WEST BAY SANITARY DISTRICT

SEWER COLLECTION SYSTEM

OVERFLOW EMERGENCY RESPONSE PLAN (OERP)

August 2015

THE OERP IS A STANDALONE DOCMENT AND IS ALSO INCLUDED AS APPENDIX-3A TO THE SEWER SYSTEM MANAGEMENT PLAN

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LIST OF ABBREVIATIONS

WBSD	West Bay Sanitary District
SSO	Sanitary Sewer Overflow
SSMP	Sewer System Management Plan
OERP	Overflow Emergency Response Plan
RWQCB	Regional Water Quality Control Board, San Francisco Bay Region
SWRCB	State Water Resources Control Board
ABAG	Association of Bay Area Governments
CASA	California Association of Sanitation Agencies
BACWA	Bay Area Clean Water Agencies
SOP	Standard Operating Procedure
WWTP	Wastewater Treatment Plant
Cal-OES	California Office of Emergency Services
DFG	Department of Fish and Game
ERS	Electronic Reporting System
DHS	Department of Health Services
ISDHH	Imminent or Substantial Danger to Human Health
CCTV	Closed Circuit Television
RCC	Regulatory Compliance Coordinator
SMCEHD	San Mateo County Environmental Health Department

SECTION 1: INTRODUCTION AND PROJECT BACKGROUND

The West Bay Sanitary District (WBSD, District) is committed to the prevention of sanitary sewer overflows (SSOs). This commitment is reflected in WBSD's record of proactive sewer maintenance and rapid spill response.

In 2005 and 2006, respectively, the San Francisco Regional Water Quality Control Board (RWQCB) and State Water Resource Control Board (SWRCB) established mandatory guidelines for development of Sewer System Management Plans (SSMP). This Overflow Emergency Response Plan (OERP) has been developed as required by the SSMP guidelines, and augments and enhances the District's ongoing efforts regarding SSO prevention and response.

On July 30, 2013 the SWRCB modified the Monitoring and Reporting Program which directly affect the SSMP and became effective on September 9, 2013, those changes have been approved and were incorporated into this OERP.

Related efforts from the following agencies were referenced during the development of this plan.

- Association of Bay Area Governments (ABAG)
- California Association of Sanitation Agencies (CASA)
- Bay Area Clean Water Agencies (BACWA)

1.1 Objectives

The primary objectives of the OERP are to protect public health and the environment, satisfy regulatory agency requirements and waste discharge permit conditions, and minimize the risk of enforcement actions against WBSD by preventing SSOs, where possible, and supporting an orderly and effective response to SSOs that occur notwithstanding the District's best efforts toward prevention. This plan provides guidelines for District staff and others working on behalf of the District, for responding to, cleaning up, and reporting SSOs that may occur in the District's wastewater collection system. Any comments from these entities or others should be considered in future updates to this plan.

This plan does not supersede existing emergency plans or standard operating procedures (SOPs) unless directed by the District Manager.

1.2 Organization of Plan

This OERP is organized as follows:

- Responsibilities
- Spill Detection
- Spill Response

- Mitigation
- Public Notification
- Water Quality Sampling and Testing
- Spill Investigation and Documentation
- Spill Reporting
- Emergency Response Equipment
- Training

SECTION 2: RESPONSIBILITIES

2.1 General

The District responds to all service calls, alarms, and SSO events that occur within the WBSD collection system, including all gravity sewers, force mains, pump stations, and siphons. The District also evaluates and mitigates SSO events from private laterals; however, maintenance and repair of the private lateral, from the building to the connection to the District mainline sewer, is the responsibility of the private property owner.

2.2 First Responder or Incident Lead

The First Responder is the person who responds to the site and is responsible for executing the required procedures of this OERP, except for specific notification and reporting that are handled by the District's Legally Responsible Officials (Regulatory Compliance Coordinator, Maintenance Superintendent, or the Superintendent's Assistant and Source Control Inspectors)

The First Responder is responsible for dispatching any necessary maintenance crews, and for ensuring safe work practices and operations at all events and responses.

The First Responder is "in command" until officially relieved by "senior personnel."

Additional responsibilities of the First Responder are included in Section 4. All processes described in this OERP are also presented in Flowcharts located in Appendices A-1 through A-7

SECTION 3: SPILL DETECTION

This section describes ways that spills are detected, and how these spills are communicated to the First Responder, both during and outside of normal working hours. See Flowchart at Appendix A-1 for Initial Response and Spill Assessment.

3.1 Public Observation

Public observation is the most common way that WBSD is notified of blockages, spills, and sewage system failures. The District's contact information is included on the District website and on the District's vehicles. The District also distributes other public outreach and information materials that include District contact information such as: Business cards, Refrigerator magnets, Brochures, Door-hangers, Flyers, Pins, Ballons, Canvas grocery bags etc…. The District's website address is http://www.westbaysanitary.org.

3.1.1 Normal Working Hours

The regular hours of operation for the District are Monday through Friday from 8:00 a.m. to 4:30 p.m., except holidays.

During regular office hours, when the public calls the District's main office, the call is answered by Administrative Personnel. The recipient communicates the information to the primary customer service vehicle (Unit-208) who is the designated First Responder. As soon as the First Responder confirms this is an SSO event they will call out additional support staff as needed and notify the RCC (in the event the RRC is unavailable notify the Maintenance Superintendent). Average response time for responding to SSOs during normal working hours is usually between 5 and 30 minutes.

3.2 Emergency Response After hours

The District operates 24 hours a day, seven days a week. After hours, from 4:30 p.m. to 8:00 a.m., and on weekends and holidays, the District's answering service forwards calls via a paging system to the assigned on-call maintenance staff, who is the First Responder. The First Responder, and members of the maintenance field crew, are assigned to on-call responsibilities on a rotating basis. If the First Responder does not answer within 10 minutes, they are paged again. If there is no response the next page goes to the Maintenance Superintendent, if no response within ten minutes the Assistant Superintendent is paged. (Emergency Notification List located in the OERP at Appendix-B-1).

It is the policy of the District to be on site within 45 minutes of being notified of a sanitary sewer overflow. The On-call person/First Responder may take the District's Service Vehicle home for after hour and weekend emergency services in order to minimize response time.

Employees that do not live within 35 miles or are unable to respond within the 45 minute window shall find an alternative means to meet this requirement.

All sewer system calls, regardless of their nature of anticipated severity, require a response to the reported location of the event. These calls may be related to alarms, sewer overflows, sewer blockages, residential backups, sewer odors, loose or noisy manhole covers and other related issues.

Once a request or call out for service is received by the on-call person that staff member will ask a series of questions of the caller to ascertain the correct level of response.

In the event the call out is believed to be an SSO, the on-call person shall proceed directly to the site while notifying other personnel to respond with additional supporting equipment to the overflow (Refer to the Order of contact list on the back of the WBSD Call Out Report form MD506 Listed as Appendix B-1).

There are three possible options of response:

1) The on-call person may go directly to the site and attempt to clear the mainline blockage with up to a minimum of 150 feet of hand-rods, in an effort to minimize the SSO,

2) Upon arrival, the First Responder should set up traffic control measures and contain the SSO to the maximum extent possible while additional resources are in transit to the site,

3) Alternatively, the on-call person may drive directly to the Corporation Yard and pick up the Jet/Vac Combo unit, the Hydro-Jet, or the Jetter Trailer, and respond to the site, set up, and prepare to clear the stoppage while the second responder is in transit to the site. The operator may proceed with clearing the stoppage once it's confirmed that the second responder is within the District limits (the second responder must notify the First Responder that they have entered the District, so that they know help is nearby and they can proceed with clearing the blockage).

The on-call person shall always be prepared to utilize option 3, particularly for larger spills that may require additional resources quickly. To assist with this option, the response vehicle can be signed out for after-hour use prior to the end of the normal work day.

3.3 Notification via Alarms

All of the District's pumping facilities are alarmed. Alarms from the pumping facilities are sent to the District's Telemetry System, which then forwards the alarm status to pump station personnel (24 hours a day/7 days a week/365 days a year). Also, the District has installed 27 smart covers that are also alarmed. An additional three (2) Smart Covers are scheduled to be ordered during fiscal 2013/2014 for a total of 29 Smart Covers. The smart cover Alarms are received by on-call personnel, Source Control Inspectors, the Maintenance Superintendent, and the RCC. During normal working hours, the Maintenance Superintendent confirms that the primary customer service vehicle (First Responder) has received the alarm and is responding. Once the First Responder is on-site, they determine the cause and appropriate corrective measure to mitigate the alarm condition. Once the alarm condition has been mitigated, the RCC is notified and resets the smart cover alarm, rearming the SMART cover via the computer system. After hours, the RCC (or his designated representative) confirms the on-call person is responding and mitigates the alarm condition prior to re-setting the alarm.

3.4 Staff Observations

District personnel conduct daily inspections of the District's sewer system facilities as part of the routine preventive maintenance program. Any problems noted with the sewer system facilities are reported to the Maintenance Superintendent. Issues related to FOG, odor complaints, and

illicit or illegal discharges in the sewer system are communicated further to the Regulatory Compliance Coordinator and Source Control Inspectors.

SECTION 4: SPILL RESPONSE

This section describes procedures to be followed when responding to and addressing spills, including priorities; initial response; containment or bypass; and special considerations in sensitive areas.

The goal of the District during normal working hours is to be on site in response to a report of an SSO in less than 30 minutes (2014 Average is about 16 minutes), and to resolve the issue within 90 minutes (2014 Average is 38 minutes).

After hours, the District's policy is to be on-site within 30-45 minutes (2014-15 minutes) and to mitigate the SSO within 1 hour (2014-38 minutes). SSOs that require outside agency reporting protocols shall be handled and reported within 2 hours as required by the State.

4.1 Spill Response Priorities

All staff involved in spill response assumes the following responsibilities:

- To follow safe work practices
- To respond promptly with the appropriate equipment
- To relieve the blockage and restore the sewer pipe flow
- To contain the spill wherever feasible
- To minimize public access to and/or contact with the spilled sewage
- To promptly notify District personnel of preliminary spill information, need for additional help, and potential impacts
- To ensure prompt notification of all appropriate District staff and other potentially affected entities (i.e., San Mateo County Environmental Health Department (SMCEHD), RWQCB, Water Suppliers, and City or Town Representatives, etc.)
- To provide traffic and crowd control where necessary
- To return the spilled sewage to the sewer system for safe conveyance to the POTW
- To restore the spill area to a pre-SSO condition

4.2 Safety

The most important item to remember during handling of an SSO is that safe operations always take precedence over expediency or short cuts. This would include Police Assistance (Drive-by) when working at night, also, staff may call a second person for assistance.

Depending on the nature or cause of the overflow/spill, staff may need to perform mechanical or electrical repairs at a pumping station, remove a mainline blockage with a Vacuum/Jetter truck, Mechanical Rodding truck, perform hand rodding, or repair a damaged section of pipeline. All applicable safety rules and procedures are followed during this work to ensure worker safety.

If a spill appears to contain a hazardous material, call 9-1-1.

Typical responses may require staff to implement the following types of safety procedures:

- Lockout/Tagout of electrical or mechanical equipment for repairs
- Confined space entry procedures
- Trench safety and shoring procedures with supervisory overview of work by others
- Traffic control
- Equipment and/or vehicle operation
- Use of personal protective equipment

There may be times when it is necessary to utilize outside contractors or outside agency staff to restore flow during an overflow event. Although these responders are responsible for their own safety, it is appropriate to reinforce safety concerns, explain the order of work, and assist them with checking of safety equipment before starting the job.

4.3 SSO Response Procedures

All District staff must review and understand the following procedures in advance, and be prepared to implement necessary tasks as dictated by the nature and extent of an overflow. Response will vary depending on the cause of overflow, which could include one or more of the following: blockage of private lateral or sewers; mainline blockage; pump station failure; capacity issues.

The response crew should implement the following steps in a manner that will best prevent or minimize the volume of the overflow.

4.3.1 Initial Response

The First Responder must proceed directly to the site and visually check for potential sewer stoppages or overflows.

All sewer system calls, regardless of their nature of anticipated severity, require a response to the reported location of the event. These calls may be related to alarms, sewer overflows, sewer blockages, residential backups, sewer odors, loose or noisy manhole covers, and other issues.

The District's insurance carrier recommends that responders neither volunteer nor disown District liability. Therefore, responders inform the public and others that liability cannot be addressed until all relevant information has been evaluated by the District Manager, Regulatory Compliance Coordinator and/or Source Control Inspector. Responders should be polite and sympathetic to property owners or tenant concerns. Responders should assure the public that District staff is present to assist in expediting the cleanup, regardless of the cause of overflow.

4.3.2 SSO Documentation

The First Responder documents the details on the District's "Overflow Incident Report" form (MD-506), included in Appendix B1, to gather necessary information and to indicate all actions implemented to assess and address the SSO, should the First Responder request the District's Source Control Inspector to be on-site, the Overflow Incident Report is passed on to him/her to track and or complete. Critical information includes the following:

- Obtain information from the On-Call Person including:
    - Name of the property owner or the person who reported the overflow, including address and phone number,
    - Location of the overflow (confirm that overflow is in the District's service area), and
    - Time overflow was detected and any possible exposure hazards.
- Record arrival time and cause.
- Record names of persons on site (and respective organizations, if applicable) at initial response and throughout incident response.
- Record final cleanup efforts and note overflow end time.
- Record time when leaving site.
- Record names and times of others contacted during response efforts.

  Take necessary photographs during each phase of the mitigation process.

4.3.3 District SSO Response Actions

Critical activities to complete in response to an SSO include the following:

- Verify the existence of an SSO or backup, and determine the source of the overflow (i.e. mainline or private lateral).

- Notify Source Control Inspector immediately if any of the following occur (See Appendix B1- Notification List):
    - Any SSO flowing into the storm drain,
    - SSO of 1,000 gallons or greater in the street, or
    - Identify if the spill is within close proximity to a sensitive area (i.e., surface water body or public area, such as a school).
- Call 9-1-1 if the spill appears to be a hazardous liquid. District responders should not participate in hazardous material spill cleanups.
- Call for District staff assistance, if required. Secure the area by placing cones or barricades around the site (Refer to the Employee Phone Roster for after-hour assistance).
- Block all openings to storm drains to prevent sewage entry or install plugs to contain the SSO within the drainage box. If flow threatens to enter receiving waters, follow requirements of Section 4.6.
- Perform a quick assessment of whether containment would be advantageous for the given spill. If it appears feasible to contain the spill without excessive delay in beginning steps to restore flow, the First Responder should take immediate action as described in Section 4.5, below.
- Work diligently to relieve the blockage. Record all work performed to mitigate the overflow or remove the source of overflow.
- Initiate bypass or "pump around" concurrently with continued work to remove blockage if, after 15 minutes, it appears that flow will not be quickly restored through cleaning or emergency pipe repair.
- After the blockage is removed and/or overflow otherwise resolved, make every attempt to recover the spilled and/or contained sewage.
- Select the estimation method for calculating the overflow volume by use of; the San Diego method, Surface Area Formula, # of homes upstream of the blockage, SSCSC Method, combined with knowledge of start and end times. Every effort must be made to determine the start time of the SSO. This may be obtained by interviewing the person who identified and reported the SSO and/or by interviewing the residents that live near the spill site, or by site conditions, i.e., visual observations, soil saturation depth vs. soil type, etc... In the event the start time cannot be determined by the interview process, or other methods, add 15 minutes to the start time of the reported SSO. Estimation methods are presented visually in Appendix C1-C3.

4.4 Overflows from Private Sewer Facilities

Although the District has a policy of responding to and assisting with the mitigation of every overflow, whether from a public or private system, the property owner is ultimately responsible for overflows that originate from a private lateral or sewer.

- In the case of an overflow from a private lateral or sewer due to a blockage or failure in the private portion of the lateral or sewer, notify the owner or property manager of their responsibility for corrective action and consequences.

- Intervene with private efforts to mitigate only when there is immediate danger to public health or environment. District response should sufficiently mitigate the danger to public health or to the environment.

- Log all hours worked for proper billing to the property owner.

- The Maintenance Superintendent or Regulatory Compliance Coordinator will contact the San Mateo County Department of Health Services and appropriate City/Town representative if chronic overflows from the same private lateral location occur.

4.5 Spill Containment or Bypass Measures

Spill containment or bypass measures may be appropriate as a first response, after it is apparent that the blockage cannot be easily or immediately cleared, and before a blockage is cleared and flow restored. Spill containment and bypass measures may involve the following:

- Determine the immediate destination of the overflowing sewage, using local jurisdictional storm drainage maps for isolating, containment, and recovery of spill prior to outfall to waterways.

- Review sewer maps for temporary upstream flow diversion bypassing.

- Plug storm drains where necessary using air plugs, sandbags, and/or plastic to contain the spill, whenever appropriate and feasible.

- Divert spill as required by building a small berm to change direction of flow back to sewer. Use portable spill boom(s) from responding vehicles, dirt and/or sandbags, then recover the overflow using a vacuum truck.

- If flow diversion can be achieved by bypass pumping, install and implement bypass pumping equipment.

- If flow cannot be diverted or bypassed back into the sewer system, dam/dike or sandbag spill to provide containment where feasible.

4.6 Response to Flows in Sensitive Areas or Near Receiving Waters

In the event of an overflow is located near a sensitive area or near receiving waters or storm drains that lead to these waters, or for a wet weather overflow caused by insufficient pipe capacity (rather than a blockage), the First Responder will take the following steps in the order shown. These steps should occur concurrently with any continued efforts to resolve the overflow:

- Secure the area by placing cones or barricades around the site.

- Contact the Source Control Inspector immediately as required by the process outlined in paragraph 4.3.1. Inform him/her of the situation; notify him/her of any property damage, public health concerns, and environmental concerns. The Source Control Inspector will notify the required agencies as applicable.

- For SSOs greater than 1,000 gallons, any flow resulting in fish kill, or any flow posing imminent or substantial danger to human health or entering receiving waters, the Source Control Inspector shall contact the California Emergency Management Agency (Cal-EMA) RWQCB, SMCEHD, Town or City representative and post the requested signage at all access points to the affected area.

- The posted signs may not be removed until cleared to do so by the SMCEHD and or the RWQCB. In addition, staff shall follow public notification guidelines provided in Section 6.

- Block all openings to storm drains to prevent further entry, and block appropriate downstream locations using drain blockers, sand bags, or other dams to minimize or stop flows from entering receiving waters. Make every effort to return the contained spill back to the sanitary sewer system.

- The RCC or Source Control Inspector will take the necessary Grab-Samples of receiving waters, complete the "Chain of Custody" (COC) Documentation and submit for laboratory analysis. See Section 7 for sampling requirements.

SECTION 5: MITIGATION

This section addresses recovery and clean up after flow has been restored.

5.1 District SSO Recovery and Clean Up Procedures

After addressing the cause of an SSO and restoring flow, complete the following:

- Post sign(s) warning the public, with the wording "Raw Sewage Spill" at all access points to the affected area and/or as directed by the San Mateo County Environmental Health Department policy for Warning Signage, included in Appendix D2 (Record the location of each posted sign by address or GPS coordinates).

- Distribute "Residential Notification Form" to all affected properties. Form is contained in Appendix D1(Record each address notified).

- Recover Spilled Sewage. Using proper containment, dilute, wash, pump, or vacuum spilled sewage and discharge back into the sanitary sewer system. If the spilled sewage cannot be immediately returned to the sanitary sewer system (i.e., it is trapped in a low area or storm drain), then vacuum spilled sewage into a combination unit or pump it back into a sanitary sewer manhole.

- Clean Up and Disinfect. Implement the clean-up and disinfection procedures outlined in Section 5.2 to reduce the potential for human health issues and adverse environmental impacts that may be associated with a SSO event. These procedures are most effective in dry weather conditions and should be modified as required for wet weather conditions.

5.2 Cleaning Hard Surface Areas (Exterior)

This section addresses clean-up activities for overflows caused by backups in the District mainline sewer that cause damage to hard exterior surfaces. Addressing damage caused by private lateral blockages is the responsibility of property owner.

- In exterior hard surface areas, collect all signs of sewage solids and sewage-related materials either by hand (using gloves) or with the use of rakes and brooms.

- Using proper containment and protection of storm drains, flush the area with dechlorinated water in the amount of three times the overflow volume, and then use a vacuum truck to return the SSO and wash water flows to the sanitary sewer.

- Disinfect all surfaces that were contaminated by sewage using disinfectant solution. Document the product used and application method of disinfectant that was employed.

- Allow area to dry. Inspect area for any remaining signs of sewage contamination. Repeat the process if an additional cleaning is warranted.

5.3 Cleaning Landscaped and Unimproved Natural Vegetation

Clean-up of landscaped and unimproved vegetated areas should follow the steps in Section 5.2, but does not require disinfection. Enzymes may be used to disinfect soil surfaces.

5.4 Cleaning Natural Waterways

Contact the SMCEHD and Department of Fish and Game to obtain requirements for clean-up of spills that occur in or near waterways. Clean up should proceed quickly in order to minimize any potential negative impact. Sewage may cause depletion of dissolved oxygen that can affect or even kill aquatic life. Any water that is used for cleanup must be de-chlorinated prior to use.

5.5 Cleaning Private Property (Interior)

This section addresses clean-up activities for overflows caused by backups in the District mainline sewer that cause interior property damage. Addressing interior damage caused by private lateral blockages is the responsibility of private property owner.

- First notify the Source Control Inspector, and then the Regulatory Compliance Coordinator, who will contact the Districts Insurance Carrier who will send out a residential/commercial cleaning contractor.

- Take detailed photographs of affected areas.

- Communicate with the owner or tenant that they should avoid contact with the sewage and inform them that assistance has been arranged. Stay on site until cleaning service arrives.

- Advise owner or tenant to contact Regulatory Compliance Coordinator for further assistance or to answer any questions regarding damage claims.

- When a resident needs alternative accommodation during cleaning operations, advise the resident to contact the Regulatory Compliance Coordinator, who will coordinate hotel or other accommodation through the District Manager and District's insurance carrier.

SECTION 6: PUBLIC NOTIFICATION

This section addresses communications with the public during and after a spill event.

- In addition to the postings described in prior sections, post signs and place barricades and caution tape as necessary to limit vehicle and pedestrian contact with spilled sewage, with emphasis on protection in public areas (i.e., schools, parks, etc.). Do not remove signs and barricades until directed to do so by the SMCEHD. (Sample results must be at normal back ground levels, reference baseline sample results, compare with post spill results for contamination assessment)

- In the event that an overflow occurs at night, perform the required duties and re-inspect the location the following day for signs of sewage solids and sewage-related materials that may warrant additional clean-up activities, and post areas as needed.

SECTION 7: WATER QUALITY SAMPLING AND TESTING

Water quality sampling and testing is required whenever spilled sewage enters a water body. Testing will be used to determine the extent and impact of the SSO.

Contact the District's Source Control Inspector for sampling. The RCC or his designated representative is responsible for ensuring that receiving water samples are taken.

Confirm that the Source Control Inspector has completed the following:

- Visually monitor, when and where practical, any receiving waters near the location of the SSO for abnormal conditions, such as visible effects to aquatic life, abnormal coloring, etc.

- Obtain water quality samples as soon as possible after the discovery of the SSO event.

- Confirm safety of access location before taking samples.

- Take samples approximately 500-feet upstream and 1000-feet downstream of spill. Depending on the volume of the spill additional downstream samples may be required. (Refer to Appendix A8 of the OERP the Water Quality Monitoring Program (WQMP), Appendix A1 Sampling & Monitoring Protocols).

- Deliver samples to San Mateo County Health Department Laboratory for testing for Total Coliform, Fecal Coliform, and E-Coli. Additional sample parameters will be required for spills equal to or greater than 50,000 gallons and are dependent on the wastewater source, (i.e., residential and or industrial areas), and the visual condition of the impacted waterway. The SSO Water Quality Monitoring Program for Spills greater than 50K gallons is located at Appendix A8.

- Implement County Health Department protocols as situation dictates.

For spills less than 50K gallons the sample results shall be reviewed by the San Mateo County Environmental Health Department and the Regulatory Compliance Coordinator. Then the sample data must be compared to the most recent baseline sample results taken by the District's Source Control Inspectors at specific locations throughout the year. On-going sampling will be required until the results are equal to the most recent baseline results or are at acceptable water quality standards. Upon review of the analytical results, the SMCEHD may request the removal of the posted signs, and declare closure for the spill event. Sampling and testing for spills greater than 50K gallons will require a "SSO Technical Report" as described in section C-5 of the MRP (Additional sampling for Ammonia, Total Coliform, Fecal Coliform, Enterococcus & e-coli shall be required for these large volume spills. Refer to Appendix A8 (R1).

SECTION 8: SPILL REPORTING

Spill reporting requirements established by the San Francisco Bay Regional Water Quality Control Board became effective December 1, 2004. The requirements were updated on May 2, 2006 by the 2006-003 DWQ and again on July 26, 2013 with an effective date of September 9, 2013.. These requirements are listed below and included in Flowchart 7(Appendix A7). RWQCB reporting requirements are also shown in Flowchart 7.

There are three different categories of spills; Category-1 (any volume reaching a Surface water, drainage channel not fully captured and returned to the sanitary sewer). Category-2 (greater than 1,000 gallons fully captured and recovered and returned to the sanitary sewer). Category-3 (less than 1,000 gallons fully captured and returned to the sanitary sewer).

An overflow that has been fully captured and returned to the Sanitary Sewer must be reported within 30-days of the end of calendar month of the SSO.

All leaks, spills, and overflows that are not contained or fully captured must be reported to the Cal-OES, who will notify the RWQCB and the SMCEHD. The District will notify the representative of the affected Town or City. The First Responder must ensure that the Source Control Inspector is notified of the spill. In the event that the Source Control Inspector cannot be contacted, the First Responder must ensure that the Regulatory Compliance Coordinator is apprised and submits the necessary reports in accordance with the following guidelines:

- Category-1 SSO resulting in discharge to surface water or drainage channel: Contact Cal-OES and obtain a Spill Control Number, Cal-OES will notify SMCEHD and RWQCB. Provide updates to the OES as needed. The District must notify the representative of the affected town or city.

- Within three (3) business days, staff must submit a Draft electronic report to the CIWQS. The draft report must be certified within fifteen (15) days of the SSO.

- SSO's greater than 50,000 gallons shall require a "SSO Technical Report" which must be submitted within 45 calendar days of the SSO end date. Refer to MRP order # WQ2013-0058-EXEC Section C-Reporting Requirements number 5-SSO Technical Report (Located at Appendix A8 subsection R1)

- All spills shall be included in the written annual report with the next SSMP Audit Report due May 2, 2014.

All spills from the District's sewer system must be reported. The District does not own laterals, reporting of Private Lateral Sewage Discharges (PLSD) is strongly encouraged when the volume is in excess of 1,000 gallons and or impacting a surface water & voluntary according to the RWQCB and Statewide MRP guidelines

In addition, for all overflows impacting City, other jurisdictional facilities, or private properties, staff should notify the impacted jurisdiction or property owner of the event. If the property owner is not home, then use the Residential Notification Form included in Appendix D.

SECTION 9: SPILL INVESTIGATION AND DOCUMENTATION

This section addresses post-spill assessment, with a focus on implementing processes and improvements that will prevent repeat SSOs and lead to decreased SSOs. The three key elements of the post-spill assessment are spill documentation, post-spill debriefing, and failure analysis investigation.

9.1 Spill Documentation

It is critical that the First Responder completes the internal Overflow Incident Report or passes it on to the Source Control Inspector during the spill event for completion. This form will be filed in the RCC's Office, with any other reports and documentation related to the event. Records retention must be at least five (5) years to meet RWQCB requirements. The file should include:

- Initial service call information,
- Internal Overflow Incident form,
- Backup calculations for volume estimate,
- Appropriate maps showing spill location,
- Photographs of the spill, location, and response activities,
- CIWQS ,RWQCB and other related report form(s),
- Water quality sampling and test results, and
- Failure analysis investigation results (PSA)

The Overflow Incident Report is provided in Appendix B1. Methods for estimating spill volumes, including the San Diego Manhole Spill Rate Chart, are included in Appendices C1-C3.

9.2 Post Spill Event Debriefing

Every SSO event is an opportunity to thoroughly evaluate and improve the District's response and reporting procedures. Each overflow event is unique with its own elements and challenges including volume, cause, location, terrain, and other parameters.

As soon as possible after each SSO event, all responders, which may include office staff, should meet to review the steps taken to report and address the spill. This process should be reviewed in reference to the procedures included in the OERP. Discussions focus on 1) any deviations from the OERP and reasons for such deviation; 2) what worked and where improvements could be made in responding to and mitigating future SSO events; 3) recommended changes to the OERP; and 4) future action items. The results of the debriefing should be documented and tracked to ensure that the proposed action items are completed.

9.3 Failure Analysis Investigation

For every overflow, it is important to understand the cause of the SSO and to identify corrective action(s) needed that will reduce or eliminate future SSOs at this location. The Post Spill Assessment (PSA at Appendix B2)/ investigation includes, at a minimum, the following steps:

- Understanding any historical overflow information from the location and reviewing past maintenance records,
- Reviewing available photographs, CCTV footage
- Developing a plan to address or minimize future SSOs from this location. This plan should include the following considerations:

- If the SSO location is an area that has experienced a problem due to grease or debris, the cleaning schedule may be adjusted and outreach materials may be distributed.

- Review of grease trap cleaning manifests to confirm compliance with FOG ordinance.

- Conduct a CCTV inspection within two (2) days of an overflow to determine if a structural problem may have caused or worsened the SSO.

- If structural damage or other obstruction exists that cannot be removed by District's cleaning crew, schedule for rehabilitation within five (5) days.

- If the spill resulted from pump station failure or deficiencies, and the Superintendent cannot immediately correct the problem within six (6) hours, formulate a plan of action after mitigation of the incident to prevent future occurrences

The entire Post Spill Assessment must be completed within 7-days of the SSO event which includes the timeline for the prevention of a repeat SSO from the reported site.

SECTION 10: EMERGENCY RESPONSE EQUIPMENT

This section provides a list of specialized equipment that will support this OERP.

- **Source Control Inspector Vehicles (2):** Carry a variety of line plugs, booms, storm drain mats, pumps, generator, and discharge hose to every SSO.

- **Closed Circuit Television (CCTV) Inspection Unit:** The District's CCTV Inspection Unit may be required to evaluate the cause of overflow in lines that have not had issues in the past or to confirm the cause of overflow in lines on accelerated maintenance schedules.

- **Digital Camera:** A digital camera is required to record the conditions upon arrival, during cleanup, and upon departure (All Activities).

- **Emergency Response Truck:** A District truck with emergency response equipment obtained from the corporation yard may be required for effective overflow response. Necessary equipment may include barriers, delineators, warning tape and signboards; plugs and drain inlets mats; sandbags for containment or flow control; lights (for night work); small generator; and other small tools.

- **Portable Generators:** A portable generator and spare pump are available to provide back-up power and bypass for the District's constituents in the On-site Wastewater Disposal Zone, and for lift stations.

- **Portable Pumps and Hoses:** Portable pumps and hoses are available to pump around line failures and lift station failures when required, and to pump spilled sewage and/or

contaminated wash water back into the sewer system. For large pump-around requirements, outside contractor assistance may be required.

- **Spare Pipes and Clamps:** Spare pipe, clamps, and other repair equipment are available for emergency pipeline repairs. The District also maintains a list of emergency contractor contact numbers for larger or complex repairs.

- **Rodder Truck:** A truck-mounted power rodder is available to clear root blockages in gravity sewers.

- **Vacuum Truck:** A vacuum truck is available to clear blockages in gravity sewers and to vacuum up spilled sewage and wash-down water.

- **Communications:** District radios, cell phones, or pagers and this OERP are available to facilitate proper communication during emergency response activities.

SECTION 11: TRAINING

This section provides information on the training that is required to support this OERP.

- **Who receives training:** All District personnel, with emphasis on those who are involved in responding to, reporting, or otherwise addressing SSOs and all new employees. District Contractors are advised on spill response activities and notify WBSD personnel for assistance should it be required.

- **Updates:** Annually update the OERP. Conduct periodic drills that cover scenarios typically observed during sewer related emergencies (i.e., mainline blockage, mainline failure, lift station failure, and lateral blockage). The results and the observations during the drills should be documented and action items should be tracked to ensure completion.

- **Record-keeping:** Maintain records of all training that is provided in support of this plan. The records for all scheduled training courses and for each overflow emergency response training event should include date, time, place, content, name of trainer(s) and names of attendees.

SECTION 12: SUPPORTING DOCUMENTS

- Appendix A1:Flow Chart 1 Initial Response

- Appendix A2: Flowchart 2 Customer Lateral Spill

- Appendix A3: Flowchart 3 Pipe Blockage or Collapse

- Appendix A4 Flowchart 4 Pump Around & Repair

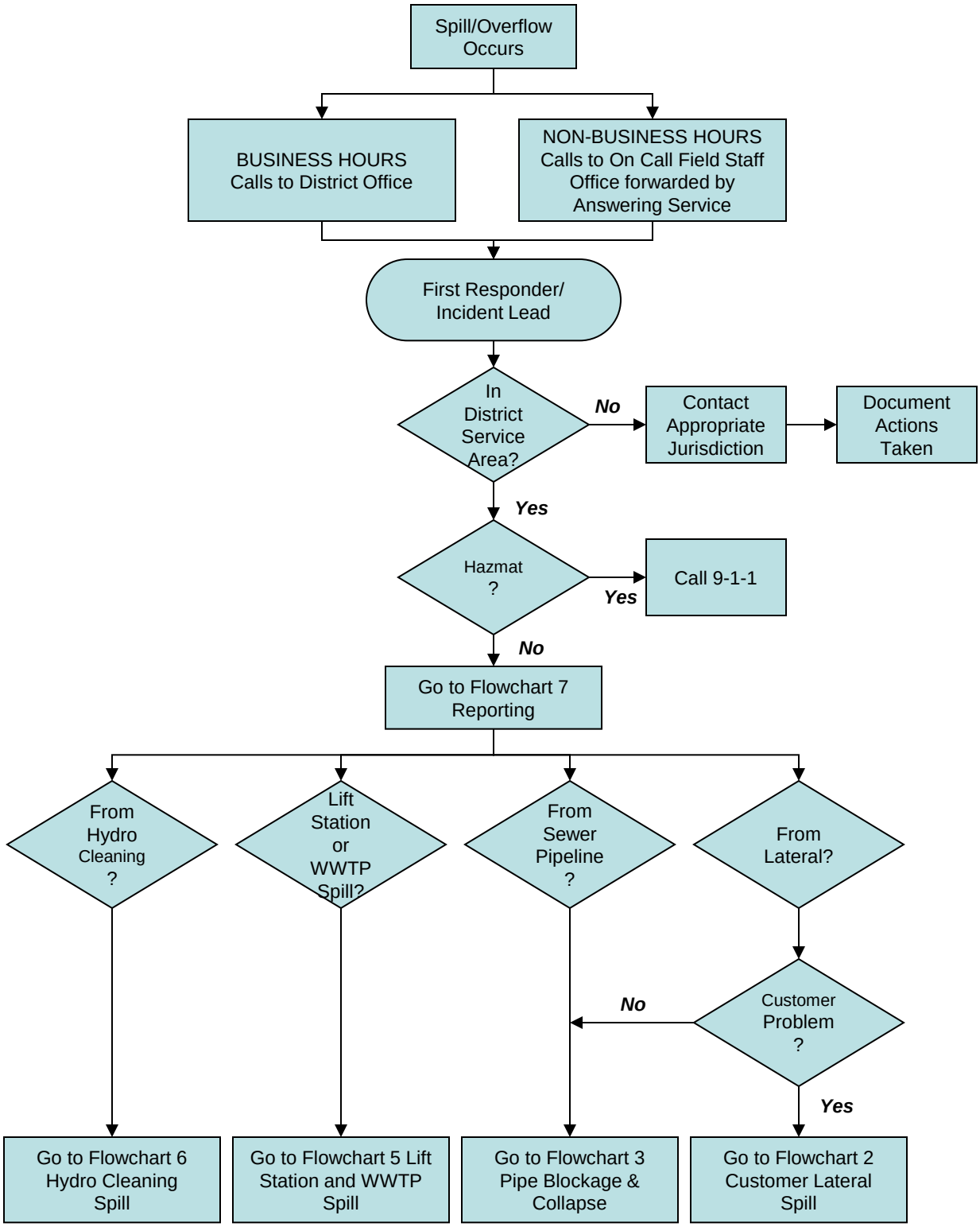
- Appendix A5: Flowchart 5 Lift Station or WWTP Spill

- Appendix A6: Flowchart 6 Backup from Hydro Cleaning

- Appendix A7: Flowchart 7 Reporting Requirements
- Appendix A8: SSO Water Quality Monitoring Program
-
- Appendix B1: Overflow Incident Report Form
- Appendix B2: Post Spill Assessment & Follow UP
- Appendix B3: Compliance Checklist
- Appendix C1: Spill Calculation Methods
- Appendix C2: Collection System Maps (# of homes u/s of blockage)
- Appendix C3: San Diego Spill Rate Chart
- Appendix D1: Residential Notification Form
- Appendix D2: Contaminated Water Sign

Appendix A1

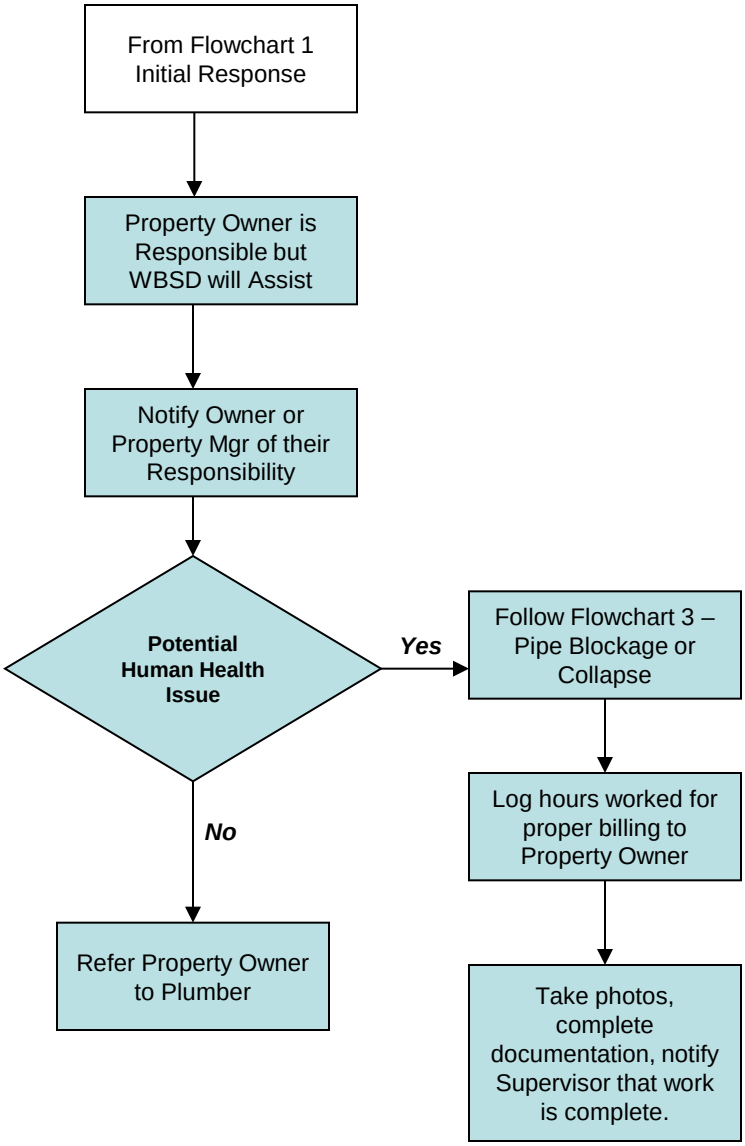
Flowchart 1: Initial Response



- The First Responder is the incident commander, until replaced by a higher-ranking staff member.
- Document overflow information on Overflow Incident Form.
- Notify Maintenance Superintendent, Regulatory Compliance Coordinator, and District Manager as needed.

Appendix A2

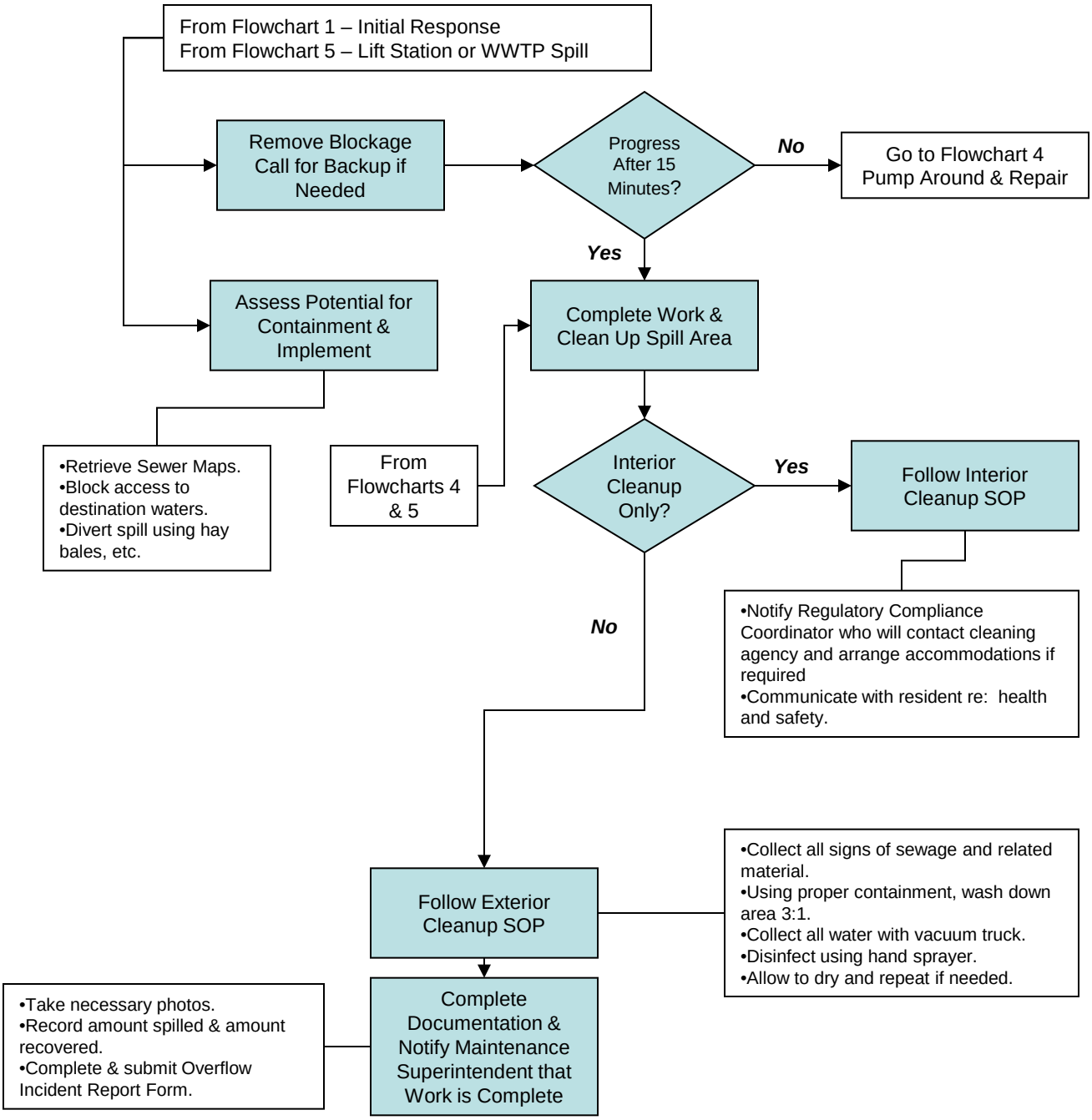
Flowchart 2: Customer Lateral Spill



- The First Responder is the incident commander, until replaced by a higher-ranking staff member.
- Document overflow information on Overflow Incident Form.
- For Spills greater than 1,000 gallons that reach surface waters, contact County Health Department
- Notify Maintenance Superintendent, Regulatory Compliance Coordinator, and District Manager as needed.

Appendix A3

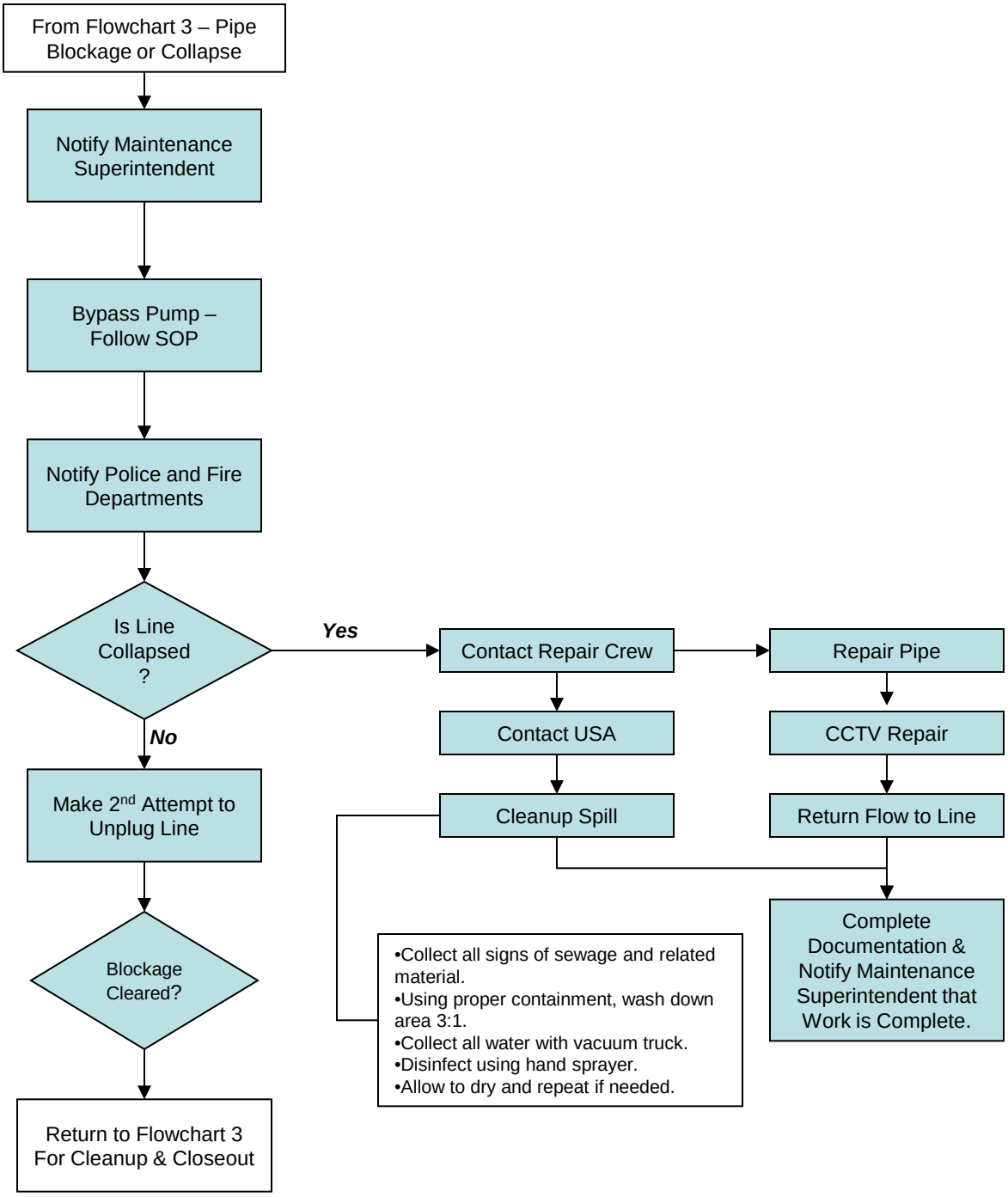
Flowchart 3: Pipe Blockage or Collapse



- The First Responder is the incident commander, until replaced by a higher-ranking staff member.
- Document overflow information on Overflow Incident Form.
- Notify Maintenance Superintendent, Regulatory Compliance Coordinator, and District Manager as needed.

Appendix A4

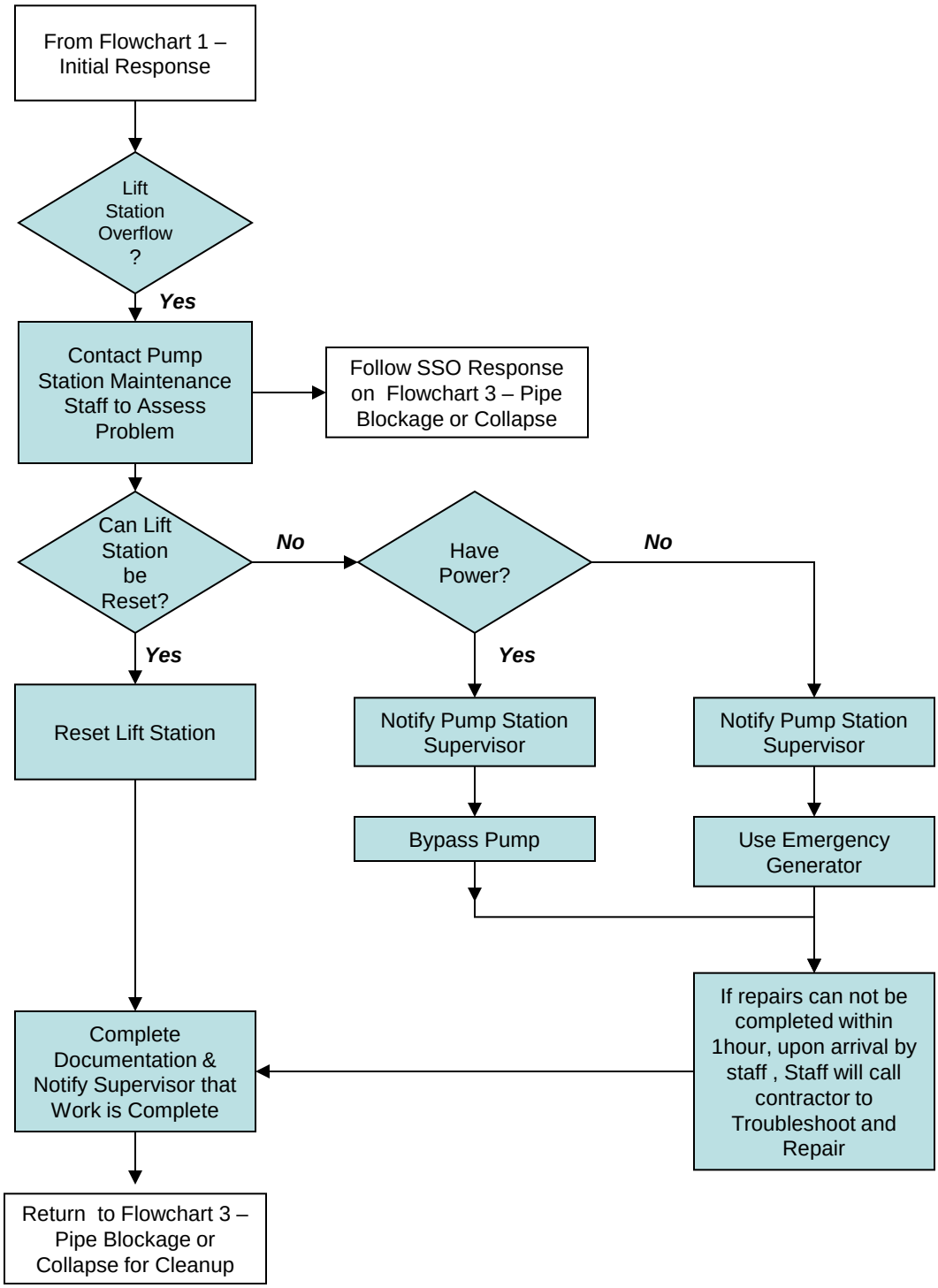
Flowchart 4: Pump Around & Repair



- The First Responder is the incident commander, until replaced by a higher-ranking staff member.
- Document overflow information on Overflow Incident Form.
- Notify Maintenance Superintendent, Regulatory Compliance Coordinator, and District Manager as needed.

Appendix A5

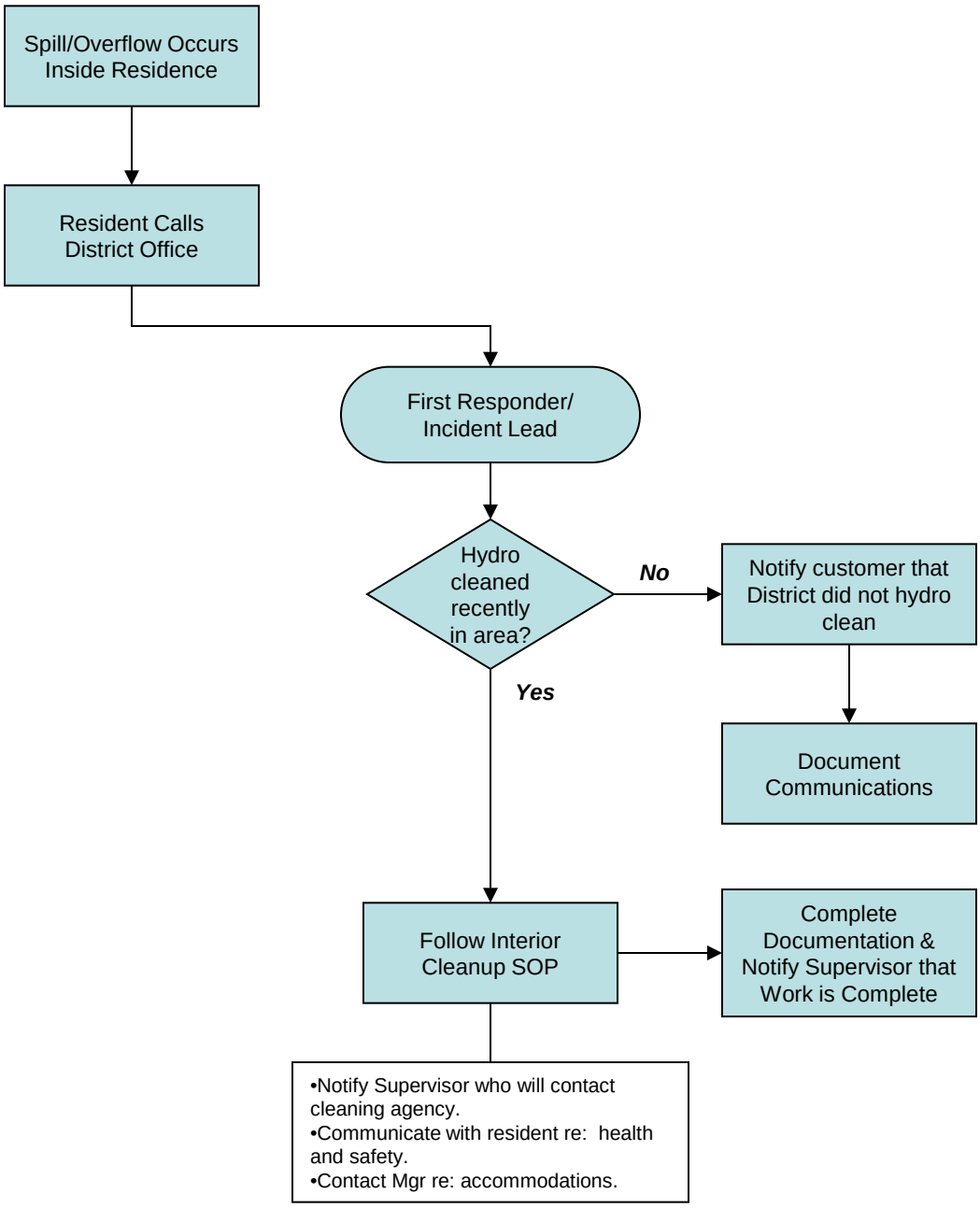
Flowchart 5: Lift Station or WWTP Spill



- The First Responder is the incident commander, until replaced by a higher-ranking staff member.
- Document overflow information on Overflow Incident Form.
- Notify Department Superintendent, Regulatory Compliance Coordinator, and District Manager as needed.

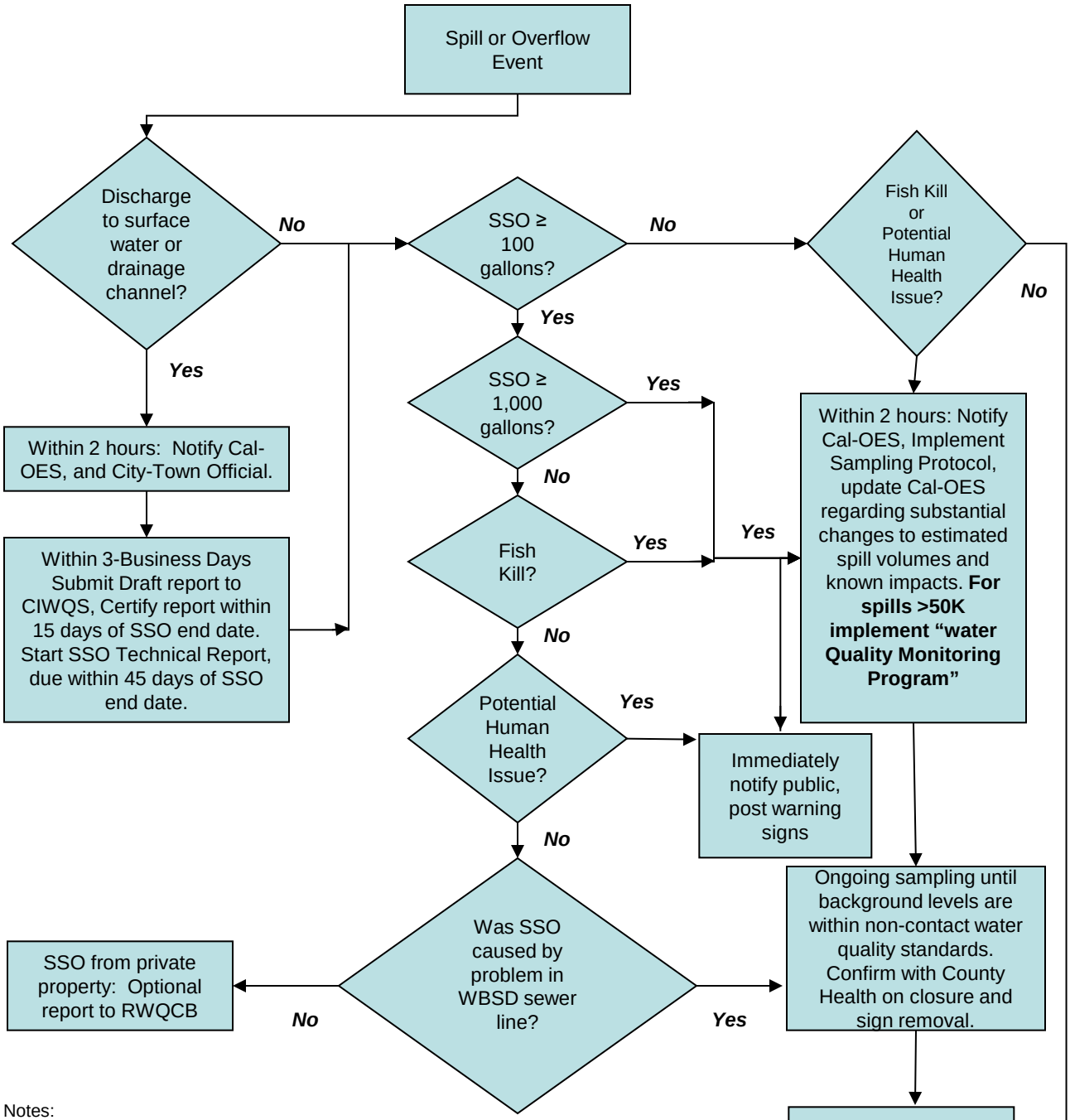
Appendix A6

Flowchart 6: Backup from Hydro Cleaning



•The First Responder is the incident commander, until replaced by a higher-ranking staff member.
•Document overflow information on Overflow Incident Form.
•Notify Department Superintendent, Regulatory Compliance Coordinator, and District Manager as needed.

Flowchart 7: Reporting Requirements



Notes:

1. Follow-up reporting should be updated as new information is available to Cal-OES
2. Category 1 Surface Water Impact: Initial reporting within 2-hours to Cal-OES. Spills >50K gallons implement Water Quality Monitoring Program Protocols. Located in the OERP at Tab-A8.
3. Category 2 (>1,000 gallons, no surface water impact): Draft report within 3 days , certify within 15 days of SSO end date.
4. Category 3 (<1,000 gallons, no surface water impact) Submit certified report within 30 calendar days of the end of the month the SSO occurred.
5. If there are no SSOs in a month, provide statement through online SSO reporting certifying that there were no SSOs for the designated month.
6. In the event that the CIWQS reporting system is not available, all required information must be faxed to the RWQCB, Region 2 (FX510-622-2460), and followed up with a phone call (510-622-2300).

A8

WATER QUALITY MONITORING PROGRAM

Created: September 4, 2013

Revised August 11, 2015

TABLE OF CONTENTS

APPENDICES

REFERENCES

Introductuion

This section of the Water Quality Monitoring Program provides the District's response activities and standard operating procedures utilized in the OERP. This program is reviewed on an annual basis and amended as necessary.

State Regulatory Requirements for the "Water Quality Monitoring Program"

To comply with sub-section *D.7(v) of the SSS WDR's, the enrollee shall develop and implement an SSO Water Quality Monitorng Program to assess impacts from SSO's to surface waters in which 50,000 gallons or greater are spilled to surface waters. The SSO Water Quality shall at a minimum:

1. Contain protocols for water quality monitoring.
2. Account for spill travel time in the surface waters and scenarios where monitoring may not be possible (e.g. safety, access restrictions, etc.)
3. Require water quality monitoring analyses for ammonia and bacterial indicators to be performed by an accredited or certified laboratory.
4. Require monitoring instruments and devices used to implement the SSO Water Quality Monitoring Program to be properly maintained and calibrated, including any records to document maintenance and calibration, as necessary, to ensure their continued accuracy.
5. Within 48 hours of the enrolleee becoming aware of the SSO, require water quality sampling for, at a minimum, the following constituents:
    i. Ammonia,
    ii. Appropriate Bacterial indicator(s) per the applicable Basin Plan water quality objective or Regional Board direction which may include total and fecal coliform, enterococcus and e-coli.

***D.7 (v) "adequate sampling to determine tha nautre and impact of the release…"**

The above requirements are written as part of the Districts Standard Operating Procedures on Sampling and Monitoring which is located at Appendix A1 of this document.

Additionally, for spills greater than 50,000 gallons a SSO Technical Report is rquired and must be submitted within 45 calender days of the SSO end date. The district shall provide all of the information requested in the Monitoring and Reporting Program (MRP) located at Section C-Reporting Requirements, Sub-section 5 SSO Technical Report items i- Causes and Circumstances of the SSO, ii-Enrolloees response to the SSO and iii-Water Quality Monitoring. A copy of the MRP is located at Appendix R1 of the Water Quality Monitoring Program.

Spill Travel Time:

Method-1; using a velocity probe (Global Water FP111-S Flow Probe) to determine the rate of flow in the surface water or

Method-2; a visual ft/sec measurement from above (floating debris) to estimate the number feet debris may travel seconds.

Either method will allow you to estimate the distance traveled and where the SSO may be headed and located within minor tributary (which may flow to a larger body of water) or the possible location within an underground storm drainage system which may allow for SSO recovery when compared to storm drainage system and stream maps.

Safety

Scenarios where monitoring may not be possible may include (but not limited to), heavy rain/storm events where access points have been compromised, flooding around low level areas, raging water. The Buddy System may be used to ensure employee safety when sample collection is required.

Monitoring Equipment and Device Calibration

Quantity	Equipment	Calibration Frequency
1	Velocity Probe-Global Water Fp111-S	Self-Calibrating (Adjustable)
1	YSI 30 Salinity/Conductivity/Temperature meter	Annually
5	Sigma 910 Flow Meter	Each Use
1	Sigma 930 Flow Meter	Each Use
4	Sigma 950 Ultra Sonic Flow Meters (4)	Annually
2	Marsh McBirney Flo-Meters	Each Use
12	Industrial Scientific Multi-Gas Meters	Monthly

The monitoring equipment listed above is maintained on a regular basis. These devices may be used and or deployed for monitoring purposes. All equipment is maintained per the manufactures specifications and records of all maintenance data will be stored electronically or by written record.

Apendix-A1 SSO Sampling Procedure

SSO Sampling Procedures

For Sampling: Total & Fecal Coliform, e Coli, Ammonia, & pH **(This is not an all-inclusive list of analysis)**

In the event a sanitary sewer overflow (SSO) reaches a surface water or (flowing) drainage channel tributary, samples may be taken for spills less than 50, 000 gallons and will be taken within 48 hours for spills greater than 50,000 gallons for the purpose of determining the nature and extent of the impact of the SSO. Additional follow up samples shall be taken to confirm the extent of the impact is reverting back to baseline levels to determine if posting of warning signs should be discontinued (if any were previously posted). In either case collaboration with the County Health Department will be ongoing until closure is obtained.

Do not forget to take into account Spill Travel Time.

When sampling a SSO a minimum of three separate sample sets must be collected (additional sample parameters may be required). One 500' upstream of the discharge location, one at the discharge location and one 1000' downstream of the discharge location.

What you will need:

Personnel protective equipment including: latex/nitrile gloves and eye protection.
3 – 100 mL sterile plastic containers for coliform analysis.
3 -1 Liter Poly containers for BOD.
3 – 500 mL Poly containers preserved with H_2SO_4 for Ammonia analysis.
3 – funnels
1 – Sample Collection Container
Cooler with ice packs
Chain of Custody forms

Ensure that there are adequate quantities of sample containers-kits if there are more than three sample locations.

Samples should be collected when it is safe and feasible. Water quality sampling should not be given precedence over stopping the spill or protection of public health.

Procedure:

1. Put on all required protective equipment including latex/nitrile gloves and eye protection.

2. Use the 100 mL sterile container for coliform, 1-liter poly container for BOD and 500mL poly container for ammonia.

- Three sets of samples are collected for each incident: 500' up stream, at the SSO entry point, and 1000' downstream.

Apendix-A1 SSO Sampling Procedure

- One set is one 1-liter bottle for BOD, one 100 mL container for coliform, and one 500 mL bottle for Ammonia (preservation with H_2SO_4 required).

- All samples are grabs and are collected at 3- 6" below the surface (if applicable).

3. Get into position to collect the sample. Try to collect the sample in the middle of the flow, against the direction of water flow.

4. Avoid sampling debris or scum layer from the surface. To avoid this, the surface may need to be agitated before sampling.

5. Rinse the sample collection container.

6. Collect sample in sample collection container. Photo-document the locations.

7. Transfer sample from sample collection container to individual sample bottle(s). Leave approximately one inch of head space in individual sample bottles. Do not overfill.

8. Once the lid is opened (individual sample bottle), the inside surface of the bottle or lid should not be touched. Care should be taken with the sample containers that contain a preservative to keep the preservation in the container.

9. Immediately, place all samples on ice and cool to 4ºC.

10. Complete Chain of Custody form and take samples to contracted environmental laboratory.

San Mateo County Public Health
Department Laboratory
225 W 37th Ave, Room # 113
San Mateo, Ca 94403
650-573-2500

Test America (pick up)
1220 Quarry Lane
Pleasanton, Ca 94566
925-484-1919

Sampling Analysis:

Parameter	Hold Time
Ammonia	28 days (preserved and cooled)
Bacterial Indicator (enterococcus or fecal/total coliform) (*)	8 hours (preserved and cooled)
Biochemical Oxygen Demand (*)	48 hours (cooled)
pH	Field Test, Immediate

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

IT IS HEREBY ORDERED THAT:

Pursuant to the authority delegated by Water Code section 13267(f), Resolution 2002-0104, and Order 2006-0003-DWQ, the MRP for the SSS WDRs (Order 2006-0003-DWQ) is hereby amended as shown in Attachment A and shall be effective on 07/26/2013.

7/30/13
Date

Thomas Howard
Thomas Howard
Executive Director

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

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

ATTACHMENT A

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

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

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

A. SUMMARY OF MRP REQUIREMENTS

Table 1 – Spill Categories and Definitions

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

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

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

B. NOTIFICATION REQUIREMENTS

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

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

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

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

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

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

C. REPORTING REQUIREMENTS

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

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

3. **SSO Categories**

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

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

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

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

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

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

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

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

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

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

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

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

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

5. **SSO Technical Report**

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

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

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

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

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

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

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

f. Historical maintenance records for the failure location.

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

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

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

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

iii. **Water Quality Monitoring:**

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

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

6. **PLSDs**

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

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

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

7. **CIWQS Online SSO Database Unavailability**

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

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

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

i. **SSO Reports**

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

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

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

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

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

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

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

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

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

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

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

   1. Items 1-14 in section 8.i.a above for Draft Category 1 SSO and Items 1-6, and 17 in section 8.i.b above for Certified Category 1 SSO.

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

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

iii. **Collection System Questionnaire**

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

iv. **SSMP Availability**

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

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

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

D. WATER QUALITY MONITORING REQUIREMENTS:

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

1. Contain protocols for water quality monitoring.

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

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

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

5. Within 48 hours of the enrollee becoming aware of the SSO, require water quality sampling for, at a minimum, the following constituents:

   i. Ammonia

   ii. Appropriate Bacterial indicator(s) per the applicable Basin Plan water quality objective or Regional Board direction which may include total and fecal coliform, enterococcus, and e-coli.

E. RECORD KEEPING REQUIREMENTS:

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

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

2. SSO Records: The enrollee shall maintain records for each SSO event, including but not limited to:

   i. Complaint records documenting how the enrollee responded to all notifications of possible or actual SSOs, both during and after business hours, including complaints that do not

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

a. Date, time, and method of notification.

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

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

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

e. Final resolution of the complaint.

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

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

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

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

   i. Supervisory Control and Data Acquisition (SCADA) systems

   ii. Alarm system(s)

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

F. CERTIFICATION

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

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

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

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

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

CERTIFICATION

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

7/30/13
Date

Jeanine Townsend
Clerk to the Board

[an error occurred while processing this directive]

CHAPTER 3: WATER QUALITY OBJECTIVES

The overall goals of water quality regulation are to protect and maintain thriving aquatic ecosystems and the resources those systems provide to society and to accomplish these in an economically and socially sound manner. California's regulatory framework uses water quality objectives both to define appropriate levels of environmental quality and to control activities that can adversely affect aquatic systems.

3.1 WATER QUALITY OBJECTIVES

There are two types of objectives: narrative and numerical. Narrative objectives present general descriptions of water quality that must be attained through pollutant control measures and watershed management. They also serve as the basis for the development of detailed numerical objectives.

Historically, numerical objectives were developed primarily to limit the adverse effect of pollutants in the water column. Two decades of regulatory experience and extensive research in environmental science have demonstrated that beneficial uses are not fully protected unless pollutant levels in all parts of the aquatic system are also monitored and controlled. The Regional Board is actively working towards an integrated set of objectives, including numerical sediment objectives, that will ensure the protection of all current and potential beneficial uses.

Numerical objectives typically describe pollutant concentrations, physical/chemical conditions of the water itself, and the toxicity of the water to aquatic organisms. These objectives are designed to represent the maximum amount of pollutants that can remain in the water column without causing any adverse effect on organisms using the aquatic system as habitat, on people consuming those organisms or water, and on other current or potential beneficial uses (as described in Chapter 2).

The technical bases of the region's water quality objectives include extensive biological, chemical, and physical partitioning information reported in the scientific literature, national water quality criteria, studies conducted by other agencies, and information gained from local environmental and discharge monitoring (as described in Chapter 6). The Regional Board recognizes that limited information exists in some cases, making it difficult to establish definitive numerical objectives, but the Regional Board believes its conservative approach to setting objectives has been proper. In addition to the technical review, the overall feasibility of reaching objectives in terms of technological, institutional, economic, and administrative factors is considered

at many different stages of objective derivation and implementation of the water quality control plan.

Together, the narrative and numerical objectives define the level of water quality that shall be maintained within the region. In instances where water quality is better than that prescribed by the objectives, the state Antidegradation Policy applies (State Board Resolution 68-16: Statement of Policy With Respect to Maintaining High Quality of Waters in California). This policy is aimed at protecting relatively uncontaminated aquatic systems where they exist and preventing further degradation. The state's Antidegradation Policy is consistent with the federal Antidegradation Policy, as interpreted by the State Water Resources Control Board in State Board Order No. 86-17.

When uncontrollable water quality factors result in the degradation of water quality beyond the levels or limits established herein as water quality objectives, the Regional Board will conduct a case-by-case analysis of the benefits and costs of preventing further degradation. In cases where this analysis indicates that beneficial uses will be adversely impacted by allowing further degradation, then the Regional Board will not allow controllable water quality factors to cause any further degradation of water quality. Controllable water quality factors are those actions, conditions, or circumstances resulting from human activities that may influence the quality of the waters of the state and that may be reasonably controlled.

The Regional Board establishes and enforces waste discharge requirements for point and nonpoint source of pollutants at levels necessary to meet numerical and narrative water quality objectives. In setting waste discharge requirements, the Regional Board will consider, among other things, the potential impact on beneficial uses within the area of influence of the discharge, the existing quality of receiving waters, and the appropriate water quality objectives.

In general, the objectives are intended to govern the concentration of pollutant constituents in the main water mass. The same objectives cannot be applied at or immediately adjacent to submerged effluent discharge structures. Zones of initial dilution within which higher concentrations can be tolerated will be allowed for such discharges.

For a submerged buoyant discharge, characteristic of most municipal and industrial wastes that are released from submerged outfalls, the momentum of the discharge and its initial buoyancy act together to produce turbulent mixing. Initial dilution in this case is completed when the diluting wastewater ceases to rise in the water column and first begins to spread horizontally.

For shallow water submerged discharges, surface discharges, and nonbuoyant discharges, characteristic of cooling water wastes and some individual discharges, turbulent mixing results primarily from the momentum of discharge. Initial dilution, in these cases, is considered to be completed when the momentum-induced velocity of the discharge ceases to produce significant

mixing of the waste, or the diluting plume reaches a fixed distance from the discharge to be specified by the Regional Board, whichever results in the lower estimate for initial dilution.

Compliance with water quality objectives may be prohibitively expensive or technically impossible in some cases. The Regional Board will consider modification of specific water quality objectives as long as the discharger can demonstrate that the alternate objective will protect existing beneficial uses, is scientifically defensible, and is consistent with the state Antidegradation Policy. This exception clause properly indicates that the Regional Board will conservatively compare benefits and costs in these cases because of the difficulty in quantifying beneficial uses.

These water quality objectives are considered necessary to protect the present and potential beneficial uses described in Chapter 2 of this Plan and to protect existing high quality waters of the state. These objectives will be achieved primarily through establishing and enforcing waste discharge requirements and by implementing this water quality control plan.

3.2 OBJECTIVES FOR OCEAN WATERS

The provisions of the State Board's "Water Quality Control Plan for Ocean Waters of California" (Ocean Plan) and "Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California" (Thermal Plan) and any revision to them will apply to ocean waters. These plans describe objectives and effluent limitations for ocean waters.

3.3 OBJECTIVES FOR SURFACE WATERS

The following objectives apply to all surface waters within the region, except the Pacific Ocean.

3.3.1 BACTERIA

Table 3-1 provides a summary of the bacterial water quality objectives and identifies the sources of those objectives. Table 3-2 summarizes U.S. EPA's water quality criteria for water contact recreation based on the frequency of use a particular area receives. These criteria will be used to differentiate between pollution sources or to supplement objectives for water contact recreation.

3.3.3.1 Implementation Provisions for Water Contact Recreation Bacteria Objectives

Water quality objectives for bacteria in Table 3-1 shall be strictly applied except when otherwise provided for in a TMDL. In the context of a TMDL, the Water Board may implement the objectives in fresh and marine waters by using a “reference system and antidegradation approach” as discussed below.

Implementation of water quality objectives for bacteria using a "reference system and antidegradation approach" requires control of bacteria from all anthropogenic sources so that bacteriological water quality is consistent with that of a reference system. A reference system is defined as an area (e.g., a subwatershed or catchment) and associated monitoring point(s) that is minimally impacted by human activities that potentially affect bacteria densities in the reference receiving water body.

This approach recognizes that there are natural sources of bacteria (defined as non-anthropogenic sources) that may cause or contribute to exceedances of the objectives for indicator bacteria. It also avoids requiring treatment or diversion of water bodies or treatment of natural sources of bacteria from undeveloped areas. Such requirements, if imposed by the Water Board, could have the potential to adversely affect valuable aquatic life and wildlife beneficial uses supported by water bodies in the region.

Under the reference system approach, a certain frequency of exceedance of the single-sample objectives shall be permitted. The permitted number of exceedances shall be based on the observed exceedance frequency in a selected reference system(s) or the targeted water body, whichever is less. The "reference system and antidegradation approach" ensures that bacteriological water quality is at least as good as that of a reference system and that no degradation of existing bacteriological water quality is permitted where existing bacteriological water quality is better than that of the selected reference system(s).

The appropriateness of this approach, the specific exceedance frequencies to be permitted under it, and the permittees to whom it would apply will be evaluated within the context of TMDL development for a specific water body, and decided by the Water Board when considering adoption of a TMDL. These implementation provisions may only be used within the context of a TMDL addressing municipal stormwater (including discharges regulated under statewide municipal NPDES waste discharge requirements), discharges from confined animal facilities, and discharges from nonpoint sources.

3.3.2 BIOACCUMULATION

Many pollutants can accumulate on particles, in sediment, or bioaccumulate in fish and other aquatic organisms. Controllable water quality factors shall not cause a detrimental increase in concentrations of toxic substances found in bottom sediments or aquatic life. Effects on aquatic organisms, wildlife, and human health will be considered.

3.3.3 BIOSTIMULATORY SUBSTANCES

Waters shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses. Changes in chlorophyll a and associated phytoplankton communities follow complex dynamics that are sometimes

associated with a discharge of biostimulatory substances. Irregular and extreme levels of chlorophyll a or phytoplankton blooms may indicate exceedance of this objective and require investigation.

3.3.4 COLOR

Waters shall be free of coloration that causes nuisance or adversely affects beneficial uses.

3.3.5 DISSOLVED OXYGEN

For all tidal waters, the following objectives shall apply:

In the Bay:

Downstream of Carquinez Bridge	5.0 mg/l minimum
Upstream of Carquinez Bridge	7.0 mg/l minimum

For nontidal waters, the following objectives shall apply:

Waters designated as:

Cold water habitat	7.0 mg/l minimum
Warm water habitat	5.0 mg/l minimum

The median dissolved oxygen concentration for any three consecutive months shall not be less than 80 percent of the dissolved oxygen content at saturation.

Dissolved oxygen is a general index of the state of the health of receiving waters. Although minimum concentrations of 5 mg/l and 7 mg/l are frequently used as objectives to protect fish life, higher concentrations are generally desirable to protect sensitive aquatic forms. In areas unaffected by waste discharges, a level of about 85 percent of oxygen saturation exists. A three-month median objective of 80 percent of oxygen saturation allows for some degradation from this level, but still requires a consistently high oxygen content in the receiving water.

3.3.6 FLOATING MATERIAL

Waters shall not contain floating material, including solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect beneficial uses.

3.3.7 OIL AND GREASE

Waters shall not contain oils, greases, waxes, or other materials in concentrations that result in a visible film or coating on the surface of the

water or on objects in the water, that cause nuisance, or that otherwise adversely affect beneficial uses.

3.3.8 POPULATION AND COMMUNITY ECOLOGY

All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce significant alterations in population or community ecology or receiving water biota. In addition, the health and life history characteristics of aquatic organisms in waters affected by controllable water quality factors shall not differ significantly from those for the same waters in areas unaffected by controllable water quality factors.

3.3.9 pH

The pH shall not be depressed below 6.5 nor raised above 8.5. This encompasses the pH range usually found in waters within the basin. Controllable water quality factors shall not cause changes greater than 0.5 units in normal ambient pH levels.

3.3.10 RADIOACTIVITY

Radionuclides shall not be present in concentrations that result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal, or aquatic life. Waters designated for use as domestic or municipal supply shall not contain concentrations of radionuclides in excess of the limits specified in Table 4 of Section 64443 (Radioactivity) of Title 22 of the California Code of Regulations (CCR), which is incorporated by reference into this Plan. This incorporation is prospective, including future changes to the incorporated provisions as the changes take effect (see Table 3-5).

3.3.11 SALINITY

Controllable water quality factors shall not increase the total dissolved solids or salinity of waters of the state so as to adversely affect beneficial uses, particularly fish migration and estuarine habitat.

3.3.12 SEDIMENT

The suspended sediment load and suspended sediment discharge rate of surface waters shall not be altered in such a manner as to cause nuisance or adversely affect beneficial uses.

Controllable water quality factors shall not cause a detrimental increase in the concentrations of toxic pollutants in sediments or aquatic life.

3.3.13 SETTLEABLE MATERIAL

Waters shall not contain substances in concentrations that result in the deposition of material that cause nuisance or adversely affect beneficial uses.

3.3.14 SUSPENDED MATERIAL

Waters shall not contain suspended material in concentrations that cause nuisance or adversely affect beneficial uses.

3.3.15 SULFIDE

All water shall be free from dissolved sulfide concentrations above natural background levels. Sulfide occurs in Bay muds as a result of bacterial action on organic matter in an anaerobic environment.

Concentrations of only a few hundredths of a milligram per liter can cause a noticeable odor or be toxic to aquatic life. Violation of the sulfide objective will reflect violation of dissolved oxygen objectives as sulfides cannot exist to a significant degree in an oxygenated environment.

3.3.16 TASTES AND ODORS

Waters shall not contain taste- or odor-producing substances in concentrations that impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin, that cause nuisance, or that adversely affect beneficial uses.

3.3.17 TEMPERATURE

Temperature objectives for enclosed bays and estuaries are as specified in the "Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays of California," including any revisions to the plan.

In addition, the following temperature objectives apply to surface waters:

- The natural receiving water temperature of inland surface waters shall not be altered unless it can be demonstrated to the satisfaction of the Regional Board that such alteration in temperature does not adversely affect beneficial uses.
- The temperature of any cold or warm freshwater habitat shall not be increased by more than 5°F (2.8°C) above natural receiving water temperature

3.3.18 TOXICITY

All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.

Detrimental responses include, but are not limited to, decreased growth rate and decreased reproductive success of resident or indicator species. There shall be no acute toxicity in ambient waters. Acute toxicity is defined as a median of less than 90 percent survival, or less than 70 percent survival, 10 percent of the time, of test organisms in a 96-hour static or continuous flow test.

There shall be no chronic toxicity in ambient waters. Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community.

Attainment of this objective will be determined by analyses of indicator organisms, species diversity, population density, growth anomalies, or toxicity tests (including those described in Chapter 4), or other methods selected by the Water Board. The Water Board will also consider other relevant information and numeric criteria and guidelines for toxic substances developed by other agencies as appropriate.

The health and life history characteristics of aquatic organisms in waters affected by controllable water quality factors shall not differ significantly from those for the same waters in areas unaffected by controllable water quality factors.

3.3.19 TURBIDITY

Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses. Increases from normal background light penetration or turbidity relatable to waste discharge shall not be greater than 10 percent in areas where natural turbidity is greater than 50 NTU.

3.3.20 UN-IONIZED AMMONIA

The discharge of wastes shall not cause receiving waters to contain concentrations of un-ionized ammonia in excess of the following limits (in mg/l as N):

Annual Median	0.025
Maximum, Central Bay (as depicted in Figure 2-5) and upstream	0.16
Maximum, Lower Bay (as depicted in Figures 2-6 and 2-7):	0.4

The intent of this objective is to protect against the chronic toxic effects of ammonia in the receiving waters. An ammonia objective is needed for the following reasons:

- Ammonia (specifically un-ionized ammonia) is a demonstrated toxicant. Ammonia is generally accepted as one of the principle toxicants in municipal waste discharges. Some industries also discharge significant quantities of ammonia.
- Exceptions to the effluent toxicity limitations in Chapter 4 of the Plan allow for the discharge of ammonia in toxic amounts. In most instances, ammonia will be diluted or degraded to a nontoxic state fairly rapidly. However, this does not occur in all cases, the South Bay being a notable example. The ammonia limit is recommended in order to preclude any build up of ammonia in the receiving water.
- A more stringent maximum objective is desirable for the northern reach of the Bay for the protection of the migratory corridor running through Central Bay, San Pablo Bay, and upstream reaches.

3.3.21 OBJECTIVES FOR SPECIFIC CHEMICAL CONSTITUENTS

Surface waters shall not contain concentrations of chemical constituents in amounts that adversely affect any designated beneficial use. Water quality objectives for selected toxic pollutants for surface waters are given in Tables 3-3, 3-3A, 3-3B, 3-3C, 3-4, and 3-4A.

The Water Board intends to work towards the derivation of site-specific objectives for the Bay-Delta estuarine system. Site-specific objectives to be considered by the Water Board shall be developed in accordance with the provisions of the federal Clean Water Act, the State Water Code, State Board water quality control plans, and this Plan. These site-specific objectives will take into consideration factors such as all available scientific information and monitoring data and the latest U.S. EPA guidance, and local environmental conditions and impacts caused by bioaccumulation. Pending the adoption of site-specific objectives, the objectives in Tables 3-3 and 3-4 apply throughout the region except as otherwise indicated in the tables or when site-specific objectives for the pollutant parameter have been adopted. Site-specific objectives have been adopted for copper in segments of San Francisco Bay (see Figure 7.2.1-01), for nickel in South San Francisco Bay (Table 3-3A), and for cyanide in all San Francisco Bay segments (Table 3-3C). Objectives for mercury that apply to San Francisco Bay are listed in Table 3-3B. Objectives for mercury that apply to Walker Creek, Soulajule Reservoir, and their tributaries, and to waters of the Guadalupe River watershed are listed in Table 3-4A.

South San Francisco Bay south of the Dumbarton Bridge is a unique, water-quality-limited, hydrodynamic and biological environment that merits continued special attention by the Water Board. Controlling urban and upland runoff sources is critical to the success of maintaining water quality in this portion of the Bay. Site-specific water quality objectives have been adopted for dissolved copper and nickel in this Bay segment. Site-specific objectives may be appropriate for other pollutants of concern, but this determination will be made on a case-by-case basis, and after it has been demonstrated that all other reasonable treatment, source control and pollution prevention measures

have been exhausted. The Water Board will determine whether revised water quality objectives and/or effluent limitations are appropriate based on sound technical information and scientific studies, stakeholder input, and the need for flexibility to address priority problems in the watershed.

3.3.22 CONSTITUENTS OF CONCERN FOR MUNICIPAL AND AGRICULTURAL WATER SUPPLIES

At a minimum, surface waters designated for use as domestic or municipal supply (MUN) shall not contain concentrations of constituents in excess of the maximum (MCLs) or secondary maximum contaminant levels (SMCLs) specified in the following provisions of Title 22, which are incorporated by reference into this plan: Table 64431-A (Inorganic Chemicals) of Section 64431, and Table 64433.2-A (Fluoride) of Section 64433.2, Table 64444-A (Organic Chemicals) of Section 64444, and Table 64449-A (SMCLs-Consumer Acceptance Limits) and 64449-B (SMCLs-Ranges) of Section 64449. This incorporation-by-reference is prospective, including future changes to the incorporated provisions as the changes take effect. Table 3-5 contains water quality objectives for municipal supply, including the MCLs contained in various sections of Title 22 as of the adoption of this plan.

At a minimum, surface waters designated for use as agricultural supply (AGR) shall not contain concentrations of constituents in excess of the levels specified in Table 3-6.

3.4 OBJECTIVES FOR GROUNDWATER

Groundwater objectives consist primarily of narrative objectives combined with a limited number of numerical objectives. Additionally, the Water Board will establish basin- and/or site-specific numerical groundwater objectives as necessary. For example, the Water Board has groundwater basin-specific objectives for the Alameda Creek watershed above Niles to include the Livermore-Amador Valley as shown in Table 3-7.

The maintenance of existing high quality of groundwater (i.e., "background") is the primary groundwater objective.

In addition, at a minimum, groundwater shall not contain concentrations of bacteria, chemical constituents, radioactivity, or substances producing taste and odor in excess of the objectives described below unless naturally occurring background concentrations are greater. Under existing law, the Water Board regulates waste discharges to land that could affect water quality, including both groundwater and surface water quality. Waste discharges that reach groundwater are regulated to protect both groundwater and any surface water in continuity with groundwater. Waste discharges that affect groundwater that is in continuity with surface water cannot cause violations of any applicable surface water standards.

3.4.1 BACTERIA

In groundwater with a beneficial use of municipal and domestic supply, the median of the most probable number of coliform organisms over any seven-day period shall be less than 1.1 most probable number per 100 milliliters (MPN/100 mL) (based on multiple tube fermentation technique; equivalent test results based on other analytical techniques as specified in the National Primary Drinking Water Regulation, 40 CFR, Part 141.21 (f), revised June 10, 1992, are acceptable).

3.4.2 ORGANIC AND INORGANIC CHEMICAL CONSTITUENTS

All groundwater shall be maintained free of organic and inorganic chemical constituents in concentrations that adversely affect beneficial uses. To evaluate compliance with water quality objectives, the Water Board will consider all relevant and scientifically valid evidence, including relevant and scientifically valid numerical criteria and guidelines developed and/or published by other agencies and organizations (e.g., U.S. Environmental Protection Agency (U.S. EPA), the State Water Board, California Department of Health Services (DHS), U.S. Food and Drug Administration, National Academy of Sciences, California Environmental Protection Agency's (Cal/EPA) Office of Environmental Health Hazard Assessment (OEHHA), U.S. Agency for Toxic Substances and Disease Registry, Cal/EPA Department of Toxic Substances Control (DTSC), and other appropriate organizations.)

At a minimum, groundwater designated for use as domestic or municipal supply (MUN) shall not contain concentrations of constituents in excess of the maximum (MCLs) or secondary maximum contaminant levels (SMCLs) specified in the following provisions of Title 22, which are incorporated by reference into this plan: Tables 64431-A (Inorganic Chemicals) of Section 64431, Table 64433.2-A (Fluoride) of Section 64433.2, and Table 64444-A (Organic Chemicals) of Section 64444. This incorporation-by-reference is prospective, including future changes to the incorporated provisions as the changes take effect. (See Table 3-5.)

Groundwater with a beneficial use of agricultural supply shall not contain concentrations of chemical constituents in amounts that adversely affect such beneficial use. In determining compliance with this objective, the Water Board will consider as evidence relevant and scientifically valid water quality goals from sources such as the Food and Agricultural Organizations of the United Nations; University of California Cooperative Extension, Committee of Experts; and McKee and Wolf's "Water Quality Criteria," as well as other relevant and scientifically valid evidence. At a minimum, groundwater designated for use as agricultural supply (AGR) shall not contain concentrations of constituents in excess of the levels specified in Table 3-6.

Groundwater with a beneficial use of freshwater replenishment shall not contain concentrations of chemicals in amounts that will adversely affect the beneficial use of the receiving surface water.

Groundwater with a beneficial use of industrial service supply or industrial process supply shall not contain pollutant levels that impair current or potential industrial uses.

3.4.3 RADIOACTIVITY

At a minimum, groundwater designated for use as domestic or municipal supply (MUN) shall not contain concentrations of radionuclides in excess of the MCLs specified in Table 4 (Radioactivity) of Section 64443 of Title 22, which is incorporated by reference into this plan. This incorporation-by-reference is prospective, including future changes to the incorporated provisions as the changes take effect. (See Table 3-5.)

3.4.4 TASTE AND ODOR

Groundwater designated for use as domestic or municipal supply (MUN) shall not contain taste- or odor-producing substances in concentrations that cause a nuisance or adversely affect beneficial uses. At a minimum, groundwater designated for use as domestic or municipal supply shall not contain concentrations in excess of the SMCLs specified in Tables 64449-A (Secondary MCLs-Consumer Acceptance Limits) and 64449-B (Secondary MCLs-Ranges) of Section 64449 of Title 22, which is incorporated by reference into this plan. This incorporation-by-reference is prospective, including future changes to the incorporated provisions as the changes take effect. (See Table 3-5.)

3.5 OBJECTIVES FOR THE DELTA

The objectives contained in the State Water Board's 1995 "Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary" and any revisions thereto shall apply to the waters of the Sacramento-San Joaquin Delta and adjacent waters as specified in that plan.

3.6 OBJECTIVES FOR ALAMEDA CREEK WATERSHED

The water quality objectives contained in Table 3-7 apply to the surface and groundwaters of the Alameda Creek watershed above Niles.

Wastewater discharges that cause the surface water limits in Table 3-7 to be exceeded may be allowed if they are part of an overall waterwastewater resource operational program developed by those agencies affected and approved by the Water Board.

TABLES

<<< Previous - Ch.2: Beneficial Uses

Next - Ch.4: Implementation Plan >>>

[an error occurred while processing this directive]

Table 3-1: Water Quality Objectives for Bacteria[a]

Beneficial Use	Fecal Coliform (MPN/100ml)	Total Coliform (MPN/100ml)	Enterococcus (MPN/100ml)[g]
Water Contact Recreation	geometric mean < 200 90th percentile < 400	median < 240 no sample > 10,000	geometric mean < 35 no sample > 104
Shellfish Harvesting[b]	median < 14 90th percentile < 43	median < 70 90th percentile < 230[c]	
Non-contact Water Recreation[d]	mean < 2000 90th percentile < 4000		
Municipal Supply: - Surface Water[e] - Groundwater	geometric mean < 20	geometric mean < 100 < 1.1[f]	

Notes:

a. Based on a minimum of five consecutive samples equally spaced over a 30-day period.

b. Source: National Shellfish Sanitation Program.

c. Based on a five-tube decimal dilution test or 300 MPN/100 ml when a three-tube decimal dilution test is used.

d. Source: Report of the Committee on Water Quality Criteria, National Technical Advisory Committee, 1968.

e. Source: California Department of Public Health recommendation.

f. Based on multiple tube fermentation technique; equivalent test results based on other analytical techniques, as specified in the National Primary Drinking Water Regulation, 40 CFR, Part 141.21(f), revised June 10, 1992, are acceptable.

g. Applicable to marine and estuarine waters only. Numeric values are based on Section 7958 of Title 17 of the California Code of Regulations, 69FR 67217 et seq., and 40 CFR Part 131.41 (effective date December 16, 2004).

Table 3-2: U.S. EPA Bacteriological Criteria for Water Contact Recreation[1,2]
(in colonies per 100 ML)

	Fresh Water		Salt Water
	Enterococci	**E. Coli**	**Enterococci**
Steady State (all areas)	33	126	35
Maximum at:			
- designated beach	61	235	104
- moderately used area	89	298	124
- lightly used area	108	406	276
- infrequently used area	151	576	500

NOTES:

1. The criteria were published in the Federal Register, Vol. 51, No. 45 / Friday, March 7, 1986 / 8012-8016. The Criteria are based on:
(a) Cabelli, V.J. 1983. Health Effects Criteria for Marine Recreational Waters. U.S. EPA, EPA 600/1-80-031, Cincinnati, Ohio, and
(b) Dufour, A.P. 1984. Health Effects Criteria for Fresh Recreational Waters. U.S. EPA, EPA 600/1-84-004, Cincinnati Ohio.

2. The U.S. EPA criteria apply to water contact recreation only. The criteria provide for a level of production based on the frequency of usage of a given water contact recreation area. The criteria may be employed in special studies within this region to differentiate between pollution sources or to supplement the current coliform objectives for water contact recreation.

WBSD CALL-OUT REPORT **Appendix B1**

Weather: _____Day of the Week: S-M-T-W-TH-F-S ☐ Take Picture(s)

1. Name of caller:_____Phone Number:_____
2. Address:_____ Cross Street:_____

3. Called out by:_____at :_____a.m. / p.m. Date:_____
Arrival Time at site_____a.m./p.m. Date:_____
Source Control called out at: _____a.m. / p.m. Date:_____
4. Reported as: ☐private c/o overflowing ☐Overflowing manhole ☐Back up in home
4A. Is there a mainline stoppage: ☐YES ☐NO
5. Estimated GPM: _____ Flow Height in Inches:_____
6. Were you able to retrieve the entire overflow? ☐ Yes ☐No
7. Was the overflow returned to sanitary sewer? ☐ Yes ☐No ☐Partial ☐ N/A
8. Overflow saturated into soil? ☐Yes (Est'd Volume_____) ☐No ☐N/A
If yes to 6, 7 or 8 above did we clean up affected area? ☐Yes ☐No ☐N/A

9. Overflow to: **Estimated volume of SSO: _____**
☐ **Direct Inlet** **Estimated volume Recovered: _____**
☐ **Section of Storm Drain line** **Estimated volume Not Recovered: _____**
☐ **Drainage Ditch** ☐ Lined ☐ Unlined
☐ **Channel** ☐ Lined ☐ Unlined
☐ **Ultimate Destination_____Est'd Volume:_____**
Line cleared at:_____a.m. / p.m. Duration of overflow:_____
Blockage caused by _____ Op(s). Performed _____
10. Is the overflow contained ☐YES ☐NO If yes, How & Where, _____
_____
Clean up methods used: ☐Vacuum/pump ☐ Hosed down & street swept ☐ Enzymes
11. Mainline: u/s_____to d/s_____
Overflowing manhole ID #_____ at _____
Method(s) used to estimate SSO Volume: ☐San Diego Method ☐Surface Area
☐____# SFR's U/S of Blockage ☐SSCSC Method ☐Soil Saturation ☐_____

12.

Staff	Unit	Time Called	T/A	Time Completed
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

Reported by:_____Date:_____
(Print Name)

13.**Affected Agency:** ☐Town of Atherton ☐Town of Portola Valley
☐Menlo Park ☐East Palo Alto ☐Unincorporated San Mateo County
☐Unincorporated Santa Clara County

GBA#_____☐Res. ☐Com. Event I.D. #_____Cert. #_____Time:_____
Category: **1**(**Surface Water Impact-Drainage Channel- MS4 not recovered) Implement Sampling Protocol**
Category: **2** **(>1K gallons, fully recovered)** Category: **3** **(<1K gallons fully recovered)**
Method used to determine start time of SSO? ☐ Reported time
☐ Interview with Customer ☐ Other:_____

Estimated Cost incurred: $_____

SANITARY SEWER OVERFLOW PREVENTION ASSESSMENT

☐ SMART COVER ALARM I.D.:_____ ☐ MAINLINE STOPPAGE RESPONSE

First Responder

_____
DATE TIME

_____
CAUSE OF BLOCKAGE / OPERATION PERFORMED

_____
MAINLINE DESIGNATION U/S TO D/S ADDRESS

Notification: ☐ Callout ☐ Routine Maintenance ☐ RCC

Blockage approximately @_____ feet u/s of manhole #_____ Partial Stoppage:Y / N
Responding Crew : _____ , _____ , _____ ,_____
Vehicle / Equipment: _____ , _____ , _____ , _____ Time Completed:_____
Tools Used To Clear Blockage : _____

GBA

☐ LINE LAST CLEANED ON:_____ S/R_____ OP. PERFORMED BY:_____ W/O#_____

_____
Tools Used To Clear Blockage

_____
TYPE OF MATERIAL– SIZE-AGE

☐36 ☐12 ☐6 ☐3
CURRENT CLEANING SCHEDULE

CCTV

CCTV—DATE: _____ START TIME:_____ COMPLETION TIME:_____
LENTGH OF RUN IN FEET:_____Crew Members: _____ , _____ , _____
Vehicle / Equipment: _____ , _____ , _____ , _____
OBSERVATION AND ASSESSMENT: _____
_____
_____
RECOMMENDED MITIGATION: ☐ Reclean line ☐ Pipe Patch ☐ Dig Up
☐ RECOMMENDED MONTHLY SCHEDULE CHANGE: ☐36 ☐12 ☐6 ☐3
☐ NOTE SPECIAL CLEANING REQUIREMENTS:_____

MTC. SUPT.

☐ MEETING ON ASSESSMENT /MITIGATION :_____ OUTCOME:_____
_____
_____
_____
_____

RE-HAB

RE-HAB– START DATE :_____ COMPLETION DATE & TIME: _____
_____
W/O #_____
Crew Members: _____ , _____ , _____ ,_____ , _____
EQUIPMENT: _____ , _____ , _____ , _____ , _____

RCC

☐ MAP CHANGE / UPDATE REQUEST: Performed by:_____ Date:_____
☐ LETTER/FLYER TO PROPERTY OWNER(S) SENT OUT ON :_____
☐ TYPE OF OUT-REACH MATERIAL SENT OUT:_____

STAFF	EQUIPMENT	TIME	ESTIMATED COST TO MITIGATE
_____	_____	_____	$_____
_____	_____	_____	$_____
_____	_____	_____	$_____

TOTAL PROJECT COST

GBA # _____

REPORT ON CONDITIONS REQUIRING FOLLOW-UP WORK

DATE: _____

MAIN LINE DESIGNATION / ADDRESS / MANHOLE/
SUBASIN #(IF CCTV NEEDED): _____

_____

_____

REASON SUBMITTED (CIRCL): (Follow-up, needs repair work, mainline only, CCTV)

_____

_____

_____

_____

REPORTED BY: _____

SUPERINTENDENT DISPOSITION: DATE: _____

_____

_____

_____

_____

_____
Signature

EVALUATION/ACTION INITIATED: DATE: _____

_____

_____

_____

_____

_____
Signature/Position

Emergency Contact Phone List

FOR WBSD EMPLOYEES REFER TO PHONE LIST

Time	Contact	Business #	Fax #	Pager-Cell	Home #
1)_____	Jed Beyer	650-321-0384	650-321-4265	650-477-6428	
2)_____	Mark Praturlon	"	"	650-477-6427	
3)_____	John Simonetti	"	"	650-477-6426	
4)_____	Bob Scheidt	"	"	650-477-6416	
5)_____	Sergio Ramirez	"	"	650-477-9885	
6)_____	Bill Kitajima	"	"	650-477-6424	
7)_____	Phil Scott	"	"	650-477-6470	

Category-1 Reporting Requirements Within 2-HOURS:

_____ Cal-OES, (Name)_____ 1-800-852-7550

Cal-OES Control # _____

_____**Affected Town or City:**_____ **Representative Name:**_____

_____Town of Atherton 650-752-0532

_____Howard Young, Town of Portola Valley 650-851-1700

_____City of Menlo Park Engineering 650-330-6740

Submit Draft Report to CIWQS within 3 Business days of SSO for Category 1 & 2 SSO Events, Certify report within 15 days of SSO end date.

For spills greater than 50,000 gallons, implement Sampling Protocol, Start SSO technical Report. Refer to Reference R1 page 5 located in OERP at Appendix A8. Update Cal-OES if the spill estimate and known impacts have substantially changed.

Category 3 spills certify report within 30 calendar days of the end of the month in which SSO occurred

Residential Back Ups & Claims

_____ Carl Warren & Co. (Julie Gonzales) C 855-542-8001

_____ RMC 1-800-400-5058 PM-Rich 1-510-856-7137

Outside Agency Contact

_____June Wong, Public Health Lab. Ofc.650-573-2500 Cell 650-339-2322

_____Menlo Park Police Dept. 650-330-6300

_____Liz Fambrini, MP Code Enforcement 650-330-6377 PGR 650-496-8562

_____Phelepe Cohen, Searsville Lake 650-851-6814 C 650-274-3782

_____SM Haz-Mat 911

_____MP Public Works (Call MPPD Dispatch) 650-330-6317 _____

_____Greg Smith, SMCEHD **W**650-599-1679**C**650-867-9434

_____Attach Completed Post Spill Assessment Form & Documents

_____Reports to O/S Agencies _____Picture(s) Taken _____Public Notification ____On-going investigation

_____SSO Technical Report Completed on _____

_____Signs Posted, Locations:_____

_____Sampling Protocol Implemented:_____

Comments:_____

ALL WORK ORDERS, REPORTS, PICTURES & FIELD NOTES MUST BE STORED ELECTRONICALLY AND FIELD IN THE SITE SPECIFIC SSO FOLDER

SPILL CALCULATION METHODS

Appendix C1

To calculate the amount of gallons in a sewage spill, determine the area of the spill (Length, Width & Depth).

Depth/inches	to Depth/feet	Depth/inches	to Depth/feet
1/16”	0.0052’	1/8”	0.0104’
3/16”	0.0156’	1/4”	0.0208’
5/16”	0.0260’	3/8”	0.0312’
7/16”	0.0364’	1/2”	0.0417’
9/16”	0.0468’	5/8”	0.0521’
11/16”	0.0573’	3/4”	0.0625’

V = L x W x D x 7.48 = GALLONS

EXAMPLE: A spill 15’ **L** x 15’ **W** x 0.0052’(1/16”) **D**
15’ x 15’ x .0.0052’ x 7.48 = 8.7516 gallons

If you are dealing with a spill that has been running into a storm drain, you must estimate the gallons by determining the following criteria:
Time of reported overflow_____, **overflow cleared at _____**(time)

Length of **T**ime for overflow _____ in minutes.

Calculating an overflow from a manhole cover “hook-hole”

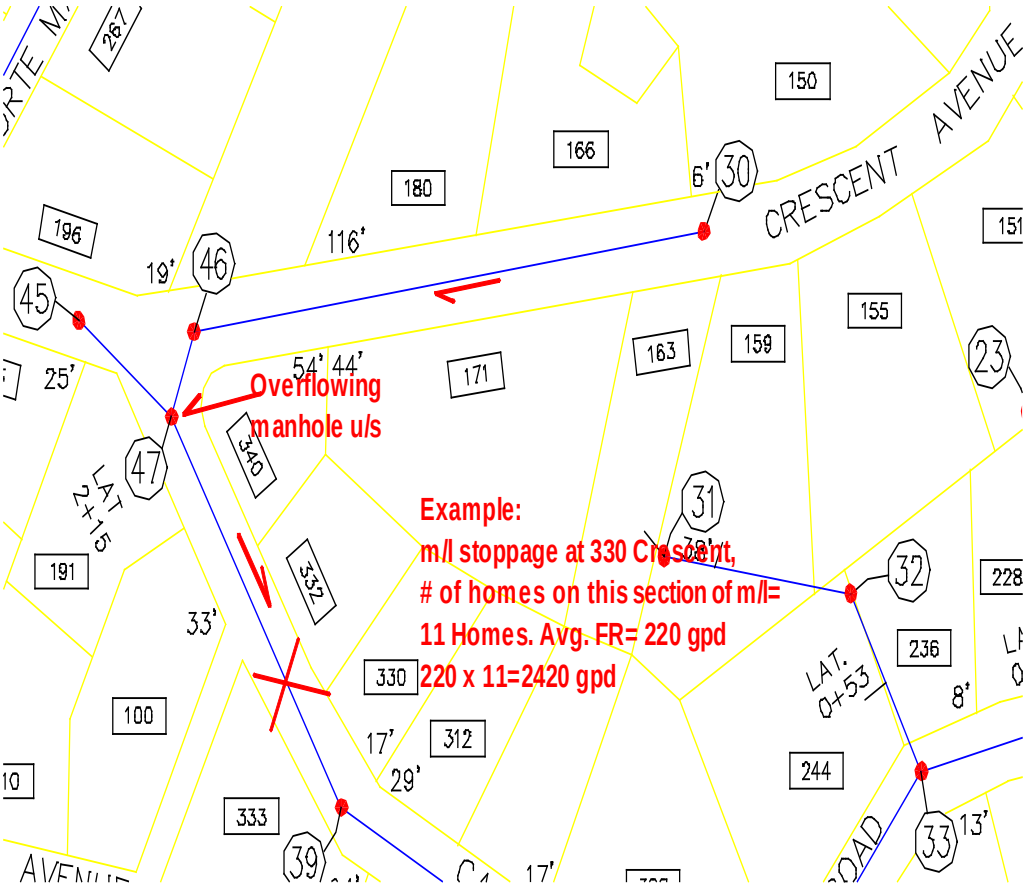
Overflow in gallons = 19.191 Constant x (Sq. root / Head in feet) x (**T**ime)
Example: Overflow reported at 14:00 hours and was cleared at 14:15 hours.
Overflow through manhole hook hole(std. 1”) has a Head of 1.5 inches.

Head in feet = 1.5”/12= .3535’
The square root of .3535 = 0.5945

19.191 **C** x 15 minutes **T** x 0.5945 **SQ.ROOT** = **101.76 GALS or 6.78 gpm.**

The constant consists of; radius of manhole hook hole, area, coefficient of nozzle, the square of 2 for gravity, conversion from secs/min and cu.ft/gallons.

Collection System Maps



1. Determine the Number of homes upstream of the blockage

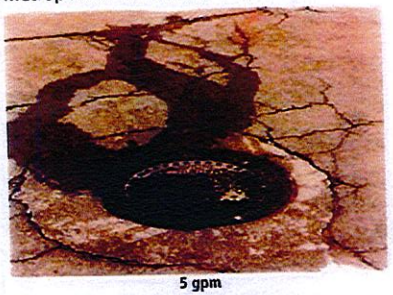
2. Utilize the average daily flow rate from Single Family Residences (SFR)

City of San Diego
Metropolitan Wastewater Department

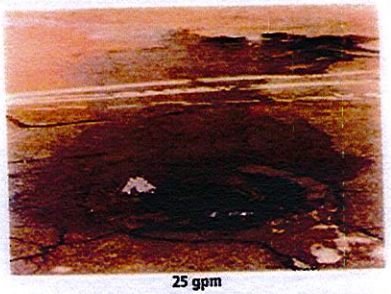
Reference Sheet for Estimating Sewer Spills from Overflowing Sewer Manholes

All estimates are calculated in gallons per minute (gpm)

Wastewater Collection Division
(619) 654-4160

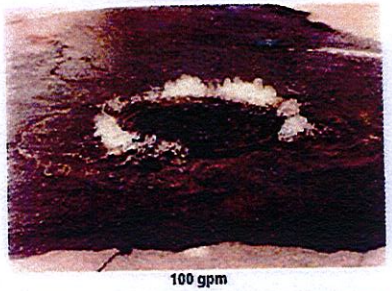


5 gpm

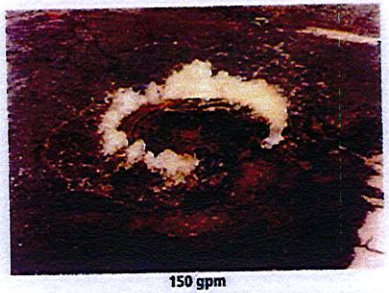


25 gpm

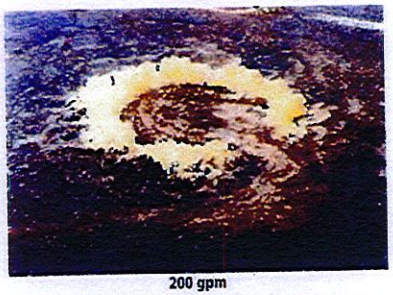
50 gpm



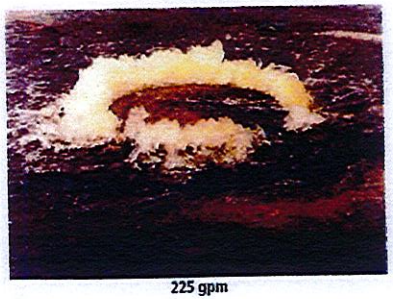
100 gpm



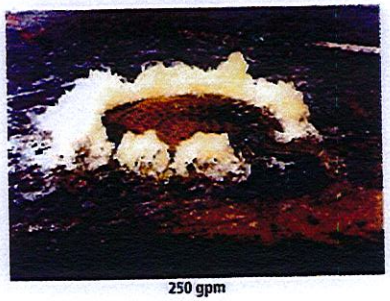
150 gpm



200 gpm



225 gpm



250 gpm

275 gpm

All photos were taken during a demonstration using metered water from a hydrant in cooperation with the City of San Diego's Water Department.

rev. 4/99

Spill Calculation Method

WEST BAY
SANITARY DISTRICT

Date: _____-_____-_____

Dear Homeowner:

Please be advised that a raw sewage spill has occurred, which may have flowed into the creek / channel (near/at the rear of) your property.

The spill was approximately _____ gallons over a _____-hour period and has been reported to the San Mateo County Department of Health, the Regional Water Quality Control Board for the San Francisco Bay Region and the California Emergency Management Agency (CALEMA) formerly Office of Emergency Services.

For your protection, we are asking that you do not allow children or pets in the creek/channel area near your property until further notice.

We wish to assure you that the District is taking every measure to ensure the protection of our customers and the environment and will keep you advised of the situation.

If you have any questions or concerns regarding this matter please contact the District Manager at (650) 321-0384.

Hand Delivered Residential Notification Form

WEST BAY SANITARY DISTRICT

RAW SEWAGE SPILL

AREA CLOSED NO ENTRY

- Do not ingest, wade or swim.
- Please keep children and pets out of the area.
- Questions concerning exposure, posting and clean up should be directed to:

WEST BAY SANITARY DISTRICT
(650) 321-0384
500 LAUREL STREET
MENLO PARK

(This document must be printed on red paper then laminated)