City Of Salinas

Sewer System
Spill Emergency Response Plan

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Sewer System

Spill Emergency Response Plan (SERP)

Sewer Spill Emergency Response Plan

1. Purpose

The purpose of the City of Salinas's Spill Emergency Response Plan (SERP) is to support an orderly and effective response to Sanitary Sewer Spill (SSPs). The SERP provides guidelines for City personnel to follow in responding to, cleaning up, and reporting Sewer Spills that may occur within the City's service area. This SERP follows the SWRCB Statewide General Waste Discharge Requirements (GWDR), which require wastewater collection agencies to have an Spill Emergency Response Plan.

2. Policy

The City's employees are required to report all sewer spills found and to take the appropriate action to secure the wastewater 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 in regard to sewer spills as set forth by the Central Coast Regional Water Quality Control Board (*SFRWQCB)* and the California State Water Resources Control Board (*SWRCB)***.**

3. Definitions as Used in This SERP

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

FROG – Fats, Roots, 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 this General Order, groundwater is hydrologically connected to a surface water when the groundwater feeds into the surface water. (The surface waterbody in this example is termed a gaining stream as it gains flow from surrounding groundwater.)

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.

LEGALLY RESPONSIBLE OFFICIAL (LRO): A Legally Responsible Official is an official representative, designated by the Enrollee, with authority to sign and certify submitted information and documents required by this General Order.

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

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

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

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

NUISANCE: For the purpose of this General Order, 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 DISCHARGES – Sewage discharges that are caused by blockages or other problems within a privately-owned lateral.

RECIEVING 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, manholes, 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 Enrollee;
- 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.

Sanitary sewer systems include only systems owned and/or operated by the Enrollee.

SPILL: A spill is a discharge of sewage from any portion of a sanitary sewer system due to a sanitary sewer system spill, 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.

SPILL CATEGORIES

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

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 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 the 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 the 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.

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.

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

SSS General Order Requirement

The Plan must include an up-to-date Spill Emergency Response Plan to ensure prompt detection and response to spills to reduce spill volumes and collect information for prevention of future spills. The Spill Emergency Response Plan 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 this General Order, State law and regulations, and applicable Regional Water Board Orders;
- Ensure that appropriate staff and contractors implement the Spill Emergency Response Plan 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 this General Order; and
- Annually, review and assess effectiveness of the Spill Emergency Response Plan, and update the Plan as needed.

The Sewer System Management Plan and critical supporting documents are available to the public at www.cityofsalinas.org under Environmental Maintenance.

5. Goals

The City's goals with respect to responding to Spills are:

- Work safely;
- Respond quickly to minimize the volume of the Spill;
- Eliminate the cause of the Spill;

- Prevent sewage system spills or leaks from entering the storm drain system or receiving waters to the maximum extent practicable;
- Contain the spilled wastewater to the extent feasible;
- Minimize public contact with the spilled wastewater;
- Mitigate the impact of the Spill;
- Meet the regulatory reporting requirements;
- Evaluate the causes of failure related to certain Spills; and
- Revise response procedures resulting from the debrief and failure analysis of certain Spills.

6. Spill Detection and Notification

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.

The City operates 11 wastewater lift stations. In the event of any pump failure, the high-level sensor activates the SCADA alarm system, and the City is contacted. To prevent a spill, wastewater from the wet well can either be pumped into a vacuum truck for disposal to a nearby sanitary sewer manhole or bypassed around the station into the sanitary sewer system.

6.1 PUBLIC OBSERVATION

Public observation is the most common way that the City is notified of blockages and spills. Contact numbers and information for reporting sewer spills and backups are in the phone book and on the City's website: http://www.cityofsalinas.org. The City's telephone number for reporting sewer problems is (831) 758-7233 during business hours. After hours callers are instructed to call 911.

Normal Work Hours
A report of sewer spill or backup during normal work hours goes to the Office Technician. They will complete the Receiving a Sanitary Sewer Service Call Report. The Office Technician will call the Wastewater Crew Supervisor or Foreman and relay the information. An available Wastewater Crew will respond.

After Hours
After hours callers are instructed to call 911. Monterey Dispatch will contact the On Call Employee.

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

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

If the Wastewater Supervisor or the Wastewater Manager determines that the spill/backup is not in the service area they provide the customer with the contact information for the responsible agency, and then notify that agency.

If the spill/backup is in the City's service area, a collections crew is dispatched and instructed to complete the Sanitary Sewer Spill/Backup Response Workbook.

The responding Wastewater Crew will complete the electronic Q-Alert report (i.e. Service Request) and document findings and response actions, as appropriate.

If the service call was not an Spill, the Q-Alert will be completed and forwarded to the Wastewater Crew Supervisor. The Wastewater Crew Supervisor will review for completeness and accuracy and ensure the Q-Alert is entered into the City system.

If the service request was an Spill, the Spill response forms will also be completed by the Crew and reviewed by the Wastewater Crew Supervisor. An Spill Incident File will be created, and the hardcopy Spill forms, and other supporting documentation will be placed in the Spill Incident File and filed at the Wastewater Division. If the Spill impacted storm water systems, the Spill Report and supporting documentation will also be filed in the Illicit Discharge Database.

After Hours, the On Call Employee will create and complete the Q-Alert and the Wastewater Crew Supervisor will review the next business day and ensure the service call is entered into the City system.

Regardless of when the service request was made, business hours or after hours, all service request Q-Alerts are also printed and filed in the City files at the Wastewater Division.

6.2 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.

6.3 CONTRACTOR OBSERVATION

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

1. Immediately notify the City.
2. Protect storm drains & Protect the Public
3. Provide Information to the City Wastewater Crew such as start time, appearance point, suspected cause, weather conditions, etc.
4. Direct <u>all</u> media and public relations requests as directed in the City's Communications Plan.

6.4 NO OBSERVATION

If there are no witnesses or no call was received for a Spill, City staff will contact nearby residents 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 placed with records for the specific Spill.

6.5 STORMWATER SYSTEM COORDINATION

The City of Salinas owns and operates all stormwater assets in the City service area. City staff maintains storm drain maps which allows them to identify storm drain inlets, outlets and intermediate structures that may allow them to isolate, contain, recover and disinfect a spill if it enters the storm drain system.

6.6 NOTIFICATION OF WATER SUPPLIERS

The City will monitor spills in the proximity of any surface water intake. In the event of a Spill that occurs within 1,000 feet of a surface water intake, the City will notify the local water purveyor or owner of the intake that a spill has occurred and that there is the potential for contamination.

7. Spill Response Procedures

7.1 Sewer Spill/Backup Response Summary

The City will respond to Spills as soon as feasible following notification of sewer spill or sewer backup.

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

- Follows the instructions in the Sanitary Sewer Spill/Backup Response Workbook.
- If the customer is not home the Wastewater Crew completes the Door Hanger and leaves it on the customer's door.
- If the customer is home the Wastewater 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 spill/backup is due to a failure in the City-owned/maintained sewer lines the Wastewater Crew:

- Follows the instructions in the Sanitary Sewer Spill/Backup Workbook.
- Notifies the Wastewater Crew Supervisor of the incident.
- Relieves blockage and cleans impacted areas.
- Forwards the completed Sanitary Sewer Spill Workbook to the Wastewater Crew Supervisor.

The Wastewater Manager or Wastewater Crew Supervisor performs required regulatory reporting in accordance with the Sanitary Sewer Spill/Backup Workbook's Regulatory Reporting section.

If the spill has impacted private property, the Wastewater Crew:

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

The Wastewater Crew Supervisor notifies the City Clerk and the City Attorney of incident.

The City Clerk:

- Reviews incident reports, claim form and other incident information.
- Communicates with claimant as appropriate.
- Adjusts and administers the claim to closure.

7.2 First Responder Priorities

The first responder's priorities are:

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

7.3 Safety

The first responder is responsible for following safety procedures at all times. Special safety precautions must be observed when performing sewer work. There may be times when 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 starting the job.

7.4 Initial Response

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

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.
- Take photos of spilling manhole(s)/cleanout(s).
- Determine if the spill or blockage is from a public or private sewer.
- Estimate discharge rate if flowing to drainage system or Water of State
- Identify and assess the affected area and extent of spill.
- Visually assess the spill location(s) and spread using photography, global positioning system (GPS), and other best available tools. Document the critical spill locations, including:
    - Photography and GPS coordinates for:
        - The system location where spill originated.
        - For multiple appearance points of a single spill event, the points closest to the spill origin.
    - Photography for:
        - Drainage conveyance system entry locations,
        - The location(s) of discharge into surface waters, as applicable,
        - Extent of spill spread, and
        - The location(s) of clean up.

- Contact caller if time permits.
- Decide whether to proceed with clearing the blockage to restore the flow or to initiate containment measures. The guidance for this decision is:
    - Small spills (i.e., spills that are easily contained) – proceed with clearing the blockage.
    - Moderate or large spill where containment is anticipated to be simple – proceed with the containment measures.
    - Moderate or large spills where containment is anticipated to be difficult – proceed with clearing the blockage; however, whenever deemed necessary, call for additional assistance and implement containment measures.
- Take steps to contain the Spill. For procedures refer to the Sanitary Sewer Spill/Backup Response Workbook.

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

For procedures refer to the Sanitary Sewer 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 manhole. Attempt to remove the blockage from the system and observe the flows to ensure that the blockage does not reoccur downstream. If the blockage cannot be cleared within a reasonable time from arrival, or sewer requires construction repairs to restore flow, then initiate containment and/or bypass pumping. If other assistance is required, immediately contact Wastewater Crew Supervisor or Wastewater Manager. For procedures refer to the Sanitary Sewer Spill/Backup Response Workbook.

7.7 Equipment

This section provides a list of specialized equipment that is required to support this 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 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 spill or backup can be found in the Wastewater Division and on equipment as available and appropriate.

8. Recovery and Cleanup

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:

8.1 Estimate the Flow and Volume of Spilled Sewage

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

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

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

8.2 Recovery of Spilled Sewage

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

8.3 Clean-up and Disinfection

Clean up and disinfection procedures will be implemented to reduce the potential for human health issues and adverse environmental impacts that are associated with an 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 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 spill 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 pick up City claim forms from the City Clerk or from the City's website www.cityofsalinas.org.

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 and environmentally

friendly surface disinfectant until the water runs clear. The flushing volume will be approximately three times the estimated volume of the spill. Take reasonable steps to contain and vacuum up the wastewater. Allow area to dry. Repeat the process if additional cleaning is required.

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

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

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

8.4 Public Notification

Signs will be posted, and barricades put in place to keep vehicles and pedestrians away from contact with spilled sewage. County Environmental Health instructions and directions regarding placement and language of public warnings will be followed. Additionally, the Wastewater Crew Supervisor will use their best judgment regarding supplemental sign placement to protect the public and local environment. Signs will not be removed until directed by County Environmental Health, the Wastewater Crew Supervisor, or the Wastewater 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. 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 a spill 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, it will be done so pursuant to the City's Communications Plan.

9. Water Quality

9.1 Waters of the State

The following waters of the state are in the City of Salinas's service area:

- Salinas River
- Gabilan Creek
- Natividad Creek
- Santa Rita Creek
- Alisal Creek
- Reclamation Ditch 1665

9.2 Receiving Water Visual Observations

Through visual observations and use of best available spill volume-estimating techniques and field calculation techniques, the Enrollee shall gather and document the following information for spills discharging to surface waters:

- Estimated spill travel time to the receiving water;
- For spills entering a drainage conveyance system, estimated spill travel time from the point of entry into the drainage conveyance system to the point of discharge into the receiving water;
- Estimated spill volume entering the receiving water; and
- Photography **of:**
  - Waterbody bank erosion,
  - Floating matter,
  - Water surface sheen (potentially from oil and grease),
  - Discoloration of receiving water, and
  - Impact to the receiving water.

9.3 Water Quality Sampling and Analysis

Water quality sampling and testing will be performed for Category 1 Spills whenever there is a major spill (50,000 gallons or more) to determine the extent and impact of the Spill. The water quality sampling procedures must be implemented within 18 hours and include the following:

- The first responders will collect samples as soon as possible after the discovery and mitigation of the Spill event. Samples must be collected each day of the duration of the spill.
- The water quality samples will be collected from the following locations:
  - A point in the drainage conveyance system prior to discharge to receiving water (Sample ID: DCS-001)
  - Upstream of the spill (Sample ID: RSW-001U),
  - Downstream of the spill (Sample ID: RSW-001D) in flowing water (e.g. creeks).
  - Near the point of entry of the spilled sewage (Sample ID: RSW-001).
- The samples shall then be brought to the Monterey County Health Department Consolidated Environmental Laboratory for analysis.

9.4 Water Quality Monitoring Plan

The City Water Quality Monitoring Plan will be implemented immediately upon discovery of any Category 1 Spill and/or whenever there is a major spill in order to assess impacts from Spills to surface waters. The Spill Water Quality Monitoring Program will:

1. Contain protocols for water quality monitoring.

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

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

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

5. Within 18 hours of the City becoming aware of the Spill, require water quality sampling for fecal coliform, E. Coli, biochemical oxygen demand (BOD), and ammonia.

6. Observe proper chain of custody procedures.

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

9.5 Spill Technical Report

The City will submit an Spill Technical Report to the CIWQS Online Database **within 45 calendar days** of the Spill end date for any major Spill (50,000 gallons or greater) to surface waters. The Wastewater Manager will supervise the preparation of this report and will certify this report. This report, which does not preclude the Water Boards from requiring more detailed analyses if requested, shall include at a minimum, the following:

<u>Causes and Circumstances of the Spill:</u>

- 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.

City's Response to SSO:

- 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.

Water Quality Monitoring:

- Description of all water quality sampling activities conducted;
- List of pollutant and parameters monitored, sampled and analyzed;
- Laboratory results, including laboratory reports;
- Detailed location map illustrating all water quality sampling points; and
- Other regulatory agencies that receive sample results (if applicable).

Follow Up Sampling:

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

- The County Environmental Health Services 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

Spill Impacts

The impacts of a spill 50,000 gallons or greater to a surface water will require the following:

- Evaluation of spill impact(s), including a description of short-term and long-term impact(s) to beneficial uses of the surface water.
- As indicated earlier, the following Waters of the State are within the City's service area:
    - Salinas River
    - Gabilan Creek
    - Natividad Creek
    - Santa Rita Creek
    - Alisal Creek
    - Reclamation Ditch 1665

  The following are Beneficial Uses for each of these water bodies:

Water Body	Beneficial Use
Alisal Creek	Agricultural Supply
	Cold Freshwater Habitat
	Commercial and Sports Fishing
	Groundwater Recharge
	Municipal and Domestic Supply
	Water Contact Recreation
	Non-Contact Water Recreation
	Spawning, Reproduction, Early Development
	Warm Freshwater Habitat
	Wildlife Habitat
Gabilan Creek	Agricultural Supply
	Cold Freshwater Habitat
	Commercial and Sports Fishing
	Groundwater Recharge
	Migration of Aquatic Organisms
	Rare, Threatened or Endangered Species
	Water Contact Recreation
	Non-Contact Recreation
	Spawning, Reproduction, Early Development
Salinas River	Municipal and Domestic Supply
	Agricultural Supply
	Water Contact Recreation
	Non-Contact Water Recreation
	Wildlife Habitat
	Cold Freshwater Habitat
	Warm Freshwater Habitat
	Migration of Aquatic Organisms
	Freshwater Replenishment
	Commercial and Sport Fishing
Santa Rita Creek	Cold Freshwater Habitat
	Municipal Domestic Supply
	Water Contact Recreation
	Non-Contact Water Recreation
	Spawning, Reproduction, Early Development
	Warm Freshwater Habitat
Recreation Ditch 1665	Cold Freshwater Habitat
	Municipal Domestic Supply
	Water Contact Recreation
	Non-Contact Water Recreation
	Spawning, Reproduction, Early Development
	Warm Freshwater Habitat
Natividad Creek	Cold Freshwater Habitat
	Municipal Domestic Supply
	Water Contact Recreation
	Non-Contact Water Recreation
	Spawning, Reproduction, Early Development
	Warm Freshwater Habitat

Source: https://www.waterboards.ca.gov/resources/data_databases/basin_plan_portal.html

10. 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 spills/backups into/onto private property:

- 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 following subsequent investigations.
- It is the responsibility of the Wastewater Crew to gather information regarding the incident and notify the Wastewater Crew Supervisor or the Wastewater Manager.
- It is the responsibility of the City Attorney or their designee to review all claims and to oversee the adjustment and administration of the claim to closure.

11. Notification, Reporting, Monitoring and Recordkeeping Requirements

In accordance with the Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (SSS GWDRs), the City of Salinas maintains records for each sanitary sewer spill for a period of five (5) years. Records include:

<u>All Spills</u>

- Spill event complaint, including but 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;
- Records documenting the steps and/or remedial action(s) undertaken by the City as applicable;
- Records documenting how estimate(s) of volume(s) and, if applicable, volume(s) of spill recovered were calculated;
- All California Office of Emergency Services notification records, as applicable; and
- All records, in accordance with the Notification, Monitoring and Recordkeeping Requirements
- Supervisory control and data acquisition (SCADA) system(s);
- Alarm system(s);
- Flow monitoring device(s) or other instrument(s) used to estimate sewage flow rates, and/or volumes;
- Computerized maintenance management system records; and
- Asset management-related records.

Category 4 Spills

- Contact information: Name and telephone number of Enrollee contact person to respond to spill-specific questions;
- Spill location name;
- Description and GPS coordinates for the system location where the spill originated;
- Did the spill reach a drainage conveyance system? If Yes:
    - Description of drainage conveyance system location,
    - Estimated spill volume fully recovered within the drainage conveyance system, and
    - Estimated spill volume remaining within the drainage conveyance system;
- Estimated total spill volume exiting the sanitary sewer system;
- Spill date and start time;
- Spill cause(s) (for example, root intrusion, grease deposition, etc.);
- System failure location (for example, main, pump station, etc.);
- Description of spill response activities including description of immediate spill containment and cleanup efforts;
- Description of how the volume estimation was calculated, including, at minimum:
    - 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
    - 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;
- Description of implemented system modifications and operating/maintenance modifications.

SWRCB required notification, monitoring and reporting are outlined in Section 11.1.

11.1 SWRCB Required Notifications/Monitoring/Reporting

Spill Category 1: Spills to Surface Waters

Spill Requirement	Action
Notification	**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. (800) 852-7550
Monitoring	• Conduct spill-specific monitoring; spill location and spread, spill volume estimations, receiving water visual observations • 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.
Reporting	• Submit Draft Spill Report **within three (3) business days** of the Enrollee'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.

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

Spill Requirements	Action
Notification	**Within two (2) hours** of the City's knowledge of a Category 2 spill of 1,000 gallons or greater, discharging or threatening to discharge to waters of the State: *Notify the California Office of Emergency Services and obtain a notification control number. (800) 852-7550 if spill goes to Water s of the State and is 1,000 gallons or greater.*
Monitoring	Conduct spill-specific monitoring; spill location and spread, spill volume estimations, receiving water visual observations.
Reporting	• Submit Draft Spill Report **within three (3) business days** of the Enrollee'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.

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	Action
Notification	Not Applicable
Monitoring	Conduct spill-specific monitoring; spill location and spread, spill volume estimations.
Reporting	• Submit monthly Certified Spill Report to the online CIWQS Sanitary Sewer System Database within **30 calendars 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.

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

Spill Requirements	Action
Notification	Not Applicable
Monitoring	Conduct spill-specific monitoring; spill location and spread, spill volume estimations.
Reporting	• 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.

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

Spill Requirements	Action
Notification	**Within two (2) hours** of the Enrollee's knowledge of a spill of 1,000 gallons or greater, from an enrollee- owned and/or operated lateral, discharging or threatening to discharge to waters of the State: Notify the California Office of Emergency Services and obtain a notification control number. Not applicable to a spill of less than 1,000 gallons.
Monitoring	Conduct visual monitoring, spill location and spread, spill volume estimations,
Reporting	• 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.

For reporting purposes, if one Spill event of whatever category results in multiple appearance points in a sewer system, a single Spill report is required in CIWQS that includes the GPS coordinates for the location of the Spill appearance point closest to the failure point, blockage or location of the flow condition that cause the Spill, and descriptions of the locations of all other discharge points associated with the single Spill event.

11.2 Complaint Records

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

- Date, time, and method of notification
- Date and time the complainant or informant first noticed the Spill or occurrence related to the call
- 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,
- Name, address, and contact telephone number of the complainant or informant reporting the potential Spill (if not reported anonymously)
- Follow-up return contact information for each complaint received (if not reported anonymously)
- Final resolution of the complaint with the original complainant
- Work service request information used to document all feasible and remedial actions taken.
- All complaint records will be maintained consistent with and pursuant to the City's Records Retention Schedule whether or not they result in an Spill. Spill records are kept under the direction and control of the Wastewater Manager.

12. Post Spill Event Debriefing

Every Spill event is an opportunity to evaluate the City response and reporting procedures. 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 Category 1, Category 2, or Category 3 Spill events all of the participants, from the person who received the call to the last person to leave the site, will meet to review the procedures used and to discuss what worked and where improvements could be made in preventing or responding to and mitigating future Spill events. The results of the debriefing will be documented and tracked to ensure the action items are completed as scheduled.

13. 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 will 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.

14. Spill Response Training

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

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

The City will verify that annual safety training requirements are current for each employee, and that employees are competent in the performance of all core competencies. This will be verified through electronic testing, interviews and observations. The City will address, through additional training/instruction, any identified gaps in required core competencies.

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

1. Please briefly describe your name and job title.
2. Please describe for us approximately when you started in this field and how long you have worked for your agency.
3. Please expand on your current position duties and role in responding in the field to any Spill complaints.
4. Please describe your SOPs used to respond/mitigate Spills when they occur.
5. Describe any training your agency provides or sends you to for conducting spill volume estimates.
6. We are interested in learning more about how your historical Spill response activities have worked in the field. We understand from discussions with management earlier that you use the SERP from the SSMP. Please elaborate on how you implement and utilize the procedures in the plan.

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

14.2 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.

14.3 Spill Training Record Keeping

Records will be kept of all training that is provided in support of this plan. The records for all scheduled training courses and for each spill emergency response training event will include date, time, place, content, name of trainer(s), and names and titles of attendees.

14.4 Contractors Working On City Sewer Facilities

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

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

15. Appendices

- Appendix A: Receiving A Sanitary Sewer Service Call Report
- Appendix B: Water Quality Monitoring Plan
- Appendix C: Testing for Total Coliforms and E. Coli
- Appendix D: Chain of Custody
- Appendix E: Private Lateral Sewage Discharge Information (Pamphlet)
- Appendix F: Door Hanger
- Appendix G: Sanitary Sewer Spill/Backup Response Workbook

APPENDIX A:
Receiving A Sanitary Sewer Service Call Report

City of Salinas

Receiving a Sanitary Sewer Service Call Report

Dispatch staff receiving the report: _____

Date of Report:_____**Time of Report** _____

- ☐ **What is the residents/person's name?** _____
- ☐ **What is the residents/person's phone number?** _____
- ☐ **What is the residents/person's address?** _____
- ☐ **What is the address or location of the incident?** _____
- ☐ **Please describe the problem:**

_____

_____

_____

_____

- ☐ **Is Spill entering stormwater system or surface water ?** _____
- ☐ **What time did the caller first notice incident?** _____
- ☐ **Is liquid currently flowing?** ☐**Yes or** ☐ **No If No what time did it stop:** _____
- ☐ **If the problem is sewer odor only, please specify where the smell is coming from:**

_____

- ☐ **Clearly communicate that if the blockage is in the sewer main in the street it will be promptly cleared, but that City staff is not allowed to work on blockage in property owner/resident's private lateral line.**
- ☐ **Show concern and empathy for the resident/person's, but do not admit or deny liability.**
- ☐ **Instruct the resident/person's to stay away from affected area, including family members and pets.**

How was problem resolved?

_____

_____

If spill is in private property or inside home:

- ☐ **Instruct the resident/person's to place towels, rags, blankets, etc. between areas that have been affected and the areas that have not been affected.**
- ☐ **Instruct the resident/person's to turn off all plumbing appliances (Laundry, shower, sinks, etc.)**
- ☐ **Instruct the resident/person's to not move any contaminated items (Let the professionals do this) they can move any uncontaminated items/property away from the spill area. If**
- ☐ **possible, ask the resident/person's to take photographs of the damage.**
- ☐ **Dispatch crew to incident. Keep copy of report at dispatch, provide one to crew responding.**
- ☐ **Crew responding:** _____

APPENDIX B:
Water Quality Monitoring Plan

SSMP
ELEMENT 6 – Spill Emergency Response Plan
APPENDIX 6.7

Water Quality Monitoring Program

WATER QUALITY MONITORING PROGRAM

INTRODUCTION

This Water Quality Monitoring Program provides City of Salinas response activities and standard operating procedures to be utilized in the SERP, in the event a sanitary sewer spill (Spill) exceeds 50,000 gallons or any discharge to a waterbody. This program is reviewed periodically and may be updated as necessary.

State Water Resources Control Board Order No. 2022-0103-DWQ, requires the following:

Spill Water Quality Monitoring Requirements

To comply with the SSS WDRs, the City shall implement a Sewer Spill Water Quality Monitoring Program to assess impacts from Spills to surface waters in which 50,000 gallons or greater are spilled to surface waters. The SSO Water Quality Monitoring Program, includes:

1. Protocols for water quality monitoring.
2. Accounting for spill travel time in the surface water and scenarios where monitoring may not be possible (e.g. safety, access restrictions, etc.).
3. Requirements for water quality analyses for ammonia and bacterial indicators to be performed by an accredited or certified laboratory.
4. Requirements for monitoring instruments and devices used to implement the Spill Water Quality Monitoring Program to be properly maintained and calibrated, including any records to document maintenance and calibration, as necessary, to ensure their continued accuracy.
5. Within 18 hours of the enrollee becoming aware of the Spill, require water quality sampling for, at a minimum, the following constituents:
    i. Ammonia
    ii. Appropriate Bacterial indicator(s) per the applicable Basin Plan water quality objective or Regional Board direction which may include total and fecal coliform, enterococcus, and e-coli.

Additionally, for spills greater than 50,000 gallons, a Spill Technical Report is required and must be submitted within 45 calendar days from the Spill end date. The Spill Technical Report requirements are described in the SERP.

VISUAL AND PHOTOGRAPHIC DOCUMENTATION

City staff shall visually assess the spill location(s) and spread using photography, global positioning system (GPS), and other best available tools. The Enrollee shall document the critical spill locations, including:

- Photography and GPS coordinates for:
    - The system location where spill originated.

  For multiple appearance points of a single spill event, the points closest to the spill origin.
- Photography for:
    - Drainage conveyance system entry locations,
    - The location(s) of discharge into surface waters, as applicable,
    - Extent of spill spread, and
    - The location(s) of clean up.

Through visual observations and use of best available spill volume-estimating techniques and field calculation techniques, City staff shall gather and document the following information for spills discharging to surface waters:

- Estimated spill travel time to the receiving water;
- For spills entering a drainage conveyance system, estimated spill travel time from the point of entry into the drainage conveyance system to the point of discharge into the receiving water;
- Estimated spill volume entering the receiving water; and
- Photography of:
    - Waterbody bank erosion,
    - Floating matter,
    - Water surface sheen (potentially from oil and grease),
    - Discoloration of receiving water(s), and
    - Impact to the receiving water(s).

SAFETY

Be aware of safety issues and do not subject personnel to unsafe conditions in order to comply with this Water Quality Monitoring Plan. Sampling will not be conducted if there are any concerns regarding field crew safety. These concerns may include heavy rain events, which compromise access points through flooding and swift currents. Thunderstorms will also be avoided when lightning is occurring. Employ the buddy system as required to maximize employee safety when sample collection is required.

ESTIMATION OF SPILL TRAVEL TIME

The following methods are recommended to estimate spill travel time and direction:

- Method 1: **Use a velocity probe** (such as a Global Water FP211-S Flow Probe)**.** To determine the rate of flow in the surface water or

- Method 2: **Visual ft. /sec measurement**. This may be done by observing or dropping floatable debris in the surface water and timing how long it takes to travel over a measured distance (e.g., 100 feet). Include sections in the surface water where there are bends, bottlenecks, or other characteristics that may slow down the flow. If the first measurement is uncertain, this estimate may be performed three to five times, and the values averaged to determine an estimated travel time.

Either method will provide a means to estimate the distance traveled and identify where the Spill may be headed within the waterway.

.

WATER QUALITY SAMPLING PROCEDURES

- In the event a Spill reaches a surface water or (flowing) drainage channel tributary, take samples for spills less than 50,000 gallons as appropriate and within 18 hours for spills greater than 50,000 gallons. The purpose of water quality sampling is to determine the nature and extent of the impact of the Spill.
- When sampling a Spill, take a minimum of four separate sample sets as conditions allow. Water quality sampling should not be given precedence over stopping the spill or protection of public health. Sample locations are as follows:
    - A point in the drainage conveyance system prior to discharge to receiving water (Sample ID: DCS-001)
    - Upstream of the spill (Sample ID: RSW-001U),
    - Downstream of the spill (Sample ID: RSW-001D) in flowing water (e.g. creeks).
    - Near the point of entry of the spilled sewage (Sample ID: RSW-001).
- Sample for Total Coliform, E. coli, enterococcus, and Ammonia as a minimum. Conduct additional sampling for pH if practical.
- Additional follow-up samples are recommended to confirm the extent that the impact reverts back to baseline levels. Follow-up samples may be used to determine if posting of warning signs should be discontinued (if signs were posted).
- Collaboration with the Monterey County Health Department should continue until closure is obtained.
- Do not forget to take into account Spill Travel Time.
- Provide a map of sample points (Google Earth) with GPS Coordinates for each sample point.

WATER QUALITY SAMPLING EQUIPMENT

The following list describes equipment that should be stocked and readily available for each water quality sampling event.

- Personnel protective equipment including latex/nitrile gloves and eye protection
- 3 – 120 mL sterile plastic containers (containing a tablet of sodium thiosulfate preservative) for Bacteria sample collection.
- 3 – 120 mL sterile plastic containers for Bacteria sample collection.
- 3 – 250 mL Poly containers preserved with H2SO4 for Ammonia analysis.
- 3 – 250 mL Poly containers
- 1 – Sample Collection Container
- Quart plastic bags
- 1 Gallon plastic bags
- sterile funnels
- Cooler with ice packs
- Chain of Custody forms

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

SAMPLE COLLECTION PROCEDURE

I. Bacteria Sample Collection – Dip sample bottle into water

☐ 1. One 120-mL sterile plastic sample bottle (containing a tablet of sodium thiosulfate preservative) must be filled at a point upstream of where the spill entered the receiving water, and one 120-mL bottle must be filled at a point downstream of where the spill entered the receiving water. Total coliform, *E. coli* and enterococcus can be analyzed at the lab from one sample container.

☐ 2. Carefully open the sample bottle without touching the inside of the lid or bottle.

☐ 3. Facing upstream (or up gradient), **submerge** the sample container and fill it under water, if possible, without collecting surface or bottom debris, and without losing the preservative tablet. Pour off excess sample volume so that the container is filled to the 100-mL fill line. Secure the lid and dry the outside of bottle with a paper towel.

☐ **4. Use a pencil to record on the bottle label (1) the sample ID*, (2) date and (3) time of sample collection, and (4) the sampler's name.**

*Sample ID = Manhole#–UP (upstream) or Manhole#-DWN (downstream) Example for upstream Sample ID: 431:06-UP Example for downstream Sample ID: 431:06-DWN

☐ *5.* Immediately place the filled & labeled sample container inside the quart bag. Then place the quart bag in the gallon bag with cold instant ice packs (Two ice packs per sample bottle). *Do not put the instant ice packs inside the quart bag with the sample.*

☐ 6. Repeat Steps 1 through 5 for each bacteria sample location. Proceed to Section III (after collecting ammonia samples if necessary).

II. Ammonia Sample Collection – Do NOT Dip Sample Bottle into Water

Use Secondary Container

☐ **1.** One 250-mL plastic ammonia sample bottle (containing 50% sulfuric acid as preservative) must be filled at a point upstream of where the spill entered the receiving water, and one 250-mL ammonia bottle must be filled at a point downstream of where the spill entered the receiving water. **Sampling personnel must wear gloves and safety glasses while collecting samples for ammonia because of potential contact with sulfuric acid, which is highly corrosive.**

☐ 2. Remove the lid from a clean / empty / unused 250-mL plastic secondary container.

☐ 3. Facing upstream (or up gradient), **submerge** the secondary container and fill it under water, if possible, without collecting surface or bottom debris.

☐ 4. Carefully open the ammonia sample bottle containing sulfuric acid.

☐ 5. Slowly transfer sample from the secondary container into the 250-mL ammonia sample bottle preserved with sulfuric acid. Secure the lid so that acidified sample does not leak out of the bottle and dry the outside of bottle with a paper towel.

☐ **6. Use a pencil to record on the bottle label (1) the sample ID*, (2) date and (3) time of sample collection, and (4) the sampler's name.**

*Sample ID = Manhole#–UP (upstream) or Manhole#-DWN (downstream) Example for upstream Sample ID: 431:06-UP Example for downstream Sample ID: 431:06-DWN

☐ 7. Immediately place the filled & labeled sample container inside a quart bag and insert the quart bag into a gallon bag with two cold instant ice packs.

☐ 8. Repeat Steps 1 through 7 for each ammonia sample location.

III. Chain-of-Custody & Sample Delivery

☐ ***1.*** Complete the Monterey County Health Lab Chain-of-Custody (COC) form for all samples that will be delivered to the County Health lab at the same time; include the Sample IDs, Date & Time of Sample Collection and Sampler's Name & Signature. Note the approximate upstream and downstream distance in the "Notes" field on the COC. ***The COC is a legal document and must be complete.***
Sample of Monterey County Health COC on page 8

☐ 2. Deliver bacteria samples and Ammonia samples to the Monterey County Consolidated Chemistry Laboratory at 1270 Natividad Road Room 118 Salinas Ca, 93906. Hours of operation are Mon – Fri 8am to 5pm.*
Have the Lab Analyst sign the COC form & make a copy.

☐ 3. Bring the signed COC forms (or photocopies) to the City Yard at 426 Work St.

SAMPLING COLLECTION BEST PRACTICE

- Collect all grab samples approximately 3' - 6" below the surface (or if shallower, as close as possible to this depth) to avoid sampling debris or scum from the surface.
- Collect the sample in a safe manner in the middle of the flow, against the direction of water flow.
- Photo-document the spill locations.
- Leave approximately one inch of head space in individual sample bottles. Do not overfill.
- Once the lid is opened for the individual sample bottle, do not touch the inside surface of the bottle or lid.
- For the sample bottles that contain a preservative, take care to keep the preservation material in the container.
- Immediately place all sample bottles on ice.

SAMPLING TIME CONSTRAINTS

Bacteria samples have a 6-hour (preserved and cooled) regulatory holding time. Samples will not be analyzed if the holding time has been exceeded. The County Lab needs about 30 minutes to set up the tests.

Ammonia samples have a 28-day regulatory holding time. Samples must be maintained at $\leq 6^{o}C$ (on ice or refrigerated) from the time of collection until receipt by the analytical laboratory.

AFTER HOUR RESPONSES

After Hours Spill responses are handled by trained personnel from the Waste Water Division. Staff are trained and follow the procedures within this Water Quality Monitoring Plan for sampling during an Spill event.

On-Call Assignments

- Emergency contacts and schedule for use in the event of lift station alarms, sanitary sewer spills or sewer related problems, illicit discharges and storm water problems.
- On-call assignments run for two weeks: Tuesday 3:30 p.m. to Tuesday 7:00 a.m.
- In the event that the on-call person is unavailable, contact the appropriate supervisor on the list.
- The on-call schedule is updated quarterly and distributed to police, fire, and county communications for all emergencies.

Sample Contact List & Schedule Sheet

From	To	Name	Primary Contact	On-Call Cell #
6/5/18	6/19/18	Salvador Vargas	320-3833 / 759-2604	970-7634
6/19/18	7/3/18	Ray Lerma	596-0830	970-7634
7/3/18	7/17/18	Robert Reyna	970-7621	970-7634

7/17/18	7/31/18	Manny Mata	776-1902	970-7634
7/31/18	8/14/18	Salvador Vargas	320-3833 / 759-2604	970-7634
8/14/18	8/28/18	Ray Lerma	596-0830	970-7634

In the event that no one on the contact list can be reached:	Home	City Cell	Personal Cell
Gary Gabriel, Wastewater Manager/Sewers/Industrial List Stations	N/A	970-7629	809-6137
David Lewellen, Crew Supervisor Environmental Compliance/Street Sweeping	N/A	970-7645	801-5003
Ray Lerma, Crew Supervisor/Sewers/NPDES Storm Drains	N/A	970-8287	596-0830
Lucas Aledo, Crew Supervisor/Signs/Street Lights/ Traffic Signals	N/A	970-7623	809-2317
Joe Albertoni, Street Maintenance Manager	758- 6862	970-7619	N/A

Chain of Custody Form Monterey County Consolidated Chemistry Laboratory

ENVIRONMENTAL ANALYSIS REQUEST FORM
MONTEREY COUNTY CONSOLIDATED CHEMISTRY LABORATORY
1270 NATIVIDAD ROAD, SALINAS, CALIFORNIA 93906 Phone (831) 755-4516

Shaded areas for laboratory use only

Chain of Custody:

Collected by (Print & sign):	Received by:	Date & Time:
Relinquished by:	Received for Laboratory:	Date & Time:

Client Name:	Report Attention:	
Address:	Copy to:	
City, State, Zip:	Phone:	Fax:

Laboratory Number	Sample ID or System #	Sample Site or Description	Collection Date & Time	Matrix[(1)]	ANALYSES REQUESTED: No. of Containers	Coliform / MMO ☐ Quanti ☐ Low-D ☐	Nitrate					

(1) D=Drinking Water (Specify as routine, repeat or replacement) W=Wastewater (Specify as grab or composite) I=Irrigation (Specify as municipal, well, reservoir, reclaimed, blue valve, canal, other).

[ ] Payment received with delivery	Amount:	Sample comments (irregularities/preservation, billing information if different than reporting):
Check:	Initials:	
Receipt #: ____________	Date: ____________	

Monterey County Testing for Coliforms and E. coli

Monterey County Health Department
Consolidated Environmental Laboratory
1270 Natividad Rd., Rm. 118
Salinas, CA 93906
(831) 755-4516

TESTING FOR TOTAL COLIFORMS AND *E. COLI*

PURPOSE: Outbreaks of enteric (intestinal) and opportunistic diseases caused by waterborne microorganisms still occur even in the most advanced nations with superior sanitation practices and sophisticated treatment and testing programs. Waterborne diseases include dysentery, hepatitis, cholera, cryptosporidiosis, and giardiasis. These diseases are spread by water contaminated with fecal material from humans and other warm-blooded animals.

It is not feasible to routinely test drinking water for every possible disease-causing microorganism. Instead, water quality standards are based on the concept of "indicator" organisms. According to this concept, drinking water is tested for organisms that are not necessarily the cause of disease, but are associated with contaminated water and indicate the potential for disease transmission. The most commonly used indicator organisms for drinking water are total **coliforms** and ***E. coli***.

The **total coliform** group is the broadest indicator classification and includes bacteria found in soil and vegetation as well as the intestinal tract of warm-blooded animals; ***E. coli*** is a specific type of coliform bacteria, which originates from the intestinal tract of warm-blooded animals.

SAMPLE COLLECTION: Water samples taken for coliform bacteria testing must be collected and handled carefully in order to insure that the sample taken truly represents the bacteriological quality of water in the system. The following procedures will help you in this regard:

1. Sterile containers provided by your laboratory must be used. Do not touch or otherwise contaminate the inside of the container, the inside of the cap, or the threads of the container. The container contains a chemical to neutralize chlorine; do not rinse the container.

2. Select a faucet that is used frequently. Do not take a sample from a faucet that is leaking around the handle. Do not take a sample from a dirty faucet or one that is equipped with an aerator and/or screen. Also, do not take a sample from a swing type faucet. Never take a sample from a hose or other device that is attached to the faucet - - - remove them first.

3. When you have found a suitable faucet, open it just enough to produce a flow which can be collected without splashing. Let it run for two or three minutes. Carefully fill the container up to the 100ml mark. Immediately replace the cap (tightly), and label the sample with well identification, description of sample point, date and time of collection, and name of sample collector.

4. Complete the laboratory form including mailing address, name of sample collector, well number, description of sample point, date and time of collection, and test ordered (i.e."Coliform").

CARE OF SAMPLE

SAMPLES MUST BE SUBMITTED DIRECTLY TO THE LABORATORY WITHIN 24 HOURS OF COLLECTION. Alternatively, the sample can be submitted on the same day of collection to one of the following health department offices:

Monterey Co. Environmental Health 1200 Aguajito Rd. Monterey, CA 831-647-7654	Monterey Co. Environmental Health 620 Broadway St. King City, CA 831-386-6899
Monterey - Drop off by 9:00 a.m.	King City – Drop off by 9:00 a.m.

SAMPLES WHICH CANNOT BE DELIVERED TO THE LABORATORY WITHIN ONE HOUR AFTER COLLECTION SHOULD BE REFRIGERATED (e.g. iced cooler).
Health department offices can provide for cold storage/transport from point of receipt.

FEE FOR TESTING

The fee for coliform testing is $25. If you do not have an account with our laboratory, you must pay in advance for this testing. Clients who have an account will be billed at the end of the month for which results are reported.

INTERPRETATION OF RESULTS

Coliforms other than the fecal group are ubiquitous and careful maintenance of the water system and collection of samples is necessary to avoid contamination. State and federal drinking water standards allow **total coliforms** to be present in up to 5% of samples tested by large water systems each month; however, small drinking water systems which test fewer than 20 samples per month should have no **total coliform** positive samples/month. ***E. coli*** should never be found in drinking water; if ***E. coli*** is present, it represents an urgent health threat and the water should be considered non-potable until properly treated.

Note to small water systems permitted by Monterey County: If total coliforms are detected in a routine sample, four additional samples should be immediately collected for testing; one from the source water (well or storage tank), one from the original site where total coliforms were detected, and two samples from the distribution system (including one upstream and one downstream). If E. coli is detected in a routine sample, immediately contact Monterey County Environmental Health (755-4507).

APPENDIX C:
Testing for Total Coliforms and E. Coli

Monterey County Health Department
Consolidated Environmental Laboratory
1270 Natividad Rd., Rm. 118
Salinas, CA 93906
(831) 755-4516

TESTING FOR TOTAL COLIFORMS AND *E. COLI*

PURPOSE: Outbreaks of enteric (intestinal) and opportunistic diseases caused by waterborne microorganisms still occur even in the most advanced nations with superior sanitation practices and sophisticated treatment and testing programs. Waterborne diseases include dysentery, hepatitis, cholera, cryptosporidiosis, and giardiasis. These diseases are spread by water contaminated with fecal material from humans and other warm-blooded animals.

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The **total coliform** group is the broadest indicator classification and includes bacteria found in soil and vegetation as well as the intestinal tract of warm-blooded animals; ***E. coli*** is a specific type of coliform bacteria, which originates from the intestinal tract of warm-blooded animals.

SAMPLE COLLECTION: Water samples taken for coliform bacteria testing must be collected and handled carefully in order to insure that the sample taken truly represents the bacteriological quality of water in the system. The following procedures will help you in this regard:

1. Sterile containers provided by your laboratory must be used. Do not touch or otherwise contaminate the inside of the container, the inside of the cap, or the threads of the container. The container contains a chemical to neutralize chlorine; do not rinse the container.

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3. When you have found a suitable faucet, open it just enough to produce a flow which can be collected without splashing. Let it run for two or three minutes. Carefully fill the container up to the 100ml mark. Immediately replace the cap (tightly), and label the sample with well identification, description of sample point, date and time of collection, and name of sample collector.

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CARE OF SAMPLE

SAMPLES MUST BE SUBMITTED DIRECTLY TO THE LABORATORY WITHIN 24 HOURS OF COLLECTION. Alternatively, the sample can be submitted on the same day of collection to one of the following health department offices:

Monterey Co. Environmental Health
1200 Aguajito Rd.
Monterey, CA
831-647-7654

Monterey - Drop off by 9:00 a.m.

Monterey Co. Environmental Health
620 Broadway St.
King City, CA
831-386-6899

King City – Drop off by 9:00 a.m.

SAMPLES, WHICH CANNOT BE DELIVERED TO THE LABORATORY WITHIN ONE HOUR AFTER COLLECTION SHOULD BE REFRIGERATED (e.g. iced cooler).
Health department offices can provide for cold storage/transport from point of receipt.

FEE FOR TESTING

The fee for coliform testing is $25. If you do not have an account with our laboratory, you must pay in advance for this testing. Clients who have an account will be billed at the end of the month for which results are reported.

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APPENDIX D:
Chain of Custody

ENVIRONMENTAL ANALYSIS REQUEST FORM

MONTEREY COUNTY CONSOLIDATED CHEMISTRY LABORATORY
1270 NATIVIDAD ROAD, SALINAS, CALIFORNIA 93906 Phone (831) 755-4516

Shaded areas for laboratory use only

Chain of Custody:

Collected by (Print & sign):	Received by:	Date & Time:
Relinquished by:	Received for Laboratory:	Date & Time:

Client Name:	Report Attention:		**ANALYSES REQUESTED**
Address:	Copy to:		
City, State, Zip:	Phone:	Fax:	

Laboratory Number	Sample ID or System #	Sample Site or Description	Collection Date & Time	Matrix[1]	No. of Containers	Coliform	MMO…. □ Quanti…….. □ Low-D…….. □	Nitrate					

[1] **D**=Drinking Water (Specify as routine, repeat or replacement) **W**=Wastewater (Specify as grab or composite) **I**=Irrigation (Specify as **m**unicipal, **w**ell, **res**ervoir, **rec**laimed, **b**lue valve, **c**anal, **o**ther).

[ ] Payment received with delivery Amount:_____

Check:_____ Initials: _____

Receipt #:_____ Date: _____

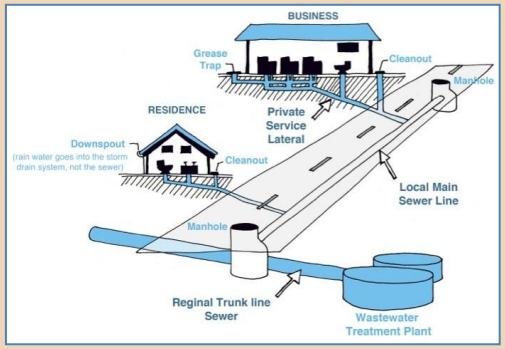
Sample comments (irregularities/preservation, billing information if different than reporting):

LAB60 (Rev 04/08)

APPENDIX E:
Private Lateral Sewage Discharge Information

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 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."*

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

City of Salinas
(831) 758-7233; Call 911 for emergencies

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 Environmental Health
(831) 755-4508

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:
(805) 849-3689
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

SALINAS

Your Responsibilities as a Private Property Owner

Provided to you by:

City of Salinas
426 Work Street
Salinas, CA 93901

(831) 758-7103

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.

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: (831) 758-7103

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. 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."
- Always notify your sewer/public works department or public sewer district of sewage spills.

Spill cleanup inside the home:

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

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

Other Tips:

- Keep children and pets out of the affected area until cleanup has been completed.
- Turn off heating/air conditioning systems
- Wear rubber boots, rubber gloves, and goggles during cleanup of the affected area.
- Discard items that cannot be washed and disinfected (such as: mattresses, rugs, cosmetics, baby toys, etc.)
- Remove and discard drywall and insulation that has been contaminated with sewage or flood waters.
- Thoroughly clean all hard surfaces (such as flooring, concrete, molding, wood and metal furniture, countertops, appliances, sinks and other plumbing fixtures) with hot water and laundry or dish detergent.
- Help the drying process with fans, air conditioning units, and dehumidifiers.

- After completing cleanup, wash your hands with soap and water. Use water that has been boiled for 1 minute (allow the water to cool before washing your hands) OR use water that has been disinfected (solution of 1/8 teaspoon of household bleach per 1 gallon of water). Let it stand for 30 min. If water is cloudy, use ¼ teaspoon of household bleach per 1 gallon of water.

- Wash clothes worn during cleanup in hot water and detergent (wash apart from uncontaminated clothes).
- Wash clothes contaminated with sewage in hot water and detergent. Consider using a Laundromat until your onsite wastewater system has been professionally inspected and serviced.
- Seek immediate attention if you become injured or ill.

Spill cleanup outside the home:

- Keep children and pets out of the affected area until cleanup has been completed.
- Wear rubber boots, rubber gloves, and goggles during cleanup of affected area.
- Clean up sewage solids (fecal material) and place in properly functioning toilet or double bag and place in garbage container.

- On hard surfaces areas such as asphalt or concrete, it is safe to use a 2% bleach solution, or ½ cup of bleach to 5 gallons of water, but don't allow it to reach a storm drain as the bleach can harm the environment.

- After cleanup, wash hands with soap and water. Use water that has been boiled for 1 minute (allow to cool before washing your hands) OR use water that has been disinfected (solution of 1/8 teaspoon of household bleach per 1 gallon of water). Let it stand for 30 min. If water is cloudy, use ¼ teaspoon of household bleach per 1 gallon of water.

- Wash clothes worn during cleanup in hot water and detergent (wash apart from uncontaminated clothes).
- Wash clothes contaminated with sewage in hot water and detergent. Consider using a Laundromat until your onsite wastewater system has been professionally inspected and serviced.
- Seek immediate attention if you become injured/ill.

APPENDIX F:
Door Hanger

City of Salinas

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

We discovered a blockage in:

- ☐ The sanitary sewer main and cleared the line
- ☐ Your sanitary sewer lateral, which is your responsibility to maintain.

If you require assistance to clear your portion of the lateral you can search 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 representative notes: _____

_____

_____

City representative:

_____

For questions or comments, please call

City of Salinas
(831) 758-7233

City of Salinas

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

We discovered a blockage in:

- ☐ The sanitary sewer main and cleared the line
- ☐ Your sanitary sewer lateral, which is your responsibility to maintain.

If you require assistance to clear your portion of the lateral you can search 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 representative notes: _____

_____

_____

City representative:

_____

For questions or comments, please call

City of Salinas
(831) 758-7233

APPENDIX G:
Sanitary Sewer Spill/Backup Response Workbook

INSERT

Sanitary Sewer Spill/Backup Response Workbook

Sanitary Sewer Spill/Backup Response Workbook

- ❑ If this is a Category 1 Spill or Category 2 Spill to surface waters **immediately contact CALOES** at (800) 852-7550 within 2 hours. Category 2 Spills that discharge to Waters of the State also require this notification. *Obtain a Notification Control Number when contacting OES.*
- ❑ **Refer to the Regulatory Reporting Guide** for additional reporting requirements.
- ❑ **If there is a backup into a residence or business:** Wastewater Manager at (831) 758-7103 or Public Works Director (831) 758-7390.
- ❑ **For Water Sample Analysis:** Monterey County Health Dept Consolidated Environmental Lab (831) 755-4516.
- ❑ **For Restoration/Remediation**: SERVPRO Monterey (831) 275-1901
  California Premiere Restoration (831) 275-2103
- ❑ **For any media inquiries/requests:**
  Public Information Officer (831) 612-9200

Don't forget to take photos!

Wastewater Crew:	
❑ Follow the instructions on the Spill/Backup Response Flowchart and complete forms in this workbook as indicated. ❑ Complete the chain of custody record (to the right) and deliver this workbook to the Wastewater Manager.	Print Name: _____ Initial: _____ Date: _____ Time: _____

Wastewater Manager:	
❑ Review the Spill Event Checklist and the forms in this booklet. Contact the Collections Crew for additional information if necessary. ❑ Complete the Collection System Failure Analysis Form. ❑ Enter data into CIWQS. ❑ Complete the Chain of Custody record (right) and file this booklet	Print Name: _____ Initial: _____ Date: _____ Time: _____

Spill Event Checklist

Date of Spill: _____ Spill Location/Name: _____

CIWQS Event ID #: _____ Category? □ 1 □ 2 □ 3 □ 4 OES#: _____

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

- ☐ Effort made to contain and return a portion/all to the sanitary sewer
- ☐ Pictures/video taken of spill
- ☐ Pictures taken of affected/unaffected area including Spill Rate
- ☐ If property damage, start that process
- ☐ Pictures taken of containment efforts, spill spread
- ☐ If Cat 1 or Cat 2 > 1000 gals threatening to discharge to Waters of State: OES Control #_____
- ☐ Spill to SW drainage or surface water? Photos of entry point?
- ☐ Impacted waters identified?
- ☐ No impacted waters?
- ☐ SSO Report Form Complete (includes fields for all required fields in CIWQS, and a sketch of Spill)
- ☐ Volume Estimation Worksheet(s) done
- ☐ Start Time Determination Form done
- ☐ Initial review of forms is complete (ensure consistency with dates, times, volumes, and other data)
- ☐ Review of photos and videos (label/date)
- ☐ Start Folder for all documentation for this Spill event. Put everything in it (SR, Field Reports, Worksheets/Forms, follow-up work orders, notes, pics, drawings, etc. CIWQS print outs and emails)
- ☐ Failure Analysis
  - TV to determine cause
  - Review Asset History
  - SERP Assessment
- ☐ Determine next steps to prevent recurrence
- ☐ Document findings and next steps on SSO Report
- ☐ Submit Draft in CIWQS w/in 3 business days (for Categories 1 and 2)
- ☐ Print CIWQS Draft hard copy and email
- ☐ Review CIWQS, Spill Report, Worksheets, CMMS, and any other documentation to ensure data is consistent (e.g. dates, times, volumes, cause, follow-up action, etc.
- ☐ Attach photos, forms etc. to CIWQS
- ☐ Submit Ready to Certify in CIWQS (with sufficient time for LRO review)
- ☐ Print CIWQS Ready to Certify and email
- ☐ Hand folder to LRO
- ☐ LRO review folder and CIWQS verify accurate and consistent data
- ☐ Certify in CIWQS (within 15 calendar days for Categories 1 & 2, 30 days after the month for Category 3 & 4)
- ☐ Print Certified CIWQS and email
- ☐ Any changes? Change in CIWQS and hard copies and explain changes, print our current version
- ☐ Move completed folder to Spill Binder
- ☐ For 50,000 gallons or larger
- ☐ Follow Water Quality Monitoring and Sampling procedures
- ☐ Map of where samples were taken
- ☐ Sampling results
- ☐ Write Technical Report
- ☐ Attach to CIWQS
- ☐ Add to Spill Folder/Binder
- ☐ If any changes are made to SSMP
- ☐ Update SSMP and link on CIWQS to SSMP
- ☐ Add change to SSMP Change Log
- ☐ If change is substantive, re-certify SSMP

INSERT TAB:
Regulatory Reporting

Regulatory Reporting Guide

Deadline	Category 1 Spill	Category 2 Spill	Category 3 Spill	Category 4 Spill
2 hr after awareness of Spill	Within 2 hours of the City's knowledge of a Cat 1 Spill 1000 gallons or greater, discharging or threatening to discharge to surface waters, notify CalOES and obtain a control #.	Within 2 hours of the City's knowledge of a Cat 2 Spill 1000 gallons or greater, discharging or threatening to discharge to surface waters, notify CalOES and obtain a control #.	N/A	N/A
As soon as possible	• Notify Monterey County Water Resources Agency • Notify Monterey County Health Department	If entering or threatening to discharge to surface water: • Notify Monterey County Water Resources Agency • Notify Monterey County Health Department	N/A	N/A
Within 18 hrs of awareness of Spill	Conduct Water Quality Sampling of the receiving water w/in 18 hrs of initial knowledge of spill 50,000 gallons or greater to surface waters.	N/A	N/A	N/A
3 Business Days after awareness of Spill	Submit Draft Spill Report in the CIWQS database.	Submit Draft Spill Report in the CIWQS database.	N/A	N/A
15 days after Spill end date	Submit Certified Spill Report w/in 15 calendar days of the Spill end date. *Submit Amended Spill Report, as needed, w/in 90 calendar days after Spill end date.*	Submit Certified Spill Report w/in 15 calendar days of the Spill end date. *Submit Amended Spill Report, as needed, w/in 90 calendar days after Spill end date.*	N/A	N/A
Within 30 calendar days after end of calendar month in which spill occurs	N/A	N/A	Submit monthly Certified Spill Report to CIWQS Database. *Submit Amended Spill Report, as needed, w/in 90 calendar days after the Certified Spill Report due date.*	Certify monthly, the estimated total spill volume exiting the sewer system and the total # of all Cat 4 Spills into CIWQS Database.
45 days after Spill end date	Submit Technical Report w/in 45 calendar days after the Spill end date for a Cat 1 Spill, 50,000 gallons or greater to surface waters. Submit Amended Spill Report w/in 90 calendar days after Spill end date.	N/A	N/A	
By February 1st after the end of the Calendar Year in which Spill occurs	N/A	N/A	N/A	

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

ASAP: If Spill impacts private property that may be a failure of the sewer main and/or if a claim for damages may be submitted against the city, notify the City Clerk.

Spill Categories

Category 1 Spill: a spill of any volume of sewage from or caused by a sanitary sewer system 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.

Category 2 Spill: a spill of 1,000 gallons or greater, from or caused by a sanitary sewer system that does not discharge to 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 spill of equal to or greater than 50 gallons and less than 1,000 gallons, 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 spill of less than 50 gallons, from or caused by a sanitary sewer system. 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.

Authorized Personnel:

All Wastewater Crews are authorized to perform CalOES notifications. The following Legally Responsible Officials (LROs) are authorized to electronically sign and certify Spill reports in CIWQS.

- Wastewater Manager (831) 758-7103
- Wastewater Supervisor (831) 758-7150

Contact	Telephone/Email
CAL OES	**(800) 852-7550**
City Clerk	**(831) 758-7381**
Monterey County Water Resources Agency (contact Brett if available)	**(831) 755-4803 or (831) 755-4860 After hours: (831) 756-1166**
Monterey County Health Department	**(831) 755-4500**
Regional Water Quality Control Board	**Phone: (805) 549-3147 Fax: (805) 543-0397**
State Water Resources Control Board Armando Martinez	**(916) 341-5586 Armando.Martinez@waterboards.ca.gov**

NOTIFICATIONS	
CAL OES (800) 852-7550	
Notification Date/Time:	
Name of Who You Spoke To:	
OES Control Number:	
Monterey County Water Resources Agency	
Notification Date/Time:	
Name of Who You Spoke To: Left Message: ☐	
Monterey County Health Department	
Notification Date/Time:	
Name of Who You Spoke To: Left Message: ☐	
City Clerk	
Notification Date/Time:	
Name of Who You Spoke To: Left Message: ☐	

INSERT TAB:
Flowchart

Spill/Backup Response Flowchart

Start Here

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

NO

This is a Private Lateral Sewage Discharge (PLSD)

1. Notify the property owner that the blockage is in their lateral and that the City does not have legal authority to maintain or perform work on privately-owned laterals.
2. Give customer the "Your Responsibilities as a Private Property Owner" pages.
3. Recommend to customer they hire a contractor to clear their line.
4. If customer is not home:
   - Complete Door Hanger and leave on customer's door.
   - Leave a message on the customer's voicemail.
5. If the property owner is unable or unwilling to address the cause of the spill, immediately contact your supervisor and discuss whether Code Enforcement, the County Department of Environmental Health or Regional Water Quality Control Board should be notified.
6. If you are directed to break the stoppage and clean up the PLSD, Be sure to document City staff time and equipment used for potential billing purposes, and take pictures.

1. Document the service call according to City procedures.

2. STOP. Do not continue to PAGE 2

YES

1. Document arrival time. Photograph spill spread and spill rate.
2. Consider the need to call out additional staff, contractor or mutual aid assistance.
3. If it is possible that this is a Cat 1 Spill or Cat 2 to Surface Water, immediately make the 2-hour notification to CalOES.

BEGIN DIVERSION AND CONTAINMENT, AS NECESSARY

1. DIVERT AWAY FROM SENSITIVE AREAS:

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

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

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

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

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

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

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

3. PHOTOGRAPH HOW THE SPILL WAS DIVERTED/CONTAINED and SPREAD, AS APPROPRIATE

ADDRESS CAUSE OF SPILL/BACKUP ASAP

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

Go to PAGE 2

Spill/Backup Response Flowchart

Continue from PAGE 1

Has the Spill reached surface waters or SW channel?

YES

1. Consider the need to sample surface waters the Spill may have reached:
   - If preliminary volume estimates of the Spill are 50,000 gallons or greater, begin collecting as soon as possible but no later than 18 hours after becoming aware of the Spill.
   - If people are fishing or swimming in the waters, collect samples regardless of the volume of the Spill.
2. Refer to and follow the sampling standard operating procedure (SOP).

NO

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

NO

YES

Contain/recover/clean up as much of the Spill in the waters and shoreline as possible. Contact Collection System Supervisor to request outside assistance, as appropriate.

Were storm drains impacted?

YES

STORM DRAIN CLEANING SOP

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

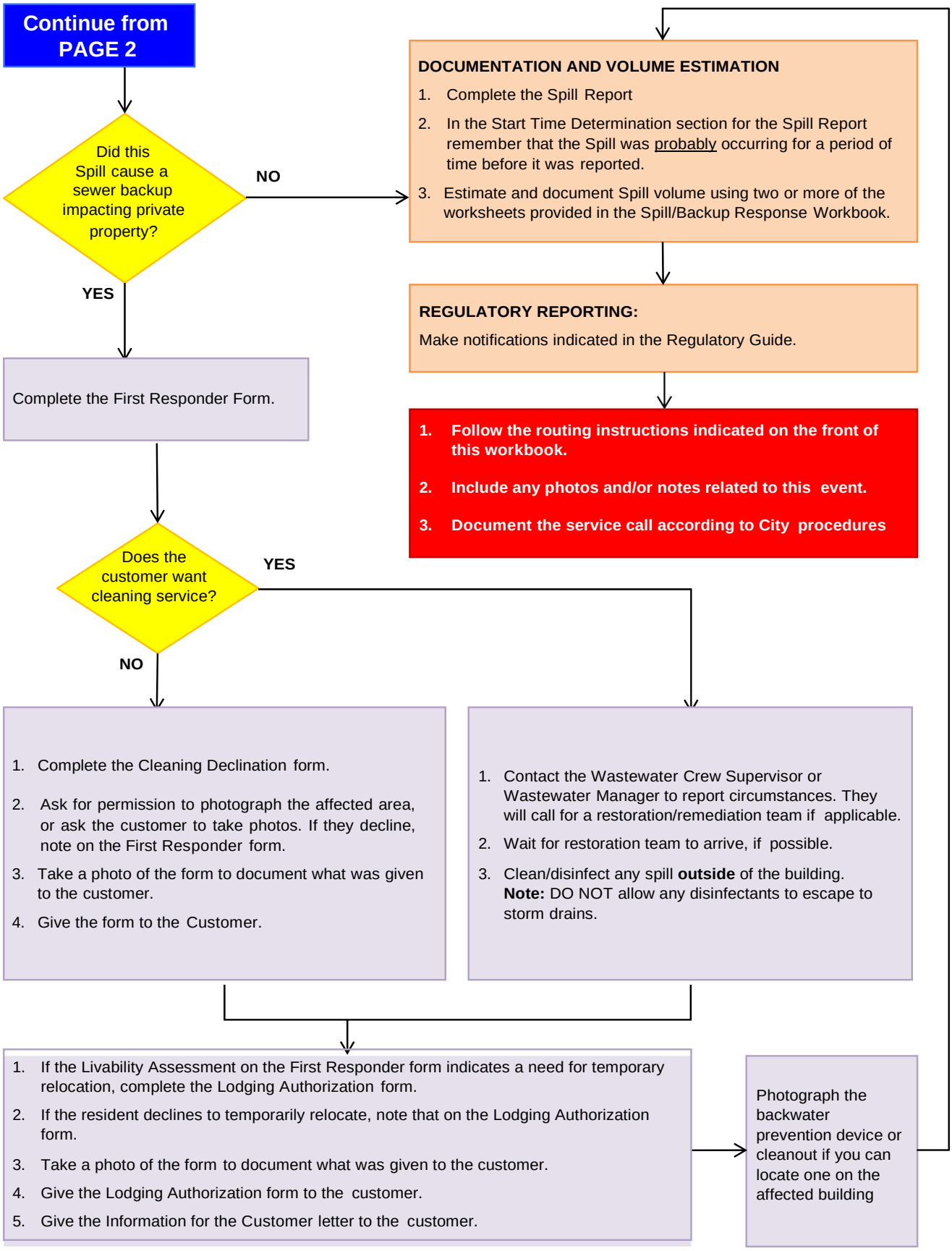
NO

IMPACTED AREA CLEANUP, AS NECESSARY

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

Go to PAGE 3

Spill/Backup Response Flowchart



INSERT TAB:
Spill Report

Sanitary Sewer Spill Field Report

PHYSICAL LOCATION DETAILS		
Spill Location Name:		
Name of Water Body Impacted:	MH ID Closes to Spill:	
Latitude of spill location:	Longitude of spill location:	
GPS coordinates for spill spread (beginning and end points):		
GPS Coordinates of spill origin site: (Provide multiple GPS locations for multiple spill origin sites.)		
Estimated Spill Rate to drainage channel or surface water (gpm):	Estimated Spill Rate from origin site (gpm):	
VOLUMES BY DESTINATION	**Volume Spilled (Gallons)**	**Volume Recovered (Gallons)**
Estimated spill volume that reached a separate storm drain that flows to a surface body of water? (If not all recovered and over 1,000 gallons, this is a Category 1)		
Estimated spill volume that directly reached a drainage channel that flows to a surface water body? (Any volume over 1,000 spilled to surface water is a Category 1)		
Estimated spill volume discharged directly to a surface water body? (Any volume over 1,000 gallons spilled to surface water is a Category 1)		
Estimated spill volume discharged to land? (Includes discharges directly to land, and discharges to a storm drain system or drainage channel that flows to a storm water infiltration/retention structure, field, or other non-surface water location. Also, includes backups to building structures).		
TOTALS	**Volume Spilled**	**Volume Recovered**
Total Volume Spilled		

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

Start Time Determination/Notes

Caller Interview: Where did you see sewage spill from?

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

☐ Other: _____

Comments: _____

_____

Last Time Caller Observed **NO Spill** occurring:_____AM / PM Date_____/_____/_____

Comments: _____

_____

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

_____Gallons ÷_____GPM = Minutes (Spill Duration).

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

Other Efforts to Determine Start Time: _____

_____

Other Comments Regarding Spill Start Time: _____

_____

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

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

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

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

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

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

SPILL FIELD REPORT
Water quality samples analyzed for: (Circle all that apply) Dissolved Oxygen Other Chemical Indicators(s) – Specify Below Biological Indicator(s) – Specify Below No Water Quality Samples Taken Not Applicable to the Spill Other (Specify Below)
Explanation of water quality samples analyzed for: (Required if water quality samples analyzed for is "Other chemical indicator(s)", "Biological indicator(s)", or "Other")
Water quality sample results reported to: (Circle all that apply) County Health Agency Regional Water Quality Control Board Other (Specify below) No Water Quality Samples Taken Not Applicable to this Spill
Explanation of water quality sample results reported to: (Required if water quality sample results reported to is “Other”)
Method and explanation of volume estimation methods used: (Circle all that apply) Eyeball Estimate Measured Volume Duration and Flow Rate Other (Explain): Assumptions made to determine Spill Volume:

INSERT TAB:
Volume Estimation

Miscellaneous Computations & Examples

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

Convert Inches to Feet

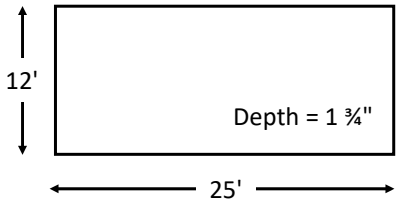
Inches	Feet
1/8"	0.01'
1/4"	0.02'
3/8"	0.03'
1/2"	0.04'
5/8"	0.05'
3/4"	0.06'
7/8"	0.07'
1"	0.08'
2"	0.17'
3"	0.25'
4"	0.33'
5"	0.42'
6"	0.50'
7"	0.58'
8"	0.67'
9"	0.75'
10"	0.83'
11"	0.92'
12"	1.00'

Miscellaneous Computations & Examples (continued)

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

Area/Volume of a Rectangle or Square

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



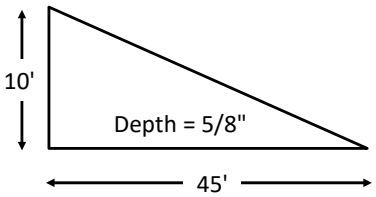
25' X 12' X 0.14' = **42 Cubic Feet**
Length Width Depth Volume

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

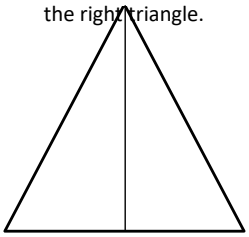
42 ft^3 X 7.48 = **314.16 gallons**
Volume gal/ft^3 Volume

Area/Volume of a Right Triangle

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



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

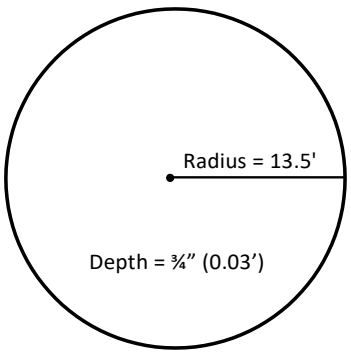


45' X 10' X 0.5 X 0.05' x 7.48 = 84.15 gallons
Base Height Depth gal/ft^3 Volume

Area/Volume of a Circle

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

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



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

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

STEP 1: Position yourself so that you have a vantage point where you can see the entire 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) or barrel(s)	**How many of this size?**	**Multiplier**	**Estimated SSO Volume (gallons)**
1-gallon water jug		x 1 gallons	
5-gallon bucket		x 5 gallons	
32-gallon trash can		x 32 gallons	
55-gallon drum		x 55 gallons	
Other:_____gallons		x_____gallons	
Estimated Total SSO Volume:			

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

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

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

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

_____ gallons − _____ gallons = _____ gallons

Estimated Spill Volume — Rainfall — **Total Estimated Spill Volume**

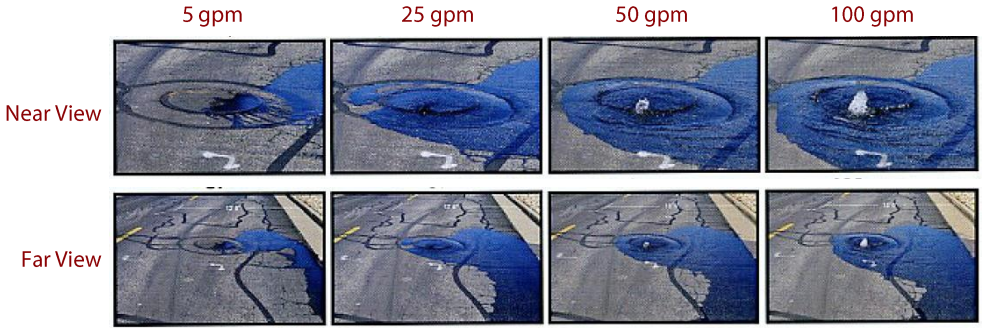
Assumptions made to determine Spill Volume:_____

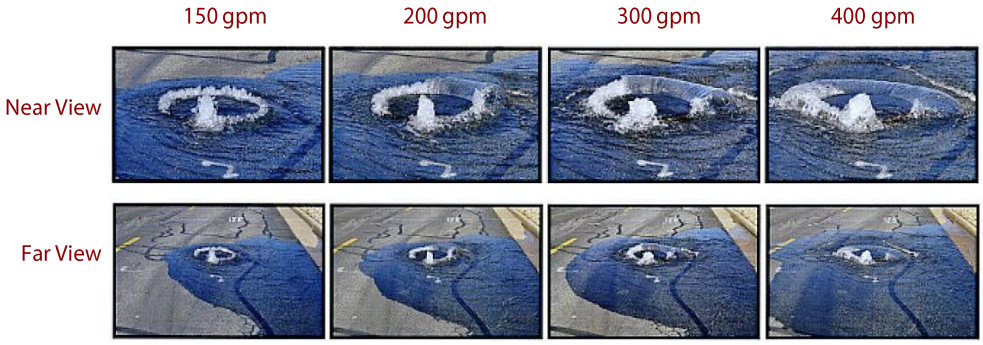
_____

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

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

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





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

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

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

Volume Estimation: Area/Volume Method

Spill Date:_____ Location: _____

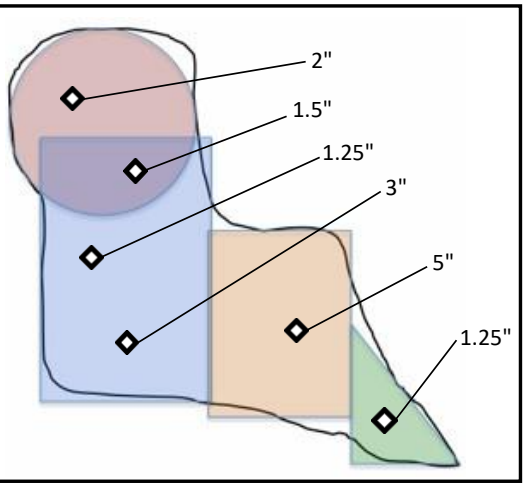
STEP 1: Describe spill area surface: ☐ Asphalt ☐ Concrete ☐ Dirt ☐ Landscape ☐ Inside Building

☐ Other: _____

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

1. Sketch the outline of the spill (black line)
2. Break the sketch down into recognizable shapes (circles, squares, etc.) as well as you can.
3. Determine the volume of each shape. (note: in this example, after the volume of the cirle is determined, multiply it by approximately 65% so that the overlap area won't be counted twice.
4. If the spill is of varying depths, take several measurements at different depths and find the average. If the spill affects a dry unimproved area such as a field or dirt parking lot, determine the aread of the wetted ground in the same manner as you would on a hard surface. Using a round-point shovel, dig down into the soil until you find dry soil. Do this in several locations within the wetted area and measure the depth of the wet soil. Average the measurement/thicknes of the wet soil and determine the average depth of the wet soil.

Example (right): 2" + 1.5" + 1.25" + 3" + 5" + 1.25" = 14.0"
14.0" ÷ 6 measurements = 2.33"
Average Depth = 2.33" (0.194')



STEP 3: Calculate the area of the footprint by completing the table below for each shape in Step 2.

If two shapes overlap, select one of the two shapes and estimate the percentage of that shape that does not overlap. Enter that percentage in the % Not Overlapping column. This will ensure that the overlap area is only counted once. Refer to the example on the previous page.

Rectangles	Length	X	Width	X	% Not Overlapping*	=	Area
	ft	X	ft	X	%	=	ft^2
	ft	X	ft	X	%	=	ft^2
	ft	X	ft	X	%	=	ft^2

Triangles	Base	X	Height	Multiplier	X	% Not Overlapping*	=	Area
	ft	X	ft	÷ 2	X	%	=	ft^2
	ft	X	ft	÷ 2	X	%	=	ft^2
	ft	X	ft	÷ 2	X	%	=	ft^2

Circles	π	X	Radius	X	Radius	X	% Not Overlapping*	=	Area
	3.14	X	ft	X	ft	X	%	=	ft^2
	3.14	X	ft	X	ft	X	%	=	ft^2
	3.14	X	ft	X	ft	X	%	=	ft^2

Total Spill Area (sum of all three tables above): _____ ft^2

STEP 4: Measure the depth of the spill.

If spill is of varying depths, take several measurements at different depths and find the average.

_____ inches ÷ _____ = _____ inches ÷ 12 = _____ feet

sum of measurements | # of measurements | average depth in inches | average depth in feet of ponded sewage

STEP 5: Calculate spill volume of ponded sewage in cubic feet by multiplying the Total Spill Area in Step 3 by the average depth calculated in Step 4.
Convert from cubic feet to gallons by multiplying by 7.48.

_____ ft^2 x _____ ft = _____ ft^3 x 7.48 gal = _____ gallons

spill area (Step 3) | average depth (Step 4) | spill volume in feet | **Total estimated volume**

INSERT TAB:
Backup Forms

Backup Forms Checklist (Backup Only) E-1

Complete this form only if there is a backup into a residence or business and if the City has determined that the backup was caused by the City.

Instructions:

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

Forms/Documents:

☐ Form E-3: Declination of Cleaning Services

☐ Form E-4: Lodging Authorization

☐ Form E-5: Customer Information Letter & Claim Form

☐ Form E-6: Your Responsibilities as a Private Property Owner

Forms Provided to: _____
Customer Name

_____
Customer Signature

_____
Date

Check here if customer declines to sign: ☐

Forms Provided by: _____ _____
Employee Name Initial

First Responder Form (Backup Only)

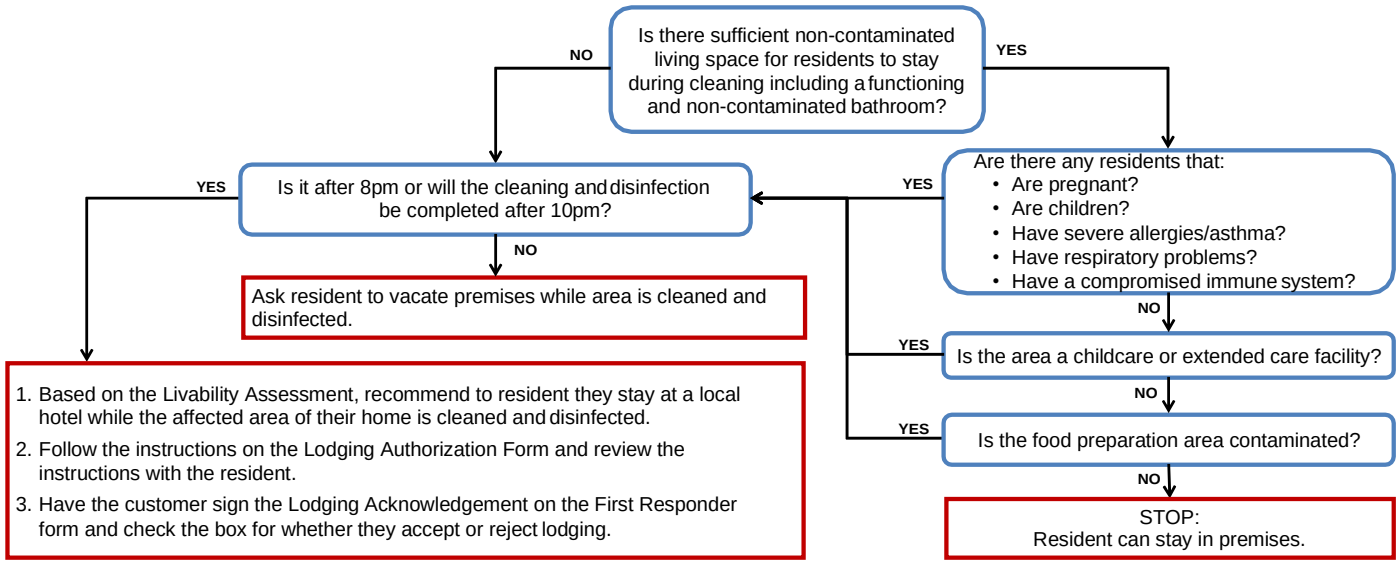
Complete this form only if there is a backup into a residence or business.

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

PERSON COMPLETING THIS FORM: Name: _____ Title: _____	PHONE: DATE: TIME:
TIME STAFF ARRIVED ON-SITE:	
DOES THE CUSTOMER WANT THE CITY TO CALL FOR CLEANING SERVICE? ☐ Yes ☐ No If no, give the customer the Cleaning Declination Form and have them sign here: _____ If customer called a cleaning contractor, provide name and contact number:	
RESIDENT NAME: ☐ Owner ☐ Renter ADDRESS: PHONE:	IF RENT, PROPERTY MANAGER(S): OWNER: ADDRESS: PHONE:
# OF PEOPLE LIVING AT RESIDENCE:	
Approximate Age of Home:	# of Bathrooms: / # of Rooms Affected:
Numbers of Photographs or Videos Taken: ☐ Photographs ☐ Video ☐ Customer did not provide or allow photographs	Where are photos/video stored?
Is nearest upstream manhole visibly higher than the drain/fixture that spilled? ☐ Yes ☐ No	
Does property have a Property Line Cleanout or BPD?	☐ Cleanout ☐ BPD ☐ Neither ☐ Unknown
If yes, was the Property Line Cleanout/BPD operational at the time of the spill?	☐ Yes ☐ No ☐ Unknown
Have there ever been any previous spills at this location?	☐ Yes ☐ No ☐ Unknown
Has the resident had any plumbing work done recently? *If YES, please describe:*	☐ Yes ☐ No ☐ Unknown

GO TO Page 2

LIVABILITY ASESSMENT

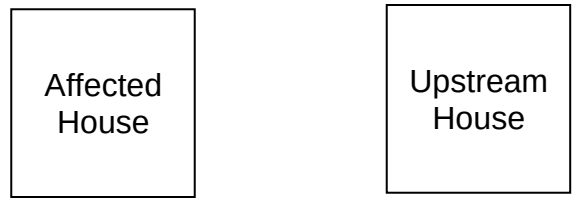


Temporary lodging was offered by the City and either (check one): ☐ Accepted ☐ Rejected

SANITARY SEWER LINE BLOCKAGE LOCATION

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

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



Recommended Follow-Up Action(s):

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

Declination of Cleaning Services (Backup Only) E-3

Customer Information		
NAME:	ADDRESS:	TELEPHONE:

ON (date)	AT (time)	Approximately (quantity)	GALLONS OF:
			☐ Sewage ☐ Grey Water ☐ Toilet Bowl Water ☐ Odor ☐ Other (describe):

Spilled from (or odor emanating from)
☐ Toilet ☐ Shower/Tub ☐ Washer ☐ Other (describe):

The spill affected the following areas *(check one):*
☐ Bathroom ☐ Bedroom ☐ Hallway ☐ Garage
☐ Kitchen ☐ Crawlspace ☐ Other (specify):

The spill affected the following flooring:
☐ Tile ☐ Wood Flooring
☐ Linoleum ☐ Carpet
☐ Other (specify):

and/or additional materials:
☐ Area Rugs ☐ Towels
☐ Clothing ☐ Other (specify):

This Form Completed By: Name: _____ **Date:** _____

(Write legibly) Title: **Time:**

CUSTOMER, please read the following and sign below. I/We acknowledge that City of Salinas (*City)* has offered to provide professional cleaning and decontamination services to remediate the sewage backup and/or spill described above and that we declined the offer. We further understand and acknowledge that because we have declined, any necessary remediation activities will be conducted without City assistance, and that the City will not accept responsibility for work performed by persons other than those engaged by the City. The City will also not accept responsibility for any charges related to this incident that are not usual and customary.

Customer Signature*:		**Date:**
The information above was explained to the customer by the following employee:	**Name:**	**Title:**
	Signature:	**Date:**

**Note to responders: if customer declines to sign this form, then have a co-worker sign here as a witness:*
*Name:*_____ *Signature:*_____ *Date:* _____

Recommendations to customer to clean up the spill:

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

Lodging Authorization (Backup Only) E-4

INSTRUCTIONS TO EMPLOYEE:

1. Complete this form if the Livability Assessment on the First Responder Form indicates a need for temporary relocation and the customer accepts the offer.
2. Notify the Wastewater Crew Supervisor or Wastewater Manager who will make arrangements via telephone and pay for the hotel with a credit card.
3. Complete the voucher as instructed by the Wastewater Crew Supervisor or Wastewater Manager.
4. Take a photo of the form for records and then give it to the customer.
5. Have the customer sign the First Responder Form to indicate if they accept or reject the offer of temporary relocation.

INSTRUCTIONS TO RESIDENT:

City of Salinas recommends that you temporarily relocate to a hotel within the City of Salinas* for your safety and convenience while your residence is being cleaned. Please note that this emergency authorization is granted under the following conditions:

1. This authorization provides for one (1) night's lodging at a hotel in the City of Salinas at a maximum rate of $250.00 per night.
2. The authorization is good for **room and tax ONLY**. Phone, food, mini-bar and other incidental charges will be your responsibility.
3. Additional nights and/or other allowances/incidentals may be discussed by contacting the Public Works Director at (831) 758-7390 or Wastewater Manager at (831) 758-7013.

*The hotel must be within the City of Salinas unless you are otherwise authorized due to extenuating circumstances such as full occupancy in Salinas hotels.

VOUCHER

Good for one (1) night's stay on (date):_____ Number of affected residents: _____

Customer's Name: _____

Field Supervisor's Name:_____ Phone Number: _____

Customer Information Letter (Backup Only) English: E-5

Dear Property Owner:

We recognize that sewer backup incidents can be stressful and require immediate response while all facts concerning how an incident occurred are still unknown. Rest assured that we do all we can to prevent this type of event from occurring in the first place. Nevertheless, occasionally tree roots or other debris in the sewer lines causes a backup into homes immediately upstream of the blockage. At this time the City is investigating the cause of this incident.

The cleaning contractor provided by the City has been selected because of their adherence to established protocols that are designed to assure to all parties thorough, cost-effective and expeditious cleaning services. You also have the right to select your own cleaning contractor, but the City does not guarantee payment of fees/expenses incurred and reserves the right to dispute fees/expenses deemed not usual and customary.

To discuss this matter, contact the Wastewater Manager at (831) 758-7103. To submit a claim for damages, complete the Claim Form and contact the City Clerk at (831) 758-7381.

Sincerely,
The City of Salinas

What you need to do now:

- Minimize the impact of the loss by responding promptly to the situation.
- Do not attempt to clean the area yourself, let the cleaning and restoration company handle this.
- Keep people and pets away from the affected area(s) until cleanup has been completed.
- Turn off any appliances that use water.
- Turn off heating/air conditioning systems.
- Do not remove items from the area – the cleaning and restoration company will handle this.
- If you had recent plumbing work done, contact your plumber or contractor and inform them of this incident.

Customer Information Letter (Backup Only) Spanish: E-5

Estimado propietario:

Reconocemos que los incidentes de la red de alcantarillado pueden ser estresantes y requieren una respuesta inmediata, mientras que todos los hechos relacionados con la forma en que ocurrió el incidente aún son desconocidos. Tenga la seguridad de que haremos todo lo posible para evitar que este tipo de evento ocurra en primer lugar. Sin embargo, ocasionalmente las raíces de los árboles u otros residuos en las líneas de alcantarillado causan una copia de seguridad en los hogares inmediatamente antes del bloqueo. En este momento la Ciudad está investigando la causa de este incidente.

El contratista de limpieza proporcionado por la Ciudad ha sido seleccionado debido a su adhesión a los protocolos establecidos que están diseñados para asegurar a todas las partes servicios de limpieza exhaustivos, rentables y rápidos. También tiene derecho a seleccionar su propio contratista de limpieza, pero la Ciudad no garantiza el pago de los honorarios / gastos incurridos y se reserva el derecho de disputar los honorarios / gastos considerados no habituales y habituales.

Para discutir este asunto, comuníquese con el Administrador de Aguas Residuales al (831) 758-7103. Para presentar una reclamación por daños y perjuicios, complete el Formulario de Reclamación y comuníquese con el Secretario Municipal al (831) 758-7381.

Sinceramente,
La Ciudad de Salinas

Lo que necesitas haver ahora:

- Minimice el impacto de la pérdida respondiendo rápidamente a la situación.
- No intente limpiar el área usted mismo, deje que la empresa de limpieza y restauración se encargue de esto.
- Mantenga a las personas y las mascotas alejadas de las áreas afectadas hasta que se haya completado la limpieza.
- Apague cualquier aparato que use agua.
- Apague los sistemas de calefacción / aire acondicionado.
- No retire elementos del área: la empresa de limpieza y restauración se encargará de esto.
- Si ha realizado trabajos de plomería recientemente, comuníquese con su plomero o contratista e infórmele de este incidente.

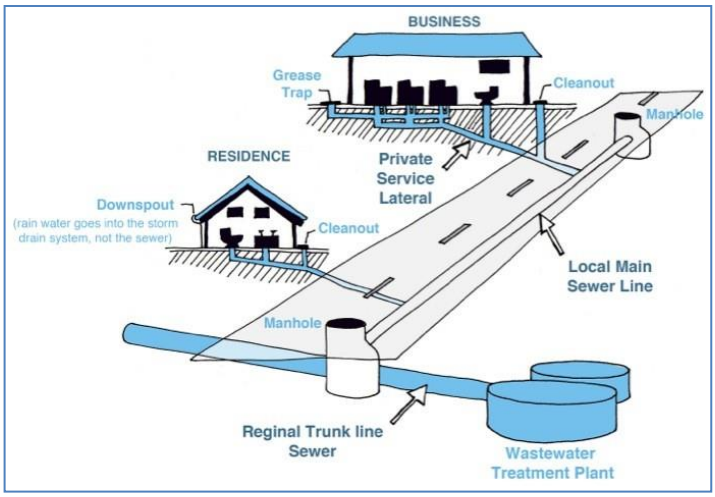
Your Responsibilities as a Private Property Owner (Backup Only) E-6: Page 1

How a Sewer System Works

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

How do sewage spills happen?

Sewage spills occur when the wastewater in underground pipes 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.



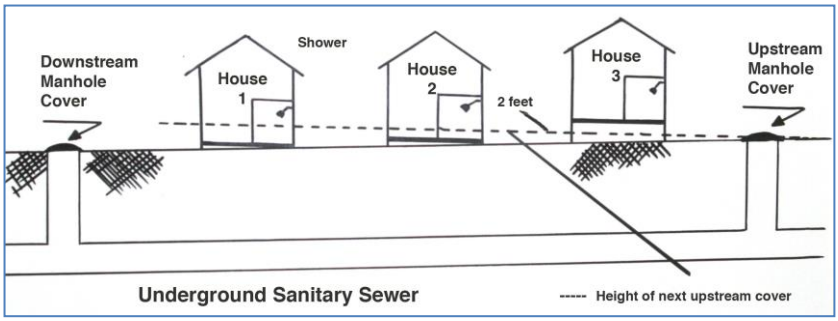
Prevent most sewage backups with a Backflow Prevention Device

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."*



Your Responsibilities as a Private Property Owner (Backup Only) E-6: Page 2

Spill cleanup inside the home:

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

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

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

Other Tips:

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

Spill cleanup outside the home:

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

INSERT TAB:
Failure Analysis

Collection System Failure Analysis

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	Tape Name/Number
CCTV Tape 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
	Repair(s)				
	Construction				
	Capital Improvement(s)				
	Change(s) to Maintenance Procedures				
	Change(s) to Spill Response Procedures				
	Training				

Comments/Notes:	
Reviewed by:	Reviewed by:
Review date:	Review date: