnel, SLAC users, and guests. Ensuring that SLAC personnel are aware of issues pertinent to sewage waste disposal and regulatory compliance requirements is essential to the successful implementation of the SSMP. Specific procedures that aid open communication between the CF Division, ESH&Q Division, and other SLAC personnel include:

- **SLAC Today**- A daily email and website posting to all SLAC personnel is used to communicate messages applicable to the entire facility.

- **ESH&Q Manual**- The ESH&Q manual contains chapters on spill response and the industrial wastewater program. All SLAC personnel have access to the manual.

- **ESH&Q Website**- Documents and information regarding the sanitary sewer management program including the SSMP and the Annual Site Environmental Report are posted on the ESH&Q website. The ESH&Q website is accessible by SLAC personnel as well as the general public.

- **Facilities Service Requests**- Any SLAC employee may submit a service request to Facilities through the Facilities website. These service requests include sanitary sewer issues.

- **Building Managers**- Each building at SLAC has a building manager who is the main point of contact for all utility issues at the building including the sanitary sewer. Facilities and ESH&Q staff can communicate information regarding the management of the sanitary sewer through the building manager.
Appendix A: SSO Reporting Requirements
Sanitary Sewer Overflow (SSO) Reporting Requirements

1. **SSO occurs.**
   - Security notifies EP.
   - EP sends internal email summarizing spill.

2. **SSO enters channel or surface water (or unable to recover from drain system)**

   - **No**
     - **No SSOs occur in a calendar month.**
       - Within 30 calendar days of end of month, certify via CIWQS that no spills occurred
       - LRO Certification
   
   - **Yes**
     - **Greater than 1000 gallons?**
       - **Yes**
         - **Certified report required via CIWQS within 30 calendar days**
         - **LRO Certification**
       
       - **No**
         - **No call to CalOES required**

3. **Category 1 SSO**
   - Report within 2 hours to CalOES: (800) 852-7550
   
   - **Greater than 50,000 gallons?**
     - **Yes**
       - **Draft report required via CIWQS within 3 business days**
       - **LRO Certification**
     
     - **No**
       - **No call to CalOES required**

4. **Category 2 SSO**
   - No call to CalOES required
   
   - **Water quality sampling is required within 48 hours.**

5. **Category 3 SSO**
   - No call to CalOES required
   
   - **Certified report required via CIWQS within 30 calendar days of end of calendar month in which SSO occurs**
   - **LRO Certification**

---

**Abbreviations and contact information:**

CalOES = California Office of Emergency Services, (800) 852-7550
LRO = Legally Responsible Official
SSO = sanitary sewer overflow

The Water Resources Control Board order on which this flow chart is based is available here:
Appendix B: Spill Summary Sheet
<table>
<thead>
<tr>
<th>Date of Spill</th>
<th>Date of Week</th>
<th>Time of Day</th>
<th>Composition of Material</th>
<th>Volume</th>
<th>Volume Units</th>
<th>Spill Location (Indoors/Outdoors)</th>
<th>General Area of Spill</th>
<th>Cause of spill</th>
<th>Corrective Actions Taken to Control or Contain Material</th>
<th>Reportable</th>
<th>Causal Analysis Factors</th>
<th>Significance Level</th>
<th>Sewer Overflows</th>
<th>Caused By</th>
<th>Spill in Contact With</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/27/2006</td>
<td>Fri</td>
<td>12:30:00 PM</td>
<td>CT water</td>
<td>500</td>
<td>GAL OD</td>
<td>B. 006</td>
<td></td>
<td>Broken pipe</td>
<td>Valve off, repair</td>
<td>No</td>
<td>FALSE</td>
<td></td>
<td></td>
<td>SLAC</td>
<td>FALSE</td>
</tr>
<tr>
<td>2/8/2006</td>
<td>Wed</td>
<td>8:35:00 AM</td>
<td>Oil</td>
<td>16</td>
<td>OZ OD</td>
<td>B. 26</td>
<td></td>
<td>Leak from motorcycle</td>
<td>WM cleaned up spill</td>
<td>No</td>
<td>FALSE</td>
<td></td>
<td></td>
<td>FALSE</td>
<td>FALSE</td>
</tr>
<tr>
<td>3/24/2006</td>
<td>Fri</td>
<td>10:45:00 AM</td>
<td>Gasoline</td>
<td>1</td>
<td>pint OD</td>
<td>B. 35</td>
<td></td>
<td>Failed safety valve</td>
<td>replaced valve</td>
<td>No</td>
<td>FALSE</td>
<td></td>
<td></td>
<td>FALSE</td>
<td>FALSE</td>
</tr>
<tr>
<td>4/10/2006</td>
<td>Mon</td>
<td>10:00:00 AM</td>
<td>Petroleum</td>
<td>1</td>
<td>qt OD</td>
<td>RV storage</td>
<td>Engine oil leak</td>
<td>cleaned up site</td>
<td>No</td>
<td>FALSE</td>
<td></td>
<td></td>
<td></td>
<td>FALSE</td>
<td>FALSE</td>
</tr>
<tr>
<td>4/13/2006</td>
<td>Thurs</td>
<td>10:45:00 AM</td>
<td>Diesel</td>
<td>0</td>
<td>cup OD</td>
<td>B. 25</td>
<td>Equipment tank</td>
<td>overfilled</td>
<td>cleaned up</td>
<td>No</td>
<td>FALSE</td>
<td></td>
<td></td>
<td>FALSE</td>
<td>FALSE</td>
</tr>
<tr>
<td>4/21/2006</td>
<td>Fri</td>
<td>8:00:00 AM</td>
<td>Motor oil</td>
<td>1</td>
<td>gal OD</td>
<td>B. 25</td>
<td>Vehicle oil release</td>
<td>cleaned up</td>
<td>No</td>
<td>FALSE</td>
<td></td>
<td></td>
<td></td>
<td>FALSE</td>
<td>FALSE</td>
</tr>
<tr>
<td>4/27/2006</td>
<td>Thurs</td>
<td>3:30:00 PM</td>
<td>LCW</td>
<td>0</td>
<td>gal OD</td>
<td>IR-2</td>
<td>Polytank overflowed</td>
<td>CEF emptied tank</td>
<td>No</td>
<td>FALSE</td>
<td></td>
<td></td>
<td></td>
<td>FALSE</td>
<td>FALSE</td>
</tr>
<tr>
<td>5/8/2006</td>
<td>Mon</td>
<td></td>
<td>LCW</td>
<td>5000</td>
<td>gal/day ID</td>
<td>ESA</td>
<td>Leaking pipe</td>
<td>repaired, rerouted to sanitary sewer</td>
<td>No</td>
<td>FALSE</td>
<td></td>
<td></td>
<td>FALSE</td>
<td>FALSE</td>
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</tr>
<tr>
<td>5/16/2006</td>
<td>Tues</td>
<td>7:30:00 AM</td>
<td>Domestic water</td>
<td>0</td>
<td>gal OD</td>
<td>Café</td>
<td>Broken supply pipe</td>
<td>repaired</td>
<td>No</td>
<td>FALSE</td>
<td></td>
<td></td>
<td></td>
<td>FALSE</td>
<td>FALSE</td>
</tr>
<tr>
<td>5/30/2006</td>
<td>Tues</td>
<td>11:45:00 AM</td>
<td>Fire system water</td>
<td>2250</td>
<td>gal OD</td>
<td>FFTB</td>
<td>Cut pipe in wrong location</td>
<td>capped line</td>
<td>No</td>
<td>FALSE</td>
<td></td>
<td></td>
<td></td>
<td>FALSE</td>
<td>FALSE</td>
</tr>
<tr>
<td>7/13/2006</td>
<td>Thurs</td>
<td>2:00:00 PM</td>
<td>mercury</td>
<td>0</td>
<td>lbs. ID</td>
<td>B.25</td>
<td>switch blew up</td>
<td>cleaned up</td>
<td>No</td>
<td>FALSE</td>
<td></td>
<td></td>
<td></td>
<td>FALSE</td>
<td>FALSE</td>
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<tr>
<td>7/18/2006</td>
<td>Thurs</td>
<td>11:00:00 AM</td>
<td>mercury</td>
<td>0</td>
<td>lbs. ID</td>
<td>B.25</td>
<td>switch blew up</td>
<td>cleaned up</td>
<td>No</td>
<td>FALSE</td>
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<tr>
<td>8/2/2006</td>
<td>Wed</td>
<td>3:15:00 PM</td>
<td>Mercury</td>
<td>0</td>
<td>lbs ID</td>
<td>B.25</td>
<td>switch blew up</td>
<td>cleaned up</td>
<td>No</td>
<td>FALSE</td>
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<td></td>
<td></td>
<td>FALSE</td>
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<tr>
<td>8/17/2006</td>
<td>Thurs</td>
<td></td>
<td>Oil</td>
<td>10</td>
<td>gal ID</td>
<td>B.44</td>
<td>Leak from Klystron</td>
<td>cleaned up</td>
<td>No</td>
<td>FALSE</td>
<td></td>
<td></td>
<td></td>
<td>FALSE</td>
<td>FALSE</td>
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<tr>
<td>8/18/2006</td>
<td>Fri</td>
<td>3:30:00 PM</td>
<td>Domestic water</td>
<td>30</td>
<td>gal OD</td>
<td>FFTB</td>
<td>Broken line affixed to concrete</td>
<td>valved off</td>
<td>No</td>
<td>FALSE</td>
<td></td>
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<td>8/21/2006</td>
<td>Mon</td>
<td>10:00:00 AM</td>
<td>Domestic water</td>
<td>100</td>
<td>gal OD</td>
<td>B.124</td>
<td>Broken unidentified line</td>
<td>percolated into soil</td>
<td>No</td>
<td>FALSE</td>
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<td></td>
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<td>FALSE</td>
<td>FALSE</td>
</tr>
<tr>
<td>8/24/2006</td>
<td>Thurs</td>
<td>7:30:00 AM</td>
<td>Water</td>
<td>500</td>
<td>gal OD</td>
<td>B.005</td>
<td>Separated fitting</td>
<td>repaired</td>
<td>No</td>
<td>FALSE</td>
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<td></td>
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<tr>
<td>8/31/2006</td>
<td>Thurs</td>
<td>12:45:00 PM</td>
<td>Hydraulic oil</td>
<td>3</td>
<td>qt OD</td>
<td>B. 730</td>
<td>Faulty hose installation</td>
<td>Cleaned up w/absorbent</td>
<td>No</td>
<td>FALSE</td>
<td></td>
<td></td>
<td></td>
<td>FALSE</td>
<td>FALSE</td>
</tr>
<tr>
<td>8/31/2006</td>
<td>Thurs</td>
<td>2:15:00 PM</td>
<td>Domestic water</td>
<td>10</td>
<td>gal OD</td>
<td>B.23</td>
<td>Leaking pipe</td>
<td>repaired</td>
<td>No</td>
<td>FALSE</td>
<td></td>
<td></td>
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<tr>
<td>9/18/2006</td>
<td>Mon</td>
<td>10:30:00 AM</td>
<td>Rad water</td>
<td>10</td>
<td>gal ID</td>
<td>PS-20</td>
<td>filter under pressure when opened</td>
<td>change procedures</td>
<td>No</td>
<td>FALSE</td>
<td></td>
<td></td>
<td></td>
<td>FALSE</td>
<td>FALSE</td>
</tr>
<tr>
<td>9/29/2006</td>
<td>Fri</td>
<td>3:30:00 PM</td>
<td>Domestic water</td>
<td>7000</td>
<td>gal OD</td>
<td>CT404</td>
<td>Valve left open</td>
<td>locked out valve</td>
<td>No</td>
<td>FALSE</td>
<td></td>
<td></td>
<td></td>
<td>FALSE</td>
<td>FALSE</td>
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<tr>
<td>10/6/2006</td>
<td>Fri</td>
<td>3:50:00 PM</td>
<td>Hot water</td>
<td>50</td>
<td>gal OD</td>
<td>B. 41</td>
<td>Hole in water line</td>
<td>valved off and repaired</td>
<td>No</td>
<td>FALSE</td>
<td></td>
<td></td>
<td></td>
<td>FALSE</td>
<td>FALSE</td>
</tr>
<tr>
<td>10/18/2006</td>
<td>Wed</td>
<td>4:15:00 PM</td>
<td>Domestic water</td>
<td>990</td>
<td>gal OD</td>
<td>CT 404</td>
<td>Malfunctioning float</td>
<td>valved off</td>
<td>No</td>
<td>FALSE</td>
<td></td>
<td></td>
<td></td>
<td>FALSE</td>
<td>FALSE</td>
</tr>
<tr>
<td>11/5/2006</td>
<td>Sun</td>
<td></td>
<td>Sulfuric acid</td>
<td>10</td>
<td>gal OD</td>
<td>B.38</td>
<td>Broken fitting tube</td>
<td>tube repaired</td>
<td>No</td>
<td>FALSE</td>
<td></td>
<td></td>
<td></td>
<td>FALSE</td>
<td>FALSE</td>
</tr>
<tr>
<td>11/13/2006</td>
<td>Mon</td>
<td>11:00:00 AM</td>
<td>Sewage</td>
<td>1</td>
<td>gal OD</td>
<td>B.131</td>
<td>Power turned off to lift station</td>
<td>Powered up lift station</td>
<td>No</td>
<td>FALSE</td>
<td></td>
<td></td>
<td></td>
<td>FALSE</td>
<td>FALSE</td>
</tr>
</tbody>
</table>
Appendix C: SSMP Audit Checklist

and 2012 Audit Results
## SSMP Audit Checklist

**Audit Date:** 8/20/2012  
**Auditors:** Ray Radau and April Giangerelli

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Requirement</th>
<th>SSMP Current</th>
<th>Implemented</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.0</td>
<td>Goals</td>
<td>Reduce, prevent, and mitigate SSOs</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>4.0</td>
<td>Organization</td>
<td>Designate LRO</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Names and phone for key personnel</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chain of communication for reporting SSOs</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>5.0</td>
<td>Legal Authority</td>
<td>Authority to implement SSMP</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>6.0</td>
<td>O&amp;M Program</td>
<td>Maintain sanitary sewer system map</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Describe routine preventive maintenance program</td>
<td>Yes</td>
<td></td>
</tr>
</tbody>
</table>

LRO and SSO has been changed from Paul Golan to David Osugi.

Wastewater Program Manager has been changed from Darrin Gambelin to April Giangerelli. The SSO contact has been changed from Paul Golan to David Osugi. Other key personnel from the Facilities Division and EP Department are correct.

All releases are reported to the SLAC Security hotline at x5555. SLAC Security notifies the appropriate Facilities Division personnel, the Waste Management Group, and the spills program manager. Facilities and EP ensure SSOs are reported to regulatory agencies.

SLAC FAC O&M Group works with the Mechanical Design group to maintain a facility map (updated on 7/18/12) which includes most of the sanitary sewer system lines and pump stations. Additionally the group has a library of drawings, and drawings are maintained electronically in SODA (SLAC Online Drawing Access). [http://mdweb.slac.stanford.edu/Doc%20Control.SODA.php](http://mdweb.slac.stanford.edu/Doc%20Control.SODA.php) The facility map and drawings are updated when errors are identified.

Routine preventive maintenance program is in place as described in Section 6.2 of the SSMP. Lift stations are monitored using a computerized maintenance management system called Distributed Control System (DCS).
## SSMP Audit Checklist

**Audit Date:** 8/20/2012  
**Auditors:** Ray Radau and April Giangerelli

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Requirement</th>
<th>SSMP Current</th>
<th>Implemented</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0 O&amp;M Program</td>
<td>Rehabilitation and replacement plan in place</td>
<td>Yes</td>
<td>The sanitary sewer assessment project was completed in July 2010. Facilities reviewed the results of this assessment to identify and prioritize repairs and replacement of sewer line segments. Facilities is waiting on funding for this work; however, the project is on the top of the FY2013 priority list in regards to mechanical operations.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Provide training for staff</td>
<td>Yes</td>
<td>Facilities staff has the requisite safety and on-the-job training, as outlined in the STA course catalog for each position. In addition, the Operations Manual is being updated.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Maintain critical spare part inventory</td>
<td>Yes</td>
<td>SLAC maintains a limited inventory of critical spare parts (such as couplings), mostly for the lift stations. Other parts are provided by service contractors or are readily available from local vendors. SLAC purchased a camera for line inspections, and level controllers and alarms were added to the system to better detect pump failure or a level condition.</td>
<td></td>
</tr>
<tr>
<td>7.0 Design and Performance Provisions</td>
<td>Design, construction, repair and rehabilitation standards for new and existing sanitary sewer systems</td>
<td>Yes</td>
<td>SLAC follows general industry standards and codes for new and existing sewer systems.</td>
<td></td>
</tr>
<tr>
<td>8.0 Emergency Response Plan</td>
<td>Procedures for response and cleanup of SSO and notification of agencies</td>
<td>Yes</td>
<td>Chapter 16 of the ES&amp;H manual describes the emergency response procedures for spills.</td>
<td></td>
</tr>
</tbody>
</table>
SSMP Audit Checklist

Audit Date: 8/20/2012
Auditors: Ray Radau and April Giangerelli

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Requirement</th>
<th>SSMP Current</th>
<th>Implemented</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.0</td>
<td>FOG Control Program</td>
<td>Implement FOG if necessary</td>
<td>Yes</td>
<td>A FOG control program is not necessary at SLAC. SLAC maintains a grease interceptor at the cafeteria and an oil/water separator at the steam cleaning pad adjacent to Building 81.</td>
</tr>
<tr>
<td>10.0</td>
<td>System Evaluation and Capacity Assurance Plan</td>
<td>Identification of elements of sanitary sewer system that experience or contribute to SSOs caused by hydraulic deficiencies</td>
<td>Yes</td>
<td>No portions of the system currently experience SSOs due to hydraulic deficiencies</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Procedures to evaluate and prioritize hydraulic deficiencies</td>
<td>Yes</td>
<td>Capacity is reviewed when any new project is proposed for the site. The capacity was recently reviewed by BKF Engineers in October 2012, and detailed in the Draft SLAC Sanitary Sewer Capacity and Entitlement Study.</td>
</tr>
<tr>
<td>11.0</td>
<td>Monitoring, Measurement, and Program Modifications</td>
<td>Maintain relevant information to establish, evaluate, and prioritize SSMP activities and assess the success of the preventative maintenance program</td>
<td>Yes</td>
<td>ES&amp;H performs an annual site-wide spill evaluation, this includes SSOs. Root causes and corrective actions are reviewed.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Monitor implementation of SSMP</td>
<td>Yes</td>
<td>The SSMP will be updated as needed and a comprehensive update will occur every five years. The last update was completed 8/2010.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Assess success of the preventative maintenance program</td>
<td>Yes</td>
<td>Mike Hug maintains a database of spill events. Facilities utilizes CMMS to maintain records of mechanical failures, sewer repairs, work orders and inspection notices.</td>
</tr>
</tbody>
</table>
SSMP Audit Checklist

Audit Date: 8/20/2012
Auditors: Ray Radau and April Giangerelli

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Requirement</th>
<th>SSMP Current</th>
<th>Implemented</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.0</td>
<td>SSMP Program Audits</td>
<td>Conduct periodic audits</td>
<td>Yes</td>
<td>Audits are planned for every two years. The next SSMP Program Audit will be performed 8/2014.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Record the results of audit</td>
<td>Yes</td>
<td>The audit report will be kept on file.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Record changes and/or corrective actions taken</td>
<td>Yes</td>
<td>The audit report will include corrective actions taken, if any.</td>
</tr>
<tr>
<td>13</td>
<td>Communications Program</td>
<td>Communicate with SLAC regarding SSMP</td>
<td>Yes</td>
<td>SLAC utilizes various methods to communicate SSMP requirements to the SLAC community, including ES&amp;H manual and the SLAC website.</td>
</tr>
<tr>
<td>Section</td>
<td>Title</td>
<td>Requirement</td>
<td>SSMP Current</td>
<td>Implemented</td>
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</tr>
<tr>
<td>3</td>
<td>Goals</td>
<td>Reduce, prevent, and mitigate SSOs</td>
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</tr>
<tr>
<td>4</td>
<td>Organization</td>
<td>Designate LRO</td>
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<td></td>
<td>Names and phone for key personnel</td>
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</tr>
<tr>
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<td>Chain of communication for reporting SSOs</td>
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</tr>
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<td>5</td>
<td>Legal Authority</td>
<td>Authority to implement SSMP</td>
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<tr>
<td>6</td>
<td>O&amp;M Program</td>
<td>Maintain sanitary sewer system map</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Describe routine preventive maintenance program</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Rehabilitation and replacement plan in place</td>
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<td></td>
<td>Provide training for staff</td>
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<tr>
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<td>Maintain critical spare part inventory</td>
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<td>7</td>
<td>Design and Performance Provisions</td>
<td>Design, construction, repair and rehabilitation standards for new and existing sanitary sewer systems</td>
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<td></td>
<td>Description</td>
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<td>8</td>
<td>Emergency Response Plan</td>
<td>Procedures for response and cleanup of SSO</td>
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<tr>
<td></td>
<td></td>
<td>Procedure for regulatory agency notification and reporting</td>
<td></td>
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<tr>
<td>9</td>
<td>FOG Control Program</td>
<td>Implement FOG if necessary</td>
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<tr>
<td>10</td>
<td>System Evaluation and Capacity Assurance Plan</td>
<td>Identification of elements of sanitary sewer system that experience of contribute to SSOs caused by hydraulic deficiencies</td>
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<td></td>
<td></td>
<td>Procedures to evaluate and prioritize hydraulic deficiencies</td>
<td></td>
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<tr>
<td>11</td>
<td>Monitoring, Measurement, and Program Modifications</td>
<td>Maintain relevant information to establish, evaluate, and prioritize SSMP activities</td>
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</table>
## SSMP Audit Checklist

<table>
<thead>
<tr>
<th></th>
<th>Monitor implementation of SSMP</th>
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<tbody>
<tr>
<td></td>
<td>Assess success of the preventative maintenance program</td>
</tr>
<tr>
<td>12</td>
<td><strong>SSMP Program Audits</strong></td>
</tr>
<tr>
<td></td>
<td>Record the results of audit</td>
</tr>
<tr>
<td></td>
<td>Record changes and/or corrective actions taken</td>
</tr>
<tr>
<td>13</td>
<td><strong>Communications Program</strong></td>
</tr>
</tbody>
</table>