Westborough Water District

Overflow Emergency Response Plan

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Sanitary Sewer Overflow Emergency Response Plan

1. Purpose

The purpose of the Westborough Water District's Overflow Emergency Response Plan (OERP) is to support an orderly and effective response to Sanitary Sewer Overflows (SSOs). The OERP provides guidelines for District personnel and service providers to follow in responding to, cleaning up, and reporting SSOs that may occur within the District's service area. This OERP satisfies the SWRCB Statewide General Waste Discharge Requirements (GWDR), which require wastewater collection agencies to have an Overflow Emergency Response Plan.

2. Policy

The District's employees and representatives are required to report all wastewater overflows found and to take the appropriate action to secure the wastewater overflow area, properly report to the appropriate regulatory agencies, relieve the cause of the overflow, and ensure that the affected area is cleaned as soon as possible to minimize health hazards to the public and protect the environment. The District's goal is to respond to sewer system overflows as soon as possible following notification. The District will follow reporting procedures in regards to sewer spills as set forth by the San Francisco Regional Water Quality Control Board (*SFRWQCB)* and the California State Water Resources Control Board (*SWRCB)*.

3. Definitions as Used in This OERP

CALIFORNIA INTEGRATED WATER QUALITY SYSTEM (CIWQS): Refers to the State Water Resources Control Board online electronic reporting system that is used to report SSOs, certify completion of the SSMP, and provide information on the sanitary sewer system.

FOG – Fats, Oils, and Grease: Refers to fats, oils, and grease typically associated with food preparation and cooking activities that can cause blockages in the sanitary sewer system.

LEGALLY RESPONSIBLE OFFICIAL (LRO): Refers to an individual who has the authority to certify reports and other actions that are submitted through CIWQS.

MAINLINE SEWER: Refers to District wastewater collection system piping that is not a private lateral connection to a user.

MAINTENANCE HOLE OR MANHOLE: Refers to an engineered structure that is intended to provide access to a sanitary sewer for maintenance and inspection.

MAJOR SPILL: A spill of whatever size that, based on a reasonable assessment of the spill size, location, and potential impacts, is deemed to pose an imminent and substantial endangerment to public health or the environment.

NOTIFICATION OF AN SSO: Refers to the time at which the District becomes aware of an SSO event through observation or notification by the public or other source.

NUISANCE - California Water Code section 13050, subdivision (m), defines nuisance as anything that meets all of the following requirements:

a. Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property.

b. Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal.

c. Occurs during, or as a result of, the treatment or disposal of wastes.

PREVENTATIVE MAINTENANCE: Refers to maintenance activities intended to prevent failures of the wastewater collection system facilities (e.g. cleaning, CCTV, inspection).

PRIVATE LATERAL SEWAGE DISCHARGES – Sewage discharges that are caused by blockages or other problems within a privately-owned lateral.

SANITARY SEWER OVERFLOW (SSO) - Any overflow, spill, release, discharge or diversion of untreated or partially treated wastewater from a sanitary sewer system. SSOs include:

(i) Overflows or releases of untreated or partially treated wastewater that reach waters of the United States;

(ii) Overflows or releases of untreated or partially treated wastewater that do not reach waters of the United States; and

(iii) Wastewater backups into buildings and on private property that are caused by blockages or flow conditions within the publicly owned portion of a sanitary sewer system.

SSOs that include multiple appearance points resulting from a single cause will be considered one SSO for documentation and reporting purposes in CIWQS.

NOTE: Wastewater backups into buildings caused by a blockage or other malfunction of a building lateral that is privately owned are not SSOs.

SSO Categories:

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: Discharge of untreated or partially treated wastewater greater than or equal to 1,000 gallons resulting from a sanitary sewer system failure or flow condition that either:

- Does not reach surface water, a drainage channel, or an MS4, or
- The entire SSO discharged to the storm drain system was fully recovered and disposed of properly.

Category 3: All other discharges of untreated or partially treated wastewater resulting from a sanitary sewer system failure or flow condition.

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

SENSITIVE AREA: Refers to areas where an SSO could result in a fish kill or pose an imminent or substantial danger to human health (e.g. parks, aquatic habitats, etc.)

SEWER SERVICE LATERAL: Refers to the piping that conveys sewage from the building to the District's wastewater collection system.

UNTREATED OR PARTIALLY TREATED WASTEWATER: Any volume of waste discharged from the sanitary sewer system upstream of a wastewater treatment plant headworks.

WATERS OF THE STATE*:* Waters of the State (or waters of the United States) means any surface water, including saline waters, within the boundaries of California. In case of a sewage spill, storm drains are considered to be waters of the State unless the sewage is completely contained and returned to the wastewater collection system and that portion of the storm drain is cleaned.

4. State Regulatory Requirements for Element 6, Overflow Emergency Response Plan

GWDR Requirement

The collection system agency shall develop and implement an overflow emergency response plan that identifies measures to protect public health and the environment. At a minimum, this plan must include the following:

(a) Proper notification procedures so that the primary responders and regulatory agencies are informed of all SSOs in a timely manner;
(b) A program to ensure appropriate response to all overflows;
(c) Procedures to ensure prompt notification to appropriate regulatory agencies and other potentially affected entities (e.g. health agencies, regional water boards, water suppliers, etc.) of all SSOs that potentially affect public health or reach the waters of the State in accordance with the Monitoring and Reporting Program (MRP). All SSOs shall be reported in accordance with this MRP, the California Water Code, other State Law, and other applicable Regional Water Board Waste Discharge Requirements or National Pollutant Discharge Elimination System (NPDES) permit requirements. The Sewer System Management Plan should identify the officials who will receive immediate notification;
(d) Procedures to ensure that appropriate staff and contractor personnel are aware of and follow the Emergency Response Plan and are appropriately trained;
(e) Procedures to address emergency operations, such as traffic and crowd control and other necessary response activities; and
(f) A program to ensure that all reasonable steps are taken to contain untreated wastewater and prevent discharge of untreated wastewater to Waters of the United States and minimize or correct any adverse impact on the environment resulting from the SSOs, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the discharge.

The Sewer System Management Plan and critical supporting documents are available to the public at https://www.westboroughwater.org.

5. Goals

The District's goals with respect to responding to SSOs are:

- Work safely;
- Respond quickly to minimize the volume of the SSO;
- Eliminate the cause of the SSO;
- Prevent sewage system overflows or leaks from entering the storm drain system or receiving waters to the maximum extent practicable;
- Contain the spilled wastewater to the extent feasible;
- Minimize public contact with the spilled wastewater;
- Mitigate the impact of the SSO;
- Meet the regulatory reporting requirements;
- Evaluate the causes of failure related to certain SSOs; and
- Revise response procedures resulting from the debrief and failure analysis of certain SSOs.

6. SSO Detection and Notification

ref. SWRCB Order No. 2006-0003-DWQ D.13vi(a)

The processes that are employed to notify the District of the occurrence of an SSO include: observation by the public, receipt of an alarm, or observation by District staff during the normal course of their work.

The District operates three wastewater lift stations. In the event of any pump failure, the high-level sensor activates the SCADA alarm system and the District is contacted. To prevent overflow, wastewater from the wet well can either be pumped into a vacuum truck for disposal to a nearby sanitary sewer manhole or bypassed around the station into the sanitary sewer system.

6.1 PUBLIC OBSERVATION

Public observation is the most common way that the District is notified of blockages and spills. Contact numbers and information for reporting sewer spills and backups are in the phone book and on the District's website: https://www.westboroughwater.org. The District's telephone number for reporting sewer problems is (650) 589-1435. After hours call roll over to an answering service.

When a report of a sewer spill or backup is made, the caller's information is gathered using the Service Request Form. District staff then notifies the Daly City Collection Division of the call and forwards the Service Request form. After hours calls are routed to an answering service which will notify the on-call staff member who will assess the situation and contact Daly City's on-call staff member if appropriate. If a report is made to the police department they will call the answering service or on-call District staff member.

When calls are received, either during normal work hours or after hours, the individual receiving the call will collect the following information:

- Time and date of call
- Specific location of potential problem
- Nature of call
- In case of SSO, estimated start time of overflow
- Caller's name and telephone number
- Caller's observation (e.g., odor, duration, location on property, known impacts, indication if surface water impacted, appearance at cleanout or manhole)
- Other relevant information

If the overflow/backup is in the District's service area, a Daly City Collection Division crew is dispatched and instructed to complete the Sanitary Sewer Overflow/Backup Response Workbook.

6.2 DISTRICT STAFF OBSERVATION

District staff will report any observations to the Daly City Collection Division, which will respond to emergency situations as appropriate. Work orders are issued to correct non-emergency conditions.

6.3 CONTRACTOR OBSERVATION

The following procedures are to be followed in the event that a contractor/plumber causes or witnesses a Sanitary Sewer Overflow. If the contractor/plumber causes or witnesses an SSO they shall:

1. Immediately notify the District.
2. Protect storm drains.
3. Protect the public.
4. Provide information to the Daly City Collection Division Crew such as start time, appearance point, suspected cause, weather conditions, etc.
5. Direct ALL media and public relations requests to the General Manager.

6.4 NO OBSERVATION

If there are no witnesses or no call was received for an SSO, the Field Crew will contact nearby residences or business owners in the vicinity of the SSO, in an attempt to obtain information that brackets a given start time that the SSO began. This information will be collected and placed with records for the specific SSO.

7. SSO Response Procedures

ref. SWRCB Order No. 2006-0003-DWQ D.13vi(b)

7.1 Sewer Overflow/Backup Response Summary

The District will respond to SSOs as soon as possible following notification of an overflow/backup or unauthorized discharge.

If it is <u>not</u> possible that the overflow/backup is due to a failure in the District-owned/maintained sewer lines the Daly City Collection Division Crew performs the following:

- Checks the mainline for normal flow conditions.
- Follows the instructions in the Sanitary Sewer Overflow/Backup Response Workbook.
- If the customer is not home the Daly City Collection Division Crew completes the Door Hanger and leaves it on the customer's door.
- If the customer is home the Daly City Collection Division Crew:

- Explains that the blockage is in the customer's lateral and the District is responsible for the District-owned main sewer line only, but can try to clear the lateral blockage if there is access to the 4" stack pipe or a cleanout.
- Performs the one-time service of clearing blockage, televising and recording lateral completely to the mainline connection and locating and marking problem areas.
- Issues a Notice to Repair (NTR) to customer explaining the notice is informational and advises customer of needed repairs to their lateral.
- Gives customer Sewer Lateral Maintenance Policy pamphlet and FOG information.

If it is possible that the overflow/backup is due to a failure in the District-owned/maintained sewer lines the Daly City Collection Division Crew:

- Follows the instructions in the Sanitary Sewer Overflow/Backup Workbook.
- Notifies the Field Supervisor of the incident.
- Relieves blockage and clean impacted areas.
- Forwards the completed Sanitary Sewer Overflow Workbook to the Field Supervisor.

The Field Supervisor performs required regulatory reporting in accordance with the Sanitary Sewer Overflow/Backup Workbook's Regulatory Reporting section.

If the overflow has impacted private property, the Daly City Collection Division Crew:

- Follows the instructions in the Sanitary Sewer Overflow/Backup Workbook.
- Provides the customer with forms and information as indicated in the Sanitary Sewer Overflow/Backup Workbook.
- Forwards the completed Sanitary Sewer Overflow/Backup Workbook to the Field Supervisor.

The Collection System Manager forwards the completed Sanitary Sewer Overflow/Backup Workbook to the District General Manager.

The District General Manager or reviews incident reports, claim form, and other incident information and forwards to ACWA/JPIA to:

- Communicate with claimant as appropriate.
- Administer the claim to closure.

7.2 First Responder Priorities

The Daly City Collection Division first responder's priorities are:

- To follow safe work practices.
- To respond promptly with the appropriate and necessary equipment.
- To contain the spill wherever feasible.
- To restore the flow as soon as practicable.
- To minimize public access to and/or contact with the spilled sewage.
- To promptly notify the Field Supervisor in event of any SSO.
- To return the spilled sewage to the sewer system.
- To restore the area to its original condition (or as close as possible).

7.3 Safety

The first responder is responsible for following safety procedures at all times. Special safety precautions must be observed when performing sewer work. There may be times when personnel responding to a sewer system event are not familiar with potential safety hazards pertaining to sewer work. In such cases it is appropriate to take the time to discuss safety issues, consider the order of work, and check safety equipment before starting the job.

7.4 Initial Response

The first responder must respond to the reporting party/problem site and visually check for potential sewer stoppages or overflows.

The first responder will:

- Note arrival time at the site of the overflow/backup.
- Verify the existence of a public sewer system spill or backup.
- Take photos and video of overflowing manhole(s)/cleanout(s).
- Determine if the overflow or blockage is from a public or private sewer.
- Identify and assess the affected area and extent of spill.
- Clear the blockage and initiate containment measures.
- Whenever deemed necessary, call for additional assistance.
- Document conditions upon arrival with photographs.
- Take steps to clear the SSO. For procedures refer to the Sanitary Sewer Overflow/Backup Response Workbook.

7.5 Restore Flow

Using the appropriate cleaning equipment, set up downstream of the blockage and hydro-clean upstream from a clear manhole. Attempt to remove the blockage from the system and observe the flows to ensure that the blockage does not reoccur downstream. If the blockage cannot be cleared within a reasonable time from arrival, or sewer requires construction repairs to restore flow, then initiate containment and/or bypass pumping. If other assistance is required, the Daly City Collection Division Crew immediately contacts the Daly City Collections System Manager. For procedures refer to the Sanitary Sewer Overflow/Backup Response Workbook.

7.6 Initiate Spill Containment Measures

The first responder will attempt to contain as much of the spilled sewage as possible using the following steps:

- Determine the immediate destination of the overflowing sewage.

- Plug storm drains using air plugs, sandbags, and/or plastic mats to contain the spill, whenever appropriate. If spilled sewage has made contact with the storm drainage system, attempt to contain the spilled sewage by plugging downstream storm drainage facilities.
- Contain/direct the spilled sewage using dike/dam or sandbags.
- Pump around the blockage/pipe failure.

For procedures refer to the Sanitary Sewer Overflow/Backup Response Workbook.

7.7 Equipment

This section provides a list of specialized equipment that is required to support this Overflow Emergency Response Plan.

- *Closed Circuit Television (CCTV) Inspection Unit* – A CCTV Inspection Unit is required to determine the root cause for all SSOs from gravity sewers.
- *Standby Response Phone* – The standby response phone is used for communications, documentation, and receiving text alerts from lift stations.
- *Emergency Response Trucks* -- A utility body pickup truck, or open bed is required to store and transport the equipment needed to effectively respond to sewer emergencies. The equipment and tools will include containment and clean up materials.
- *Portable Generators, Portable Pumps, Piping, and Hoses* – Equipment used to bypass pump, divert, or power equipment to mitigate an SSO.
- *Combination Sewer Cleaning Trucks* -- Combination high velocity sewer cleaning trucks with vacuum tanks are required to clear blockages in gravity sewers, vacuum spilled sewage, and wash down the impacted area following the SSO event.
- *Air plugs, sandbags and plastic mats*
- *SSO Sampling Kits*
- *Portable Lights*

Standard operating procedures for equipment that may be necessary in the event of a sanitary sewer overflow or backup can be found in the Collections Office.

8. Recovery and Cleanup

ref. SWRCB Order No. 2006-0003-DWQ D.13vi(e)

The recovery and cleanup phase begins immediately after the flow has been restored and the spilled sewage has been contained to the extent possible. The SSO recovery and cleanup procedures are:

8.1 Estimate the Flow and Volume of Spilled Sewage

To estimate the flow rate, crew members will use the SSCSC Manhole Overflow Gauge if the same style of manhole cover is observed overflowing. A variety of approaches exist for estimating the volume of a sanitary sewer spill. Crew members should use the method most appropriate to the sewer overflow in question and reference the Sanitary Sewer Overflow/Backup Response Workbook which provides three (3) methods:

- Eyeball Estimation Method

- Duration and Flow Rate Calculation Method
- Area/Volume Method

In addition, wherever and whenever possible, document the estimate using photos and/or video of the SSO site before and during the recovery operation.

8.2 Recovery of Spilled Sewage

Vacuum up and/or pump the spilled sewage and rinse water and discharge it back into the sanitary sewer system.

8.3 Clean-up and Disinfection

Clean up and disinfection procedures will be implemented to reduce the potential for human health issues and adverse environmental impacts that are associated with an SSO event. The procedures described are for dry weather conditions and will be modified as required for wet weather conditions. Where cleanup is beyond the capabilities of District staff, a cleanup contractor will be used.

Private Property
Daly City crews are responsible for the cleanup when the property damage is minor in nature and is outside of private building dwellings, such as in front, side and backyards, easements, etc. In all other cases, affected property owners can call a water damage restoration contractor to complete the cleanup and restoration. If the overflow into property is the definite cause of District system failure, the crew will call out a water damage restoration contractor to complete the cleanup and restoration. In both cases, property owners may request a District claim form.

Hard Surface Areas
Collect all signs of sewage solids and sewage-related material either by protected hand or with the use of rakes and brooms. Wash down the affected area with clean water and/or deozyme or similar non-toxic biodegradable surface disinfectant until the water runs clear. The flushing volume will be approximately three times the estimated volume of the spill. Take reasonable steps to contain and vacuum up the wastewater. Allow area to dry. Repeat the process if additional cleaning is required.

Landscaped and Unimproved Natural Vegetation
Collect all signs of sewage solids and sewage-related material either by protected hand or with the use of rakes and brooms. Wash down the affected area with clean water until the water runs clear. The flushing volume will be approximately three times the estimated volume of the spill. Either contain or vacuum up the wash water so that none is released. Allow the area to dry. Repeat the process if additional cleaning is required.

Natural Waterways
The Department of Fish and Wildlife will be notified by CalOES for SSOs greater than or equal to 1,000 gallons.

Wet Weather Modifications
Omit flushing and sampling during heavy storm events (i.e., sheet of rainwater across paved surfaces) with heavy runoff where flushing is not required and sampling would not provide meaningful results.

8.4 Public Notification

Signs will be posted and barricades put in place to keep vehicles and pedestrians away from contact with spilled sewage. County Environmental Health instructions and directions regarding placement and language of public warnings will be followed. Additionally, the Field Supervisor will use their best judgment regarding supplemental sign placement in order to protect the public and local environment. Signs will not be removed until directed by County Environmental Health, the Field Supervisor, or their designee.

Creeks, streams and beaches that have been contaminated as a result of an SSO will be posted at visible access locations until the risk of contamination has subsided to acceptable background bacteria levels. The area and warning signs, once posted, will be checked every day to ensure that they are still in place. Photographs and video of sign placement will be taken.

In the event that an overflow occurs at night, the location will be inspected first thing the following day. The field crew will look for any signs of sewage solids and sewage-related material that may warrant additional cleanup activities.

When contact with the local media is deemed necessary, the District General Manager will provide the media with all revelvant information.

9. Water Quality

ref. SWRCB Order No. 2006-0003-DWQ D.13vi(f)

9.1 Water Quality Sampling and Testing

Water quality sampling and testing will be performed for Category 1 SSOs whenever there is a major spill to determine the extent and impact of the SSO. The water quality sampling procedures must be implemented within 48 hours and include the following:

- The first responders will consider the need to sample surface waters the SSO may have reached. If preliminary volume estimates of the SSO are 50,000 gallons or greater, the first responders will begin collecting as soon as possible but no later than 48 hours after becoming aware of the SSO.
- The water quality samples will be collected from upstream of the spill, from the spill area, and downstream of the spill in flowing water (e.g. creeks). The water quality samples will be collected near the point of entry of the spilled sewage.

9.2 Water Quality Monitoring Plan

The District Water Quality Monitoring Plan will be implemented immediately upon discovery of any Category 1 SSO whenever there is a major spill in order to assess impacts from SSOs to surface waters. The SSO Water Quality Monitoring Program will:

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, legal right to access, 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 District becoming aware of the SSO, require water quality sampling for fecal coliform, E. Coli, biochemical oxygen demand (BOD), and ammonia.

6. Observe proper chain of custody procedures.

7. If the District's current standard operating procedures (SOP's) cannot fully mitigate an SSO and if it is determined that the SSO may pose an imminent and substantial endangerment to public health or the environment, the District shall consult a qualified biologist, health care specialist or equivalent professional to assist.

9.3 SSO Technical Report

The District will submit an SSO Technical Report to the CIWQS Online SSO Database within 45 calendar days of the SSO end date for any major SSO spilled to surface waters. The District General Manager will supervise the preparation of this report and will certify this report. This report, which does not preclude the Water Boards from requiring more detailed analyses if requested, shall include at a minimum, the following:

Causes and Circumstances of the SSO:

- Complete and detailed explanation of how and when the SSO was discovered.
- Diagram showing the SSO failure point, appearance point(s), and final destination(s).
- Detailed description of the methodology employed and available data used to calculate the volume of the SSO and, if applicable, the SSO volume recovered.
- Detailed description of the cause(s) of the SSO.
- Copies of original field crew records used to document the SSO.
- Historical maintenance records for the failure location.

Response to SSO:

- Chronological narrative description of all actions taken by the District and Daly City Collection Division Crew to terminate the spill.
- Explanation of how the SSMP Overflow Emergency Response Plan was implemented to respond to and mitigate the SSO.
- Final corrective action(s) completed and/or planned to be completed, including a schedule for actions not yet completed.

Water Quality Monitoring:

- Description of all water quality sampling activities conducted including analytical results and evaluation of the results.
- Detailed location map illustrating all water quality sampling points.

10. Sewer Backup Into/Onto Private Property Claims Handling Policy

It is the policy of the District that a claims form shall be offered to anyone wishing to file a claim. The following procedures will be observed for all sewer overflows/backups into/onto private property:

- Daly City Collection Division Field Crew will offer a District claim form irrespective of fault whenever it is possible that the sanitary sewer backup may have resulted from an apparent blockage in the District-owned sewer lines or whenever a District customer requests a claim form. The claim may later be rejected if subsequent investigations into the cause of the loss indicate the District was not at fault.
- It is the responsibility of the Daly City Collection Division Field Crew to gather information regarding the incident and notify the Field Supervisor, who will notify the Collection System Manager, who will notify the District General Manager, who ultimately notifies ACWA JPIA.
- It is the responsibility of the General Manager and ACWA JPIA to review all claims and to oversee the adjustment and administration of the claim to closure.

11. Notification, Reporting, Monitoring and Recordkeeping Requirements

ref. SWRCB Order No. 2006-0003-DWQ D.13vi(c)

In accordance with the Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (SSS GWDRs), the District maintains records for each sanitary sewer overflow. Records include:

- Documentation of response steps and/or remedial actions
- Photographic/video evidence to document the extent of the SSO, field crew response operations, and site conditions after field crew SSO response operations have been completed. The date, time, location, and direction of photographs/video taken will be documented.
- Documentation of how any estimations of the volume of discharged and/or recovered volumes were calculated including all assumptions made.
- Regulator required notifications are outlined in Section 11.1 on the following page.

11.1 Regulator Required Notifications

ELEMENT	REQUIREMENT	METHOD
NOTIFICATION	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, the Daly City Collections Division will notify the District General Manager, who will notify the California Office of Emergency Services (CalOES) and obtain a notification control number. In the absence of the District GM, Daly City Collections Division will contact the CalOES and obtain a notification control number.	Call Cal OES at: **(800) 852-7550**
REPORTING	• Category 1 SSO: The District will 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: The District will 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: The District will submit certified report within 30 calendar days of the end of month in which SSO the occurred. • SSO Technical Report: The District will 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: The District will 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: The District will update and certify every 12 months	Enter data into the CIWQS Online SSO Database[1] (http://ciwqs.waterboards.ca.gov/)certified by the Legally Responsible Official(s) [2]. All information required by CIWQS will be captured in the Sanitary Sewer Overflow Report. Certified SSO reports may be updated by amending the report or adding an attachment to the SSO report within 120 calendar days after the SSO end date. After 120 days, the State SSO Program Manager must be contacted to request to amend an SSO report along with a justification for why the additional information was not available prior to the end of the 120 days.
WATER QUALITY MONITORING	The Daly City Collection Division Crew will 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 will be uploaded into CIWQS for Category 1 SSOs in which 50,000 gallons or greater are spilled to surface waters.
RECORD KEEPING	The District will maintain the following records: • 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.

[1] In the event that the CIWQS online SSO database is not available, the General Manager will notify SWRCB by phone and will fax or e-mail all required information to the RWQCB office at (510) 622-2460 in accordance with the time schedules identified above. In such an event, the District will submit the appropriate reports using the CIWQS online SSO database when the database becomes available. A copy of all documents that certify the submittal in fulfillment of this section shall be retained in the SSO file.

[2] The District always has at least one LRO. Any change in the LRO(s) including deactivation or a change to contact information, will be submitted to the SWRCB within 30 days of the change by calling (866) 792-4977 or emailing help@ciwqs.waterboards.ca.gov.

For reporting purposes, if one SSO event of whatever category results in multiple appearance points in a sewer system, a single SSO report is required in CIWQS that 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 cause the SSO, and descriptions of the locations of all other discharge points associated with the single SSO event.

11.2 Complaint Records

The District maintains records of all complaints received whether or not they result in sanitary sewer overflows. These complaint records include:

- Date, time, and method of notification
- Date and time the complainant first noticed the SSO or occurrence related to the call
- Narrative description describing the complaint
- A statement from the complainant, if they know, of whether or not the potential SSO may have reached waters of the state
- Name, address, and contact telephone number of the complainant reporting the potential SSO (if not reported anonymously)
- Follow-up return contact information for each complaint received (if not reported anonymously)
- Final resolution of the complaint with the original complainant
- Work service request information used to document all feasible and remedial actions taken

All complaint records will be maintained for a minimum of five years whether or not they result in an SSO. The Daly City Collection Division provides a monthly report listing any service requests made, whether or not the request was an SSO. The Daly City Collection Division will relay verbally and/or email service request findings to the District as necessary depending on the circumstances. The District files the monthly report and any other communications from the Daly City Collection Division, including the SSO/Backup Response Workbook electronically on the District server, and hard copy files are stored in the District files.

The Daly City Collection Division enters the service requests into the City CMMS and flags them as District incidents.

12. Post SSO Event Debriefing

ref. SWRCB Order No. 2006-0003-DWQ D.13vi(d)

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

As soon as possible after Category 1 and Category 2 SSO events all of the participants, from the person who received the call to the last person to leave the site, will meet to review the procedures used and to discuss what worked and where improvements could be made in preventing or responding to and mitigating future SSO events. The results of the debriefing will be documented and tracked to ensure the action items are completed as scheduled.

13. Failure Analysis Investigation

ref. SWRCB Order No. 2006-0003-DWQ D.13vi(d)

The objective of the failure analysis investigation is to determine the "root cause" of the SSO and to identify corrective action(s) needed that will reduce or eliminate future potential for the SSO to recur or for other SSOs to occur.

The investigation will include reviewing all relevant data to determine appropriate corrective action(s) for the line segment. The investigation will include:

- Reviewing and completing the Sanitary Sewer Overflow Report and any other documents related to the incident
- Reviewing the incident timeline and other documentation regarding the incident
- Reviewing communications with the reporting party and witness
- Reviewing volume estimate, volume recovered estimate, volume estimation assumptions and associated drawings
- Reviewing available photographs
- Interviewing staff that responded to the spill
- Reviewing past maintenance records
- Reviewing past CCTV records,
- Conducting a CCTV inspection to determine the condition of all line segments immediately following the SSO and reviewing the video and logs,
- Reviewing any Fats, Oils, Roots and Grease (FROG) related information or results
- Post SSO debrief records
- Interviews with the public at the SSO location

The product of the failure analysis investigation will be the determination of the root cause and the identification and scheduling of the corrective actions. The Collection System Failure Analysis Form (in Sanitary Sewer Overflow/Backup Response Workbook) will be used to document the investigation.

14. SSO Response Training

ref. SWRCB Order No. 2006-0003-DWQ D.13vi(d)

This section provides information on the training that is required to support this Overflow Emergency Response Plan. Daly City Collection Division is responsible to provide the following training to their staff as appropriate.

14.1 Initial and Annual Refresher Training

All personnel who may have a role in responding to, reporting, and/or mitigating a sewer system overflow will receive training on the contents of this OERP. All new employees will receive training before they are placed in a position where they may have to respond. Current employees will receive annual refresher training on this plan and the procedures to be followed. All training will be documented.

Affected employees will receive annual training on the following topics by knowledgeable trainers:

- The District's Overflow Emergency Response Plan and Sanitary Sewer Management Plan
- Sanitary Sewer Overflow Volume Estimation Techniques
- Researching and Documenting Sanitary Sewer Overflow Start Times
- Impacted Surface Waters: Response Procedures
- State Water Resources Control Board Employee Knowledge Expectations
- Employee Core Competency Evaluations on Sanitary Sewer Operations
- Water Quality Sampling Plan

The District will verify that annual OERP and WQMP training requirements are current for each employee, and that employees are competent in the performance of all core competencies. The City of Daly City will provide proof of annual training to the District General Manager. Any identified gaps in required core competencies will be addressed through additional training/instruction.

Through SWRCB Employee Knowledge Expectations training the employee will be able to answer the following:

1. Name and job title.
2. Please describe for us approximately when you started in this field and how long you have worked for your agency.
3. Please expand on your current position duties and role in responding in the field to any SSO complaints.
4. Please describe your SOPs used to respond/mitigate SSOs when they occur.
5. Describe any training your agency provides or sends you to pertaining to SSOs.
6. We are interested in learning more about how your historical SSO response activities have worked in the field. We understand from discussions with management earlier that you use the OERP from the SSMP. Please elaborate on how you implement and utilize the procedures in the plan.
7. Historically, before any recent changes, can you please walk us through how you would typically receive and respond to any SSO complaints in the field?
8. Can you tell us who is responsible for estimating SSO volumes discharged? If it is you, please describe how you go about estimating the SSO volume that you record on the work order/service request forms?
9. What other information do you collect or record other than what is written on the work order form?
10. Describe if and when you ever talk with people that call in SSOs (either onsite or via telephone) to further check out when the SSO might have occurred based on what they or others know? If you do this, can you tell us where this information is recorded?
11. We understand you may be instructed to take pictures/video of some sewer spills/backups into structures. Other than these SSOs, when else would you typically take any pictures/video of an SSO?
12. Please walk us through anything else you'd like to add to help us better understand how your field crews respond and mitigate SSO complaints.

14.2 SSO Response Drills

The City of Daly City will conduct periodic training drills or field exercises will be held to ensure that employees are up to date on these procedures, equipment is in working order, and the required materials are readily available. The training drills will cover scenarios typically observed during sewer related emergencies (e.g. mainline blockage, mainline failure, and lateral blockage). The results and the observations during the drills will be recorded and action items will be tracked to ensure completion. The City of Daly City will provide the District General Manager with records of the training provided.

14.3 SSO Training Record Keeping

Daly City will maintain training records for their staff and the District General Manager will maintain copies of training records provided by the City as well as training records for District staff. Records will be kept 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 will include date, time, place, content, name of trainer(s), and names and titles of attendees.

14.4 Contractors Working on District Sewer Facilities

All construction contractors working on District sewer facilities will be required to develop a project-specific OERP, will provide project personnel with training regarding the content of the contractor's OERP and their role in the event of an SSO, and to follow that OERP in the event that they cause or observe an SSO. Emergency response procedures shall be discussed at project pre-construction meetings, regular project meetings and after any contractor involved incidents.

All service contractors will be provided, and required to observe contractor procedures.

15. Authority

- Health & Safety Code Sections 5410-5416
- CA Water Code Section 13271
- Fish & Wildlife Code Sections 5650-5656
- State Water Resources Control Board Order No. 2006-0003-DWQ
- State Water Resources Control Board Order No. WQ 2013-0058-EXEC Effective September 9, 2013

APPENDIX A

Service Request Form

Service Request Form

Caller Name: _____ Phone: _____

Caller Address: _____

_____

Received by: _____ Date: _____ Time: _____

Nature of Call (Complaint): _____

_____

_____

_____

Location of Potential Problem: _____

_____

Caller's observation (e.g., odor, duration, location on property, known impacts, indication if surface water impacted, appearance at cleanout or manhole): _____

_____

_____

_____

In case of SSO, estimated start time of overflow: _____

Additional comments/information: _____

_____

_____

_____

☐ Referred to Daly City Collection Division

Date: _____ Time: _____

Spoke to: _____

APPENDIX B

Regulatory Reporting Guide

Regulatory Reporting Guide Matrix

Deadline	Category 1 SSO	Category 2 SSO	Category 3 SSO
2 hours after awareness of SSO	If the spill is greater than or equal to 1,000 gallons, call CalOES.	-	-
As soon as possible	If SSO impacts private property that may be a failure of the sewer main and/or if a claim for damages may be submitted against the city, notify ACWA JPIA.		
48 Hours after awareness of SSO	If 50,000 gal or more were not recovered, begin water quality sampling.	-	-
3 Business Days after awareness of SSO	Submit Draft Spill Report in the CIWQS database.	Submit Draft Spill Report in the CIWQS database.	-
15 Days after response conclusion	Certify Spill Report in CIWQS. Update as needed until 120 days after SSO end date.	Certify Spill Report in the CIWQS database. Update as needed until 120 days after SSO end time.	-
30 Days after end of calendar month in which SSO occurred	-	-	Certify Spill Report in CIWQS. Update as needed until 120 days after SSO end date.
45 days after SSO end date	If 50,000 gal or more were not recovered, submit SSO Technical Report in CIWQS.	-	-

Note: For reporting purposes, if one SSO event results in multiple appearance points, complete one SSO report in the CIWQS SSO Online Database, and report the location of the SSO failure point, blockage or location of the flow condition that caused the SSO, including all the discharge points associated with the SSO event.

Category	Definition
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).
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.
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.

Regulatory Reporting Contacts and Authorization

Authorized Personnel:

The following are authorized to perform regulatory reporting of SSOs:

Title	Contact	✓ if LRO*
Westborough Water District General Manager	(650) 589-1435	✓
Field Supervisors or Managers	(650) 991-8200	✓

* Legally Responsible Officials (LROs) are authorized to electronically sign and certify SSO reports in CIWQS.

Contact Information:

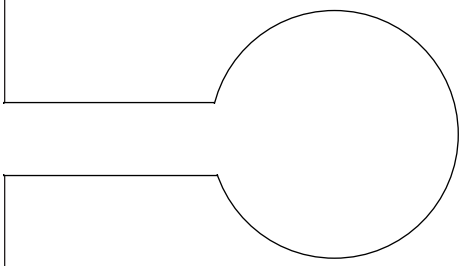
Contact	Telephone/Email
CalOES	(800) 852-7550
Westborough Water District General Manager	(650) 589-1435
ACWA JPIA	Business hours (7:30am-4:30pm): (800) 231-5742 After Hours: Sedgwick – James Stewart (916) 548-8283 Sedgwick – Casey McClintock (916) 607-6360
Regional Water Quality Control Board	Phone: (510) 622-2300 Fax: (510) 622-2460
State Water Resources Control Board Walter Mobley	(916) 323-0878 Walter.Mobley@waterboards.ca.gov
San Mateo County Environmental Health	(650) 573-2764

Regulatory Reporting Checklist

NOTIFICATIONS Refer to Regulatory Reporting Guide Matrix for applicable notifications.	
CAL OES:	
Notification Date/Time:	
Name of Who You Spoke To:	
OES Control Number:	
San Mateo County Health Department:	
Notification Date/Time:	
Name of Who You Spoke To: Left Message: ☐	
ACWA JPIA:	
Notification Date/Time:	
Name of Who You Spoke To: Left Message: ☐	
Regional Water Quality Control Board:	
Notification Date/Time:	
Name of Who You Spoke To: Left Message: ☐	
State Water Resources Control Board:	
Notification Date/Time:	
Name of Who You Spoke To: Left Message: ☐	

APPENDIX C

Door Hanger



On (date) _____, at

(location) _____,
we responded to a reported blockage of the sanitary sewer service to your property.

We discovered a blockage in:

- ☐ The sanitary sewer main and cleared the line
- ☐ The District-maintained portion of your sanitary sewer lateral and cleared the line.
- ☐ Your portion of the sanitary sewer lateral, which is your responsibility to maintain. We also found the District's portion of the lateral and the main to be flowing normally.

If you require assistance to clear your portion of the lateral you can search the internet for "Sewer Contractors" or "Plumbing Drains & Sewer Cleaning." If you plan to hire a contractor we recommend getting estimates from more than one company.

Daly City Collections Division representative
(on behalf of Westborough Water District):

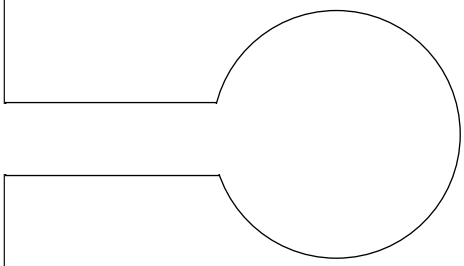
_____

Notes:_____
_____
_____

For questions or comments, please call:

Westborough Water District

(650) 589-1435



On (date) _____, at

(location) _____,
we responded to a reported blockage of the sanitary sewer service to your property.

We discovered a blockage in:

- ☐ The sanitary sewer main and cleared the line
- ☐ The District-maintained portion of your sanitary sewer lateral and cleared the line.
- ☐ Your portion of the sanitary sewer lateral, which is your responsibility to maintain. We also found the District's portion of the lateral and the main to be flowing normally.

If you require assistance to clear your portion of the lateral you can search the internet for "Sewer Contractors" or "Plumbing Drains & Sewer Cleaning." If you plan to hire a contractor we recommend getting estimates from more than one company.

Daly City Collections Division representative
(on behalf of Westborough Water District):

_____

Notes:_____
_____
_____

For questions or comments, please call:

Westborough Water District

(650) 589-1435

Appendix E:

Sanitary Sewer Overflow/Backup Response Workbook

Westborough Water District

Overflow Emergency Response Plan

Sanitary Sewer Overflow and Backup Response Workbook

INSERT TAB:
Start Here

- ❑ If this is a Category 1 SSO greater than or equal to 1,000 gallons, **immediately contact the Field Supervisor or Collections System Manager at (650) 991-8211 ext.8654 or (650) 515-0263** to make the 2-hour notification to CALOES at (800) 852-7550.
- ❑ **Refer to the Regulatory Reporting Guide** for additional reporting requirements.
- ❑ **If there is a backup into a residence or business:**
  Business hours (7:30am – 4:30pm): ACWA JPIA (800) 231-5742
  After hours, weekends and holidays: Sedgwick Claims Management
  - Jim Stewart at (916) 548-8283, or
  - Casey McClintock at (916) 607-6360
- ❑ **For any media inquiries/requests:** District General Manager (650) 589-1435
- ❑ **For Restoration/Remediation**:
  Provide customer with Customer Information materials. Do not call out a restoration/remediation firm for Westborough Water District customers.

Don't forget to take photos!

Field Crew:

- ❑ Follow the instructions on the Overflow/Backup Response Flowchart and complete forms in this workbook as indicated.
- ❑ Complete the chain of custody record (to the right) and deliver this workbook to the Collections System Manager.

Print Name: _____

Initial: _____

Date: _____

Time: _____

Collections System Manager:

- ❑ Review the SSO Event Checklist and the forms in this booklet. Contact the Field Crew for additional information if necessary.
- ❑ Confirm that all required regulatory notifications have been made.
- ❑ If this was a Sewer Backup, complete the Backup Forms Checklist.
- ❑ Complete the Collection System Failure Analysis Form.
- ❑ Complete the Chain of Custody record (right) and forward Workbook to the Westborough Water District General Manager or their administrative staff.

Print Name: _____

Initial: _____

Date: _____

Time: _____

Westborough Water District General Manager:

- ❑ Enter data into CIWQS.
- ❑ File workbook according to District procedures.

SSO Event Checklist

Date of SSO: _____ SSO Location/Name: _____

CIWQS Event ID #: _____ Category? ☐ 1 ☐ 2 ☐3 OES#: _____

Property Damage? ☐ Yes ☐ No Service Request #: _____

- ☐ Effort made to contain and return a portion/all to the sanitary sewer
- ☐ Pictures/video taken of overflow
- ☐ Pictures taken of affected/unaffected area
- ☐ If property damage, start that process
- ☐ Pictures taken of containment efforts
- ☐ If Cat 1 > 1000 gals:
  OES Control #_____
- ☐ Impacted waters identified?
- ☐ No impacted waters?
- ☐ SSO Report Form Complete (includes fields for all required fields in CIWQS, and a sketch of SSO)
- ☐ Volume Estimation Worksheet(s) done
- ☐ Start Time Determination Form done
- ☐ Initial review of forms is complete (ensure consistency with dates, times, volumes, and other data)
- ☐ Review of photos and videos (label/date)
- ☐ Start Folder for all documentation for this SSO event. Put everything in it (SR, Field Reports, Worksheets/Forms, follow-up work orders, notes, pics, drawings, etc. CIWQS print outs and emails)
- ☐ Failure Analysis
  - TV to determine cause
  - Review Asset History
- ☐ Determine next steps to prevent recurrence
- ☐ Document findings and next steps on SSO Report
- ☐ Submit Draft in CIWQS w/in 3 business days (for Categories 1 and 2 only)
- ☐ Print CIWQS Draft hard copy and email
- ☐ Review CIWQS, SSO Report, Worksheets, CMMS, and any other documentation to ensure data is consistent (e.g. dates, times, volumes, cause, follow-up action, etc.
- ☐ Attach photos, forms etc. to CIWQS
- ☐ Submit Ready to Certify in CIWQS (with sufficient time for LRO review)
- ☐ Print CIWQS Ready to Certify and email
- ☐ Hand folder to LRO
- ☐ LRO review folder and CIWQS verify accurate and consistent data
- ☐ Certify in CIWQS (within 15 calendar days for Categories 1 & 2, 30 days after the month for Category 3)
- ☐ Print Certified CIWQS and email
- ☐ Any changes? Change in CIWQS and hard copies and explain changes, print our current version
- ☐ Move completed folder to SSO Binder
- ☐ For 50, 000 gallons or larger
- ☐ Follow Water Quality Monitoring and Sampling procedures
- ☐ Map of where samples were taken
- ☐ Sampling results
- ☐ Write Technical Report
- ☐ Attach to CIWQS
- ☐ Add to SSO Folder/Binder
- ☐ If any changes are made to SSMP:
  - Update SSMP and link on CIWQS to SSMP
  - Add change to SSMP Change Log
  - If change is substantive, re-certify SSMP

INSERT TAB:
Regulatory Reporting

Regulatory Reporting Guide

In most cases the District will make Regulatory Notifications. If District staff is unavailable the Field Supervisor may need to make the necessary notifications.

Deadline	Category 1 SSO	Category 2 SSO	Category 3 SSO
2 hours after awareness of SSO	If the spill is greater than or equal to 1,000 gallons, call CalOES.	-	-
As soon as possible	If SSO impacts private property that may be a failure of the sewer main and/or if a claim for damages may be submitted against the city, notify ACWA JPIA.		
48 Hours after awareness of SSO	If 50,000 gal or more were not recovered, begin water quality sampling.	-	-
3 Business Days after awareness of SSO	Submit Draft Spill Report in the CIWQS database.	Submit Draft Spill Report in the CIWQS database.	-
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30 Days after end of calendar month in which SSO occurred	-	-	Certify Spill Report in CIWQS. Update as needed until 120 days after SSO end date.
45 days after SSO end date	If 50,000 gal or more were not recovered, submit SSO Technical Report in CIWQS.	-	-

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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).
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.
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	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.

Authorized Personnel:

The following are authorized to perform regulatory reporting of SSOs:

Title	Contact	✓ if LRO*
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Field Supervisors or Managers	(650) 991-8200	✓

* Legally Responsible Officials (LROs) are authorized to electronically sign and certify SSO reports in CIWQS.

Contact	Telephone/Email
CalOES	(800) 852-7550
Westborough Water District General Manager	(650) 589-1435
ACWA JPIA	Business hours (7:30am-4:30pm): (800) 231-5742 After Hours: Sedgwick – James Stewart (916) 548-8283 Sedgwick – Casey McClintock (916) 607-6360
Regional Water Quality Control Board	Phone: (510) 622-2300 Fax: (510) 622-2460
State Water Resources Control Board Walter Mobley	(916) 323-0878 Walter.Mobley@waterboards.ca.gov
San Mateo County Environmental Health	(650) 573-2764

NOTIFICATIONS Refer to Regulatory Reporting Guide Matrix for applicable notifications.	
CAL OES:	
Notification Date/Time:	
Name of Who You Spoke To:	
OES Control Number:	
San Mateo County Health Department:	
Notification Date/Time:	
Name of Who You Spoke To: Left Message: ☐	
ACWA JPIA:	
Notification Date/Time:	
Name of Who You Spoke To: Left Message: ☐	
Regional Water Quality Control Board:	
Notification Date/Time:	
Name of Who You Spoke To: Left Message: ☐	
State Water Resources Control Board:	
Notification Date/Time:	
Name of Who You Spoke To: Left Message: ☐	

INSERT TAB:
Flowchart

Overflow/Backup Response Flowchart

Start Here

Does the SSO/backup appear to be due to a problem in the **District-owned/maintained** sewer line?

NO

This is a Private Lateral Sewage Discharge (PLSD)

1. Explain that the blockage is in the customer's lateral and the District is responsible for the District-owned main sewer line only, but can try to clear the lateral blockage if there is access to the 4" stack pipe or a cleanout.
2. Perform the one-time service of clearing blockage, televising and recording lateral completely to the mainline connection and locating and marking problem areas.
3. Issue a Notice to Repair (NTR) to customer explaining the notice is informational and advises customer of needed repairs to their lateral.
4. Give customer Sewer Lateral Maintenance Policy pamphlet and FOG information.
5. If customer is not home:
   - Complete Door Hanger and leave on customer's door.
   - Leave a message on the customer's voicemail.
   - If the property owner is unable or unwilling to address the cause of the overflow, immediately contact your supervisor and discuss whether Code Enforcement, the County Department of Environmental Health or Regional Water Quality Control Board should be notified.
6. If you are directed to to break the stoppage and clean up the PLSD, be sure to document District staff time and equipment used for potential billing purposes, and take pictures.

YES

1. Document arrival time.
2. Consider the need to call out additional staff, contractor or mutual aid assistance.
3. If it is possible that this is a Category 1 SSO greater than or equal to 1,000 gallons, immediately make the 2-hour notification to CalOES.

1. Document the service call according to District procedures.

2. STOP. Do not continue to PAGE 2

ADDRESS CAUSE OF SSO/BACKUP ASAP

1. For pump station related SSO/Backups refer to that station's Emergency Response Plan
2. For SSO/Backups not related to a pump station, relieve the stoppage. Note the distance from the manhole and catch/remove debris that could cause another stoppage. After flow has returned to normal, clean the pipe thoroughly.
3. Photograph staff activities while clearing the blockage, as appropriate.

BEGIN DIVERSION AND CONTAINMENT, AS NECESSARY

1. DIVERT AWAY FROM SENSITIVE AREAS:

a. Cover unplugged storm drains w/mats, or use dirt/other material to divert sewage away from sensitive areas (e.g., schools, playgrounds, intersections, etc.)

b. ENSURE PUBLIC CONTACT DOES NOT OCCUR. Use cones/barricades to isolate area.

2. CONTAIN SSO & RETURN TO SYSTEM, IF POSSIBLE:

a. Plug storm drain catch basins or use rubber mats to cover basin inlet and divert flow to catch basin

b. Build/excavate a berm to channel flow to downstream sanitary sewer manhole (*barricade manhole if left open)*

c. Use bypass pumps to pump around blockage until it can be removed

d. Divert to low area of ground where it can be collected later

3. PHOTOGRAPH HOW THE SSO WAS DIVERTED/CONTAINED, AS APPROPRIATE

Go to PAGE 2

Overflow/Backup Response Flowchart

Continue from PAGE 1

Has the SSO reached surface waters?

YES

1. Consider the need to sample surface waters the SSO may have reached:
   - If preliminary volume estimates of the SSO are 50,000 gallons or greater, begin collecting as soon as possible but no later than 48 hours after becoming aware of the SSO.
   - If people are fishing or swimming in the waters, collect samples regardless of the volume of the SSO.
2. Refer to the WQMP for sampling procedures.

NO

Is it feasible/practical to contain/recover any of the SSO from the surface waters?

NO

YES

Contain/recover/clean up as much of the SSO in the waters and shoreline as possible. Contact Collections System Manager to request outside assistance, as appropriate.

Were storm drains impacted?

YES

STORM DRAIN CLEANING SOP

1. Seal or berm the storm drain immediately downstream of point the SSO reached
2. Photograph impacted storm drain catch basins before cleaning
3. Vacuum any visible sewage – *Record the volume of sewage recovered*
4. Using dechlorinated water, flush impacted sections of storm drain with 3X amount of SSO, if possible – *Record volume of flush water*
5. Ensure all visible signs of sewage have been removed
6. Return flush water to sanitary sewer – *Record volume of flush water recovered*
7. Photograph storm drain catch basins after cleaning is completed

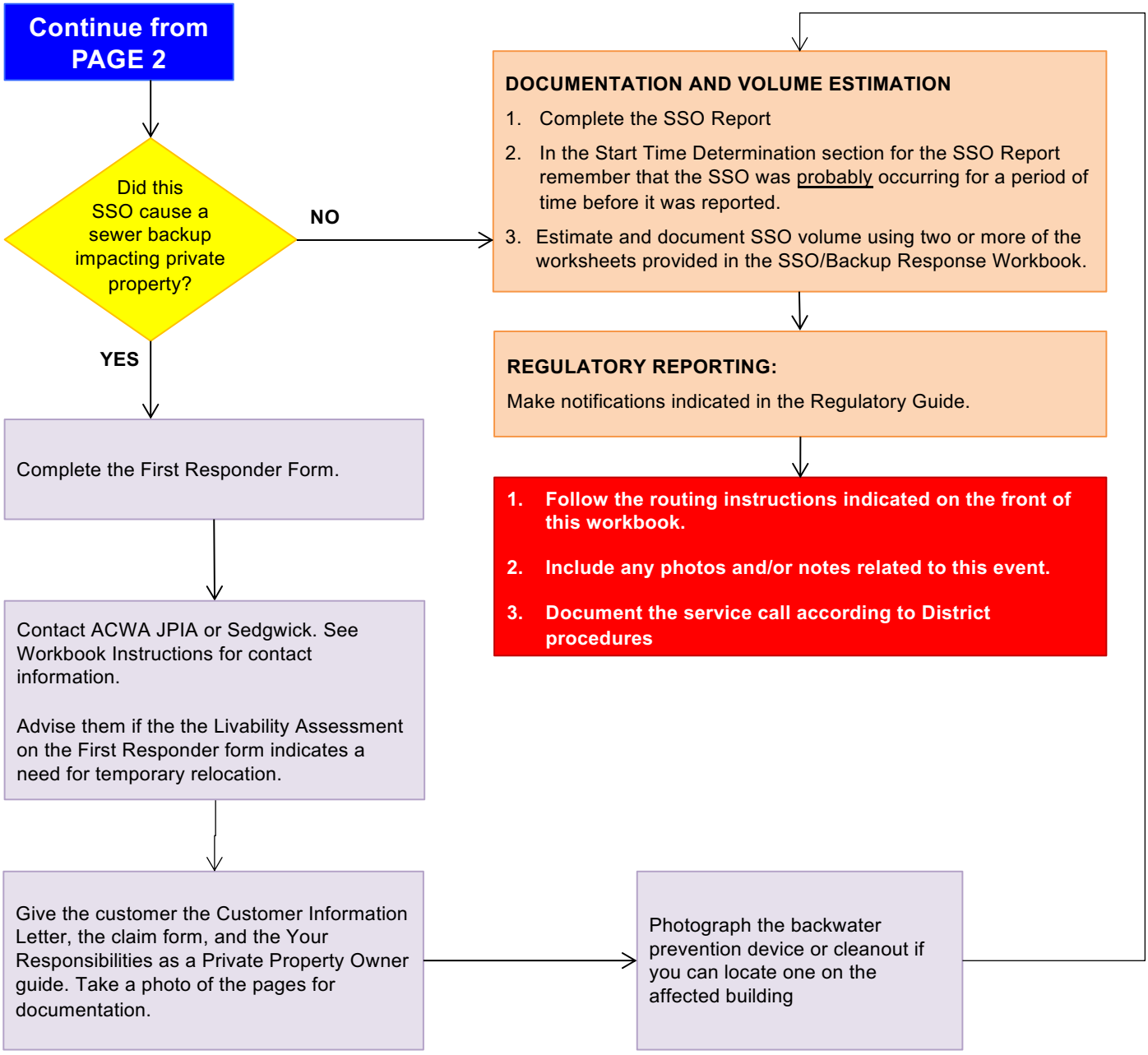
NO

IMPACTED AREA CLEANUP, AS NECESSARY

1. **Assign staff to begin cleanup.** If you might use the are measured volume method to estimate the volume, draw a sketch of the SSO footprint and capture dimensions before washing it down.
2. **Remove all signs of gross pollution** with a shovel, broom, and bucket. (toilet paper, solids, grease, etc.)
3. **Flush area w/dechlorinated water – Unless raining.** (*3X amount of SSO, if possible)*
   a. Setup berm/other means to contain all water so it can be returned to sewer
   b. Don't use disinfectants if they may enter storm drain system and not be fully recovered or if they may enter a water body
4. **Address saturated soil** with removal and/or in-place treatment, depending on the extent of the contamination, the location, and land use. Take measures to prevent accidental contact by the public. NOTE: addressing saturated soil may involve returning to the site one or more days after the SSO event.
5. **Photograph the area when cleanup operations are complete**

Go to PAGE 3

Overflow/Backup Response Flowchart



INSERT TAB:
SSO Report

Sanitary Sewer Overflow Field Report

PHYSICAL LOCATION DETAILS	
Spill location name	Latitude of spill location
	Longitude of spill location
County San Mateo	Regional Water Quality Control Board San Francisco

RESPONDING STAFF		
Person(s) completing this form	Name:	Signature:
	Name:	Signature:
	Name:	Signature:
Name(s) of person(s) involved in the response:		

VOLUMES BY DESTINATION	Volume Spilled (Gallons)	Volume Recovered (Gallons)
2.a/2.b Estimated spill volume that reached a separate storm drain that flows to a surface body of water? (If not all recovered, this is a Category 1)		
2.c/2d Estimated spill volume that directly reached a drainage channel that flows to a surface water body? (Any volume spilled is a Category 1)		
2.e/2.f Estimated spill volume discharged directly to a surface water body? (Any volume spilled is a Category 1)		
2.g/2.h Estimated spill volume discharged to land? (Includes discharges directly to land, and discharges to a storm drain system or drainage channel that flows to a storm water infiltration/retention structure, field, or other non-surface water location. Also, includes backups to building structures).		
	Volume Spilled	**Volume Recovered**
Total Volume Spilled (Verify this matches the table in between 2.h and 3 in CIWQS)		
Describe any assumptions made to determine any of the volume estimates including recovered volumes:		

DATE/TIME DETERMINATIONS		
	DATE	TIME
Start of SSO (Use Start Time Determination/Notes Below)		
Agency Notified		
Collection System Operator Dispatched		
Collection System Operator Arrived		
End of SSO		
End of Spill Response		

Start Time Determination/Notes

Don't forget to take photos!

Witness 1: _____
Name Contact Information

Where did you see sewage spill from?

☐ Manhole ☐ Inside Building ☐ Vent/Clean Out ☐ Catch Basin ☐ Wet Well/Lift Station ☐ Other: _____

When did you notice the sewage spilling? _____ AM / PM Date _____ /_____ /_____

When did you last observe **NO Spill** occurring? _____ AM / PM Date _____ /_____ /_____

Comments: _____

_____

Witness 2: _____
Name Contact Information

Where did you see sewage spill from?

☐ Manhole ☐ Inside Building ☐ Vent/Clean Out ☐ Catch Basin ☐ Wet Well/Lift Station ☐ Other: _____

When did you notice the sewage spilling? _____ AM / PM Date _____ /_____ /_____

When did you last observe **NO Spill** occurring? _____ AM / PM Date _____ /_____ /_____

Comments: _____

_____

Witness 3: _____
Name Contact Information

Where did you see sewage spill from?

☐ Manhole ☐ Inside Building ☐ Vent/Clean Out ☐ Catch Basin ☐ Wet Well/Lift Station ☐ Other: _____

When did you notice the sewage spilling? _____ AM / PM Date _____ /_____ /_____

When did you last observe **NO Spill** occurring? _____ AM / PM Date _____ /_____ /_____

Comments: _____

_____

Start Time Determination/Notes continued

If the volume of the SSO and rate of flow are known, divide volume by rate of flow to get duration of SSO event.

_____Gallons ÷ _____GPM = Minutes (SSO Duration).

Subtract the Duration from the SSO End Date/Time to establish the SSO Start Date/Time.

Other Efforts to Determine Start Time: _____

_____

_____

_____

_____

Other Comments Regarding Spill Start Time: _____

_____

_____

_____

_____

Estimated SSO Start Time: _____ AM / PM Date: _____ / _____ / _____

SSO End Time: _____ AM / PM Date: _____ / _____ / _____

SSO FIELD REPORT
Spill location description:
Number of appearance points:
Spill appearance points: (Check all that apply) ☐ Backflow Prevention Device ☐ Force Main ☐ Gravity Mainline ☐ Inside Building/Structure ☐ Lateral Clean Out (Private/Public) ☐ Lower Lateral (Private/Public) ☐ Manhole ☐ Pump Station ☐ Upper Lateral (Private/Public) ☐ Other Sewer System Structure
Spill appearance point explanation. (Enter information here if “Other” or multiple appearance points were selected):
Final spill destination: (Check all that apply) ☐ Building/Structure ☐ Combined Storm Drain ☐ Drainage Channel ☐ Other (Specify Below) ☐ Paved Surface ☐ Separate Storm Drain ☐ Street/Curb and Gutter ☐ Surface Water ☐ Unpaved Surface
Explanation of final spill destination (Enter information if “Other” was selected):

SSO FIELD REPORT
Spill cause: (Check One) ☐ Air Relief Valve (ARV)/Blow Off Valve (BOV)/Backwater Valve Failure ☐ Construction Diversion Failure ☐ CS Maintenance Caused Spill/Damage ☐ Damage by Others Not Related to CS Construction/Maintenance (Specify Below) ☐ Debris from Construction ☐ Debris from Lateral ☐ Debris-General ☐ Debris-Rags ☐ Debris Wipes/Non-Dispersible ☐ Flow Exceeded Capacity (Separate CS Only) ☐ Grease Deposition (FOG) ☐ Inappropriate Discharge to CS ☐ Natural Disaster ☐ Operator Error ☐ Other (Specify Below) ☐ Pipe Structural Problem/Failure ☐ Pipe Structural Problem/Failure – Installation ☐ Pump Station Failure – Controls ☐ Pump Station Failure – Mechanical ☐ Pump Station Failure – Power ☐ Rainfall Exceeded Design, I and I (Separate CS Only) ☐ Root Intrusion ☐ Siphon Failure ☐ Surcharged Pipe (Combined CS Only) ☐ Vandalism
Spill cause explanation: (Required if Spill Cause is “Other”)

SSO FIELD REPORT		
Where did the problem occur? ☐ Air Relief Valve (ARV)/Blow Off Valve (BOV) Failure ☐ Force Main ☐ Gravity Mainline ☐ Lower Lateral (Public) ☐ Manhole ☐ Other (Specify Below) ☐ Pump Station Failure – Controls ☐ Pump Station Failure – Mechanical ☐ Pump Station Failure – Power ☐ Siphon ☐ Upper Lateral (Public)		
Explanation of where failure occurred: (Required if Where Failure Occurred is “Other”)		
Was spill associated with a storm event?	YES	NO
Diameter of sewer pipe at the point of blockage or failure:	inches	
Material of sewer pipe at the point of blockage or failure:		
Estimated age of sewer asset at the point of blockage or failure (if applicable):	years	
Spill Response Activities. (Check all that apply) ☐ Cleaned-Up ☐ Mitigated Effects of Spill ☐ Contained All or Portion of Spill ☐ Other (Specify Below) ☐ Restored Flow ☐ Returned All Spoil to Sanitary Sewer System ☐ Property Owner Notified ☐ Other Enforcement Agency Notified		
Explanation of spill response activities: (Required if spill response activities is “Other”):		

SSO FIELD REPORT		
Spill corrective action taken: (Check all that apply) ☐ Add location to, or increase frequency check, in Preventive Maintenance Program ☐ Adjusted Schedule/Method of Preventive Maintenance ☐ Enforcement Action Against FOG Source ☐ Inspected Sewer Using CCTV to Determine Cause ☐ Other (Specify Below) ☐ Plan Rehabilitation or Replacement of Sewer ☐ Repaired Facilities or Replaced Defect		
Explanation of corrective action taken: (Required if spill corrective action is “Other”)		
Is there an ongoing investigation?	YES	NO
Health warnings posted?	YES	NO
Did spill result in beach closure?	YES	NO
Name of Impacted Beach(es): (Enter N/A if none)		
Name of impacted surface waters:		

SSO FIELD REPORT
Water quality samples analyzed for: (Check all that apply) ☐ Dissolved Oxygen ☐ Other Chemical Indicators(s) – Specify Below ☐ Biological Indicator(s) – Specify Below ☐ No Water Quality Samples Taken ☐ Not Applicable to the Spill ☐ Other (Specify Below)
Explanation of water quality samples analyzed for: (Required if water quality samples analyzed for is "Other chemical indicator(s)", "Biological indicator(s)", or "Other")
Method and explanation of volume estimation methods used: (Check all that apply) ☐ Eyeball Estimate ☐ Measured Volume ☐ Duration and Flow Rate ☐ Counting Upstream Connections ☐ Other (Explain):

INSERT TAB:
Volume Estimation

Miscellaneous Computations & Examples

To convert inches to feet (NOTE: for the purposes of this worksheet, the unit of measurement will be in feet for formula examples)	Divide the inches by 12 or use the chart on the right. **Example 1:** 27" ÷ 12 = 2.25' **Example 2:** 1¾" = ?' 1" (0.08') + ¾" (0.06') = 0.14'
Volume of one cubic foot	7.48 gallons of liquid
Area: Two-dimensional measurement represented in square feet (SQ/FT or ft^2)	Square/rectangle: Area = Length x Width Circle: Area = $\pi \times r^2$ (where $\pi \approx 3.14$ and r = radius = ½ diameter) Triangle: Area = ½ (Base x Height)
Volume: Three-dimensional measurement represented in cubic feet (CU/FT or ft^3)	Rectangle/square footprint: Volume = Length x Width x Depth Circle footprint (cylinder): Volume = $\pi \times r^2$ x Depth (where $\pi \approx 3.14$ and r = radius = ½ diameter) Triangle footprint: Volume = ½ (Base x Height) x Depth
Depth: Wet Stain on Concrete or asphalt surface	If the depth is not measurable because it is only a wet stain, use the following estimated depths: Depth of a wet stain on concrete surface: 0.0026' (1/32") Depth of a wet stain on asphalt surface: 0.0013' (1/64") These were determined to be a reasonable depth to use on the respective surfaces through a process of trial and error. One gallon of water was poured onto both asphalt and concrete surfaces. Once the area was determined as accurately as possible, different depths were used to determine the volume of the wetted footprint until the formula produced a result that (closely) matched the one gallon spilled. This process was repeated several times.
Depth: Contained or "Ponded" sewage	Measure actual depth of standing sewage whenever possible. When depth varies, measure several representative sample points and determine the average. Use that number in your formula to determine volume.

Convert Inches to Feet

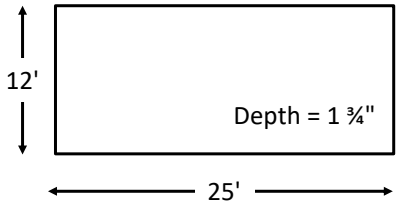
Inches	Feet
1/8"	0.01'
1/4"	0.02'
3/8"	0.03'
1/2"	0.04'
5/8"	0.05'
3/4"	0.06'
7/8"	0.07'
1"	0.08'
2"	0.17'
3"	0.25'
4"	0.33'
5"	0.42'
6"	0.50'
7"	0.58'
8"	0.67'
9"	0.75'
10"	0.83'
11"	0.92'
12"	1.00'

Miscellaneous Computations & Examples (continued)

Convert Inches to Feet	
Inches	**Feet**
1/8"	0.01'
1/4"	0.02'
3/8"	0.03'
1/2"	0.04'
5/8"	0.05'
3/4"	0.06'
7/8"	0.07'
1"	0.08'
2"	0.17'
3"	0.25'
4"	0.33'
5"	0.42'
6"	0.50'
7"	0.58'
8"	0.67'
9"	0.75'
10"	0.83'
11"	0.92'
12"	1.00'

Area/Volume of a Rectangle or Square

Formula: Length x Width x Depth = Volume in **cubic feet**



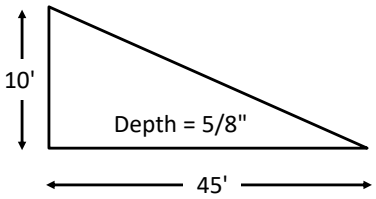
25'	X	12'	X	0.14'	=	**42 Cubic Feet**
Length		Width		Depth		Volume

Multiply the volume by 7.48 gallons to determine the volume in **gallons**:

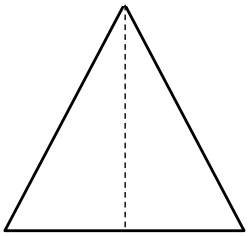
42 ft^3	X	7.48	=	**314.16 gallons**
Volume		gal/ft^3		Volume

Area/Volume of a Right Triangle

Formula: Base x Height x Depth = Volume in **cubic feet**



For isosceles triangles (two sides are equal lengths), break it down into two right triangles and compute area as you would for the right triangle.

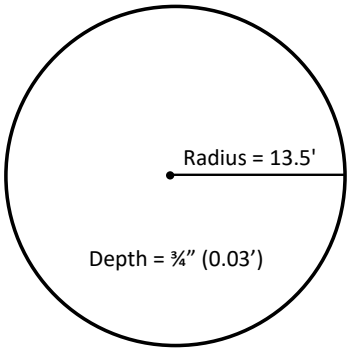


45'	X	10'	X	0.5	X	0.05'	x	7.48	=	84.15 gallons
Base		Height				Depth		gal/ft^3		Volume

Area/Volume of a Circle

Formula: π x r^2 x 0.785 x Depth = Volume in **cubic feet**

The diameter is a straight line passing from side to side through the center of a circle.



13.5'	X	13.5'	X	3.14	X	0.03'	x	7.48	=	128.42 gallons
Radius		Radius		π		Depth		gal/ft^3		Volume

Volume Estimation: Eyeball Estimation Method (for ≤100 gallons) D-2

STEP 1: Position yourself so that you have a vantage point where you can see the entire SSO.

STEP 2: Imagine one or more buckets or barrels of water tipped over. Depending on the size of the SSO, select a bucket or barrel size as a frame of reference. It may be necessary to use more than one bucket/barrel size.

STEP 3: Estimate how many of each size bucket or barrel it would take to make an equivalent spill. Enter those numbers in Column A of the row in the table below that corresponds to the bucket/barrel sizes you are using as a frame of reference.

STEP 4: Multiply the number in Column A by the multiplier in Column B. Enter the result in Column C.

	A	B	C
Size of bucket(s) or barrel(s)	**How many of this size?**	**Multiplier**	**Estimated SSO Volume (gallons)**
1 gallon water jug		x 1 gallons	
5 gallon bucket		x 5 gallons	
32 gallon trash can		x 32 gallons	
55 gallon drum		x 55 gallons	
Other: _____ gallons		x _____ gallons	
Estimated Total SSO Volume:			

STEP 5: Is rainfall a factor in the SSO? ☐ Yes ☐ No

If yes, what volume of the observed spill volume do you estimate is rainfall? _____ gallons

If yes, describe how you determined the amount of rainfall in the observed spill?

STEP 6: Calculate the estimated SSO volume by subtracting the rainfall from the SSO volume:

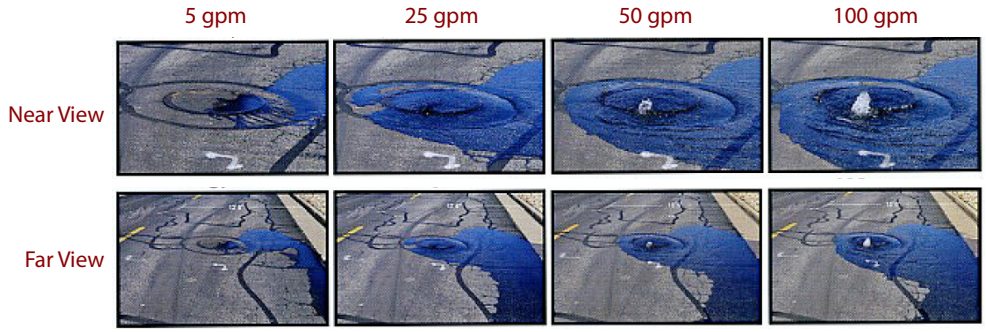
_____ gallons − _____ gallons = _____ gallons

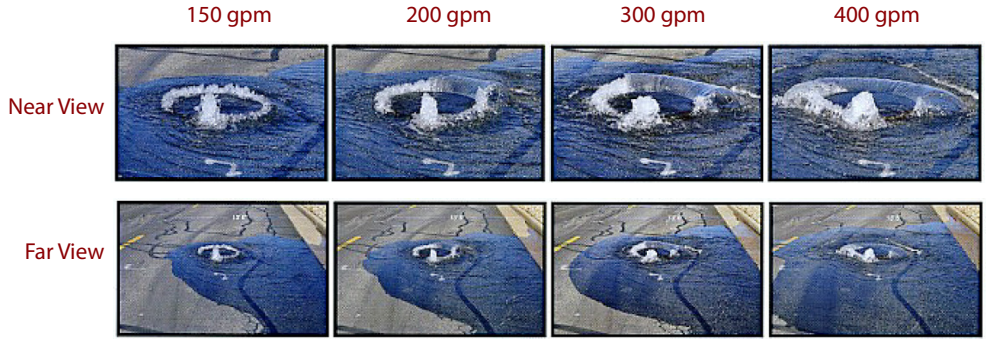
Estimated SSO Volume — Rainfall — **Total Estimated SSO Volume**

Volume Estimation: Duration and Flow Rate Comparison Method D-3

Compare the SSO to reference images below to estimate flow rate of the current overflow. **NOTE: If the manhole cover in your picture has vent holes or more than one pry hole, do not use these pictures for comparison.**

Describe which reference photo(s) were used and any additional factors that influenced applying the reference photo data to the actual SSO:





SSCSC Manhole Overflow Gauge: CWEA Southern Section Collections Systems Committee
Overflow Simulation courtesy of Eastern Municipal Water District

Flow Rate Based on Photo Comparison: _____ gallons per minute (gpm)

Start Date and Time	1.
End Date and Time	2.
SSO Event Total Time Elapsed (subtract Line 1 from Line 2. Show in minutes.)	3.
Average Flow Rate GPM (Account for diurnal flow pattern)	4.
Total Volume Estimated Using Duration and Flow Method (Line 3 x Line 4)	5.

Volume Estimation: Area/Volume Method

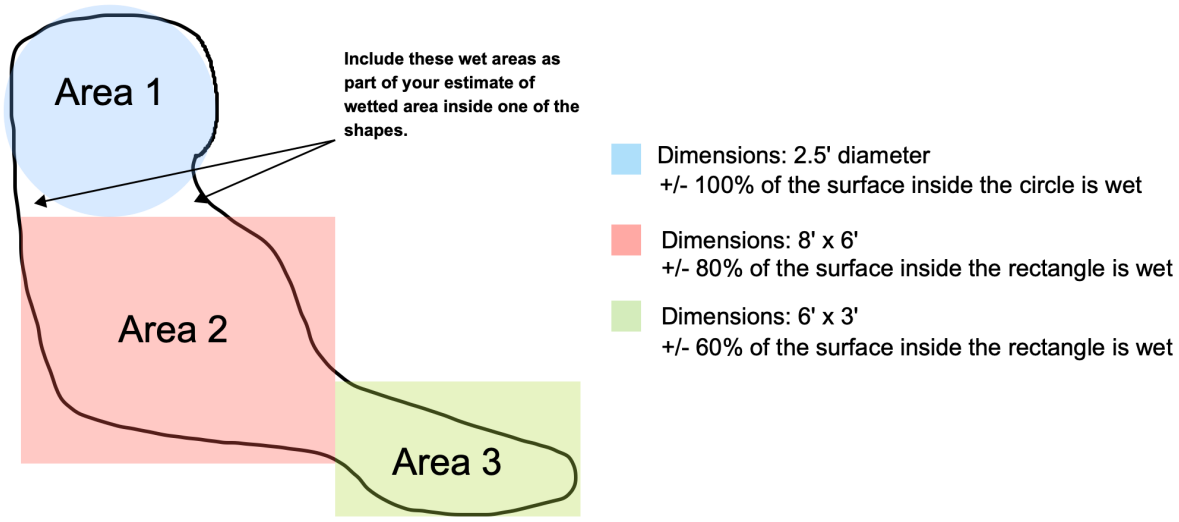
SSO Date: _____ Location: _____

STEP 1: Describe spill area surface: ☐ Asphalt ☐ Concrete ☐ Dirt ☐ Landscape ☐ Inside Building

☐ Other: _____

STEP 2: Draw/sketch the outline (footprint) of the spill. Then break the footprint down into recognizable shapes. See example below.

EXAMPLE:



STEP 3: Calculate the area of the footprint by completing the table below for each area in Step 2. Measure actual depth of standing sewage whenever possible. When depth varies, measure several representative sample points and determine the average. If the depth is not measurable because it is only a wet stain, use the following estimated depths:

- Depth of a wet stain on concrete surface: 0.0026' (1/32")
- Depth of a wet stain on asphalt surface: 0.0013' (1/64")

Rectangles:

Area # (from labeled drawing)		Length	X	Width	X	% Wet	=	Area	X	Depth	=	Volume
	→	ft	X	ft	X	%	=	ft^2	X	ft	=	ft^3
	→	ft	X	ft	X	%	=	ft^2	X	ft	=	ft^3
	→	ft	X	ft	X	%	=	ft^2	X	ft	=	ft^3

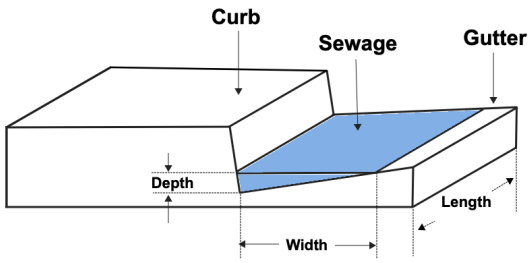
Circles:

Area # (from labeled drawing)		π	X	Radius	X	Radius	X	% Wet	=	Area	X	Depth	=	Volume
	→	3.14	X	ft	X	ft	X	%	=	ft^2	X	ft	=	ft^3
	→	3.14	X	ft	X	ft	X	%	=	ft^2	X	ft	=	ft^3
	→	3.14	X	ft	X	ft	X	%	=	ft^2	X	ft	=	ft^3

STEP 4: If part of the spill is in a gutter, use the formula below to calculate the volume:

_____ X _____ X _____ X 0.5 = _____ ft^3

Length Depth Width **Volume**



STEP 5: Calculate Total Spill Volume (sum of all of the volume calculations above): _____ ft^3

STEP 6: Convert from cubic feet to gallons by multiplying by 7.48.

_____ ft^3 x 7.48 gallons = _____ gallons

spill volume in cubic feet **Total estimated volume**

INSERT TAB:
Backup Forms

Backup Forms Checklist (Backup Only) E-1

Complete this form only if there is a backup into a residence or business.

Instructions to the Field Crew:

1. Take photo of each form before giving it to the customer for documentation.
2. Tear forms listed below out of this workbook and hand to customer. *Leave the First Responder Form in this workbook, do not give to Customer.*
3. Check each item that was provided to the customer.
4. Have customer sign below.

Forms/Documents:

☐ E-3: Customer Information Letter

☐ E-4: Your Responsibilities as a Private Property Owner

☐ E-5: Claim for Damages

Forms Provided to:

_____
Customer Name

_____
Customer Signature

_____
Date

Check here if customer declines to sign: ☐

Formularios / Documentos:

☐ E-3: Carta de Información del Cliente

☐ E-4: Sus Responsabilidades Como Propietario de Una Propiedad Privad

☐ E-5: Reclamación por daños

Formularios proporcionados a:

_____
Nombre del cliente

_____
Firma del cliente

_____
Fecha

Marque aquí si el cliente se niega a firmar: ☐

Forms Provided by: _____ _____
Employee Name Initial

Instruction to Collections System Manager:

Send photos, including the photo of the Declination of Cleaning Services,
and a copy of the First Responder form to the Westborough Water District General Manager.

First Responder Form (Backup Only)

Complete this form only if there is a backup into a residence or business.

Fill out this form as completely as possible.
Ask customer if you may enter the home. If so, take photos of all damaged and undamaged areas.

PERSON COMPLETING THIS FORM: Name: _____ Title: _____	PHONE: DATE: TIME:
TIME STAFF ARRIVED ON-SITE:	
RESIDENT NAME: ☐ Owner ☐ Renter ADDRESS: PHONE:	IF RENT, PROPERTY MANAGER(S): OWNER: ADDRESS: PHONE:
# OF PEOPLE LIVING AT RESIDENCE:	

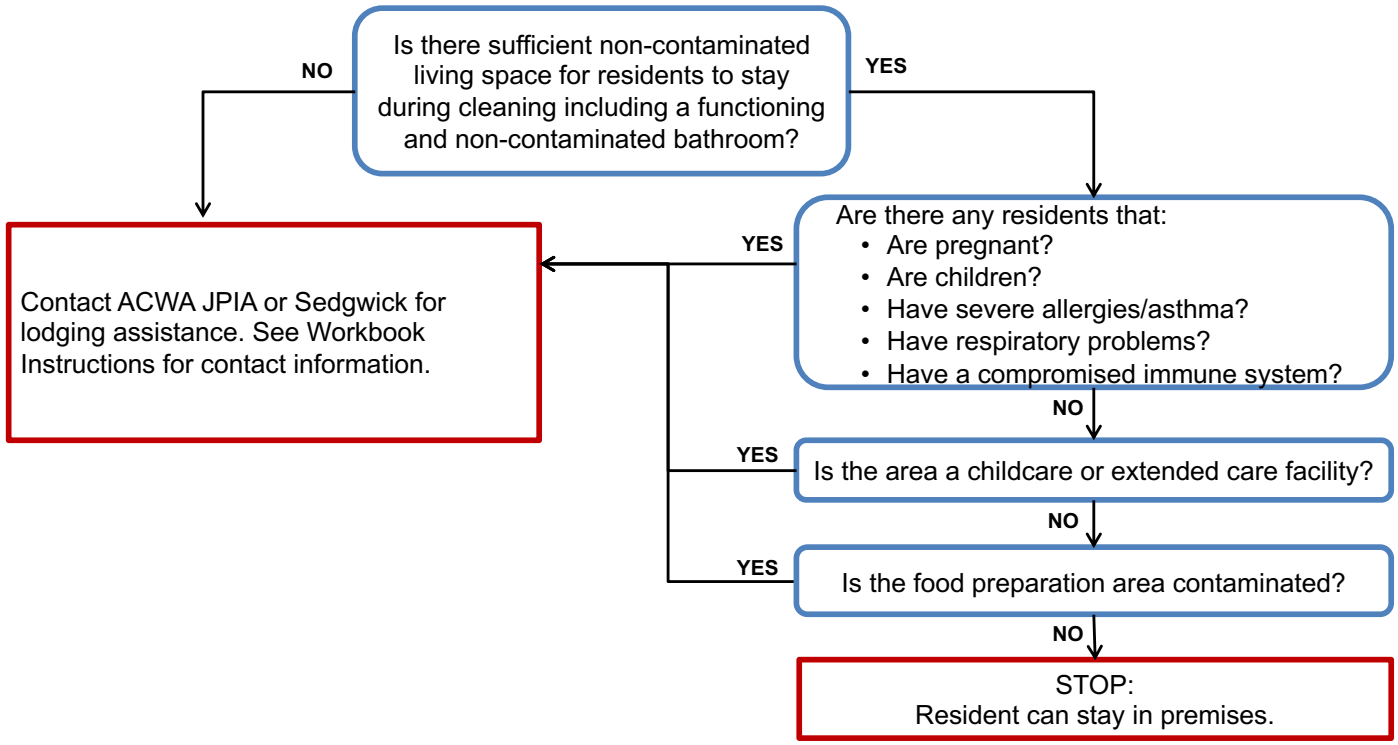
Approximate Age of Home:	# of Bathrooms:	# of Rooms Affected:

Numbers of Photographs or Videos Taken: ☐ Photographs ☐ Video ☐ Customer did not provide or allow photographs	Where are photos/video stored?

Is nearest upstream manhole visibly higher than the drain/fixture that overflowed?	☐ Yes ☐ No
Does property have a Property Line Cleanout or BPD?	☐ Cleanout ☐ BPD ☐ Neither ☐ Unknown
If yes, was the Property Line Cleanout/BPD operational at the time of the overflow?	☐ Yes ☐ No ☐ Unknown
Have there ever been any previous spills at this location?	☐ Yes ☐ No ☐ Unknown
Has the resident had any plumbing work done recently? *If YES, please describe:*	☐ Yes ☐ No ☐ Unknown

GO TO Page 2

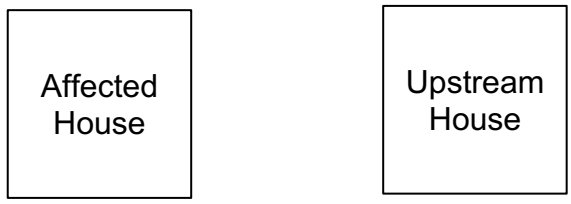
LIVABILITY ASESSMENT



SANITARY SEWER LINE BLOCKAGE LOCATION

PLEASE CHECK THE BOXES THAT DESCRIBE YOUR OBSERVATIONS:	
Customer Cleanout Was: ☐ Non-Existent ☐ Full ☐ Empty	Agency Owned/Maintained Cleanout was: ☐ Non-Existent ☐ Full ☐ Empty

On the diagram below, indicate the location of the sewer line and where the problem occurred.



Recommended Follow-Up Action(s):

Did sewage go under buildings? ☐ Yes ☐ No ☐ Unsure

Customer Information Letter (Backup Only) E-3

Dear Property Owner:

We recognize that sewer back flow incidents can be stressful. The District has prepared this brief set of instructions to help you minimize the impact of the loss by responding promptly to the situation.

The District is not responsible for cleanup charges or damages caused by blockages in the property owner's sewer line or caused by code violations. At this time, the District is investigating the cause of the loss and does not assume liability for damages. However, if our investigation determines the District is responsible for this incident, the costs you incur for reasonable and necessary cleanup will be included in the settlement of your claim. Regardless of whether you or the District is responsible for the loss, it is up to you to arrange for the repair of your property and to present a claim for consideration.

You or the property owner should immediately contact a firm for clean-up of the affected areas. If you do not know of a company to call for service, the following 24-hour emergency restoration companies are available to respond: *

Servicemaster (800) 737-7663)	Ideal Restoration (800) 379-6881	Faragon Restoration (415) 999-5446
Coit/Olympia Restoration (800) 367-2648 or (800) 606-4110 Extension # 146	Restoration 9-1-1 (650) 873-7867	

* This list is provided as a resource only. The District does not require or endorse the use of any of these firms. This list is not to be construed as exclusive, comprehensive or limiting in any way. Qualified contractors can be found on the Internet under "Water Damage Restoration" or "Fire & Water Damage Restoration". However, be sure you hire a firm with experience in sewer backups and enough resources to get the job done quickly.

What you need to do now:

- Minimize the impact of the loss by responding promptly to the situation.
- Do not attempt to clean the area yourself, let the cleaning and restoration company handle this.
- Keep people and pets away from the affected area(s) until cleanup has been completed.
- Turn off any appliances that use water.
- Turn off heating/air conditioning systems.
- Do not remove items from the area – the cleaning and restoration company will handle this.
- If you had recent plumbing work done, contact your plumber or contractor and inform them of this incident.
- File your claim with the District, as soon as practical. The California Government Code, Sections 900 -960, requires filing a written claim and outlines specific timelines and notice procedures that must be used.
- Call the District's Claims Administrator and provide a number where you can be reached: ACWA JPIA (800) 231-5742.
- The form and contents of a claim are specified by Section 910, et seq. A claim relating to a cause of action for death or for injury to person or to personal property or growing crops shall be presented not later than six months after accrual of the cause of action; other claims shall be presented within one year (*Section 911.2)*.It is suggested that the claimant refer to claims law and be fully advised with respect to the exceptions and further provisions contained therein.

Important Legal Notice: For your protection, read carefully, obtain a reliable translation, and/or consult your attorney.

Carta de información del cliente (solo copia de seguridad) E-3: en español

Estimado propietario:

Reconocemos que los incidentes de reflujo de alcantarillado pueden ser estresantes. El Distrito ha preparado este breve conjunto de instrucciones para ayudarlo a minimizar el impacto de la pérdida al responder rápidamente a la situación.

El Distrito no es responsable de los cargos de limpieza o daños causados por bloqueos en la línea de alcantarillado del propietario de la propiedad o causados por violaciones del código. En este momento, el Distrito está investigando la causa de la pérdida y no asume responsabilidad por daños. Sin embargo, si nuestra investigación determina que el Distrito es responsable de este incidente, los costos en los que incurra por la limpieza razonable y necesaria se incluirán en la liquidación de su reclamo. Independientemente de si usted o el Distrito son responsables de la pérdida, depende de usted organizar la reparación de su propiedad y presentar un reclamo para su consideración.

Usted o el dueño de la propiedad deben comunicarse inmediatamente con una empresa para la limpieza de las áreas afectadas. Si no conoce una compañía a la que llamar para recibir servicio, las siguientes compañías de restauración de emergencia las 24 horas están disponibles para responder: *

Servicemaster (800) 737-7663)	Ideal Restoration (800) 379-6881	Faragon Restoration (415) 999-5446	Restoration 9-1-1 (650) 873-7867
Coit/Olympia Restoration: (800) 367-2648 or (800) 606-4110 Extension # 146			

* Esta lista se proporciona solo como un recurso. El Distrito no requiere ni respalda el uso de ninguna de estas firmas. Esta lista no debe interpretarse como exclusiva, completa o limitante de ninguna manera. Los contratistas calificados se pueden encontrar en Internet en "Restauración de daños por agua" o "Restauración de daños por incendio y agua". Sin embargo, asegúrese de contratar a una empresa con experiencia en copias de seguridad de alcantarillado y recursos suficientes para hacer el trabajo rápidamente.

Lo que tienes que hacer ahora:

- Minimizar el impacto de la pérdida respondiendo rápidamente a la situación.
- No intente limpiar el área usted mismo, deje que la empresa de limpieza y restauración se encargue de esto.
- Mantenga a las personas y mascotas alejadas de las áreas afectadas hasta que se haya completado la limpieza.
- Apague cualquier aparato que use agua.
- Apague los sistemas de calefacción / aire acondicionado.
- No retire los artículos del área: la empresa de limpieza y restauración se encargará de esto.
- Si ha realizado trabajos de plomería recientes, comuníquese con su plomero o contratista e infórmeles de este incidente.
- Presente su reclamo ante el Distrito, tan pronto como sea práctico. El Código de Gobierno de California, Secciones 900 -960, requiere la presentación de un reclamo por escrito y describe plazos específicos y procedimientos de notificación que deben usarse.
- Llame al Administrador de Reclamos del Distrito y proporcione un número donde pueda ser contactado: ACWA JPIA (800) 231-5742.
- La forma y el contenido de una reclamación se especifican en la Sección 910, y siguientes. Una reclamación relativa a una causa de acción por muerte o por lesiones a la persona o a los bienes personales o cultivos en crecimiento se presentará a más tardar seis meses después del devengo de la causa de la acción; otras reclamaciones se presentarán en el plazo de un año (artículo 911.2). Se sugiere que el reclamante se remita al régimen de reclamaciones y que se le informe plenamente con respecto a las excepciones y otras disposiciones que figuran en él.

Aviso legal importante: Para su protección, lea detenidamente, obtenga una traducción confiable y/ o consulte a su abogado.

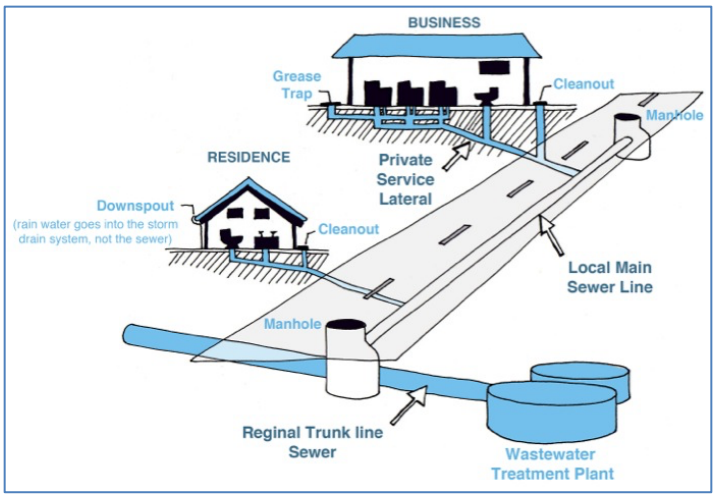
Your Responsibilities as a Private Property Owner (Backup Only) E-4: Page 1

How a Sewer System Works

A property owner's sewer pipes are called ***service laterals*** and are connected to larger local main and regional trunk lines. Service laterals run from the connection at the home to the connection with the public sewer. These laterals are the responsibility of the property owner and must be maintained by the property owner.

How do sewage spills happen?

Sewage spills occur when the wastewater in underground pipes overflows through a manhole, cleanout, or broken pipe. Most spills are relatively small and can be stopped and cleaned up quickly, but left unattended they can cause health hazards, damage to homes and businesses, and threaten the environment, local waterways, and beaches. Common causes of sewage spills include grease build-up, tree roots, broken/cracked pipes, missing or broken cleanout caps, undersized sewers, and groundwater/rainwater entering the sewer system through pipe defects and illegal connections.



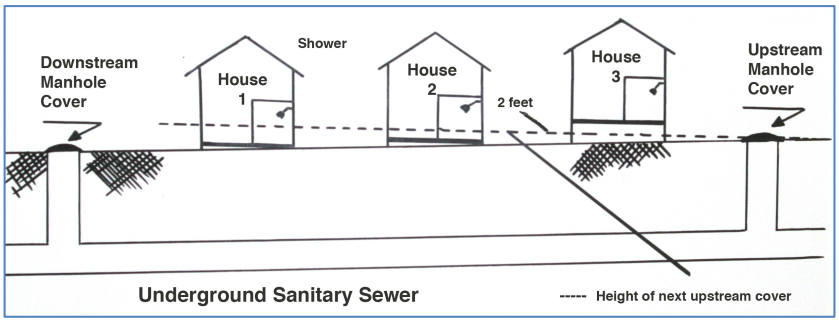
Prevent most sewage backups with a Backflow Prevention Device

This type of device can help prevent sewage backups into homes and businesses. If you don't already have a Backflow Prevention Device, contact a professional plumber or contractor to install one as soon as possible.

Is my home required to have a backflow prevention device?

Section 710.1 of the Uniform Plumbing Code (U.P.C.) states: *"Drainage piping serving fixtures which have flood level rims located below the elevation of the next upstream manhole cover or private sewer serving such drainage piping **shall** be protected from backflow of sewage by installing an approved type of backwater valve."* The intent of Section 710.1 is to protect the building interior from mainline sewer overflows or surcharges.

Additionally, U.P.C. 710.6 states: *"Backwater valves **shall** be located where they will be accessible for inspection and repair at all times and, unless continuously exposed, shall be enclosed in a masonry pit fitted with an adequately sized removable cover."*



Your Responsibilities as a Private Property Owner (Backup Only) E-4: Page 2

Spill cleanup inside the home:

For large clean ups, a professional cleaning firm should be contacted to clean up impacted areas, If you hire a contractor, it is recommended to get estimates from more than one company. Sometimes, homeowner's insurance will pay for the necessary cleaning due to sewer backups. Not all policies have this coverage, so check with your agent.

If you decide to clean up a small spill inside your home, protect yourself from contamination by observing the following safety measures. Those persons whose resistance to infection is compromised should not attempt this type of clean up.

Seek immediate attention if you become injured or ill during or after the cleanup process.

Other Tips:

- Keep children and pets out of the affected area.
- Turn off heating/air conditioning systems
- Wear rubber boots, rubber gloves, and goggles during cleanup.
- Discard items that cannot be washed and disinfected (such as: mattresses, rugs, cosmetics, toys, etc.)
- Remove and discard drywall and insulation that has been contaminated with sewage or flood waters.
- Thoroughly clean all hard surfaces (such as flooring, concrete, molding, wood and metal furniture, countertops, appliances, sinks and other plumbing fixtures) with hot water and laundry or dish detergent.
- Help the drying process with fans, air conditioning units, and dehumidifiers.
- After completing cleanup, wash your hands with soap and water. Use water that has been boiled for 1 minute (allow the water to cool before washing your hands) OR use water that has been disinfected (solution of 1/8 teaspoon of household bleach per 1 gallon of water). Let it stand for 30 min. If water is cloudy, use ¼ teaspoon of household bleach per 1 gallon of water.
- Wash clothes worn during cleanup in hot water & detergent (wash apart from uncontaminated clothes).
- Wash clothes contaminated with sewage in hot water and detergent. Consider using a Laundromat until your onsite wastewater system has been professionally inspected and serviced.

Spill cleanup outside the home:

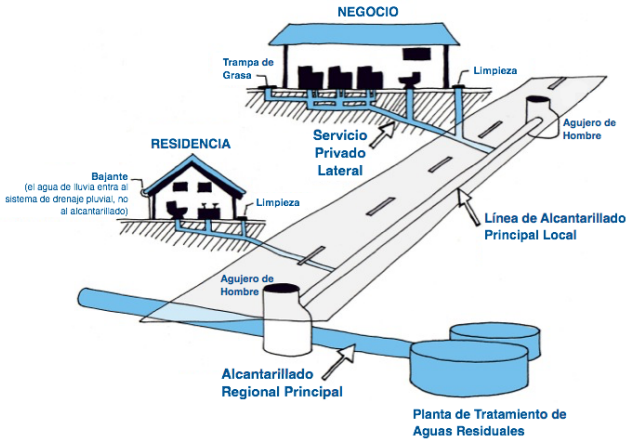
- Keep children and pets out of the affected area until cleanup has been completed.
- Wear rubber boots, rubber gloves, and goggles during cleanup of affected area.
- Clean up sewage solids (fecal material) and place in properly functioning toilet or double bag and place in garbage container.
- On hard surfaces areas such as asphalt or concrete, it is safe to use a 2% bleach solution, or ½ cup of bleach to 5 gallons of water, but don't allow it to reach a storm drain as the bleach can harm the environment.
- After cleanup, wash hands with soap and water. Use water that has been boiled for 1 minute (allow to cool before washing your hands) OR use water that has been disinfected (solution of 1/8 teaspoon of household bleach per 1 gallon of water). Let it stand for 30 min. If water is cloudy, use ¼ teaspoon of household bleach per 1 gallon of water.
- Wash clothes worn during cleanup in hot water and detergent (wash apart from uncontaminated clothes).
- Wash clothes contaminated with sewage in hot water and detergent. Consider using a laundromat until your onsite wastewater system has been professionally inspected and serviced.

Cómo funciona un sistema de alcantarillado

Las tuberías de alcantarillado de un propietario se denominan servicios laterales y están conectadas a líneas troncales principales y regionales locales más grandes. Los servicios laterales se ejecutan desde la conexión en el hogar hasta la conexión con el sistema de alcantarillado del Distrito. Estos laterales son responsabilidad del propietario y deben ser mantenidos por el propietario.

¿Cómo ocurren los derrames de aguas residuales?

Los derrames de aguas residuales ocurren cuando las aguas residuales en las tuberías subterráneas se desbordan a través de un pozo de acceso, limpieza o tubería rota. La mayoría de los derrames son relativamente pequeños y se pueden detener y limpiar rápidamente, pero si se los deja desatendidos, pueden causar riesgos para la salud, dañar viviendas y negocios y amenazar el medio ambiente, las vías fluviales locales y las playas. Las causas comunes de derrames de aguas residuales incluyen acumulación de grasa, raíces de árboles, tuberías rotas / agrietadas, tapas de limpieza faltantes o rotas, alcantarillas de tamaño insuficiente y aguas subterráneas / pluviales que ingresan al sistema de alcantarillado a través de defectos en las tuberías y conexiones ilegales.



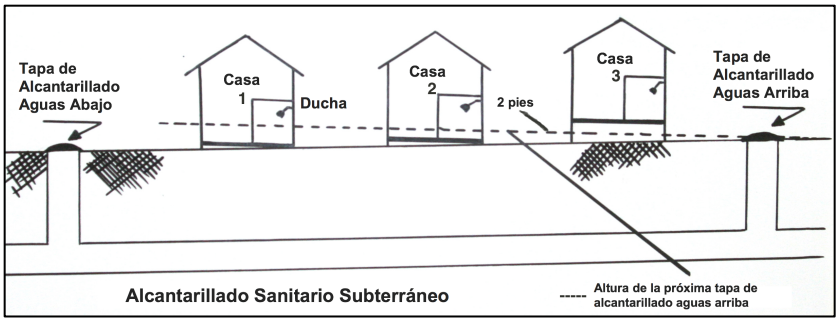
Prevenga la mayoría de las copias de seguridad de aguas residuales con un dispositivo de prevención de reflujo

Este tipo de dispositivo puede ayudar a prevenir las copias de seguridad de aguas residuales en hogares y empresas. Si aún no tiene un dispositivo de prevención de reflujo, comuníquese con un plomero o contratista profesional para instalar uno lo antes posible.

¿Se requiere que mi hogar tenga un dispositivo de prevención de reflujo?

La Sección 710.1 del Código Uniforme de Plomería (UPC) establece: “Los accesorios de tuberías de drenaje que tienen llantas de nivel de inundación ubicadas debajo de la elevación de la siguiente boca de alcantarilla corriente arriba o la alcantarilla privada que atiende dicha tubería de drenaje deben protegerse contra el reflujo de aguas residuales al instalar un tipo de válvula de evacuación ”. La intención de la Sección 710.1 es proteger el interior del edificio de los desagües o sobrecargas de alcantarillado de la línea principal.

Adicionalmente, U.P.C. 710.6 dice: Las válvulas de aguas residuales deben ubicarse donde puedan ser inspeccionadas y reparadas en todo momento y, a menos que estén continuamente expuestas, deben estar encerradas en un pozo de mampostería equipado con una cubierta removible del tamaño adecuado.



Limpieza de derrames dentro de la casa:

Para grandes limpiezas, se debe contactar a una empresa de limpieza profesional para limpiar las áreas afectadas. Si contrata a un contratista, se recomienda obtener estimaciones de más de una compañía. A veces, el seguro del propietario de vivienda pagará la limpieza necesaria debido a las reservas de alcantarillado. No todas las pólizas tienen esta cobertura, así que consulte con su agente.

Si decide limpiar un pequeño derrame dentro de su casa, protéjase de la contaminación observando las siguientes medidas de seguridad. Aquellas personas cuya resistencia a la infección esté comprometida no deben intentar este tipo de limpieza.

Busque atención inmediata si se lesiona o se enferma durante o después del proceso de limpieza.

Otros consejos:

- Mantenga a los niños y mascotas fuera del área afectada.
- Apague los sistemas de calefacción / aire acondicionado
- Use botas de goma, guantes de goma y gafas durante la limpieza.
- Deseche los artículos que no se puedan lavar y desinfectar (como: colchones, alfombras, cosméticos, juguetes, etc.)
- Retire y deseche los paneles de yeso y el aislamiento contaminado con aguas residuales o aguas de inundación.
- Limpie a fondo todas las superficies duras (como pisos, concreto, molduras, muebles de madera y metal, mostradores, electrodomésticos, fregaderos y otros accesorios de plomería) con agua caliente y ropa o detergente para platos.
- Ayude al proceso de secado con ventiladores, unidades de aire acondicionado y deshumidificadores.
- Después de completar la limpieza, lávese las manos con agua y jabón. Use agua que haya sido hervida por 1 minuto (deje que el agua se enfríe antes de lavarse las manos) O use agua que haya sido desinfectada (solución de 1/8 cucharadita de lejía doméstica por 1 galón de agua). Dejar reposar durante 30 min. Si el agua está turbia, use ¼ cucharadita de lejía de uso doméstico por 1 galón de agua.
- Lave la ropa usada durante la limpieza con agua caliente y detergente (lave aparte de la ropa no contaminada).
- Lavar la ropa contaminada con aguas residuales en agua caliente y detergente. Considere usar una lavandería hasta que su sistema de aguas residuales en el sitio haya sido inspeccionado y reparado profesionalmente.

Limpieza de derrames fuera de la casa:

- Mantenga a los niños y las mascotas fuera del área afectada hasta que se haya completado la limpieza.
- Use botas de goma, guantes de goma y gafas protectoras durante la limpieza del área afectada.
- Limpie los sólidos de alcantarillado (material fecal) y colóquelos en un inodoro o bolsa doble que funcione correctamente y colóquelos en un contenedor de basura.
- En áreas de superficies duras como el asfalto o el concreto, es seguro usar una solución de lejía al 2%, o ½ taza de lejía a 5 galones de agua, pero no permita que llegue a un drenaje de tormenta ya que la lejía puede dañar la ambiente.
- Después de la limpieza, lávese las manos con agua y jabón. Use agua que haya sido hervida por 1 minuto (deje enfriar antes de lavarse las manos) O use agua que haya sido desinfectada (solución de 1/8 cucharadita de cloro por 1 galón de agua). Dejar reposar durante 30 min. Si el agua está turbia, use ¼ cucharadita de lejía de uso doméstico por 1 galón de agua.
- Lave la ropa usada durante la limpieza con agua caliente y detergente (lave aparte de la ropa no contaminada).
- Lavar la ropa contaminada con aguas residuales en agua caliente y detergente. Considere usar una lavandería hasta que su sistema de aguas residuales en el sitio haya sido inspeccionado y reparado profesionalmente.

INSERT CLAIM FORM

INSERT TAB:
Failure Analysis

OFFICE USE ONLY

Incident Report #		Prepared By	
SSO/Backup Information			
Cause			
Summary of Historical SSOs/Backups/Service Calls/Other Problems			
Date	Cause	Date Last Cleaned	Crew
Records Reviewed By:		Record Review Date:	
Summary of CCTV Information			
CCTV Inspection Date		Tape Name/Number	
CCTV Tape Reviewed By		CCTV Review Date	
Observations			

Go to Page 2

Recommendations					
✓	Type	Specific Actions	Who is Responsible?	Completion Deadline	Who Will Verify Completion?
	No Changes or Repairs Required	n/a	n/a	n/a	n/a
	Repair(s)				
	Construction				
	Capital Improvement(s)				
	Change(s) to Maintenance Procedures				
	Change(s) to Overflow Response Procedures				
	Training				
	Misc.				
Comments/Notes:					
Reviewed by:			Reviewed by:		
Review Date:			Review Date:		

INSERT TAB:
Field Sampling

Surface Water Sampling Standard Operating Procedure G-1

Start Here

Get ice pack or ice and place in cooler

Determine point spill entered waterway – photograph this location (*include a reference point in the photo)*

Remove and begin the Surface Water Sampling Worksheet

Determine the direction of water movement from point of discharge

- Collect all samples against the direction of the water flow! (face upstream so any sediment disturbed flows behind and away from you.)
- Collect downstream sample first!
- Collect samples well away from the bank (preferably where water is visibly flowing)
- Avoid sampling debris or scum layer from the surface.
- Photograph evidence of dead fish!

SAMPLING STEPS

Determine approximate stream velocity, if applicable, and how long it has been since the SSO flow to the surface water stopped, and move downstream the appropriate distance to collect the downstream sample. Move upward to collect the spill entry point sample and keep moving upstream the appropriate distance to collect the upstream or reference sample.

Don the PPE from the Sampling Kit.

Label all samples with their location, your name and the date/time collected. Record this on the Surface Water Sampling Worksheet.

Take a photo of each sample location (include a reference point in the photo). Remove the seal from the bacteria sample container (100ml) just prior to collecting your sample.

1. Remove the cap immediately before collecting each sample.
2. Avoid allowing the inside of the cap to touch anything
3. Using the sample pole, lower the bottle/dipper 6” below the water surface and sweep the bottle/dipper upstream and out of the water. Do not disturb the bottom sediment. Fill the sample bottle to the line. Immediately replace cap
4. Open the ammonia-nitrogen sample container and allow water to gently flow into the bottle to just below the neck of the jar. NOTE: The ammonia-nitrogen sample bottle contains sulfuric acid – LEAVE THE ACID IN THE BOTTLE AND DO NOT ALLOW IT TO TOUCH YOUR SKIN!

Repeat sampling steps (red boxes) to collect downstream and discharge point samples.

Place samples in cooler on the ice pack

Complete the Chain of Custody Form and the Surface Water Sampling Worksheet.

Contact the lab and inform them that the following samples require processing: Ammonia-Nitrogen and total/fecal coliform.

Take cooler containing the samples and completed chain of custody to the lab within 6 hours of collection time.

Post warning signs as directed by the County Environmental Health Department or the Supervisor. (Remove Warning Signs and lift restrictions when authorized by County Environmental Health.)

Repeat sampling daily from time the spill is known until the results of two consecutive sets of samples indicate the return to the normal level or cessation of monitoring is authorized by the County Environmental Health Department.

Sample Collection Chain of Custody Record

Instructions to Employee: Complete all shaded boxes

Customer Name	**Westborough Water District**			**PO#**	
Customer Address	**2263 Westborough Boulevard, South San Francisco, CA 94080**			**WO#**	
Customer Telephone	**(650) 589-1435**	**Mail Code**		**LAB INFORMATION**	**Turnaround Requirement**
Sample Location Name				Ship to:	☐ Normal (21 days)
Lab Program Coordinator		**Phone #**		Ship Date:	☐ Rush: _____
Sampled By				Courier:	☐ Other:

LIMS# (Issued by Lab)	SAMPLE COLLECTION INFORMATION						# Containers	Matrix*	Analysis Requested					QA/QC Requirements
	Date	Time	Type: Composite	Type: Grab	Sample Location	Field pH	Field Temp			Ammonia	Enterococcus				☒ Lab Standard ☐ Special (see attached) Remarks/Notes
			☐	☒	Upstream			2	A	☒	☒	☐	☐	☐	
			☐	☒	Entry Point			2	A	☒	☒	☐	☐	☐	
			☐	☒	Downstream			2	A	☒	☒	☐	☐	☐	
			☐	☐				2		☐	☐	☐	☐	☐	
			☐	☐				2		☐	☐	☐	☐	☐	
			☐	☐				2		☐	☐	☐	☐	☐	
			☐	☐				2		☐	☐	☐	☐	☐	

*Matrix: P = Potable Water, W = Wastewater, A = Ambient Water, G = Groundwater, S = Soil, B = Biosolids, I = Industrial, O = Other (specify in remarks)

Relinquished by	Date	Time

Relinquished to	Date	Time

Transport/Shipping Information		
☐ USPS	☐ UPS	☐ FedEx
Tracing #:		
☐ Other:		

Sample Receiving Documentation

Container intact? ☐ Yes ☐ No	Correct container? ☐ Yes ☐ No	Field preserved? ☐ Yes ☐ No	Custody tape intact? ☐ Yes ☐ No
Cooled? ☐ Yes ☐ No	Temp. Blank? ☐ Yes ☐ No (°C)	Comments:	
Sample distribution: ☐ Lab bench ☐ Ice chest ☐ Walk-in cooler shelf #		Disposal Date:	Disposed by: (inits.)
C-O-C Distribution Date: By: ☐ Lab Admin File ☐ Prog/proj Mgr. ☐ Lab Prog. Coord. ☐ Delivery courier ☐ Pick-up courier			

Surface Water Sampling Worksheet

Sample Date:	Sample Time: □AM □PM	Sample Location:	
Sampler(s)' Name(s):			
Sampler(s)' Signature(s):			

What is being sampled?
□Stream □Pond □Lake □River □Other:

Weather at time of sampling: □Sunny □Overcast
□Sprinkling □Raining □Snowing

Was the SSO actively entering the surface water during Sampling? □YES □NO
If no, complete A-D in the gray box to the right ➔

If the SSO was not actively entering the surface water during sampling:

A. Stream Velocity: _____CFS
B. How Long Has the SSO ***NOT*** Been Entering the Surface Water?
_____ minutes X 60sec/min = _____ seconds
C. How Far Downstream Did You Travel To Collect The SOURCE Sample?
(A X C = Feet): _____ feet
D. Explain why you travelled a different distance, if you did, to collect the source sample:

Sample Location	# of Samples*	Photo ID# of Sample Location	Visual Observations and/or Interferences
Upstream*			
Source*			
Downstream*			
Field Blank*			

* Collect duplicate bacteria samples at each location

FINISH CHECKLIST

- ☐ **All Samples Labeled with:**
  - ☐ Date: a six-digit number indicating the year, month, day of collection
  - ☐ Time: a four-digit number indicating military time of collection. e.g. 0954
  - ☐ Sample Location: Upstream, Source, or Downstream
  - ☐ Samplers: each sampler is identified
  - ☐ Parameter/preservative: analysis to be conducted for sample/sample preservation
- ☐ **Chain of Custody Completed**
- ☐ **Samples on Ice in Cooler**
- ☐ **Pictures Taken of Each Sample Location and the Photo ID/# Noted Above**
- ☐ **All Sampling Equipment Collected**

NOTES / OBSERVATIONS

APPENDIX F

Water Quality Monitoring Plan

INSERT
WATER QUALITY MONITORING PLAN