Spill Emergency Response Plan (SERP)

Tesoro Viejo Master Mutual Water Company

Prepared by

California Water Service Company

and

Water Works Engineers, LLC

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

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

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

California Integrated Water Quality System (CIWQS) – CIWQS is the statewide database that provides for mandatory electronic reporting as required in State and Regional Water Board-issued waste discharge requirements.

Data Submitter – A Data Submitter is an individual designated and authorized by the Enrollee's LRO to enter Spill data into the online CIWQS SSS Database. A Data Submitter does not have the authority of a LRO to certify reporting entered into the online CIWQS SSS Database.

Disadvantaged Community – A disadvantaged community is a community with a median household income of less than eighty percent (80%) of the statewide annual median household income.

For the purpose of this General Order, there is no differentiation between a small and large disadvantaged community.

Drainage Conveyance System (DCS) – 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.

Enrollee – An Enrollee is a public, private, or other non-governmental entity that has obtained approval for regulatory coverage under the WDR, including:

• A state agency, municipality, special district, or other public entity that owns and/or operates one or more sanitary sewer systems:

- greater than one (1) mile in length (each individual sanitary sewer system);
- one mile or less in length where the SWRCB or a RWQCB requires regulatory coverage under the WDR, or

• A federal agency, private company, or other non-governmental entity that owns and/or operates a SSS of any size where the SWRCB or a RWQCB requires regulatory coverage under the WDR in response to a history of Spills, proximity to surface water, or other factors supporting regulatory coverage.

Environmentally Sensitive Area – An environmentally sensitive area is a designated agricultural and/or wildlife area identified to need special natural landscape protection due to its wildlife or historical value.

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

Flood Control Channel – A flood control channel is a channel used to convey stormwater and non-stormwater flows through and from areas for flood management purposes.

Governing Entity – A governing entity includes but is not limited to the following:

• A publicly elected governing board, council, or commission of a municipal agency;

• A Department or Division director of a federal or state agency that is not governed by a board;

• A governing board or commission of an organization or association; and

• A private system owner/manager that is not governed by a board

Hydrologically Connected – Two waterbodies are hydrologically connected when one waterbody flows, or has the potential to flow, into the other waterbody. According to the WDR, 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.)

Lateral (including Lower and Upper) – A lateral is an underground segment of smaller diameter pipe that transports sewage from a customer's building or property (residential, commercial, or industrial) to the Enrollee's main sewer line in a street or easement. Upper and lower lateral boundary definitions are subject to local jurisdictional codes and ordinances, or private system ownership.

A lower lateral is the portion of the lateral located between the sanitary sewer system main, and either the property line, sewer clean out, curb line, established utility easement boundary, or other jurisdictional locations.

An upper lateral is the portion of the lateral from the property line, sewer clean out, curb line, established utility easement boundary, or other jurisdictional locations, to the building or property.

Legally Responsible Official (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 the WDR.

Nuisance – As outlined in the WDR, 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.

Percent Reached Surface Water – Volume of sewage discharged from a sanitary sewer system or private lateral or collection system estimated to have reached surface water divided by the total volume of sewage discharged.

Percent Recovered – Volume of sewage discharged that was disposed of properly, divided by the total volume of sewage discharged.

Potential to Discharge, Potential Discharge – Potential to Discharge, or Potential Discharge, means any exiting of sewage from a SSS which can reasonably be expected to discharge into a water of the State based on the size of the sewage spill, proximity to a DCS, and the nature of the surrounding environment.

Private Sewer Lateral (PSL) – A private sewer lateral is the privately-owned lateral that transports sewage from private property(ies) into the SSS. CalWater is not responsible for this portion of the lateral.

Private Sanitary Sewer System (PSSS) – A private sanitary sewer system is a SSS of any size that is owned and/or operated by a private individual, company, corporation, or organization. A private sanitary sewer system may or may not connect into a publicly owned SSS.

Receiving Water – A receiving water is a water of the State that receives a discharge of waste

Resilience – Resilience is the ability to recover from or adjust to adversity or change, and grow from disruptions. Resilience can be built through planning, preparing for, mitigating, and adapting to changing conditions.

Sanitary Sewer System (SSS) – 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 WWTP 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.

For the WDR, sanitary sewer systems include only systems owned and/or operated by the Enrollee.

Satellite Sewer System or Tributary Sewer System (STSS) – A satellite sewer system or Tributary sewer System is a portion of a SSS owned or operated by a different owner than the owner of the downstream WWTP ultimately treating the sewage.

Sewage – Sewage, and its associated wastewater, is untreated or partially treated domestic, municipal, commercial and/or industrial waste (including sewage sludge), and any mixture of these wastes with inflow or infiltration of stormwater or groundwater, conveyed in a SSS.

Sewer System Management Plan (SSMP) – A sewer system management plan is a living document an Enrollee develops and implements to effectively manage its SSS(s) in accordance with the WDR.

Spill – A Spill is a discharge of sewage from any portion of a SSS due to a sanitary system overflow, operational failure, and/or infrastructure failure. Exfiltration of sewage is not considered to be a Spill under the WDR if the exfiltrated sewage remains in the subsurface and does not reach a surface water of the State.

Spill Category 1 – All discharges of sewage resulting from a failure in an Enrollee's SSS that results in a discharge to a drainage channel and/or surface water.

Spill Category 2 – All discharges of sewage resulting from a failure in an Enrollee's SSS of a volume equal to or greater than 1,000 gallons that did not reach surface water.

Spill Category 3 – All discharges of sewage resulting from a failure in an Enrollee's SSS of a volume less than 1,000 gallons and greater than 50 gallons that did not reach surface water.

Spill Category 4 – All discharges of sewage resulting from a failure in an Enrollee's SSS of a volume less than 50 gallons that did not reach surface water.

Training – Training is in-house or external education and guidance needed that provides the knowledge, skills, and abilities to comply with the WDR.

Total Volume Recovered – Amount of sewage discharged that was captured and disposed of properly.

Wash Down Water – Wash down water is water used to clean a Spill area.

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

Waste Discharge Identification Number (WDID) – Waste Discharge Identification Number assigned as a unique identifier by the SWRCB to each Enrollee for regulatory recordkeeping and data management purposes.

Waters of the State – Waters of the State are surface waters or groundwater within boundaries of the state as defined in Water Code section 13050(e), in which the State and Regional Water Boards have authority to protect beneficial uses. Waters of the State include, but are not limited to, groundwater

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

Waters of the United States – Waters of the United States are surface waters or waterbodies that are subject to federal jurisdiction in accordance with the Clean Water Act.

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

1.0. Introduction

The goal of this Spill Emergency Response Plan (SERP) is to provide an effective response to sewage spills The SERP provides procedures for the TVMMWC/CalWater maintenance personnel and maintenance contractor to follow in responding to, cleaning up, and reporting spills within the sanitary sewer system.

All spills are required to be reported in accordance with the California State Water Resources Control Board (SWRCB) Statewide General Waste Discharge Requirements (WDR) and as outlined in this SERP. In addition, TVMMWC/CalWater staff and on-call contractors will take all measures to contain the spill area, report to the regulatory agencies, resolve the cause of spill, and ensure that the spill area is cleaned. With the goal of addressing spills in a timely manner, responsible parties will follow the SWRCB requirements.

2.0. Notification Procedures

Whenever a spill is reported, Dispatch answers the call, gathers information, and contacts the On Call Sewer Maintenance Contractor.

The following information is collected by the Dispatch:

- Time and date
- Spill location
- Spill start time
- Spill end time (if applicable)
- Spill receiving point (e.g. storm drain, private property, etc.)
- Caller's name and contact number
- General observation or any relevant information

The On-Call Maintenance Contractor will respond immediately to the site and determine if the situation is an active or a non-active spill. The On-Call Maintenance Contractor's goal is to arrive at the location with vehicle and equipment within 30 minutes upon notification.

In addition, dispatch notifies one of the following (contact is attempted in the order listed):

- Manager of Wastewater Systems / Chief Plant Operator - Primary Operator
- Direct Operator in Charge – Secondary Operator
- Plant Operator on Duty – Tertiary Operator

The On-Call Maintenance Contractor will notify the Operator of the spill status and the Operator will notify the appropriate regulatory entities (Cal OES, CVRWQCB, etc.) in Attachment A – SERP Contact Directory which includes spill responsible and regulatory contacts.

Figure 1 below**,** summarizes the spill procedures sequence flow chart. Revise based on the above information

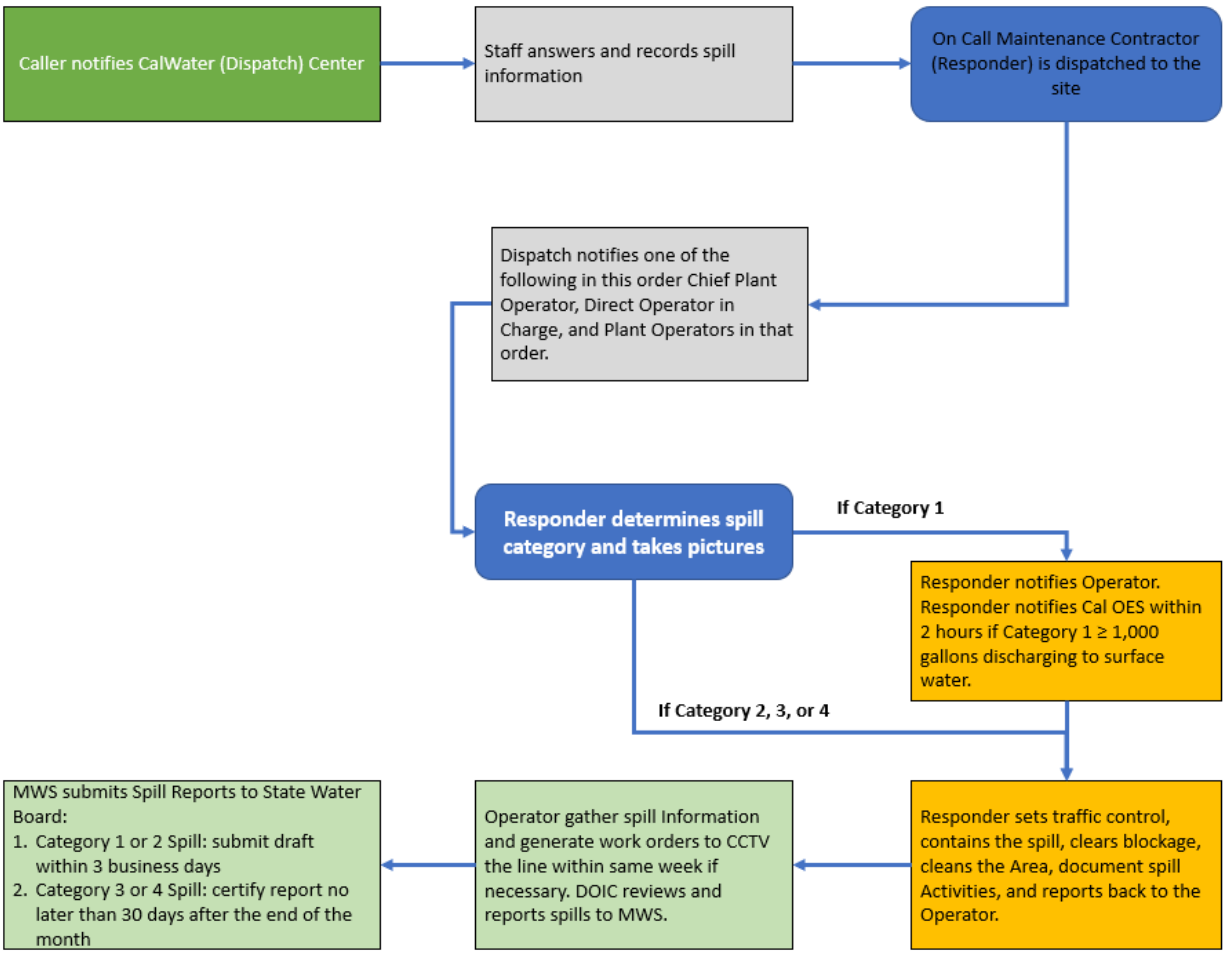

Figure 1 – Spill Procedures Flow Chart

State of California

- **California Office of Emergency Services (Cal OES)**

  Cal OES must be notified by telephone immediately (within 2 hours of becoming aware of a spill) when a Category 1 Spill greater than or equal to 1,000 gallons occurs.

- **Central Valley Regional Water Quality Control Board** (if necessary)
- **California Department of Fish and Wildlife** (if necessary)
- **California Highway Patrol** (for spills occurred on highways in the State)

Local Stormwater Agency

Contact stormwater agency if a spill enters a drainage conveyance system.

Law Enforcement

Contact the local Sheriff's Department for assistance. In an emergency, dial 9-1-1 for assistance.

Neighborhoods

1. Local residents should be notified of the spill whenever the situation endangers the health of a neighborhood or its environment.
2. If a resident asks about cleanup from private property structure damage caused by a spill, refer to **Attachment D – Spill Cleanup SOP** for more information.

3.0. Spill Response Procedures

The On-Call Maintenance Contractor's is responsible to contain, repair, clean, document the spill and provide additional assistance if required.

Refer to the following procedures when responding to a spill:

Investigation and Assessment

1. Wear personal protective equipment and follow all safety regulations.
2. Take photos and/or videos of the incident and surrounding area.
3. Determine the Category of the spill. An answer "Yes" to at least one of the following questions indicates a Category 1 Spill:
    a. Did the spill reach a drainage conveyance system (DCS) or surface waters?
    b. Did the spill discharge into a DCS that was not fully captured and returned to the sanitary sewer system?
4. Identify receiving water that may be impacted by spill.
5. Notify/follow-up with the DOIC or On-call Plant Operator as soon as possible if the spill is Category 1. CalWater staff must still be notified of a Category 2 or 3 Spill, but priority can be given to containing the spill and clearing the blockage. Notify Cal OES, if Spill Category 1 is more than 1,000 gal, within the first two hours.

Mitigation and Containment

1. Call for additional help if needed
2. Provide adequate traffic control and establish perimeters and control zones with cones, barricades, vehicles, or terrain for sewer crew's protection and public safety. See **Attachment C – Spill Response Contingency Equipment** for the available SERP equipment.
3. The Spill Monitoring Plan (**Attachment E – Water Quality Monitoring Program**) will be implemented immediately upon discovery of any Category 1 Spill of 50,000 gallons or greater.
4. Post warning signs and block contaminated areas with yellow caution tape and barricades if spill poses a public threat or is reaching or has reached the Waters of the State to protect the public, or if deemed necessary by the any regulatory entity.
5. Contain the spill by employing any of the following or other site-specific methods for containing the spill:
    a) Plug nearby catch basin outlets using plugs or cover catch basin inlets and storm drains using rubber mats.

b) Contain spill by letting sewage collect in a natural low area and recover sewage after relieving blockage.
c) Use sandbags or absorbent material around the spill to collect the sewage and prevent it from spreading.
d) Divert spill by building dikes or berms to redirect flow back to the sewer system.
e) Divert spill by pumping around an overflow and attempting to return it to the sewer system.

6. Correct the cause of spill
   a) Relieve the blockage or cause of the spill and determine the cause of the spill (i.e., evaluate type and amount of debris, illegal activities, etc.).
   b) If unable to relieve the blockage, request immediate assistance from additional staff and appropriate equipment.
   c) If still unable to clear the blockage, request immediate assistance with the establishment of bypass pumping and CCTV support to determine the problem.
7. Estimate volume of the spill using **Attachment B – Spill Reporting and Volume Estimation** (provided by SWRCB) or **Section 8.0** of this document, for active spills upon arrival. If the spill was not active upon arrival, provide relevant volume estimation information to DOIC. This information will be used to calculate an estimated spill volume.

Cleanup and Documentation

1. Refer to **Attachment D – Spill Cleanup SOP** for procedures on cleanup and disinfection.
   a) If a spill is on private property and is caused by a blockage, follow the procedures described in **Section 4.0** of this Spill Emergency Response Plan.
2. Interview Residents
   a) Attempt to interview at least two others in addition to caller to obtain additional insight and/or observations regarding the spill including the time that the spill was first observed and a visual estimate of the amount of water discharged.
   b) Document interview attempts in detail in the Spill Reporting Form (Attachment B).
3. Follow the procedures in the Water Quality Monitoring Program Plan (Attachment E) if sampling is required.

4.0. Spills in Homes and in Businesses

Refer to **Attachment D – Spill Cleanup SOP** for private spill cleanup and private damage claims.

5.0. Spill Documentation

A. Initial Documentation

Office staff records and keep the following spill information:

1. Type of problem
2. Call date and time
3. Caller name, phone number, and comments
4. Location of incident
5. Time reported to DOIC or On-call Plant Operator

6. Name of On-Call contractor or staff dispatched

B. Field Documentation

The Responder fills out the Spill Reporting Form and reviews it with the DOIC or On-call Plant Operator, prior to forwarding the information to the MWS. The following information is recorded on the form:

1. Location of spill
2. Time and date notified of spill
3. Time Responder arrived at the spill location
4. Time spill started (based on caller/resident interview(s); if field inspection fails to give better information, it is assumed that the spill started a minimum of 30 minutes before the first recorded observation time.)
5. Time spill blockage cleared
6. Pipe size and material
7. Spill appearance point
8. Cause of spill
9. Estimated total volume of spill, number to be reviewed by DOIC
10. Estimated volume contained
11. Estimated volume recovered
12. Estimated volume returned to the sewer system
13. Estimated volume that may have reached any receiving water and name of that receiving water
14. Final spill destination
15. Time response completed (cleanup)
16. Description of mitigation measures
17. Documentation of caller/resident interviews
18. Names of sewer crew members that responded to the spill

C. Office Documentation

1. Responder crew delivers completed Spill Reporting Form to the Chief Plant Operator to finalize the information.
2. Chief Plant Operator uses information on the Spill Reporting Form to submit data to the regulatory agencies as required. **It is important to write the CIWQS unique event ID on the form after reporting.** The Chief Plant Operator updates Cal OES of any substantial changes to initially reported data for Category 1 Spills.

6.0. Post Response Activities

Conduct a post spill investigation to identify necessary corrective actions. Follow-up actions may include:

1. Clean and CCTV the pipe to evaluate the defect.
2. Adjust preventative maintenance schedule to increase maintenance frequency or type of preventative maintenance (e.g. higher frequency).

3. Replace/rehabilitate/repair sewer pipe or sections of sewer pipe if determined to be an appropriate course of action.
4. If a spill is caused by lack of capacity during wet weather conditions, document the storm event and forward information to the District Engineer to conduct analysis of the system to determine point source mitigation relief or upgrade needs. This is analyzed by Section 8 of the SSMP if necessary.
5. Recommend new equipment needs for future spill response.
6. Conduct follow up meeting with staff involved to go over lessons learned and brainstorm improvements. Document meeting for annual review, update, and certification of SERP.

7.0. Spill Reporting

All spills are reported back to the Chief Plant Operator to be reviewed where any additional follow-ups are confirmed. Upon consolidation of the data, such as volume and time, all spill information is accurately reported into the CIWQS database online by the Chief Plant Operator. The following provides instructions for general and time sensitive spill reporting.

State of California

- **California Office of Emergency Services (Cal OES)**
  - Once Cal OES is notified, an OES Control Number will be provided for record and proof of report compliance.
  - The OES Control Number will be used to complete the "Notification Details" field of the Spill Report in CIWQS.
- **California State Water Resources Control Board (State Water Board)**

  Whenever an event shown below occurs, CalWater will complete the required reporting and recordkeeping requirements on the CIWQS website, as required by the Statewide General Waste Discharge Requirements (WDR) for Sanitary Sewer Systems Order WQ 2022-0103-DWQ. **It is important to write the CIWQS unique event ID on the Spill form after reporting.**

Table 1 – Required Reporting and Recordkeeping

Element	Requirement	Method
Reporting	• Category 1 Spill: TVMMWC/CalWater will submit draft report within 3 business days of becoming aware of the spill and certify within 15 calendar days of spill end date. • Category 2 Spill: TVMMWC/CalWater will submit draft report within 3 business days of becoming aware of the spill and certify within 15 calendar days of the spill end date. • Category 3 Spill: TVMMWC/CalWater will submit certified report within 30 calendar days of the end of month in which spill the occurred.	Enter data into the CIWQS Online Spill Database: (http://ciwqs.waterboards.ca.gov/) Which is certified by the Legally Responsible Official(s). All information required by CIWQS will be captured in the Spill Report. Certified Spill Reports may be updated by amending the report or adding an attachment to within 120 calendar days after the spill end date. After 120 days, the State

	• Spill Technical Report: TVMMWC/CalWater will submit within 45 calendar days after the end date of any Category 1 Spill in which 50,000 gallons or greater are spilled to surface waters. • "No Spill" Certification: TVMMWC/CalWater will certify that no spills occurred within 30 calendar days of the end of the month or, if reporting quarterly, the quarter in which no spills occurred. • Annual Report: TVMMWC/CalWater will update and certify every 12 months	Spill Program Manager must be contacted to request to amend a Spill report along with a justification for why the additional information was not available prior to the end of the 120 days.
Water Quality Monitoring	TVMMWC/CalWater conduct water quality sampling within 18 hours after initial spill notification for Category 1 Spills in which 50,000 gallons or greater are spilled to surface waters.	Water quality results will be uploaded into CIWQS for Category 1 Spills in which 50,000 gallons or greater are spilled to surface waters.
Record Keeping	• TVMMWC/CalWater will maintain the following records: • Spill event records. • Records documenting Sanitary Sewer Management Plan (SSMP) implementation and changes/updates to the SSMP. • Records to document Water Quality Monitoring for spills of 50,000 gallons or greater spilled to surface waters. • Collection system telemetry records if relied upon to document and/or estimate spill volume.	Self-maintained records shall be available during inspections or upon request.

8.0. Spill Volume Calculations and Estimates

The following are some methods of determining the volume of a spill in gallons. **Attachment B – Spill Reporting and Volume Estimation** provides guidance for volume estimation of a spill.

1. Rectangular Area

If the spill is settled in a rectangular area, the formula for calculating the volume is:

Gallons Spilled (Volume) = Length (ft) × Width (ft) × Depth (ft) × 7.48 (gal/ft^3)

Example 1: Calculate a spill with dimensions of 100 ft by 100 ft and 0.5 ft deep.

Volume of Spill = 100 × 100 × 0.5 × 7.48 = 37,400 Gallons

2. Circular Area

If the spill is settled in a circular area, the formula for calculating the volume is:

Gallons Spilled (Volume) = Length (ft) × Width (ft) × Depth (ft) × 7.48 (gal/ft^3) × 0.785

Example 2: Calculate a spill with a circular surface area similar to Example #1.

Volume of Spill = 100 × 100 × 0.5 × 7.48 × 0.785 = 26,180 Gallons

3. Upstream Connections

If you are dealing with an ongoing spill where the sewage is not contained by the terrain, you can estimate the volume of the spill entering the drainage conveyance system by multiplying the average sewer flow rate per household per hour and the duration of the spill in hours, then multiply the number of connections on the receiving line.

Estimate: Average sewer flow rate per household = 10 gallons/hour

Example 3: You have a line with 6 houses connected to the sewer main and the manhole has been overflowing for 24 hours. Calculate the total amount of spill.

Volume of Spill = 10 gallons per hour × 24 hours × 6 houses = 1,440 Gallons

Example 4: Calculate the volume of Spill for 3 hours in Example #3 using 220 gallons per day per household.

Volume of Spill = (220 gallons per day × 3 hours × 6 houses) / 24 hours = 165 Gallons

4. Soil Sampling

If a spill has reached an unpaved surface, measure the dimensions of the wetted area. Then measure the depth of the wetted area at several spots to calculate the average depth. A soil sampling can be conducted to determine the moisture content of the soil which can be used to calculate the actual spill volume contained by the soil. Refer to the Soil Sampling for Water Content Form **Attachment F – Soil Sampling for Water Content Form** for procedures on soil sampling.

9.0. SERP Training

With a goal of minimizing spill volume and increasing data accuracy, TVMMWC/CalWater regularly implements internal SERP trainings for staff and sewer crew. These trainings cover changes made to the SERP and reviews key information from previous trainings. Refer to **Training Section** of **Element 4 – O&M Program of the SSMP** for more information regarding employee training**.**

10.0 Annual Review

CalWater will conduct an annual review and assessment of the effectiveness of the SERP. This will include consolidation and analysis of post response activities by the MWS. Which will be presented to field staff in a workshop meeting where input will be exchanged. Suggested improvements (if any), will be memorialized and documented in the SERP update and certified in the Annual Report.

Attachment A – SERP Contact Directory

Attachment B – Spill Reporting and Volume Estimation

Attachment C – Spill Response Contingency Equipment

Attachment D – Spill Cleanup SOP

Attachment E – Water Quality Monitoring Program

Attachment F – Soil Sampling for Water Content Form