City of Calistoga

Sewer System Management Plan (SSMP)

INCLUDES:

SANITARY SEWER OVERFLOW EMERGENCY RESPONSE PLAN

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City of Calistoga
Sanitary Sewer System
Sewer System Management Plan

Introduction i
1. Goals 1-1
2. Organization 2-1
3. Legal Authority 3-1
4. Operation and Maintenance Program 4-1
   4.1 Collection System Map 4-1
   4.2 Prioritized Preventive Maintenance 4-1
   4.3 Rehabilitation and Replacement 4-2
   4.4 Training 4-2
   4.5 Contingency Equipment and Replacement Inventories 4-2
5. Design and Construction Standards 5-1
   5.1 Standards for Installation, Rehabilitation and Repair 5-1
   5.2 Standards for Inspection and Testing of New and Rehabilitated Facilities 5-1
6. Overflow Emergency Response Plan 6-1
   6.1 Notification 6-1
   6.2 Response 6-1
   6.3 Reporting 6-2
   6.4 Impact Mitigation 6-3
   6.5 Training 6-3
7. Fats, Oils, and Grease (FOG) Control Program 7-1
   7.1 Identification & Sewer Cleaning 7-1
   7.2 Source Control 7-1
   7.3 Facility Inspection 7-2
   7.4 Legal Authority 7-2
   7.5 Disposal 7-3
8. Capacity Management 8-1
   8.1 Capacity Assessment 8-1
   8.2 System Evaluation and Capacity Assurance Plan 8-1
9. Monitoring, Measurement, and Program Modifications 9-1
   1. Goals 9-1
   2. Organization 9-1
   3. Legal Authority 9-1
   4. Operation and Maintenance Program 9-1
   5. Design and Construction Standards 9-2
   6. Overflow Emergency Response Plan 9-2
   7. Fats, Oils, and Grease (FOG) Control Program 9-2
   8. Design and Construction Standards 9-3
   10. SSMP Audits 9-3
   11. Communication Program 9-3
10. SSMP Audits 10-1
11. Communication Program 11-1

Attachments: Appendix A: Outreach to Plumbers & Sewer Contractors
Appendix B: Emergency Public Works Phone Numbers
Appendix C: Overflow Emergency Response Plan

Introduction

The City of Calistoga's (City) sanitary sewer collection system conveys wastewater for the area within the city limits to the Dunaweal Wastewater Treatment Plant (WWTP). The WWTP has an average dry weather flow design capacity of 0.84 million gallons per day (MGD) and can treat up to 4.0 MGD during wet weather flow events. The City's sewer collection system serves a population of approximately 5,200. Inputs to the sewer system are mainly domestic in origin and include residences, hotels, and geothermal spas. However, there are also several restaurants, a micro-brewery, and two mineral water bottling companies that discharge to the sanitary sewer system.

The City typically has 1-2 small (less than 150 gallons) collection system overflows per year. The number of overflows is decreasing as older pipelines are replaced and repairs are made. The City has an up-to-date map of its collection system. The current version was prepared in 2002 and is updated yearly whenever a new sewer line or structure is added. There are approximately 16 miles of sewer lines, 250 manholes, and 4 lift stations within the City's collection system.

The City's Sewer System Management Plan (SSMP) was initially developed in 2006 to comply with requirements of a 2005 Order from the San Francisco Regional Water Quality Control Board (Regional Water Board). The SSMP was since revised several times in order to comply with a State Water Resources Control Board (State Water Board) Order and subsequent amendments. The SSMP complies with Provision D.13 of State Water Board Water Quality Order (WQO) 2006-0003 Sanitary Sewer System Waste Discharge Requirements (WDR) and the associated Monitoring Reporting Program (MRP). This latest version of the SSMP, Version 5, includes recommendations from internal SSMP audits performed in May 2014 and again in May 2016 as well as updates needed to comply with the State Water Board's latest amendments to the MRP promulgated in July 2013 as part of WQO-2013-0058-EXEC.

1. Goals

The City of Calistoga mission statement is as follows:

"We are dedicated to serving the needs and desires of our citizens by:

- Maintaining a safe and secure environment and high quality of life.
- Preserving and enhancing the community's unique beauty and character.
- Managing our resources efficiently, effectively and equitable.
- Recognizing the value and benefits of our diversity.
- Achieving long-term fiscal stability and self-sufficiency.
- Encouraging full public participation and ongoing communication.
- Strengthening partnerships with the private, non-profit and other public sectors for the cohesive and innovative delivery of government services."

The Public Works Department includes the Sewer Collection Division and the Wastewater Treatment Division. The Public Works Department goals include the proper management, operation, and maintenance of all parts of the wastewater collection system, maintaining adequate capacity to convey peak flows, minimizing the frequency and volume of Sanitary Sewer Overflows (SSOs), and mitigating the impact of SSOs.

The Sewer Collection Division maintains four sewer lift stations in the City and all of the City's existing sewer mains and recycled water mains, making repairs and replacements when necessary and installing new sewer mains and recycled water mains when required. The goal of this Division is to continue to maintain the City's sewer collection system to ensure no disruption of service or inconvenience to the City's residents.

The Wastewater Treatment Division operates and maintains the Dunaweal Wastewater Treatment Plant (WWTP) and disposal system. The WWTP processes the City's sewage, producing a high quality effluent that can be discharged to the Napa River and/or recycled for irrigation purposes. The goal of this Division is to continue to provide the necessary treatment and disposal processes for the City of Calistoga's residents in the most environmentally sensitive and cost effective manner possible.

2. Organization

The City's organization chart identifies agency staff responsible for implementing, managing, and updating the SSMP. The chain of communication for responding to and reporting Sanitary Sewer Overflows (SSOs) is also addressed in Section 3 of this SSMP. Figure 1 illustrates the organization chart for the City and roles are further described below.

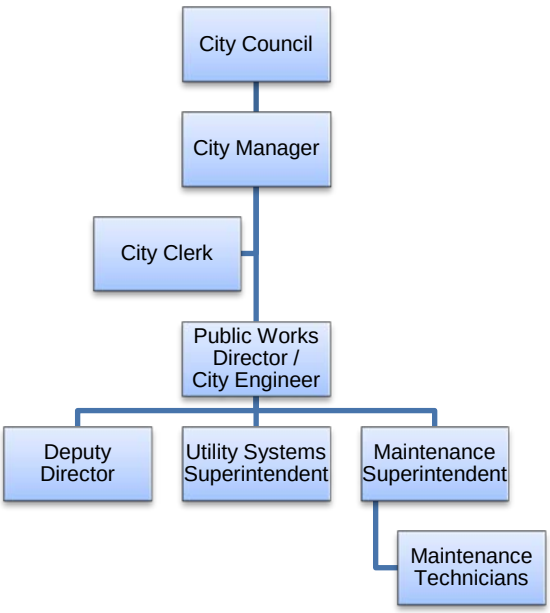

Figure 1. City of Calistoga Organization Chart for SSMP

City Council. The Mayor and Council members represent the residents of Calistoga, review public policy, and adopt policies responsive to the community. The City Council meets two evenings per month.

- The City Council's role in the SSMP is as follows:
  - Look to the Director of Public Works for reports on any SSOs
  - Make decisions regarding resolution of collection system problems

City Manager. The City Manager's office is responsible for the implementation of the policies and procedures of the Council and for the overall management of the City Staff.

City Clerk. The City Clerk's Office is responsible for preparation of agendas and minutes; ensures compliance with legal noticing requirements; the conduct of general municipal and special elections; responding to requests for public records; maintenance of the City's Municipal Code; and management of the citywide records management program. The City Clerk may also serve as the City's Public Information Officer.

- The City Clerk's role in the SSMP is as follows:
  - May, at times, receive phone calls regarding SSOs
  - Arrange for emergency meetings, if necessary

Public Works Director / City Engineer. Establishes policy, plans strategy, leads staff, allocates resources, delegates responsibility, authorizes outside contractors to perform services, and may serve as public information officer. Prepares wastewater collection system planning documents; manages capital improvement delivery system; documents new and rehabilitated assets; and coordinates development and implementation of SSMP. The City Engineer is legally responsible for monitoring, compliance and reporting associated with the City's National Pollutant Discharge Elimination System (NPDES) permit, the State Department of Health Services water purveyor permit, transportation permits, surface mining reclamation, the safety and operation of the City's dam and reservoir, and is the City's primary point of contact with the ecological, environmental, and other water quality and water rights regulatory agencies.

The City Engineer plans, bids, manages and monitors all Capital Improvement Projects (CIP) for each of the Department of Public Works' functional divisions. For private (non-City) projects, the City Engineer is responsible for the review of tentative and final parcel and subdivision maps, improvement agreements, inspection of privately-constructed public improvements, review of use permits, review and approval of all encroachment permits, monitoring of mitigation measures, safety issues of all City facilities, staffing of Napa County Transportation Planning Agency and Water Resources Planning Committee. DPW Administration personnel attend and participate in each Planning Commission and City Council meeting.

- The Public Works Director / City Engineer's role in the SSMP is as follows:
    - Receives complaint of SSO
    - Prepares wastewater collection system planning documents
    - Coordinates development and implementation of the SSMP
    - Reports SSOs to City Council
    - Works with Maintenance Superintendent to resolve and report SSOs
    - Works with Maintenance Superintendent to implement fats, oils, and grease program, and other special collection system programs.

Deputy Director. Provides professional engineering staff support to all parts of the Public Works operations. The scope of those operations is as described under "Public Works Director/City Engineer."

- The Deputy Director's role in the SSMP is as follows:
    - Assists in preparation of wastewater collection system planning documents
    - Assists in development and implementation of SSMP

Maintenance Superintendent. The Maintenance Superintendent oversees the Maintenance Technicians (the field personnel), wastewater collection, water distribution, streets, public parks, building maintenance technicians, and performs source control investigations. Manages field operations and maintenance activities, provides relevant information to agency management, prepares and implements contingency plans, leads emergency response, investigates and reports SSOs, and trains field crews. Performs preventive maintenance

activities, mobilizes and responds to notification of stoppages and SSOs (mobilize sewer cleaning equipment, by-pass pumping equipment, and portable generators).

- The Maintenance Superintendent's role in the SSMP is as follows:
    - Manages field operations and maintenance activities
    - Provides relevant information to Public Works Director
    - Leads emergency response
    - Works with Public Works Director to report SSOs to the State
    - Trains field crews
    - Works with Public Works Director to implement fats, oils, and grease program, and other special collection system programs.

Utility Systems Superintendent. The Utility Systems Superintendent oversees the City's water treatment and wastewater treatment systems. In this role, he coordinates with the Maintenance Superintendent and other Public Works staff for monitoring and management of the sewer collection system. The superintendent also assists with identification and resolution of sewer system issues, including, but not limited to, capacity determination and source control.

- The Utility Systems Superintendent's role in the SSMP is as follows:
    - Assist Maintenance Superintendent and Public Works Director in preventing and resolving SSOs

Maintenance Technicians. These technicians perform inspections of pipelines and associated equipment, respond to SSOs, and clean, maintain, and repair the sanitary sewer collection system. They ensure that new and rehabilitated assets meet agency standards, work with field crews to handle emergencies when contractors are involved; and provide verbal and written reports to Maintenance Superintendent. These staff perform preventive maintenance activities, mobilize, and respond to notification of stoppages and SSOs (mobilize sewer cleaning equipment, by-pass pumping equipment, and portable generators).

- The Maintenance Technician's role in the SSMP is as follows:
    - Perform preventative maintenance activities
    - Respond to stoppages and SSOs
    - Report equipment needs to Maintenance Superintendent

The names and contact information for each person in the positions described above are kept on file at the Public Works office. The information is updated on an on-going basis as personnel changes are made.

3. Legal Authority

The City of Calistoga Municipal Code Chapter 13.08 (Sewer Service) authorizes the City of Calistoga to require permits for installation or repair of sewer lines. The purpose of the Chapter is to provide rules and regulations for the use, maintenance, construction, alteration and repair of all sanitary sewer facilities within the City. This Chapter applies to all sanitary sewer facilities now and hereafter in use within the City of Calistoga.

The Chapter includes regulations for use of public sewers, has conditions for private sewage disposal, and includes regulations for public sewer construction. The Chapter also includes a section related to use of public sewers for domestic, commercial and industrial waste discharges.

The Chapter prohibits discharge of rainwater, stormwater, groundwater, street drainage, subsurface drainage, yard drainage, water from yard fountains, geothermal well water, ponds or lawn sprays or any other uncontaminated water into any sewer system facility which directly or indirectly discharges to facilities owned by the City.

Article XI of the Chapter relates to enforcement of the Municipal Code. This section authorizes the City to fine violators of the Chapter or prosecute violations as a misdemeanor. The Article sets out procedures for correction of violations and authorizes the City to disconnect a user from the sewer system for violations.

The City's entire Municipal Code is available online at www.codepublishing.com/CA/Calistoga.

4. Operation and Maintenance Program

4.1 Collection System Map

The City of Calistoga maintains up-to-date maps of wastewater collection system facilities. These maps include:

- All gravity line segments
- Manholes
- Pumping facilities
- Pressure pipes and valves
- Applicable stormwater conveyance facilities

4.2 Prioritized Preventive Maintenance

The City schedules regular maintenance of certain sewer lines that are known to have problems with oil and grease on a quarterly and semi-annual basis. Foothill Blvd., Cedar Street, sewer line from the Rancho De sewer lift station easterly to North Oak Street, and Grant Street in the vicinity of the Fairgrounds are cleaned every six months. Lincoln Avenue, Washington Street, and Fair Way are cleaned quarterly. All other sewer lines are cleaned on an annual basis. This maintenance includes using a hydro machine to flush and clean the sewer lines as noted below.

The City owns two sewer hydro machines with cutter attachments that are used to clean and flush the sewer lines. The goal of the maintenance program is clean the entire sewer system each year. In addition, certain areas of the City require more frequent cleaning, as often as once a month. The main causes of flow obstruction are roots and fats, oil and grease (FOG). The hydro machines work effectively to eliminate these obstructions.

Hydro

The hydro cleans grit and grease accumulated from sewer mains with water pressure, scouring the inside of the pipes. The hydro is used primarily for cleaning sewer lines that have the highest potential for blockage, mostly due to grease being discharged into the sewer lines. These areas are described as "hot spots".

Once a week, the Maintenance Technicians also make observations at manholes, inspect the lift stations, time the pumps, and test the emergency power systems. Approximately 20 to 30 manholes are checked each week. A log sheet is completed for each manhole, where observations on flow, pipe condition, and infiltration are recorded. A sample lift station inspection report and a sample manhole inspection sheet are presented in the attachments to this chapter. Department personnel estimate that most potential flow problems are prevented by this weekly inspection.

Structural deficiencies are noted when making routine inspections and during the hydro cleaning process. If a structural problem is suspected, cameras are brought in to identify the specific problem and location. Excavation and repairs are then undertaken when warranted. The City maintains a large, extensive inventory of replacement parts and equipment. The City must keep a large inventory because it is located at least an hour away from the major plumbing/equipment distributors. In fact, City staff has not been caught short during an emergency repair situation in at least 15 years. Sewer system maintenance is further discussed in Section 3 (Operation and Maintenance Program) of this SSMP.

The City currently distributes an information sheet for plumbers and contractors discussing how sanitary sewer overflows can be prevented when sewer laterals are being repaired as well as steps to take during new construction to prevent future problems. (See attached information sheet in Appendix A).

4.3 Rehabilitation and Replacement

The City of Calistoga maintains a two-year rolling budget that includes operations and maintenance as well as capital improvements for the wastewater collection system. The budget for FY 15/16 for the wastewater collection systems was $752,530 for Operations & Maintenance and $2,340,000 for Capital Improvements. The proposed budget for FY 16/17 for the wastewater collection systems is $855,829 for Operations & Maintenance and $838,350 for Capital Improvements.

The City is currently conducting a survey of the Collection System. This survey will include identification of the sewer system's structural deficiencies and will include a program to implement a prioritized short-term and long-term action plan for improvements. The City has purchased software and created an initial model. Manhole inspections have been completed; the inspections identify depths, condition of manhole with photos, diameters of sewer lines and their material/condition. The City's surveyor has completed the survey to identify manhole rim elevations. The City will use this along with the in-house manhole inspections to determine pipe invert depths, which will be input into the model.

4.4 Training

The Maintenance Superintendent arranges for his staff to attend seminars regarding sanitary sewer overflow prevention as well as providing in-house weekly training sessions related to a wide variety of issues, including sewer line maintenance and cleaning. Certifications for classes/seminars attended are maintained by the Administrative Assistant.

4.5 Contingency Equipment and Replacement Inventories

The City of Calistoga owns six (6) backhoes and loaders as well as other equipment needed for sewer line repair. In addition, the City maintains a list of Contractors that are available in emergencies with equipment and personnel. (See attached list in Appendix B) The City has a large inventory on hand of miscellaneous parts that allow the City to handle emergencies.

5. Design and Construction Standards

5.1 Standards for Installation, Rehabilitation and Repair

The City of Calistoga Municipal Code Chapter 16, Construction of Improvements requires that all streets, drainage facilities, water distribution and fire protection facilities, sanitary sewer facilities and other required improvements shall be constructed in accordance with the provisions of this chapter and with the following specifications, as applicable: the Public works Standard Specifications of the City of Santa Rosa, CalTrans Standard Specifications, the American Water Works Association, Board of Fire Underwriters.

All improvement plans must be prepared and signed by a registered civil engineer and must be approved by the City Engineer prior to construction.

5.2 Standards for Inspection and Testing of New and Rehabilitated Facilities

All improvements are subject to inspection by the City per Municipal Code Chapter 16.18.040. Inspections shall include testing by a certified testing firm to ensure all facilities meet the requirements of the specifications for that particular item. If it is determined that construction of any particular improvement is deficient, a deficiency list will be prepared by the inspector and transmitted to the contractor. Upon completion of all corrections or additional work outlined in the deficiency list, the contractor is required to request a final inspection by the Director of Public Works.

6. Overflow Emergency Response Plan

A copy of the City's Overflow Emergency Response Plan (ERP) can be found in Appendix C. The ERP protocols are summarized below.

6.1 Notification

This section summarizes information on how the City is to be notified of an SSO through a complaint or a report. Additionally, this section includes the chain of communication leading up to the response to the overflow.

The City provides emergency on-call service 24-hours a day, every day of the year. The City will clear all plugged sewer main lines. If the problem is in the property owner's lateral, the City crew will inform them of the situation and may turn off the customer's water until the plug has been cleared. The Calistoga Municipal Code defines the property owner's lateral as the pipe from the structure or dwelling to the point where it enters the City's main line. It is the property owner's responsibility for operation, maintenance, and repair of the lateral and building plumbing. Anyone wishing to report an SSO should contact the Department of Public Works:

Address:	414 Washington Street, Calistoga CA 94515
Hours:	8:00 a.m. - 4:30 p.m.
Phone:	707-942-2828
After Hours Phone:	707-942-2810
Fax:	707-942-9472

When SSOs are reported, the Maintenance Technicians are contacted by cell phone or home phone and dispatched to visit the spill site. The Maintenance Technicians rotate their schedules to ensure that someone is on-call 24 hours per day, 7 days per week.

6.2 Response

Once a spill is verified, water is turned off in that line or re-routed to a downstream sewer manhole until the spill has been contained and cleaned up, and the problem has been solved. The Maintenance Technician calls for assistance if needed, estimates the volume spilled, and reports the overflow to the Maintenance Superintendent. SSO cleanup is conducted immediately which involves spill containment, prevention of discharge to nearby waterways, use of absorbent materials or vacuums (depending on the spilled volume), and air drying of wet surfaces. No chlorine or lime is used for disinfection per guidelines circulated by the Napa County Department of Environmental Management and the State of California Department of Fish and Game.

An automatic telephone alarm system monitors all collection system pump stations, treatment plant units, and irrigation pump station for overflows or water quality. A plant operator and collection system personnel are on call 7 days a week. The alarm system pages the operator or a backup operator in the event of any alarms at the treatment and disposal facility. The system will also call the Calistoga Police Department in the event the alarm is not responded

to. The collection system pump stations have high level and power failure alarms, which call the Police Department for dispatching of collection system personnel.

At the Wastewater Treatment Plant, inadequately treated waste will automatically bypass the waste back into the treatment plant or equalization pond system. A storm water pump system collects all rain water and any plant overflow water and pumps it back to the flow equalization storage pond for treatment processing. The City also has a 6-inch portable diesel fully automatic wastewater pump for use in emergencies capable of pumping in excess of 1 mgd as well as several 4-inch portable gas pumps with sufficient hose to bypass waste water around any collection system or treatment plant unit.

6.3 Reporting

The Public Works Director and Maintenance Superintendent are responsible for completing, or overseeing the completion of regulatory reporting associated with SSOs.

If 1,000 gallons or more reach surface waters the Public Works Director or Maintenance Superintendent notifies the California Office of Emergency Services (CalOES) within 2 hours from the time of becoming aware of the spill.

The Public Works Director or his/her designee is also responsible for completing, or overseeing the completion of the SSO Spill Form and of the CIWQS online reporting (http://ciwqs.waterboards.ca.gov). Depending on the SSO classification, CIWQS reporting procedures are as follows:

Category 1 (all spills that reach waterways without being fully recovered):

- Submit draft report within 3 days of becoming aware of SSO
- Finalize report and certify within 15 days of the end of the SSO
- If more than 50,000 gallons reached the waterways, an SSO Technical Report will be developed and submitted within 45 days of the end of the SSO.

Category 2 (spills of 1,000 gallons or more that do not reach waterways or that are fully recovered):

- Submit draft report within 3 days of becoming aware of SSO
- Finalize report and certify within 15 days of the end of the SSO

Category 3 (spills less than 1,000 gallons that do not reach waterways or that are fully recovered):

- Submit certified report within 30 calendar days of the end of month in which SSO the occurred.

6.4 Impact Mitigation

When an SSO results in release of sewage into the street, the following procedures are used to remove the wastewater and clean the affected area:

1. Collect wastewater utilizing absorbent material, or install wastewater containment device(s).
2. Pump contained wastewater into the downstream sanitary sewer manhole.

If an SSO results in release of sewage into a surface water, the following procedures are used to minimize negative impact on the affected area:

1. Immediately stop additional flows from entering the waterway.
2. Clear the plugged sewer main.
3. If 50,000 or more gallons reached waterways, sampling of the body of water is mandatory. Sampling procedures are included in the Water Quality Monitoring Program which can be found as an attachment to the ERP. At the direction of the Director of Public Works, sampling of lower volume spills may also be performed. Conducting sampling at the appropriate locations allows staff to establish and monitor the levels of contamination as well as to establish or compare with the natural background levels of bacteria in the receiving waters.

6.5 Training

Formal training related to the Emergency Response Plan is scheduled annually. All employees are required to attend and a log of attendees is kept. Other informal training sessions take place throughout the year as needed. These informal sessions are not logged.

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

The City has identified fats, oils, and grease (FOG) as a frequent cause of line blockage in the sewer system. Efforts to reduce the discharge of FOG to the sewer are described in the following sections.

7.1 Identification & Sewer Cleaning

During routine sewer cleaning and in response to plugged lines, the City has identified areas or line segments of the wastewater collection system that are subject to grease stoppages and have established a prioritized cleaning schedule for each area. Two sewer mains within the downtown corridor have been identified that need more frequent cleaning due to FOG buildup. The City flushes those lines every month to two months to prevent flow restrictions. Problem areas change over time and are not due to a consistent or single cause. For example, problem areas appear to occur in areas with:

- High density housing or multiple families residing in single family homes
- Mobile home residential areas
- Commercial buildings

7.2 Source Control

As part of an effort to address oil and grease issues in the City of Calistoga's wastewater, a program to educate residents regarding proper handling of used cooking oil was developed. The general message of the outreach campaign is that residents should dispose of used cooking oil in the trash, using absorbent materials (e.g. paper towels), rather than down the drain. The activities included in the City's outreach program are described below.

Identify Problem Areas

City collection system staff were consulted to identify areas within the City where collection system upsets were most likely to occur. Call-out records were reviewed to obtain a more complete picture of collection system problem areas. The collection system was characterized for locations having a history of sewer system upsets. This characterization included a determination of whether the upsets were associated with residential or commercial activities. Residential areas were further characterized to determine if the area consisted of low density (i.e., single family homes mostly) or high density (i.e., apartment complexes) housing. Institutional facilities that serve food (i.e., convalescent hospitals, schools) were also identified in the problem areas.

Outreach Materials

Based on the information obtained regarding the residential problem areas and experiences of other communities, outreach materials were developed containing simple messages regarding proper handling of used cooking oil and grease. These materials included collateral materials such as pot holders, magnets, flyers and door hangers (see examples of materials in the attachments to this chapter). A FOG educational spot also runs on the City's Public Educational Government Channel (broadcasting on Channel 28 of Calistoga cable TV subscribers).

Conduct Outreach
The outreach materials developed can be distributed in many ways, including a booth at the Napa County Fair, local newspapers and publications, and door hangers.

If the problem areas contain schools, group facilities or apartment complexes, it may be possible to work with their staff to implement practices that would aid in the education process. Kitchen staff from schools or group facilities with large kitchens will be educated on proper oil and grease handling practices. Schools will be asked to distribute information for students to bring home. Apartment complex managers could be asked to provide outreach materials to new tenants and to assist with general distribution of materials. They could also be asked to track grease problems that occur within the complex. This tracking may be useful for evaluating program progress.

Program Evaluation
Program evaluation will be conducted periodically to determine if the program is meeting its goals of reducing oil and grease discharged from residential areas. Mobile home facilities will be asked to track grease problems within their plumbing system. Collection system upsets will be tracked to determine if a decrease in collection system upsets has occurred. Finally, a survey card will be distributed to determine the level of awareness of oil and grease disposal issues. The evaluation results will be used to determine any future steps needed to reduce oil and grease in the collection system.

7.3 Facility Inspection
The initial focus of the City's FOG program was on residential sources of oils and grease. The necessity for inspection of local food service establishments was evaluated. An agreement was approved for food services establishments to be inspected on an annual basis by the Napa County Department of Environmental Management as part of the NPDES Stormwater Pollution Prevention Program. Education related to the disposal of fats, oil and grease is part of these inspections.

7.4 Legal Authority
The City of Calistoga's sewer use ordinance is located in Chapter 13.08 of the Calistoga Municipal Code. As specified in Sections 425 and 430 (attached to this chapter); grease traps, interceptors, and/or sand traps must be provided at all restaurants, carwashes, breweries, mud baths, and bottling plants. The owner of the business must keep maintenance records that include: when the trap/interceptor was cleaned, how much grease was removed, and how much and when any pretreatment was used. Licensed grease/oil recycling firms must be utilized for disposal, and disposal invoices must be retained for inspection.

Enforcement of the ordinance is addressed in Article XI, Enforcement, of the Sewer Use Ordinance. Every violation is subject to a fine of not less than $50 or more than $1000 per day. Corrections must be made within 7 days of notice or the City will make the repairs and bill its expenses to the property owner. The City also has discretion to disconnect any user that does not comply with the regulations.

7.5 Disposal

During cleaning of sewer lines if fats, oil and grease (FOG) are found, the FOG is removed and placed in a dumpster at the Calistoga Wastewater Treatment Plant headworks facility where it is disposed of through the treatment facility waste disposal contract.

8. Capacity Management

8.1 Capacity Assessment

Currently, capacity studies are performed in isolated areas, during development planning.

8.2 System Evaluation and Capacity Assurance Plan

The Capital Improvement Plan includes measures for evaluating the system and ensuring capacity. Current capital improvements include reconditioning of manholes, a sewer system assessment and master plan, sewer trunkline replacement, a sewer lateral replacement program, and inflow and infiltration improvements.

Although the sewer system assessment and master plan has been budgeted, this project has been delayed due to budget constraints. The City is currently working to complete a survery of the Collection System (see Section 4.3).

9. Monitoring, Measurement, and Program Modifications

The intention of this section is to monitor the effectiveness of each SSMP element and update and modify SSMP elements to keep them current, accurate, and available for audit as appropriate. One way to track the effectiveness of each SSMP element is to use performance indicators. Performance indicators will be used during the audit process to determine any deficiencies in the SSMP. Examples of performance indicators that will be used to assess the SSMP include:

- Number of SSOs over the past 12 months
- SSOs by cause (roots, grease, debris, etc.)

Status updates as of May 2016 (Version 5 of the SSMP) for each of the SSMP sections can be found below. These updates incorporate recommendations from the May 2016 SSMP Audit.

1. Goals

The City of Calistoga's goals still include:

- Maintaining a safe and secure environment and high quality of life.
- Preserving and enhancing the community's unique beauty and character.
- Managing our resources efficiently, effectively and equitable.
- Recognizing the value and benefits of our diversity.
- Achieving long-term fiscal stability and self-sufficiency.
- Encouraging full public participation and ongoing communication.
- Strengthening partnerships with the private, non-profit and other public sectors for the cohesive and innovative delivery of government services.

2. Organization

The City's organization chart and roles have not significantly changed since originally described in 2006. The title for two positions were updated in 2016.

3. Legal Authority

The City's Sewer Service Ordinances (Chapter 13) demonstrates the City's legal authority to control the use, maintenance, construction, alteration and repair of all sanitary sewer facilities within the City limits. No changes have been made to these ordinances since the time of the previous audit in May 2014.

4. Operation and Maintenance Program

4.1 Collection System Map

A map of the City's collection system is maintained and updated periodically. No changes have been made since the last SSMP update.

4.2 Prioritized Preventive Maintenance

The City of Calistoga continues to schedule regular maintenance of certain sewer lines that are known to have problems with oil and grease. Those lines are cleaned on a quarterly or semi-annual basis. The entire system is cleaned once a year. Once a week, the Maintenance Technicians also make observations at manholes, inspect the lift stations, time the pumps, and test the emergency power systems. Approximately 20 to 30 manholes are checked each week.

4.3 Rehabilitation and Replacement

The City is currently working on a survey of the Collection System that identifies sewer system structural deficiencies and will help implement a prioritized short-term and long-term action plan for improvements.

4.4 Contingency Equipment and Replacement Inventories

The City of Calistoga continues to upkeep, and replace as necessary, backhoes and loaders as well as other equipment needed for sewer line repair. In addition, the City maintains a list of Contractors that are available in emergencies with equipment and personnel. This list was updated in May 2016. The City has a large inventory on hand of miscellaneous parts that allow technicians to handle emergencies.

4.5 Training

The Maintenance Superintendent continues to arrange for his staff to attend seminars regarding sanitary sewer overflow prevention as well as providing in-house weekly training sessions related to a wide variety of issues, including sewer line maintenance and cleaning.

5. Design and Construction Standards

The City of Calistoga Municipal Code Chapter 16, Construction of Improvements requires that all streets, drainage facilities, water distribution and fire protection facilities, sanitary sewer facilities and other required improvements shall be constructed in accordance with outlined provisions of this chapter. Chapter 16 is periodically reviewed, and updated as necessary. No updates have been made since the last SSMP update.

6. Overflow Emergency Response Plan

The City's Sewer Overflow Response Plan was updated to include recommendations from the 2014 Internal SSMP Audit and comply with reporting requirements from WDR-2013-0058-EXEC. No updates have been necessary since the previous SSMP update in May 2014.

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

The City continues to identify and clean sections of the sewer system that are subject to grease blockages. The City continues to distribute materials regarding source control activities to educate local businesses about FOG control. Random inspections and

inspections upon notice of an issue continue to take place. The outreach materials are distributed in many ways, including a booth at the Napa County Fair, local newspapers and publications, and door hangers. Program evaluation is conducted periodically to determine if the program is meeting its goals of reducing oil and grease discharged from residential areas. The focus of the City's FOG program is on residential sources of oils and grease. Food service establishments are now being inspected by the Napa County Department of Environmental Management for proper disposal of oil and grease.

8. Design and Construction Standards

The City of Calistoga Municipal Code Chapter 16, Construction of Improvements requires that all streets, drainage facilities, water distribution and fire protection facilities, sanitary sewer facilities and other required improvements shall be constructed in accordance with outlined provisions of this chapter. Chapter 16 is periodically reviewed, and updated as necessary. No updates have been since the SSMP was last updated.

10. SSMP Audits

The City completed an internal SSMP Audit in May 2016. This version of the SSMP (Version 5, updated May 2016) includes revisions based on the audit's recommendation.

11. Communication Program

The section was updated to note that the SSMP is published online. No other revisions were needed at this time.

10. SSMP Audits

The City plans to complete a review of the SSMP every two years to evaluate it effectiveness and to identify any deficiencies and steps to correct them. Audit reports will be kept on file at the Public Works. The most recent audit was completed in May 2016. This version of the SSMP (Version 5, updated May 2016) includes revisions based on the audit's recommendation.

11. Communication Program

The City maintains a website (http://www.ci.calistoga.ca.us/index.html) to inform the public about City activities. The City's website is an effective communication channel for providing alerts and news to the public. The main page of the website provides important announcements, agendas and minutes for City Council meetings, and other key information for City residents. The City publishes the SSMP on the Public Works Department page of the City website. The SSMP is certified by the City Council during a public city council meeting once every five years. The City also uses the website to notify the public of important upcoming activities related to sewer system management, its development, and implementation, and performance.

The City does not need have any tributary or satellite collection systems; there is no need to establish communication protocols with any such agencies.

APPENDIX A

Outreach to Plumbers & Sewer Contractors

Plumbers & Sewer Contractors: Your Actions Can Prevent Sanitary Sewer Overflows!

What are Sanitary Sewer Overflows or SSOs?

SSOs discharge untreated or partially treated human and industrial waste, debris and disease-causing organisms from the sanitary sewer onto the ground near and into homes and potentially into creeks, rivers, lakes or streams.

What are the impacts of SSOs?

SSOs may result in property damage, environmental damage and/or potential liability to you or your company. Allowing sewage to discharge to a gutter, storm drain or waterway may subject you to penalties and/or out-of-pocket costs to reimburse cities or public agencies for clean-up efforts and regulatory penalties.

How can you prevent SSOs?

and avoid associated penalties & fines

When clearing plugged sewer laterals:

- ☑ Whenever possible, remove root balls, grease blockages and any other debris; don't push debris from the lateral to the sewer main.
- ☑ If you can't prevent a root ball or other debris from entering the sewer main when working in our service area, **please call us** at ((707) 942-2828, so we can work with you (free of charge) to remove the root ball from the sewer main to prevent blockages further downstream.
- ☑ Use plenty of water to flush lines.
- ☑ Don't open manholes. Hazardous sewer gases from manholes are odorless, undetectable and can be deadly. Call us to open manholes for you and please note that discharge into a publicly-owned manhole requires a permit. Contact our Public Works Department at (707) 942-2828, for an application.

When constructing sewer laterals:

- ☑ Check your work area. Gravel, backfill material and test plugs can become lodged in the sewer line and cause blockages. Make sure no debris is left in the sewer line before you backfill.
- ☑ Avoid offset joints – offset joints make sewer lines vulnerable to root intrusion & grease accumulation, cause debris hang-ups and make lines harder to clean. Properly bed your joints and don't hammer tap.
- ☑ In the Calistoga service area, contact our Permit Counter for the appropriate construction specs at (707) 942-2828.

Who Do I Call to Avoid an SSO?

Help us help you…

If you require our free assistance to help clear root balls, grease blockages and other debris from a main sewer line to prevent an SSO or to open a manhole in our service area, please call us at:

(707) 942-2828

Public Works Department
414 Washington Street
Calistoga, CA 94515

APPENDIX B

Emergency Public Works Phone Numbers

Emergency Phone Numbers
Public Works - All 707 Area Code unless otherwise specified

Emergency Contacts			
COMPANY	**CONTACT**		**PHONE #**
AT&T - Lift Station Emergencies	**Dawn**	CITYS REP	**866-371-4157(**after hrs Emer.**800-303-0103)**
PGE EMERGENCY Use Locator # First !! Gas & Elec Locator **257-5955 **PGE Power Outage 800-743-5002**	ROMERO SALVADOR **800-743-5000** When recording begins, SAY the Word "Emergency"	BUSINESS MESSAGE George>	963-7133 257-5936 OR **Katie Kerns > Cell 321-2574** **Cell 249-3120**
BABS Bay Area Barricades **SAND BAGS**	**LEN** SONGSTER	BUSINESS Rings at home	 (925) 686-1089
BLAKELEY Construction LOCAL EMERG. HELP *** Debbie – Sec.	 **DICK BLAKELEY** Dennis Blakeley	BUSINESS HOME CELL HOME CELL	**942-4383** 942-9286 975-0887 942-6371 975-0592
Lutz Bags (SAND BAGS)	Allan Lutz	BUSINESS	(707) 762-0215 (24 hrs.)
CDF Calif Dept Forestry	***Fires***		963-3601
CALTRANS **LOCAL OFFICE** **Upvalley Emerg #** augusto.lumba@dot.ca.gov	MAIN OFFICE Dennis Schnapp-Supt. Cell: (707) 695-5119 **762- 6641(M-F 7:30 to 4pm)** **After Hours Emerg # - (510) 286-6359 (24 hr radio call)** **Augusto Lumba**	BUSINESS CALISTOGA TRAFFIC LIGHTS Santa Rosa-Permits	(510) 286-4444 942-6010 (415) 330-6500 (707) 769-5698
CHP	ROAD CONDITIONS	BUSINESS	(800) 427-7623
COMCAST (800-266-2278)	**Emergency**	(559) 455-4413	Calif. Govt. Acct. Emerg. Contact
Fish & Game **(Hazardous Spills)**		24 Hr Dispatch	(800) 358-1300
Herndon Electric Electrician - Local Help	Jim Herndon	Cell	483-2619
Leete Electric **Generators**	Emerg. Pager: 226-4918 Put in return number plus # sign		545-0484 (800) 649-0484
Napa County Roads	Mike Shepherd	Yountville Office	944-0196
" "		Public Works	253-4351
Napa County Sheriff		24-hr Dispatch	253-4451
Pacific Tree Care Office: 942-0261	**Joe Schneider** **Jake Schneider**	Hm: 942-1672 Hm: 225-1788	Cell: 249-5027 Cell: 249-5028
Redwood Coast Petroleum **FUEL**	**Call First** John Harvey-Gen Mgr.	Business and Emergency	**(707) 546-0766 Ext. 177**** **After hours will prompt with a number to call** (510) 557-0870 (cell)
Other Important Numbers			*Other Important Numbers*
Ace Hardware	Mark / Tim Peterson	Business	942-4396 (fx: 4921)
Acme Rigging	Business	800-862-4639	462-0567
Alkar Personnel	**Temp Employees**	Business	578-5001

Emergency Phone Numbers
Public Works - All 707 Area Code unless otherwise specified

Emergency Contacts			
COMPANY	**CONTACT**		**PHONE #**
AT&T	**# 611 REPAIR**		
Bell Products	HVAC	Business	255-1811
Boyadjieff Constr.	Eugene: Owner	Bus/Hm	942-4829
Britton Tree Service	Joe Borden	Bus: 963-7578	Cell: 695-5022
BWS Safety	Matt Radin	Bus: 546-2484	Cell: (707) 975-2103
Calistoga Towing	Ray Bolger	Bus: 942-4445	Cell: 337-4502 (Ans Svc: 543-2944)
Central Valley Hardware	Bus: 963-3622	Napa Office	257-8888
CJUSD - **Local Schools**	Dr. Esmerelda Mondragon	District	942-4703
Emergencies (1st)	**Chris Ochs**	**Dir. Of Facilities**	**942-4564**
(2nd) Principal	Craig Wycoff	Highschool	942-4703 - 339-0505 (cell)
(3rd)	Monique Saviez	District	942-4703 - 239-3239 (cell)
Principal	Jane Bunting	Elementary	942-4398 - 889-4374
Davey Tree Expert Co.	Paul Dubois	Cell	974-2101
Express Personnel	**Temp Employees**	Fax: 224-9365	Office: 224-9252
Fairgrounds (Calistoga)	Carlene Moore	Bus: 942-5111	Cell: (707) 501-8401
Farris Construction	Dan Farris	Cell:	975-7575
Grainger (hardware)		Fax: 584-8868	Bus: 584-9211
R & B Company (parts)	Jeannine Clary	Bus: 542-4100	Cell: 230-1742
Harold Smith & Son	John Raybould	Bus: 963-7977	Cell: 975-3347
Hertz Rentals	Fred Peterson	Bus:586-4444	Cell: (707) 396-6254
Rohnert Park	Jon Moyer	Manager	Cell: (510) 774-6171
Jim's Supply	Tom Post	Bus: 942-5467	Cell: (707) 331-2078
Joe Branum Tree Care	Joe Branum	Bus: 942-8954	Cell: 396-0216
Mark West Quarry	Trucking	Business	942-5110
Marvin Asher (Marvin's Garage)	Tires / Auto Repair	Cell	363-1443
MME (Street Sweeper)	Frank Wheeler	Business	916-922-1101
Montelli Construction	Fax: 963-4670	Business	963-4800
		Dan M.	942-5002
Nationwide Wire/Brush	****SEE United Rotary Brush below****		
Olgetree's Welding	John/ Mike	Business	963-3537
Pace Supply (parts)	Pete	Bus: 974-8068	Cell: 603-1129
Paul Coates Construction	Construction	Cell:	707-974-9909
Peterson Power Systems	**Generator Service**	Business	576-1616
Phillips, Steve	**Generator Service**	Business	Ph: 795-7425 Cell: 484-0272
Precision Concrete Cutting	Trip Hazard Removal Prof.	Victor Nunnemaker	Ph:650-465-333 - safesidewalks.com
Precision Crane	Crane Rentals	Business	546-6900
Rainbow AG	Parts	Bob Coffin	942-4566
Sakai General Engineering	Bruce	Bus: 942-0578	Cell: 732-7900
SHAW Plumbing	Dave Shaw	Bus: 942-6754	Cell # 975-7106
Other Important Numbers (Continued)		*Other Important Numbers (Continued)*	
Stadlehoffer (Constr.)	Rich S.	Bus: 942-4298	Cell # 484-6471
SYAR Industries	Trucking	Bus: 252-8711	Lad Stevenson: Cell (707) 975-6059
		Blake	(707) 249-4853
Stevenson Supply	Rodney	Cell: 481-0247	Fx: 575-8723
(hardware / tractor)	Jeremy	Cell: 570-6337	Bus: 575-3335
Tamagni, Ted	Mechanic	Bus/ 942-6409	Cell: 486-4441
Tel Star Instruments Inc.	Tak Koo	925-671-2888	Cell: 510-385-5377

Emergency Phone Numbers
Public Works - All 707 Area Code unless otherwise specified

Emergency Contacts			
COMPANY	**CONTACT**		**PHONE #**
Lift Station Repair			
United Rotary Brush	F: 209-744-2904	P: 209-744-4200	800- 872-7874
United Rentals Napa	Dennis Gordon Cell: (707) 678-3492	Business 24-hr phone	255-1066 Fax: 255-6683 (800) 877-3687
Watson Construction	Dennis W. denwat@sbcglobal.net	Business Hm: 965-9223	965-1100 Cell # 974-6497
Wilson Construction	Dan Wilson	Bus: 968-9930	Cell 799-4601 / HM: 987-8583

APPENDIX C

Sewer Overflow Response Plan

City of Calistoga
Overflow Emergency Response Plan
(ERP)

Prepared By:

City of Calistoga
Public Works Department
414 Washington Street
Calistoga, CA 94515
Voice: (707) 942-2828
Fax: (707) 942-9472

Updated May 2014

Contact Persons:

Director of Public Works
(707) 942-2828

Maintenance Superintendent
(707) 942-2828

Regulatory Agency to Report Sewer Overflow:

Governor's Office of Emergency Services (OES)
(800) 852-7550 phone
(916) 262-1677 fax

Contractors

Repairs:

Blakely Construction (707) 942-4383 Cell: (707) 975-0887
Wilson Construction (707) 968-9930 Cell: (707) 799-4601
Dennis Watson Construction (707) 965-1100
Harold Smith & Son, Inc. (707) 963-7977

Clean-up:

JCC, Inc. (707) 575-4011
Service Master (707) 963-0970
Bay Area Water & Smoke Damage (707) 224-4033

Other Important Contacts

Regional Water Quality Control Board (Regional Water Board)
(510) 622-2460 phone
(510) 622-5633 fax

Caltrans
(707) 224-8684

PG&E
(800) 743-5000

City Insurance (PARSAC)
(916) 927-7727

Upper Valley Disposal
(707) 963-7988

Napa County Planning/Building & Environmental Services
(707) 253-4471 business hours
(800) 540-5306

Napa County Public Works
(707) 253-4351
(707) 944-0196, roads

California Dept of Fish & Wildlife
(707) 944-5500

Calistoga Fire Department
(707) 942-2840

Calistoga Police
(707) 942-2810

Railroad Police
(707) 477-5955, emergency

Table of Contents

1. Authority 1
2. General 1
   2.1. Objectives 1
   2.2. Organization of Plan 1
3. Overflow Response Procedure 1
   3.1. Receipt of Information Regarding an SSO 1
   3.2. Dispatch of Sewer Maintenance technician to Site of Sewer Overflow 2
   3.3. Overflow Correction, Containment, and Clean-Up 3
   3.4. Sewage Overflow Report 5
   3.5. Customer Satisfaction 6
4. Public Advisory Procedure 6
   4.1. Temporary Signage 6
   4.2. Other Public Notification 7
5. Regulatory Agency Notification Plan 7
6. Maintenance of ERP 7

Appendices

Appendix A Sanitary Sewer Overflow Long Form
Appendix B Sanitary Sewer Overflow Short Form
Appendix C Water Quality Monitoring Plan
Appendix D Suggested Criteria for Demonstrating How a Sewer Overflow was Unavoidable
Appendix E Measures to Avoid Sewer Overflow

1. Authority

The City of Calistoga (City) Overflow Emergency Response Plan (ERP) is prepared pursuant to National Pollutant Discharge Elimination System (NPDES) permit requirements and the Sanitary Sewer System Waste Discharge Requirements (WDR) to facilitate proper incident reporting procedures and to ensure that the protection of the environment and the public's health and safety remains a high priority concern.

2. General

The ERP is designed to ensure that every report of a sewage overflow incident is immediately dispatched to the appropriate City personnel for confirmation. Quick response will minimize the effects of the overflow with respect to impacts on public health, beneficial uses and water quality of surface waters and on customer service.

2.1. Objectives

The primary objective of the ERP is to protect public health and the environment, satisfy regulatory agencies and waste discharge permit conditions which address procedures for managing sewer overflows, and minimize risk of enforcement actions against the City.

Additional objectives of the ERP are as follows:

- Protect collection system personnel and wastewater treatment plant operators;
- Protect the collection system, wastewater treatment facilities, and all appurtenances; and
- Protect private and public property beyond the collection and treatment facilities.

2.2. Organization of Plan

The key elements of the ERP are addressed individually as follows:

Section 3 – Overflow Response Procedure
Section 4 – Public Advisory Procedure
Section 5 – Maintenance of ERP
Appendices

3. Overflow Response Procedure

The Overflow Response Procedure presents a strategy for the City's Public Works Department to mobilize labor, materials, tools and equipment to correct or repair any condition, which may cause or contribute to an unpermitted discharge. The plan considers a wide range of potential system failures that could create an overflow to surface waters, land or buildings.

3.1. Receipt of Information Regarding an SSO

An overflow may be detected by City employees or by others. The City is responsible to act based on phone calls received or reports on possible sewage overflow from the public wastewater disposal system, and to provide immediate response to investigate and/or correct reported sewer overflow. Generally, telephone calls from the public reporting possible sewer overflows are received at the Public Works Department or City offices during normal working hours and the Calistoga Police Department after hours.

1) The telephone operator obtains all relevant information available regarding the overflow including:
    a. Time and date call was received;

b. Specific location;
c. Description of problem;
d. Time possible overflow was noticed by the caller;
e. Caller's name and phone number;
f. Observations of the caller; and
g. Other relevant information that will enable the Public Works Department crews, to quickly locate, assess and stop the overflow.

2) The Public Works Department dispatches sewer maintenance technician to confirm the overflow. Until verified, the report of a possible spill will not be referred to as a "sewer overflow." If it is determined that 1,000 gallons or more reached or are likely to reach surface waters, the Public Works Department shall provide the information orally to the Governor's Office of Emergency Services (OES) within 2 hours of confirming the spill. The caller will receive an "OES Control Number." All spills, regardless of volume will be electronically reported into the California Integrated Water Quality System (CIWQS). The Director of Public Works is responsible for reviewing, updating and certifying the final SSO Report.

3.2. Dispatch of Sewer Maintenance Technician to Site of Sewer Overflow

Failure of any element within the public wastewater disposal system that threatens to cause or causes a SSO shall trigger an immediate response to isolate and correct the problem. Personnel and equipment shall be available to respond to any SSO location. Additional maintenance technicians shall be brought in if extra manpower is needed.

1) Dispatching Maintenance Technicians:
   - When the City receives notification of a potential sewer overflow, the Public Works Department dispatches maintenance technicians with appropriate resources as required.

2) Maintenance Technician Instructions
   - Dispatch maintenance technicians by telephone or radio. Assign appropriate personnel, materials, supplies and equipment needed.
   - The telephone operator shall verify that the entire message has been received and acknowledged by the Maintenance Technician who was dispatched. All personnel being dispatched to the site of an SSO proceed immediately to the site of the overflow. Any delays or conflicts in assignments shall be reported immediately for resolution.
   - Maintenance Technicians shall investigate all reports of SSOs. Whether an SSO was confirmed or not, the responding technician will write what was found and what actions were taken. These reports shall be attached to the Complaint Form.

3) Additional Resources
   The Maintenance Superintendent or his designee conveys, appropriate parties requests for additional personnel, material, supplies, and equipment for Maintenance Technician working at the site of a sewer overflow.

4) Field Supervision and Inspection
   - The Maintenance Superintendent or his designee shall visit the site of the SSO to ensure that provisions of this ERP and other directives are met.

- The Maintenance Superintendent or his designee is responsible for verbally notifying regulatory agencies within the specified time and submitting the SSO Report.

5) Coordination with Hazardous Material Response
    - Upon arrival at the scene of a SSO, should a suspicious substance (e.g., oil sheen, foamy residue) be found on the ground surface, or should a suspicious odor (e.g., gasoline) not common to the sewer system be detected, the City sewer maintenance crew shall immediately contact the Maintenance Superintendent for guidance before taking further action.
    - Should the Maintenance Superintendent determine the need to alert the hazardous material response team, the Maintenance Technician shall await the contracted hazardous waste team response.
    - Upon arrival of the hazardous material response team, the City sewer Maintenance Technician shall take direction from the person with the lead authority of that team. Only when that authority determines it is safe and appropriate for the City sewer Maintenance Technician to proceed under the ERP with the containment, clean-up activities, and correction.

3.3. Overflow Correction, Containment, and Clean-Up

This section describes specific actions to be performed by the City sewer maintenance technician during a SSO. The objectives of these actions are:

- To protect public health, environment and property from sewage overflows and restore surrounding area back to normal as soon as possible;
- To establish perimeters and control zones with appropriate traffic cones and barricades, vehicles or use of natural topography (e.g., hills, berms);
- To promptly notify Cal OES in cases where 1,000 gallons or more reached or may reach surface waters and provide preliminary overflow information and potential impacts;
- To contain the sewer overflow to the maximum extent possible including preventing the discharge of sewage into surface waters; and
- To minimize the City's exposure to any regulatory agency penalties and fines.

Under most circumstances, the City can handle all response actions with its own maintenance forces. They have the skills and experience to respond rapidly and in the most appropriate manner. An important issue with respect to an emergency response is to ensure that the temporary actions necessary to divert flows and repair the problem do not produce a problem elsewhere in the system. Circumstances may arise when the City could benefit from the support of private-sector construction assistance. This may be true in the case of large diameter pipes buried to depths requiring sheet piling and dewatering should excavation be required. The City may also choose to use private contractors for open excavation operations that might exceed one day to complete.

1) Responsibilities of City Sewer Maintenance Technician Upon Arrival

    It is the responsibility of the first person who arrives at the site of a sewer overflow to protect the health and safety of the public by mitigating the impact of the overflow to the maximum extent possible. Should the overflow not be the responsibility of the City, the first responder shall turn the City water off to eliminate the potential for additional discharge. The first responder shall direct the immediate clean-up by the

Property Owner. If that clean-up is not completed in a timely manner, City crews will provide for the clean-up and bill the property owner. If there is imminent danger to public health, public or private property, or to the quality of waters of the State, then the first responder takes prudent emergency action until the responsible party assumes responsibility and provides actions.

Upon arrival at a SSO, the City sewer Maintenance Technician performs the following:

- Determines the cause of the overflow (e.g., sewer line blockage, pump station mechanical or electrical failure, sewer line break, etc.);
- Identifies and requests assistance or additional resources to correct the overflow or to assist in determination of its cause;
- Takes immediate steps to stop the overflow (e.g., relieves pipeline blockage, manually operates pump station controls, repairs pipe, etc.) Where overflows from private property threaten public health and safety (e.g., an overflow running off of private property into the public right-of-way) water service to the property will be turned off; and
- Requests additional personnel, materials, supplies, or equipment that will expedite and minimize the impact of the overflow.

2) Initial Measures for Containment

Initiate measures to contain the overflowing sewage and recover where possible sewage, which has already been discharged, minimizing impact to public health or the environment.

- Determine the immediate destination of the overflow, (e.g., storm drain, street curb gutter, body of water, stream bed, etc.);
- Identify and request the necessary materials and equipment to contain or isolate the overflow, if not readily available; and
- Take immediate steps to contain the overflow, (e.g., block or bag storm drains, recover through vacuum truck, divert into downstream manhole, etc.)

3) Additional Measures Under Potentially Prolonged Overflow Conditions

In the event of a prolonged sewer line blockage or a sewer line collapse, set up a portable by-pass pumping operation around the obstruction.

- Take appropriate measures to determine the proper size and number of pumps required to effectively handle the sewage flow.
- Implement continuous or periodic monitoring of the by-pass pumping operation as required.
- Address regulatory agency issues in conjunction with emergency repairs.

4) Cleanup

Clean sewer overflow sites thoroughly after an overflow. No readily identified residue (e.g., sewage solids, papers, rags, plastics, and rubber products) is to remain.

- Whenever possible digital photos should be taken of the area before and after cleanup.
- Where practical, thoroughly flush the area and clean of any sewage or wash-down water. Solids and debris are to be flushed, swept, raked, picked-up, and transported for proper disposal.

- Secure the overflow area to prevent contact by members of the public until the site has been thoroughly cleaned.
- Where appropriate, disinfect and deodorize the overflow site.
- Where sewage has resulted in ponding, pump the pond dry and dispose of the residue in accordance with applicable regulations and policies.
- If a ponded area contains sewage, which cannot be pumped dry, it may be treated with bleach. If sewage has discharged into a body of water that may contain fish or other aquatic life, do not use bleach. Contact the Department of Fish & Game for specific instructions.

5) Sampling

If an estimated 50,000 gallons or more reach surface waters, follow procedures in the Water Quality Monitoring Plan for ammonia and bacteria monitoring (Appendix C)

3.4. SSO Reporting

The Sewer Overflow Reports in Appendices A and B contain information which is required to be reported to regulatory agencies. The on-line website for reporting SSOs is: **http://ciwqs.waterboards.ca.gov/.** The Maintenance Superintendent or his designee completes the appropriate Sewer Overflow Report (Short or Long, see Appendix A or B). The Short Form is to be used when the SSO is less than 1,000 gallons and none of it has reached the surface waters (Category 3 SSOs). The Long Form is to be used when the SSO is greater than 1,000 gallons or when any volume reaches surface waters (Category 1 and 2 SSOs). In addition, an SSO where 1,000 gallons or more reach surface waters must be reported to the California Office of Emergency Services (CalOES) within 2 hours of becoming aware of the spill.

Reporting instructions are as follows:

❖ Category 1 SSO - Any spill that reaches surface water ***(Use Long Form)***
(Submit draft report on-line within three (3) business days of becoming aware of the SSO and certify within 15 calendar days of SSO end date.)

1. **If 1,000 gallons or more reach surface waters**, call CalOES within in two (2) hours to receive an OES Control Number - (800) 852-7550.
2. For all spills that reach surface waters, regardless of volume:
   - Complete the LONG FORM REPORT
   - Enter data into the CIWQS on-line SSO Database http://ciwqs.waterboards.ca.gov
   - Certify report by Legally Responsible Official.
3. If 50,000 gallons or more reach surface waters:
   - Follow the Water Quality Monitoring Plan
   - Report all monitoring results and develop a Technical Report within 45 days of SSO end date.

❖ Category 2 SSO **-** Spills equal to or greater than 1,000 gallons that **do not** reach surface water ***(Use Long Form)***
(Submit draft report on-line within three (3) business days of becoming aware of the SSO and certify within 15 calendar days of the SSO end date.)

1. Complete the LONG FORM REPORT.
2. Enter data into the CIWQS on-line SSO Database http://ciwqs.waterboards.ca.gov
3. Certify report by Legally Responsible Official

- Category 3 SSO - Spills less than 1,000 gallons that **do not** reach surface water
  (Use Short Form Only) (Submit certified report within 30 calendar days of the end of the month in which the SSO occurred.)

The NPDES Illicit Discharge Complaint form and Investigation Form shall be completed for all SSOs.

The NPDES Illicit Discharge Report Form shall be completed when a discharge reaches the public right-of-way.

The NPDES Illicit Discharge Follow-up Form shall be completed when a Report form is warranted.

Information regarding the sewer overflow collected on the SSO report forms includes the following:

- Time of SSO
  - Date, time, duration, weather
- Description of SSO
  - Estimated volume, source, spill destination, volume contained, fish kills
- Location of SSO
  - Address, Lat/Long, waterbody, watershed
- Cause of SSO
- Incident Response
  - Visual inspection, correction actions, samples collected, investigations underway, posted warnings
- Suspected Responsible Party
- Notification
  - OES Control Number, agency contact information
- Regional Water Board Information

3.5. Customer Satisfaction

The first responder should follow up in person or by telephone with the entity who was reporting the overflow. The cause of the overflow and its resolution will be disclosed.

4. Public Advisory Procedure

This section describes the actions the City will take to limit public access to areas potentially impacted by unpermitted discharges of pollutants to surface water bodies from the wastewater collection system.

4.1. Temporary Signage

The City has primary responsibility for determining when to post notices of polluted surface water bodies or ground surfaces that result from uncontrolled wastewater discharges from its facilities. The postings do not necessarily prohibit use of recreational areas, unless posted otherwise, but provide a warning of potential public health risks due to sewage contamination. The Director of Public Works and/or Maintenance Superintendent shall determine if posting of a confirmed overflow is necessary.

4.2. Other Public Notification

Should the posting of surface water bodies or ground surfaces subjected to a sewer overflow be deemed necessary by the Public Works Department, the Director of Public Works and/or the Maintenance Superintendent shall determine the need for further public notification (e.g., television, radio, door hangers, etc.).

5. Maintenance of ERP

The ERP will be reviewed on an annual basis. Possible amendments can include:

- Change in procedures
- Change in contact personnel or phone numbers
- Changes due to regulatory requirements

APPENDIX A

SSO Long Form Report

City of Calistoga

SSO LONG FORM REPORT

For Any Spill That Reaches Surface Water – CAT 1

and

Spills Equal to or Greater than 1,000 Gallons that do not Reach Surface Water – CAT 2

Note: * means Required Field

A. SSO OCCURING TIME

SSO Date:* _____ (military time)

Time of Initial Call*: _____

Estimated first responder arrival time*: _____

Estimated spill start time: _____
(necessary to calculate volume spilled)

Estimated spill end time*: _____

Weather condition at time of spill:
- ☐ Sunny Weather
- ☐ Cloudy Weather
- ☐ Rainy Weather
- ☐ Rain for Several Days

B. SSO DESCRIPTION

Estimate volume spilled:* (in gallons) _____

How was spill volume determined?* _____
_____
_____

SSO Source:*
- ☐ Manhole
- ☐ Pipe
- ☐ Clean Out
- ☐ Pump Station
- ☐ Other

- If Other, please specify: _____

Final spill destination:
- ☐ Storm Drain
- ☐ Capture in Storm Drain
- ☐ Building Structure
- ☐ Yard/Land
- ☐ Street/Curb & Gutter
- ☐ Surface Water Impact
- ☐ Ground Water Impact
- ☐ No Water Involved
- ☐ Unknown

Did incident reach State waters?* ☐ Yes ☐ No

Volume of SSO recovered/contained :* (in gallons) _____
(do not include water used for clean-up)

Volume of SSO discharged to State waters:* (in gallons) _____

Any fish killed?* ☐ Yes ☐ No

C. SSO LOCATION

Street address or site description: _____

City: _____ County:* _____ ZIP Code:* _____

Longitude*: _____ (*Decimal Degrees)*

Latitude*: _____ (*Decimal Degrees)*

Water Body/Watershed/Region Basin: _____

D. CAUSE OF SSO

Spill Cause:
- ☐ Blockage
- ☐ Infrastructure Failure
- ☐ Inflow/Infiltration
- ☐ Electrical Power Failure
- ☐ Flow Capacity Deficiency
- ☐ Natural Disaster
- ☐ Bypass
- ☐ Cause Unknown

- If spill cause is Blockage, please specify:
  - ☐ Roots
  - ☐ Grease
  - ☐ Debris
  - ☐ Debris from laterals
  - ☐ Vandalism
  - ☐ Animal carcass
  - ☐ Construction debris
  - ☐ Multiple causes
- If spill caused by Infrastructure Failure, please specify:
  - ☐ Breakage of collection system
  - ☐ Damage to collection system
  - ☐ Leaks to collection system
  - ☐ Pump station failure
  - ☐ Multiple causes
- Specify other cause: _____

E. INCIDENT REPONSE

Visual inspection result of receiving water:* _____

_____

Were response/corrective actions taken?* ☐ Yes ☐ No
Were clean-up actions taken?* ☐ Yes ☐ No

Were disinfection actions taken?* ☐ Yes ☐ No
Were samples collected?* ☐ Yes ☐ No
Any on-going investigation?* ☐ Yes ☐ No
- If Yes, please specify completion date: _____
- Status: ☐ Open Active
  ☐ Open Enforcement
  ☐ Closed

Any sampling result reported on the SSO?* ☐ Yes ☐ No
Were health warnings posted? ☐ Yes ☐ No
Any beach closure?* ☐ Yes ☐ No
Beach closure details:* _____
_____

F. SUSPECTED RESPONSIBLE PARTY

Name: _____ Agency:* _____ Phone: _____
Mail Address: _____
City: _____ County: _____ ZIP Code: _____

G. NOTIFICATION (for spills where 1,000 gallons or more reach surface waters)

OES Control Number:* _____
Date OES Called: _____
Time OES Called: _____ (military time)
OES Staff spoke to: _____(staff person's name)

AGENCY CONTACT INFORMATION

Originally reported by:* _____
Entered by:* _____
Facility ID/Name/Region:* _____
Agency Name:* _____
Notification List: _____
Agencies Notified by Water Board: _____

AGENCY CONTACT INFORMATION

Name:* _____ Agency:* _____
Phone:* _____
Mail Address:* _____
City: _____ County:* _____ ZIP Code:* _____

SSO Brief Discussion: _____
_____
_____
_____
_____

Person completing form: _____ Date: _____

APPENDIX B

SSO Short Form Report

City of Calistoga

SSO SHORT FORM REPORT

(*For spills less than 1,000 gallons that **do not** reach surface water*)

Cause occurred in: ☐ Lateral ☐ Main Line

Incident Date: _____

Time of Initial Call: _____

Estimated Spill Start Time: _____

Estimated Spill End Time: _____

Street address/ or site description: _____

City: _____ County: _____ ZIP Code: _____

Latitude: _____ Longitude: _____

Amount spilled in gallons: _____ (Numeric Only)

How was spill volume determined? _____

_____

_____

Source of spill:
- ☐ Manhole
- ☐ Pipe
- ☐ Clean Out
- ☐ Pump Station
- ☐ Other

- If Other, please specify: _____

Final spill destination:
- ☐ Storm Drain
- ☐ Capture in Storm Drain
- ☐ Building Structure
- ☐ Yard/Land
- ☐ Street/Curb & Gutter
- ☐ Surface Water Impact
- ☐ Ground Water Impact
- ☐ No Water Involved
- ☐ Unknown

Spill cause:
- ☐ Blockage
- ☐ Infrastructure Failure
- ☐ Inflow/Infiltration

- ☐ Electrical Power Failure
- ☐ Flow Capacity Deficiency
- ☐ Natural Disaster
- ☐ Bypass
- ☐ Cause Unknown

- If spill cause is Blockage, please specify:
  - ☐ Roots
  - ☐ Grease
  - ☐ Debris
  - ☐ Debris from laterals
  - ☐ Vandalism
  - ☐ Animal carcass
  - ☐ Construction debris
  - ☐ Multiple causes

Comments: _____

_____

_____

_____

_____

Person Completing Form: _____

Date Completed: _____

APPENDIX C

Water Quality Monitoring Plan

November 2013

CITY OF CALISTOGA

Sanitary Sewer Overflow Water Quality Monitoring Plan

Table of Contents

A PROJECT MANAGEMENT 1

A.1 PROJECT ORGANIZATION 1
A.2 BACKGROUND 1

B DATA GENERATION AND ACQUISITION 3

B.1 SAMPLING PROCESS DESIGN 3
B.1.1 Sampling Event Timing 3
B.1.2 Monitoring Site Locations 3
B.2 EQUIPMENT PREPARATION 3
B.2.1 Sampling Containers 4
B.2.2 Field Meter Calibration 4
B.3 WATER QUALITY MONITORING 4
B.3.1 Spill Travel Time 5
B.3.2 Sample Collection Methods 6
B.4 SAMPLE HANDLING AND CUSTODY 7
B.4.1 Sample Bottle Labels 7
B.4.2 Transport 7
B.4.3 Chain of Custody Form 8

C REPORTING 8

List of Tables

Table 1. Project Contact list 1

Table 2. Monitoring Equipment List 3

Table 3. Constituents to be Analyzed, Sample Volume Required, and Sample Type 4

Table 4. Constituent Hold Times and Analytical Methods 7

Table 5. Site Names for Sample Handling 7

Table 6. Analytical Laboratories 8

Table 7. Notification and Reporting Timeline 8

List of Figures

Figure 1. SSO Action Flow Chart 2

List of Appendices

A Field Forms

B Calibration Logs

C Chain of Custody Forms (CoCs)

A PROJECT MANAGEMENT

A.1 PROJECT ORGANIZATION

This monitoring program will be conducted under the direction of the City of Calistoga (the City) with guidance provided by Larry Walker Associates (LWA). Caltest Analytical Laboratory of Napa (Caltest) will serve as the primary laboratory, but alternatives might be used due to logistics and timing. The Project Contact list is provided in **Table 1.**

Table 1. Project Contact List

Name	Role	Agency/Company	Phone Number	Email
John Montelli	Monitoring Coordinator	City of Calistoga	707-942-2828 (o) 707-975-2465 (c)	jmontelli@ci.calistoga.ca.us
Travis Bounsall	Field Crew	City of Calistoga	707-942-2828 (o) 707-975-6692 (c)	tbounsall@ci.calistoga.ca.us
Brandon Gray	Field Crew	City of Calistoga	707-942-2828 (o) 707-975-5907 (c)	bgray@ci.calistoga.ca.us
Steven Maricle	MRP Technical Advisor	LWA	530.753.6400 (o)	stevem@lwa.com
Todd Albertson	Laboratory Project Manager	Caltest	707.258.4000 (o)	todd@caltestlabs.com

A.2 BACKGROUND

In 2006, the State Water Resources Control Board (State Water Board) adopted Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (SSS WDRs), Order No. 2006-0003-DWQ. The Monitoring and Reporting Program (MRP) established monitoring, record keeping, reporting, and public notification requirements. On September 9, 2013, Order No. WQ 2013-0058-EXEC became effective that clarified and expanded requirements of the original MRP and defined new sanitary sewer overflow (SSO) categories. The SSO definitions, as well as the notification, monitoring, and technical reporting requirements are shown in **Figure 1**.

This monitoring plan addresses water quality monitoring requirements for Category 1 SSOs that are greater than or equal to 50,000 gallons. As defined by Order No. WQ 2013-0058-EXEC, the following elements must be included in an SSO Water Quality Monitoring Plan to comply with subsection D.7(v) of the SSS WDRs:

1. 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. Water quality monitoring analyses for ammonia and bacterial indicators to be performed by an accredited or certified laboratory.

4. Procedures for proper maintenance and calibration of monitoring instruments and devices used to implement the SSO Water Quality Monitoring Program and documentation of maintenance and calibration, as necessary, to ensure their continued accuracy.

5. Water quality sampling within 48 hours of the City becoming aware of the SSO, for, at a minimum, the following constituents:

    a. Ammonia
    b. Total Coliform

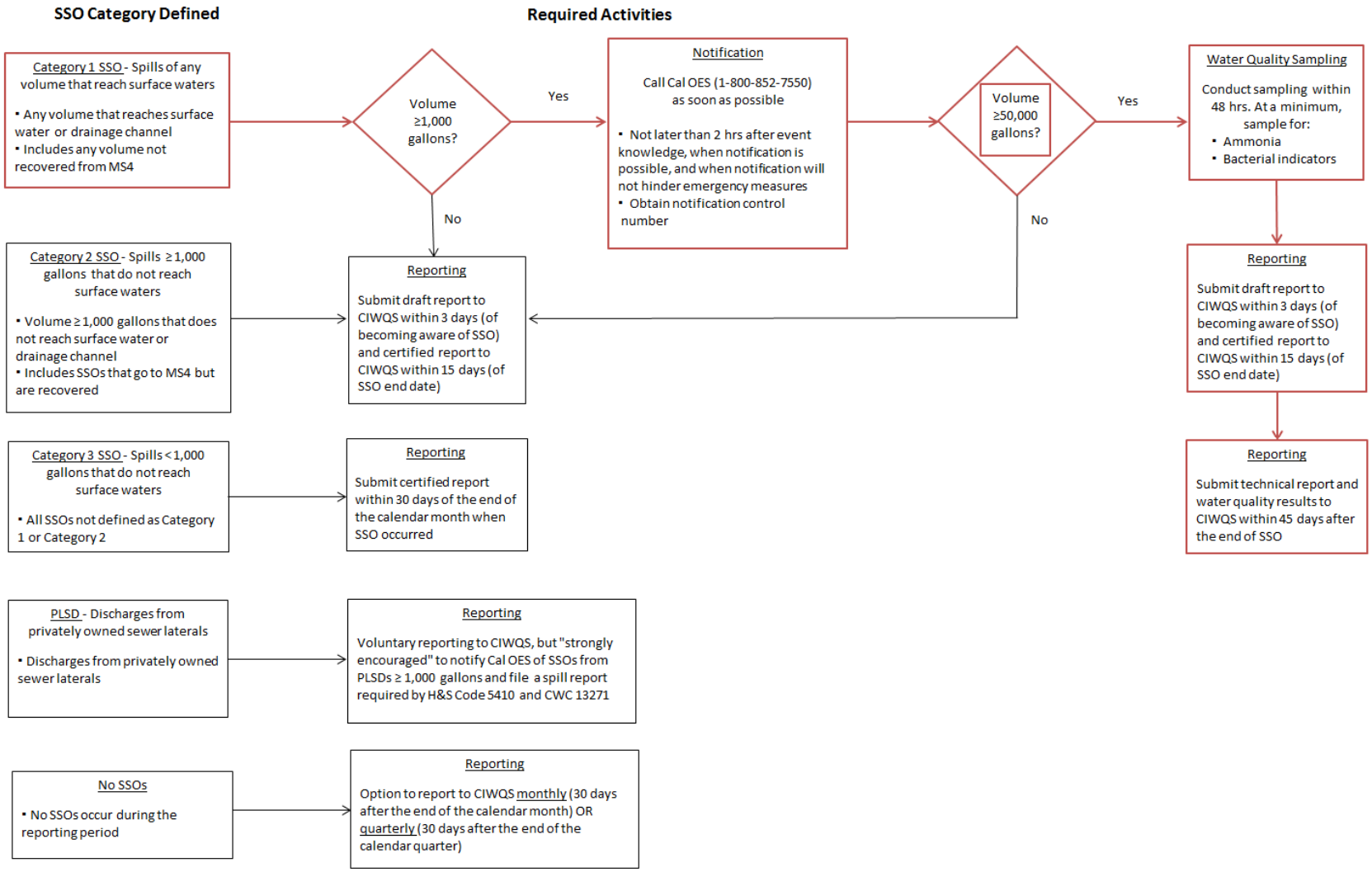

Figure 1. SSO Action Flow Chart (Based on Order No. WQ 2013-0058-EXEC)

B DATA GENERATION AND ACQUISITION

B.1 SAMPLING PROCESS DESIGN

B.1.1 Sampling Event Timing

The Monitoring Coordinator will determine when the field crew will be mobilized to sample the receiving water. Sampling must be conducted within 48 hours after initial Category 1 SSO and spill volume notification. The monitoring coordinator will target daylight sampling within the first 24 hours of the SSO notification, but sample timing may be shifted due to safety and logistical issues.

Sampling will not be conducted if there are any concerns regarding field crew safety. These concerns may include heavy rain events, which compromise access points through flooding and swift currents. Thunderstorms will also be avoided when lightning is occurring. Sampling will only be conducted if there are at least two members of the field crew team available.

B.1.2 Monitoring Site Locations

Upon notice of a Category 1 SSO, the Monitoring Coordinator will determine where the field crew will sample. The Monitoring Coordinator will be responsible for determining the sampling locations. At a minimum, sampling will occur where the SSO enters the surface water body, 100 feet upstream of the entry point, and at least one point downstream of the entry point. The downstream location(s) will be determined from visual monitoring and estimated spill travel time (see Section B.3.1). The Monitoring Coordinator will provide a detailed description of potential monitoring site locations to the Field Crew.

Upon arrival at the monitoring sites, the Field Crew will determine the best locations to sample by assessing the hydrology of the receiving water and any safety precautions. The Field Crew should look for locations where the receiving water can easily be entered or sampled mid-channel by a grab pole. Once the sampling site location is selected, but before sampling starts, the Field Crew will record the latitude and longitude of the sampling location into the Field Form (**APPENDIX A**).

B.2 EQUIPMENT PREPARATION

The Field Crew shall maintain a sampling kit with the necessary supplies to conduct a monitoring event. **Table 2** lists the equipment and supplies that will be included in the sampling kit.

Table 2. Monitoring Equipment List

Storm Kit
Spare batteries for field meter (6)
Spare sample labels
Pencils (2) and waterproof pens/markers (2)
Diagonal clippers
Electrical tape
Cable ties (assorted sizes)
Utility knife
Zip-lock baggies (assorted sizes)
Powder-free nitrile gloves
Rubber bands, heavy duty
Camera

Duct tape
GPS Device
Camera
SSO Water Quality Monitoring Plan
Log books/ Field forms
Chain-of-custody forms
New sample bottles
Intermediate containers
Flow meters
Coolers and ice
Cellular phone
Any necessary safety gear
Grab pole
Umbrella
Paper towels
Trash bags

B.2.1 Sampling Containers

The Field Crew will maintain a supply of sampling bottles for at least 4 events. The Field Crew will order bottles directly from the laboratory and will reorder bottles if they are unused for six months. **Table 3** includes the required bottle types, sample volumes, and preservatives for ammonia and total coliform samples.

Table 3. Constituents to be Analyzed, Sample Volume Required, and Sample Type

Constituent	Optimum Vol. (L)	Min. Vol. (L)	Collection Method	Bottle Type	Preservation	Analytical Lab
Ammonia (NH_3)	0.500	0.100	Direct Fill	500mL Plastic	H_2SO_4, <6° C	Caltest
Total Coliform	0.100	0.100	Direct Fill	100mL Sterile Plastic	<6° C	Caltest

B.2.2 Field Meter Calibration

All field meters will be properly calibrated and maintained by the Field Crew. Calibrations will be performed according to the methods and frequency recommended by the equipment manufacturer. When calibrating the instruments, the Field Crew will document all pertinent information in a Calibration Log (**APPENDIX B**) and keep it with the rest of the project documentation.

B.3 WATER QUALITY MONITORING

The Field Crew will be responsible for the following tasks upon arrival at the monitoring location:

1. Determine best sampling locations and record latitude and longitude readings for the upstream, SSO entry point, and downstream sampling sites.

2. Calculate spill travel time at the downstream monitoring site.

3. Collect water quality samples in the following order: first at the SSO entry point, second at the downstream site(s), and third at the upstream monitoring site.

4. Complete all field forms and prepare the samples for delivery to the laboratory.

The following sections outline the necessary steps the Field Crew must take when performing the above actions.

B.3.1 Spill Travel Time

When the Field Crew arrives at the downstream monitoring site, they will estimate spill travel time by calculating travel time within enclosed storm drains (distance traveled/initial spill rate) and within open surface waters. Travel time within the open surface waters can be determined two different ways depending on the accessibility and safety of the monitoring site.

B.3.1.1 Velocity Probe

Using a velocity probe is the preferred method of spill travel time calculation, but it requires extra safety precautions, since the Field Crew will have to wade and cross the surface water body.

1. The Field Crew must first ensure that the receiving water body is flowing at a safe rate and its span can be crossed by wading.

2. One Field Crew member will be responsible for using the velocity probe and the other will stand on the shore and record the readings.

3. The Field Crew member with the velocity probe will enter the surface water at the shore and begin to take a velocity measurement, roughly six inches below the surface. The Field Crew member will wait for the reading to stabilize before reporting the value to the recording Field Crew member.

4. The Field Crew member will then move the velocity probe two feet further into the surface water body and make another measurement. This will continue until the entire span of the receiving water body has been measured.

5. The Field Crew will not cross into any unsafe portions of the receiving water body and will note on the Field Form if the measurements are only for a portion of the channel.

B.3.1.2 Visual Velocity Estimation

If the receiving water body is unsafe to enter, the velocity can be measured by observing floating debris.

1. The Field Crew members will stand on the edge of the channel, 30 feet apart.

2. The Field Crew member standing upstream will indicate when a large piece of debris passes their point. At this time the Field Crew member standing downstream will start timing.

3. Once the same piece of debris passes the downstream Field Crew member, they will stop timing and calculating the velocity (ft/sec) by dividing 30 feet by the number of seconds it took for the debris to travel that length.

If there isn't any large debris floating in the surface water, the upstream Field Crew member can use a nearby stick or other buoyant object.

B.3.2 Sample Collection Methods

Sample collection methods will vary depending on the surface water and the safety of the Field Crew. Clean, powder-free, nitrile gloves will be worn for all bottle handling. The direct fill sample collection method is the preferred sampling method, since it does not use an intermediate container. In cases where the direct fill method cannot be used due to accessibility or safety an intermediate bottle and a grab pole can be used.

B.3.2.1 Direct Fill Sample Collection

The direct fill sample collection method will be used in cases where the surface water can be entered safely by the Field Crew. Field Crew will wear waders and ensure that the water level and velocity of the surface water are low enough to provide a safe entry and sampling environment.

Ammonia and bacteriological sample bottles will be filled by direct submersion to approximately mid-depth as follows.

1. Wade to approximately the area of the water body with the highest flow rate and face upstream. This will most likely be midstream, but can be in a different portion of the stream, depending on the hydrology.
2. Submerge the sample bottle with its cap on to approximately mid-depth at a location of significant flow (avoid stagnant water). Hold the bottle upright under the surface while it is still capped.
3. Open the lid carefully just a little to let water run in. Fill the bottle and screw the cap tightly while the bottle is still underneath the surface.
4. Remove bottle from stream and place on ice.

B.3.2.2 Intermediate Container Sample Collection

If the flow, water level and/or access point are deemed unsafe then an intermediate bottle attached to a grab pole will be used for sample collection. A clean, new intermediate bottle will be used for each sampling event and sampling site.

Ammonia and bacteriological sample bottles will be filled by intermediate container sample collection as follows:

1. Attach the intermediate bottle to an expandable pole using tape or cable ties and remove lid.
2. Submerge the intermediate bottle, attached to expandable pole, to approximately mid-depth at a location of significant flow (avoid stagnant water).
3. Remove bottle from water and empty contents. Repeat this twice more.
4. Once the intermediate bottle is properly rinsed, return it to approximately mid-depth at a location of significant flow (avoid stagnant water).
5. Using the intermediate bottle, fill the bacteriological sample container and then the ammonia bottle. Ensure that neither bottle overflows and that the preservative stays in the sample container.
6. After bottle fills, replace bottle lid, remove bottle from pole, and place on ice.

B.4 SAMPLE HANDLING AND CUSTODY

The Field Crew will ensure that all samples are collected and submitted to their respective labs by the maximum hold times listed in Table 4. If timing or logistics prevent a hold time being met, the Field Crew will contact the Monitoring Coordinator.

Table 4. Constituent Hold Times and Analytical Methods

Constituent	Analytical Method[1]	Maximum Hold Times	Analytical Lab
Ammonia (NH_3)	SM 4500-NH3-G	28 days	Caltest
Total Coliform	SM 9221-B/E	6 hours	Caltest

B.4.1 Sample Bottle Labels

The Field Crew will label all sample bottles with a waterproof label, which will contain the agency name, sample collection date, analyte, analysis method, station number and name and Field Crew names. The analytes and analysis methods are shown in **Table 4** and the station identification protocols are shown in **Table 5**.

Table 5. Site Names for Sample Handling

Station Number	Station Name
US-001	Surface Water Upstream
ENTRY	Surface Water Point of Entry
DS-001	Surface Water Downstream 1
DS-XXX[1]	Surface Water Downstream XXX[1]

1 Additional downstream monitoring sites will be labeled in sequential order starting from the SSO surface water point of entry.

Example sample bottle label:

Direct Fill Sample Bottle Label

City of Calistoga

Station Number - ____

Analyte – Analysis Method _____

Date & Time:_____ Collected by:_____

B.4.2 Transport

All samples will be kept on ice from the time of collection to the time of receipt by laboratory personnel. It is imperative that all samples be analyzed within maximum holding times (see **Table 4**). Samples will be shipped/delivered as specified in **Table 6**.

Table 6. Analytical Laboratories

Analytical Laboratory	Analysis	Shipping Method
Caltest Attn. Todd Albertson 1885 North Kelly Road Napa, CA 94558 707.258.4000	Ammonia and bacterial	Hand delivered

B.4.3 Chain of Custody Form

Chain-of-Custody (CoC) forms will be filled out by the Field Crew for all samples submitted to the laboratories. CoCs will contain the following information:

- Sampler name
- Address (where the results will be sent)
- To whom the laboratory results are being sent
- Sample collection date and time
- Sample location
- Analysis method requested
- Sample container type and number
- Comments/special instructions
- Samples relinquished by (signature, print name, date)
- Samples received by (signature, print name, date)

An electronic data deliverable will be requested for all sample reports. Example lab specific CoCs are included in **APPENDIX C.**

C REPORTING

A Category 1 SSO in which 50,000 gallons or greater are spilled to a surface water requires multiple stages of notification and reporting. The City will adhere to the required timeline outlined in **Table 7**, which begins when the City becomes aware of an SSO. The specific requirements for notification and reporting are specified by Order No. WQ-2013-0058-EXEC and detailed in the City's Sanitary Sewer Management Plan.

Table 7. Notification and Reporting Timeline

Time Period	Requirement
<2 Hours	Notification to CalOES
Within Three Business Days	Draft Category 1 SSO Report to CIWQS
Within 15 Calendar Days	Certified Category 1 SSO Report to CIWQS
Within 45 Calendar Days	SSO Technical Report with water quality results to CIWQS

Appendix A

Field Forms

SSO Water Quality Monitoring Plan Field Log		
General Information		
Event ID:	Date:	SSO Time:
Sampling Personnel:		
SSO Description		
Time of Notification:	Size:	Location:
Weather (fog, rain, wind, etc):		
Total precipitation during previous 5 days:		
Monitoring Sites		
US-001		
Arrival Time:	Departure Time:	
GPS Coordinates	Latitude:	Longitude:
Sample Location	☐ Mid-Channel	☐ Bank
Sample Time:	Total Coliform:	Ammonia:
Floating Material or Debris:		
Water Color/Turbidity:		
Odor:		
POINT of ENTRY		
Arrival Time:	Departure Time:	
GPS Coordinates	Latitude:	Longitude:
Sample Location	☐ Mid-Channel	☐ Bank
Sample Time:	Total Coliform:	Ammonia:
Floating Material or Debris:		
Water Color/Turbidity/Odor:		
Estimated Spill Travel Time to Monitoring Site:		
DS-001		
Arrival Time:	Departure Time:	
GPS Coordinates	Latitude:	Longitude:
Sample Location	☐ Mid-Channel	☐ Bank
Sample Time:	Total Coliform:	Ammonia:
Floating Material or Debris:		
Water Color/Turbidity/Odor:		
Estimated Spill Travel Time to Monitoring Site:		
Page __ of ___		

SSO Monitoring Plan Field Log (Additional Downstream Sites)		
DS-____		
Arrival Time:	Departure Time:	
GPS Coordinates	Latitude:	Longitude:
Sample Location	☐ Mid-Channel	☐ Bank
Sample Time:	Total Coliform:	Ammonia:
Floating Material or Debris:		
Water Color/Turbidity/Odor:		
Estimated Spill Travel Time to Monitoring Site:		
DS-____		
Arrival Time:	Departure Time:	
GPS Coordinates	Latitude:	Longitude:
Sample Location	☐ Mid-Channel	☐ Bank
Sample Time:	Total Coliform:	Ammonia:
Floating Material or Debris:		
Water Color/Turbidity/Odor:		
Estimated Spill Travel Time to Monitoring Site:		
DS-____		
Arrival Time:	Departure Time:	
GPS Coordinates	Latitude:	Longitude:
Sample Location	☐ Mid-Channel	☐ Bank
Sample Time:	Total Coliform:	Ammonia:
Floating Material or Debris:		
Water Color/Turbidity/Odor:		
Estimated Spill Travel Time to Monitoring Site:		
DS-____		
Arrival Time:	Departure Time:	
GPS Coordinates	Latitude:	Longitude:
Sample Location	☐ Mid-Channel	☐ Bank
Sample Time:	Total Coliform:	Ammonia:
Floating Material or Debris:		
Water Color/Turbidity/Odor:		
Estimated Spill Travel Time to Monitoring Site:		
Page __ of ___		

Appendix B

Calibration and Maintenance Logs

Calibration and Maintenance Log

Instrument Model	Type of Calibration or Maintenance	Date of Calibration or Maintenance

Appendix C

Chain of Custody Forms (CoCs)

Caltest
ANALYTICAL LABORATORY

1885 N. KELLY ROAD NAPA, CA 94558 (707) 258-4000 FAX (707) 226-1001

PAGE ____ OF ____

SAMPLE CHAIN OF CUSTODY

PROJECT NAME / PROJECT NUMBER:

P.O. NUMBER

LAB ORDER #

CLIENT: Town of Yountville

REPORT ATTN:

MAILING ADDRESS:

STATE:

ZIP

BILLING ADDRESS:

ATTN:

PHONE NUMBER:

FAX PHONE NUMBER:

SAMPLER (PRINT & SIGN NAME):

ANALYSES REQUESTED

TURN-AROUND TIME

[X] STANDARD

[ ] RUSH

DUE DATE:

CALTEST LAB #	DATE SAMPLED	TIME SAMPLED	SAMPLE MATRIX*	CONTAINER TYPE/ AMOUNT**	PRESERVATIVE	SAMPLE IDENTIFICATION / SITE	CLIENT LAB #	COMP. or GRAB	Ammonia	Total Coliform									REMARKS
				1-500mL HDPE	H2SO4	US-001			X										
				100mL	None	US-001				X									*** 6 hour holding time!
				1-500mL HDPE	H2SO4	ENTRY			X										
				100mL	None	ENTRY				X									*** 6 hour holding time!
				1-500mL HDPE	H2SO4	DS-001			X										
				100mL	None	DS-001				X									*** 6 hour holding time!

RELINQUISHED BY	DATE/TIME	RECEIVED BY	RELINQUISHED BY	DATE/TIME	RECEIVED BY
	/			/	
	/			/	

FOR LAB USE ONLY

Samples: WC ____ MICRO ____ BIO ____ AA ____ SV ____ VOA ____ pH? Y/N TEMP: SEALED: Y/N INTACT: Y/N

BD: BIO WC AA

CC: AA ____ SV ____ VOA ____

SIL: HP ____ PT ____ QT ____ VOA ____

W/HNO_3 ____ H_2SO_4 ____ NaOH ____

PL: HNO_3 H_2SO_4 NaOH HCL

COMMENTS:

*MATRIX: AQ = Aqueous Nondrinking Water, Digested Metals; FE = Low R.L.s, Aqueous Nondrinking Water, Digested Metals; DW = Drinking Water; SL = Soil Sludge, Solid ; FP = Free

**CONTAINER TYPES: AL = Amber Liter; AHL = 500 ml Amber; PT = Pint (Plastic); QT = Quart (Plastic); HG = Half Gallon (Plastic); SJ = Soil Jar; B4 = 4oz. BACT; BT = Brass Tube; VOA = 40mL VOA; OTC - Other Type Container

R FR VI E

WHITE - LABORATORY YELLOW - CLIENT COPY TO ACCOMPANY FINAL REPORT PINK - CLIENT COPY AS RECEIPT

APPENDIX D

Suggested Criteria for Demonstrating How a Sewer Overflow was Unavoidable

SSO's can be demonstrated as unavoidable by showing the discharge meets each of the criteria 1 through 5.

1. The discharge resulted from a temporary, exceptional incident that was either:

   A. Necessary to prevent loss of life, personal injury, or severe property damage

   B. Beyond the reasonable control of the operator. Incidents beyond the reasonable control of the operator would include:

      - Exceptional acts of nature;
      - Third party actions that could not reasonably be prevented, including vandalism that could not be avoided by reasonable measures;
      - Blockages that could not be avoided by reasonable measures;
      - Unforeseeable sudden structural, mechanical, or electrical failure that could not be avoided by reasonable measures.

2. The discharge had no feasible alternative.

3. The discharge was not caused by any of the following:

   A. Operational error.

   B. Improperly designed or constructed collection systems facilities.

   C. Inadequate collection system facilities or components.

   D. The lack of appropriate preventive maintenance.

   E. Careless or improper oversight.

4. Steps to stop the discharge, address the source of the problem, and mitigate potential impacts from the discharge were taken as soon as possible after becoming aware of the release.

APPENDIX E

Measures to Avoid Sewer Overflow

A. Proper Collection System Maintenance and Operations Program

- Cleaning of pipes (grease, roots, deposits)
- Sealing or maintenance for deteriorating sewers
- Remediation of poor/substandard construction (short term)
- Sewer replacement or rehabilitation program (long term)
- Property maintenance and operations of pump stations.

B. New Wastewater Disposal System Construction

- Use latest technology and standards in constructing new wastewater disposal system improvements.
- Perform proper construction inspection/quality assurance procedures.