


City of Pleasanton

Sewer Spill Emergency Response Plan

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Signature: 

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1. PURPOSE

The purpose of the City of Pleasanton (City) Spill Emergency Response Plan (SERP) is to support a prompt, orderly and effective response to spills (sanitary), reduce spill volumes, and collect information for prevention of future spills. A “spill” in this document is defined, by SWRCB Order No. WQ 2022-0103-DWQ as a discharge of sewage from any portion of a sanitary sewer system due to a sanitary sewer system overflow, operational failure, and/or infrastructure failure.

The SERP provides guidelines for City personnel to follow in responding to, cleaning up, reporting, and properly documenting spills that may occur within the City’s service area. This SERP satisfies the SWRCB Order, which require wastewater collection agencies to have a Spill Emergency Response Plan.

Additionally, the SERP outlines procedures for responding to sanitary sewer spill backups into structures as required by the City’s insurer. “Backup” is a term typically used by insurers to describe property damage resulting from exposure and contact to untreated or partially treated sewage.

2. POLICY

The City’s employees are required to report all spills from agency owned sewer mains and publicly owned laterals found and to take the appropriate action to secure the spill area, properly report to the appropriate regulatory agencies, relieve the cause of the spill, and ensure that the affected area is cleaned as soon as possible to minimize health hazards to the public and protect the environment. The City’s goal is to respond to sewer system spills as soon as possible following notification. The City will follow reporting procedures regarding sewer spills as set forth by the San Francisco Regional Water Quality Control Board and the California State Water Resources Control Board Order.

3. DEFINITIONS AS USED IN THIS SERP

ANNUAL REPORT: An Annual Report (previously termed as Collection System Questionnaire in Order 2006-0003-DWQ) is a mandatory report in which the City provides a calendar-year update of its efforts to prevent spills.

BASIN PLAN: A Basin Plan is a water quality control plan specific to a Regional Water Quality Control Board (Regional Water Board), that serves as regulations to: (1) define and designate beneficial uses of surface and groundwaters, (2) establish water quality objectives for protection of beneficial uses, and (3) provide implementation measures.

BENEFICIAL USES: The term “Beneficial Uses” is a Water Code term, defined as the uses of the waters of the State that may be protected against water quality degradation. Examples of beneficial uses include but are not limited to, municipal, domestic, agricultural, and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves.

CALIFORNIA INTEGRATED WATER QUALITY SYSTEM (CIWQS): CIWQS is the statewide database that provides for mandatory electronic reporting as required in State and Regional Water Board-issued waste discharge requirements.

DATA SUBMITTER: A Data Submitter is an individual designated and authorized by the City’s Legally Responsible Official to enter spill data into the online CIWQS Sanitary Sewer System Database. A Data Submitter does not have the authority of a Legally Responsible Official to certify reporting entered into the online CIWQS Sanitary Sewer System Database.

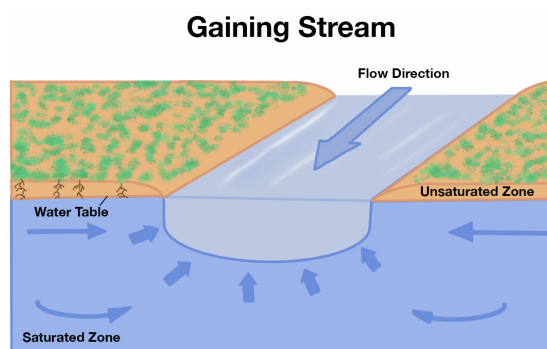
DRAINAGE CONVEYANCE SYSTEM: A drainage conveyance system is a publicly- or privately-owned separate storm sewer system, including but not limited to drainage canals, channels, pipelines, pump stations, detention basins, infiltration basins/facilities, or other facilities constructed to transport stormwater and non-stormwater flows.

ENVIRONMENTALLY SENSITIVE AREA: An environmentally sensitive area is a designated agricultural and/or wildlife area identified to need special natural landscape protection due to its wildlife or historical value.

EXFILTRATION: Exfiltration is the underground exiting of sewage from a sanitary sewer system through cracks, offset or separated joints, or failed infrastructure due to corrosion or other factors.

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.

HYDROLOGICALLY CONNECTED: Two waterbodies are hydrologically connected when one waterbody flows, or has the potential to flow, into the other waterbody. For the purpose of the SWRCB Order, groundwater is hydrologically connected to a surface water when the groundwater feeds into the surface water. See image, right. The surface waterbody in this example is termed a gaining stream as it gains flow from surrounding groundwater.



LATERAL (INCLUDING LOWER AND UPPER LATERAL): A lateral is an underground segment of smaller diameter pipe that transports sewage from a customer’s building or property (residential, commercial, or industrial) to the City’s main sewer line in a street or easement. Upper and lower lateral boundary definitions are subject to local jurisdictional codes and ordinances, or private system ownership. A lower lateral is the portion of the lateral located between the sanitary sewer system main, and either the property line, sewer clean out, curb line, established utility easement boundary, or other jurisdictional locations. An upper lateral is the portion of the lateral from the property line, sewer clean out, curb line, established utility easement boundary, or other jurisdictional locations, to the building or property.

LEGALLY RESPONSIBLE OFFICIAL: A Legally Responsible Official is an official representative, designated by the City, with authority to sign and certify submitted information and documents required by SWRCB ORDER WQ 2022-0103-DWQ.

MAINLINE SEWER: Refers to City wastewater collection system piping downstream of the sewer laterals that is not a private sewer lateral connection to a building.

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

NOTIFICATION OF A SPILL: Refers to the time at which the City becomes aware of a spill event through observation or notification by the public or other source.

NUISANCE: For the purpose of the SWRCB ORDER WQ 2022-0103-DWQ, a nuisance, as defined in Water Code section 13050(m), is anything that meets all of the following requirements:

- 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;
- 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; and

- 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 SPILL – Spills that are caused by blockages or other problems within a privately-owned lateral.

PRIVATE SANITARY SEWER SYSTEM: A private sanitary sewer system is a sanitary sewer system of any size that is owned and/or operated by a private individual, company, corporation, or organization. A private sanitary sewer system may or may not connect into a publicly owned sanitary sewer system.

PRIVATE SEWER LATERAL: A private sewer lateral is the privately-owned lateral that transports sewage from private property(ies) into a sanitary sewer system.

POTENTIAL TO DISCHARGE, POTENTIAL DISCHARGE: Potential to Discharge, or Potential Discharge, means any exiting of sewage from a sanitary sewer system which can reasonably be expected to discharge into a water of the State based on the size of the sewage spill, proximity to a drainage conveyance system, and the nature of the surrounding environment.

RECEIVING WATER: A receiving water is a water of the State that receives a discharge of waste.

SANITARY SEWER SYSTEM: A sanitary sewer system is a system that is designed to convey sewage, including but not limited to, pipes, maintenance holes, pump stations, siphons, wet wells, diversion structures and/or other pertinent infrastructure, upstream of a wastewater treatment plant headworks, including:

- Laterals owned and/or operated by the City;
- Satellite sewer systems; and/or
- Temporary conveyance and storage facilities, including but not limited to temporary piping, vaults, construction trenches, wet wells, impoundments, tanks, and diversion structures.

For purpose of the SWRCB ORDER WQ 2022-0103-DWQ, sanitary sewer systems include only systems owned and/or operated by the City.

SATELLITE SEWER SYSTEM: A satellite sewer system is a portion of a sanitary sewer system owned or operated by a different owner than the owner of the downstream wastewater treatment facility ultimately treating the sewage.

SEWAGE: Sewage, and its associated wastewater, is untreated or partially treated domestic, municipal, commercial and/or industrial waste (including sewage sludge), and any mixture of these wastes with inflow or infiltration of storm-water or groundwater, conveyed in a sanitary sewer system.

SEWER BACKUP A sanitary sewer spill resulting from a sanitary sewer system overflow, operational failure, and/or infrastructure failure in a publicly owned sewer system, with an appearance point and subsequent discharge into a structure.

SPILL: A spill is a discharge of sewage from any portion of a sanitary sewer system due to a sanitary sewer system overflow, operational failure, and/or infrastructure failure. Exfiltration of sewage is not considered to be a spill under the SWRCB ORDER WQ 2022-0103-DWQ if the exfiltrated sewage remains in the subsurface and does not reach a surface water of the State.

- **Category 1 Spill:**

A Category 1 spill is a spill of any volume of sewage from or caused by a sanitary sewer system regulated under the SWRCB ORDER WQ 2022-0103-DWQ that results in a discharge to:

- A surface water, including a surface water body that contains no flow or volume of water; or
- A drainage conveyance system that discharges to surface waters when the sewage is not fully captured and returned to the sanitary sewer system or disposed of properly.

Any spill volume not recovered from a drainage conveyance system is considered a discharge to surface water, unless the drainage conveyance system discharges to a dedicated stormwater infiltration basin or facility.

A spill from an City-owned and/or operated lateral that discharges to a surface water is a Category 1 spill; the City shall report all Category 1 spills per section 3.1 of Attachment E1 (Notification, Monitoring, Reporting and Recordkeeping Requirements) of SWRCB ORDER WQ 2022-0103-DWQ.

- **Category 2 Spill**

A Category 2 spill is a spill of 1,000 gallons or greater, from or caused by a sanitary sewer system regulated under the SWRCB ORDER WQ 2022-0103-DWQ that does not discharge to a surface water.

A spill of 1,000 gallons or greater that spills out of a lateral and is caused by a failure or blockage in the sanitary sewer system, is a Category 2 spill.

- **Category 3 Spill**

A Category 3 spill is a spill of equal to or greater than 50 gallons and less than 1,000 gallons, from or caused by a sanitary sewer system regulated under the SWRCB ORDER WQ 2022-0103-DWQ that does not discharge to a surface water. A spill of equal to or greater than 50 gallons and less than 1,000 gallons, that spills out of a lateral and is caused by a failure or blockage in the sanitary sewer system is a Category 3 spill.

- **Category 4 Spill**

A Category 4 spill is a spill of less than 50 gallons, from or caused by a sanitary sewer system regulated under the SWRCB ORDER WQ 2022-0103-DWQ that does not discharge to a surface water. A spill of less than 50 gallons that spills out of a lateral and is caused by a failure or blockage in the sanitary sewer system is a Category 4 spill.

TRAINING: Training is in-house or external education and guidance needed that provides the knowledge, skills, and abilities to comply with the SWRCB ORDER WQ 2022-0103-DWQ.

WASH DOWN WATER: Wash down water is water used to clean a spill area.

WASTE: Waste, as defined in Water Code section 13050(d), includes sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing, or processing operation, including waste placed within containers of whatever nature prior to, and for purposes of, disposal.

WATERS OF THE STATE: Waters of the State are surface waters or groundwater within boundaries of the state as defined in Water Code section 13050(e), in which the State and Regional Water Boards have authority to protect beneficial uses. Waters of the State include, but are not limited to, groundwater aquifers, surface waters, saline waters, natural washes

and pools, wetlands, sloughs, and estuaries, regardless of flow or whether water exists during dry conditions. Waters of the State include waters of the United States.

WATERS OF THE UNITED STATES: Waters of the United States are surface waters or waterbodies that are subject to federal jurisdiction in accordance with the Clean Water Act.

WATER QUALITY OBJECTIVE: A water quality objective is the limit or maximum amount of pollutant, waste constituent or characteristic, or parameter level established in statewide water quality control plans and Regional Water Boards' Basin Plans, for the reasonable protection of beneficial uses of surface waters and groundwater and the prevention of nuisance.

4. STATE REGULATORY REQUIREMENTS FOR ELEMENT 6, SPILL EMERGENCY RESPONSE PLAN

The Sewer System Management Plan (SSMP) must include an up to date Spill Emergency Response Plan (SERP) to ensure prompt detection and response to spills to reduce spill volumes and collect information for prevention of future spills. The SERP must include procedures to:

- Notify primary responders, appropriate local officials, and appropriate regulatory agencies of a spill in a timely manner;
- Notify other potentially affected entities (for example, health agencies, water suppliers, etc.) of spills that potentially affect public health or reach waters of the State;
- Comply with the notification, monitoring and reporting requirements of SWRCB ORDER WQ 2022-0103-DWQ, State law and regulations, and applicable Regional Water Board Orders;
- Ensure that appropriate staff and contractors implement the SERP and are appropriately trained;
- Address emergency system operations, traffic control and other necessary response activities;
- Contain a spill and prevent/minimize discharge to waters of the State or any drainage conveyance system;
- Minimize and remediate public health impacts and adverse impacts on beneficial uses of waters of the State;
- Remove sewage from the drainage conveyance system;
- Clean the spill area and drainage conveyance system in a manner that does not inadvertently impact beneficial uses in the receiving waters;
- Implement technologies, practices, equipment, and interagency coordination to expedite spill containment and recovery;
- Implement pre-planned coordination and collaboration with storm drain agencies and other utility agencies/departments prior, during, and after a spill event;
- Conduct post-spill assessments of spill response activities;
- Document and report spill events as required in SWRCB ORDER WQ 2022-0103-DWQ; and
- Annually, review and assess effectiveness of the Spill Emergency Response Plan, and update it as needed.
- The Sewer System Management Plan is available to the public at <http://www.cityofpleasantonca.gov/gov/depts/os/sewer/default.asp>.

5. SPILL EMERGENCY RESPONSE PLAN OBJECTIVES

The Spill Emergency Response Plan includes measures to protect public health and the environment. The City will respond to spills from its system(s) in a timely manner that minimizes water quality impacts and nuisance by:

- Immediately stopping the spill and preventing/minimizing a discharge to waters of the State;
- Intercepting sewage flows to prevent/minimize spill volume discharged into waters of the State;
- Thoroughly recovering, cleaning up and disposing of sewage and wash down water; and
- Cleaning publicly accessible areas while preventing discharges to waters of the State.

Additionally, City Staff will:

- Work safely;
- Properly document each spill event in a separate file including photos and/or video where applicable;
- Collect information for prevention of future spills;
- Minimize public contact with the spilled wastewater;
- Mitigate the impact of the spill;
- Meet the regulatory reporting requirements;
- Evaluate the causes of failure related to spills;
- Perform post-spill response evaluation for adherence to procedures and effectiveness of response; and
- Revise response procedures, modify maintenance practices or provide additional training based on the results from the debrief and failure analysis of spills, if needed.

6. SPILL DETECTION AND NOTIFICATION

ref. SWRCB ORDER WQ 2022-0103-DWQ, ATTACHMENT D, Element 6, Page D-6

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

6.1 LIFT STATION ALARMS

The City operates 11 wastewater lift stations. In the event of pumping failure, alarms are activated via the supervisory control and data acquisition (SCADA) system and City staff is contacted. To prevent overflow, wastewater being delivered to the lift station can either be pumped into a vacuum truck for disposal to a nearby sanitary sewer maintenance hole or bypassed around the station into the sanitary sewer system.

6.2 PUBLIC OBSERVATION

Public observation is the most common way that the City is notified of blockages and spills. Contact numbers and information for reporting sewer spills and backups are on the City Operations Services Department's website: <http://www.cityofpleasantonca.gov/gov/depts/os/contact.asp>.

During business hours, the telephone number for reporting sewer problems is the Operations Services Department customer service main line at (925) 931-5500. After business hours, the telephone number for reporting sewer problems is the Police Department main line at (925) 931-5100.

When calls are received the individual receiving the call will collect relevant information using the Sewer Service Call Report (Appendix C).

During business hours when the Operations Services Department receives calls, the Sewer Service Call Report will be filled out by customer service staff and attached to a work order that is generated by customer service staff. Customer service will immediately dispatch Utility Division staff.

During after-hours when the Police Department receives calls, information similar to that in the Sewer Service Call Report will be collected in their Computer Aided Dispatch system and can be provided to utility staff upon request as a report. Police department will immediately dispatch Utility Division staff. A work order is not generated by the Police Department and requires generation by Utilities Division staff at a later time.

After dispatch, Utility Division staff responds, investigates, takes appropriate actions, and completes the work order.

If the spill or backup is in the City's service area, the Sewer Crew (during business hours) or standby employee (after hours) will respond to the address of the complaint and do an investigation. If the complaint is not a spill, the crew members' findings and actions taken, if any, are logged into the Maintstar Computerized Maintenance Management System (CMMS). If the complaint is a spill, the crew member will complete the Sanitary Sewer Spill and Backup Response Workbook and then enter the findings and actions taken into the Maintstar.

6.3 CITY STAFF OBSERVATION

City staff conducts periodic inspections of its sewer system facilities as part of their routine activities. Any problems noted with the sewer system facilities are reported to appropriate City staff that, in turn, responds to emergency situations. Work orders are issued to correct non-emergency conditions.

6.4 CONTRACTOR OBSERVATION

Contractors working on the City sewer system will be informed of contractor spill response procedures by being provided the form included in Appendix D. The following procedures are to be followed in the event that a contractor/plumber causes or witnesses a sanitary sewer spill.

1. Immediately notify the City Operations Services Department at (925) 931-5500 and provide the following information if available:
 - a. Date, time contractor first noticed the spill
 - b. Description of the contractor's observation, including any information regarding whether the spill has reached surface waters or a drainage conveyance system
 - c. Contractor's contact information
2. Protect storm drains.
3. Protect the public.
4. Direct ALL media and public relations requests to the Managing Director of Utilities and Environmental Services at (925) 931-5500.

6.5 NO OBSERVATION

If there are no witnesses or no call was received for a spill, the City staff will contact nearby residences or business owners in the vicinity of the spill, in an attempt to obtain information that brackets a given start time that the

spill began. This information will be collected and documented on the Sanitary Sewer Spill Report in the Sanitary Sewer Spill/Backup Response Workbook.

7. SPILL RESPONSE PROCEDURES (Ref. SWRCB ORDER WQ 2022-0103-DWQ, ATTACHMENT D Element 6 page D-6)

7.1 SEWER SPILL/BACKUP RESPONSE SUMMARY

If it is not possible that the overflow/backup is due to a failure in the City-owned/maintained sewer lines the Sewer Crew performs the following:

- Follows the instructions in the Sanitary Sewer Overflow/Backup Response Workbook.
- If the customer is not available the Sewer Crew completes the Door Hanger and leaves it on the customer's door along with the Sewer Spill Reference Guide Pamphlet (Appendix E).
- If the customer is available the Sewer Crew:
 - Explains that the blockage is in the customer's lateral and the City does not have legal authority to maintain or perform work on privately owned laterals.
 - Recommends to the customer that they hire a contractor to clear their line.
 - Gives the customer the Sewer Spill Reference Guide pamphlet.

If it is possible that the overflow/backup is due to a failure in the City-owned/maintained sewer lines the Sewer Crew follows the instructions in the Sanitary Sewer Overflow/Backup Workbook, and after completion of response activities, forwards the completed workbook to the Chief Utility Systems Operator.

- The Chief Utility System Operator 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 Sewer Crew provides the customer with forms and information as indicated in the Sanitary Sewer Overflow/Backup Workbook.

- The Chief Utility System Operator notifies the City Attorney or designee of incident.
- The City Attorney or designee:
 - Reviews incident reports, claim form and other incident information.
 - Communicates with claimant as appropriate.
 - Administers the claim to closure.

7.2 FIRST RESPONDER PRIORITIES

The first responder's priorities are:

- Prompt response to spills.
- To follow safe work practices.
- To respond promptly with the appropriate and necessary equipment.
- To reduce spill volume and 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 Chief Utility Systems Operator including noting spills needing additional resources, and/or impacting environmentally sensitive areas.
- To return the spilled sewage to the sewer system.
- To restore the area to its original condition (or as close as possible). Collect information for the prevention of future spills.
- Properly document the spill and response activities on the forms provided in the Sanitary Sewer Spill/Backup Response Workbook, including photos and/or video where practicable.

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 City personnel responding to a sewer system event are not familiar with potential safety hazards peculiar 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 beginning response activities.

If the first responders encounter access restrictions or unsafe conditions that prevent its compliance with spill response requirements or monitoring requirements in SWRCB ORDER WQ 2022-0103-DWQ, the City will provide written documentation of access restrictions and/or safety hazards in the corresponding required report.

7.4 INITIAL RESPONSE

The first responder must respond to the site of the spill/backup and visually check for potential sewer stoppages. The first responder will:

- Note arrival time at the site of the spill/backup.
- Verify the existence of a public sewer system spill or backup.
- Identify and assess the affected area and extent of spill.
- Assess the spill location(s) and spread using photography, global positioning system (GPS), and other best available tools.
- Contact caller if time permits.
- Document the spill according to the requirements described in Section 10 of this SERP, including taking photos and/or videos of overflowing maintenance hole(s)/cleanout(s).
- Take steps to contain, recover, and return the spill to the sanitary sewer as feasible. For procedures refer to the Sanitary Sewer Spill/Backup Response Workbook.
- Protect surface waters to the extent practicable. For procedures refer to the Sanitary Sewer Spill/Backup Response Workbook.

- Implement pre-planned coordination and collaboration with storm drain agencies and other utility agencies/departments prior, during, and after a spill event.

7.5 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.
- Vacuum retrieve sewage whenever practicable.
- Pump around the blockage/pipe failure.

Containment efforts will be documented. For procedures refer to the Sanitary Sewer Spill/Backup Response Workbook.

7.6 RESTORE FLOW

Using the appropriate cleaning equipment, set up downstream of the blockage and hydro-clean upstream from a clear maintenance hole. 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, immediately contact the Chief Utility Systems Operator. For procedures refer to the Sanitary Sewer Spill/Backup Response Workbook.

7.7 EQUIPMENT

This section provides a list of specialized equipment that may be used to support this Sewer Spill Emergency Response Plan.

- *Closed Circuit Television (CCTV) Inspection Unit* – A CCTV Inspection Unit is required to determine the root cause for all spills from gravity sewers.
- *Camera* -- A digital or disposable camera (photo, video or phone) is required to record the conditions upon arrival, during clean up, and upon departure.
- *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 a spill.
- *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 spill event.
- *Air plugs, sandbags and plastic mats*

- *Spill 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 City server and on the Smart SOP mobile application.

8. RECOVERY AND CLEANUP (Ref. SWRCB ORDER WQ 2022-0103-DWQ, Element 6, ATTACHMENT D, Page D-6)

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 spill recovery and cleanup procedures are described in the following sections.

8.1 ESTIMATE THE FLOW AND VOLUME OF SPILLED SEWAGE

A variety of approaches exist for estimating the volume of a sanitary sewer spill. The Sewer Crew members should use the method most appropriate to the sewer overflow in question and reference the Sanitary Sewer Spill/Backup Response Workbook which provides four (4) methods:

- Eyeball Estimation Method
- Flow Out of Maintenance hole Vent or Pickhole Method
- Area/Volume Method
- Upstream Connections Method

In addition, the following will be documented on the Sewer Spill Report form:

1. Description, photographs, and GPS coordinates of the system location where the spill originated. If a single spill event results in multiple appearance points, provide GPS coordinates for the appearance point closest to the failure point and describe each additional appearance point in the spill appearance point explanation field;
2. Estimated total spill volume exiting the system;
3. Description and photographs of the extent of the spill and spill boundaries;
4. Did the spill reach a drainage conveyance system? If yes:
 - Description of the drainage conveyance system transporting the spill;
 - Photographs of the drainage conveyance system entry location(s);
 - Estimated spill volume that reached the drainage conveyance system;
 - Estimated spill volume fully recovered from the drainage conveyance system;
 - Estimated spill volume remaining within the drainage conveyance system
 - Estimated spill volume discharged to a groundwater infiltration basin or facility, if applicable;
 - Estimated spill travel time from the point of entry into the drainage conveyance system to the point of discharge into the receiving water.
5. Estimated total spill volume recovered.

8.2 RECOVERY OF SPILLED SEWAGE

Vacuum up and/or pump the spilled sewage and wash down water and discharge it back into the sanitary sewer system. Thoroughly recover and dispose of sewage and wash down water.

8.3 CLEAN-UP AND DISINFECTION

Clean up procedures will be implemented to reduce the potential for human health issues and adverse environmental impacts associated with a spill 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 City staff, a cleanup contractor will be used.

Private Property

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 accessible 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 City system failure, the property owner can call out a water damage restoration contractor to complete the cleanup and restoration. In both cases, property owners may submit a 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 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 spills greater than or equal to 1,000 gallons. For spills less than 1000 gallons, contact the County of Alameda Department of Environmental Health for direction.

Wet Weather Modifications

Collect all signs of sewage solids and sewage-related material either by protected hand or with the use of rakes and brooms. 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 of Alameda Department of Environmental Health instructions and directions regarding

placement and language of public warnings will be followed. Additionally, the Chief Utilities Systems Operator or designee in consultation with the Utilities Division Manager 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 the County of Alameda Department of Environmental Health or the Chief Utilities Systems Operator or designee in consultation with the Utilities Division Manager.

Creeks, streams and beaches that have been contaminated as a result of a spill will be posted at visible access locations until the risk of contamination has subsided to acceptable background bacteria levels. Document the number and location of posted signs. The area and warning signs, once posted, will be checked every day to ensure that they are still in place. Photographs 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 Managing Director of Utilities and Environmental Services or their designee will provide the media with all relevant information.

9. WATER QUALITY (*Ref. SWRCB ORDER WQ 2022-0103-DWQ, Element 6, Attachment A - DEFINITIONS page A-5, Attachment E1 2.3 through 2.4 pages E1-5 through E1-8*)

9.1 SURFACE WATERS OF CONCERN

Refer to Appendix F for a map of surface water bodies in the City's service area.

9.2 WATER QUALITY SAMPLING AND TESTING

For sewage spills in which an estimated 50,000 gallons or greater are discharged into a surface water, the City will conduct the following water quality sampling as soon as possible but no later than **18 hours** after the City's knowledge of a potential discharge to a surface water. Collect one water sample, each day of the duration of the spill, at:

- The DCS-001 location as described in section 9.5 (Receiving Water Sampling Locations) below, if sewage discharges to a surface water via a drainage conveyance system; and/or
- Each of the three receiving water sampling locations in section 9.5 (Receiving Water Sampling Locations) below;

If the receiving water has no flow during the duration of the spill, the City must report "No Sampling Due To No Flow" for its receiving water sampling locations.

The City staff collecting the samples will complete the Chain of Custody prior to transferring ownership of the samples to Alpha Labs.

Alpha Labs shall analyze the collected receiving water samples for the following constituents:

- Ammonia, and
- Appropriate bacterial indicator(s) per the San Francisco Region Basin Plan water quality objectives (see table below for detail):
 - Fecal coliform

- Enterococcus
- E. coli

Water Quality Objectives for Bacteria^a				
<i>ref. San Francisco Bay Basin (Region 2) Water Quality Control Plan (Basin Plan), November 5, 2019</i>				
Beneficial Use	Fecal Coliform^a (MPN/100mL)	Total Coliform^a (MPN/100mL)	Enterococcus (CFU/100mL)^g	E. coli (CFU/100mL)^g
Water Contact Recreation			geometric mean < 30 STV < 110	geometric mean < 100 STV < 320
Non-contact Water Recreation ^d	mean < 2000 90th percentile < 4000	geometric mean < 100		
Municipal Supply: Surface Water ^e	geometric mean < 20			
Municipal Supply: Ground-water		< 1.1 ^f		
<p>Notes:</p> <p>a. Based on a minimum of five consecutive samples equally spaced over a 30-day period.</p> <p>b. Source: National Shellfish Sanitation Program.</p> <p>c. Based on a five-tube decimal dilution test or 300 MPN/100 ml when a three-tube decimal dilution test is used.</p> <p>d. Source: Report of the Committee on Water Quality Criteria, National Technical Advisory Committee, 1968.</p> <p>e. Source: California Department of Public Health recommendation.</p> <p>f. Based on multiple tube fermentation technique; equivalent test results based on other analytical techniques, as specified in the National Primary Drinking Water Regulation, 40 CFR, Part 141.21(f), revised June 10, 1992, are acceptable.</p> <p>g. Numeric values are from Part 3 of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California based on Section 7958 of Title 17 of the California Code of Regulations, 69FR 67217 et seq., and 40 CFR Part 131.41 (effective date December 16, 2004). The Enterococcus objective applies to marine and estuarine waters where the salinity is greater than 1 part per thousand more than 5 percent of the time. The E. coli objective applies to freshwaters where the salinity is equal to or less than 1 part per thousand 95 percent or more of the time. The geometric mean for enterococcus and E. coli is computed weekly for all samples in a 6-week interval. There is no fecal coliform objective to protect water contact recreation for inland surface waters, enclosed bays, or estuaries, but a fecal coliform objective protecting this use remains in the California Ocean Plan. The STV is the statistical threshold value and shall not be exceeded by more than 10 percent of the samples collected in a calendar month.</p>				

Dependent on the receiving water(s), sampling of bacterial indicators shall be sufficient to determine post-spill (after the spill) compliance with the water quality objectives and bacterial standards of the California Ocean Plan or the California Inland Surface Water Enclosed Bays, and Estuaries Plan, including the frequency and/or number of post-spill receiving water samples as may be specified in the applicable plans.

The City shall collect and analyze additional samples as required by the applicable Regional Water Board Executive Officer or designee.

9.3 LAB SELECTION

Analytical Lab

Samples collected for spill response and background monitoring purposes will be analyzed at Alpha Labs, which is accredited through California’s Department of Public Health Environmental Laboratory Accreditation Program (ELAP). ELAP provides evaluation and accreditation of environmental testing laboratories to ensure the quality of analytical data used for regulatory purposes to meet the requirements of the State's drinking water, wastewater, shellfish, food, and hazardous waste programs. The State agencies that monitor the environment use the analytical data from these accredited labs. The ELAP-accredited laboratories have demonstrated capability to analyze environmental samples using approved methods.

Getting Samples to the Lab

At all times, sample hold times identified below will be observed in accordance with the following:

Analytical Parameter	Maximum Holding Time	Required Container Type	Required Preservative	Minimum Amount
Ammonia (NH ₃ as N); SM 4500NH ₃ B/C or B/G	28 days	Plastic / Glass	H ₂ SO ₄ pH <2 +0-6°C	200 mL
Coliform, Total / Fecal; SM 9221 B/E	8 hours – wastewater/storm- water 30 hours – drinking water	Plastic (sterile)	Na ₂ S ₂ O ₃ + 0-10°C; No regulatory temp. req. for drinking water)	100 mL
Coliform, Total / E.Coli; SM 9223 B (Present/Ab- sent or Quantitray)	8 hours	Plastic (sterile)	Na ₂ S ₂ O ₃ + 0-10°C; No regulatory temp. req. for DW	100 mL
Enterococcus by Enter- olert	8 hours	Plastic (sterile)	Na ₂ S ₂ O ₃ + 0-10°C	100 mL

Once samples are collected, they will be transported by the Sewer Crew to the lab to be processed.

9.4 WATER QUALITY ANALYSIS SPECIFICATIONS

Spill monitoring must be representative of the monitored activity (40 Code of Federal Regulations section 122.41(j)(1)).

Sufficiently Sensitive Methods

Sample analysis must be conducted according to sufficiently sensitive test methods approved under 40 Code of Federal Regulations Part 136 for the sample analysis of pollutants. For the purposes of SWRCB ORDER WQ 2022-0103-DWQ, a method is sufficiently sensitive when the minimum level of the analytical method approved under 40 Code of Federal Regulations Part 136 is at or below the receiving water pollutant criteria.

Environmental Laboratory Accreditation Program-Accredited Laboratories

The analysis of water quality samples required per SWRCB ORDER WQ 2022-0103-DWQ must be performed by a laboratory that has accreditation pursuant to Article 3(commencing with section 100825) of

Chapter 4 of Part 1 of Division 101 of the Health and Safety Code. (Water Code section 13176(a).) The State Water Board accredits laboratories through its Environmental Laboratory Accreditation Program (ELAP).

9.5 RECEIVING WATER SAMPLING LOCATIONS

The City shall collect receiving water samples at the following locations.

Sampling of Flow in Drainage Conveyance System (DCS) Prior to Discharge

Sampling Location	Sampling Location Description
DCS-001	A point in a drainage conveyance system before the drainage conveyance system flow discharges into a receiving water.

Receiving Surface Water Sampling (RSW)¹

Sampling Location	Sampling Location Description
RSW-001: Point of Discharge	A point in the receiving water where sewage initially enters the receiving water.
RSW-001U: Upstream of Point of Discharge	A point in the receiving water, upstream of the point of sewage discharge, to capture ambient conditions absent of sewage discharge impacts.
RSW-001D: Downstream of Point of Discharge	A point in the receiving water, downstream of the point of sewage discharge, where the spill material is fully mixed with the receiving water.

9.6 STREAM VELOCITY MEASUREMENTS

If sampling is performed after the spill has stopped, the velocity of the impacted surface water must be determined to estimate spill travel time and select an accurate Downstream sample location. One way to measure the spill travel time is to use a velocity probe (such as a Global Water FP111-S Flow Probe) to determine the rate of flow in the water body. In cases where a water velocity probe is used, the manufacturer’s instructions will be followed.

9.7 SAMPLE TYPES

Grab Samples

Grab samples are appropriate for the characterization of surface waters at a particular time and place, to provide information about minimum and maximum concentrations, to allow for the collection of variable sample volume.

Grab samples may be collected directly into the sample container, or a clean decontaminated intermediate container may be used if a wading sample is not possible or safe. If an intermediate container is used, when in the

¹ The City must use its best professional judgment to determine the upstream and downstream distances based on receiving water flow, accessibility to upstream/downstream waterbody banks, and size of visible sewage plume.

field, double rinse the sampling device (bucket, automatic sampler) with sample water prior to collecting the sample and be sure to discard rinse water downstream of where sample will be collected. If samples are collected in a bucket and distributed a consolidation collection container, swirl the contents of the bucket as it is being poured into the consolidation collection container to avoid settling of solids (and pour in back-and-forth pattern – e.g., 1-2-3-3-2-1).

Field Blanks

Field Blanks are used to evaluate the potential for contamination of a sample by site contaminants from a source not associated with the sample collected (e.g., airborne dust, etc.). Sterile, deionized water is taken into the field in a sealed container. This is the stock water. The stock water is then poured into the sample container. The containers and sample submission forms are labeled as “Field Blank.” The same template selected for the test samples should be used. Field blanks are subject to the same holding time limitations as samples. The appropriate FIELD QC box on the sample Chain of Custody form should be checked.

9.8 SAMPLE LABELING AND CHAIN OF CUSTODY PROCEDURES

At a minimum, the following grab samples will be collected:

- Field Blank
- Upstream: A point in the receiving water, upstream of the point of sewage discharge, to capture ambient conditions absent of sewage discharge impacts.
- Source: A point in the receiving water where sewage initially enters the receiving water.
- “Downstream” of spill: A point in the receiving water, downstream of the point of sewage discharge, where the spill material is fully mixed with the receiving water. This location will vary with the velocity of the surface water to be sampled (see *Section 9.6*).
- A point in a drainage conveyance system before the drainage conveyance system flow discharges into a receiving water.

Sample labels shall be completed for each sample, using waterproof ink.

Photos or video of each sample location will be taken, properly labeled with date, time, and view direction and a map of the photo locations completed. Photos and videos shall include relevant landmarks to identify sampling locations and their surroundings.

Due to the evidentiary nature of samples collected during enforcement investigations, possession must be traceable from the time the samples are collected until they are analyzed. To maintain and document sample possession, a Surface Water Sample Chain of Custody Record (see Sewer Spill/Backup Response Workbook) must be completed. A sample is under custody if:

- It is in your possession, or
- It is in your view, after being in your possession, or
- It was in your possession and under your control to prevent tampering, or
- It is in a designated secure area.

As few people as possible should handle samples. The person taking the samples is personally responsible for the care and custody of the samples collected until they are transferred or dispatched properly.

Samples are accompanied by a chain of custody record. When transferring the possession of samples, the individuals relinquishing and receiving will sign, date, and note the time on the record. This record documents sample custody transfer from the sampler, often through another person, to the analyst at the laboratory. The samples are typically transferred to the sample-receiving custodian at the laboratory.

9.9 SAMPLING EQUIPMENT

The following are examples of sampling equipment used by the City:

- Sampling pole with fixed container
- Sampling pole with removable container
- Sampling pail and rope
- Stream velocity meter
- Grab-n-Go Sample Kit containing, at a minimum:
 - Cooler
 - Ice pack
 - Latex gloves
 - Safety glasses
 - Waterproof pen
 - Sample bottle labels (minimum 50)
 - Distilled water for field blanks
 - Sample bottle (10 for each constituent)

The kit shall be inspected quarterly by the Chief Utilities System Operator. Additionally, any City employee utilizing the kit is responsible for decontaminating sampling equipment and replenishing the kit.

9.10 DECONTAMINATION PROCEDURES

Removing or neutralizing contaminants from sampling equipment minimizes the likelihood of sample cross contamination, reduces or eliminates transfer of contaminants to clean areas, and prevents the mixing of incompatible substances.

Gross contamination can be removed by physical decontamination procedures. These abrasive and non-abrasive methods include the use of brushes, air and wet blasting, and high and low pressure water cleaning.

The decontamination procedures for the sample types and sampling equipment (other than sample bottles, which are provided to Sewer Crew in a “ready to be used” condition by the lab) used at the City may be summarized as follows:

1. Physical removal
2. Tap water rinse
3. Air dry

9.11 SAMPLING PROCEDURES

9.11.1 Sample Location and Identification Procedures

Samples will be collected by the Sewer Crew. It is impossible to establish hard and fast rules concerning sampling locations. However, the following general guidelines should be applied whenever surface waters are sampled:

- The sampling location should be far enough upstream or downstream of confluences or point sources so that the surface water and spill volume is well mixed. Natural turbulence can be used to provide a good mixture.
- Samples should be collected at a location where the velocity is sufficient to prevent deposition of solids, and to the extent practical, should be in straight reach having uniform flow. All flow in the reach should be represented, so divided flow areas should be avoided and samples should be taken towards the middle of the reach where feasible.
- Sampler must always stand downstream of the collection vessel, and sample "into the current." Care must be taken to avoid introducing re-suspended sediment into the sample.

9.11.2 Surface Water Sampling Standard Operating Procedure (SOP)

The Surface Water Sampling SOP in the Sewer Spill/Backup Response Workbook, provides step-by-step procedures to collect samples and deliver them for analysis in accordance with SWRCB ORDER WQ 2022-0103-DWQ, Element 6.

9.11.3 Follow Up Sampling

Sampling will be repeated every 24 hours, or as directed by the RWQCB or the County of Alameda Department of Environmental Health, until such time as one of the following criteria have been met:

- The County of Alameda Department of Environmental Health or the RWQCB indicates follow up sampling is no longer required, or
- Both the ammonia and bacteria levels downstream are approximately equal to or less than the upstream levels.

9.12 SAFETY AND ACCESS EXCEPTIONS

If the City encounters access restrictions or unsafe conditions that prevents its compliance with spill response requirements or monitoring requirements in SWRCB ORDER WQ 2022-0103-DWQ, the City shall provide documentation of access restrictions and/or safety hazards in the corresponding required report.

Personal safety of staff engaged in any fieldwork activity (e.g. in transit, walking or hiking, and any field activities while at the sample site) is of primary importance. Staff should never place themselves in dangerous or risky situations. Any hazards that are known by field personnel should be communicated to other members of the field crew.

Fieldwork should be postponed if there is indication that engagement in the field activity could cause bodily harm. Working during lightning storms, in heavy vegetation or poison oak, near aggressive wildlife or domestic animals, traversing steep or rugged terrain, unstable slopes or creek banks, near swiftly moving water or potential flash flood conditions, or during snowy weather is not considered "normal risk." If any member of the field crew is

uncomfortable with a reasonable self-determined hazardous field condition, it is that person's responsibility to bring this to the attention of the onsite field supervisor or their supervisor. A "reasonable self-determined hazardous field condition" is defined as other than normal risk. Supervisors shall not dismiss any person's spoken concerns that field conditions are too hazardous to complete the work assignment.

The person taking the samples must have adequate protection, including protective clothing. They must wear gloves, as protection against chemical and/or bacteriological hazards, while they are sampling or handling samples that are known or suspected to be hazardous (e.g. visible solids or sheens, downstream from sewage spills, etc.), or if hands have open wounds. The type of gloves worn shall be determined by the sampling circumstance and type of pollutants expected – for instance longer gloves are needed when samples must be taken well below the surface.

When in a boat or wading in a stream and where the danger of drowning exists, a personal floatation device shall be worn at all times in addition to following the other requirements of Title 8 CCR 1602 Working Over or Near Water. Other protective measures shall be taken in accordance with City safety procedures.

Upon arrival at a sampling site, safety equipment such as signs, cones, lights, etc. shall be set out as appropriate. Vehicles shall be parked in locations and directions to minimize traffic disruption and avoid sample contamination. Photos should be ultimately taken of the placement of all safety equipment and signage.

The following guidelines apply to all fieldwork by City staff.

- No sample or measurement is worth the risk of injury.
- All staff shall use proper personnel protective gear as appropriate for the incident (e.g., life preservers, gloves, goggles, etc.)
- Field sampling crews should consist of at least two members unless otherwise approved by a supervisor.
- Be conscious of the whereabouts of rattlesnakes, mountain lions, and other dangerous animals.
- Open body wounds are entry sites for infection; take the necessary precautions for self-protection.
- If there is storm activity in the work area, wait for safer conditions to develop or postpone the sampling.
- Do not sample at night without approval from your supervisor.
- Do not trespass on private property or posted restricted public lands without prior permission and written approval from property owner or administrator.
- If strange or suspicious looking people are in the work area, either wait for them to leave or postpone the work to a later time. Do not force confrontations with strangers and back away from any confrontations with the public. Be courteous and understanding of public concerns of the situation.
- Take the necessary precautions against exposure to harmful weather conditions such as heat, wind, snow, cold, rain, etc.
- Carefully evaluate a given on-site situation to determine if the task can be performed safely.
- Streams will not be entered unless the responding employees have the necessary protective footwear (e.g. rubber boots, waders) and the footwear does not pose an additional risk to worker safety (e.g. waders filling with water if the employee slips in the stream).
- Streams will not be entered if deemed unsafe to do so by the most senior employee on the responding crew and if entered, will only be done so in accordance with Title 8 CCR Section 1602 Work Over or Near Water.

9.13 SPILL TECHNICAL REPORT: Spill Technical Report for Individual Category 1 Spill in which 50,000 Gallons or Greater Discharged into a Surface Water

For any spill in which 50,000 gallons or greater discharged into a surface water, **within 45 calendar days** of the spill end date, the Chief Utility System Operator shall submit a Spill Technical Report to the online CIWQS Sanitary Sewer System Database. The Spill Technical Report, at minimum, must include the following information:

1. Spill causes and circumstances, including at minimum:
 - Complete and detailed explanation of how and when the spill was discovered;
 - Photographs illustrating the spill origin, the extent and reach of the spill, drainage conveyance system entrance and exit, receiving water, and post-cleanup site conditions;
 - Diagram showing the spill failure point, appearance point(s), the spill flow path, and ultimate destinations;
 - Detailed description of the methodology employed, and available data used to calculate the discharge volume and, if applicable, the recovered spill volume;
 - Detailed description of the spill cause(s);
 - Description of the pipe material, and estimated age of the pipe material, at the failure location;
 - Description of the impact of the spill;
 - Copy of original field crew records used to document the spill; and
 - Historical maintenance records for the failure location.
2. City's response to the spill:
 - Chronological narrative description of all actions taken by the City to terminate the spill;
 - Explanation of how the Sewer System Management Plan Spill Emergency Response Plan was implemented to respond to and mitigate the spill; and
 - Final corrective action(s) completed and a schedule for planned corrective actions, including:
 - Local regulatory enforcement action taken against an illicit discharge in response to this spill, as applicable,
 - Identifiable system modifications, and operation and maintenance program modifications needed to prevent repeated spill occurrences, and
 - Necessary modifications to the Emergency Spill Response Plan to incorporate lessons learned in responding to and mitigating the spill.
3. Water Quality Monitoring, including at minimum:
 - Description of all water quality sampling activities conducted;
 - List of pollutant and parameters monitored, sampled and analyzed; as required in Section 9.2.
 - Laboratory results, including laboratory reports;
 - Detailed location map illustrating all water quality sampling points; and
 - Other regulatory agencies receiving sample results (if applicable).
5. Evaluation of spill impact(s), including a description of short-term and long-term impact(s) to beneficial uses of the surface water.

9.14 TRAINING

Training will be provided in accordance with the table below:

Surface Water Sampling Training Program	
Who Is Trained to Collect Surface Water Samples?	Sewer Crew
Training Curriculum	At a minimum, training shall include: <ul style="list-style-type: none"> • Water quality procedures (this Section 9) • Sampling technique, including hands on practice • Sampling equipment calibration, use and decontamination procedures, including hands on practice • Sampling safety • Completion of the Surface Water Sampling Report and Chain of Custody
Training Documentation	Attendees shall be required to sign-in to all training on the appropriate forms used by the City.
Refresher Training Frequency	Annual
Who is Responsible for Ensuring Training Occurs?	Training and Emergency Services Manager
Required Training Records	Employee training sign in log
Who is Responsible for Maintaining Records?	Training and Emergency Services Manager

10. NOTIFICATION, REPORTING, MONITORING AND RECORDKEEPING REQUIREMENTS

ref. ORDER WQ 2022-0103-DWQ Attachment E-1 and E-2

10.1 REPORTING REQUIREMENTS

All reporting required in SWRCB ORDER WQ 2022-0103-DWQ must be submitted electronically to the online CIWQS Sanitary Sewer System Database (<https://ciwqs.waterboards.ca.gov>), unless specified otherwise. Electronic reporting may solely be conducted by a Legally Responsible Official or Data Submitter(s) previously designated by the Legally Responsible Official, as required in section 5.8 (Designation of Data Submitters) of the SWRCB ORDER WQ 2022-0103-DWQ.

The City shall report any information that is protected by the Homeland Security Act, by email to SanitarySewer@waterboards.ca.gov, with a brief explanation of the protection provided by the Homeland Security Act for the subject report to be protected from unauthorized disclosure and/or public access, and for official Water Board regulatory purposes only.

Refer to Appendix A for detailed reporting requirements by spill category.

10.2 REGULATOR REQUIRED NOTIFICATIONS

10.2.1 Spill Category 1: Spills to Surface Waters

Spill Requirement	Due	Method
Notification	<p>Within two (2) hours of the City’s knowledge of a Category 1 spill of 1,000 gallons or greater, discharging or threatening to discharge to surface waters notify the California Office of Emergency Services and obtain a notification control number.</p>	<p>California Office of Emergency Services at: (800) 852-7550 (Section 1 of Attachment E1 of the SWRCB ORDER WQ 2022-0103-DWQ)</p>
Monitoring	<ul style="list-style-type: none"> • Conduct spill-specific monitoring; • Conduct water quality sampling of the receiving water within 18 hours of initial knowledge of spill of 50,000 gallons or greater to surface waters. 	<p>(Section 2 of Attachment E1 of the SWRCB ORDER WQ 2022-0103-DWQ)</p>
Reporting	<ul style="list-style-type: none"> • Submit Draft Spill Report within three (3) business days of the City’s knowledge of the spill; • Submit Certified Spill Report within 15 calendar days of the spill end date; • Submit Technical Report within 45 calendar days after the spill end date for a Category 1 spill in which 50,000 gallons or greater discharged to surface waters; and • Submit Amended Spill Report within 90 calendar days after the spill end date. 	<p>(Section 3.1 of Attachment E1 of the SWRCB ORDER WQ 2022-0103-DWQ)</p>

10.2.2 Spill Category 2: Spills of 1,000 Gallons or Greater That Do Not Discharge to Surface Waters

Spill Requirements	Due	Method
Notification	Within two (2) hours of the City's knowledge of a Category 2 spill of 1,000 gallons or greater threatening to discharge to waters of the State: Notify California Office of Emergency Services and obtain a notification control number.	California Office of Emergency Services at: (800) 852-7550 (Section 1 of Attachment E1 of the SWRCB ORDER WQ 2022-0103-DWQ)
Monitoring	Conduct spill-specific monitoring.	(Section 2 of Attachment E1 of the SWRCB ORDER WQ 2022-0103-DWQ)
Reporting	<ul style="list-style-type: none"> • Submit Draft Spill Report within three (3) business days of the City's knowledge of the spill; • Submit Certified Spill Report within 15 calendar days of the spill end date; and • Submit Amended Spill Report within 90 calendar days after the spill end date. 	(Section 3.2 of Attachment E1 of the SWRCB ORDER WQ 2022-0103-DWQ)

10.2.3 Spill Category 3: Spills of Equal or Greater than 50 Gallons and Less than 1,000 Gallons That Does Not Discharge to Surface Waters

Spill Requirements	Due	Method
Notification	Not Applicable	Not Applicable
Monitoring	Conduct spill-specific monitoring.	(Section 2 of Attachment E1 of the SWRCB ORDER WQ 2022-0103-DWQ)
Reporting	<ul style="list-style-type: none"> • Submit monthly Certified Spill Report to the online CIWQS Sanitary Sewer System Database within 30 calendar days after the end of the month in which the spills occur; and • Submit Amended Spill Reports within 90 calendar days after the Certified Spill Report due date. 	(Section 3.3 and 3.5 of Attachment E1 of the SWRCB ORDER WQ 2022-0103-DWQ)

10.2.4 Spill Category 4: Spills Less Than 50 Gallons That Do Not Discharge to Surface Waters

Spill Requirements	Due	Method
Notification	Not Applicable	Not Applicable
Monitoring	Conduct spill-specific monitoring.	(Section 2 of Attachment E1 of the SWRCB ORDER WQ 2022-0103-DWQ)
Reporting	<ul style="list-style-type: none"> • If, during any calendar month, Category 4 spills occur, certify monthly, the estimated total spill volume exiting the sanitary sewer system, and the total number of all Category 4 spills into the online CIWQS Sanitary Sewer System Database, within 30 days after the end of the calendar month in which the spills occurred. • Upload and certify a report, in an acceptable digital format, of all Category 4 spills to the online CIWQS Sanitary Sewer System Database, by February 1st after the end of the calendar year in which the spills occur. 	(Section 3.4, 3.6, 3.7 and 4.4 of Attachment E1 of the SWRCB ORDER WQ 2022-0103-DWQ)

10.2.5 City Owned and/or Operated Lateral Spills That Do Not Discharge to Surface Waters

Spill Requirements	Due	Method
Notification	<p>Within two (2) hours of the City’s knowledge of a spill of 1,000 gallons or greater, from an City-owned and/or operated lateral, discharging or threatening to discharge to waters of the State:</p> <p>Notify California Office of Emergency Services and obtain a notification control number.</p> <p>Not applicable to a spill of less than 1,000 gallons.</p>	<p>California Office of Emergency Services at: (800) 852-7550</p> <p>(Section 1 of Attachment E1 of the SWRCB ORDER WQ 2022-0103-DWQ)</p>
Monitoring	<p>Conduct visual monitoring.</p>	<p>(Section 2 of Attachment E1 of the SWRCB ORDER WQ 2022-0103-DWQ)</p>
Reporting	<ul style="list-style-type: none"> • Upload and certify a report, in an acceptable digital format, of all lateral spills (that do not discharge to a surface water) to the online CIWQS Sanitary Sewer System Database, by February 1st after the end of the calendar year in which the spills occur. • Report a lateral spill of any volume that discharges to a surface water as a Category 1 spill. 	<p>(Sections 3.6, 3.7 and 4.4 of Attachment E1 of the SWRCB ORDER WQ 2022-0103-DWQ)</p>

10.3 COMPLAINT RECORDS

The City maintains records of all complaints received whether or not they result in sanitary sewer overflows. These complaint records include, but are not limited to, records documenting how the City responded to notifications of spills. Each complaint record must, at a minimum, include the following information:

- Date, time, and method of notification,
- Date and time the complainant first noticed the spill, if available,
- Narrative description of the complaint, including any information the caller provided regarding whether the spill has reached surface waters or a drainage conveyance system, if available,
- Complainant’s contact information, if available, and
- Final resolution of the complaint;

All complaint records will be maintained for a minimum of five years whether or not they result in a spill. Spill files (field notes, spill/Backup Response Workbook) are kept under the direction and control of the Chief Utility System Operator and via work orders.

11. POST-SPILL ASSESSMENTS OF SPILL RESPONSE ACTIVITIES

(ref. SWRCB ORDER WQ 2022-0103-DWQ, Element 6, ATTACHMENT D, Page D-6)

Every spill event is an opportunity to evaluate the City adherence to response and reporting procedures and effectiveness of the response. Each spill event is unique, with its own elements and challenges including volume, cause, location, terrain, climate, and other parameters.

As soon as possible after spill events all 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 responding to and mitigating future spill events. The results of the debriefing will be documented via the Post-Spill Assessment in the Sewer Spill/Backup Response Workbook and tracked to ensure the action items are completed as scheduled.

11.1 FAILURE ANALYSIS INVESTIGATION

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

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

- Reviewing and completing the Sanitary Sewer Spill 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 spill and reviewing the video and logs,
- Reviewing any Fats, Oils, Roots and Grease (FROG) related information or results
- Post spill debrief records
- Interviews with the public at the spill 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 Spill/Backup Response Workbook) will be used to document the investigation.

12. SPILL RESPONSE TRAINING

(ref. SWRCB ORDER WQ 2022-0103-DWQ, Element 6, Attachment D 4.3 page D-5 and Element 6 page D-6)

This section provides information on the training that is required to support this Spill Emergency Response Plan.

12.1 INITIAL AND ANNUAL REFRESHER TRAINING

All City personnel who may have a role in responding to, reporting, and/or mitigating a sewer system spill will receive training on the contents of this SERP. 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 SERP and the procedures to be followed. The City will document all training.

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

- The requirements of SWRCB ORDER WQ 2022-0103-DWQ, Element 6
- The City's Spill Emergency Response Plan procedures and practice drills
- Containment and cleanup methods
- Researching and documenting Sanitary Sewer Spill Start Times
- Skilled estimation of spill volume for field operators
- Impacted Surface Waters: Sample location selection, sampling, and documentation procedures
- Electronic CIWQS reporting procedures for staff submitting data
- State Water Resources Control Board Employee Knowledge Expectations

12.2 SPILL RESPONSE DRILLS

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.

12.3 SPILL TRAINING RECORD KEEPING

Records will be kept of all training that is provided in support of this SERP for 5 years. 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), names and titles of attendees, brief narrative description of the training, including training method(s) and training materials and/or equipment used.

12.4 CONTRACTORS WORKING ON CITY SEWER FACILITIES

All contractors working on City sewer facilities will be required to follow the spill response instructions on the Sanitary Sewer Spill Response Instructions for Contractors (Appendix D). Additional training may be required depending on the nature of the work on any or all of the following:

- The requirements of *SWRCB ORDER WQ 2022-0103-DWQ* Element 6
- Communication procedures to City in the event a spill is caused or witnessed
- The City's Spill Emergency Response Plan procedures and practice drills
- Skilled estimation of spill volume for field operators
- Electronic CIWQS reporting procedures for staff submitting data

13. SEWER BACKUP INTO/ONTO PRIVATE PROPERTY CLAIMS HANDLING POLICY

It is the policy of the City 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:

- The Sewer Crew will provide an information letter to the customer that includes instructions for obtaining a claim form on the City website. City staff will offer a City claim form irrespective of fault whenever it is possible that the sanitary sewer backup may have resulted from an apparent blockage in the City-owned sewer lines or whenever a City customer requests a claim form. The claim may later be rejected if subsequent investigations into the cause of the loss indicate the City was not at fault.
- It is the responsibility of the Sewer Crew to gather information regarding the incident and notify the Chief Utility System Operator or their designee.
- It is the responsibility of the City Attorney's Office or their designee to review all claims and to oversee the adjustment and administration of the claim to closure.

14. AUTHORITY

This SERP is written in accordance with the Statewide Sanitary Sewer Systems General Order 2022-0103-DWQ.

15. APPENDICES

- A. Reporting Requirements by Spill Category
- B. Warning Sign
- C. Sewer Service Call Report
- D. Sanitary Sewer Spill Response Instructions for Contractors
- E. Sewer Spill Reference Guide Pamphlet and Door Hanger
- F. Surface Water Bodies Map
- G. Sanitary Sewer Spill/Backup Response Workbook

APPENDIX A:
Reporting Requirements by Spill Category

REPORTING REQUIREMENTS FOR INDIVIDUAL CATEGORY 1 SPILL REPORTING

Draft Spill Report

Within three (3) business days of the City's knowledge of a Category 1 spill, the City shall submit a Draft Spill Report to the online CIWQS Sanitary Sewer System Database.

The Draft Spill Report must, at minimum, include the following items:

1. Contact information: Name and telephone number of City contact person to respond to spill-specific questions;
2. Spill location name;
3. Date and time the City was notified of, or self-discovered, the spill;
4. Operator arrival time;
5. Estimated spill start date and time;
6. Date and time the City notified the California Office of Emergency Services, and the assigned control number;
7. Description, photographs, and GPS coordinates of the system location where the spill originated; If a single spill event results in multiple appearance points, provide GPS coordinates for the appearance point closest to the failure point and describe each additional appearance point in the spill appearance point explanation field;
8. Estimated total spill volume exiting the system;
9. Description and photographs of the extent of the spill and spill boundaries;
10. Did the spill reach a drainage conveyance system? If Yes:
 - a. Description of the drainage conveyance system transporting the spill;
 - b. Photographs of the drainage conveyance system entry location(s);
 - c. Estimated spill volume fully recovered from the drainage conveyance system;
 - d. Estimated spill volume remaining within the drainage conveyance system;
 - e. Description and photographs of all discharge point(s) into the surface water;
 - f. Estimated spill volume that discharged to surface waters; and
 - g. Estimated total spill volume recovered.

Certified Spill Report

Within 15 calendar days of the spill end date, the City shall submit a Certified Spill Report for Category 1 spills, to the online CIWQS Sanitary Sewer System Database.

Upon completion of the Certified Spill Report, the online CIWQS Sanitary Sewer System Database will issue a final spill event identification number.

(Category 1 continued)

The Certified Spill Report must, at minimum, include the following mandatory information in addition to all information in the Draft Spill Report:

1. Description of the spill event destination(s), including GPS coordinates if available, that represent the full spread and reach of the spill;
2. Spill end date and time;
3. Description of how the spill volume estimations were calculated, including at a minimum:
 - a. The methodology, assumptions and type of data relied upon, such as supervisory control and data acquisition (SCADA) records, flow monitoring or other telemetry information used to estimate the volume of the spill discharged, and the volume of the spill recovered (if any volume of the spill was recovered), and
 - b. The methodology(ies), assumptions and type of data relied upon for estimations of the spill start time and the spill end time;
4. Spill cause(s) (for example, root intrusion, grease deposition, etc.);
5. System failure location (for example, main, lateral, pump station, etc.);
6. Description of the pipe material, and estimated age of the pipe material, at the failure location;
7. Description of the impact of the spill;
8. Whether or not the spill was associated with a storm event;
9. Description of spill response activities including description of immediate spill containment and cleanup efforts;
10. Description of spill corrective action, including steps planned or taken to reduce, eliminate, and prevent reoccurrence of the spill, and a schedule of major milestones for those steps;
11. Spill response completion date;
12. Detailed narrative of investigation and investigation findings of cause of spill;
13. Reasons for an ongoing investigation (as applicable) and the expected date of completion;
14. Name and type of receiving water body(s);
15. Description of the water body(s), including but not limited to:
 - a. Observed impacts on aquatic life,
 - b. Public closure, restricted public access, temporary restricted use, and/or posted health warnings due to spill,
 - c. Responsible entity for closing/restricting use of water body, and
 - d. Number of days closed/restricted as a result of the spill.
16. Whether or not the spill was located within 1,000 feet of a municipal surface water intake; and
17. If water quality samples were collected, identify sample locations and the parameters the water quality samples were analyzed for. If no samples were taken, Not Applicable shall be selected.

(Category 1 continued)

Amended Certified Spill Reports

The City shall update or add additional information to a Certified Spill Report within **90 calendar days** of the spill end date by amending the report or by adding an attachment to the Spill Report in the online CIWQS Sanitary Sewer System Database. The City shall certify the amended report.

After **90 calendar days**, the City shall contact the SWRCB at SanitarySewer@waterboards.ca.gov to request to amend a Spill Report. The Legally Responsible Official shall submit justification for why the additional information was not reported within the Amended Spill Report due date.

REPORTING REQUIREMENTS FOR INDIVIDUAL CATEGORY 2 SPILL REPORTING

Draft Spill Report

Within three (3) business days of the City's knowledge of a Category 2 spill, the City shall submit a Draft Spill Report to the online CIWQS Sanitary Sewer System Database.

The Draft Spill Report must, at minimum, include the following items:

1. Contact information: Name and telephone number of City contact person to respond to spill-specific questions;
2. Spill location name;
3. Date and time the City was notified of, or self-discovered, the spill;
4. Operator arrival time;
5. Estimated spill start date and time;
6. Date and time the City notified the California Office of Emergency Services, and the assigned control number;
7. Description, photographs, and GPS coordinates of the system location where the spill originated; If a single spill event results in multiple appearance points, provide GPS coordinates for the appearance point closest to the failure point and describe each additional appearance point in the spill appearance point explanation field;
8. Estimated total spill volume exiting the system;
9. Description and photographs of the extent of the spill and spill boundaries;
10. Did the spill reach a drainage conveyance system? If Yes:
 - Description of the drainage conveyance system transporting the spill;
 - Photographs of the drainage conveyance system entry location(s);
 - Estimated spill volume fully recovered from the drainage conveyance system;
 - Estimated spill volume remaining within the drainage conveyance system;
11. Estimated spill volume discharged to a groundwater infiltration basin or facility, if applicable; and
12. Estimated total spill volume recovered.

Certified Spill Report

Within 15 calendar days of the spill end date, the City shall submit a Certified Spill Report for the Category 2 spill, to the online CIWQS Sanitary Sewer System Database (<https://ciwqs.waterboards.ca.gov>). Upon completion of the Certified Spill Report, the online CIWQS Sanitary Sewer System Database will issue a final spill event identification number.

(Category 2 continued)

The Certified Spill Report must, at minimum, include the following mandatory information in addition to all information in the Draft Spill Report:

1. Description of the spill event destination(s), including GPS coordinates if available, that represent the full spread and reach of the spill;
2. Spill end date and time;
3. Description of how the spill volume estimations were calculated, including at a minimum:
 - The methodology, assumptions and type of data relied upon, such as supervisory control and data acquisition (SCADA) records, flow monitoring or other telemetry information used to estimate the volume of the spill discharged, and the volume of the spill recovered (if any volume of the spill was recovered), and
 - The methodology(ies), assumptions and type of data relied upon for estimations of the spill start time and the spill end time;
4. Spill cause(s) (for example, root intrusion, grease deposition, etc.);
5. System failure location (for example, main, pump station, etc.);
6. Description of the pipe/infrastructure material, and estimated age of the pipe material, at the failure location;
7. Description of the impact of the spill;
8. Whether or not the spill was associated with a storm event;
9. Description of spill response activities including description of immediate spill containment and cleanup efforts;
10. Description of spill corrective action, including steps planned or taken to reduce, eliminate, and prevent reoccurrence of the spill, and a schedule of major milestones for those steps;
11. Spill response completion date;
12. Detailed narrative of investigation and investigation findings of cause of spill;
13. Reasons for an ongoing investigation (as applicable) and the expected date of completion; and
14. Whether or not the spill was located within 1,000 feet of a municipal surface water intake.

Amended Certified Spill Reports

The City shall update or add additional information to a Certified Spill Report within **90 calendar days** of the spill end date by amending the report or by adding an attachment to the Spill Report in the online CIWQS Sanitary Sewer System Database. The City shall certify the amended report.

After **90 calendar days**, the City shall contact the SWRCB at SanitarySewer@waterboards.ca.gov to request to amend a Spill Report. The Legally Responsible Official shall submit justification for why the additional information was not reported within the Amended Spill Report due date.

REPORTING REQUIREMENTS FOR INDIVIDUAL CATEGORY 3 SPILL REPORTING

Monthly Certified Spill Reporting

The City shall individually report and certify all Category 3 spills to the online CIWQS Sanitary Sewer System Database within 30 calendar days after the end of the month in which the spills occurred. (For example, all Category 3 spills occurring in the month of February shall be reported and certified by March 30th). After the Legally Responsible Official certifies the spills, the online CIWQS Sanitary Sewer System Database will issue a spill event identification number for each spill.

The monthly reporting of all Category 3 spills must include the following items for each spill:

1. Contact information: Name and telephone number of City contact person to respond to spill-specific questions;
2. Spill location name;
3. Date and time the City was notified of, or self-discovered, the spill;
4. Operator arrival time;
5. Estimated spill start date and time;
6. Description, photographs, and GPS coordinates where the spill originated. If a single spill event results in multiple appearance points, provide GPS coordinates for the appearance point closest to the failure point and describe each additional appearance point in the spill appearance point explanation field;
7. Estimated total spill volume exiting the system;
8. Description and photographs of the extent of the spill and spill boundaries;
9. Did the spill reach a drainage conveyance system? If Yes:
 - a. Description of the drainage conveyance system transporting the spill;
 - b. Photographs of the drainage conveyance system entry location(s);
 - c. Estimated spill volume fully recovered from the drainage conveyance system; and
 - d. Estimated spill volume discharged to a groundwater infiltration basis or facility, if applicable.
10. Estimated total spill volume recovered;
11. Description of the spill event destination(s), including GPS coordinates, if available, that represent the full spread and reaches of the spill;
12. Spill end date and time;
13. Description of how the spill volume estimations were calculated, including, at minimum:
 - a. The methodology and type of data relied upon, including supervisory control and data acquisition (SCADA) records, flow monitoring or other telemetry information used to estimate the volume of the spill discharged, and the volume of the spill recovered (if any volume of the spill was recovered), and
 - b. The methodology and type of data relied upon to estimate the spill start time, on-going spill rate at time of arrival (if applicable), and the spill end time;
14. Spill cause(s) (for example, root intrusion, grease deposition, etc.);

(Category 3 Continued)

15. System failure location (for example, main, pump station, etc.);
16. Description of the pipe/infrastructure material, and estimated age of the pipe/infrastructure material, at the failure location;
17. Description of the impact of the spill;
18. Whether or not the spill was associated with a storm event;
19. Description of spill response activities including description of immediate spill containment and cleanup efforts;
20. Description of spill corrective actions, including steps planned or taken to reduce, eliminate, and prevent reoccurrence of the spill, and a schedule of the major milestones for those steps; including, at minimum:
 - a. Local regulatory enforcement action taken against an illicit discharge in response to this spill, as applicable, and
 - b. Identifiable system modifications, and operation and maintenance program modifications needed to prevent repeated spill occurrences at the same spill event location, including:
 - Adjusted schedule/method of preventive maintenance,
 - Planned rehabilitation or replacement of sanitary sewer asset,
 - Inspected, repaired asset(s), or replaced defective asset(s),
 - Capital improvements,
 - Documentation verifying immediately implemented system modifications and operating/maintenance modifications,
 - Description of spill response activities,
 - Spill response completion date, and
 - Ongoing investigation efforts, and expected completion date of investigation to determine the full cause of spill;
21. Detailed narrative of investigation and investigation findings of cause of spill.

Amended Certified Spill Reports

Within 90 calendar days of the certified Spill Report due date, the City may update or add additional information to a certified Spill Report by amending the report or by adding an attachment to the Spill Report in the online CIWQS Sanitary Sewer System Database. The City shall certify the amended report.

After 90 calendar days, the Legally Responsible Official shall contact the SWRCB at SanitarySewer@waterboards.ca.gov to request to amend a certified Spill Report. The Legally Responsible Official shall submit justification for why the additional information was not reported within the 90-day timeframe for amending the certified Spill Report, as provided above.

REPORTING REQUIREMENTS FOR INDIVIDUAL CATEGORY 4 SPILL REPORTING

Monthly Certified Spill Reporting

The City shall report and certify the estimated total spill volume exiting the sanitary sewer system, and the total number of all Category 4 spills to the online CIWQS Sanitary Sewer System Database, within 30 calendar days after the end of the month in which the spills occurred.

Annual Certified Spill Reporting of Category 4 and/or Lateral Spills

For all Category 4 spills and spills from its owned and/or operated laterals that are caused by a failure or blockage in the lateral and that do not discharge to a surface water, the City shall:

- Maintain records per section 4.4. of Attachment E1 (Notification, Monitoring, Reporting and Recordkeeping Requirements) of SWRCB ORDER WQ 2022-0103-DWQ. The City shall provide records upon request by SWRCB or Regional Water Board staff.
- Annually upload and certify a report, in an appropriate digital format, of all recordkeeping of spills to the online CIWQS Sanitary Sewer System Database, by February 1st after the end of the calendar year in which the spills occurred.

A spill from an City-owned and/or operated lateral that discharges to a surface water is a Category 1 spill; the City shall report all Category 1 spills per section 3.1 of Attachment E1 (Notification, Monitoring, Reporting and Recordkeeping Requirements) of SWRCB ORDER WQ 2022-0103-DWQ.

Monthly Certification of “No-Spills” Or “Category 4 Spills” and/or “Non-Category 1 Lateral Spills”

If either (1) no spills occur during a calendar month or (2) only Category 4, and/or City-owned and/or operated lateral spills (that do not discharge to a surface water) occur during a calendar month, the City shall certify, within 30 calendar days after the end of each calendar month, either a “No-Spill” certification statement, or a “Category 4 Spills” and/or “Non-Category 1 Lateral Spills” certification statement, in the online CIWQS Sanitary Sewer System Database, certifying that there were either no spills, or Category 4 and/or Non-Category 1 Lateral Spills that will be reported annually (per section 3.6 of Attachment E1 (Notification, Monitoring, Reporting and Recordkeeping Requirements) of SWRCB ORDER WQ 2022-0103-DWQ) for the designated month.

If a spill starts in one calendar month and ends in a subsequent calendar month, and the City has no further spills of any category, in the subsequent calendar month, the City shall certify “no-spills” for the subsequent calendar month.

If the City has no spills from its systems during a calendar month, but the City voluntarily reported a spill from a private lateral or a private system, the City shall certify “no-spills” for that calendar month.

If the City has spills from its owned and/or operated laterals during a calendar month, the City shall not certify “no spills” for that calendar month.

APPENDIX B:
Warning Sign

DANGER

CONTAMINATED WATER • AVOID CONTACT



PELIGRO

AGUA CONTAMINADA • EVITE TODO CONTACTO

For more information

Para más información

City of Pleasanton

**Business Hours:
(925) 931-5500**

**After hours and on weekends:
(925) 931-5100**

APPENDIX C:
Sewer Service Call Report

SERVICE CALL / COMPLAINT FORM

CALLER'S INFORMATION		
Name:	Phone:	
Address:		
CALL RECEIVED:		
Received by (name):		
Date:	Time:	
Date and time caller first noticed the spill:		Still spilling: <input type="checkbox"/> YES <input type="checkbox"/> NO
COMPLAINT:		
Caller's description of the spill (e.g., a trickle, like a garden hose running full, etc.):		
Caller's description of the size of the wetted area(s):		
Caller's description of where the spill is coming from:		
Caller's other observations (e.g., odor, duration, location on property, known impacts, indication if surface water impacted, appearance at cleanout or maintenance hole):		

APPENDIX D:
Sanitary Sewer Spill Response Instructions for Contractors

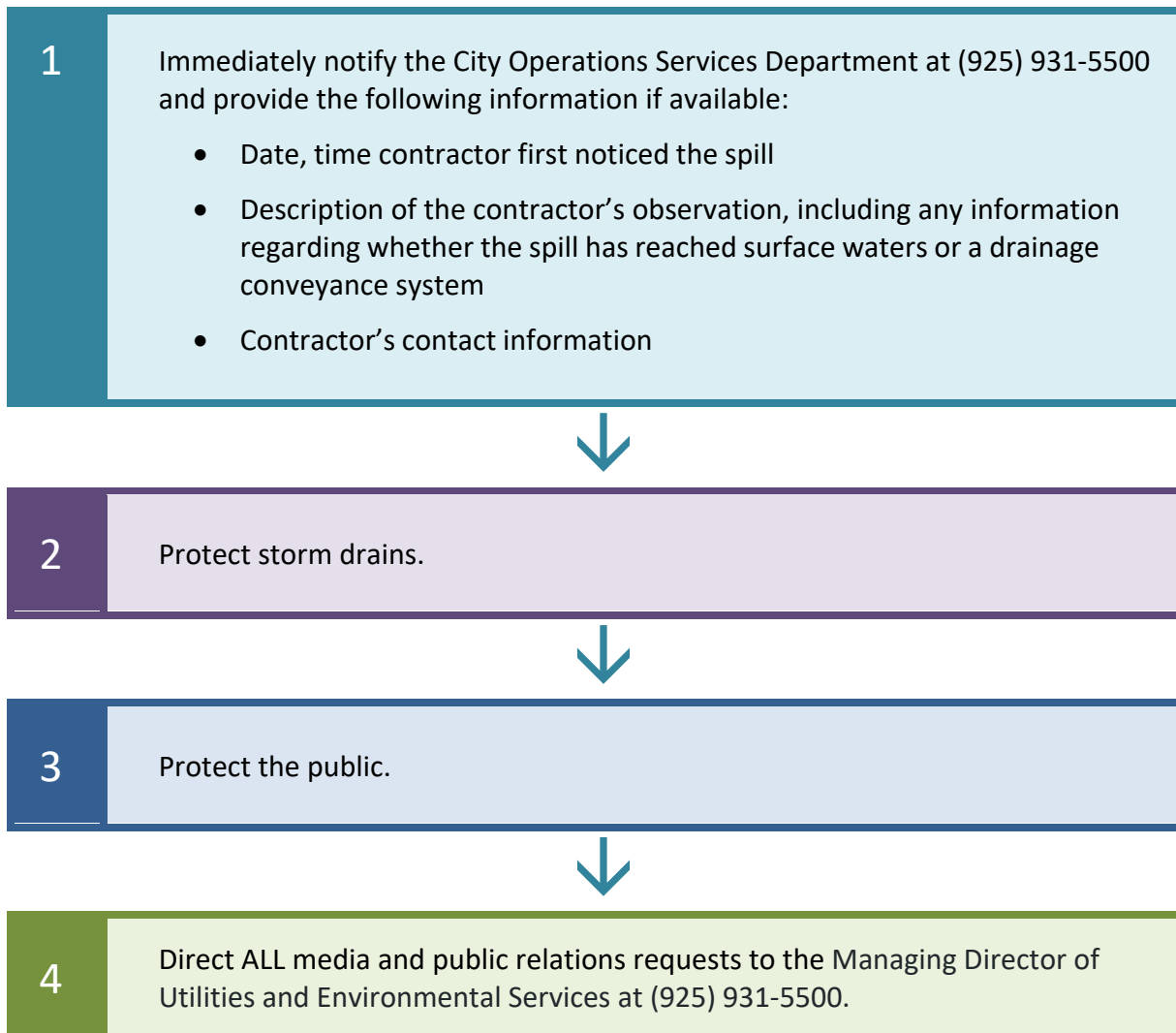
City of Pleasanton Spill Emergency Response Plan

Sanitary Sewer Spill Response Instructions for Contractors

For contractors working on the sanitary sewer system the City expects them to have, at all worksites, spill response materials necessary to block drainage conveyance system entry points near the work area and surface waters.

Additionally, contractor must be trained on spill response materials and equipment.

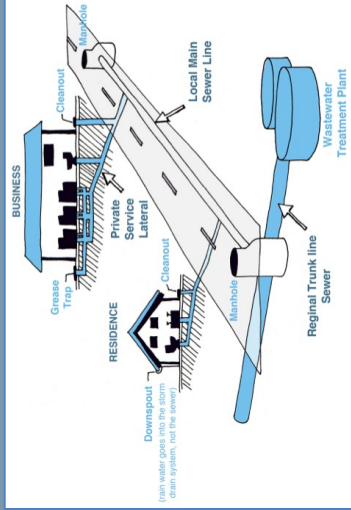
The following procedures are to be followed in the event that a contractor/plumber causes or witnesses a sanitary sewer spill.



APPENDIX E:
Sewer Spill Reference Guide Pamphlet
and Door Hanger

How a Sewer System Works

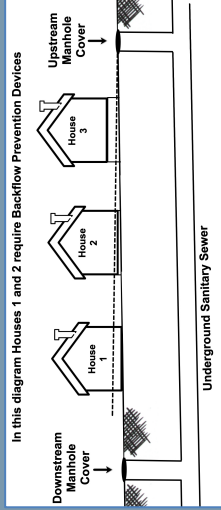
A property owner's sewer pipes are called **service laterals** and are connected to larger local main and regional trunk lines. Service laterals run from the connection at the home to the connection with the public sewer. These laterals are the responsibility of the property owner and must be maintained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



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."



If you have a sewage spill from your private sewer line that impacts storm drains, waterways or public property, contact:

City of Pleasanton (925) 931-5500

Discharge of untreated or partially treated sewage is prohibited by law. If you would like more information on this prohibition, please contact any of the following:

County Department of Environmental Health

(510) 567-6700

California Health and Safety Code, Sections 5410-5416 requires:

- No person shall discharge raw or treated sewage or other waste in a manner that results in contamination, pollution, or a nuisance.
- Any person who causes or permits a sewage discharge to any state waters:
 - Must immediately notify the local health agency of the discharge.
 - Shall reimburse the local health agency for services that protect the public's health and safety.
 - Who fails to provide the required notice to the local health agency is guilty of a misdemeanor and shall be punished by a fine (between \$500-\$1,000) and/or imprisonment for less than one year.

Regional Water Quality Control Board

San Francisco: (510) 622-2300

Requires the prevention, mitigation, response to, and reporting of sewage spills.

California Governor's Office of Emergency Services (CalOES): (800) 852-7550

California Water Code, Article 4, Chapter 4, Sections 13268-13271 & California Code of Regulations, Title 23, Division 3, Chapter 9.2, Article 2, Sections 2250-2260 require:

- Any person who causes or permits sewage in excess of 1,000 gallons to be discharged to state waters shall immediately notify the Office of Emergency Services.
- Any person who fails to provide the notice required by this section is guilty of a misdemeanor and shall be punished by a fine (less than \$20,000) and/or imprisonment for not more than one year.

Sewer Spill Reference Guide



Your Responsibilities as a Private Property Owner

Provided to you by:

City of Pleasanton

3333 Bush Road

Pleasanton CA 94566

(925) 931-5500

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How do sewage spills happen?

Sewage spills occur when the wastewater in underground pipes overflows through a manhole, cleanout, interior fixture drains, 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.

CAUTION!

When trying to locate a sewer problem, never open manholes or other public sewer structures. Only our crews are allowed to open & inspect these structures.

Call for assistance: (925) 931-5500

Common causes of sewage spills

- Grease build-up
- Tree roots
- Broken/cracked pipes
- Missing or broken cleanout caps
- Undersized sewers
- 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.

Protect the environment!

If you let sewage from your property discharge to a gutter or storm drain, you may be subject to penalties and/or out-of-pocket costs for clean-up and enforcement efforts. A property owner may be

charged for costs incurred by agencies responding to spills from private properties.

What to look for:

Sewage spills can be a very noticeable gushing of water from a manhole or a slow water leak that may take time to be noticed. Don't dismiss unaccounted-for wet areas. Look for:

- Drain backups inside the building.
- Wet ground and/or water leaking around manhole lids onto your street.
- Leaking water from cleanouts or outside drains
- Unusual odorous wet areas: sidewalks, external walls, ground/landscape around a building.

The following are indicators of a possible obstruction in your sewer line:

- Water comes up in floor drains, showers or toilets.
- Toilets, showers or floor drains below ground level drain very slowly.

What to do if there is a spill:

Immediately notify the City of Pleasanton. During business hours, the telephone number for reporting sewer problems is the Operations Services Department customer service main line at (925) 931-5500. After business hours, the telephone number for reporting sewer problems is the Police Department main line at (925) 931-5100.

Our crews locate the blockage and determine if it is in the public sewer; if it is the crew removes the blockage and arranges for cleanup.

If the backup is in your private internal plumbing or in the private service laterals, you are required to immediately:

- Control and minimize the spill by shutting off or not using the water

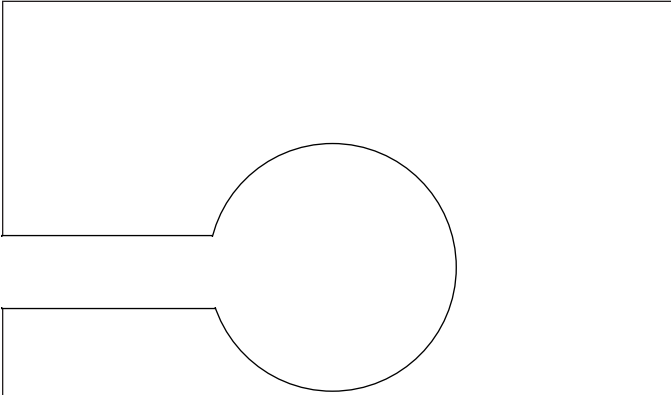
- Keep sewage out of the storm drain system using sandbags, dirt and/or plastic sheeting
- Call a plumbing professional to clear blockages and make repairs as needed. Look in the yellow pages under "Plumbing, Drain & Sewer Cleaning" or "Sewer Contractors."

Spill cleanup:

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.

Until cleanup is complete:

- Keep people and pets away from the affected area(s).
- Turn off heating/air conditioning systems.
- Turn off any appliances that use water.
- Prevent any material from reaching floor vents to prevent contamination.
- Do not remove items from the area –the company you hire will handle these contents.
- If you had recent plumbing work, contact your plumber or contractor.



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

We discovered a blockage in:

- The City’s sanitary sewer main and cleared the line
- Your sanitary sewer lateral, which is your responsibility to maintain. We also found the City’s main to be flowing normally.

If you require assistance to clear your 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.

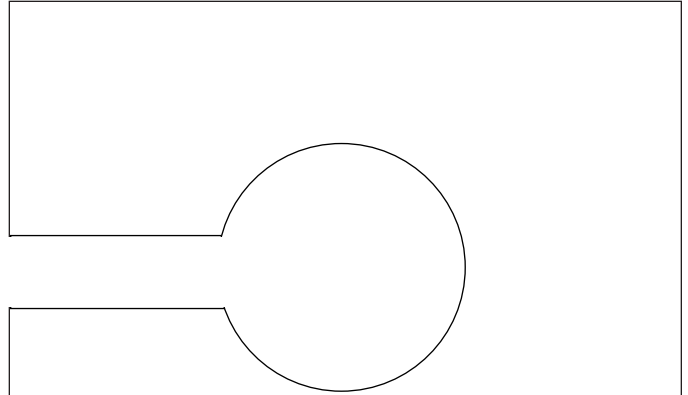
City of Pleasanton representative notes:

City of Pleasanton Representative:

For questions or comments, please call:



Business Hours
(925) 931-5500
After hours
(925) 931-5100



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

We discovered a blockage in:

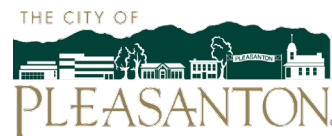
- The City’s sanitary sewer main and cleared the line
- Your sanitary sewer lateral, which is your responsibility to maintain. We also found the City’s main to be flowing normally.

If you require assistance to clear your 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.

City of Pleasanton representative notes:

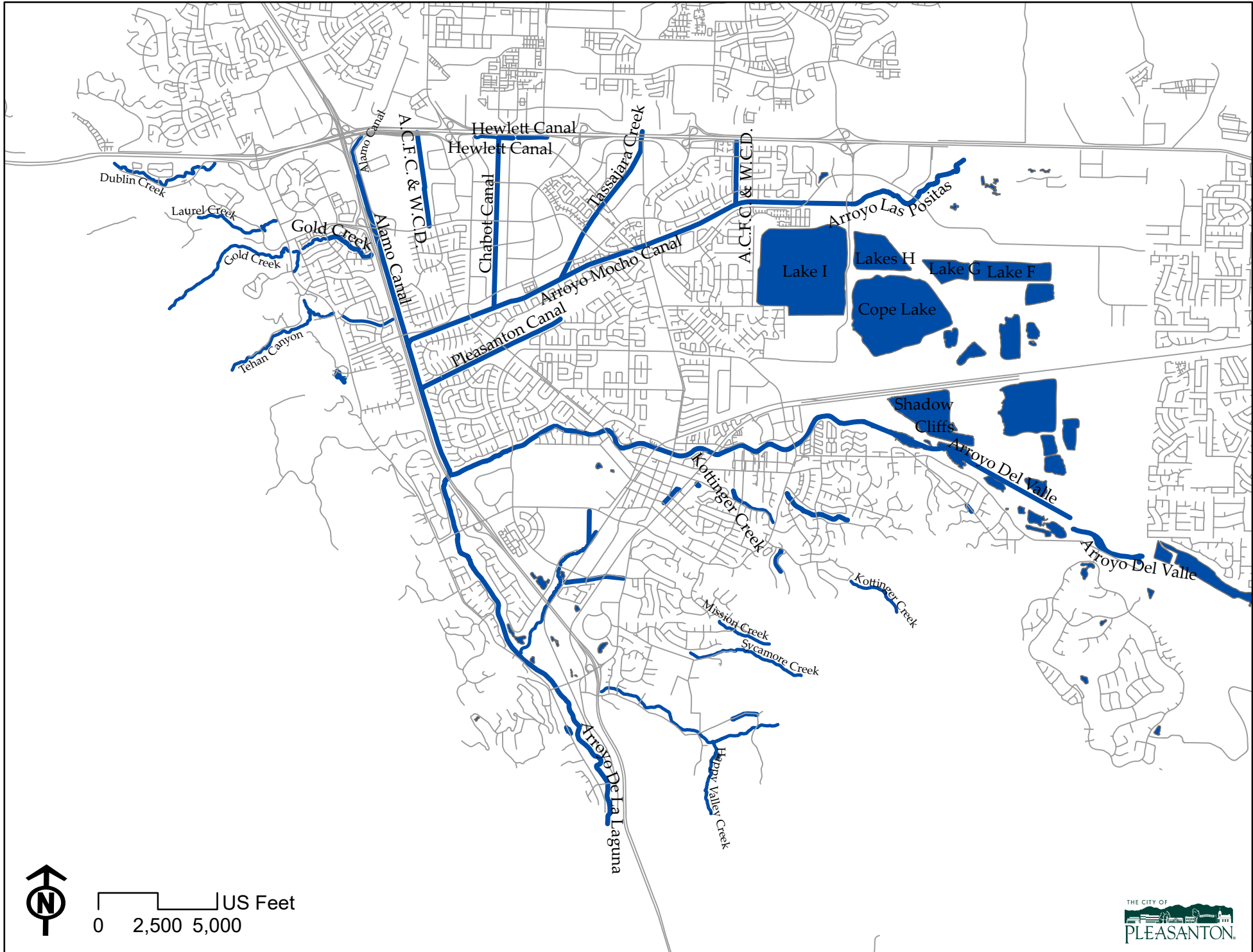
City of Pleasanton Representative:

For questions or comments, please call:



Business Hours
(925) 931-5500
After hours
(925) 931-5100

APPENDIX F:
Surface Water Bodies Map



0 2,500 5,000 US Feet

APPENDIX G:
Sanitary Sewer Overflow/Backup Response Workbook

City of Pleasanton

Sewer Spill Emergency Response Plan

Sewer Spill/Backup Response Workbook



INSERT TAB:
A: Start Here

Sanitary Sewer Spill/Backup Response Workbook

- Make immediate notifications:
 - If this spill is discharging or threatening to discharge greater than or equal to 1,000 gallons to surface waters, contact CalOES within 2 hours and obtain a control number.
 - If this spill is discharging to surface waters, notify Zone 7.
 - For all spills notify Alameda County Department of Environmental Health
 - For all spills notify Chief Utility System Operator
 - If there is a backup into a residence/business, notify Chief Utility System Operator who will notify City Attorney's Office
 - For media inquiries/requests, direct to the Managing Director of Utilities and Environmental Services.
- Log all notifications in B-2.
- See the following page for contact information as needed.

<p>SEWER CREW:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Refer to the Spill Event Checklist (A-4), follow the instructions on the Spill/Backup Response Flowchart (C-1), and complete forms in this Workbook as indicated. <input type="checkbox"/> Complete the chain of custody record (to the right) and deliver this workbook to the Chief Utility System Operator. 	<p>CHAIN OF CUSTODY</p> <p>Print Name:</p> <hr/> <p>Initial:</p> <hr/> <p>Date:</p>
--	--

<p>CHIEF UTILITY SYSTEM OPERATOR:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Review the Spill Event Checklist (A-4) and the forms in this Workbook (D and E). Contact the Sewer Crew for additional information if necessary. <input type="checkbox"/> Confirm that all required regulatory notifications have been made (B-2). <input type="checkbox"/> If there was a sewer backup into residence/business contact City Attorney's Office and confirm procedure/forms in Tab F properly executed. <input type="checkbox"/> Complete the Post Spill Assessment (H-1) and Collection System Failure Analysis Form (H-2). <input type="checkbox"/> Complete the Chain of Custody record (right) and forward Workbook to Data Submitter 	<p>CHAIN OF CUSTODY</p> <p>Print Name:</p> <hr/> <p>Initial:</p> <hr/> <p>Date:</p>
--	--

<p>DATA SUBMITTER:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Refer to Spill Event Checklist (A-4) Data Submitter Responsibilities <input type="checkbox"/> Complete the chain of custody record (to the right) and deliver this workbook to a Legally Responsible Official. 	<p>CHAIN OF CUSTODY</p> <p>Print Name:</p> <hr/> <p>Initial:</p> <hr/> <p>Date:</p>
--	--

<p>LEGALLY RESPONSIBLE OFFICIAL:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Refer to Spill Event Checklist (A-4) Data Submitter Responsibilities <input type="checkbox"/> Complete the chain of custody record (to the right) and file this Workbook with the spill file. 	<p>CHAIN OF CUSTODY</p> <p>Print Name:</p> <hr/> <p>Initial:</p> <hr/> <p>Date:</p>
---	--

Contact Information

Contact	Description	Telephone/Email/Address
Alameda County Department of Environmental Health	Ronald Browder	(510) 567-6700 Ronald.Browder@acgov.org
Alpha Labs	Water quality sample analysis	262 Rickenbacker Circle, Livermore, CA. On weekends, prior to delivery, contact Alpha Labs at (650) 464-3237 to arrange for receipt.
CAL/OES	California Office of Emergency Services	(800) 852-7550
San Francisco Regional Water Quality Control Board		Email: info2@waterboards.ca.gov Phone: (510)622-2300 Fax: (510)622-2460
State Water Resources Control Board	Walter Mobley	(916) 323-0878 Walter.Mobley@waterboards.ca.gov
Zone 7 Water Agency	Notification (if spill will impact Zone 7 property or operations)	Business Hours: (925) 454-5000 After hours and emergency: (925) 447-6704 ext. 1

City of Pleasanton Contacts

Contact	Description	Telephone/Email/Address
Chief Utilities Systems Operator	<ul style="list-style-type: none"> ○ Notifications ○ Assistance with backup into residence/business ○ Outside Assistance / Mutual Aid 	Office: (925) 931-5528 Cell: (925) 354-0476
City Attorney’s Office	Assistance with sewer backup customers	(925) 931-5015
Managing Director of Utilities and Environmental Services	Media inquiries/requests	(925) 931-5523

NOTE: All references to “General Order” refer to State Water Board Order WQ 2022-0103-DWQ.

DRAINAGE CONVEYANCE SYSTEM: A drainage conveyance system is a publicly- or privately-owned separate storm sewer system, including but not limited to drainage canals, channels, pipelines, pump stations, detention basins, infiltration basins/facilities, or other facilities constructed to transport stormwater and non-stormwater flows.

SPILL: A spill is a discharge of sewage from any portion of a sanitary sewer system due to a sanitary sewer system overflow, operational failure, and/or infrastructure failure. Exfiltration of sewage is not considered to be a spill under this General Order if the exfiltrated sewage remains in the subsurface and does not reach a surface water of the State.

- **Category 1 Spill:**

A Category 1 spill is a spill of any volume of sewage from or caused by a sanitary sewer system regulated under this General Order that results in a discharge to:

- A surface water, including a surface water body that contains no flow or volume of water; or
- A drainage conveyance system that discharges to surface waters when the sewage is not fully captured and returned to the sanitary sewer system or disposed of properly.

Any spill volume not recovered from a drainage conveyance system is considered a discharge to surface water, unless the drainage conveyance system discharges to a dedicated stormwater infiltration basin or facility.

A spill from an City-owned and/or operated lateral that discharges to a surface water is a Category 1 spill; the City shall report all Category 1 spills per section 3.1 of Attachment E1 (Notification, Monitoring, Reporting and Recordkeeping Requirements) of this General Order.

- **Category 2 Spill**

A Category 2 spill is a spill of 1,000 gallons or greater, from or caused by a sanitary sewer system regulated under this General Order that does not discharge to a surface water. A spill of 1,000 gallons or greater that spills out of a lateral and is caused by a failure or blockage in the sanitary sewer system, is a Category 2 spill.

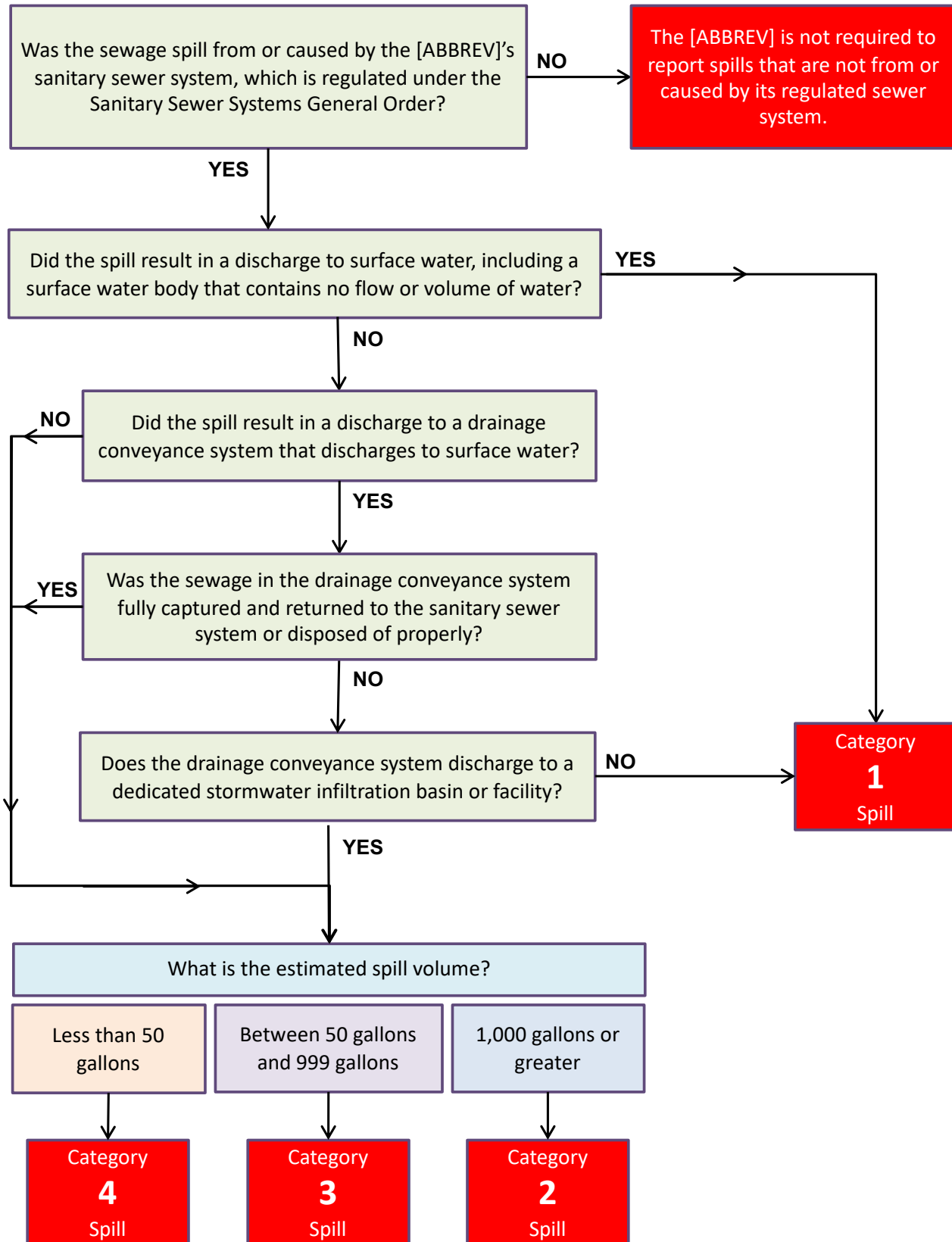
- **Category 3 Spill**

A Category 3 spill is a spill of equal to or greater than 50 gallons and less than 1,000 gallons, from or caused by a sanitary sewer system regulated under this General Order that does not discharge to a surface water. A spill of equal to or greater than 50 gallons and less than 1,000 gallons, that spills out of a lateral and is caused by a failure or blockage in the sanitary sewer system is a Category 3 spill.

- **Category 4 Spill**

A Category 4 spill is a spill of less than 50 gallons, from or caused by a sanitary sewer system regulated under this General Order that does not discharge to a surface water. A spill of less than 50 gallons that spills out of a lateral and is caused by a failure or blockage in the sanitary sewer system is a Category 4 spill.

INSTRUCTIONS: Answer each question in order and stop at the red box once you have determined the category.



Spill Event Checklist

Date of Spill: _____ Spill Location/Name: _____
 CIWQS Event ID #: _____ Category? 1 2 3 4 OES#: _____
 Private Backup? Yes No Work Order #: _____

SEWER CREW RESPONSIBILITIES

- Effort made to contain and return a portion/all to the sanitary sewer
- Pictures/video taken of spill
- Pictures taken of affected/unaffected area
- Pictures taken of containment efforts
- All notifications made and logged (B-2)
- Were surface waters impacted?
- Sanitary Sewer Spill Field Report (D) form complete (includes fields for all required fields in CIWQS, and a sketch of spill)
- Volume Estimation Worksheet(s) (E) done
- Start Time Determination Form (D) done
- For Cat 1 spills 50,000 gallons or large, began water quality monitoring procedures (G).
- If private backup, followed procedures in Tab F.

CHIEF UTILITY SYSTEM OPERATOR RESPONSIBILITIES

- Review Sanitary Sewer Spill Field Report (D) and Volume Calc (E). Ensure consistency of dates, times, volumes, data, etc.
- Review of photos and videos (label/date)
- Start folder for all documentation for this spill event. Put everything in it (this Response Workbook, follow-up work orders, notes, photos, drawings, CIWQS print outs, emails, etc.)
- Conduct Post Spill Assessment & complete form (H-1)
- Confirm all notification properly made (B-2)
- Conduct Failure Analysis & complete form (H-2)
- If private backup, review forms (F) and contact City Attorney's Office
- If Cat 1 Spill 50,000 gallon or larger, followed sample procedures (G) and prepared technical report.

DATA SUBMITTER RESPONSIBILITIES

- Submit Draft in CIWQS w/in 3 business days (for Categories 1 and 2 only)
- Print CIWQS Draft hard copy and email
- Review CIWQS, Sanitary Sewer Spill Field 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
- Attach Technical Report to CIWQS (for Cat 1 50,000 gallons or larger only)
- Submit Ready to Certify Spill Report in CIWQS (with sufficient time for LRO review)
- Print CIWQS Ready to Certify and email
- Hand Workbook to LRO and complete Chain of Custody form

LRO RESPONSIBILITIES

- LRO review documentation 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 & 4)
- Print Certified CIWQS and email
- Any changes? Explain changes in documentation and update in CIWQS. Print out updated certifications and email.
- Move completed Workbook and spill folder to spill files
- If any changes are made to SSMP
 - Update SSMP and link on CIWQS to SSMP
 - Add change to SSMP Change Log
 - Consider need to re-certify SSMP

INSERT TAB:
B: Regulatory Reporting

The City’s Legally Responsible Officials (LROs) are authorized to electronically sign and certify spill reports in CIWQS. See contact information for LROs on page A-2.

Deadline	Category 1 Spill*	Category 2 Spill**	Category 3 Spill**	Category 4 Spill**
2 hours after awareness of spill	Within two (2) hours of the City’s knowledge of a Category 1 spill of 1,000 gallons or greater, discharging or threatening to discharge to Waters of the State, notify CalOES and obtain a notification control number.	Within two (2) hours of the City’s knowledge of a Category 2 spill of 1,000 gallons or greater threatening to discharge to Waters of the State, notify CalOES and obtain a notification control number.	-	-
Within 18 hours of awareness of spill	Conduct water quality sampling of the receiving water within 18 hours of initial knowledge of spill of 50,000 gallons or greater to surface waters.	-	-	-
3 Business Days after awareness of spill	Submit Draft Spill Report in the CIWQS database.	Submit Draft Spill Report in the CIWQS database.	-	-
15 Days after the spill end date	Submit Certified Spill Report within 15 calendar days of the spill end date. (Submit Amended Spill Report, as needed, within 90 calendar days after the spill end date.)	Submit Certified Spill Report within 15 calendar days of the spill end date. (Submit Amended Spill Report, as needed, within 90 calendar days after the spill end date.)	-	-
Within 30 calendars days after the end of the calendar month in which the spill occurs	-	-	Submit monthly Certified Spill Report to the online CIWQS Sanitary Sewer System Database (Submit Amended Spill Report, as needed, within 90 calendar days after the Certified Spill Report due date.)	Certify monthly, the estimated total spill volume exiting the sanitary sewer system, and the total number of all Category 4 spills into the online CIWQS Sanitary Sewer System Database.
45 days after spill end date	Submit Technical Report within 45 calendar days after the spill end date for a Category 1 spill in which 50,000 gallons or greater discharged to surface waters; and	-	-	-
By February 1 st after the end of the calendar year in which the spills occur.	-	See ++ note below.	-	Upload and certify a report, in an acceptable digital format, of all Category 4 spills to the online CIWQS Sanitary Sewer System Database.

* A spill from an Enrollee-owned and/or operated lateral that discharges to a surface water is a Category 1 spill.

++ See following page for notes.

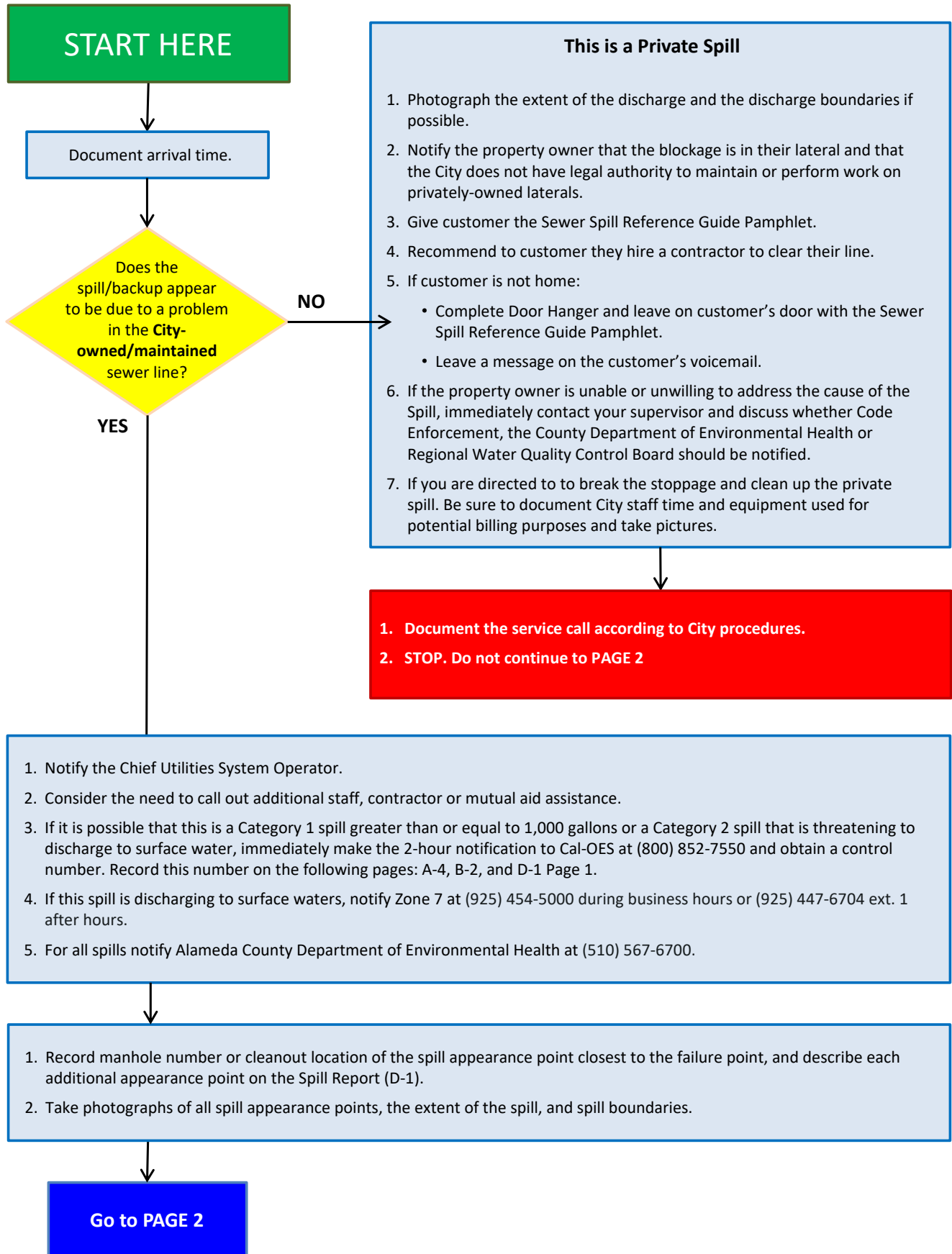
++ Agency owned lateral spills (Cat 2-4) to be reported by Feb 1 of the following year.

- **Monthly Spill Reporting of Non-Category 1 Lateral Spills:** If either (1) no spills occur during a calendar month or (2) only Category 4, and/or Enrollee-owned and/or operated lateral spills (that do not discharge to a surface water) occur during a calendar month, the Enrollee shall certify, within 30 calendar days after the end of each calendar month, either a “No-Spill” certification statement, or a “Category 4 Spills” and/or “Non-Category 1 Lateral Spills” certification statement, in the online CIWQS Sanitary Sewer System Database, certifying that there were either no spills, or Category 4 and/or Non-Category 1 Lateral Spills that will be reported annually for the designated month.
- **Annual Certified Spill Reporting of Category 4 and/or Lateral Spills:** For all Category 4 spills and spills from its owned and/or operated laterals that are caused by a failure or blockage in the lateral and that do not discharge to a surface water, the Enrollee shall annually upload and certify a report, in an appropriate digital format, of all recordkeeping of spills to the online CIWQS Sanitary Sewer System Database, by February 1st after the end of the calendar year in which the spills occurred.

Regulatory Reporting Log

Agency/Firm Contacted	Individual Spoken to:	Date	Time	Notes
CalOES				Control Number:

INSERT TAB:
C: Flowchart



Continue from PAGE 1



BEGIN DIVERSION AND CONTAINMENT, AS NECESSARY

- 1. DIVERT AWAY FROM SENSITIVE AREAS:**
 - a. 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 SPILL & RETURN TO SYSTEM, IF POSSIBLE:**
 - a. As practical, plug or block drainage conveyance system entry locations or use rubber mats to cover basin inlet and divert flow to a downstream sanitary sewer manhole (*barricade manhole if left open and monitor after barricade*) or area suitable to capture the spill for later collection.

If any amount has already reached the drainage conveyance system, trace it downstream to a dry manhole and block it from entering surface waters. i.e. plugs, sandbags, or vacuum truck.
 - b. If you are confident that you can capture the spill in the drainage conveyance system, trace it downstream to a dry manhole, block it from entering surface waters, and then divert the spill to the drainage conveyance system for later recovery and return to the sanitary sewer.
 - c. If needed, use bypass pumps to pump around blockage until it can be removed.
- 3. PHOTOGRAPH** how spill was diverted/contained and drainage conveyance system entry points.

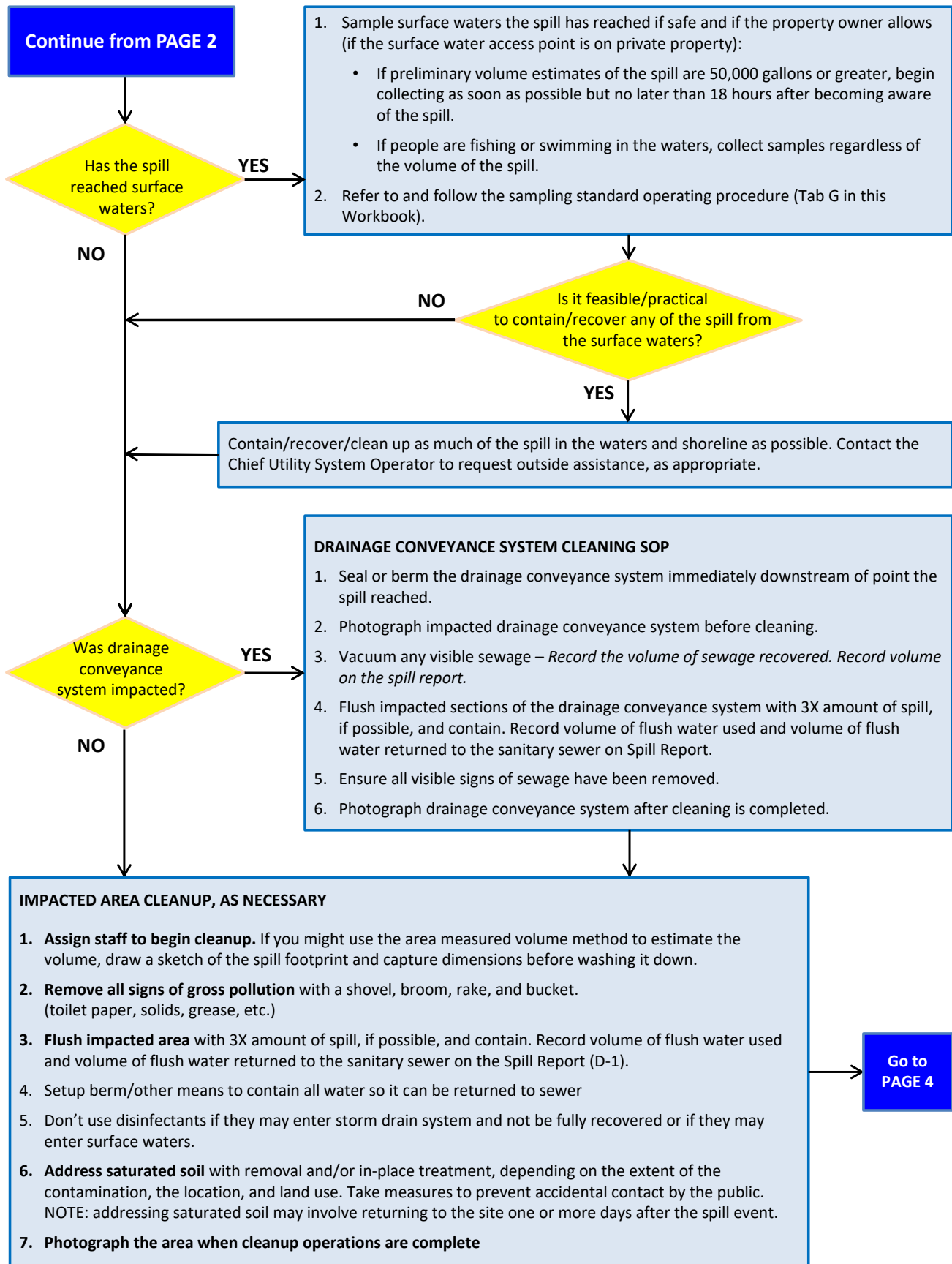


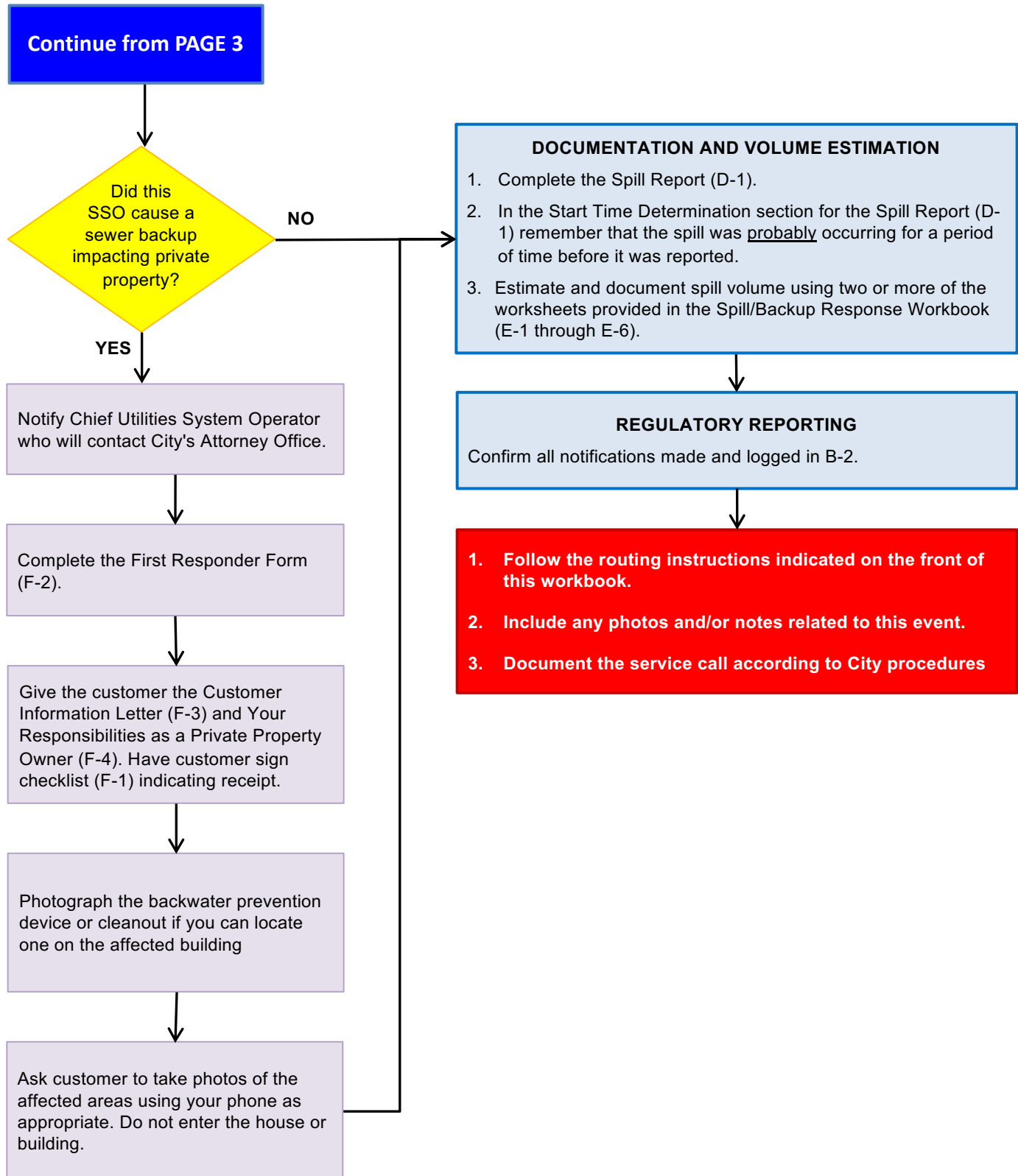
ADDRESS CAUSE OF SPILL/BACKUP ASAP

1. For spill/backups not related to a pump station, relieve the stoppage. Note the distance of the obstruction from the manhole and catch/remove debris that could cause another stoppage. After flow has returned to normal, clean the pipe thoroughly. Consider televising (CCTV) the affected line.
2. For pump station related spill/backups refer to that station's emergency procedures.
3. Photograph staff activities while clearing the blockage.



Go to
PAGE 3





INSERT TAB:
D: Spill Report

Sanitary Sewer Spill Field Report

Check spill category (see A-3 for definitions): CATEGORY 1 CATEGORY 2 CATEGORY 3 CATEGORY 4

CalOES NOTIFICATION*		
Date:	Time:	Assigned Control Number:

Names of the Persons Completing this Report	Contact Information

PHYSICAL LOCATION DETAILS	
Spill location name:	
Location description:	
Address of spill:	
City: Pleasanton	Cross Street:
Regional Water Quality Control Board: San Francisco	County: Alameda

DATE/TIME
Date and time the City was notified of, or self-discovered, the spill: _____
Operator arrival time: _____

PHOTOGRAPHS
Photos must be taken during the spill event. At a minimum, the following photos must be taken: <ul style="list-style-type: none"> <input type="radio"/> Appearance point closest to the failure point <input type="radio"/> Extent of the spill and spill boundaries <input type="radio"/> Entry location of each drainage conveyance system the sewage entered <input type="radio"/> All discharge points into surface waters <input type="radio"/> Location(s) of clean up
Where are photographs stored?

* Within two (2) hours of the City’s knowledge of a Category 1 or Category 2 spill of 1,000 gallons or greater, discharging or threatening to discharge to waters of the State, notify CalOES and obtain a notification control number.

SPILL ORIGINATION	
Description and GPS coordinates of the system location where the spill originated* : <i>Include manhole number or cleanout location of the spill appearance point closest to the failure point as applicable.</i>	
Latitude:	Longitude:
Number of additional appearance points:	
Spill appearance points: (Check all that apply) <input type="checkbox"/> Backflow Prevention Device <input type="checkbox"/> Combined Sewer Drain Inlet (Combined Collection System Only) <input type="checkbox"/> Force Main <input type="checkbox"/> Gravity Mainline <input type="checkbox"/> Inside Building/Structure <input type="checkbox"/> Lateral Clean Out (Private) <input type="checkbox"/> Lateral Clean Out (Public) <input type="checkbox"/> Lower Lateral (Private) <input type="checkbox"/> Lower Lateral (Public) <input type="checkbox"/> Manhole <input type="checkbox"/> Other Sewer System Structure <input type="checkbox"/> Pump Station <input type="checkbox"/> Upper Lateral (Private) <input type="checkbox"/> Upper Lateral (Public) <input type="checkbox"/> Other, describe:	
Describe each spill appearance point:	
Check to confirm photos were taken of all appearance points: <input type="checkbox"/>	

* Note: If a single spill event results in multiple appearance points, provide GPS coordinates for the appearance point closest to the failure point and describe each additional appearance point in the “Describe each spill appearance point” description section above. Take photos of spill appearance point(s).

SPILL DESTINATION (Check all that apply)	
Final spill destination(s): <input type="checkbox"/> Drainage Conveyance System That Discharges to Surface Water <input type="checkbox"/> Surface Water <input type="checkbox"/> Building or Structure <input type="checkbox"/> Drainage Conveyance System <input type="checkbox"/> Groundwater Infiltration Basic or Facility <input type="checkbox"/> Paved Surface <input type="checkbox"/> Street/Curb and Gutter <input type="checkbox"/> Unpaved Surface <input type="checkbox"/> Other, describe:	
Description of the spill event destination(s) including GPS coordinates if available that represent the full spread and reach of the spill.	
Latitude:	Longitude:
Latitude (if needed):	Longitude (if needed):
Latitude (if needed):	Longitude (if needed):
Latitude (if needed):	Longitude (if needed):
Check to confirm photos were taken of spill destination/boundaries: <input type="checkbox"/>	

SPILL VOLUME	
Estimated total spill volume exiting the system: _____	gallons
Did the spill reach a drainage conveyance system? <input type="checkbox"/> YES <input type="checkbox"/> NO If yes: <ul style="list-style-type: none"> • Estimated time the spill reached the drainage conveyance system: _____ • Distance from drainage conveyance system to entry point to surface waters: _____ feet • Method to determine travel time from point of entry to drainage conveyance system to receiving waters: _____ _____ • Describe the drainage conveyance system transporting the spill: _____ _____ 	
Estimated spill volume fully recovered from the drainage conveyance system: _____	gallons
Estimated spill volume remaining within the drainage conveyance system: _____	gallons
Check to confirm photos taken of entry location of drainage conveyance system the sewage entered: <input type="checkbox"/>	
Did the spill reach surface water? <input type="checkbox"/> YES <input type="checkbox"/> NO If yes: <ul style="list-style-type: none"> • Estimated time the spill entered the surface water: _____ • Distance from spill appearance point to entry point to surface water: _____ feet • Method to determine travel time to receiving waters: _____ _____ • Describe all discharge points: _____ _____ 	
Estimated spill volume that discharged to surface waters: _____	gallons
Estimated total spill volume recovered: _____	gallons
Check to confirm photos were taken of the following, as applicable: all discharge points into surface waters, waterbody bank erosion, floating matter, water surface sheen, discoloration of receiving water, any notable impacts to the receiving water: <input type="checkbox"/>	
Did the spill discharge to a groundwater infiltration basin or facility? <input type="checkbox"/> YES <input type="checkbox"/> NO If yes, <ul style="list-style-type: none"> • Estimated time the spill entered the groundwater infiltration basin or facility: _____ • Estimated spill volume discharged to the groundwater infiltration basin or facility: _____ gallons 	
Estimated spill volume that did NOT reach drainage conveyance system, surface water, or groundwater infiltration basin or facility: _____	
Estimated Total Spill Volume Recovered: _____	
gallons	

SPILL VOLUME (continued)

Method and explanation of volume estimation methods used: (Check all that apply)

- Eyeball Estimate (worksheet included in Spill/Backup Response Workbook)
- Counting Upstream Connections (worksheet included in Spill/Backup Response Workbook)
- Duration and Flow Rate (worksheet included in Spill/Backup Response Workbook)
- Measured Volume (worksheet included in Spill/Backup Response Workbook)
- Other (provide worksheet/calculations)

Description of how the spill volume estimations were calculated, including at a minimum, the methodology, assumptions and types of data relied upon, such as supervisory control and data acquisition (SCADA) records, flow monitoring or other telemetry information, used to estimate the volume of the spill discharged, and the volume of the spill recovered (if any volume of the spill was recovered):

SPILL START TIME and END TIME DETERMINATION	
Were there witnesses to the spill? <input type="checkbox"/> YES <input type="checkbox"/> NO If yes, provide Spill Witness Statements below:	
Witness 1 Name:	Witness 1 Contact Information:
Where did they see sewage spill from? <input type="checkbox"/> Manhole <input type="checkbox"/> Inside Building <input type="checkbox"/> Vent/Clean Out <input type="checkbox"/> Catch Basin <input type="checkbox"/> Wet Well/Lift Station <input type="checkbox"/> Other (describe):	
When did the witness notice the sewage spilling? _____ AM / PM Date ____ / ____ / ____	
Witness description of spill and affected area: Is it currently spilling? <input type="checkbox"/> YES <input type="checkbox"/> NO	
When did the witness last observe NO Spill occurring? _____ AM / PM Date ____ / ____ / ____	
Did the witness notice if the spill had reached the storm drain or surface waters?	
Comments:	
Witness 2 Name:	Witness 2 Contact Information:
Where did they see sewage spill from? <input type="checkbox"/> Manhole <input type="checkbox"/> Inside Building <input type="checkbox"/> Vent/Clean Out <input type="checkbox"/> Catch Basin <input type="checkbox"/> Wet Well/Lift Station <input type="checkbox"/> Other (describe):	
When did the witness notice the sewage spilling? _____ AM / PM Date ____ / ____ / ____	
Witness description of spill and affected area: Is it currently spilling? <input type="checkbox"/> YES <input type="checkbox"/> NO	
When did the witness last observe NO Spill occurring? _____ AM / PM Date ____ / ____ / ____	
Did the witness notice if the spill had reached the storm drain or surface waters?	
Comments:	
Witness 3 Name:	Witness 3 Contact Information:
Where did they see sewage spill from? <input type="checkbox"/> Manhole <input type="checkbox"/> Inside Building <input type="checkbox"/> Vent/Clean Out <input type="checkbox"/> Catch Basin <input type="checkbox"/> Wet Well/Lift Station <input type="checkbox"/> Other (describe):	
When did the witness notice the sewage spilling? _____ AM / PM Date ____ / ____ / ____	
Witness description of spill and affected area: Is it currently spilling? <input type="checkbox"/> YES <input type="checkbox"/> NO	
When did the witness last observe NO Spill occurring? _____ AM / PM Date ____ / ____ / ____	
Did the witness notice if the spill had reached the storm drain or surface waters?	
Comments:	

SPILL START TIME and END TIME DETERMINATION (continued)
<p>Are the volume of the spill and rate of flow known? <input type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>If yes, divide volume by rate of flow to get duration of spill event:</p> $\frac{\text{_____ Gallons}}{\text{Spill Volume}} \div \frac{\text{_____ GPM}}{\text{Flow Rate}} = \frac{\text{_____ Minutes}}{\text{Spill Duration}}$ <p>Subtract the duration from the spill end date/time to establish the spill start date/time:</p> $\frac{\text{_____}}{\text{Spill End Date/Time}} - \frac{\text{_____}}{\text{Duration}} = \frac{\text{_____}}{\text{Spill Start Time}}$ <p>Method to determine flow rate:</p>
<p>Solids Present? <input type="checkbox"/> None or small amount (indicates recent start) <input type="checkbox"/> Significant amount of buildup</p>
<p>Staining? <input type="checkbox"/> None (indicates recent start) <input type="checkbox"/> Minor <input type="checkbox"/> Significant</p>
<p>Distance sewage has traveled from spill point:</p>
<p>Spill Start Time:</p>
<p>Spill End Date and Time:</p>
<p>How was end time determined?</p> <p><input type="checkbox"/> Broke stoppage</p> <p><input type="checkbox"/> Turned pump station back on</p> <p><input type="checkbox"/> Other, explain:</p>
<p>Description of the methodology(ies), assumptions and type of data relied upon for estimations of the spill start time and the spill end time.</p>

SPILL CAUSE (check all that apply)

- Air Relief Valve (ARV)/Blow Off Valve (BOV)/Backwater Valve Failure
- Construction Diversion Failure
- Collection System Maintenance Failure (Specify Below)
- Damage by Others Not Related to CS Construction/Maintenance (Specify Below)
- Debris from Construction
- Debris from Lateral
- Debris-General
- Debris-Rags
- Debris-wipes/Non-disposables
- Flow Exceeded Capacity (Separate CS Only)
- Fats, Oils and Grease (FOG)
- Inappropriate Discharge to CS
- Natural Disaster (Specify Below)
- Operator Error (Specify Below)
- Pipe Structural Problem/Failure – Installation
- Pipe Structural Problem/Failure – Controls
- Pump Station Failure – Power
- Pump Station Failure – Mechanical
- Pump Station Failure – Controls
- Rainfall Exceeded Design, I and I (Separate CS Only)
- Root Intrusion
- Siphon Failure
- Surcharged Pipe (Combines CS Only)
- Vandalism (Specify Below)
- Other, specify:

SYSTEM FAILURE LOCATION	
<p>System failure location:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Air Relief Valve (ARV)/Blow Off Valve (BOV) Failure <input type="checkbox"/> Force Main <input type="checkbox"/> Gravity Mainline <input type="checkbox"/> Lower Lateral <input type="checkbox"/> Manhole <input type="checkbox"/> Pump Station Failure – Controls <input type="checkbox"/> Pump Station Failure – Mechanical <input type="checkbox"/> Pump Station Failure – Power <input type="checkbox"/> Siphon <input type="checkbox"/> Upper Lateral (Specify Below) <input type="checkbox"/> Other, specify: 	
<p>Description of the pipe material at the failure location:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Copper <input type="checkbox"/> Galvanized Steel <input type="checkbox"/> Polyvinyl Chloride (PVC) <input type="checkbox"/> Acrylonitrile Butadiene Styrene (ABS) <input type="checkbox"/> Cross-Linked Polyethylene (PEX) <input type="checkbox"/> Cast Iron <input type="checkbox"/> Vitrified Clay <input type="checkbox"/> Concrete <input type="checkbox"/> Ductile Iron <input type="checkbox"/> Fiberglass <input type="checkbox"/> Other, specify: 	
<p>Estimated age of sewer asset at the point of blockage or failure (if applicable):</p>	<p>years</p>
<p>Diameter of sewer pipe at the point of blockage or failure:</p>	<p>inches</p>

SPILL IMPACT

Description of the impact of the spill:

STORM EVENT

Was spill associated with a storm event? YES NO

SPILL RESPONSE ACTIVITIES (check all that apply)

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

Description of spill response activities including description of immediate spill containment and cleanup efforts:

SPILL CORRECTIVE ACTION (check all that apply)
<input type="checkbox"/> Added Sewer to Preventive Maintenance Program <input type="checkbox"/> Adjusted Schedule/Method of Preventive Maintenance <input type="checkbox"/> Enforcement Action Against FOG Source <input type="checkbox"/> Inspected Sewer Using CCTV to Determine Cause <input type="checkbox"/> Plan Rehabilitation or Replacement of Sewer <input type="checkbox"/> Repaired Facilities or Replaced Defect <input type="checkbox"/> Other, specify:
Refer to Collection System Failure Analysis Report for details about: <ul style="list-style-type: none"> Spill corrective action, including steps planned or taken to reduce, eliminate, and prevent reoccurrence of the spill, and a schedule of major milestones for those steps. Schedule of major milestones Check to confirm completion of each report: <ul style="list-style-type: none"> <input type="checkbox"/> Post-Spill Assessment <input type="checkbox"/> Collection System Failure Analysis
Spill response completion date:

INVESTIGATION
Detailed narrative of investigation and investigation findings of cause of spill:
Is the City conducting an ongoing investigation? <input type="checkbox"/> YES <input type="checkbox"/> NO If yes, reasons for an ongoing investigation:
If yes, expected date of completion of investigation: _____

SURFACE WATERS (Complete for Category 1 Spills Only)		
Name of receiving water body	Type of receiving water body: Stream, Ocean, Wetland, Slough, Estuary, River, Lake, Reservoir, Vernal Pool, Wash, or Other (specify)	Description of the water body(s), including but not limited to: <ul style="list-style-type: none"> ○ Observed impacts on aquatic life, ○ Public access impact(s): public closure, restricted public access, temporary restricted use, and/or other (specify below) ○ Responsible entity for closing/restricting use of water body, and ○ Number of days closed/restricted as a result of the spill.

MUNICIPAL INTAKE (Complete for Category 1 and 2 Spills Only)		
Was the spill located within 1,000 feet of a municipal surface water intake?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
Describe:		

WATER SAMPLING

Were water quality samples collected? YES NO N/A

If yes, identify sample locations:

Identify parameters the water quality samples were analyzed for: (Check all that apply)

- Total Coliform Bacteria
- Fecal coliform bacteria
- E-coli
- Ammonia
- Other, specify:

INSERT TAB:
E: Volume Estimation

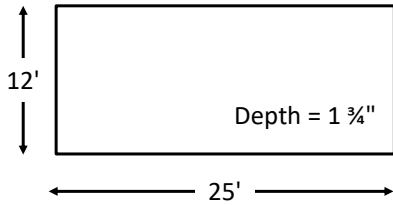
Miscellaneous Computations & Examples

<p>To convert inches to feet (NOTE: for the purposes of this worksheet, the unit of measurement will be in feet for formula examples)</p>	<p>Divide the inches by 12 or use the chart on the right. Example 1: $27" \div 12 = 2.25'$ Example 2: $1\frac{3}{4}" = ?'$ $1" (0.08') + \frac{3}{4}" (0.06') = 0.14'$</p>
<p>Volume of one cubic foot</p>	<p>7.48 gallons of liquid</p>
<p>Area: Two-dimensional measurement represented in square feet (SQ/FT or ft²)</p>	<p>Square/rectangle: Area = Length x Width Circle: Area = $\pi \times r^2$ (where $\pi \approx 3.14$ and $r = \text{radius} = \frac{1}{2} \text{ diameter}$) Triangle: Area = $\frac{1}{2} (\text{Base} \times \text{Height})$</p>
<p>Volume: Three-dimensional measurement represented in cubic feet (CU/FT or ft³)</p>	<p>Rectangle/square footprint: Volume = Length x Width x Depth Circle footprint (cylinder): Volume = $\pi \times r^2 \times \text{Depth}$ (where $\pi \approx 3.14$ and $r = \text{radius} = \frac{1}{2} \text{ diameter}$) Triangle footprint: Volume = $\frac{1}{2} (\text{Base} \times \text{Height}) \times \text{Depth}$</p>
<p>Depth: Wet Stain on Concrete or asphalt surface</p>	<p>If the depth is not measurable because it is only a wet stain, use the following estimated depths:</p> <ul style="list-style-type: none"> ○ Depth of a wet stain on concrete surface: 0.0026' (1/32") ○ Depth of a wet stain on asphalt surface: 0.0013' (1/64") <p>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.</p>
<p>Depth: Contained or "Ponded" sewage</p>	<p>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.</p>

Miscellaneous Computations & Examples (continued)

Area/Volume of a Rectangle or Square

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



$$\frac{25'}{\text{Length}} \times \frac{12'}{\text{Width}} \times \frac{0.14'}{\text{Depth}} = \underline{42 \text{ Cubic Feet}} \text{ Volume}$$

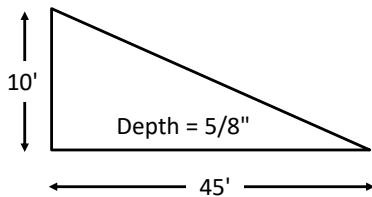
Multiply the volume by 7.48 gallons to determine the volume in **gallons**:

$$\frac{42 \text{ ft}^3}{\text{Volume}} \times \frac{7.48}{\text{gal/ft}^3} = \underline{314.16 \text{ gallons}} \text{ Volume}$$

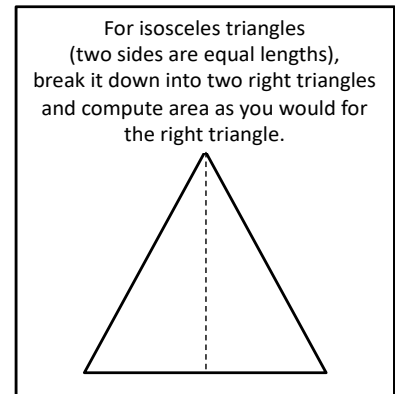
Convert Inches to Feet	
Inches	Feet
1/8"	0.01'
1/4"	0.02'
3/8"	0.03'
1/2"	0.04'
5/8"	0.05'
3/4"	0.06'
7/8"	0.07'
1"	0.08'
2"	0.17'
3"	0.25'
4"	0.33'
5"	0.42'
6"	0.50'
7"	0.58'
8"	0.67'
9"	0.75'
10"	0.83'
11"	0.92'
12"	1.00'

Area/Volume of a Right Triangle

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



$$0.5 \times \frac{45'}{\text{Base}} \times \frac{10'}{\text{Height}} \times \frac{0.05'}{\text{Depth}} \times \frac{7.48}{\text{gal/ft}^3} = \underline{84.15 \text{ gallons}} \text{ Volume}$$

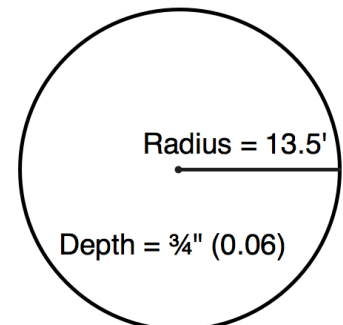


Area/Volume of a Circle

Formula: $\pi \times r^2 \times \text{Depth} = \text{Volume in cubic feet}$

The radius is 1/2 the diameter, which is a straight line passing from side to side through the center of a circle.

$$\frac{13.5'}{\text{Radius}} \times \frac{13.5'}{\text{Radius}} \times 3.14 \times \frac{0.06'}{\text{Depth}} \times \frac{7.48}{\text{gal/ft}^3} = \underline{256.8 \text{ gallons}} \text{ Volume}$$



Spill Date: _____ Location: _____

This method is invalid if surface conditions are wet (due to rainfall, irrigation, etc.) DO NOT use this method under these circumstances.

- STEP 1: Position yourself so that you have a vantage point where you can see the entire spill.
- STEP 2: Imagine one or more buckets or barrels of water tipped over. Depending on the size of the spill, 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)/barrel(s)	How many of this size?	Multiplier	Estimated Spill Volume
		x 1 gallon	
		x 5 gallons	
		x 32 gallons	
		x 55 gallons	
		x ___ gallons	
Estimated Total Spill Volume:			

STEP 5: List assumptions made to arrive at the total estimated spill volume:

STEP 6: Take photographs. Where are photographs stored?

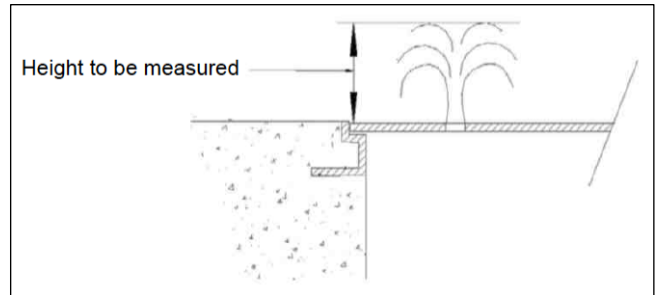
The following photos must be taken: appearance point closest to the failure point, extent of the spill and spill boundaries, the entry location of each drainage conveyance system the sewage entered, all discharge points into surface waters (Category 1 spill only), and location(s) of clean up.

Spill Date: _____ Location: _____

STEP 1: Measure the water height flowing out of the vent or pick hole in inches: _____ inches

Note: Be as precise as possible. A small difference in spout height can make a major difference in estimated spill volume!

Describe how the spout height was determined:



STEP 2: Determine the Spill Rate by referring to the table on the following pages (E-3 pages 2 and 3). Find the height measured in Step 1 in the left column. Read the Spill Rate in the next column (gpm = gallons per minute).

NOTE: This table is provided for general reference. The agency is strongly encouraged to develop site-specific data.

$$\frac{\text{_____ gpm}}{\text{Single Vent/Pickhole Spill Rate}} \times \text{_____ \# of ventholes} = \frac{\text{_____ gpm}}{\text{Combined Vent/Pickhole Spill Rate}}$$

STEP 3: Multiply the spill rate by the spill duration to calculate the estimated spill volume.

$$\frac{\text{_____ gpm}}{\text{Spill Rate}} \times \frac{\text{_____ min.}}{\text{Duration}} = \frac{\text{_____ gal}}{\text{Est. Spill Volume}}$$

STEP 4: Describe any assumptions made to determine any of the volume estimates including recovered volumes:

Take photographs. Where are photographs stored?

The following photos must be taken: appearance point closest to the failure point, extent of the spill and spill boundaries, the entry location of each drainage conveyance system the sewage entered, all discharge points into surface waters (Category 1 spill only), and location(s) of clean up.

Estimated Flows Through Manhole Cover Vent Holes and Pick Holes for Spill Estimating

Hole Dia. inches	Area sq. ft.	Coeff. of Vel. Cv	Coeff. Of Cont. Cc	C Cv x Cc	Water Ht inches	Water Ht inches	Water Ht feet	Q cfs	Q gpm	Q gph
	Formula: =0.785*Ax*Ax/144			Formula: =Ix*449			Formula: =Gx/12	Formula: =Ex*Bx*(S QRT(2*32.2*Hx))	Formula: =Ix*449	Formula: =Jx*60
Vent Hole										
0.50	0.00136	0.945	0.70	0.662	1/16 th	0.063	0.005	0.0005	0.23	14
0.50	0.00136	0.945	0.70	0.662	1/8 th	0.125	0.010	0.0007	0.33	20
0.50	0.00136	0.945	0.70	0.662	1/4 th	0.250	0.021	0.0010	0.47	28
0.50	0.00136	0.945	0.70	0.662	one half	0.500	0.042	0.0015	0.66	40
0.50	0.00136	0.945	0.70	0.662	3/4 ths	0.750	0.063	0.0018	0.81	49
0.50	0.00136	0.945	0.70	0.662	1 inch	1.000	0.083	0.0021	0.94	56
0.50	0.00136	0.945	0.70	0.662	1 1/4 "	1.250	0.104	0.0023	1.05	63
0.50	0.00136	0.945	0.70	0.662	1 3/8"	1.375	0.115	0.0024	1.10	66
0.50	0.00136	0.945	0.70	0.662	1 1/2"	1.500	0.125	0.0026	1.15	69
0.50	0.00136	0.945	0.70	0.662	1 5/8"	1.625	0.135	0.0027	1.20	72
0.50	0.00136	0.945	0.70	0.662	1 3/4"	1.750	0.146	0.0028	1.24	74
0.50	0.00136	0.945	0.70	0.662	2 inches	2.000	0.167	0.0030	1.33	80
0.50	0.00136	0.945	0.70	0.662	2 1/4"	2.250	0.188	0.0031	1.41	84
0.50	0.00136	0.945	0.70	0.662	2 1/2"	2.500	0.208	0.0033	1.48	89
0.50	0.00136	0.945	0.70	0.662	2 3/4"	2.750	0.229	0.0035	1.56	93
0.50	0.00136	0.945	0.70	0.662	3 inches	3.000	0.250	0.0036	1.62	97
0.50	0.00136	0.945	0.70	0.662	3 1/4"	3.250	0.271	0.0038	1.69	101
0.50	0.00136	0.945	0.70	0.662	3 1/2"	3.500	0.292	0.0039	1.75	105
0.50	0.00136	0.945	0.70	0.662	3 3/4"	3.750	0.313	0.0040	1.82	109
0.50	0.00136	0.945	0.70	0.662	4.000	4.000	0.333	0.0042	1.88	113
Vent Hole										
0.75	0.00307	0.955	0.67	0.640	1/16 th	0.063	0.005	0.0011	0.51	31
0.75	0.00307	0.955	0.67	0.640	1/8 th	0.125	0.010	0.0016	0.72	43
0.75	0.00307	0.955	0.67	0.640	1/4 th	0.250	0.021	0.0023	1.02	61
0.75	0.00307	0.955	0.67	0.640	one half	0.500	0.042	0.0032	1.44	87
0.75	0.00307	0.955	0.67	0.640	3/4 ths	0.750	0.063	0.0039	1.77	106
0.75	0.00307	0.955	0.67	0.640	1 inch	1.000	0.083	0.0045	2.04	122
0.75	0.00307	0.955	0.67	0.640	1 1/4 "	1.250	0.104	0.0051	2.28	137
0.75	0.00307	0.955	0.67	0.640	1 3/8"	1.375	0.115	0.0053	2.39	144
0.75	0.00307	0.955	0.67	0.640	1 1/2"	1.500	0.125	0.0056	2.50	150
0.75	0.00307	0.955	0.67	0.640	1 5/8"	1.625	0.135	0.0058	2.60	156
0.75	0.00307	0.955	0.67	0.640	1 3/4"	1.750	0.146	0.0060	2.70	162
0.75	0.00307	0.955	0.67	0.640	2 inches	2.000	0.167	0.0064	2.89	173
0.75	0.00307	0.955	0.67	0.640	2 1/4"	2.250	0.188	0.0068	3.06	184
0.75	0.00307	0.955	0.67	0.640	2 1/2"	2.500	0.208	0.0072	3.23	194
0.75	0.00307	0.955	0.67	0.640	2 3/4"	2.750	0.229	0.0075	3.38	203
0.75	0.00307	0.955	0.67	0.640	3 inches	3.000	0.250	0.0079	3.53	212
0.75	0.00307	0.955	0.67	0.640	3 1/4"	3.250	0.271	0.0082	3.68	221
0.75	0.00307	0.955	0.67	0.640	3 1/2"	3.500	0.292	0.0085	3.82	229
0.75	0.00307	0.955	0.67	0.640	3 3/4"	3.750	0.313	0.0088	3.95	237
0.75	0.00307	0.955	0.67	0.640	4.000	4.000	0.333	0.0091	4.08	245
Vent Hole										
1.00	0.00545	0.960	0.65	0.624	1/16 th	0.063	0.005	0.0020	0.88	53
1.00	0.00545	0.960	0.65	0.624	1/8 th	0.125	0.010	0.0028	1.25	75
1.00	0.00545	0.960	0.65	0.624	1/4 th	0.250	0.021	0.0039	1.77	106
1.00	0.00545	0.960	0.65	0.624	one half	0.500	0.042	0.0056	2.50	150
1.00	0.00545	0.960	0.65	0.624	3/4 ths	0.750	0.063	0.0068	3.06	184
1.00	0.00545	0.960	0.65	0.624	1 inch	1.000	0.083	0.0079	3.54	212
1.00	0.00545	0.960	0.65	0.624	1 1/4 "	1.250	0.104	0.0088	3.96	237
1.00	0.00545	0.960	0.65	0.624	1 3/8"	1.375	0.115	0.0092	4.15	249
1.00	0.00545	0.960	0.65	0.624	1 1/2"	1.500	0.125	0.0097	4.33	260
1.00	0.00545	0.960	0.65	0.624	1 5/8"	1.625	0.135	0.0100	4.51	271
1.00	0.00545	0.960	0.65	0.624	1 3/4"	1.750	0.146	0.0104	4.68	281
1.00	0.00545	0.960	0.65	0.624	2 inches	2.000	0.167	0.0111	5.00	300
1.00	0.00545	0.960	0.65	0.624	2 1/4"	2.250	0.188	0.0118	5.31	318
1.00	0.00545	0.960	0.65	0.624	2 1/2"	2.500	0.208	0.0125	5.59	336
1.00	0.00545	0.960	0.65	0.624	2 3/4"	2.750	0.229	0.0131	5.87	352
1.00	0.00545	0.960	0.65	0.624	3 inches	3.000	0.250	0.0136	6.13	368

Estimated Flows Through Manhole Cover Vent Holes and Pick Holes for Spill Estimating

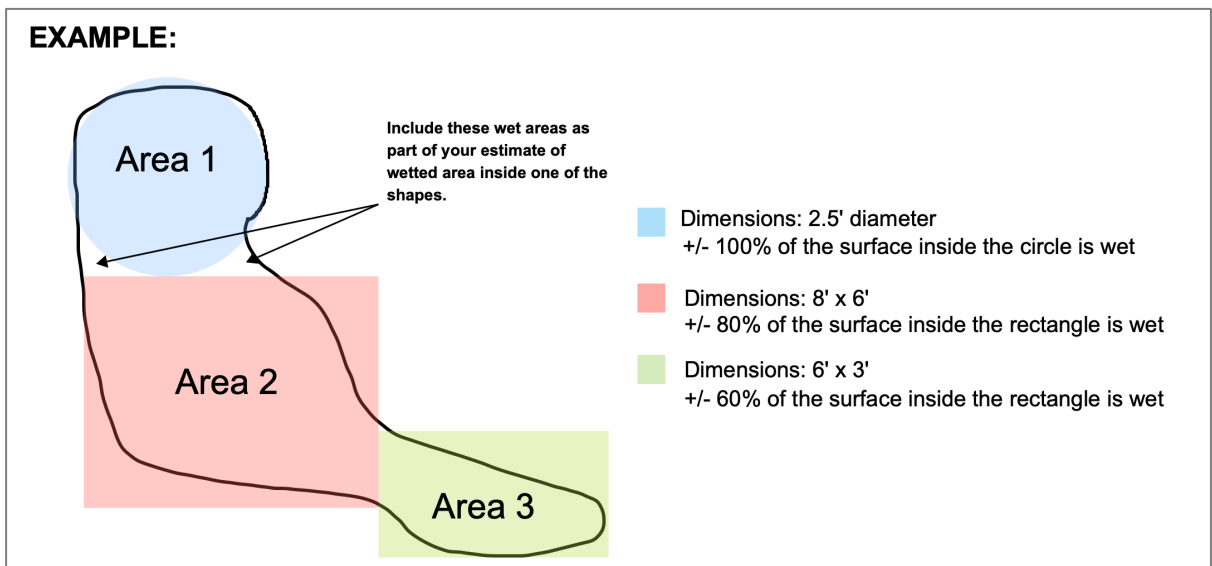
Hole Dia. Inches	Area sq. ft.	Coeff. of Vel. Cv	Coeff. Of Cont. Cc	C Cv x Cc	Water Ht Inches	Water Ht Inches	Water Ht feet	Q cfs	Q gpm	Q gph
	Formula: =0.785*Ax* Ax/144			Formula: =Ix*449			Formula: =Gx/12	Formula: =Ex*Bx*(S QRT(2*32. 2*Hx))	Formula: =Ix*449	Formula: =Jx*60
Vent Hole										
1.00	0.00545	0.960	0.65	0.624	3 1/4"	3.250	0.271	0.0142	6.38	383
1.00	0.00545	0.960	0.65	0.624	3 1/2"	3.500	0.292	0.0147	6.62	397
1.00	0.00545	0.960	0.65	0.624	3 3/4"	3.750	0.313	0.0153	6.85	411
1.00	0.00545	0.960	0.65	0.624	4.000	4.000	0.333	0.0158	7.08	425
Pick Hole semicircular area										
1.00	0.00273	0.960	0.65	0.624	1/16 th	0.063	0.005	0.0010	0.44	27
1.00	0.00273	0.960	0.65	0.624	1/8 th	0.125	0.010	0.0014	0.63	38
1.00	0.00273	0.960	0.65	0.624	1/4 th	0.250	0.021	0.0020	0.89	53
1.00	0.00273	0.960	0.65	0.624	one half	0.500	0.042	0.0028	1.25	75
1.00	0.00273	0.960	0.65	0.624	3/4 ths	0.750	0.063	0.0034	1.53	92
1.00	0.00273	0.960	0.65	0.624	1 inch	1.000	0.083	0.0039	1.77	106
1.00	0.00273	0.960	0.65	0.624	1-1/2 inch	1.500	0.125	0.0048	2.17	130
1.00	0.00273	0.960	0.65	0.624	2 inches	2.000	0.167	0.0056	2.51	150
1.00	0.00273	0.960	0.65	0.624	2 1/4"	2.250	0.188	0.0059	2.66	159
1.00	0.00273	0.960	0.65	0.624	2 1/2"	2.500	0.208	0.0062	2.80	168
1.00	0.00273	0.960	0.65	0.624	2 3/4"	2.750	0.229	0.0065	2.94	176
1.00	0.00273	0.960	0.65	0.624	3 inches	3.000	0.250	0.0068	3.07	184
1.00	0.00273	0.960	0.65	0.624	3 1/4"	3.250	0.271	0.0071	3.19	192
1.00	0.00273	0.960	0.65	0.624	3 1/2"	3.500	0.292	0.0074	3.31	199
1.00	0.00273	0.960	0.65	0.624	3 3/4"	3.750	0.313	0.0076	3.43	206
1.00	0.00273	0.960	0.65	0.624	4.000	4.000	0.333	0.0079	3.54	213

Spill 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. Label/identify each sketch outline area (Area 1, Area 2, etc.) See example below.



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:

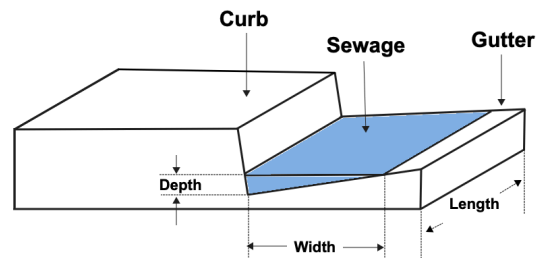
Area # (from labeled drawing)	Length	X	Width	X	% Wet	=	Area	X	Depth	=	Volume
→	ft	X	ft	X	%	=	ft ²	X	ft	=	ft ³
→	ft	X	ft	X	%	=	ft ²	X	ft	=	ft ³
→	ft	X	ft	X	%	=	ft ²	X	ft	=	ft ³

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:

$$\frac{\text{Length}}{\text{Length}} \times \frac{\text{Depth}}{\text{Depth}} \times \frac{\text{Width}}{\text{Width}} \times 0.5 = \frac{\text{Volume}}{\text{Volume}} \text{ ft}^3$$



STEP 5: Calculate Total Spill Volume (sum of all of the volume calculations above): _____ ft³

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

$$\frac{\text{spill volume in cubic feet}}{\text{spill volume in cubic feet}} \text{ ft}^3 \times 7.48 \text{ gallons} = \frac{\text{Total estimated volume}}{\text{Total estimated volume}} \text{ gallons}$$

STEP 7: List assumptions made to arrive at the total estimated spill volume. Adjust estimation up for moderate to severe cracking and/or roughness of surface (General Rule 20% to 40%):

STEP 8: Take photographs. Where are photographs stored?

The following photos must be taken: appearance point closest to the failure point, extent of the spill and spill boundaries, the entry location of each drainage conveyance system the sewage entered, all discharge points into surface waters (Category 1 spill only), and location(s) of clean up.

Spill Date: _____ Location: _____

Attach and/or reference system map and identify location of spill and buildings contributing to spill.

STEP 1: Determine the number of Equivalent Dwelling Units (EDUs) for this spill: _____ EDUs
 NOTE: A single-family residential home = 1 EDU. For commercial buildings, refer to agency documentation.

STEP 2: This volume estimation method utilizes daily usage data based on flow rate studies of several jurisdictions in California. Column A shows how an average daily usage of 180 gallons per day is distributed during each 6-hour period. Adjust the table as necessary to accurately represent the actual data.

Complete Column E by entering the number of minutes the spill was active during each 6-hour time period. Multiply column D times Column E to calculate the gallons spilled during each time period. Add the numbers in Column F together for the Total Estimated spill Volume per EDU.

Time Period	Flow Rate Per EDU				Spill	
	A	B	C	D	E	F
	Gallons per Period	Hours per period	A ÷ B = Gallons per Hour	C ÷ 60 = Gallons per Minute	Minutes spill was active during period	D × E = Gallons spilled per period
6am-noon	72	6	12	0.20		
noon-6pm	36	6	6	0.10		
6pm-midnight	54	6	9	0.15		
midnight-6am	18	6	3	0.05		
Total Estimated Spill Volume per EDU:						

STEP 3: Multiply the Estimated spill Volume per EDU from Step 2 by the number of EDUs from Step 1.

$$\frac{\text{_____ gallons}}{\text{Volume per EDU}} \times \frac{\text{_____}}{\text{\# of EDUs}} = \frac{\text{_____ gallons}}{\text{Estimated spill Volume}}$$

STEP 4: Adjust spill volume as necessary considering other factors, such as activity that would cause a fluctuating flow rate (doing laundry, taking showers, etc.). Explain rationale below and indicate adjusted spill estimate (attach a separate page if necessary).

Total Estimated spill Volume: _____ gallons

STEP 7: List assumptions made to arrive at the total estimated spill volume:

STEP 8: Take photographs. Where are photographs stored?

The following photos must be taken: appearance point closest to the failure point, extent of the spill and spill boundaries, the entry location of each drainage conveyance system the sewage entered, all discharge points into surface waters (Category 1 spill only), and location(s) of clean up.



INSERT TAB:
F: Private Backup

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

Instructions to Sewer 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 this checklist (F-1) and the First Responder Form (F-2) 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:

- Form F-3: Customer Information Letter
- Form F-4: Your Responsibilities as a Private Property Owner

Formularios / Documentos:

- F-3: Carta de Información del Cliente
- F-4: Sus Responsabilidades Como Propietario de Una Propiedad Privad

Forms Provided to:

Customer Name

Customer Signature

Date

Check here if customer declines to sign:

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

Date

Instructions to Chief Utility System Operator:

Send photos and a copy of the First Responder form to the City Attorney's Office.

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

Fill out this form as completely as possible.

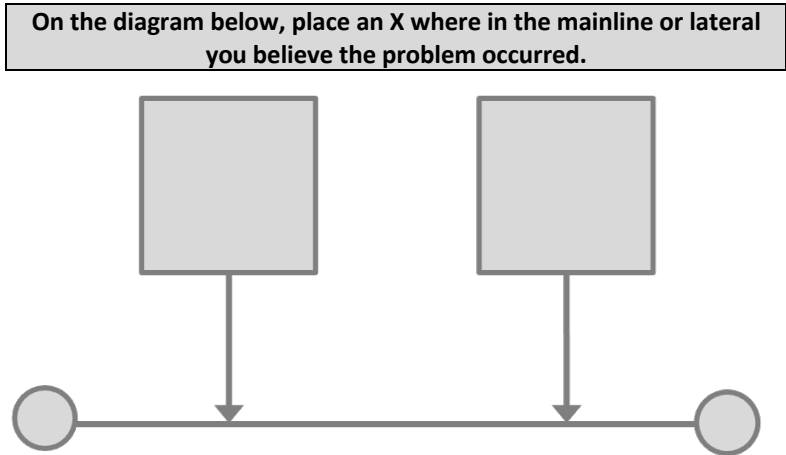
Ask customer if you may enter the home. If so, take photos of all damaged and undamaged areas.

PERSON COMPLETING THIS FORM:		PHONE:
Name: _____		DATE:
Title: _____		TIME:
TIME STAFF ARRIVED ON-SITE:		
RESIDENT NAME: <input type="checkbox"/> Owner <input type="checkbox"/> 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: <input type="checkbox"/> Photographs _____ <input type="checkbox"/> Video _____ <input type="checkbox"/> Customer did not provide or allow photographs		Where are photos/video stored?
Is nearest upstream manhole visibly higher than the drain/fixture that spilled? <input type="checkbox"/> Yes <input type="checkbox"/> No		
Does property have a Property Line Cleanout or BPD? <input type="checkbox"/> Cleanout <input type="checkbox"/> BPD <input type="checkbox"/> Neither <input type="checkbox"/> Unknown		
If yes, was the Property Line Cleanout/BPD operational at the time of the spill?		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
Have there ever been any previous spills at this location?		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
Has the resident had any plumbing work done recently? <i>If YES, please describe:</i>		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown

GO TO PAGE 2

SANITARY SEWER LINE BLOCKAGE LOCATION

PLEASE CHECK THE BOXES THAT DESCRIBE YOUR OBSERVATIONS:	
Building Cleanout Was:	Property Line Cleanout was:
<input type="checkbox"/> Non-Existent	<input type="checkbox"/> Non-Existent
<input type="checkbox"/> Full	<input type="checkbox"/> Full
<input type="checkbox"/> Empty	<input type="checkbox"/> Empty



Did sewage go under buildings? Yes No Unsure

Recommended Follow-Up Action(s):

Dear Property Owner:

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

The City 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 City is investigating the cause of the loss and does not assume liability for damages. However, if our investigation determines the City 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 City 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: *

Restoration Company	Contact
Restoration Management	(800) 400-5058
Servpro	(800) SERVPRO / (800) 737-8776
Service Master	(800) RESPOND / (800) 737-7663
Speedy Restoration	(510) 593-5440

* This list is provided as a resource only. The City 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:

- Contact a restoration company for clean-up and removal of affected surfaces.
- Do not attempt to clean the area yourself, let the company you hire handle this.
- Keep people and pets away from the affected area(s).
- Turn off heating/air conditioning systems.
- Turn off any appliances that use water.
- Prevent any material from reaching floor vents to prevent contamination.
- Do not remove items from the area –the company you hire will handle these contents.
- If you had recent plumbing work, contact your plumber or contractor.
- Contact your homeowner's insurance carrier to report a claim.
- If you wish to file a claim with the City of Pleasanton, contact the City Attorney's office at (925) 931-5015.

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

Estimado Propietario:

Somos conscientes de que los incidentes de alcantarillado de flujo puede ser estresante. La ciudad ha preparado este breve conjunto de instrucciones que le ayudarán a minimizar el impacto de la pérdida por responder rápidamente a la situación.

La Ciudad no es responsable de los gastos de limpieza y daños causados por los bloqueos en línea de la alcantarilla del propietario del inmueble o causados por violaciones de código. En este momento, la Ciudad está investigando la causa de la pérdida y no asume responsabilidad por los daños y perjuicios. Sin embargo, si nuestra investigación determina la Ciudad es responsable de este incidente, los gastos incurridos para la limpieza razonable y necesario se incluirán en la liquidación de su reclamo. Independientemente de si o de la Ciudad es responsable de la pérdida, es a usted para organizar la reparación de su propiedad y que presente una reclamación para su consideración.

Usted o el dueño de la propiedad debe inmediatamente ponerse en contacto con una empresa para la limpieza de las zonas afectadas. Si usted no sabe de una empresa de solicitar un servicio, las siguientes 24 horas, empresas de restauración de emergencia están disponibles para responder:*

Empresa de restauración	Número de Teléfono
Restoration Management	(800) 400-5058
Servpro	(800) SERVPRO / (800) 737-8776
Service Master	(800) RESPOND / (800) 737-7663
Speedy Restoration	(510) 593-5440

* Esta lista se proporciona como un único recurso. La ciudad no necesita ni aprueba el uso de cualquiera de estas empresas. Esta lista no debe ser interpretado como exclusiva, completa o limitar de ninguna manera. Contratistas calificados se pueden encontrar en las páginas amarillas bajo "Restauración de daños causados agua" o "Fuego y Agua Restauración de daños causados". Sin embargo, asegúrese de contratar a una empresa con experiencia en las copias de seguridad de drenaje y los recursos suficientes para hacer el trabajo rápidamente.

Lo que necesita saber en este momento:

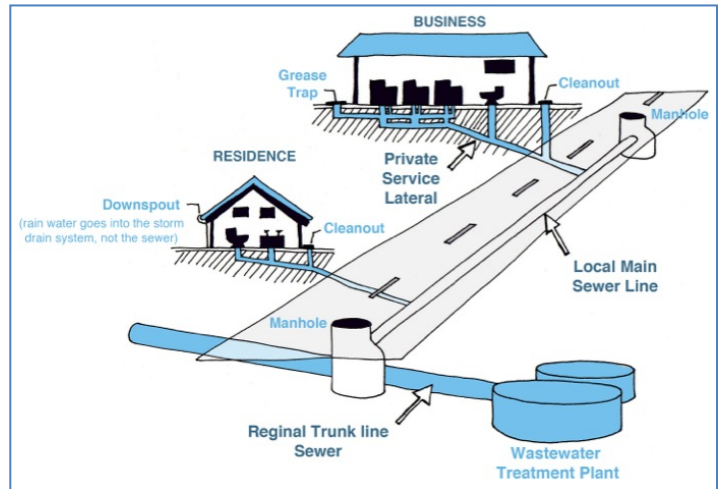
- Póngase en contacto con una empresa de restauración para la limpieza y eliminación de las superficies afectadas.
- No intente limpiar el área, deje que la empresa de contratar a manejar esto.
- Mantenga a las personas ya las mascotas alejados de la zona afectada (s).
- Apague la calefacción / aire acondicionado.
- Apague todos los electrodomésticos que utilicen agua.
- Evite que el material alcance respiraderos del piso para evitar la contaminación.
- No quitar elementos de la zona-la empresa que se encargará de contratar a estos contenidos.
- Si ha tenido el trabajo de plomería reciente, póngase en contacto con un plomero o contratista.
- Póngase en contacto con soporte de su seguro de propietario para presentar una reclamación.
- Si desea presentar un reclamo ante la Ciudad de Pleasanton, comuníquese con la oficina del Fiscal de la Ciudad al (925) 931-5015.

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. Depending on your location, a portion of the lateral is 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 spills 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.



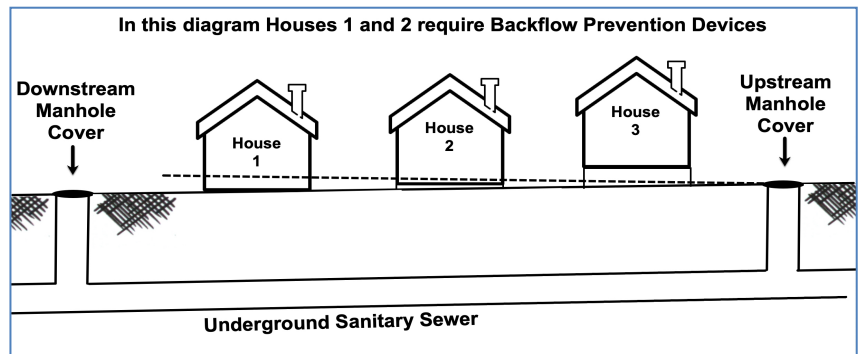
Prevent most sewage backups with a Backflow Prevention Device

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 spills 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.”*

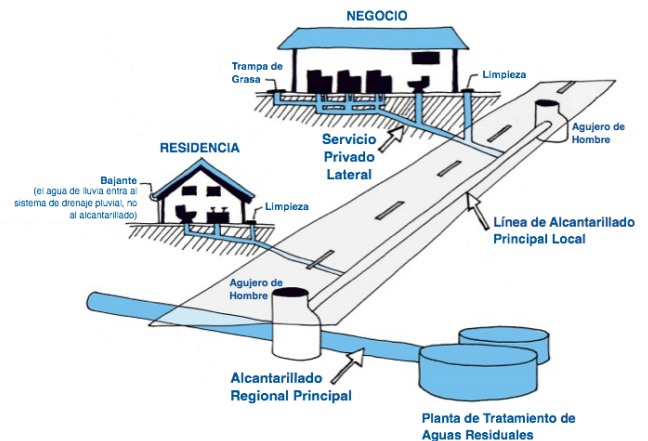


Cómo funciona un sistema de alcantarillado

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.



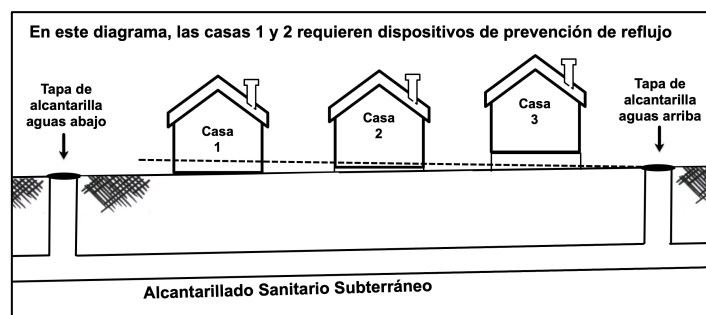
Prevenga la mayoría de las copias de seguridad de aguas residuales con un dispositivo de prevención de reflujo

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.



INSERT TAB:
G: SAMPLING SOP

Table of Contents (this page)..... G-1
Specifications & Requirements -2
Introduction & Overview -3
Equipment & Safety -4
Before Sampling -5
Surface Water Sampling -6
After Sampling -7
Attachment E1 Summary -8
Quick-Reference Guide -9
Surface Water Sampling Worksheet..... -10
Surface Water Sample Chain of Custody Record -11



Process:	<i>Surface Water Sampling</i>
Personnel Required:	<ul style="list-style-type: none"> • 1
Personal Protective Equipment:	<ul style="list-style-type: none"> • Safety Glasses • Rubber Gloves
License Required:	<ul style="list-style-type: none"> • None required
Common Hazards:	<ul style="list-style-type: none"> • Drowning or submersion • Slip, trip, and fall • Exposure • Insect/Wildlife • Weather • Boat/Watercraft • Physical Strain or Injury
Safe Operation Guidelines:	<ul style="list-style-type: none"> • Wear proper PPE • Be aware of currents, depth, and unstable banks • Do not eat, drink or smoke while sampling • Avoid cross-contamination • Label all samples clearly

The purpose of this procedure is to provide a standard for collecting surface water samples to assess water quality, avoid contamination, and ensure that samples can be accurately labeled and transported to the lab for processing.

Start by collecting downstream samples first.

In order to determine where the downstream sample is located in a stream, creek, or river, you will need to determine the velocity of the surface water. This can be accomplished through the use of a stream velocity meter or by measuring off a distance along the bank and timing how long it takes for a floating object to travel that distance.

Use the formula on the *Surface Water Sampling Worksheet* to calculate the stream velocity. Once known, determine the time that the spill **has not been** entering the surface water.

This, along with the stream velocity, will inform you how far downstream you need to travel to collect the downstream sample.

Surface water sampling helps to ensure water quality by identifying areas of concern and potential failure mechanisms that may impact surface waters or stormwater infrastructure in the service area.



Minimize Impacts

Surface water sampling allows for the proper evaluation of potential contamination following a sanitary sewer spill.



Having a thorough understanding of the service area and its various challenges can help responders be better prepared to minimize the impacts of a spill on local surface waters and stormwater infrastructure.

Before beginning the sampling process, there are several important steps that must be taken to ensure that the samples collected are representative of the water quality in the area being monitored.

These steps include:

1. Gathering the necessary equipment:

- The surface water sampling worksheet, chain of custody, sampling pole, sample containers, and PPE are essential tools that must be prepared and organized before sampling can begin.

2. Donning appropriate personal protective equipment:

- To protect against exposure to potentially harmful contaminants and the sulfuric acid preservative in the Ammonia sample bottles, workers must wear gloves, eye protection, and other personal protective equipment, as needed.

3. Determining the point of spill entry into the waterway:

- It's important to locate the point at which any spill entered the waterway in order to collect the required samples: point of entry into the surface water, downstream, and upstream.



The approximate stream velocity and time since the spill flow to the surface water stopped should be determined to calculate the appropriate distance to move downstream to collect:

- 1. The downstream sample,**
- 2. Move upstream to collect the spill entry point sample,**
- 3. And move further upstream to collect the upstream or reference sample.**



Personal Protective Equipment

Personal Protective Equipment (PPE) should be used when conducting surface water sampling. The PPE that is required includes:

- Gloves
- Eye Protection



Sampling Equipment

In addition to PPE, other sampling equipment is necessary:

- Sample Bottles & Containers
- Cooler with Ice, or Ice packs
- Sampling Pole, or
- Rope & Bucket



The use of PPE and proper sampling equipment is important for the safety of the sampler and for ensuring accurate and reliable sampling results.

Test Type	Sample Locations			
	Spill Area	Downstream of Spill	Upstream of Spill	Drainage Conveyance System (as applicable)
Ammonia/ Nitrogen	1 pint with H2SO4	1 pint with H2SO4	1 pint with H2SO4	1 pint with H2SO4
Enterococcus	1 bacti bottle	1 bacti bottle	1 bacti bottle	1 bacti bottle
Fecal Coliforms	1 bacti bottle	1 bacti bottle	1 bacti bottle	1 bacti bottle
e. Coli	1 bacti bottle	1 bacti bottle	1 bacti bottle	1 bacti bottle

Water samples must be collected in different bottles for various tests and then transported in a cooler with ice packs.

For each of the three sampling sites (plus drainage conveyance system as applicable), one bottle is needed for ammonia/nitrogen testing, and three bacti bottles are required for each type of bacteria being tested.

Additionally, one field blank sample is required for each constituent. Field blank sample bottles are filled with sterilized water during sampling to serve as quality control on the sampler's sampling methods.

Since the sample bottles contain sterilized water, bacteria and ammonia should not be present in the water.

If the lab analysis shows the presence of bacteria or ammonia, it indicates that the sampler's method may not have been correct, and the other bacti samples may have been contaminated.

Surface Water Sampling – Preparation

Step 1 of 4



Prepare the cooler for sample storage by adding an instant ice pack, ice pack, or ice to keep the samples cold during transport to the lab.



Step 2 of 4

Identify the point of the spill where the wastewater entered the waterway and take a photograph of this location with a reference point in the picture.

Surface Water Sample Collection Chain of Custody Record									
Customer Name				<input type="checkbox"/> Hazardous Waste	DOE				
Customer Address				<input type="checkbox"/> Unknown Material	BOE				
Customer Telephone	Mail Code	CONTRACT LAB INFORMATION		Turnaround Requirement					
Program Name		City/Co.	Ship Date:	<input type="checkbox"/> Normal	<input type="checkbox"/> Rush				
Lab Program Classifier		Phone #		<input type="checkbox"/> Fast	<input type="checkbox"/> Other				
Sampled By	Collector								
SAMPLE COLLECTION INFORMATION									
Date	Time	Type	Sample Location	Sample Label ID	Analysis Requested	SADC Requirements			
LMMR (Mandated by LCR)		<input type="checkbox"/> System			2 A B SS SS SS SS	<input type="checkbox"/> Lab Review			
		<input type="checkbox"/> Storm Water			2 A B SS SS SS SS	<input type="checkbox"/> Sampling observed			
		<input type="checkbox"/> Downstream			2 A B SS SS SS SS				
		<input type="checkbox"/> Field Blank			2 O SS SS SS SS	<input type="checkbox"/> Bottle sterilized water			
<small>*Storm: P = Public Water, W = Wastewater, A = Ambient Water, G = Groundwater, S = Soil, B = Biosolids, I = Industrial, O = Other (specify in remarks)</small>									
Reference #	Date	Time	Reference to	Date	Time				
<small>Sample Retention Documentation</small> <input type="checkbox"/> Container intact? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Control container? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Field preservation? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Controls kept intact? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Cooled? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Sample stored? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Contaminated? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Sample distribution? <input type="checkbox"/> Let settle <input type="checkbox"/> Mix immediately <input type="checkbox"/> Dispense Date: <input type="checkbox"/> Disposed by: <input type="checkbox"/> Final use: <input type="checkbox"/> Cooled/Refrigerated: <input type="checkbox"/> None <input type="checkbox"/> Ice <input type="checkbox"/> Lab Review Only <input type="checkbox"/> Preparing: <input type="checkbox"/> Lab Prep Count: <input type="checkbox"/> Container Closure: <input type="checkbox"/> None (MVA)									
<small>© 2014 DKF Solutions Group, LLC Page 10 of 21</small>									

Step 3 of 4

Begin completing the *Surface Water Sampling Worksheet* to record the relevant information about the sampling location and collected samples.



Step 4 of 4

To determine which direction is upstream and downstream for sample collection, you should observe the direction of water movement from the point of discharge.



Step 1 of 9

Don the appropriate PPE from your sampling kit. This should include latex or rubber gloves and safety glasses.



Step 2 of 9

Label all samples with their location (refer to table on G-8), your name, and the date and time they are collected. Record this information on the surface water sampling worksheet.



Step 3 of 9

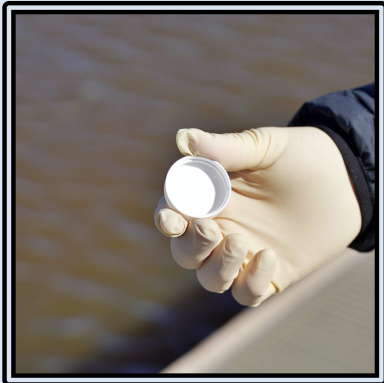
Take photos of each sample location and ensure a reference point is visible in each photo. In the photo (left), the dock and sign serve as excellent reference points.



Step 4 of 9

Remove the seal from the Ammonia sample container just prior to collecting your sample, as applicable.

To reduce the likelihood of contamination, remove the cap immediately before collecting each sample.



Step 5 of 9

To prevent sample contamination, do not allow the inside of the cap to touch anything while you are obtaining the sample.



Step 6 of 9

When filling the ammonia nitrogen sample bottle, don't overfill it because it contains sulfuric acid. Sweep the bottle or dipper upstream and out of the water without disturbing the bottom sediment. Remember to leave the sulfuric acid in the bottle and avoid skin contact.



Step 7 of 9

Fill the Ammonia sample bottle to the fill line, and immediately replace the cap. If there is no clear fill line, fill it to the “neck” of the bottle.



Step 8 of 9

Open the Bacteria sample container and allow water to gently flow into the bottle just to the fill line.



Repeat the sampling process for all sample points, and **provide a “field blank”** sample using sterile water, which verifies the quality of the samples.



Step 9 of 9

Place all samples in the cooler on the ice pack. To ensure accurate analysis, the Bacti samples must be transported to the lab within 6 hours of the time of collection.

Step 1 of 4: Documentation

All samples must be labeled with their location, your name, and the date and time they were collected. Refer to the state requirements found on the last page of this document. Record this information on the chain of custody form and the surface water sampling worksheet.

Chain of Custody Record

**Westborough Water District Water Quality Monitoring Program Plan
Surface Water Sample Collection Chain of Custody Record**

Customer Name: ABC Soapberry Distributors
 Customer Address: 555 Post Valley Ln
 Customer Telephone: 555-555-1212
 Program Name: Spill Remediation
 Lab Program Coordinator: David Patzer
 Sampled By: David Patzer

LMSP (Issued by Lab)	Date	Time	Type	Sample Location	Sample Label ID	#Containers	Material	Analysis Requested	QA/QC Requirements	Remarks/Notes
	2/10/23	12:30	<input type="checkbox"/> <input checked="" type="checkbox"/>	Upstream	RSW-001 U	2	A	<input type="checkbox"/> Lead <input type="checkbox"/> Copper <input type="checkbox"/> BOD	<input type="checkbox"/> Lead <input type="checkbox"/> Special (see attached)	
	2/10/23	12:35	<input type="checkbox"/> <input checked="" type="checkbox"/>	Entry Point	RSW-001 E	2	A	<input type="checkbox"/> Lead <input type="checkbox"/> Copper <input type="checkbox"/> BOD		
	2/10/23	12:45	<input type="checkbox"/> <input checked="" type="checkbox"/>	Downstream	RSW-001 D	2	A	<input type="checkbox"/> Lead <input type="checkbox"/> Copper <input type="checkbox"/> BOD		
			<input type="checkbox"/> <input checked="" type="checkbox"/>	Field Blank	FB-1	2	O	<input type="checkbox"/> Lead <input type="checkbox"/> Copper <input type="checkbox"/> BOD		Sterile deionized water

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

Surface Water Sampling Worksheet

Surface Water Sampling Worksheet

Sample Date: 2/10/23
 Sample Time: 12:30 AM
 Sample Location: Suburban Slough
 Sampler(s) Name(s): David Patzer
 What is being sampled? Stream Pond Lake River Other: _____
 Weather at time of sampling: Sunny Overcast Drizzling Raining Snowing

Visual Observations and Interferences:
 Upstream: RSW-001 U (check near stream V-V set from sample point)
 Downstream: RSW-001 D
 Field Blank: FB-1

Step 2 of 4: Contact the Lab

Inform the lab that the following samples require processing: ammonia-nitrogen, total/fecal coliform, e. Coli, and/or enterococcus. Provide any additional information the lab may require.

Step 3 of 4: Transport Samples

Place the samples in the cooler on the ice pack and transport them to the lab within 6 hours of collection time. Complete the chain of custody form and ensure all samples are properly secured during transport.

Step 4 of 4: Post Warning Signs

If directed by your supervisor or the county environmental health division, post warning signs in the affected area. Keep track of sign locations and remove warning signs and lift restrictions only when authorized to do so.

The Enrollee shall collect receiving water samples at the following locations:

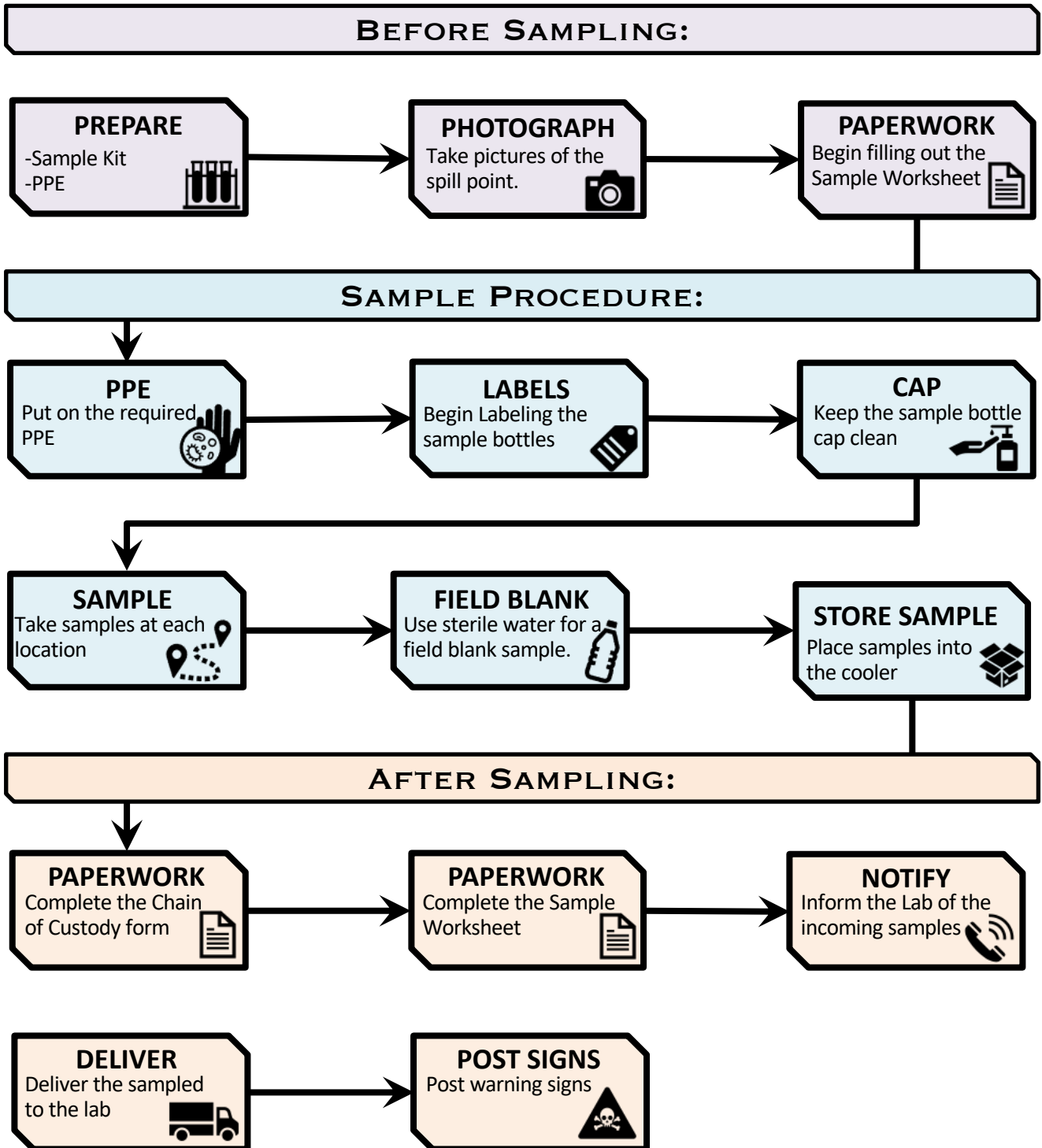
Sampling of Flow in Drainage Conveyance System (DCS) Prior to Discharge

Sampling Location	Sampling Location Description
DCS-001	A point in a drainage conveyance system before the drainage conveyance system flow discharges into a receiving water.

Receiving Surface Water Sampling (RSW¹)

Sampling Location	Sampling Location Description
RSW-001 Point of Discharge	A point in the receiving water where sewage initially enters the receiving water.
RSW-001U Upstream of Point of Discharge	A point in the receiving water, upstream of the point of sewage discharge, to capture ambient conditions absent of sewage discharge impacts.
RSW-001D Downstream of Point of Discharge	A point in the receiving water, downstream of the point of sewage discharge, where the spill material is fully mixed with the receiving water.

¹The Enrollee must use its best professional judgment to determine the upstream and downstream distances based on receiving water flow, accessibility to upstream/downstream waterbody banks, and size of visible sewage plume.



Sample Date:	Sample Time: <input type="checkbox"/> AM <input type="checkbox"/> PM	Sample Location:		
Sampler(s)' Name(s):				
Sampler(s)' Signature(s):				
What is being sampled? <input type="checkbox"/> Stream <input type="checkbox"/> Pond <input type="checkbox"/> Lake <input type="checkbox"/> River <input type="checkbox"/> Other:		If the spill was not actively entering the surface water during sampling: A. Stream Velocity: _____ CFS B. How Long Has the spill 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:		
Weather at time of sampling: <input type="checkbox"/> Sunny <input type="checkbox"/> Overcast <input type="checkbox"/> Sprinkling <input type="checkbox"/> Raining				
Was the spill actively entering the surface water during Sampling? <input type="checkbox"/> YES <input type="checkbox"/> NO If no, complete A-D in the gray box to the right.				
Sample Location	Sample Label	# of Samples*	Photo ID# of Sample Location	Visual Observations and/or Interferences
Drainage Conveyance	DCS-001	4		
Source*	RSW-001	4		
Upstream*	RSW-001U	4		
Downstream*	RSW-001D	4		
Field Blank*	Field Blank	4		

* Ammonia plus 3 bacti samples

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

INSERT TAB:
POST-SPILL

SPILL LOCATION
Spill location name:
Address of spill:

NOTIFICATION AND COMMUNICATION PROCEDURES
Were notification procedures adhered to? <input type="checkbox"/> Yes <input type="checkbox"/> No
Were notification procedures effective? <input type="checkbox"/> Yes <input type="checkbox"/> No

RESPONSE PROCEDURES
Were response time goals met? <input type="checkbox"/> Yes <input type="checkbox"/> No
Were safety procedures adhered to? <input type="checkbox"/> Yes <input type="checkbox"/> No
Were safety procedures effective? <input type="checkbox"/> Yes <input type="checkbox"/> No
Were initial response procedures adhered to? <input type="checkbox"/> Yes <input type="checkbox"/> No
Were initial response procedures effective? <input type="checkbox"/> Yes <input type="checkbox"/> No
Were containment procedures adhered to? <input type="checkbox"/> Yes <input type="checkbox"/> No

RESPONSE PROCEDURES (continued)	
Were containment procedures effective?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Were clean up and recovery procedures adhered to?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Were clean up and recovery procedures effective?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Were sewer back up procedures adhered to?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Were sewer back up procedures effective?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Were chain of custody procedures adhered to?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Was failure analysis investigation performed and documented?	<input type="checkbox"/> Yes <input type="checkbox"/> No
REPORTING AND NOTIFICATION PROCEDURES	
Were reporting and notification timeline requirements met?	<input type="checkbox"/> Yes <input type="checkbox"/> No

DOCUMENTATION	
Was spill file created?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Was QA/QC performed to ensure field data matched CIWQS data?	<input type="checkbox"/> Yes <input type="checkbox"/> No
RECOMMENDED CHANGES	
<div style="text-align: right; padding-right: 20px;"><input type="checkbox"/> N/A</div>	
ATTENDEES	
FACILITATED BY	
	Date:

OFFICE USE ONLY

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

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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
	Added sewer to preventive maintenance program				
	Adjusted schedule/method of preventive maintenance				
	Enforcement action against FOG source				
	Plan rehabilitation or replacement of sewer				
	Repaired facilities or replaced defect				
	Change(s) to Spill Response Procedures				
	Training				
	Misc.				
Comments/Notes:					
Reviewed By:				Review Date:	