MIDWAY CITY SANITARY DISTRICT

Spill Emergency Response Plan 2023

Submitted to:
Midway City Sanitary District
14451 Cedarwood Avenue
Westminster, CA 92683

MIDWAY CITY SANITARY DISTRICT

SPILL EMERGENCY RESPONSE PLAN
2023

Submitted to

Midway City Sanitary District
14451 Cedarwood Avenue, Westminster, California 92683

Submitted by

AKM Consulting Engineers
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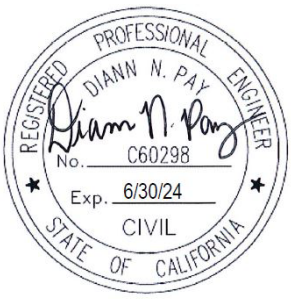
(949) 753-7333

June 2023



Date of Signing 6/2/23

Date of Signing: 6/2/23

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MIDWAY CITY SANITARY DISTRICT
SPILL EMERGENCY RESPONSE PLAN

Certification

This Spill Emergency Response Plan (SERP) has been prepared to provide the Midway City Sanitary District with the tools and procedures for responding to sewer spills efficiently and effectively to protect public health and the environment.

I certify under penalty of law that this document and all attachments were prepared under my direct supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted.

Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Robert Housley
General Manager
Midway City Sanitary District

06/15/2023
Date

Spill Emergency Response Plan Change Log

Date	Report Section	SERP Report or Procedure Change	Status

Spill Emergency Response Plan Change Log

Date	Report Section	SERP Report or Procedure Change	Status

SECTION 1
AUTHORITY

The authority and responsibility for a sanitary sewer Spill Emergency Response Plan (SERP) are contained in the following five (5) documents:

1-1 Clean Water Act

Section 301 of the Clean Water Act prohibits discharges of any wastewater to the waters of the United States.

1-2 California Water Code

Sections 13260 and 13376 of the California Water Code prohibits discharges of any wastewater to surface waters of the State.

1-3 State Water Resources Control Board, Order WQ 2022-0103-DWQ, Statewide Waste Discharge General Order for Sanitary Sewer Systems

On December 6, 2022, the State Water Resources Control Board (SWRCB) adopted Order WQ 2022-0103-DWQ (Order). This Order supersedes the previous Order WQ 2006-003-DWQ and Order WQ 2013-0058-EXEC.

Order WQ 2022-0103-DWQ includes the following prohibitions:

- *Any discharge from a sanitary sewer system that has the potential to discharge to surface waters of the State is prohibited unless it is promptly cleaned up and reported as required in this General Order.*
- *Any discharge from a sanitary sewer system, discharged directly or indirectly through a drainage conveyance system or other route, to waters of the State is prohibited.*
- *Any discharge from a sanitary sewer system that creates a nuisance or condition of pollution as defined in Water Code Section 13050(m) is prohibited.*

SWRCB Order WQ 2022-0103-DWQ becomes effective on June 5, 2023. The following is stated in Section 5.12 of the Order:

"For Existing Enrollees (with regulatory coverage under Order 2006-0003-DWQ):

> ***Within six (6) months of the Adoption Date of this General Order**, the Enrollee shall update and implement its Spill Emergency Response Plan, per Attachment D, Section 6 (Spill Emergency Response Plan) of this General Order*
>
> *The Enrollee shall certify, in its Annual Report, that its Spill Emergency Response Plan is up to date.*
>
> *The Spill Emergency Response Plan shall include measures to protect public health and the environment. The Enrollee shall respond to spills from its system(s) in a timely manner that minimizes water quality impacts and nuisance by:*
>
> - *Immediately stopping the spill and preventing/minimizing a discharge to waters of the State;*
> - *Intercepting sewage flows to prevent/minimize spill volume discharged into waters of the State;*
> - *Thoroughly recovering, cleaning up and disposing of sewage and wash down water; and*
> - *Cleaning publicly accessible areas while preventing toxic discharges to waters of the State."*

Based on the aforementioned, Midway City Sanitation District (MCSD) must update and implement its Spill Emergency Response Plan by June 5, 2023.

1-3.1 Legally Responsible Officials

Per Section 5 of Order WQ 2022-0103-DWQ, MCSD must designate a Legally Responsible Official (LRO) that can verify that MCSD complies with all requirements of the order. The LRO is defined by the Order as follows:

> *The 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.*
>
> *The Legally Responsible Official must:*
>
> 1. *Have responsibility over management of the Enrollee's entire sanitary system, and*
> 2. *Be authorized to make managerial decisions that govern the operation of the sanitary sewer system, including, having the explicit or implicit duty of making major capital improvement recommendations to ensure long-term environmental compliance.*
> 3. *Have or have direct authority over individuals that:*
>   - *Possess a recognized degree or certificate related to operations and maintenance of sanitary sewer systems, and/or*
>   - *Have professional training and experience related to the management of sanitary sewer systems, demonstrated through extensive knowledge, training, and experience.*

The Order requires that the LRO be responsible for the following:

1. Completing the "User Registration" form,
2. Certify and upload the Sewer System Management Plan and updates on the California Integrated Water Quality System (CIWQS) Sanitary Sewer System Database,
3. Submit audit reports on the CIWQS Sanitary Sewer System Database
4. Submit the "Electronic Sanitary Sewer System Service Area Boundary Map", on the CIWQS Sanitary Sewer System Database.
5. Certifying the necessary spill reports on the CIWQS Sanitary Sewer System Database

MCSD has identified the following individuals as Legally Responsible Officials:

- General Manager
- District Engineer
- Director of Operation & Safety

1-3.2 Data Submitters

Per Section 5 of Order WQ 2022-0103-DWQ, the LROs may designate one or more individuals as Data Submitter(s) for reporting spill data. A Data Submitter is defined by the Order as follows:

> *A Data Submitter is an individual designated and authorized by the Enrollee's Legally Responsible Official to enter spill data into the online CIWQS Sanitary Sewer System Database. A Data Submitter <u>does not</u> have the authority of a Legally Responsible Official to certify reporting entered into the online CIWQS Sanitary Sewer System Database.*

MCSD has identified the following individuals as Data Submitters:

- District Engineer
- Director of Operations & Safety
- Lead Sewer Maintenance Worker

1-4 National Pollutant Discharge Elimination System (NPDES)

In California, the NPDES Permit program is regulated by the nine (9) Regional Water Quality Control Boards (RWQCB) to regulate the discharge of pollutants into the waters of the United States. The City of Westminster, where the majority of the MCSD service area resides, operates under the Santa Ana RWQCB Order # R8-2009-0030, NPDES No. CAS618030, as amended by Order No. R8-2010-0062 (and subsequent permit renewals), *Waste Discharge Requirements for The County of Orange, Orange County Flood Control District and The Incorporated Cities of Orange County within the Santa Ana Region Areawide Urban Storm Water Runoff Orange County*.

SECTION 2
OVERVIEW

2-1 Background

Midway City Sanitary District (MCSD) provides sewer service to an area of about 10.4 square miles covering the City of Westminster and the unincorporated community of Midway City. The service area resident population of about 103,000. The sewage collected MCSD's sewer collection system is conveyed to Orange County Sanitation District's (OCSD) trunk sewers. The primary elements of the sewer system are as follows:

- 174 miles of gravity sewer mains (primarily VCP), 8" to 18" in diameter
- 34,832 sewer connections
- 4 sewer lift stations and approximately 5,900 feet of forcemains
- 32 siphons

An overview of MCSD's sewer collection system is shown on Figure 2-1. A map of MCSD's sewer system overlaid with the local drainage conveyance systems and surface waters are shown on Appendix A-1.

2-2 Previous Overflow Emergency Plan

A Overflow Emergency Response Plan was included as Section 12 of the 2022 Sewer System Master Plan document. The procedures for responding to a sanitary sewer overflow included the following:

- Notification Procedures
- Response Procedures
- Regulatory Notification Procedures
- Training Procedures
- Private Spill Response Procedures

This Spill Emergency Response Plan (SERP) will serve to update these procedures to comply with the State Water Resources Control Board (SWRCB) adopted Order WQ 2022-0103-DWQ (Order).

2-3 Purpose

The purpose of this SERP is primarily to document spill response procedures and assist MCSD staff in the achieving the following:

- Efficient response to reported spills and dispatch of appropriate crews and equipment in a timely manner
- Notification of all appropriate agencies of reported spills in a timely manner
- Containment of sewer spills so they do not reach a surface water
- Elimination of the cause of a sewer spill
- Protection of public and private property
- Sufficient cleanup of the impacted spill area
- Documentation of all spills and response activities
- Ensure appropriate staff is knowledgeable of the SERP procedures and appropriately trained

- Preparation of reports for submittal to regulatory agencies and other interested parties
- Compliance with SWRCB Order No. WQ-2022-0103-DWQ

2-4 Terminology

2-4.1 Overflows and Spills

The previous SWRCB Order WQ 2006-0003-DWQ defined Sanitary Sewer Overflows (SSOs), as "*any overflow, spill, release, discharge or diversion of untreated or partially treated wastewater from a sanitary sewer system*."

SWRCB Order WQ 2022-0103-DWQ defines a spill as, "a *discharge of sewage from any portion of a sanitary sewer system due to a sanitary sewer system overflow, operational failure and/or infrastructure failure. 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*". For reporting purposes, this document will use the Order WQ 2022-0103-DWQ terminology.

2-4.2 Surface Water

Per discussion with the State Water Resources Control Board (SWRCB), surface waters are defined as follows:

"Surface waters are natural water bodies that include but are not limited to: oceans, rivers, streams, lakes, vernal pools, wetlands, and estuaries.

- *If the natural water body or portions of it was rerouted or channelized (includes things like underground pipes, box culverts, concrete channels), it is still considered a surface water*
- *If the water body is manmade and retains water (i.e. golf course pond, home owner association lake), it is not a natural water body; and therefore, not a surface water*
- *Groundwater is not a surface water"*

Orange County Flood Control District (OCFCD) channels, creeks, and/or basins are considered surface waters; this includes both concrete-lined channels as well as earthen bottom channels.

2-4.3 Drainage Conveyance System

Per Attachment A of the Order WQ 2022-0103-DWQ, a drainage conveyance system is defined as follows:

"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."

2-4.4 Waters of the State

Per Attachment A of the Order WQ 2022-0103-DWQ, waters of the State is defined as follows

"Surface water 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."

2-4.5 Receiving Water

Per Attachment A of the Order WQ 2022-0103-DWQ, a receiving water is defined as follows

"Waters of the State that receives a discharge of waste."

2-5 Spill Emergency Response Flow Chart

The Spill Emergency Response Flow Chart is shown on Figure 2-2 and included in Appendix B-1. The flow chart summarizes the steps MCSD needs to take for initial spill reporting, spill correction, sewage containment and cleanup, and final spill reporting.

2-6 Coordination and Collaborations

To comply with the requirements of Order WQ-2022-0103-DWQ, MCSD has met with and/or collaborated its spill response procedures with the following agencies:

1. State Water Resourced Control Board (SWRCB)
2. Regional Water Quality Control Board Region 8 (RWQCB)
3. Orange County Flood Control District (OCFCD)
4. Orange County Health Care Agency (OCHCA)
5. Orange County Sanitation District (OCSAN)
6. SOCAL WDR Group
7. Clean Water Summit Partners

Documentation of meetings and correspondence with the aforementioned agencies is included in Appendix D.

2-7 Spill Emergency Response Plan Report Sections

The SERP report includes the following sections:

Section 1: Authority
Section 2: Overview
Section 3: Initial Response Procedures
Section 4: Notification Procedures
Section 5: Spill Response Procedures
Section 6: Monitoring and Reporting Procedures
Section 7: Training

2-8 Spill Response and Reporting Documents

This SERP document includes detailed response procedures for all types of spill events. Appendix B contains the pertinent documents needed in the field when responding to a spill and for reporting purposes. The intent is for these documents to be readily available to maintenance staff during a spill event, as a guide, so that appropriate notifications are made and all information needed for reporting is collected.

Appendix B-1 Spill Emergency Response Flowchart
Appendix B-2 Spill Initial Receipt Form
Appendix B-3 Spill Notification and Reporting Requirements
Appendix B-4 Resource Phone List
Appendix B-5 Sewer Spill Report
Appendix B-6 Monitoring and Reporting Data by Spill Category Summary
Appendix B-7 Water Sampling Requirements

22 FWY
City of Garden Grove
Bolsa Chica Rd
405 FWY
Springdale St
Edwards St
Knott Interceptor
Goldenwest St
Hoover St
Garden Grove Blvd
GG FWY
City of Garden Grove
Newland St
Trask Av
Hoover-Western Sub-Trunk
Miller Holder Trunk
Hoover-Western Sub-Trunk
Beach Blvd
Bushard Street Trunk
Magnolia St
City of Seal Beach
Westminster LS
Westminster Blvd
Westminster Ave Interceptor
Westminster Av
Bushard St
Brookhurst St
Ward St
Hazard Av
Willow LS
Knott Interceptor
Hammon LS
City of Huntington Beach
Springdale St
Miller Holder Trunk
Hazaard Ave
Edwards St
405 FWY
Unincorporated Orange County Midway City
City of Garden Grove
Brookhurst LS
Bolsa Ave
Bolsa Av
Bolsa Avenue Trunk
Goldenwest St
McFadden Av
McFadden Av
Miller Holder Trunk
Hoover St
Miller Holder Trunk
Bushard Street Trunk
City of Huntington Beach
Edinger Av
Edinger Av
Knott Interceptor
405 FWY
Newland St
Magnolia St
Bushard Street Trunk
Bushard St
City of Fountain Valley
Brookhurst St
Ward St
Edinger- Bolsa Chica Trunk
Slater Springdale Trunk
Golden West Trunk

Legend

- MCSD Sewer Lift Stations
- MCSD Sewer
- Private Sewer
- OCSD Gravity Trunk Sewers
- City of Westminster Boundary

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0 1,000 2,000 4,000 Feet

AKM

Project No.: 2351844.00

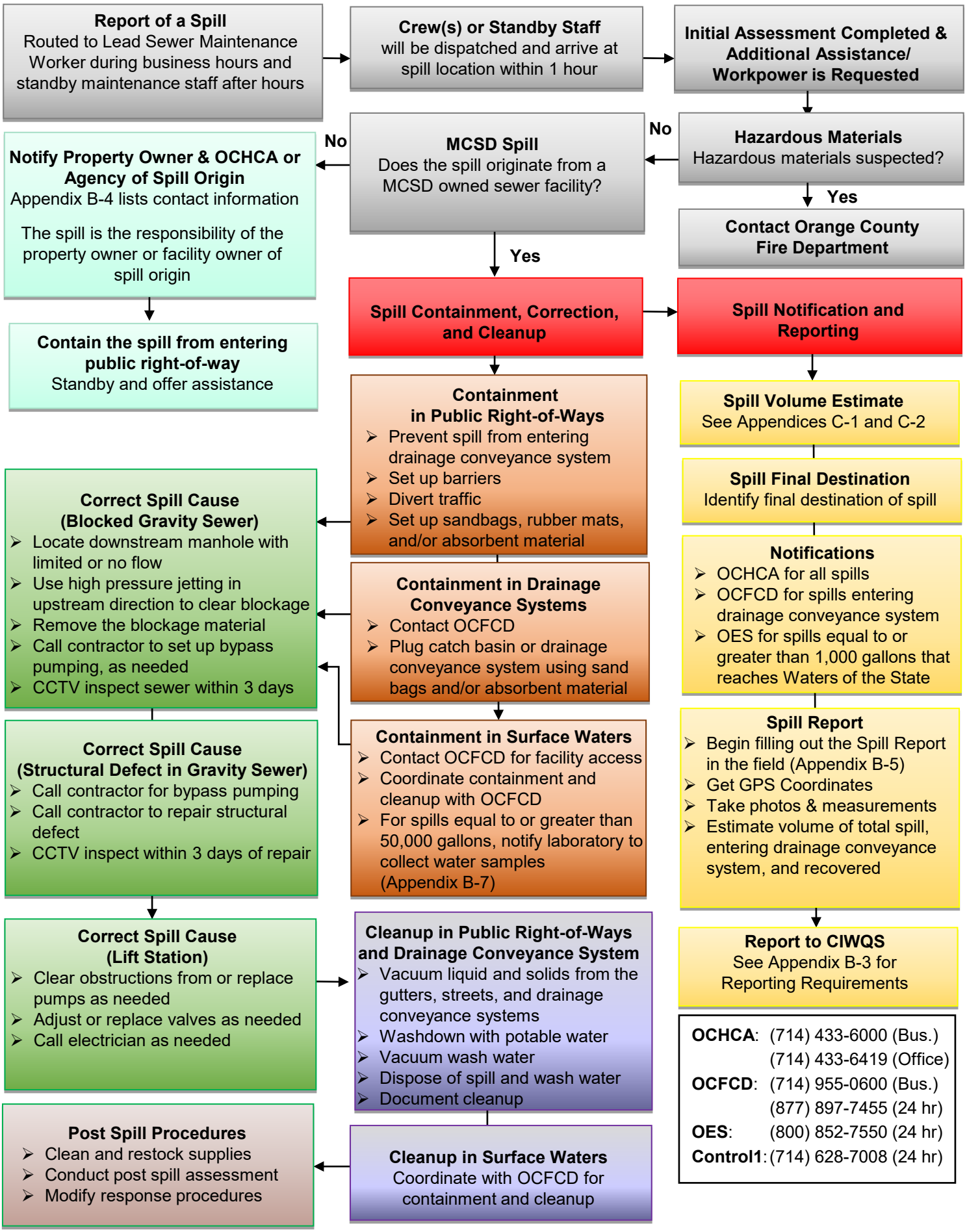
Date: June 2023

Midway City Sanitary District SERP

Existing Sewer System

Figure 2-1

Figure 2-2
Midway City Sanitary District
Spill Emergency Response Flowchart



SECTION 3
INITIAL RESPONSE PROCEDURES

3-1 Receipt of Information Regarding Spills

A spill may be detected and reported by Midway City Sanitary District (MCSD) personnel, the public, or by the lift station alarms. The maintenance staff are available to respond to all spills 24 hours a day, seven days a week. MCSD's website directs the public to contact the following to report spills:

Business Hours	**MCSD Headquarters**	**(714) 893-3553**
After Hours	**Sewer Emergency Mobile (Primary)**	**(714) 310-9004**
	Sewer Emergency Mobile (Secondary)	**(714) 310-8654**

If calls regarding spills are received at the City of Westminster, the calls will be routed to MCSD during business hours and the sewer emergency mobile phone numbers after hours.

3-2 Initial Notification to MCSD Staff

The contact information for MCSD's key maintenance staff is included in Table 3-1.

Table 3-1
Maintenance Staff Contact Information

Name	Position	Telephone Number	Cell Phone Number
Robert Housley	General Manager	(714) 893-3553	(562) 239-7557
Milo Ebrahimi	District Engineer	(714) 893-3553	(657) 368-9992
Nick Castro	Director of Operations & Safety	(714) 310-8654	(714) 486-3730
Randy Griffith	Lead Sewer Maintenance Worker	(714) 325-3606	(714) 373-4813

3-2.1 Business Hours

As soon as a spill is reported, MCSD staff will fill out the initial receipt form, which is detailed in Appendix B-2. During business hours, the Lead Sewer Maintenance Worker or the standby maintenance staff (via the sewer emergency mobile phone numbers) will be called and informed of the reported spill. The City of Westminster Public Works Department and Police Dispatch will direct spill reports to MCSD as well.

Typically if a spill occurs during business hours, the Lead Sewer Maintenance Worker and any available maintenance staff will respond to the initial notification to ensure that the potential spill event is well managed.

3-2.2 After Hours

After hours, MCSD recordings direct callers to the primary and secondary emergency mobile phone numbers. City of Westminster Police Dispatch will also call the emergency mobile phone numbers.

The sewer staff member who receives the call will report to the spill site and if a spill is verified, he/she will assess the situation and determine what additional assistance is required. The second on-call sewer staff member will be called to the site as needed.

When assigned on-call responsibilities, the sewer staff members must be reachable via the emergency mobile phone. It is their responsibility to:

1. Verify that the assigned cell phone is charged and functional;

2. Check the maintenance vehicles to assure that the fuel tanks are full, all tools are present and that all equipment is functional;

3-3 Initial Notification of Spills at Lift Stations

3-3.1 Lift Station Alarms

The four (4) lift stations are equipped with programmable logic controllers (PLC) that send out alarms if there are any issues at the lift stations. The PLC contacts the primary and secondary emergency mobile phones through a wireless and/or landline phone system.

The following are monitored and set to send an alarm to MCSD:

- High Wet Well Level
- Pump Failure
- Power Failures
- Motor High Temperature
- Site Intrusion
- Generator Failure

The initial response to a lift station alarm is similar to the report of a spill. Available sewer staff members will respond immediately during business hours. After hours, the sewer staff member who receives the call will report to the lift station first and assess the situation to determine what additional assistance is required. The second on-call sewer staff member will be called to the lift station as needed.

3-4 Response Time

Whether the notification of a spill occurs during normal business hours or after hours, MCSD staff will respond to the notification, **within one hour** of initial notification.

The first responder(s) will evaluate the situation and contact additional staff and/or contractors to provide the necessary work power and/or equipment to manage the spill response.

3-5 Vehicles and Equipment

MCSD has two (2) combination jetting/vacuum trucks, traffic control equipment, one by-pass pump and hoses, one trailer-mounted standby generator, sewer maintenance tools, containment equipment (i.e. mats, sand bags, absorbent materials, etc.), cleanup equipment, and safety equipment for responding to sewer spills.

This SERP document and spill response forms (included in Appendix B) will be available on maintenance vehicles at all times.

SECTION 4
NOTIFICATION PROCEDURES

Notification to regulatory agencies and local agencies is dependent on the type of spill, the volume of the spill, the origination and end point of the spill, and/or the category of the spill as defined by Order No. WQ 2022-0103-DWQ (Order).

4-1 Spill Categories defined by Order No. WQ 2022-0103-DWQ

The SWRCB spill categories are summarized in Table 4-1.

Table 4-1
Spill Categories

Spill Category	Spill Volume	Discharged to a Surface Water
Category 1 Spill	All Spills	Yes
Category 2 Spill	≥ 1000 Gallons	No
Category 3 Spill	≥ 50 Gallons & < 1,000 gallons	No
Category 4 Spill	<50 Gallons	No

**Private spills are not categorized*

Spill categories are defined in the Order as follows:

Category 1 Spill

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

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

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

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

Category 2 Spill

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

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

Category 3 Spill

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

A spill of equal to or greater than 50 gallons and less than 1,000 gallons, that spills out of a lateral and is caused by a failure or blockage in the sanitary sewer system is a Category 3 spill.

Category 4 Spill

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

A spill of less than 50 gallons that spills out of a lateral and is caused by a failure or blockage in the sanitary sewer system is a Category 4 spill.

Private Spill

A private spill is a spill of any volume that originates in a private sewer system or private lateral. Private spills are the responsibility of the property owner. As encouraged by SWRCB, MCSD will report a spill from a private sewer system or private lateral to the SWRCB CIWQS website if

- *A spill equal or greater than 1,000 gallons or more that discharges (or has a potential to discharge) to waters of the State, or a drainage conveyance system that discharges to waters of the State; or*
- *A spill of any volume that discharges to a surface water*

4-1.1 Category 1 Spill Clarification

"Surface Waters" are defined by SWRCB staff as natural water bodies, including portions that were rerouted or channelized. OCFCD channels, creeks, and/or basins are therefore considered surface waters; this includes both concrete-lined channels as well as earthen bottom channels. If a spill reaches any of these OCFCD facilities, it will be considered a Category 1 Spill. Surface waters within MCSD's service area illustrated on Figure 4-1.

If a spill cannot be contained within a drainage conveyance system, regardless of whether water is flowing or not, the spill will be considered a Category 1 Spill. If however, the spill is fully contained and removed, the impacted portion of the drainage conveyance system is cleaned, and the wash water is captured and disposed of properly, the spill will be considered Category 2, 3, or 4.

22 FWY
City of Garden Grove
Bolsa Chica Rd
405 FWY
Springdale St
Edwards St
C03P01
Goldenwest St
C03P17
Hoover St
Garden Grove Blvd
GG FWY
City of Seal Beach
Bolsa Chica Channel (C02)
Bestel Storm Channel (C02S03)
Trask Av
City of Garden Grove
Newland St
Trask Av
Humboldt Storm Channel (C03S02)
Beach Blvd
Anaheim Barber City Channel (C03)
Westminster Blvd
Magnolia St
OCFCD C04P12
Westminster Av
Bushard St
Westminster Channel(C04)
Brookhurst St
Ward St
City of Huntington Beach
Springdale St
Hazaard Ave
Hazard Av
Edwards St
405 FWY
Unincorporated Orange County Midway City
C05P34
C05P27
Westminster Channel(C04)
City of Garden Grove
Bolsa Ave
Bolsa Av
C05S01
Goldenwest St
C05P06
C05P07
McFadden Av
McFadden Av
Hoover St
Newland Storm Channel (C05S01)
City of Huntington Beach
East Garden Grove Wintersburg Channel (C05)
Edinger Storm Channel (C05S05)
Edinger Av
Edinger Av
Magnolia St
Bushard St
City of Fountain Valley
Brookhurst St
Ward St
405 FWY
Newland St

Legend

- OCFCD Open Channel (Surface Water)
- OCFCD Drainage Conveyance System
- City of Westminster Drainage Conveyance System
- City of Westminster Boundary

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Midway City Sanitary District SERP

Drainage Conveyance Systems and Surface Waters

Project No.: 2351844.00

Date: June 2023

Figure 4-1

4-2 Notification to Regulatory Agencies

4-2.1 Notification Responsibilities

Once the maintenance staff verifies a spill has occurred, they will notify the Lead Sewer Maintenance Worker, who will be in charge of contacting and/or delegating a designee to contact all regulatory agencies, as needed. A summary of initial notifications that will be made is shown in Table 4-2.

If the Lead Sewer Maintenance Worker is unavailable and the maintenance staff experiences delays or conflicts or requires additional resolution toward responding to the spill, the District Engineer and/or General Manager shall be contacted to provide direction. The District Engineer and/or General Manager shall then also be responsible for contacting the regulatory agencies, as needed.

Table 4-2
Notifications

Spill Category	Notify	Conditions
Category 1 Spill	OES	Total Spill Volume >=1,000 gallons even if the spill is partially contained or recovered
	OCHCA	All
	OCFCD	All
Category 2 Spill	OES	Spill Reaches Waters of the State (Groundwater) even if the spill is partially contained or recovered
	OCHCA	All
	OCFCD	Spill Enters a Storm Drain
Category 3 Spill	OCHCA	All
	OCFCD	Spill Enters a Storm Drain
Category 4 Spill	OCHCA	All
	OCFCD	Spill Enters a Storm Drain
MCSD Owned Lateral Spill	OCHCA	All
	OCFCD	Spill Enters a Storm Drain
Private System or Private Lateral Spill	OCHCA	All
	OCFCD	Spill Enters a Storm Drain

OES = Office of Emergency Services
OCHCA = Orange County Health Care Agency
OCFCD = Orange County Flood Control District

4-2.2 California Office of Emergency Services

The California Office of Emergency Services (OES) will be notified when the total spill volume is 1,000 gallons or greater, the spill originates from MCSD's sewer system and has discharged or is threatening to discharge to a waters of the State (includes surface water and groundwater). OES will be notified even if the spill is partially contained or recovered.

If the volume of a large spill is uncertain or the final destination of the spill is undetermined, MCSD will contact OES to report the spill and obtain an Emergency Services Control Number.

California Office of Emergency Services (OES)

(800) 852-7550

4-2.3 Orange County Health Care Agency

The Orange County Health Care Agency (OCHCA) will be notified of all spills originating from MCSD's sewer system, as well as private spills. Based on the information provided, OCHCA staff will determine the need for a site investigation or other actions to protect the public and environment. If needed, OCHCA will work with private property owners to ensure that private spills are contained, corrected and cleaned up.

Orange County Health Care Agency (OCHCA)

General Reporting: (714) 433–6000

Office Staff: (714) 433–6419

After Hours (Control 1): (714) 628–7008

4-2.4 Orange County Flood Control District

The Orange County Flood Control District (OCFCD) will be notified of any spill that reaches any type of drainage conveyance system and/or surface water, whether it is owned by the City of Westminster or OCFCD. The drainage facilities considered surface waters within MCSD's service area are shown on Figure 4-1. This includes any spill that reaches a catch basin, storm drain manhole, or structural Best Management Practice (BMP) and has the potential to enter a drainage conveyance system. Based on the information provided, OCFCD staff will determine the need for a site investigation or other actions to protect surface waters.

OCFCD and the City of Westminster (City) has entered into a Water Quality Ordinance Implementation Agreement, which allows OCFCD to act on behalf of the City in providing assistance with containment and cleanup of spills within the City's drainage conveyance systems. Written authorization (via email or text) is needed prior to OCFCD's response, in order to implement the Agreement.

The County has developed an on-line "Water Pollution" service request website (link below) for **all spills** that reach a drainage conveyance system and/or flood control facility. This online reporting may be conducted on a desktop computer or mobile device, and is the best way to notify OCFCD of a spill event. MCSD will be notified of the receipt of the spill report electronically to ensure that the online notification has been conducted appropriately.

https://myoceservices.ocgov.com/ServiceRequest

The required spill information for the online spill reporting includes:

- Location
- Date and Time
- Is the spill located on a private property?
- Pollution category
- Is the spill in liquid form?
- What is the volume and units?
- Who is the responsible party?
- Nearest cross streets
- Additional comments

In addition the online request, the Lead Sewer Maintenance Worker will contact OCFCD by phone if immediate assistance is needed (i.e. access to locked OCFCD facilities, additional guidance for response to large spills, etc.).

Orange County Flood Control District (OCFCD)

Business Hours: (714) 955–0600

24 Hour Hotline: (877) 897–7455

After Hours (Control 1): (714) 628–7008

4-2.5 Spill Notification Information

Notification to OES, OCHCA, and OCFCD will occur as soon as possible, but no later than (2) hours from the verification of the spill. At minimum, the following information will be provided:

a. Name and phone number of person making notification

b. Estimated spill volume in gallons;

c. Estimated spill rate from the system (gallons per minute);

d. Estimated discharge rate (gallons per minute) directly into surface waters or indirectly into a drainage conveyance system;

e. Spill incident description

- Brief narrative of the spill event, and
- Spill incident location (address, city, and zip code) and closest cross streets and/or landmarks;

f. Name and phone number of the contact person on-scene;

g. Date and time the Enrollee was informed of the spill event;

h. Name of the sanitary sewer system causing the spill;

i. Spill cause or suspected cause (if known);

j. Amount of spill contained;

k. Name of receiving water body receiving or potentially receiving discharge; and

l. Description of water body impact and/or potential impact to beneficial uses.

4-2.6 Notification of Spill Report Updates

Following initial notifications and prior to certifying the spill report in the online CIWQS Sanitary Sewer System Database, the Lead Sewer Maintenance Worker will provide updates to OES, OCHCA, and OCFCD regarding substantial changes to:

a. Estimated spill volume (increase or decrease in gallons initially estimated);

b. Estimated discharge volume directly into Waters of the State or indirectly into a drainage conveyance system (increase or decrease in gallons initially estimated); and

c. Additional impact(s) to the waters of the State and beneficial uses

4-3 Private Property Owners

If a spill originates on private property and has neither reached the public right-of-way nor shows signs of imminent danger of reaching the public right-of-way, the maintenance staff will notify the property owner or property manager of the spill. The property owner will be informed that it is their responsibility to hire a contractor or plumber to correct the cause of the spill. If the contractor or plumber is unable to correct the cause, the

maintenance staff may take the necessary action to correct the cause of the spill. If appropriate, the property owner will then be informed that the cost of the work will be their responsibility. The property owner will also be advised not to use water until the spill has been resolved.

MCSD will notify the City of Westminster or Orange County Public Works (OCPW) of private spills, based on the property location. When the City of Westminster or OCPW staff arrives, MCSD staff will remain on-scene to assist in efforts to keep the spill from entering the public right-of-way and/or drainage conveyance systems. The City of Westminster or OCPW will complete and submit the final spill report.

City of Westminster

Business Hours: (714) 548-3686 or (714) 548-3687

After Hours: 9-1-1

Orange County Public Works

Business Hours: (714) 897-7455

After Hours: (877) 897-7455

As previously mentioned, OCHCA will also be informed of all private spills.

4-4 On-Call Contractors

MCSD's maintenance staff are well trained in performing the majority of the work necessary to mitigate a spill. Based upon the initial spill assessment, the responding maintenance staff may request additional crews, equipment, and/or on-call contractors. Tasks that may require the use of on-call contractors include but are not limited to; replacement of structurally damaged sewers, requirement for shoring with sheet piling, dewatering, bypass pumping, and open excavation extending past one day.

MCSD's on-call contractors are listed in Table 4-3.

Table 4-3
On-Call Contractors

Contractor	Services	Telephone Number
Charles King Company	Bypass Pumping, Lift Station Repairs, Pipeline Construction/Rehabilitation, CIPP Lining	(562) 426-2974
Empire Pipe Cleaning and Equipment	CCTV Inspection, Pipe Cleaning, Pipe Repairs, Vactor Services, Pressure Jetting	(714) 639-8352
Performance Pipe	CCTV Inspection, Pipe Cleaning, Pipe Repairs, Vactor Services, Pressure Jetting	(714) 536-7386
Paulus Engineering	Pipe Repairs, Pavement Repair, Emergency Response	(714) 632-3975

4-5 Orange County Fire Authority

Hazardous materials can be detected by odor, foamy residue, or oil sheen. If the spill is suspected to involve hazardous materials, the Orange County Fire Authority (OCFA) will be notified for assistance. Since the

suspicious material may be flammable, all maintenance staff will keep a safe distance away until OCFA has assessed the situation.

Orange County Fire Authority

Business Hours: (714) 744-0455
After Hours: 9–1–1

4-6 Southern California Edison (SCE)

If the spill has been determined to have been caused by an electrical outage at a MCSD lift station, the maintenance staff will contact Southern California Edison (SCE) get power restored.

Southern California Edison

(800) 611–1911

4-7 Nearby Sewer Agencies

If the spill originates from another agency's sewer system, the responsible agency will be immediately notified. The nearby sewer agency contact information is summarized in Table 4-4.

Table 4-4
Nearby Sewer Agencies

Sewer Agency	Business Hours	After Hours
Orange County Sanitation District	(714) 962-2411	(714) 593-7025
Garden Grove Sanitary District	(714) 741-5395	(714) 741-5704
City of Fountain Valley	(714) 593-4600	(714) 593-4484
City of Huntington Beach	(714) 960-8861	(714) 960-8830 (P.D.)
City of Seal Beach	(562) 431-2527 (ext 17)	(562) 799-4100

Maintenance staff will start containment and provide assistance if the spill poses a threat to the public health, waters of the State, public property, and/or private property, especially if they are the first to arrive at the spill site. Maintenance staff will remain at the spill site until the other agency arrives to take over responsibility of the spill.

MCSD is a member agency of Water Emergency Response Organization of Orange County (WEROC), which supports and manages countywide emergency preparedness, planning, response, and recovery efforts for water and wastewater agencies in Orange County. In the event of a spill, WEROC member agencies, and other nearby agencies can be contacted if additional combination/vactor trucks, equipment, and/or work power are needed.

4-8 Laboratory

If the spill is equal to or greater than 50,000 gallons and has reached surface waters, MCSD's approved laboratory (Sierra Analytical Laboratories Incorporated) will be contacted by the Lead Sewer Maintenance Worker to sample the receiving waters.

Sierra Analytical Laboratories Incorporated (Sierra Analytical)
(949) 348-9389

4-9 Traffic Control

If a spill is within the public right-of-way, traffic control will be set up to direct the public and vehicle traffic around the spill location. Traffic control will be set per the current version of the Work Area Traffic Control Handbook (WATCH) Standards and/or the California Manual on Uniform Traffic Control Devices (MUTCD). The City of Westminster Police Department will be contacted when extensive traffic and crowd control is necessary.

City of Westminster Police Department

(714) 548-3212

4-10 Public Advisory

MCSD will provide any signage and/or other public notification to educate the public of the spill, as required by the OES or OCHCA.

4-11 Media Notification

MCSD will determine if and when the media will be informed of a spill incident.

4-12 Resource Phone List

All contact information can be found in the Resource Phone list, summarized in Table 4-5 and Appendix B-4.

Table 4-5
Resources Phone List

Contact	Business Number	After Hours
Midway City Sanitation District		
MCSD	(714) 310-9004 (714) 893-3553	(714) 310-9004 (Primary 1) (714) 310-8654 (Secondary 2)
Sewer Emergency Mobile Phones		(714) 310-9004 (Primary 1) (714) 310-8654 (Secondary 2)
General Manager (Robert Housley)	(714) 893-3553	(562) 239-7557 (mobile)
Lead Sewer Maintenance Worker (Randy Griffith)	(714) 325-3606	(714) 325-3606 (mobile) (714) 373-4813 (home)
Director of Operations & Safety (Nick Castro)	(714) 310-8654	(714) 486-3730 (home)
District Engineer (Milo Ebrahimi)	(714) 893-3553	(657) 368-9992 (mobile)
City of Westminster		
City of Westminster	(714) 548-3686 (714) 548-3687	9-1-1
NPDES Inspector (Justin Watts)	(714) 548-3472	(714) 231-3965 (949) 858-3348 (home)
Contact	**Business Number**	**After Hours**
Emergency Contacts		
Orange County Fire Authority	(714) 573-6522	9-1-1
City of Westminster Police Department	(714) 548-3212	9-1-1
Watch Commander	(714) 548-3767	9-1-1
Code Enforcement	(714) 548-3478	9-1-1
Caltrans	(949) 936-3600	
California Highway Patrol (CHP)	(714) 567-6000	
Orange County Control 1	(714) 628-7008	(714) 628-7008
Southern California Edison	(800) 611-1911	
Notification Agencies		
State of California, Office of Emergency Services	(800) 852-7550	
Orange County Health Care Agency	(714) 433-6000	(714) 628-7008 (Control1)
Office Staff	(714) 433-6419	
Private Property	(714) 433-6140 (714) 433-6000	(714) 936-4697 (mobile)
Public Right-of-way	(714) 433-6015	
Orange County Public Works (OCPW)	(877) 897-7455	(877) 897-7455
Orange County Flood Control District (OCFCD)	(714) 955-0600	(714) 628-7008 (Control1)
24-Hour Hotline	(877) 897-7455	(877) 897-7455
Water Pollution Service Request	https://myoceservices.ocgov.com/ServiceRequest	
Regional Water Quality Control Board - Santa Ana	(951) 782-4130	
Nearby Sewer Agencies		
Orange County Sanitation District	(714) 962-2411	
Garden Grove Sanitary District	(714) 741-5395	(714) 741-5704
City of Fountain Valley	(714) 593-4600	(714) 593-4484
City of Huntington Beach	(714) 960-8861	(714) 960-8830 (P.D.)
City of Seal Beach	(562) 431-2527 (ext 17)	(562) 799-4100
On-Call Contractors		
Charles King Company	(562) 426-2974	
Empire Pipe Cleaning and Equipment	(714) 639-8352	
Performance Pipe	(714) 536-7386	
Paulus Engineering	(714) 632-3975	
Laboratory and Environmental Consultant		
Ocean Blue Environmental Services	(562) 624-4120	
Sierra Analytical Labroatory	(949) 348-9389	

SECTION 5
SPILL RESPONSE PROCEDURES

5-1 General

The Spill Emergency Response Flow Chart is provided as Appendix B-1. The flow chart details the steps that will be taken from initial notification of a spill to the final reporting of the spill to regulatory agencies.

The following procedures generally apply when there are dry weather conditions. The procedures during wet weather conditions will be similar, except the drainage conveyance system will not be entered or blocked due to potential flooding.

5-2 Preliminary Assessment Procedures

Sewer maintenance staff are required to respond to a reported spill within one (1) hour of the initial notification. During business hours, available maintenance staff will mobilize to the reported spill location. After hours, the on-call sewer maintenance staff will mobilize to the reported spill location.

Upon arrival at the spill location, the maintenance staff will do the following:

1. Perform a quick investigation/assessment of the spill
2. Take photos of the spill and surrounding area
3. Determine the extent of the spill
4. Determine what agencies need to be notified
5. Determine what additional resources are needed. Additional crews and/or equipment will typically be requested under the following circumstances:
    a. A sewer spill is confirmed and additional work power and equipment is needed. If the combination/vactor truck is not already onsite, it will be brought to the spill site immediately.
    b. A spill has entered or has the potential to enter drainage conveyance system, requiring two or more crews to simultaneously address the cause of the spill and to contain the sanitary sewer spill.
    c. It is determined that additional expertise and/or work power is required to correct or contain a spill.

If it is determined or suspected that the spill is a hazardous material spill, the Orange County Fire Authority will be contacted. If the sewer spill is determined to originate from a private sewer lateral or private sewer system, the property owner or property manager will be contacted. If the sewer spill is determined to originate from another sewer system, the agency who owns the system will be contacted. In each of the aforementioned cases, the maintenance staff will remain on standby and assist as needed.

5-3 Traffic Control and Crowd Control

As stated in Section 4-9, if a spill reaches the public right-of-way, traffic control will be set up to direct the public and vehicle traffic around the spill location. The City of Westminster will be contacted if extensive traffic and crowd control is necessary.

All traffic control will comply with the Work Area Traffic Control Handbook (WATCH) standards.

5-4 Containment Procedures

5-4.1 Public Right-of-Way

If a spill originates from MCSD's sewer system in a public right-of-way or street, the maintenance staff will set up barriers and divert traffic and the public away from the spill, using equipment such as signs, cones, delineators, barricades, arrow boards, and tape.

The maintenance staff shall take all necessary measures to contain the spill or direct the spill to a location where it can be vacuumed up. If at all possible, maintenance staff will contain the spill in the street and prevent sewage from entering the drainage conveyance system by locating the nearest entry point(s) to the drainage conveyance system. The sewer system and drainage conveyance system map (Appendix A-1) can be used to locate the catch basins and drainage conveyance systems downstream of the spill location. Sewage will be blocked from entering the drainage conveyance system catch basins and manhole covers by using sandbags, rubber mats, absorbent materials, etc.

If necessary, bypass pumping will be implemented to pump the sewage from upstream of the spill location to a downstream sewer.

To collect the information necessary for completing the spill report to the State Water Resources Control Board (SWRCB), the maintenance staff shall document the time the spill started and the time the cause of the spill was corrected. If possible, photographs and/or video footage of the spill will be taken at different times during the spill event because the volumes will likely change over time.

5-4.2 Drainage Conveyance Systems

If the spill does enter the drainage conveyance system, the maintenance staff will do everything possible to prevent the spill from reaching a surface water, which are shown on the map included in Appendix A-1. If feasible, the maintenance staff will plug the catch basin where the spill entered or open a manhole downstream and place sandbags and/or other absorbent material in the drainage conveyance system to contain the spill. Then the spill will be removed using the combination/vactor truck. OCFCD must be contacted when a spill reaches a drainage conveyance system and can also provide additional assistance in containing and removing the spill.

5-4.3 OCFCD Facilities/Surface Waters

If the spill reaches an OCFCD facility/surface water, OCFCD will be contacted. MCSD will likely need OCFCD crews to access any of the nearby channels/surface water because the gates to the access roads are typically locked. Upon authorization of the Water Quality Ordinance Implementation Agreement (via email/text from local storm drain agency), OCFCD will send crews out to conduct containment and cleanup. MCSD crews will coordinate with OCFCD and assist in any way possible.

5-4.4 Private Sewer System or Laterals

If a spill originates from a private sewer system or lateral and it has neither reached public right-of-way nor shown signs of imminent danger of it reaching public right-of-way, the maintenance staff will locate the property owner or manager to inform them of their responsibility to contain the spill, eliminate the cause, and cleanup the spill.

Private property owners or managers will be informed of their responsibility to hire a contractor or plumber to correct the cause of the spill, at the property owner's expense. Alternatively, the maintenance staff may take the necessary action to correct the cause of the spill at the expense of the private property owner.

Property owners will be advised not to use water until the cause of the spill has been resolved. If necessary, MCSD will contact the local water agency to shut off the water supply.

If there is the potential of the spill reaching the public right-of-way, the maintenance staff will assist in containment and removal of the sewage on private property using sandbags, waddles, absorbent materials, plastic sheeting, etc.

5-4.5 Wet Weather Conditions

The function of a drainage conveyance system is to prevent flooding, which provides safety to the public as well as protection of public and private property. If a spill enters the drainage conveyance system during a wet weather event, the drainage conveyance system will **not** be entered or blocked if such action could potentially cause flooding. Additionally, the maintenance staff shall not enter the drainage conveyance system if unsafe conditions are observed.

Under wet weather conditions, the maintenance staff will concentrate on correcting the cause of the spill to minimize the volume that is discharged to surface waters and prevent additional discharge of sewage into the drainage conveyance system.

The determination of "wet weather conditions" will be at the discretion of the maintenance staff. It is assumed to be wet weather conditions if the catch basin or drainage conveyance system cannot be blocked for fear of causing flooding on the street and/or in the drainage conveyance system. Under these conditions, the spill cannot be contained.

5-5 Correction Procedures

5-5.1 Gravity Sewer Corrections

Sewer spills may be the result of blockages due to heavy grease, roots, or other obstructions. Spills may also be the result of structural deficiencies, which include but are not limited to collapsed pipes, broken pipes, deformed pipes, and severe offset joints.

In the case of blockages, the maintenance staff will open manhole lids downstream of the spill. High pressure jetting in the upstream direction from the first manhole found without or with limited sewage flowing through it, will be used to clear the blockage. The blockage material will be removed at the manhole.

Upon clearing the blockage, CCTV inspection will be performed as soon as possible, but no less than three (3) days after the spill event, to verify the condition of the sewer line. If a structural deficiency is found, the District Engineer will be informed so that a plan for repair can be developed.

The maintenance staff may determine that bypass pumping will be required if the blockage cannot be cleared in a timely manner, if a pipe has failed, or if the spill is large and has the potential to endanger public health, enter drainage conveyance system catch basins and manholes, discharge to a surface water, or damage private property. If bypass pumping is required, MCSD will contact an on-call contractor, as listed in Table 4-3.

Optionally, if bypass pumping is not feasible, the maintenance staff will block the upstream manhole and use the combination/vactor truck to vacuum sewage out of it while the cause of the spill is corrected.

5-5.2 Lift Station Corrections

In the event of a pump failure, the maintenance staff will manually switch the lift station to operate with the backup pump. MCSD has a standby pump and motor for each of its lift stations at the Maintenance Yard.

If one pump at the station can be operated, the maintenance staff will address the pump failure as follows:

- If there is an obstruction in the pump that can be removed easily, the obstruction will be cleared and the pump will be placed back into service.

- If the failure is due to a closed check valve, the check valve setting will be adjusted.
- If the failure is due to a broken check valve or isolation valve, the broken valve will be replaced. The maintenance staff will determine if the valve can be salvaged. If not, a new valve will be ordered to replace the broken valve.
- If the failure is due to severe ragging or if the failure is due to a broken pump, the maintenance staff will request an additional crew to transport the standby pump from the Maintenance Yard. The standby pump will be placed into service by a contractor, as the ragging is cleared or the pump is fixed. The District Engineer will determine if the removed pump can be salvaged. If not, a new pump will be ordered to replace the broken pump.

5-5.3 Electrical Failure Corrections

Southern California Edison (SCE) will be contacted to return power service in the event of a failure at a lift station is due to a power outage. Westminster and Hammon Lift Stations have permanent generators. Willow Lift Station has overflow protection (i.e. overflow pipe). If the needed, MCSD maintenance staff will transport the trailer-mounted standby generator to the Brookhurst Lift Station which does not have a permanent generator nor overflow protection.

If upon arrival to either of the two lift stations where a generator is available, the maintenance staff finds that the automatic transfer switch has failed to connect to the generator, the generator will be set as the main power source.

If the spill is due to an electrical failure at the lift station, a contract electrician will be contacted. In the event that there is a failure with the motor, the maintenance staff will place the standby motor into service and determine if the motor can be salvaged. If not, a new motor will be ordered.

5-5.4 Bypass Pumping at Lift Stations

MCSD owns a small bypass pump that can be used at Brookhurst Lift Station under any of the following circumstances:

- Rising sewage levels in the wet well are greater than the pump start setting
- Failure of both pumps and/or motors leave the lift station inoperable
- No power is available

The suction end of the bypass pump will be placed into the bottom of the wet well. The discharge hose will be connected to one of the adjacent manholes downstream of the lift station.

If bypass pumping is not feasible or the existing forcemain(s) are not operable, the maintenance staff will use the MCSD's combination/vactor truck to vacuum the wastewater from the wet well as the lift station failure is being fixed. Wastewater will decanted back into the system at a downstream manhole or disposed of at an OCSD treatment facility. Neighboring agencies and/or contractors will be contacted if additional combination/vactor trucks are needed.

5-6 Cleanup Procedures

Once the cause of the spill has been corrected and the spill contained, the maintenance staff will clean up all sewage. All spill and wash water will be vacuumed and decanted back to the sewer system at a downstream manhole, preferably at a deep manhole with a large diameter pipe downstream. The flow through the discharge

hose will be controlled using the drain valve handle so as not to surcharge the sewer system. Solids are disposed of at the OCSD treatment plant in Fountain Valley.

5-6.1 Public Right-of- Ways

Initially, all sewage will be vacuumed from the gutter and street. Any remaining solids and semisolids within the public right-of-way will be swept, raked, and picked-up. The impacted area will then be washed down with potable water until all evidence of sewage is removed.

5-6.2 Drainage Conveyance System

Once the spill volume has been vacuumed out of drainage conveyance system, it will be cleaned. The solids will be removed, and the drainage conveyance system will be washed down with potable water.

5-6.3 OCFCD Facilities/Surface Waters

If the spill reaches a OCFCD facility/surface water, MCSD will coordinate the cleanup efforts with OCFCD and assist in any way possible. OCFCD maintenance staff will provide assistance with most spills. For larger spills and upon authorization of the Water Quality Ordinance Implementation Agreement by the City of Westminster, OCFCD has three (3) on-call contractors that can assist with clean up services.

5-6.4 Private Property

If there is damage to private property due to a spill originating from a MCSD sewer, the maintenance staff will perform cleanup as needed such as the following activities:

- Initial clean up, including wiping and cleaning furniture
- Collect solid waste material
- Remove standing fluid from both indoor and outdoor areas
- Take photographs and video footage of the damaged and undamaged areas
- Inform the property owner of their right to hire a professional sewer cleanup service, which will be reimbursed by MCSD
- Make arrangements to place the residents in a nearby hotel, as necessary

If the spill originated from a private lateral or private sewer system, MCSD is not responsible for the cleanup but will assist to the extent deemed feasible.

SECTION 6
MONITORING AND REPORTING PROCEDURES

6-1 State Water Resources Control Board (SWRCB) Requirements

Order WQ 2022-0103-DWQ states:

"The Spill Emergency Response Plan must include procedures to comply with the notification, monitoring, and reporting requirements of this General Order, State law and regulations, and applicable Regional Water Board Orders."

All notification, monitoring, reporting and record keeping requirements are detailed in Attachment E1 of the Order WQ 2022-0103-DWQ.

6-2 Spill Specific Monitoring Procedures

Monitoring requirements are summarized in Attachment E1 of Order WQ 2022-0103-DWQ. The monitoring and reporting requirements are summarized in Appendix B-6.

MCSD will monitor the progression of the spill from the time the maintenance staff arrives at the spill location to the time that the spill is fully contained and cleaned up. Without impeding the containment, cleanup, and/or correction of the spill cause, the maintenance staff will monitor the response procedures with photography, video recordings, and notes.

6-2.1 Global Positioning System Coordinates

For all spill categories, the global positioning system (GPS) coordinates will be determined for:

- The system location where the spill originated. For multiple appearance points of a single spill event, the points closest to the spill origin.
- Representing the full spread and reach of the spill, if available

The latitude and longitude will be recorded from navigation equipment, cell phones, or other technology. The spill coordinates are further verified with a desktop analysis using Geographic Information Systems (GIS), Google Earth, or other computer based mapping programs.

6-2.2 Photography

The spill response will be documented with photographs and video recordings of the following:

- Location of the spill and/or spill origin
- Extent of spill spread and spill boundaries
- Drainage conveyance system entry and exit locations
- The location(s) of discharge into surface waters, as applicable
- The location(s) of clean up
- Waterbody bank erosion
- Floating matter
- Water surface sheen (potentially from oil and grease)
- Discoloration of receiving water

- Impact to the receiving water
- Post-cleanup site conditions

6-2.3 Spill Start Time

The time that the spill was reported will be recorded on the Spill Initial Receipt Form, included in Appendix B-2 upon initial notification of a spill. If the initial start time is unknown, the time the spill is initially reported will be used as the spill start time. If the spill volume is not consistent with the recorded spill start time, the person who initially reported the spill and/or other residents will be interviewed to get a better understanding of when the spill actually began.

6-2.4 Spill Volume Estimation

Spill volumes will be calculated by one of the methodologies that are documented in the *Sewer Spill Estimation Guide*, included in Appendix C-1. The guidebook was developed by the Orange County Area Waste Discharge Requirements Steering Committee to address the SWRCB spill reporting requirements.

Although the guidebook discusses many volume estimation methods, a few are commonly used by MCSD. For estimating the volume of small spills, typically the Visual Method, Pictorial Reference Method or Measured Volume Method is implemented. For larger spills, the Gutter Flow Method might be implemented. And if the spill is isolated to the pick or vent holes in the manhole cover, the Pick and Vent Holes Method will be used.

Visual or Eyeball Method

The Visual Method is typically used for small spills (under 200 gallons) on hard surfaces. Maintenance staff must imagine the amount of water that would spill from a bucket or barrel and estimate the volume.

Pictorial Reference Method

The Pictorial Reference Method involves the use of either the San Diego Manhole Overflow Rate Chart or the CWEA Southern Section Collection Systems Committee (SSCSC) Manhole Overflow Gauge Chart. Maintenance staff will select the picture that most accurately represents the spill being estimated. The gpm associated with the picture multiplied by the spill duration time will determine the spill volume.

Measured Volume Method

The Measured Volume Method requires maintenance staff to measure the shape, dimensions, and depth of the contained spill. The dimensions are used to calculate the area of the spill and the depth is used to calculate the volume. For irregular spill shapes, the spill area will be broken into multiple simple geometric shapes that can be combined to represent the total spill area. Various spill depths will be measured to get an average depth of the spill.

When the spill is a wet spot on the ground, the depth of the spill will be estimated to be 1/32” for asphalt and 1/64” for concrete.

Gutter Flow Method

The Gutter Flow Method can be used for estimating spill volumes in open channels such as ditches, curb and gutter, etc. The cross sectional area and the velocity of the flow in the channel is needed to use this method.

The cross sectional area is calculated as follows:

Curb and Gutter with V-Shape

Cross Sectional Area (ft^2) = (1/2) x Depth x Width

Rectangular Channels

Cross Sectional Area (ft^2) = Depth (ft) x Width (ft)

The velocity in the channel can be measured by dropping a small floating object (leaf, small piece of wood or paper, etc.) into the flow and timing how long it takes to travel a measured distance. The velocity is calculated as follows:

Spill Velocity (ft/s) = Premeasured Travel Distance (ft) ÷ Recorded Travel Time (seconds)

The volume is measured as:

Volume (ft^3) = Spill Time (seconds) x Cross Sectional Area (ft^2) x Spill Velocity (ft/s)

Volume (gal) = Volume (ft^3) x 7.4805 (gal/ ft^3)

The flowrate and volume will be calculated whenever the spill flowrate visually changes. Additional depths, widths, and velocities will be measured whenever there is a change in flowrate. The time the flowrate changed, which is necessary to calculate the corresponding spill volumes, will be identified. The total flow volume will be calculated as the sum of the individual volumes.

Table 6-1
Pick/Vent Hole Flowrate Estimation Chart

	Hole Diameter (in)	Water Height (in)	Flowrate (gpm)
Vent Hole (Circular)	0.50	0.063	0.23
	0.50	0.125	0.33
	0.50	0.250	0.47
	0.50	0.500	0.66
	0.50	0.750	0.81
	0.50	1.000	0.94
	0.75	0.063	0.51
	0.75	0.125	0.72
	0.75	0.250	1.02
	0.75	0.500	1.44
	0.75	0.750	1.77
	0.75	1.000	2.04
	1.00	0.063	0.88
	1.00	0.125	1.25
	1.00	0.250	1.77
	1.00	0.500	2.50
	1.00	0.750	3.06
	1.00	1.000	3.54
Pick Hole (Semi Circle)	1.00	0.063	0.44
	1.00	0.125	0.63
	1.00	0.250	0.89
	1.00	0.500	1.25
	1.00	0.750	1.53
	1.00	1.000	1.77
	1.00	1.500	2.17
	1.00	2.000	2.51

Pick and Vent Holes Method

The Pick and Vent Holes Method will be used if spill is isolated to the pick and vent holes in the manhole cover. The diameter of the pick/vent holes and the height of the sewage plume existing the holes will be measured. The flowrate through each pick/vent hole will be estimated using Table 6-1. The total spill volume will be calculated as follows:

Volume (gal) = Flowrate (gpm) x Number of Holes x Spill Time (min)

The flowrate and volume calculations will be estimated whenever the plume height visually changes. The new plume height will be measured and the time the plume changed will be recorded to calculate the corresponding spill volumes. The total flow volume will be the sum of the individual volume calculations.

Field Inspection Forms

Field Inspection forms for the Pictorial Reference Method, Measured Volume Method, the Gutter Flow Method, and the Pick and Vent Hole Method are included in Appendix C-2, which should always be available on the response vehicles. Forms will be replenished after each spill event.

6-2.5 Estimated Spill Travel Time

Spill travel time from the point of entry into the drainage conveyance system to the point of discharge into a receiving water will need to be estimated if a spill does enter the drainage conveyance system and reaches a surface/receiving water. The spill travel time can be calculated by using actual times recorded by staff as to when the spill entered the drainage conveyance system and when spill entered the receiving water.

If the spill is continuously flowing and the time of entry is unknown, the velocity of the flow will be estimated. This will be done by floating an object (ping pong ball, leaf, small piece of wood or paper, etc.) in the spill flow for a known distance and recording the time of travel. The velocity is calculated as follows:

Spill Velocity (ft/s) = Premeasured Travel Distance (ft) ÷ Recorded Travel Time (seconds)

The distance from the point of entry to the drainage conveyance system to the point of entry to the receiving water will be estimated by using available GIS mapping data. The total time of travel will be calculated as follows:

Recorded Travel Time (seconds) = Travel Distance (ft) ÷ Spill Velocity (ft/s)

MCSD will contact OCFCD to help with estimating the spill travel time for large spills that reached their facilities. The spill velocity will depend on the size of the spill, the geometry and material of the drainage conveyance system or open channel, and existing flows within the facilities.

6-2.6 Receiving Water – Water Quality Sampling and Analysis

For spills estimated at 50,000 gallons or greater and discharged into a surface water, the following water quality sampling must be conducted no later than 18 hours after the potential discharge to a surface water is known. The sampling requirements are described below and summarized in Appendix B-7.

Definitions

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

A **receiving water** is a water of the State that receives a discharge of waste.

A **surface water** is a natural water body.

Receiving Water Sampling Locations

Receiving water samples will be collected at the following locations:

- DCS-001: A point in a drainage conveyance system (DCS) before the flow discharges into a receiving water. This is upstream of RSW-001.
- RSW-001 (Point of Discharge): A point in the receiving water where the sewage initially enters the receiving water.
- RSW-00U (Upstream of Point of Discharge): A point in the receiving water, upstream of the point of sewage discharge, to capture ambient conditions absent of sewage discharge impacts. This is upstream of RSW-001.
- RSW-001D (Downstream of Point of Discharge): A point in the receiving water, downstream of the point of sewage discharge, where the spill material is fully mixed with the receiving water.

There are two exceptions to the water sampling requirements: If the receiving water has no flow during the duration of the spill, MCSD can report "No Sampling Due to No Flow". If there are access restrictions or unsafe conditions that prevents compliance, MCSD can provide documentation of the restrictions or safety hazards.

Receiving Water Sampling Frequency

At minimum, water samples will be collected at each location, once a day, for each day of the duration of the spill.

Receiving Water Sample Analysis

At minimum, the receiving water samples will be analyzed for the following:

- Ammonia, and
- Appropriate bacterial indicator(s) per the applicable Basin Plan water quality objectives, including one or more of the following, unless directed otherwise by the Regional Water Board:
  - Total Coliform Bacteria
  - Fecal Coliform Bacteria
  - E-coli
  - Enterococcus

Receiving Water Quality Analysis Specifications

Water Quality Samples will be conducted in accordance with sufficiently sensitive test methods approved under Title 40, Code of Federal Regulations, Part 136, which are summarized in Appendix B-7.

Per Order WQ 2022-0103-DWQ, all water samples must be performed by a laboratory that has accreditation through the Environmental Laboratory Accreditation Program (ELAP). Sierra Analytical Laboratories (ALS Global) has ELAP accreditation with Certificate No. 2320 and is capable of providing the necessary sampling and testing services that are required by Order WQ 2022-0103-DWQ.

6-3 Reporting Procedures

6-3.1 CIWQS Notification Procedures

All spill reporting is required to be submitted electronically to the online California Integrated Water Quality System (CIWQS) database (**https://ciwqs.waterboards.ca.gov/**) unless specified otherwise in Attachment E1 of Order WQ 2022-0103-DWQ. Electronic reporting may solely be conducted by the Legally Responsible Official (LRO) or Data Submitter(s) previously designated by the LRO.

Legally Responsible Officials (LROs) are responsible for certifying MCSD's spill reports on the CIWQS Sanitary Sewer System Database. Data Submitters may enter spill data on the CIWQS Sanitary Sewer System Database, but do not have the authority to certify the reporting data. MCSD's LROs and Data Submitters are detailed in Section 1-3.

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

6-3.2 Spill Report

The maintenance staff will fill out the Spill Report in the field to document the spill characteristics and MCSD's response. The Spill Report is included in Appendix B-5.

Once the spill response activities have been completed, the Spill Report, field notes, pictures, and video footage will be provided to the Data Submitter and LRO. The information will be used to submit the draft and final certified reports to the SWRCB, via the CIWQS online reporting database. The data requested for each type of spill that must be input for the draft report and the final certified report are shown in Appendix B-6.

6-3.3 Category 1

In the event of a Category 1 Spill, the following reporting will be completed:

1. Draft Spill Report within three (3) business days of knowledge of the spill. Draft Spill Report will be submitted by the Data Submitter to the online CIWQS Sanitary Sewer System Database.
2. Certified Spill Report withing fifteen (15) days of the spill end date. The Certified Spill Report will be submitted by the LRO to the online CIWQS Sanitary Sewer System Database. Then, a final spill event identification number will be issued by CIWQS.

   The Certified Spill Report can be updated and additional information can be added within ninety (90) calendar days of the spill end date by amending the report or by adding an attachment to the report in the online CIWQS Sanitary Sewer System Database. After 90 calendar days, the State Water Board must be contacted at SanitarySewer@waterboards.ca.gov to request to amend a spill report.

In the event of a Category 1 Spill in which 50,000 gallons or greater is discharged to a surface water, the following reporting will also be completed:

1. A Spill Technical Report will be submitted withing forty five (45) calendar days of the spill end date. The Spill Technical Report will be submitted by the LRO to the online CIWQS Sanitary Sewer System Database.

The information required to be submitted with the Draft Spill Report, the Certified Spill Report and the Spill Technical Report are summarized in Appendix B-6.

6-3.4 Category 2

In the event of a Category 2 Spill, the following reporting will be completed:

1. Draft Spill Report within three (3) business days of knowledge of the spill. Draft Spill Report will be submitted by the Data Submitter to the online CIWQS Sanitary Sewer System Database.
2. Certified Spill Report within fifteen (15) days of the spill end date. The Certified Spill Report will be submitted by the LRO to the online CIWQS Sanitary Sewer System Database. Then, a final spill event identification number will be issued by CIWQS.

   The Certified Spill Report can be updated and additional information can be added within ninety (90) calendar days of the spill end date by amending the report or by adding an attachment to the report in the online CIWQS Sanitary Sewer System Database. After 90 calendar days, the State Water Board must be contacted at SanitarySewer@waterboards.ca.gov to request to amend a spill report.

The information required to be submitted with the Draft Spill Report and the Certified Spill Report are summarized in Appendix B-6.

6-3.5 Category 3

For Category 3 Spills, the LRO will report and certify all Category 3 spills within 30 calendar days after the end of the month in which the spill occurred to the CIWQS Sanitary Sewer System Database. Then, a spill event identification number for each spill will be issued by CIWQS. The information required to be submitted with the monthly Certified Spill Reports are summarized in Appendix B-6.

The Certified Spill Report can be updated and additional information can be added within ninety (90) calendar days of the spill end date by amending the report or by adding an attachment to the report in the online CIWQS Sanitary Sewer System Database. After 90 calendar days, the State Water Board must be contacted at SanitarySewer@waterboards.ca.gov to request to amend a spill report.

6-3.6 Category 4

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

Records of Category 4 spills will be maintained similarly to other spill categories (per Section 4.4 of Attachment E1 of the Order). MCSD will also annually upload and certify a report (in an appropriate digital format) of all recordkeeping of 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 occurred. The information required to be reported annually is summarized in Appendix B-6.

6-3.7 Lateral Spills

MCSD generally does not own any sewer laterals, except for the laterals associated with MCSD owned buildings.

For MCSD owned and/or operated laterals that are caused by a failure or blockage in the lateral and that do not discharge to a surface water, the LRO will report and certify the estimated total spill volume exiting the sanitary sewer system, and the total number of all owned and/or operated lateral spills to the online CIWQS Sanitary Sewer System Database, within 30 calendar days after the end of the month in which the spills occurred.

Records of lateral spills will be maintained similarly to other spill categories (per Section 4.4 of Attachment E1 of the Order). MCSD will also annually upload and certify a report (in an appropriate digital format) of all recordkeeping of all owned and/or operated lateral spills to the online CIWQS Sanitary Sewer System Database by February 1st after the end of the calendar year in which the spills occurred. The information required to be reported annually is summarized in Appendix B-6.

It is optional to report private system and private lateral spills.

6-3.8 No Spills

If there are no spills within a calendar month, the LRO will submit a “No Spill” certification statement electronically on the CIWQS Sanitary Sewer System Database, within 30 calendar days after the end of each month.

If there are no spills from MCSD’s sewer system during a calendar month and private lateral spills were voluntarily reported, a “No Spill certification statement will still be submitted.

6-4 California Office of Emergency Services

As discussed in Section 4-2.2, the California Office of Emergency Services (OES) will be initially contacted if a spill greater than or equal to 1,000 gallons has reached surface waters, a drainage channel tributary to a surface water, and/or a municipal separate storm sewer system (MS4). The Responsible Staff will contact OES within 2 hours of the spill verification.

As indicated by California Code of Regulations (CCR), Title 19, Chapter 4, Article 2, Section 2705, MCSD is required to send an Emergency Release Follow–Up Notice Reporting Form to Chemical Emergency Planning and Response Commission (CEPRC) whenever OES is notified of a spill. The sample form is included in Appendix E.

Chemical Emergency Planning and Response Commission (CEPRC)

3650 Schriever Avenue

Mather, CA 95655

The CCR includes a form, indicating the information required from the Responsible Staff. At minimum, the report will include the following:

1. Business Name
2. Emergency Contact and Phone number
3. Date and time of Incident
4. OES Control No.
5. Incident Address
6. Spill Type
7. Quantity of Spill
8. Contamination Areas
9. Time of Release
10. Actions taken to stop and contain the spill
11. Health effects
12. Comments
13. Certification

SECTION 7
TRAINING AND EVALUAUTION

7-1 Distribution

The Spill Emergency Response Plan (SERP) will be distributed to:

1. Legally Responsible Official(s)
2. Data Submitter(s)
3. Lead Sewer Maintenance Worker
4. Maintenance Staff for Response Vehicles

The plan will be made available to the public for review at MCSD's Headquarters and on the MCSD website. Copies of the plan will be made available to the public when requested in writing, at the cost of producing the document.

7-2 Training

The maintenance staff receives training through the California Water Environment Association's (CWEA) Training Program, which is the current industry standard for training and certifying sewer collection system maintenance staff.

In addition, annual spill emergency response training occurs in the office and in the field. The Director of Operations & Safety, the District Engineer, and/or the Lead Sewer Maintenance Worker are responsible for scheduling and documenting training sessions for MCSD staff.

7-2.1 Office Training

Initial Spill Receipt training is conducted by the Director of Operations & Safety, the District Engineer, and/or the Lead Sewer Maintenance Worker. Training includes review of the correct procedures for receiving calls, recording the information on the Sanitary Sewer Overflow Initial Receipt Form (Appendix B-2), and notification of the maintenance staff.

Office training of maintenance staff is conducted by the District Engineer, Director of Operations & Safety and/or Lead Sewer Maintenance Worker. This involves complete review of the following documents and/or procedures:

1. The SERP plan document review
2. The SERP flowchart (Appendix B-1)
3. Regulatory agency notification and reporting requirements (Appendix B-3)
4. Filling out the Spill Report (Appendix B-5)
5. Sewer and Storm Drain Maps (Appendix A)
6. Spill volume calculation methodologies (Appendix C-1 and C-2)
7. Post-Spill Response evaluation procedures

7-2.2 Field Training

Field training of the maintenance staff **is** conducted by the Director of Operations & Safety, the District Engineer, and/or the Lead Sewer Maintenance Worker. The following training topics are reviewed in the field once per year:

1. Safety Procedures
2. Operation of MCSD's combination/vactor truck
3. Field spill volume estimation, with training simulations
4. Review of all available equipment on the combination/vactor truck
5. Review of all spare parts available at the MCSD yard
6. Containment and clean up procedures
7. Gravity sewer correction procedures
8. Sewer lift station and forcemain correction procedures
9. Bypass pumping procedures

Any new staff that has not participated in the annual training will be separately trained by the Director of Operations & Safety, the District Engineer, and/or the Lead Sewer Maintenance Worker during his/her first week of employment.

7-2.3 Other Training Opportunities

MCSD will participate in other training opportunities made available from nearby agencies including but not limited to:

- Orange County Sanitation District (OCSD)
- SoCal Waste Discharge Requirements Group
- California Water Environment Association (CWEA)
- Water Emergency Response Organization of Orange County (WEROC)

7-2.4 Training Logs

The District Engineer or Lead Sewer Maintenance Worker keeps records of all SERP related training. Sign-in sheets include the training topic, date, time, and list of all attendees. All sign-in sheets, agendas, handout material, quizzes, etc will be maintained electronically.

7-3 Spill Emergency Response Plan Evaluation

The main goal of the spill emergency response plan is to ensure prompt response to a spill and to minimize the spill volumes. MCSD conducts routine evaluations of its procedures to ensure that the response is effective.

7-3.1 Key Performance Indicators

Key performance indictors (KPI) will be reviewed by MCSD to ensure that the current spill response procedures are efficient. The KPIs include:

- Number of spills
- % of recovered volume versus total spill volume

- Verification that the notification procedures were followed for each spill event
- Verification that the response procedures were followed for each spill event
- Verification that reporting to regulatory agencies were conducted correctly for each spill event
- Verification that training was conducted as scheduled

7-3.2 Spill Event Response Evaluation

Order 2022-0103-DWQ requires that the spill response procedures be reviewed following each spill event. MCSD will conduct an evaluation of the effectiveness of the response procedures per the Spill Response Evaluation Form, which is included in Appendix F-1.

7-3.3 Annual SERP Document Evaluation

Order WQ 2022-0103-DWQ requires that the effectiveness of the SERP be reviewed annually, at minimum. The SERP document will be evaluated per the SERP Document Annual Evaluation Form, which is included in Appendix F-2.

7-3.4 Change Log

MCSD performs spill event response evaluations and annual SERP evaluations. Adjustments to the SERP procedures and report will be tracked in the Change Log, included at the beginning of the SERP.

APPENDIX A-1

Sewers, Drainage Conveyance Systems, and Surface Waters Map

APPENDIX B-1

Spill Emergency Response Flowchart

Appendix B-1
Midway City Sanitary District
Spill Emergency Response Flowchart

Report of a Spill
Routed to Lead Sewer Maintenance Worker during business hours and standby maintenance staff after hours

Crew(s) or Standby Staff
will be dispatched and arrive at spill location within 1 hour

Initial Assessment Completed & Additional Assistance/ Workpower is Requested

Hazardous Materials
Hazardous materials suspected?

No

Yes

MCSD Spill
Does the spill originate from a MCSD owned sewer facility?

No

Yes

Notify Property Owner & OCHCA or Agency of Spill Origin
Appendix B-4 lists contact information

The spill is the responsibility of the property owner or facility owner of spill origin

Contain the spill from entering public right-of-way
Standby and offer assistance

Contact Orange County Fire Department

Spill Containment, Correction, and Cleanup

Spill Notification and Reporting

Containment in Public Right-of-Ways
- Prevent spill from entering drainage conveyance system
- Set up barriers
- Divert traffic
- Set up sandbags, rubber mats, and/or absorbent material

Containment in Drainage Conveyance Systems
- Contact OCFCD
- Plug catch basin or drainage conveyance system using sand bags and/or absorbent material

Containment in Surface Waters
- Contact OCFCD for facility access
- Coordinate containment and cleanup with OCFCD
- For spills equal to or greater than 50,000 gallons, notify laboratory to collect water samples (Appendix B-7)

Correct Spill Cause (Blocked Gravity Sewer)
- Locate downstream manhole with limited or no flow
- Use high pressure jetting in upstream direction to clear blockage
- Remove the blockage material
- Call contractor to set up bypass pumping, as needed
- CCTV inspect sewer within 3 days

Correct Spill Cause (Structural Defect in Gravity Sewer)
- Call contractor for bypass pumping
- Call contractor to repair structural defect
- CCTV inspect within 3 days of repair

Correct Spill Cause (Lift Station)
- Clear obstructions from or replace pumps as needed
- Adjust or replace valves as needed
- Call electrician as needed

Cleanup in Public Right-of-Ways and Drainage Conveyance System
- Vacuum liquid and solids from the gutters, streets, and drainage conveyance systems
- Washdown with potable water
- Vacuum wash water
- Dispose of spill and wash water
- Document cleanup

Cleanup in Surface Waters
Coordinate with OCFCD for containment and cleanup

Post Spill Procedures
- Clean and restock supplies
- Conduct post spill assessment
- Modify response procedures

Spill Volume Estimate
See Appendices C-1 and C-2

Spill Final Destination
Identify final destination of spill

Notifications
- OCHCA for all spills
- OCFCD for spills entering drainage conveyance system
- OES for spills equal to or greater than 1,000 gallons that reaches Waters of the State

Spill Report
- Begin filling out the Spill Report in the field (Appendix B-5)
- Get GPS Coordinates
- Take photos & measurements
- Estimate volume of total spill, entering drainage conveyance system, and recovered

Report to CIWQS
See Appendix B-3 for Reporting Requirements

OCHCA:	(714) 433-6000 (Bus.)
	(714) 433-6419 (Office)
OCFCD:	(714) 955-0600 (Bus.)
	(877) 897-7455 (24 hr)
OES:	(800) 852-7550 (24 hr)
Control1:	(714) 628-7008 (24 hr)

APPENDIX B-2

Spill Initial Receipt Form

Appendix B-2
Spill Initial Receipt Form

Date	
Time that the Spill was Reported	
Time Spill Started (If known)	
Caller's Name	
Caller's Address	
Caller's Telephone No.	
Location of Spill	
Has the spill reached a catch basin or drainage conveyance system or is in close proximity?	
Description of Problem	
Additional Information	
Time Maintenance Staff Called	
Name of Maintenance Staff Called	

APPENDIX B-3

Spill Notification and Reporting Requirements

Appendix B-3
Spill Notification and Reporting Requirements

Deadline	Category 1 Spill	Category 2 Spill	Category 3 Spill	Category 4 Spill	Lateral Spill	No Spill
As soon as practical within 2 hours after: - knowledge of the spill; and - notification can be provided without substantially impeding cleanup or other emergency measures	Notify OCHCA and OCFCD. For spills 1,000 gallons or greater, discharging or threatening to discharge to surface waters (does not include groundwater), notify OES and obtain a notification control number.	Notify OCHCA Notify OCFCD if spill enters drainage conveyance system. For spills 1,000 gallons or greater, discharging or threatening to discharge to Waters of the State (includes groundwater), notify OES and obtain a notification control number.	Notify OCHCA Notify OCFCD if spill enters drainage conveyance system.	Notify OCHCA Notify OCFCD if spill enters drainage conveyance system.	Notify OCHCA Notify OCFCD if spill enters drainage conveyance system.	
Within 18 hours of knowledge of spill	Conduct water quality sampling of the receiving water within 18 hours of initial knowledge of spill of 50,000 gallons or greater to surface waters.					
3 business days after knowledge of spill	Submit Draft Spill Report to the online CIWQS Sanitary Sewer System Database	Submit Draft Spill Report to the online CIWQS Sanitary Sewer System Database				
15 calendar days after the spill end date	LRO must submit Certified Spill Report to the online CIWQS Sanitary Sewer System Database	LRO must submit Certified Spill Report to the online CIWQS Sanitary Sewer System Database				
Within 30 calendar days after the end of the month in which the spill occurred			LRO must submit monthly Certified Spill Report to the online CIWQS Sanitary Sewer System Database	LRO must report and certify 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	LRO must report and certify the estimated total spill volume exiting the sanitary sewer system and the total number of all owned and/or operated lateral spills into the online CIWQS Sanitary Sewer System Database. It is optional to report private system and private lateral spills.	LRO must submit a “No Spill” certification statement to the online CIWQS Sanitary Sewer System Database
45 calendar days after the spill end date	LRO must submit Spill Technical Report to the online CIWQS Sanitary Sewer System Database for a spill in which 50,000 gallons or greater discharged to surface waters					
90 calendar days after the spill end date	LRO must submit Amended Spill Report to the online CIWQS Sanitary Sewer System Database	LRO must submit Amended Spill Report to the online CIWQS Sanitary Sewer System Database	LRO must submit Amended Spill Report to the online CIWQS Sanitary Sewer System Database			
By February 1st after the end of the calendar year in which the spill occurs				Upload and certify a report, in an acceptable digital format, of all Category 4 spills to the online CIWQS Sanitary Sewer System Database	Upload and certify a report, in an acceptable digital format, of all Category owned and/or operated lateral spills to the online CIWQS Sanitary Sewer System Database. It is optional to report private system and private lateral spills.	

APPENDIX B-4

Resource Phone List

Appendix B-4
Resource Phone List

Contact	Business Number	After Hours
Midway City Sanitation District		
MCSD	(714) 310-9004 (714) 893-3553	(714) 310-9004 (Primary 1) (714) 310-8654 (Secondary 2)
Sewer Emergency Mobile Phones		(714) 310-9004 (Primary 1) (714) 310-8654 (Secondary 2)
General Manager (Robert Housley)	(714) 893-3553	
Lead Sewer Maintenance Worker (Randy Griffith)	(714) 325-3606	(714) 325-3606 (mobile) (714) 373-4813 (home)
Director of Operations & Safety (Nick Castro)	(714) 310-8654	(714) 486-3730 (home)
District Engineer (Milo Ebrahimi)	(714) 893-3553	(657) 368-9992 (mobile)
City of Westminster		
City of Westminster	(714) 548-3686 (714) 548-3687	9-1-1
NPDES Inspector (Justin Watts)	(714) 548-3472	(714) 231-3965 (949) 858-3348 (home)
Contact	**Business Number**	**After Hours**
Emergency Contacts		
Orange County Fire Authority	(714) 573-6522	9-1-1
City of Westminster Police Department	(714) 548-3212	9-1-1
Watch Commander	(714) 548-3767	9-1-1
Code Enforcement	(714) 548-3478	9-1-1
Caltrans	(949) 936-3600	
California Highway Patrol (CHP)	(714) 567-6000	
Orange County Control 1	(714) 628-7008	(714) 628-7008
Southern California Edison	(800) 611-1911	
Notification Agencies		
State of California, Office of Emergency Services	(800) 852-7550	
Orange County Health Care Agency	(714) 433-6000	(714) 628-7008 (Control1)
Office Staff	(714) 433-6419	
Private Property	(714) 433-6140 (714) 433-6000	(714) 936-4697 (mobile)
Public Right-of-way	(714) 433-6015	
Orange County Public Works (OCPW)	(877) 897-7455	(877) 897-7455
Orange County Flood Control District (OCFCD)	(714) 955-0600	(714) 628-7008 (Control1)
24-Hour Hotline	(877) 897-7455	(877) 897-7455
Water Pollution Service Request	https://myoceservices.ocgov.com/ServiceRequest	
Regional Water Quality Control Board - Santa Ana	(951) 782-4130	
Nearby Sewer Agencies		
Orange County Sanitation District	(714) 962-2411	
Garden Grove Sanitary District	(714) 741-5395	(714) 741-5704
City of Fountain Valley	(714) 593-4600	(714) 593-4484
City of Huntington Beach	(714) 960-8861	(714) 960-8830 (P.D.)
City of Seal Beach	(562) 431-2527 (ext 17)	(562) 799-4100
On-Call Contractors		
Charles King Company	(562) 426-2974	
Empire Pipe Cleaning and Equipment	(714) 639-8352	
Performance Pipe	(714) 536-7386	
Paulus Engineering	(714) 632-3975	
Laboratory and Environmental Consultant		

APPENDIX B-5

Spill Report

APPENDIX B-5
MIDWAY CIY SANITARY DISTRICT
SPILL REPORT

General Spill Information

Date of Incident: _____ **Call Time**: _____ **Spill Start**: _____ **Arrival**: _____

Location of Incident: _____

GPS Coordinates: **Latitude** _____ **Longitude**: _____

Weather Conditions during Spill Event:_____

Sewer Component: ☐ Manhole ☐ Clean Out ☐ Interceptor ☐ Other_____

Ownership: ☐ MCSD ☐ Private ☐ Other _____ **Hot Spot?** ☐ Yes ☐ No

Reported by	**Property Owner/Agent/Manager/Spill Witness**
Name: _____	Name: _____
Address: _____	Address: _____
Phone: _____	Phone: _____

Signature: _____ **Date:** _____

Spill Categories and Notifications

Determine what type of spill it is based on the following descriptions and then make appropriate notifications:

☐ **Category 1 Spill (Discharge from or caused by a MCSD Sewer)** - *A spill of **any** volume of sewage that results in a discharge to a surface water (flow or no flow) or a drainage conveyance system that discharges to a surface water, when the sewage is not fully captured and returned to the sanitary sewer system or disposed of properly.* Call OCHCA, OCFCD, and OES **within 2 hours of becoming aware of the spill**. Make sure you obtain a control number from OES. Also, notify a supervisor as soon as possible.

☐ **Category 2 Spill (Discharge from or caused by a MCSD Sewer)** - *A spill of 1,000 gallons or greater that does not discharge to a surface water (spills that enter the drainage conveyance system must be fully captured and recovered).* Call OCHCA as soon as possible. Call OCFCD as soon as possible if spill enters strop drain. If spill reaches groundwater, Call OES and obtain a control number.

☐ **Category 3 Spill (Discharge from or caused by a MCSD Sewer) -** *A spill equal to or greater than 50 gallons and less than 1,000 gallons that does not discharge to a surface water (spills that enter the drainage conveyance system must be fully captured and recovered).* Call OCHCA as soon as possible. Call OCFCD as soon as possible if spill enters a drainage conveyance system.

☐ **Category 4 Spill (Discharge from or caused by a MCSD Sewer) -** *A spill of less than 50 gallons that does not discharge to a surface water (spills that enter the drainage conveyance system must be fully captured and recovered).* Call OCHCA as soon as possible. Call OCFCD as soon as possible if spill enters a drainage conveyance system.

☐ **MCSD Lateral Spill -** *A MCSD lateral spill is a spill of any volume that originates in a MCSD owned lateral associated with MCSD owned buildings/facilities.* Call OCHCA as soon as possible.

☐ **Private Spill-** *A private spill is a spill of any volume that originates in a private sewer system or private lateral. Private spills are the responsibility of the property owner.* Call OCHCA as soon as possible.

OES (Office of Emergency Services)

(800) 852-7550 24 hours

Contacted Within 2 Hours? ☐ **Yes** ☐ **No** **Date/Time Called**: _____ am/pm

Control # _____ **Spoke to:** _____

OCHCA (Orange County Health Care Agency)

Normal Hours

(714) 433-6000 (Business Hours) **Time Called:** _____ am/pm
(714) 433-6419 (Office Staff)
After Hours **Spoke To:** _____
Control 1: (714) 628-7008 (will contact OCHCA on call staff)

OCFCD (Orange County Flood Control District)

Normal Hours
(714) 955-0600 **Time Called:** _____ am/pm
(877) 897-7455 (24 hour hotline)
After Hours **Spoke To:** _____
Control 1: (714) 628-7008 (specify water pollution incident notification)

Name(s) of Employee(s) Responding: (Check all that Apply)

☐ Randy Griffith ☐ Nick Castro

Other_____

Other_____

Other_____

Other_____

Other_____

Other_____

Cause of Spill: (Check all that Apply)

☐ Grease ☐ Roots ☐ Debris ☐ Construction ☐ Vandalism ☐ Manhole Condition/Failure

☐ Pipeline Condition/Failure ☐ Lift Station Failure ☐ Power Failure ☐ Unknown

☐ Other_____

Action Taken: (Check all that Apply)

☐ Contained w/ sandbags, absorbent materials, etc. ☐ Called coworkers for assistance

☐ Rubber mats placed over drainage conveyance system inlets ☐ Determined blockage location

☐ Cleared blockage ☐ Photos taken of spill, containment, and cleanup ☐ Notified proper agencies

☐ Notified contractors ☐ Flow returned to normal ☐ Calculated spill volume

☐ Recovered spill from drainage conveyance system ☐ Washed & vacuumed street ☐ CCTV Inspection

☐ Talked to Residents/Witnesses ☐ Returned waste & wash water back to sewer ☐ Other _____

_____

Photos Taken: (Check all that Apply)

☐ Location of spill and/or spill origin ☐ Extent of spill spread and spill boundaries

☐ Drainage conveyance system entry and exit locations ☐ Location(s) of discharge into surface waters

☐ Location(s) of clean up ☐ Post clean-up site conditions

☐ Other _____

☐ Other _____

☐ Other _____

Photos receiving waters:

☐ Waterbody bank erosion ☐ Floating matter ☐ Water surface sheen

☐ Discoloration of receiving water ☐ Impact to the receiving water ☐ Post clean-up site conditions

☐ Other _____

☐ Other _____

☐ Other _____

Other Information

Blockage Cleared Time: _____ am/pm **Blockage Cleared Footage:** _____ ft

Spill Volume: _____gal **Spill Volume that Entered Drainage Conveyance System:** _____gal

Spill Volume Recovered from Drainage Conveyance System: _____ gal

Spill Volume Lost: _____ gal

Spill Volume Calculation Methodology: _____

Location of Drainage Conveyance System where Spill Entered: _____

Describe Drainage Conveyance System Transporting Spill:_____

Wash Water Volume: _____ gal

Wash Water Lost: _____ gal **Finish Cleanup Time:** _____ am/pm

Description Discharge Point(s) to Surface Water:_____

_____

_____

Name and Type of Receiving Water:_____

_____

Additional description of spill containment, correction, and cleanup procedures:
(Attach Additional Sheet, if Needed)

_____

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APPENDIX B-6

Monitoring and Reporting Data

by Spill Category

Appendix B-6
Monitoring and Reporting Data by Spill Category Summary

Photographs	SWRCB Spill Category						
	Category 1			Category 2		Category 3	Category 4
	Draft Spill Report	Certified Spill Report	Spill Technical Report (50,000 gallons or more discharged to surface water)	Draft Spill Report	Certified Spill Report	Monthly Certified Report	Annual Certified Report
Location of the spill and/or spill origin	X		X	X		X	X
Extent of spill spread and spill boundaries	X		X	X		X	X
Drainage conveyance system entry and exit locations	X		X	X		X	X
The location(s) of discharge into surface waters	X		X	X			
The location(s) of clean up	X		X	X			
Waterbody bank erosion			X				
Floating matter			X				
Water surface sheen (potentially from oil and grease)			X				
Discoloration of receiving water			X				
Impact to the receiving water			X				
Post clean up site conditions			X				

Report Information	SWRCB Spill Category						
	Category 1			Category 2		Category 3	Category 4
	Draft Spill Report	Certified Spill Report	Spill Technical Report (50,000 gallons or more discharged to surface water)	Draft Spill Report	Certified Spill Report	Monthly Certified Report	Annual Certified Report
Contact information: Name and telephone number of contact person, who will be available to respond to spill-specific questions	X			X		X	X
Spill location name	X			X		X	X
Date and time notified of, or self-discovered, the spill	X			X		X	
Operator arrival time	X			X		X	
Estimated spill start date and time	X			X		X	X
Date and time the California Office of Emergency Services (OES) was notified and the assigned OES control Number.	X			X			
GPS coordinates (latitude and longitude) of where the spill originated. If a single spill event results in multiple appearance points, provide GPS coordinates for appearance point closest to the failure point and describe each additional appearance point	X			X		X	X
Estimated total spill volume exiting the system	X			X		X	X
Description of extent of spill and spill boundaries	X			X		X	
If the spill reached a drainage conveyance system, describe the drainage conveyance system transporting the spill, the estimated spill volume recovered from the drainage conveyance system, and spill volume remaining within the drainage conveyance system.	X			X		X	X
Description of all discharge point(s) to the surface water	X						
Estimated spill volume that discharged to surface waters	X						
Estimated total spill volume recovered	X			X			
Description of the spill event destination, including GPS coordinates of full spread and reach of spill.		X			X	X	
Spill end date and time		X			X	X	

Report Information	SWRCB Spill Category						
	Category 1			Category 2		Category 3	Category 4
	Draft Spill Report	Certified Spill Report	Spill Technical Report (50,000 gallons or more discharged to surface water)	Draft Spill Report	Certified Spill Report	Monthly Certified Report	Annual Certified Report
Description of spill volume estimation calculation: Methodology and assumptions of data relied upon, determining the recovered spill volume; and determining spill start and stop time.		X	X		X	X	X
Spill cause(s)		X	X		X	X	X
System failure location (main, lateral, lift station, etc.)		X			X	X	X
Description of pipe material and age at failure location		X	X		X	X	
Description of the impact of the spill		X	X		X	X	
Was the spill associated with a storm event?		X			X	X	
Description of spill response activities (containment and cleanup)		X			X	X	X
Description of spill corrective action, including steps planned or taken to reduce, eliminate and prevent reoccurrences of the spill and a schedule of major milestones for these steps. Actions can include but not limited to enforcement action against illicit discharges, system modifications, O&M program modifications, and adjustments to the SERP procedures.		X	X		X	X	
Spill response completion date		X			X		
Description of investigation and findings of the cause of the spill		X			X	X	
Reasons for an ongoing investigation of the cause of the spill and anticipated date of completion.		X			X		
Name and type of the receiving water body		X					
Description of the receiving water body: Impact on aquatic life, public closure/restricted access, responsible entity for closing/restricting use of water body, and number of days closed/restricted as a result of spill.		X					
Was spill located within 1,000 feet of a municipal surface water intake?		X			X		

Report Information	SWRCB Spill Category						
	Category 1			Category 2		Category 3	Category 4
	Draft Spill Report	Certified Spill Report	Spill Technical Report (50,000 gallons or more discharged to surface water)	Draft Spill Report	Certified Spill Report	Monthly Certified Report	Annual Certified Report
If water quality samples were collected, identify sample location and parameters for the water quality samples.		X					
Complete and detailed explanation of how and when the spill was discovered.			X				
Diagram showing the spill failure point, appearance point(s), the spill flow path and ultimate destinations.			X				
Copy of original field crew records used to document the spill			X				
Historical maintenance records for the failure location.			X				
Chronological narrative describing actions taken to terminate the spill			X				
Description of how SERP report was implemented to respond to and mitigate the spill			X				
Description of water quality sampling activities conducted			X				
List of pollutants, parameters monitored, sampled, and analyzed			X				
Laboratory results and laboratory report			X				
Location map, illustrating all water sampling points			X				
Other regulatory agency receiving water sample results			X				
Description of short-term and long-term impact(s) to beneficial use of surface water.			X				

APPENDIX B-7

Water Sampling Requirements

Appendix B-7
Water Sampling Requirements

Sampling Location	Sampling Location Description	Sampling Frequency	Sampling Constituents	Sampling Specifications
DCS-001	A point in a drainage conveyance system (DCS) before the drainage conveyance system flow discharges into a receiving water	1 sample per day for duration of spill	1. Ammonia 2. Appropriate bacterial indicator(s) per the applicable Basin Plan water quality objectives, including one or more of the following, unless directed otherwise by the Regional Water Board: - Total Coliform Bacteria - Fecal Coliform Bacteria - E-coli - Enterococcus Collect and analyze additional samples as required by the applicable Regional Water Board Executive Office or designee.	1. Water Quality Samples must be conducted in accordance with sufficiently sensitive test methods approved under Title 40, Code of Federal Regulations, Part 136. 2. Water quality sample analysis must be performed by a laboratory that has accreditation through the Environmental Laboratory Accreditation Program (ELAP)
RSW-001[1] (Point of Discharge)	A point in the receiving water where sewage initially enters the receiving water.	1 sample per day for duration of spill		
RSW-001U[1] (Upstream of Discharge Point)	A point in the receiving water, upstream of the point of sewage discharge, to capture ambient conditions absent of sewage discharge impacts.	1 sample per day for duration of spill		
RSW-001D[1] (Downstream of Discharge Point)	A point in the receiving surface water (RSW), downstream of the point of sewage discharge, where the spill material is fully mixed with the receiving water.	1 sample per day for duration of spill		

[1] *If the receiving water has no flow during the duration of the spill, "No Sampling Due to No Flow" will be reportea*

Title 40, Code of Federal Regulations, Part 136: List of Approved Biological Methods for Wastewater and Sewage Sludge

Bacteria					
Parameter and Units	**Method**	**EPA**	**Standard Methods**	**AOAC, ASTM, USGS**	**Other**
1. Coliform (fecal), number per 100 mL or number per gram dry weight	Most Probable Number (MPN), 5 tube, 3 dilution, or	p. 132,3 1680,11 15 1681 11 20	9221 E–2014		
	Membrane filter (MF) 2 5, single step	p. 124 3	9222 D–2015 29	B–0050–85 4	
2. Coliform (fecal), number per 100 mL	MPN, 5 tube, 3 dilution, or	p. 132 3	9221 E–2014; 9221 F–2014 33		
	Multiple tube/multiple well, or				Colilert-18®.13 18 28
	MF 2 5, single step 5	p. 124 3	9222 D–2015 29		
3. Coliform (total), number per 100 mL	MPN, 5 tube, 3 dilution, or	p. 114 3	9221 B–2014		
	MF 2 5, single step or two step	p. 108 3	9222 B–2015 30	B–0025–85 4	
	MF 2 5, with enrichment	p. 111 3	9222 B–2015 30		
4. *E. coli,* number per 100 mL	MPN 6 8 16 multiple tube, or		9221 B2014/9221 F–2014 12 14 33		
	multiple tube/multiple well, or		9223 B–2016 13	991.15 10	Colilert® 13 18 Colilert-18® 13 17 18
	MF 2 5 6 7 8, two step, or		9222 B–2015/9222 I–2015 31		
	Single step	1603 21			m-ColiBlue24®.19
5. Fecal streptococci, number per 100 mL	MPN, 5 tube, 3 dilution, or	p. 139 3	9230 B–2013		
	MF 2, or	p. 136 3	9230 C–2013 32	B–0055–85 4	
	Plate count	p. 143 3			
6. Enterococci, number per 100 mL	MPN, 5 tube, 3 dilution, or	p. 139 3	9230 B–2013		
	MPN 6 8, multiple tube/multiple well, or		9230 D–2013	D6503–99 9	Enterolert®.13 23
	MF 2 5 6 7 8 single step or	1600 24	9230 C–2013 32		
	Plate count	p. 143 3			
7. *Salmonella,* number per gram dry weight 11	MPN multiple tube	1682 22			

Title 40, Code of Federal Regulations, Part 136: List of Approved Biological Methods for Wastewater and Sewage Sludge

Aquatic Toxicity					
Parameter and Units	**Method**	**EPA**	**Standard Methods**	**AOAC, ASTM, USGS**	**Other**
8. Toxicity, acute, fresh water organisms, LC50, percent effluent	Water flea, Cladoceran, *Ceriodaphnia dubia* acute	2002.0 25			
	Water fleas, Cladocerans, *Daphnia pulex* and *Daphnia magna* acute	2021.0 25			
	Fish, Fathead minnow, *Pimephales promelas,* and Bannerfin shiner, *Cyprinella leedsi,* acute	2000.0 25			
	Fish, Rainbow trout, *Oncorhynchus mykiss,* and brook trout, *Salvelinus fontinalis,* acute	2019.0 25			
9. Toxicity, acute, estuarine and marine organisms of the Atlantic Ocean and Gulf of Mexico, LC50, percent effluent	Mysid, *Mysidopsis bahia,* acute	2007.0 25.			
	Fish, Sheepshead minnow, *Cyprinodon variegatus,* acute	2004.0 25			
	Fish, Silverside, *Menidia beryllina, Menidia menidia,* and *Menidia peninsulae,* acute.	2006.0 25.			

Title 40, Code of Federal Regulations, Part 136: List of Approved Biological Methods for Wastewater and Sewage Sludge

Aquatic Toxicity					
Parameter and Units	**Method**	**EPA**	**Standard Methods**	**AOAC, ASTM, USGS**	**Other**
10. Toxicity, chronic, fresh water organisms, NOEC or IC25, percent effluent	Fish, Fathead minnow, *Pimephales promelas,* larval survival and growth	1000.0 26			
	Fish, Fathead minnow, *Pimephales promelas,* embryo-larval survival and teratogenicity	1001.0 26			
	Water flea, Cladoceran, *Ceriodaphnia dubia,* survival and reproduction	1002.0 26			
	Green alga, *Selenastrum capricornutum,* growth	1003.0 26			
11. Toxicity, chronic, estuarine and marine organisms of the Atlantic Ocean and Gulf of Mexico, NOEC or IC25, percent effluent	Fish, Sheepshead minnow, *Cyprinodon variegatus,* larval survival and growth	1004.0 27.			
	Fish, Sheepshead minnow, *Cyprinodon variegatus,* embryo-larval survival and teratogenicity	1005.0 27			
	Fish, Inland silverside, *Menidia beryllina,* larval survival and growth	1006.0 27			
	Mysid, *Mysidopsis bahia,* survival, growth, and fecundity	1007.0 27			
	Sea urchin, *Arbacia punctulata,* fertilization	1008.0 27			

APPENDIX C-1

Orange County
Sewer Spill
Estimation Guide

SEWER SPILL ESTIMATION GUIDE

Developed by the Orange County Area Waste Discharge Requirements Steering Committee

Sewer Spill Estimation Guide

A Guide to Estimating Sanitary Sewer Overflow (SSO) Volumes

Developed by the Orange County Area
Waste Discharge Requirements Steering Committee
Orange County, CA

February 18, 2014

Acknowledgements

This Sewer Spill Estimation Guide has been compiled through the efforts of members of the Orange County Wastewater Discharge Requirements (WDR) Steering Committee. This committee was originally formed to address the requirements of the original WDR imposed by the California Regional Water Quality Board, Region 8 and later the statewide WDR imposed by the California State Water Resources Control Board. Committee members who assisted in the compilation of this Sewer Spill Estimation Guide are:

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Peggy Echavarria	Executive Assistant	Orange County Sanitation District
Gene Estrada	Environmental Program Manager	City of Orange
Rob Hamers	District Engineer	Costa Mesa Sanitary District
Robert Kreg	(Former) Director of Support Services	South Coast Water District (Retired)

Disclaimer

This Sewer Spill Estimation Guide is freely offered to agencies to assist the user with the estimation process for a sanitary sewer overflow. Methods used for spill estimation and the estimate itself are solely the responsibility of the agency making the estimate. The authors or contributors to this Sewer Spill Estimation Guide do not accept any responsibility for the spill estimation methods used; their accuracy or any spill estimate determined through the use of this guide. Information found in this guide is commonly available on the internet and is also common practice with many cities and sewering agencies throughout Southern California.

No statewide or national standards issued by a regulatory agency exist at this time.

Table of Contents

SSO Volume Estimation

Accurate flow estimation is essential to determine the volume of a Sanitary Sewer Overflow (SSO). An accurate estimate of an SSO is required for reporting to the California Integrated Water Quality System (CIQWS) and to the Orange County Health Care Agency. The estimated volume of an SSO is used to determine the category of the SSO and can also be used in the calculation of penalties or fines from the State or Regional Water Quality Control Boards in California. Additionally, accurate flow estimation is important to determine the extent of the cleanup and its effectiveness.

Volume estimation is basically the flow rate (gallons per minute) times the amount of time (in minutes) the flow has occurred. Each SSO tends to be unique requiring different strategies for determining the volume of the SSO. Different methods can also be used for the same SSO acting as a check to ensure the most accurate estimate. The method(s) utilized will be determined by several factors including the type of SSO and the personnel responding. Some SSO volumes, due to terrain, rainfall or other factors, can be very difficult for field staff to determine and may require someone with additional expertise. There is no one method that works for all types of SSOs. The following are methods that may be utilized for SSO volume estimation. These methods are effective means of estimating a sewer spill volume during dry weather but may not be effective during rain events.

During rain events, infiltration and/or inflow into the collection system and runoff in the stormwater system, including the curb and gutter, can affect the SSO estimate. When estimating an SSO during a rain event, the SSO estimate is to include only the wastewater that left the collection system and not any waters that the wastewater comingled with after leaving the system. The same is true for any wash down water; although contaminated, the water is not considered part of the SSO estimate. Any water that infiltrated into the collection system upstream of the SSO and subsequently became part of the SSO is included in the SSO volume estimate.

Start Time

Determining the start time for an SSO is one of the most critical, yet can be one of the most difficult, factors to determine. Depending upon the location and time of day, an SSO may occur for some time before it is reported to the City or Agency or it may trickle for an extended period of time before being noticed. What is known is that the SSO started some time before the City or Agency was notified. It is common for SSOs to start and stop as flows in the pipeline routinely rise and fall because most blockages do not entirely block the flow in the pipe. Every effort should be utilized to determine the most accurate start time of each SSO. These efforts may include:

- If possible, contact the person who reported the SSO to determine when they became aware of the SSO.
- Make contact with residences or businesses in the area of the SSO to determine if there were any witnesses that could help establish the start time.
- Conditions change during the SSO. This is particularly true in remote areas out of public view. Initially, there may be an amount of toilet paper and solids around the spill site. This will increase the longer the SSO continues. After a few days to a week, these may form a light brown residue that may turn dark after a few weeks to a month.

Stop Time

The stop time is the time that wastewater stopped overflowing. For manhole covers in low areas, this is noted by water flowing back into the manhole through the vent holes and should be easy to determine by SSO response personnel. Care should be taken to accurately record the time that the SSO stopped.

Photographs

Take photographs of the spill event. Try to include objects of known size in the photographs to give a perspective of the extent of the spill. Photographs should include the initial spill, remediation efforts, clean up, and the spill area after the spill remediation has been completed. Photographs should be maintained with the spill report information.

Flow Rate

The flow rate is the volume of flow per unit time that is escaping from the collection system. SSOs do not always occur at a constant rate. This is because flows into the collection system are not constant and rise and fall throughout the day. Additionally, most blockages are not full blockages. Pressure buildup as the wastewater surcharges in the pipe can cause the blockage to clear or partially clear, resulting in changes to the flow rate.

To make an SSO volume estimate as accurate as possible, the onsite City or Agency employee should note the time and the amount of change of any significant differences in flow noticed during the event. For example, if the employee determines the flow rate escaping from the manhole is 100 gallons per minute when they arrive on scene but noticed that it has dropped to 50 gallons per minute five minutes later, their report should reflect that fact. The estimated flow rate and the time period for that flow rate should be recorded. During any one SSO event there could be multiple flow rates spread over the duration of the SSO.

Volume Estimation Methods

Visual or Eyeball Method

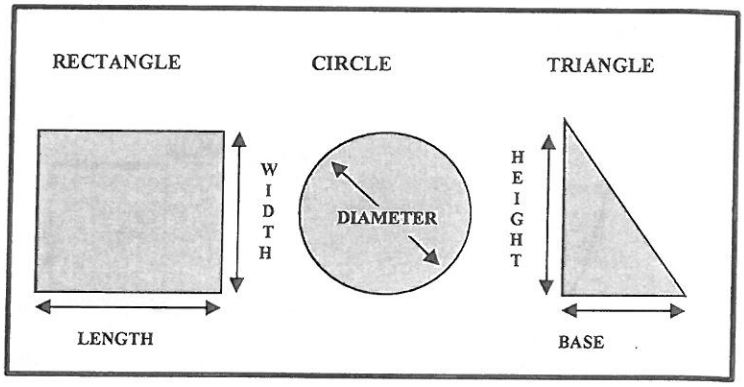
The volume of small spills can be estimated using an "eyeball estimate." To use this method, imagine the amount of water that would spill from a bucket or a barrel. A full bucket may contain 1, 2 or 5 gallons and a barrel contains 55 gallons when full. If the spill is larger than 55 gallons, try to divide the standing water into barrels and then multiply by 55 gallons. This method is useful for contained spills up to approximately 200 gallons. This method can be useful on spills that occur on hard surfaces such as concrete or asphalt. Crews can be trained by estimating the volume of a measured amount of potable water spilled upon concrete and asphalt surfaces.

Measured Volume

The volume of most small spills that have been contained can be estimated using this method. The shape, dimensions, and the depth of the contained wastewater are needed. The shape and

dimensions are used to calculate the area of the spills and the depth is used to calculate the volume.

Common Shapes and Dimensions



1. Sketch the shape of the contained wastewater.
2. Measure or pace off the dimensions.
3. Measure the depth at several locations and select an average.
4. Convert the dimensions, including depth, to feet.
5. Calculate the area:

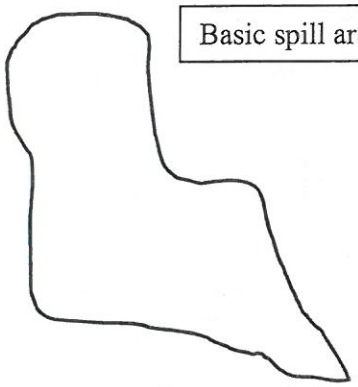
   Rectangle: Area = length (feet) x width (feet)

   Circle: Area = diameter (feet) x diameter (feet) x 3.14 divided by 4

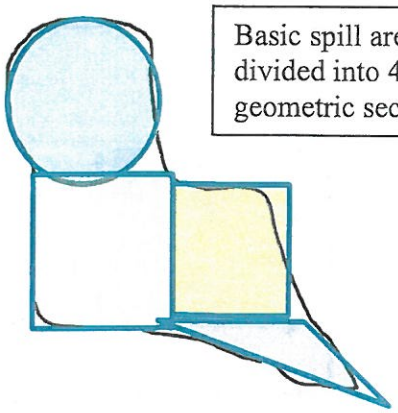
   Triangle: Area = base (feet) x height (feet) x 0.5
6. Multiply the area (square feet) times the depth (in feet) to obtain the volume in cubic feet.
7. Multiply the volume in cubic feet by 7.48 to convert to gallons

Not all SSOs will conform to a specific shape. When this occurs, break up the area of the SSO into various shapes or segments, then calculate the amount of wastewater spilled in each segment, adding them together to arrive at the total spill volume.

Example:

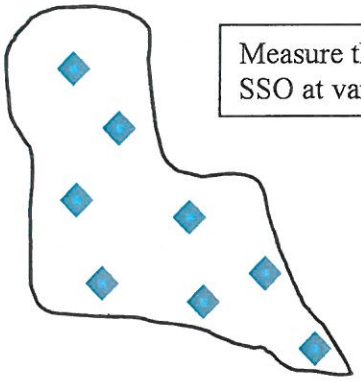


Basic spill area



Basic spill area divided into 4 geometric sections.

Determine the area of each of the geometric sections adding them all together to determine the total area of the spill.



Measure the depth of the SSO at various locations.

Where it is difficult to measure wet spots on asphalt, use a depth of 0.0026'or 1/32". For wet spots on concrete use depths of 0.0013'or 1/64" for reasonable estimates.

Inch to Feet Conversion:		
Inches	to	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'

Sample Calculation:
A 20 ft x 20 ft square wet spot on concrete equals 3.9 gal and for asphalt is 7.8 gal.

Counting Connections

Once the location of the blockage has been established, the amount of the SSO could be estimated by counting the number of upstream connections. On the sewer atlas maps or GIS system, locate the pipeline where the SSO occurred. Count all of the developed parcels that are connected to the pipeline upstream of the blockage. The typical single family residential parcel may discharge 8 to 10 gallons of wastewater per hour during active times of the day. For a multi-family residential development such as an apartment or condo complex, count each apartment as a single family residential unit. Use the higher flow number (10 gallons per hour) during typical peak flow hours and the lower flow number (8 gallons per hour) during low flow periods. Multiply the number of connections times the average flow (8 to 10 gallons per hour) times the time period (duration) that the SSO occurred.

Example for an SSO occurring on a weekday at 8:00am:

Number of upstream connections	22
Estimated flow per parcel	10 gallons per hour
Duration of SSO event	45 minutes
Total spill estimation (22 x 10 x .75)	165 gallons

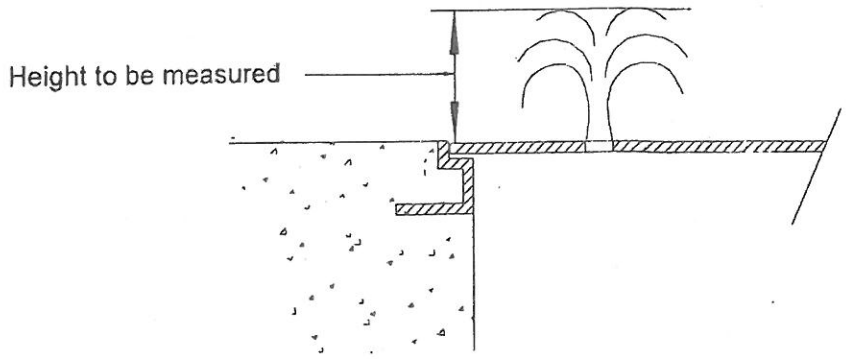
(22 connections x 10 gallons per hour x 45 minutes (.75 hour) = 165 gallons)

Data may be available in your drainage area from your capacity planners at your city or agency. Consult with them on reasonable flow amounts or rates of flow.

Pick and Vent Holes in Manhole Covers

Small SSOs will occur where the wastewater escaping from the manhole is isolated to the pick or vent holes in the cover. Larger SSOs may involve both the discharge from the pick and/or vent holes and the gap between the manhole cover and manhole frame. To estimate an SSO occurring from the manhole pick and vent holes, measure the height of the wastewater plume exiting the holes. Find that height and hole diameter on the manhole pick or vent hole chart to determine the flow rate escaping the pick/vent hole. Multiply the flow rate times the number of holes that are discharging wastewater. Once the total volume (gpm) has been determined,

multiply the gpm by the duration of the SSO in minutes. This will result in the total estimated gallons of the SSO.



Example: Measured height of plume exiting pick/vent hole is 1 inch from a ½-inch vent hole and there are 4 vent holes. The total volume per minute would be .94 gpm per hole (from attached chart) or 3.76 gpm total (.94 gpm x 4 holes) from the manhole cover. If the SSO lasted one hour, the total wastewater lost would be 226 gallons (3.76 x 60 = 225.6).

Number of pick holes	4
Flow from each pick hole	.94 gpm
Duration of SSO	60 minutes
Total SSO volume (.94 x 4 x 60=225.6)	226 gallons

Pick and Vent Hole Estimation Chart

Estimated Flows thru Manhole Cover Vent Holes and Pick Holes for SSO estimating

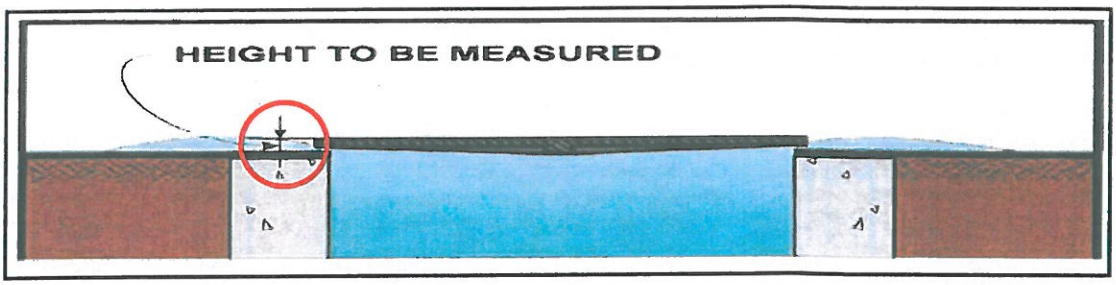
Hole Dia. inches	Area sq. ft.	Coeff.of Vel. Cv	Coeff. Of Cont. Cc	C Cv x Cc	Water Ht inches	Water Ht inches	Water Ht feet	Q cfs	Q gpm	Q gph
	Formula: =0.785*Ax*Ax/144			Formula: =Ix*449			Formula: =Gx/12	Formula: =Ex*Bx*(SQRT(2*32.2*Hx))	Formula: =Ix*449	Formula: =Jx*60
Vent Hole										
0.50	0.00136	0.945	0.70	0.662	1/16 th	0.063	0.005	0.0005	0.23	14
0.50	0.00136	0.945	0.70	0.662	1/8 th	0.125	0.010	0.0007	0.33	20
0.50	0.00136	0.945	0.70	0.662	1/4 th	0.250	0.021	0.0010	0.47	28
0.50	0.00136	0.945	0.70	0.662	one half	0.500	0.042	0.0015	0.66	40
0.50	0.00136	0.945	0.70	0.662	3/4 ths	0.750	0.063	0.0018	0.81	49
0.50	0.00136	0.945	0.70	0.662	1 inch	1.000	0.083	0.0021	0.94	56
Vent Hole										
0.75	0.00307	0.955	0.67	0.640	1/16 th	0.063	0.005	0.0011	0.51	31
0.75	0.00307	0.955	0.67	0.640	1/8 th	0.125	0.010	0.0016	0.72	43
0.75	0.00307	0.955	0.67	0.640	1/4 th	0.250	0.021	0.0023	1.02	61
0.75	0.00307	0.955	0.67	0.640	one half	0.500	0.042	0.0032	1.44	87
0.75	0.00307	0.955	0.67	0.640	3/4 ths	0.750	0.063	0.0039	1.77	106
0.75	0.00307	0.955	0.67	0.640	1 inch	1.000	0.083	0.0045	2.04	122
Vent Hole										
1.00	0.00545	0.960	0.65	0.624	1/16 th	0.063	0.005	0.0020	0.88	53
1.00	0.00545	0.960	0.65	0.624	1/8 th	0.125	0.010	0.0028	1.25	75
1.00	0.00545	0.960	0.65	0.624	1/4 th	0.250	0.021	0.0039	1.77	106
1.00	0.00545	0.960	0.65	0.624	one half	0.500	0.042	0.0056	2.50	150
1.00	0.00545	0.960	0.65	0.624	3/4 ths	0.750	0.063	0.0068	3.06	184
1.00	0.00545	0.960	0.65	0.624	1 inch	1.000	0.083	0.0079	3.54	212
Pick Hole semicircular area										
1.00	0.00273	0.960	0.65	0.624	1/16 th	0.063	0.005	0.0010	0.44	27
1.00	0.00273	0.960	0.65	0.624	1/8 th	0.125	0.010	0.0014	0.63	38
1.00	0.00273	0.960	0.65	0.624	1/4 th	0.250	0.021	0.0020	0.89	53
1.00	0.00273	0.960	0.65	0.624	one half	0.500	0.042	0.0028	1.25	75
1.00	0.00273	0.960	0.65	0.624	3/4 ths	0.750	0.063	0.0034	1.53	92
1.00	0.00273	0.960	0.65	0.624	1 inch	1.000	0.083	0.0039	1.77	106
1.00	0.00273	0.960	0.65	0.624	1-1/2 inch	1.500	0.125	0.0048	2.17	130
1.00	0.00273	0.960	0.65	0.624	2 inches	2.000	0.167	0.0056	2.51	150

Courtesy of OCSD: Created 5/17/99, as an estimating tool for field staff. This is based on flow through orifices assumptions. Your city or agency may want to develop a similar tool.

$Q=CA(2gh)^{.5}$ Where Q=cfs C=0.624 A=area(sq. ft.) g=32.2 ft/sec/sec
h= water height (ft.)

Manhole Ring

Some manhole covers in use today typically only have one pick hole forcing most of the wastewater to escape from the perimeter of the manhole cover during higher flow SSOs. To estimate the volume in this example, measure the observed height of the wastewater plume exiting the manhole cover. Find the height and manhole diameter on the Manhole with Cover in Place to determine the flow rate escaping the manhole. The chart has two columns, one for 24-inch diameter covers and one for 36-inch diameter covers. Wastewater will also be escaping from the pick hole and must be accounted for separately by following the instructions for estimating an SSO from pick/vent hole. Multiply the flow rate times the number of holes that are discharging. The total estimated rate (gpm) is determined by adding together the rate being lost (gpm) from around the cover with the rate being lost (gpm) from the pick and/or vent hole(s). Once the total rate (gpm) has been determined, multiply the gpm by the duration of the SSO in minutes. This will result in the total estimated gallons of the SSO.



Example: The measured height of the plume exiting the ring of a 36-inch manhole is 1 inch. The total volume per minute would be 13 gpm from around the ring of a 36-inch manhole cover (from the attached chart). (Calculate the amount exiting the pick hole(s) and add to the total being lost around the ring). If the SSO lasted one hour the total wastewater lost would be 780 gallons (13 x 60 = 780).

Estimated loss around ring (from chart)	13 gpm
Duration of SSO	60 minutes
Total SSO (without loss from pick hole)	780 gallons

(13 gal/min x 60 minutes = 780 gallons plus amount lost from pick hole(s))

ESTIMATED SSO FLOW OUT OF MH WITH COVER IN PLACE

24" COVER

Height of spout above M/H rim H in inches	S S O Q FLOW in gpm	in MGD	Min. Sewer size in which these flows are possible
1/4	1	0.001	
1/2	3	0.004	
3/4	6	0.008	
1	9	0.013	
1 1/4	12	0.018	
1 1/2	16	0.024	
1 3/4	21	0.030	
2	25	0.037	
2 1/4	31	0.045	
2 1/2	38	0.054	
2 3/4	45	0.065	
3	54	0.077	
3 1/4	64	0.092	
3 1/2	75	0.107	
3 3/4	87	0.125	
4	100	0.145	
4 1/4	115	0.166	
4 1/2	131	0.189	
4 3/4	148	0.214	
5	166	0.240	
5 1/4	185	0.266	
5 1/2	204	0.294	
5 3/4	224	0.322	6"
6	244	0.352	
6 1/4	265	0.382	
6 1/2	286	0.412	
6 3/4	308	0.444	
7	331	0.476	
7 1/4	354	0.509	
7 1/2	377	0.543	
7 3/4	401	0.578	8"
8	426	0.613	
8 1/4	451	0.649	
8 1/2	476	0.686	
8 3/4	502	0.723	
9	529	0.761	

36" COVER

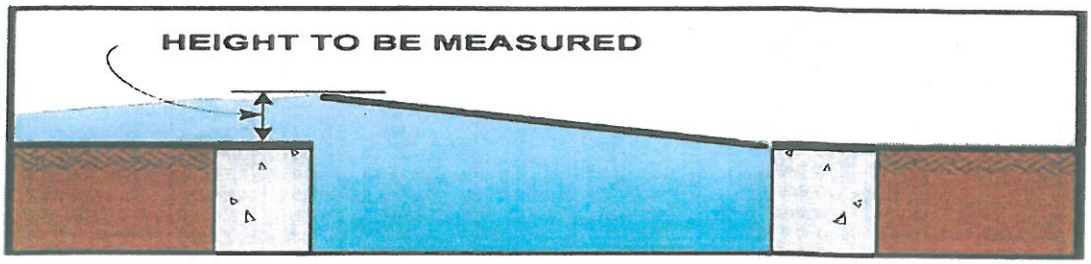
Height of spout above M/H rim H in inches	S S O Q FLOW in gpm	in MGD	Min. Sewer size in which these flows are possible
1/4	1	0.002	
1/2	4	0.006	
3/4	8	0.012	
1	13	0.019	
1 1/4	18	0.026	
1 1/2	24	0.035	
1 3/4	31	0.044	
2	37	0.054	
2 1/4	45	0.065	
2 1/2	55	0.079	
2 3/4	66	0.095	
3	78	0.113	
3 1/4	93	0.134	
3 1/2	109	0.157	
3 3/4	127	0.183	
4	147	0.211	
4 1/4	169	0.243	
4 1/2	192	0.276	
4 3/4	217	0.312	6"
5	243	0.350	
5 1/4	270	0.389	
5 1/2	299	0.430	
5 3/4	327	0.471	
6	357	0.514	
6 1/4	387	0.558	8"
6 1/2	419	0.603	
6 3/4	451	0.649	
7	483	0.696	
7 1/4	517	0.744	
7 1/2	551	0.794	
7 3/4	587	0.845	10"
8	622	0.896	
8 1/4	659	0.949	
8 1/2	697	1.003	
8 3/4	734	1.057	
9	773	1.113	

The formula used to develop Table 1 measures the maximum height of the water coming out of the maintenance manhole above the rim. The formula was taken from Hydraulics and Its Application by A.H. Gibson (Constable & Co. Limited).

Partially Covered Manhole

Sometimes an SSO will occur that only lifts one side of the manhole cover. This is especially true of manholes where the cover is on an incline with the cover lifting on the downward side of the manhole. To estimate the volume of an SSO under these conditions, calculate the area (in square feet) from where the wastewater is escaping and the velocity (in feet per second) that the wastewater is normally traveling in the sewer at half the pipe depth. The velocity is estimated from visual observation with 2 feet/second or less being a small velocity, 4 to 5 feet/second being a medium velocity, and 7 feet/second or higher being a large velocity. Velocities in the sewer above 7 feet/second may be strong enough to blow the manhole cover off. Higher velocities also tend to raise the manhole lid higher. Next, multiply by the duration

(in seconds) that the SSO occurred. Finally, multiply by 7.48 to determine the volume of the SSO in gallons. The formula is Volume (gallons) = Area (sq. ft.) x Velocity (ft/sec) x Time (in seconds) x 7.48 (gal/cu. ft.).



Example: The measured height of the plume exiting the side ring of a 24-inch manhole is 2 inches. Based upon the data provided in the Area Calculation Chart below, a 2-inch plume from one side of a 24-inch manhole cover provides 0.524 square feet of area. The velocity of the flow is estimated at 4 ft/sec (visual observation) with the assumed duration of the flow lasting for one hour. The total amount of the SSO is estimated at 56,441 gallons (.524 x 4 x 60 x 60 x 7.48 = 56,441)

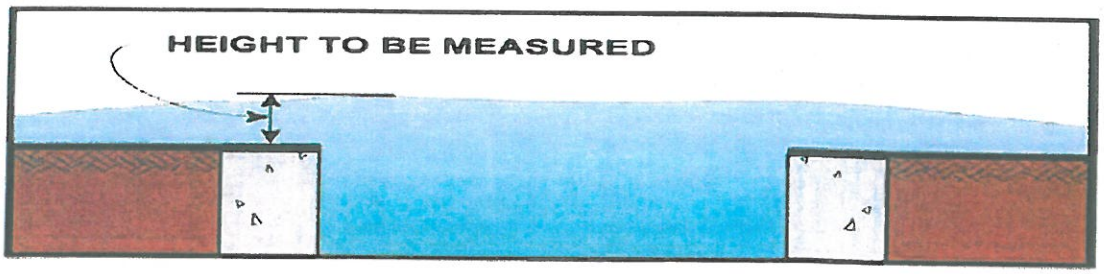
Height of plume	2 inches
Area for 24 inch manhole	0.524 square feet
Estimated velocity	4 ft/sec
Duration of SSO	60 minutes
Conversion from cu. ft. to gallons	7.48
Total estimated SSO volume	56,441 gallons

(.524 sq. ft. x 4 ft/sec x 60 minutes x 60 sec/min x 7.48 gal/cu ft = 56,441 gal)

Area Calculation Chart		
Height of Flow	24 Inch Manhole	36 Inch Manhole
.5 inches	0.131 sq. ft.	0.195 sq. ft.
1 inches	0.262 sq. ft.	0.391 sq. ft.
1.5 inches	0.393 sq. ft.	0.586 sq. ft.
2 inches	0.524 sq. ft.	0.782 sq. ft.
2.5 inches	0.655 sq. ft.	0.977 sq. ft.
3 inches	0.786 sq. ft.	1.173 sq. ft.
3.5 inches	0.917 sq. ft.	1.368 sq. ft.
4 inches	1.048 sq. ft.	1.564 sq. ft.

Open Manhole

In large events the force of the overflowing wastewater will have sufficient pressure and volume to unseat the cover from the frame and move the manhole cover away from the manhole. Typically, when the SSO rates reach approximately 7 cfs (approximately 3,000 gpm or about 4.32 mgd), there is sufficient flow and pressure to blow off the manhole cover. To estimate the volume of an SSO where the manhole cover has been removed, the average height of the plume of wastewater exiting the manhole must be measured. This measurement is from the pavement surface close to the manhole ring to the top of the plume. Take several measurements in several locations around the ring and average the findings. If possible, and being safe to protect yourself from the open manhole, find the average height of the plume for the size of the manhole lid (24-inch or 36-inch diameter) on the Area Calculation Chart to determine the rate of flow exiting the manhole. Multiply the flow rate expressed in gallons per minute from the chart multiplied by the duration of the SSO in minutes to determine the total volume of the SSO. A photo taken at a safe distance upon arrival may help you refine your estimate.



Example: Determine the observed height of the plume at several locations around the ring of the manhole and average the results. Determine the size of the manhole cover. If the average height of the plume exiting an open 24-inch diameter manhole is 2 inches, find 2 inches on the 24-inch Manhole Cover Removed Chart. Based upon the data provided in the Manhole Cover Removed Chart, the flow in gallons per minute would be 3,444 gpm. If the duration of the flow lasted for one hour (60 minutes), the total amount of the SSO would be estimated at 206,640 gallons (3,444 x 60 = 206,640).

Height of plume (average) on 24-inch manhole	2 inches
Estimated flow from chart	3,444 gpm
Duration of SSO	60 minutes
Estimated SSO total volume	206,640 gallons

(Est flow from chart 3,444 x 60 minutes = 206,640)

ESTIMATED SSO FLOW OUT OF M/H WITH COVER REMOVED

24" FRAME

Water Height above M/H frame H in inches	S S O FLOW Q in gpm	in MGD	Min. Sewer size in which these flows are possible
1/8	28	0.04	
1/4	62	0.09	
3/8	111	0.16	
1/2	160	0.23	
5/8	215	0.31	6"
3/4	354	0.51	8"
7/8	569	0.82	10"
1	799	1.15	12"
1 1/8	1,035	1.49	
1 1/4	1,340	1.93	15"
1 3/8	1,660	2.39	
1 1/2	1,986	2.86	
1 5/8	2,396	3.45	18"
1 3/4	2,799	4.03	
1 7/8	3,132	4.51	
2	3,444	4.96	21"
2 1/8	3,750	5.4	
2 1/4	3,986	5.74	
2 3/8	4,215	6.07	
2 1/2	4,437	6.39	
2 5/8	4,569	6.58	24"
2 3/4	4,687	6.75	
2 7/8	4,799	6.91	
3	4,910	7.07	

36" FRAME

Water Height above M/H frame H in inches	S S O FLOW Q in gpm	in MGD	Min. Sewer size in which these flows are possible
1/8	49	0.07	
1/4	111	0.16	
3/8	187	0.27	6"
1/2	271	0.39	
5/8	361	0.52	8"
3/4	458	0.66	
7/8	556	0.8	10"
1	660	0.95	12"
1 1/8	1,035	1.49	
1 1/4	1,486	2.14	15"
1 3/8	1,951	2.81	
1 1/2	2,424	3.49	18"
1 5/8	2,903	4.18	
1 3/4	3,382	4.87	
1 7/8	3,917	5.64	21"
2	4,458	6.42	
2 1/8	5,000	7.2	24"
2 1/4	5,556	8	
2 3/8	6,118	8.81	
2 1/2	6,764	9.74	
2 5/8	7,403	10.66	
2 3/4	7,972	11.48	30"
2 7/8	8,521	12.27	
3	9,062	13.05	
3 1/8	9,604	13.83	
3 1/4	10,139	14.6	
3 3/8	10,625	15.3	36"
3 1/2	11,097	15.98	
3 5/8	11,569	16.66	
3 3/4	12,035	17.33	
3 7/8	12,486	17.98	
4	12,861	18.52	
4 1/8	13,076	18.83	
4 1/4	13,285	19.13	
4 3/8	13,486	19.42	

Disclaimer:
This sanitary sewer overflow table was developed by Ed Euyen, Civil Engineer, P.E. No. 33955, California, for County Sanitation District 1. This table is provided as an example. Other Agencies may want to develop their own estimating tables.

Pictorial Reference

Currently there are two picture charts being widely used to assist with estimating SSO volumes. The older chart is the city of San Diego's Manhole Overflow Rate Chart with the

newer chart being the CWEA Southern Section Collection Systems Committee (SSCSC) Manhole Overflow Gauge. Each chart is a pictorial depiction of how an overflowing manhole appears at a given flow rate. The SSCSC Manhole Overflow Gauge has an additional picture for each flow rate showing a wide angle view of the spill area. When using either of the pictorial reference charts, select which picture most accurately represents the SSO being estimated. Use the gpm of the associated picture multiplied times the duration of the SSO to determine the total spill volume. Example: If the selected picture shows 300 gpm and the duration of SSO is 55 minutes, the total estimated spill volume would be 16,500 gallons (300 gpm x 55 min).

Selected picture volume	300 gpm
Duration of SSO	55 minutes
Total estimated SSO	16,500 gallons
(300 gpm x 55 minutes = 16,500 gallons)	

Note: Data was obtained at training facilities where potable water was metered and photos were taken at various flow rates.

Training facilities also exist at the Orange County Sanitation District in Fountain Valley, CA.

As a reference point, an 8-inch diameter sewer flowing half full at a velocity of 2.5 ft/sec would have a flow rate of about 192 gal/min. If fully blocked, the SSO rate would be 192 gpm. For a partial blockage, the SSO rate will be less.

Other agencies have developed above ground estimating tools such as frame and cover sets that can be pressurized using potable water and simple flow meters.

City of San Diego Manhole Overflow Picture Chart

City of San Diego
Metropolitan Wastewater Department

Reference Sheet for Estimating Sewer Spills from Overflowing Sewer Manholes

All estimates are calculated in gallons per minute (gpm)

Wastewater Collection Division
(619) 654-4160

5 gpm

25 gpm

50 gpm

100 gpm

150 gpm

200 gpm

225 gpm

250 gpm

275 gpm

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

rev 4/09

SSCSC Manhole Overflow Gauge

SSCSC MANHOLE OVERFLOW GAUGE

Overflow Simulation courtesy of Eastern Municipal Water District

DISCLAIMER: The overflow simulation may appear differently from those in other systems because of the manhole lid pick hole configuration. Manhole lids with single or multiple pick holes may appear differently during similar overflow conditions. However, the volume of extrusion and the footprint of the wet area should appear relatively the same under similar scope conditions.

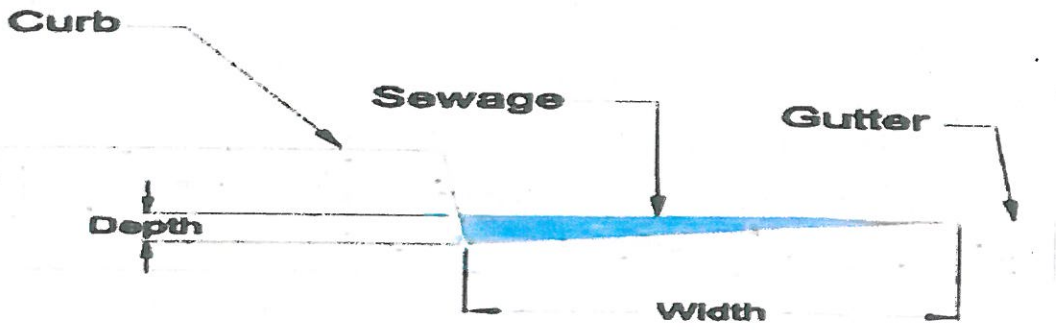
CWEA SOUTHERN SECTION COLLECTION SYSTEMS COMMITTEE

PROVIDING QUALITY TRAINING FOR COLLECTION SYSTEM PERSONNEL SINCE 1991

Mission Statement: To continuously increase the level of professionalism of Collection Systems personnel involved in the operation, maintenance, design and construction of Wastewater Collection Systems, by providing education and training, being an active role in promoting certification, and recognizing proficiency in our field.

Gutter Flow (Simplified Version)

Although the traditional Manning's Equation is used to calculate flows in open channels, this simplified version can be used to measure SSOs that are flowing in open channels such as ditches, curb and gutter, etc. and still achieve reasonable estimations. Two things need to be determined to utilize this method of spill estimation, the cross sectional area of the channel and the velocity of the flow in the channel. First, determine the cross sectional dimensions of the channel (width and depth of flow) to determine the area of the flow. Then determine the velocity of the flow in the channel. To determine the velocity, drop a small floating object (ping pong ball, leaf, small piece of wood, etc.) into the flow and time how long it takes the object to travel a measured distance. This should be practiced several times in a non-SSO situation, and averaged to determine the flow velocity. The velocity of the flow multiplied by the cross sectional area of the flow multiplied by the duration of the SSO will result in the approximate volume of the SSO.



$Q = V \times A$

Flow (gal/min) = Velocity (ft/sec) x Area (ft^2) x 7.48 gal/cu ft x 60 sec/min

Example: If the cross section triangular area of the spill is calculated at .5 sq.ft. with the velocity measured at .25 ft. per second, the flow would be .125 cubic feet per second. Multiply times 449 (one cubic foot per second equals 449 gallons per minute) to determine the gallons per minute (56 gpm). If the SSO lasted for 35 minutes the total estimated spill volume would be 1,964 gallons.

Simplified Cross Section Area of the SSO	
Estimated Triangular Area	0.5 square feet
Estimated Velocity	.25 feet per second
Duration of the SSO	35 minutes
Gallons per minute per cubic foot per second conversion	449
Total estimated spill volume	1,964 gallons

(Area .5 sq.ft. x Est velocity .25 ft. per sec. = .125 cfs x 449 = 56 gpm x 35 minutes = 1,964 estimated gallons spilled)

Gutters on steep hillsides will flow at higher velocities. Practice your estimating on flatter areas and steeper areas of your service area.

Bucket Method

This method can be used for small spills due to partial blockages where the entire flow stream could be captured in a bucket. Estimate how many minutes it takes to fill the bucket. Dividing the volume of the bucket (in gallons) by the elapsed time to fill the bucket (in minutes). This provides the flow rate in gallons per minute (gpm). Once the gpm has been established, multiply the gpm by the total time duration in minutes of the SSO until it stopped to determine the total estimated volume of the SSO.

Example: If it takes 30 seconds (.5 minutes) to fill a 5 gallon bucket and the total spill duration was 20 minutes, the total spill volume would be 200 gallons. (5gal/.5 min = 10 gpm x 20 min = 200 gal).

Time to fill a 5 gallon bucket	30 seconds (.5 minute)
Duration of SSO	20 minutes
Estimated spill volume	200 gallons

(5 gallons every 30 seconds equals 10 gallons per minute x 20 minutes = 200 gallons)

You can practice visual estimating by filling a bucket of known volume for a measured time from a garden hose.

Pipe Size

To calculate an SSO based upon pipe size requires the diameter of the pipe, the depth of flow in the pipe downstream of the blockage during and after the blockage, and the flow velocity in the pipe. This method calculates the amount of flow in the pipe at the same time of the day during the blockage compared to the amount of flow normally in the pipe to determine how much flow had been lost over time.

To use this method, measure the flow depth at the nearest manhole downstream from the blockage. Record the depth reading. Once the blockage has been cleared and the flow stabilized, measure the flow depth at the same manhole as before and record the reading. The attached chart can be used on various size pipelines where the velocity is 2.0 feet per second. Pipelines of other rates will have to be calculated.

To use the attached chart, find the depth of the flow during the blockage in column 1. Follow the row across to the diameter of the pipe where the blockage has occurred. The number listed will be the flow rate in gallons per minute for pipelines with a velocity of 2 feet per second. Next find the flow depth after the blockage has been removed and the flow stabilized. Move across the chart to the proper pipe size and record the flow rate for a free flowing pipeline. Subtract the flow rate from the blocked pipe from the flow rate of the free flowing pipe. The remainder will be the flow rate lost. Multiply the flow rate lost times the duration of the SSO to determine the total flow volume lost. Example: If the flow depth during the blockage of a 10-inch pipe was 1 inch, the flow rate would 25 gpm. After the blockage was cleared and the flow stabilized, the flow depth was now 5 inches then the flow rate would be 240 gpm. To determine the amount lost, subtract the gpm (pipe blocked) from the gpm (pipe cleared) (240 gpm – 25 gpm = 215gpm) leaving the flow rate of the SSO. Multiply the remaining flow rate multiplied by the duration of the SSO in minutes to estimate the total volume of the SSO.

Flow Depth Inches	8 " PIPE	10" PIPE	12" PIPE	15" PIPE	18" PIPE	21" PIPE	24" PIPE
1	20 GPM	25 GPM	30 GPM	35 GPM	40 GPM	45 GPM	50 GPM
2	60	70	80	85	95	105	125
3	110	125	135	150	175	185	210
4	160	180	200	235	260	285	320
5	190	240	280	315	360	380	445
6	260	310	355	415	455	500	555
7	290	370	425	495	570	620	695
8	320	430	500	600	680	760	815
9		465	575	690	800	890	965
10		490	625	775	905	1005	1120
11			685	870	1020	1135	1275
12			715	935	1130	1260	1410
13				1020	1240	1415	1580
14				1070	1345	1520	1690
15				1105	1425	1650	1850
16					1495	1760	1990
17					1550	1880	2110
18					1595	1980	2285
19						2050	2410
20						2115	2530
21						2160	2630
22							2700
23							2765
24							2820

Note: the chart assumes V = 2.0 feet per second and n = 0.013

1. Record the time that spill was reported.
2. Record the flow, in inches, downstream of the spill or blockage. Record the pipe size in inches. Determine flow rate in gallons per minute (GPM) using chart above.
3. Re-establish flow and allow stabilizing. Record the time that flow stabilizes and the depth of flow, in inches. Determine flow rate using chart above.
4. Subtract the flow rate calculated in #2 from the flow rate calculated in #3.
5. Multiply the result of 4 by the minutes elapsed from notification to stopping overflow.
6. Report total amount in gallons on the SSO Report.

Note: The above chart is only for pipelines of the diameters shown and flowing at a velocity of 2.0 ft/sec.

Metered Flow

Estimates of the amount of wastewater spilled from a continuously metered system can be achieved utilizing upstream and downstream flow meters located close to the point where the wastewater escaped. Flow meters may be located at strategic locations throughout the wastewater collection system or at the intake or discharge of wastewater pump or lift stations. Flow metering usually occurs on pressure systems. If a spill is suspected on a metered upstream wastewater line, check the flow meter readings for abnormalities and note the time they start. Also check the flow meter readings at the downstream flow meter. If the downstream readings are lower than usual, the difference may be the amount of wastewater being lost to a spill. Abnormal pumping cycles for pump or lift stations located downstream from the spill can also be used to estimate the volume of a spill. Portable flow meters could also be installed in gravity sewers after a SSO event to help verify average flows at various times of the day when full or partial blockages may have occurred. You should also perform

this on the same day of the week that the SSO occurred. This is also a good way to understand how flows will change during the day in various parts of your system.

Rain Events

Previous examples of methods throughout the document were all in dry weather situations. Rain events cause substantial difficulties for SSO responders in establishing an accurate estimate of an SSO. Infiltration into the sewer system will increase, sometimes dramatically, the system flow including the amount of the SSO. When estimating the SSO amount during a rain event, the estimate is to include only the amount of wastewater that left the collection system (this includes any clear water inflow and/or infiltration (I&I) that entered the collection system upstream of the SSO) and not any waters that the wastewater comingled with after leaving the system. Although the comingled waters are considered contaminated by the SSO and may be involved in the cleanup, they should not be considered in the estimate of the volume of sewage spilled for the event. Consult with your city or agency management or your site-specific procedures to be used during wet weather SSOs.

Saturated Soils

Spills that have occurred on or migrated to grassy or dirt areas can be estimated if the area is dry and is not regularly irrigated like a field or dirt parking lot. This method is effective only during dry weather and not during or after a rain event. To estimate how much wastewater has been lost to the soil, first determine how many cubic feet of soil has been wetted. First determine the size of the area where the spill occurred. This is done in the same manner as for spills that occurred on hard surfaces and as discussed in the Measured Volume Method. Next determine how deep the soil has been saturated. To determine the depth of the soil saturation, dig several test holes with a round point shovel until dry soil is reached. Measure the depth of each hole and determine the average depth of the saturated soil. Multiply the area of the spill (in square feet) times the average depth of the soil saturation to determine the amount (in cubic feet) of saturated soil. Different types of soils will retain moisture in different amounts. Water will penetrate sandy soils quicker than clay soils and clay soils are capable of holding more moisture than sandy soils. Use an average of 18% moisture content when estimating the amount of wastewater that has saturated the soil.

Example: If the spill was contained in a dry dirt or grassy area of 10 feet by 20 feet, the area of the spill would be 200 square feet if it was a perfect rectangle (assumed). If the wastewater penetrated the soil to an average depth of 3 inches, the total amount of saturated soil would be 50 cubic feet (10 x 20 x .25 = 50 cf.). To determine the amount of wastewater suspended in the wetted soil, multiply the 50 cubic feet times 7.48 gallons per cubic foot (50 cf x 7.48 gal/cf = 374 gallons). Next multiply the gallons times the average amount of moisture the soil can hold (use 18% as a rough estimate or calculate the soil moisture) to determine the actual estimated amount of wastewater that has saturated the soil (374 gal x .18 = 67.3 gallons of wastewater contained in the soil for the area of the spill). Add the amount of wastewater estimated to be contained in the soil with the amount of surface wastewater that was removed to achieve an estimated total amount of the wastewater spill.

Simple method to calculate soil moisture content:
Equipment needed: One coffee filter; a funnel; a graduated measuring cup; a jar or bottle. Place the coffee filter into the funnel. Place the funnel into the mouth of the jar or bottle. Place one cup of clean dry soil from the spill site onto the coffee filter. Pour one cup (8 ounces) of water onto the soil and allow the water to drain into the jar. Once the water has stopped dripping from the funnel, remove the funnel and measure the amount of water in the jar. The difference between the amount of water in the jar and the 8 ounces originally poured over the soil is the amount of moisture the soil retained.

Example: If six and one half ounces (6.5) remained in the jar, one and one half ounce (1.5) or 18.75% remained in the soil. The soil moisture content would be 18.75%.

Combo Truck or Vacuum Truck Recovery

When the spill is contained to a specific area and recovered by a combo or vacuum truck, the amount recovered can be used in calculating the amount of the original spill. If the spill is contained on a hard surface, estimate the total spill volume by what was captured by the combo or vacuum truck plus the amount that could not be captured. To estimate the amount not captured by the combo or vacuum truck, use the Measured Volume Method. For wet spots on concrete, use a depth of 0.0013 ft. or 1/64 inch. For wet stains on asphalt, use a depth of

0.0026 ft. or 1/32 inch. If the spill is contained on soil, use the Saturated Soils Method to determine how much of the spill soaked into the soil and add to the amount captured by the combo or vacuum truck.

Conversion Factors

1.0 cfs = .6463 mgd

One cubic foot of water (cf) = 7.48 gallons

One cubic foot of water per second (cfs) = 448.8 gallons per minute

A cylinder 1 foot in diameter and one foot deep = 5.87 gallons

A 1 square foot triangle 1 foot deep = 3.25 gallons

One inch or 1/12 ft = .083 feet

Volumes Recovered with Trucks or Pumped to Tanks

Level gauge on truck or

Known volume of the full tank or

Number of full tank trucks used during large SSO events

Use your agency's approved conversion factors, if available.

References

California Environmental Protection Agency

http://www.calepa.ca.gov/

State Water Resources Control Board

http://www.swrcb.ca.gov/

Sanitary Sewer Overflow (SSO) Reduction Program

http://www.swrcb.ca.gov/water_issues/programs/sso/index.shtml

Sample Worksheet

_____
(City or Agency Name)

SSO Volume Estimation Worksheet

SSO Address/Location:_____ **Date:** _____

_____

SSO Volume Method of Estimation (check appropriate box and provide appropriate information for method used below)

Pictorial Reference Flow Rate Chart (San Diego Chart ☐ CWEA Ruler ☐)
Vent or Pick Holes ☐ Eyeball estimate ☐

Measured volume ☐ Counting Connections ☐ Manhole Ring ☐ Partially Covered Manhole ☐ Open Manhole ☐

Bucket Method ☐ Pipe Size Method ☐ Gutter Flow Method ☐ Metered Flow ☐
Rain Event Method ☐

Saturated Soils Method ☐ Combo/Vacuum Truck Recovery Method ☐

Spill Start Date: _____ Spill Start Time:_____

Spill End Date: _____ Spill End Time: _____ Total Est. Spill Volume (gal):_____

Provide a detailed description of the method(s) used to determine the SSO estimate. (Use additional sheets as needed)

Signed: _____ **Date:** _____

APPENDIX C-2

Volume Estimate Forms

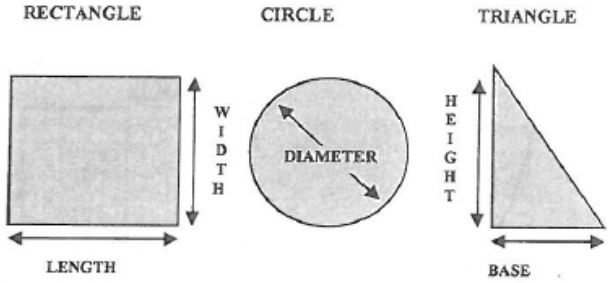
MEASURED VOLUME METHOD
FIELD INSPECTION FORM

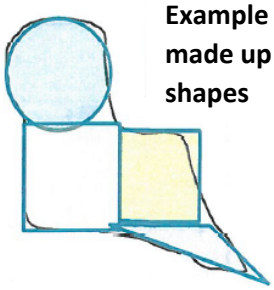
1. Sketch shape of contained spill.

Sketch spill

Shape 1		**Shape 2**	
Length	_____	Length	_____
Width	_____	Width	_____
Diameter	_____	Diameter	_____
Shape 3		**Shape 4**	
Length	_____	Length	_____
Width	_____	Width	_____
Diameter	_____	Diameter	_____

2. Identify Shape Dimensions. (May Require Multiple Shapes)





Example area is made up of 4 shapes

3. Calculate Area

f. Rectangle: Length (ft) x Width (ft)
g. Circle: Diameter (ft) x 3.14 ÷ 4
h. Triangle: Length (ft) x Width (ft) ÷ 2

4. Measure Spill Depth

a. Average of multiple sample depths.
b. For wet spots, assume depth:
1/32" for asphalt
1/64" for concrete

5. Calculate Volume

d. Calculated Area (ft^2) x Average Depth (ft)
e. 7.48 gallons per cubic foot (ft^3)

Field Calculations

Total Gallons

Depth	
Sample 1	_____
Sample 2	_____
Sample 3	_____
Sample 4	_____
Sample 5	_____
Sample 6	_____
Sample 7	_____
Sample 8	_____
Average Depth	_____

GUTTER FLOW METHOD
FIELD INSPECTION FORM

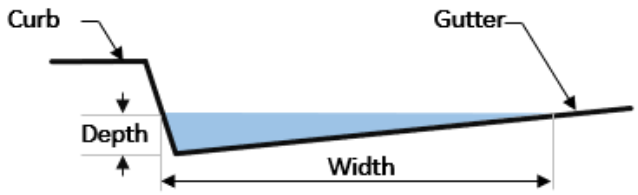
Gutter Flow Method can be used for estimating spill volumes in open channels such as ditches, curve and gutter, etc.

1. **Identify surface geometry: Curb & Gutter, V-Gutter, or Rectangular Channel.**
2. **Measure spill depth (ft) and width (ft)**
3. **Calculate cross sectional flow area.**
4. **Measure spill velocity.**
   - **Predetermine a travel distance**
   - **Measure the time it takes an object (leaf or ping pong ball) to travel that predetermined travel distance.**

Velocity (ft/s) = Distance (ft) / Time (seconds)

5. **Calculate the spill flowrate:**
   Flowrate (ft^3/s) = Cross Sectional Area (ft^2) x Velocity (ft/s)
   1 cubic foot = 7.48 gallons
   1 minute = 60 seconds
6. **Measure the depth and velocity if it changes over during the spill event**
7. **Calculate the flow volume:**
   Volume (ft^3) = Flowrate (ft^3/s) x Spill Duration (s)
   1 cubic foot = 7.48 gallons
   If the flow depth changes over time, the total volume is equal to the sum of the calculated volume at each flow depth.

Curb & Gutter

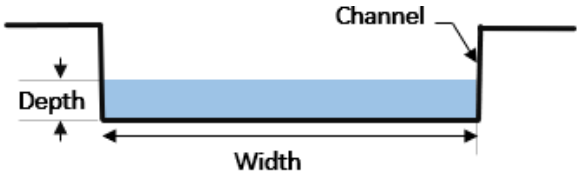


Cross sectional Area = (1/2) x Depth (ft) x width (ft)

V-Gutter

Cross sectional Area = (1/2) x Depth (ft) x width (ft)

Rectangular Channel



Cross sectional Area = Depth (ft) x width (ft)

Field Calculations

Total Volume = T1 x Q1 + T2 x Q2 + (…)

Total Gallons

	Event Time (T1)	Event Time (T2)	Event Time (T3)
Cross Section Area Calculation			
Geometry			
Depth (in)			
Depth (ft)			
Width (ft)			
Cross Sectional Area (ft^2)			
Velocity Calculation			
Length (ft)			
Travel Time (sec)			
Velocity (fps)			
Flowrate Calculation (cross sectional area x velocity)			
Flowrate (ft^3/s)			
Flowrate (gpm)*			

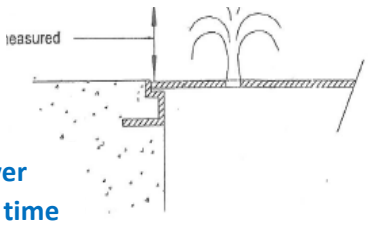
* 1 ft^3/s = 448.8 gpm

PICK AND VENT HOLES METHOD
FIELD INSPECTION FORM

Use this method if the sewage flow is isolated to the pick and vent holes only.

1. Identify how many pick/vent holes are experiencing flow through each manhole. Measure diameter of each hole.
2. Measure the height of the sewage plume over each pick/vent hole. Record the height and time of measurement.
3. If the height changes during spill event, remeasure the height of the sewage plume over each pick/vent hole. Record the height and time of measurement.
4. Determine flowrate from the Pick/Vent Hole Estimation Chart
5. Calculate the flow volume for each hole:

   Volume (gal) = Flowrate (gpm) x Number of Holes x Spill Time (min)
6. Total volume is the sum flow volume from all holes.
   If the plume height changes, the total volume is the sum of the flow volume for all holes a t various plume heights.



Equation $Q = CA(2gh)^{0.5}$

Q = Flowrate (cfs)

C = Coefficient 0.624

A = Area (sqft)

G = 32.2 ft/sec^2

H water height (ft)

Pick/Vent Hole Flowrate Estimation Chart			
	Hole Diameter (in)	Water Height (in)	Flowrate (gpm)
Vent Hole (Circular)	0.50	0.063	0.23
	0.50	0.125	0.33
	0.50	0.250	0.47
	0.50	0.500	0.66
	0.50	0.750	0.81
	0.50	1.000	0.94
	0.75	0.063	0.51
	0.75	0.125	0.72
	0.75	0.250	1.02
	0.75	0.500	1.44
	0.75	0.750	1.77
	0.75	1.000	2.04
	1.00	0.063	0.88
	1.00	0.125	1.25
	1.00	0.250	1.77
	1.00	0.500	2.50
	1.00	0.750	3.06
	1.00	1.000	3.54
Pick Hole (Semi Circle)	1.00	0.063	0.44
	1.00	0.125	0.63
	1.00	0.250	0.89
	1.00	0.500	1.25
	1.00	0.750	1.53
	1.00	1.000	1.77
	1.00	1.500	2.17
	1.00	2.000	2.51

Count	Manhole ID	Pick or Vent Hole?	Diam (in)	Event Time (T1)		Event Time (T2)	
				Height (in)	Q1 (gpm)	Height (in)	Q2 (gpm)
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
				Total Q1		Total Q2	

Field Calculations ·2 x Q2 + (...)

Total Gallons

PICTORIAL REFERENCE METHOD
FIELD INSPECTION FORM

San Diego Manhole Overflow Rate Chart.

5 gpm

25 gpm

50 gpm

100 gpm

150 gpm

200 gpm

225 gpm

250 gpm

275 gpm

Field Calculations Total Volume = T1 x Q1 + T2 x Q2 + (…)

Q: Selected picture flowrate

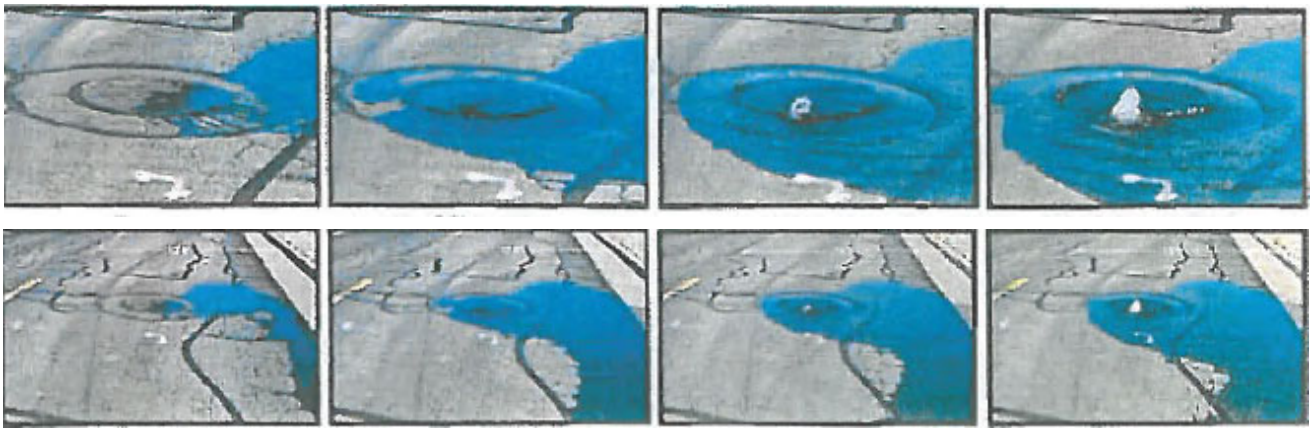
T: Duration of spill

Total Gallons

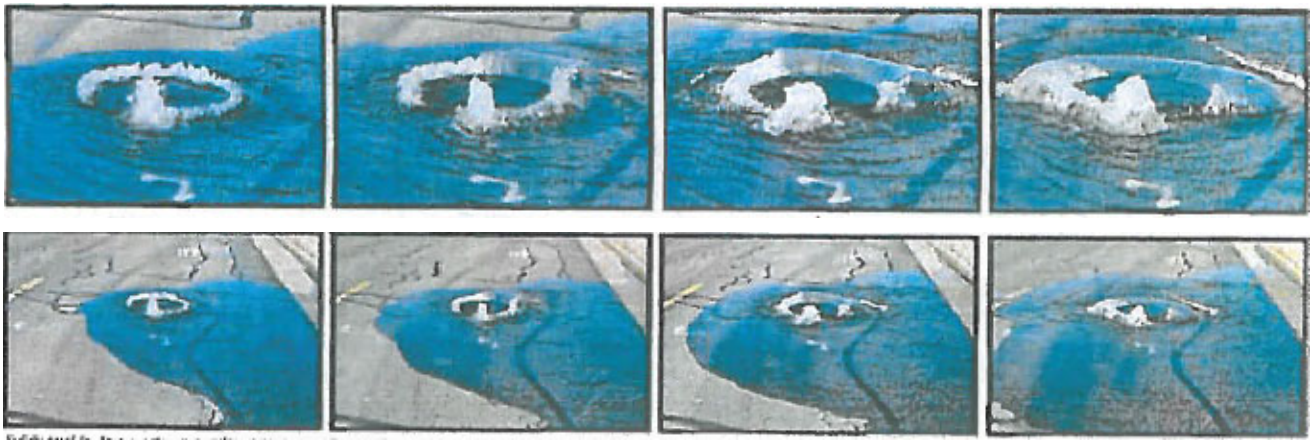
PICTORIAL REFERENCE METHOD
FIELD INSPECTION FORM

CWEA Southern Section Collection System Committee (SSCSC) Manhole Oveflow Gauge

5 gpm **25 gpm** **50 gpm** **100 gpm**



150 gpm **200 gpm** **300 gpm** **400 gpm**



Field Calculations Total Volume = T1 x Q1 + T2 x Q2 + (…)

Q: Selected picture flowrate

T: Duration of spill

Total Gallons

APPENDIX D-1 through D-7

Agency Coordination Documentation

APPENDIX D-1

ORANGE COUNTY FLOOD CONTROL DISTRICT

Email Correspondence

May 1, 2023
Orange County Flood Control District
Spill Emergency Response Plan

Correspondents: Tracy Ingebrigtsen, OCFCD, Countywide Compliance Program Manager
Kimberley Buss, OCFCD, Senior Environmental Resources Specialist
David Razo, OCFCD
Diann Pay, AKM Consulting Engineers
Jon Nitta, AKM Consulting Engineers
Adrian Hernandez, AKM Consulting Engineers

Subject: Spill Emergency Response Plans

OCFCD Comments/Responses in red.

I. Request for current GIS layers We can provide these in a zip folder

1. OCFCD Orange County Flood Control District (OCFCD)Stormwater Drainage Facilities
2. Local Stormwater Drainage Facilities (other agencies)
3. Catch Basins
4. Retention Basins
5. Stormwater Pump Stations (these are sw lift stations that *may* act as retention facilities
6. Diversions to SSS

II. Notification Procedures

- Verify when it is necessary for a local Agency to notify OCFCD of a sewer spill

1. Should OCFCD be notified whenever a spill enters any OCFCD stormwater facility (channels, retention basins, verse underground pipes)? Yes Or are there only certain facilities that require notification? Any impact to an OCFCD facility should result in a notification (see Section III below for clarification)
2. Should OCFCD be notified of all spills no matter the volume? Yes Or only if the spill is greater than 50,000 gallons, ~~which is the volume for Category 1 spills~~? Please note that a Category 1 spill is defined as any discharge to a drainage conveyance system, iex. catch basin (regardless of volume)
3. Should OCFCD be notified whenever one of its stormwater facilities needs to be accessed for containment? Yes; further collaboration on how to go about this is forthcoming

- Verify that spill notification time frame of 2 hours or as soon as possible is acceptable. As soon as possible, is preferred. Order 2022-0103-DWQ requires the Office of Emergency Services to be notified within two (2) hours of a spill greater than 1,000 gallons.
- Verify that OCFCD contact information for spill notification is correct:
    1. https://myoceservices.ocgov.com/ServiceRequest (Submitting a Water Pollution Service Request will be the most responsive form of notification.)
    2. Business Hours (714) 955-0600 correct
    3. After Hours (877) 897-7455 correct
- Verify the information required by OCFCD during the initial call from an Agency responsible and reporting a spill:
    1. Location of the spill (cross streets and affected storm drains)
    2. Approximate spill flowrate
    3. Approximate volume lost to the catch basin (if known)
    4. Has discharge been stopped?
    5. Has discharge been contained?
    6. Has cleanup begun?
    7. Flow conditions upstream of the spill entrance point with an OCFCD facility. What is the stormwater/urban water runoff estimated flowrate? This has not been a prior requirement.
- Verify if Orange County Health Care Agency (OCHCA) needs to also be notified: OC HCA receives all CalOES notifictions; we can provide you with OCHCA contact info in order to answer questions 1 and 2, below
    1. Is it required for sewer agencies to notify OCHCA for all spills?
        a. If not for all spills, under what conditions should they be notified? Is it dependent on size and/or location of spill?
        b. Please provide ordinance or code that details the requirements, so that AKM can include in SERP reports.
    2. Verify Contact Information for OCHCA:
        a. General Reporting(714) 433 – 6000
        b. Office Staff: (714) 433 – 6419A
        c. After Hours: (714) 628 – 7008

III. OCFCD Response

- What type of response is provided by OCFCD in the event of a spill notification?

Category 1,2, or 3 Spill:

1. Assessment up and downstream of incident (eg. Determine u/s flow; determine d/s impacts)
2. Identification of d/s sanitary sewer diversions, retention basins, etc.

3. Provide downstream containment as warranted
4. Provide OCFCD site access
5. Additional cleanup resources (only when all other resources have been exhausted)
6. Provide determination of cleanup end points (to the maximum extent practicable).
7. All OCFCD responses are recorded in the County's Illicit Discharge, Detection & Elimination (IDDE) database

Category 4 Spill:

8. No on-site response required by OCFCD, but may still be available for assistance, if needed.
9. If notification is received, a Category 4 spill will be recorded in the County's IDDE database.

IV. Containment and Clean Up

- The SERP updated reports will include containment and clean up procedures that meet the Order 2022-0103-DWQ requirements, at a minimum.
    1. Does OCFCD have any specific requirements for containment and clean up of spills?
- It is a requirement of Order 2022-0103-DWQ that an Agency contain and remove the spill within the drainage conveyance system.
    1. The current SERP states that when the drainage conveyance system is **not** currently flowing with stormwater or urban runoff, the Agency will intercept the flow within the drainage facilities, using pipe plugs and/or sand bags.
    2. Does OCFCD have any concerns with the Agency entering its drainage conveyance system to contain the spill? It is OCFCD understanding that MOUs (or some written, formalized SOP) will be implemented in response to the reissued Order and these processes will be spelled out therein.
- Please verify that OCFCD agrees with the Agency's procedures for a spill that occurs **during a wet weather event**:
    1. Agency **will not** enter drainage facilities to contain the spill. Agree
    2. The Agency will concentrate on containing the spill on the street as best as possible. Agree
    3. The main focus will be to stop the spill and correct the cause of the spill such that the sewer system is functional, and the spill volume is minimized. Agree
- Please verify that OCFCD agrees with the following clean-up procedures. This is generally what the SERPs include. Does OCFCD have other specific requirements that the agencies should be aware of. Different for different facilities (channels/ retention basins)
    1. After the spill has been contained, the Agency will pump the sewage from the drainage facility, however earthen channel cleanup will be determined on a case-by-case basis. Agree
    2. The Agency will remove any solids from the drainage facility Agree

3. All wash water will be recovered and removed from the facility. Agree
4. Does OCFCD have any additional clean-up requirements?
    a. All equipment and materials related to the cleanup must be removed from County right-of-way prior to exiting the facility.
5. Are there any specific clean up procedures for spills entering pump station and retention basins?
    a. Notification shall be made to diversion and pump station operators in the chance that sewage may reach such a facility. (Locations and contact information will be provided in aforementioned MOU/SOP)

V. Water Sampling

- Order 2022-0103-DWQ requires water sampling for spills greater than 50,000 gallons discharged to a surface water.
    1. Does OCFCD have any alternate requirements?
        a. OCFCD does not have any additional sampling or monitoring requirements, however OCHCA should be consulted regarding the questions below.
    2. Are there different sampling requirements for spills in:
        a. Ocean
        b. Channel
        c. Retention Basin
        d. Pump Station Wet Well
- Order 2022-0103-DWQ requires the following constituents to be analyzed of the collected receiving water samples:
    a. Ammonia, and
    b. Appropriate bacterial indicator (Total Coliform Bacteria, Fecal Coliform Bacteria, E-coli, Enterococcus)
    c. Does OCFCD have other sampling requirements? No
- Order 2022-0103-DWQ requires the following receiving water sample locations
    a. Upstream of the spill within drainage conveyance system before point of discharge
    b. Point of discharge in the receiving water
    c. Upstream of the spill in the receiving water
    d. Downstream of the spill in the receiving water
    e. Does OCFCD have other location requirements? No

Email Correspondence

May 3, 2023

Orange County Flood Control District

Spill Emergency Response Plan

Correspondents: Tracy Ingebrigtsen, OCFCD, Countywide Compliance Program Manager
Kimberley Buss, OCFCD, Senior Environmental Resources Specialist
David Razo, OCFCD
Diann Pay, AKM Consulting Engineers
Jon Nitta, AKM Consulting Engineers
Adrian Hernandez, AKM Consulting Engineers

Subject: Responses to SSS SERP questions from AKM: 5/02/23

SWRCB Comments in Red

1. Please send over the GIS layers.
   a. *We will need to put in a request to OCSurvey's Geospatial Services, and likely will require a written request from the requesting water district or its assigned contractor.*
2. Please provide the contact for Orange County Health Care Agency.
   a. *Hisham Elmishad: helmishad@ochca.com*
3. We would like to clarify the definitions of "drainage conveyance system" and "surface waters" and how it relates to the Category 1 Spill. We think we understand what you are saying, but we just want to make sure because we talked to SWRCB staff and they define things a little differently from OCFCD and Region 8 staff.
   a. *The definition of a drainage conveyance system in the Order is in essence, a city's MS4. Further defined: a "catch basin" is considered to be the initial point of entry into an MS4. Thereby, when a spill enters a catch basin, it has entered the city's MS4.*
4. Who is supposed to prepare the MOUs and/or SOPs in-regards to containment in an OCFCD facility? Is it OCFCD or each agency?
   a. *This will be a collaborative effort, however OCFCD already has draft language started.*
   b. *Note: This will likely be discussed further at the May 3rd meeting with CWSP and the State;* "Agenda Item No. 2: Coordination with stormwater agencies – including how to maximize the use of stormwater conveyance systems as containment"
5. We would like to discuss further how containment and cleanup has been conducted during past spills into OCFCD facilities. Our clients have not actually experienced large spills that have entered OCFCD facilities.
   a. *This response was erroneously left off the AKM's initial request, first bullet after IV. Containment and Cleanup*
   Due to the vast number of variables related to pollution response, endpoints must be determined on a case-by-case basis, ensuring that containment and cleanup has been carried out to the maximum extent practicable.

6. We would like to discuss water sampling as well. Some of our clients have been under the impression that the county would do water sampling in the event of a large spill that reached OCFCD facilities. We would like to verify the procedures that need happen to make sure sampling is done properly and in a timely manner.

   a. *OCFCD does not carry out sampling or monitoring following an SSO. However, OC HCA will carry out monitoring wrt to its Ocean Recreational Waters program (eg. Closures, Posted Warnings, and Posted Advisory Warnings) as it is required of them.*

      OCFCD will work with its GIS team to obtain/share the following layers (likely with agencies with whom OCFCD has active MOUs related to their SERP). To be discussed further.

      - OCFCD storm drains
      - Local storm drains
      - Catch basins
      - Retention basins
      - Pump stations

Meeting Minutes

May 4, 2023
Orange County Flood Control District
Spill Emergency Response Plan

Attendees: Tracy Ingebrigtsen, OCFCD, Countywide Compliance Program Manager
Kimberley Buss, OCFCD, Senior Environmental Resources Specialist
Jonathan Humphrey, OCFCD, Environmental Resources Specialist
Diann Pay, AKM Consulting Engineers
Jon Nitta, AKM Consulting Engineers
Adrian Hernandez, AKM Consulting Engineers

Subject: Spill Emergency Response Plans – Coordination with OCFCD

A meeting to discuss Spill Emergency Response Plans for agencies within Orange County took place on May 4, 2023 via the Microsoft Teams platform. The following is a summary of the meeting's events and discussions.

1. Email Tracy and Kim to request GIS files of the Orange County stormwater facilities
2. OCFCD was under the impression that a spill that reached a catch basin was considered Category 1. Agreed though that the SWRCB staff did not say this at the May 3, 2023 Clean Waters Summit Partners webinar.
    a. If a spill reaches an infiltration basin, it will eventually get treated
    b. If a spill reaches a stormwater BMP (Best Management Practices), OCFCD considers it Category 1. They would want to remediate the spill within the facility and make sure the facility is not compromised.
        i. https://storymaps.arcgis.com/stories/1918b3a686bc434c8e22b22579829780
    c. Bioswale - spill can't infiltrate
    d. Lift station in a retention basin could be used to act as containment. This will be a case by case scenario, that depends on the size of the spill and volume of water in the retention basin.
    e. There are diversions, where dry weather flow (irrigation runoff, etc.) are diverted to sewers. OCFCD an provide shapefiles.
3. BMPs are mapped and tracked using a Stormwater Tool (online web based tool) but only agencies have access to it. It is not public information. Mainly south OC agencies have input data. Not many north OC agencies input data.
4. It is possible to maneuver trucks to a position to remove spill from a channel. It just depends on the situation.
5. OCFCD could do cleanup in their own facilities. There is an implementation agreement with 31 of the 34 OC cities (Not with Huntington Beach, Anaheim, or Newport Beach) for

stormwater pollution response. It is called the Water Quality Ordinance Implementation Agreement.

6. Notify OCFCD whenever spill reaches a storm drain
    a. Submit a Water Pollution Service Request at https://myoceservices.ocgov.com/ServiceRequest
    b. OCFCD staff will respond to give access to facilities if needed (i.e. locks that give access to channels)
    c. OCFCD will respond within 1 hour
7. OCFCD would like to know if agencies would rather change their municipal code or ordinances to ensure they possess legal authority to "collaborate with storm sewer agencies to coordinate emergency spill response" (Pg D-4 of WDR) or develop a MOU or SOP and sign agreement with OCFCD. They will check if any of the existing stormwater agreements have language that would comply with the new WDR.
8. Orange County Health Care Agency contacts
    a. Hisham Elmishad: helmishad@ochca.com
    b. Lauren Robinson: lrobinson@ochca.com
9. OCHCA labs are not open 24/7. Even their contract labs are not open 24/7. Agencies should check if OCSD or other municipal labs could be utilized.
10. OCHCA will take samples but it may not be as extensive as what the new WDR is requiring (4 specific locations)
11. Send OCFCD writeup for SERP? Confirm with clients that this will be ok.

Phone Call

May 24, 2023

Orange County Flood Control District

Spill Emergency Response Plan

Attendees: Tracy Ingebrigtsen, OCFCD, Countywide Compliance Program Manager
Kimberley Buss, OCFCD, Senior Environmental Resources Specialist
David Razo, OCFCD
Diann Pay, AKM Consulting Engineers
Jon Nitta, AKM Consulting Engineers
Adrian Hernandez, AKM Consulting Engineers

Subject: Spill Emergency Response Plans – Coordination with OCFCD

Report Comments

1. Section 1.5

In California, the NPDES Permit program is regulated by the nine (9) Regional Water Quality Control Boards (RWQCB) to regulate the discharge of pollutants into the waters of the United States. Enrollee operates under the Santa Ana RWQCB Order # R8-2009-0030, NPDES No. CAS618030, as amended by Order No. R8-2010-0062 (and subsequent permit renewals),*Waste Discharge Requirements for The County of Orange, Orange County Flood Control District and The Incorporated Cities of Orange County within the Santa Ana Region Areawide Urban Storm Water Runoff Orange County*.

2. Section 4-1.1

"Surface Waters" are defined by SWRCB staff as natural water bodies, including portions that were rerouted or channelized. OCFCD channels, creeks, and/or basins are therefore considered surface waters; this includes both concrete-lined channels as well as earthen bottom channels. If a spill reaches any of these OCFCD facilities, it will be considered a Category 1 Spill. Surface waters within the City's service area illustrated on Figure 4-1.

If a spill cannot be contained within the City's catch basin, regardless of whether water is flowing or not, the spill will be considered a Category 1 Spill. If however, the sewage can be fully contained and removed, and the impacted portion of the conveyance system cleaned and captured, and disposed of properly, the spill will be considered a Category 2, 3 or 4 Spill, depending on the volume.

3. Section 4-2.4

The Orange County Flood Control District (OCFCD) will be notified of any spill that reaches any type of drainage conveyance system and/or surface water, whether it is owned by the Enrollee or OCFCD. The drainage facilities considered surface waters within the Enrollee's service area are shown on Figure 4-1. This includes any spill that reaches a catch basin, storm drain manhole, or structural Best Management Practice (BMP) and has the potential to enter a drainage conveyance

system. Based on the information provided, OCFCD staff will determine the need for a site investigation or other actions to protect surface waters.

OCFCD and the Enrollee have entered into a Water Quality Ordinance Implementation Agreement, which allows OCFCD to act on behalf of the Enrollee in providing assistance with containment and cleanup of spills within the Enrollee's drainage conveyance systems. Written authorization (via email or text) is needed prior to OCFCD's response, in order to implement the Agreement.

The County has developed an on-line "Water Pollution" service request website for **all spills** that reach a drainage conveyance system and/or flood control facility. This online reporting may be conducted on a desktop computer or mobile device, and is the best way to notify OCFCD of a spill event. The City will be notified of the receipt of the spill report electronically to ensure that the online notification has been conducted appropriately.

4. Section 5-4.3

If the spill reaches an OCFCD facility/surface water, OCFCD will be contacted. The City will likely need OCFCD crews to access any of the nearby channels/surface water because the gates to the access roads are typically locked. Upon authorization of the Water Quality Ordinance Implementation Agreement (via email/text), OCFCD will send crews out to conduct containment and cleanup. City crews will coordinate with OCFCD and assist in any way possible.

5. Section 5-6.3

If the spill reaches a OCFCD facility/surface water, the City will coordinate the cleanup efforts with OCFCD and assist in any way possible. OCFCD maintenance staff will provide assistance with most spills. For larger spills and upon authorization of the Water Quality Ordinance Implementation Agreement by the City, OCFCD has three (3) on-call contractors that can assist with clean up services.

7. Section 6-2.4

Gutter Flow Method

The Gutter Flow Method can be used for estimating spill volumes in open channels such as ditches, curb and gutter, etc. The cross sectional area and the velocity of the flow in the channel is needed to use this method.

The cross sectional area is calculated as follows:

Curb and Gutter with V-Shape

Cross Sectional Area (ft^2) = (1/2) x Depth x Width

Rectangular Channels

Cross Sectional Area (ft^2) = Depth (ft) x Width (ft)

The velocity in the channel can be measured by dropping a small floating object (~~Ping pong ball~~ (Removed since it is not biodegradable) leaf, small piece of wood or paper, etc.) into the flow and timing how long it takes to travel a measured distance.

APPENDIX D-2

STATE WATER RESOURCES CONTROL BOARD

Email Correspondence

January 1, 2023
State Water Resources Control Board
Spill Emergency Response Plan

Correspondents: Steve Cheung, State Water Resources Control Board
Tracy Ingebrigtsen, OCFCD, Countywide Compliance Program Manager
Diann Pay, AKM Consulting Engineers
Jon Nitta, AKM Consulting Engineers
Adrian Hernandez, AKM Consulting Engineers

Subject: Spill Emergency Response Plans

SWRCB Comments/Responses in red.

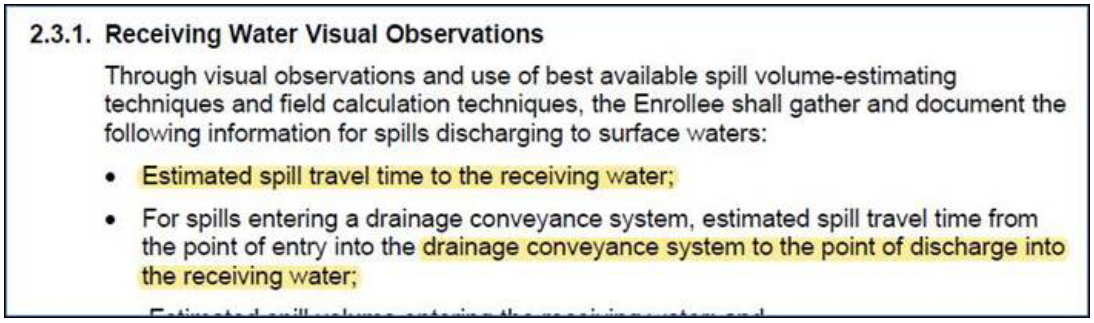
1. Spill Volume:
   a. Section 2-2 of Appendix E states:

> **2.2 Spill Volume Estimation**
>
> To assess the approximate spill magnitude and spread, the Enrollee shall estimate the total spill volume using updated volume estimation techniques, calculations, and documentation for electronic reporting. The Enrollee shall update its notification and reporting of estimated spill volume (which includes spill volume recovered) as further information is gathered during and after a spill event.

   b. In the past, AKM's clients have referred to the "Sewer Spill Estimation Guide", prepared by the Orange County Area Waste Discharge Requirements Steering Committee in 2014. Please see attachment. This is a very comprehensive document that provides many alternatives for volume estimation.

   c. What is "updated volume estimation techniques" referring to? Are there other specific methodologies that SWRCB would like included in an agency's Spill Emergency Response Plan documentation? If AKM references the "Sewer Spill Estimation Guide" prepared by the Orange County Area Waste Discharge Requirements Steering Committee, please reference that technique in any spill reporting.

2. Travel Time
   a. Section 2-3.1 of Appendix E states:



2.3.1. 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;

   b. Are the terms "surface waters", "receiving water", and " Waters of the State" all one in the same? Do they all refer to the same water? If not, what is the differences?

Receiving Water

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

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.

   c. Please verify that the statement "Estimated spill travel time to the receiving water" is the time the spill travels from the sewer facility (i.e. manhole) to Waters of the State, including travel time on the street/in the gutters? The spill travel time begins when the spill emerges from its origin point (i.e. a manhole, pipeline, etc.) all the way to a receiving water.

   d. Please verify that the second bullet point is referring to the time the spill travels within a drainage system alone to the Waters of the State. For example, from the time the sewage enters a catch basin until it reaches Waters of the State. Correct, it is from the point of entry into the drainage conveyance system.

   e. The travel times will vary with flowrate during dry weather and wet weather conditions. Is it SWRCB goal for these travel times to be estimated with Manning's equation and estimated flowrates? Are there other specific methodologies that the SWRCB has in mind for estimating the travel times? Provide the best estimate of time based on each respective situation of the when the spill occurred to when it reaches a receiving water.

3. Waters of the State
   a. Appendix A defines the following:

> **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.

   b. Water Code Section 13050 € provides the following definition:

> (e) "Waters of the state" means any surface water or groundwater, including saline waters, within the boundaries of the state.

   c. It is AKM's understanding that surface water includes ocean water, streams, lakes, drainage retention basins, groundwater and flood control channels. It is unclear, what drainage channels are considered surface waters and which facilities are not. AKM conducts work in southern California, primarily in Los Angeles and Orange County. Is there a list of facilities that SWRCB considers "Waters of the State" or "surface waters"?

      We do not have a list of facilities that identify which drainage channels are considered surface waters. If the drainage channel leads to a surface water or has the potential to lead to a surface water, then the Board needs to know about any spills that occur in those respective drainage channels.

Email Correspondence

March 7, 2023
State Water Resources Control Board
Spill Emergency Response Plan

Correspondents: Walter Mobley, State Water Resources Control Board
Steve Cheung, State Water Resources Control Board
Diann Pay, AKM Consulting Engineers
Jon Nitta, AKM Consulting Engineers
Adrian Hernandez, AKM Consulting Engineers

Subject: Spill Emergency Response Plans

SWRCB Comments in Red.

AKM Connents in Green

a. There is a definition of Waters of the State and receiving waters in Attachment A of the WDR. Please verify if AKM's definition of surface water is what the SWRCB understands surface waters to be:

   i. Water body open to the atmosphere (i.e. ocean, river, stream, lake, open channel). These would be examples of a receiving waters and waters of the State.

   ii. Would a small local open channel be considered a surface water, even if there is no flow in it? It would be considered a Category 1 spill if it has potential to flow to a surface water, even with no flow in it. For example, it the channel is dry but water is discharged into the channel and it has to the potential to reach a surface water, it would be considered a Category 1 spill if any of the discharge is left in the channel. You said it is Category 1 if sewage is left in channel. If sewage reaches a dry open channel and all sewage is recovered, then is it correct to say this is not Category 1 spill? Is the definition only dependent on whether or not the sewage is recovered? Or is any open channel (no matter the size or ownership) considered a surface water? We are looking for a clear definition of "surface water" because per the definition of Category 1 spill, if sewage reaches a "surface water", it is automatically a Category 1 spill. .

   The agencies we are working for own small local open channels that lead to regional channels and then to the major rivers or ocean. We are trying to figure out if all open channels are considered "surface waters". Or can the small local open channels fall under the category of "drainage conveyance system"? Then if sewage reaches these facilities and is captured, it is not a Category 1 spill.

   The drainage channel itself is not considered a surface water. If any discharge is left in a drainage conveyance channel that has the potential to reach a surface water would be considered a Category 1 spill. If it is fully recovered from the channel, then it would not trigger a Category 1 spill.

   Per the definition:

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

A 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.

Email Correspondence

April 19, 2023
State Water Resources Control Board
Spill Emergency Response Plan

Correspondents: Walter Mobley, State Water Resources Control Board
Steve Cheung, State Water Resources Control Board
Diann Pay, AKM Consulting Engineers
Jon Nitta, AKM Consulting Engineers
Adrian Hernandez, AKM Consulting Engineers

Subject: Spill Emergency Response Plans

SWRCB Comments in Red.

We are working on updating the SERP for several agencies in the Region 8 area. We are having difficulty in getting in touch with someone from the RWQCB Region 8, to discuss some of our questions. The following email was tried, several weeks ago without any response:

RB8SpillReporting@waterboards.ca.gov

Can you please provide an email address and/or phone number for a representative that we could communicate with.

You can reach out to Julio Lara down in Region 8.

Email: Julio.Lara@waterboards.ca.gov

Phone: 951-782-4901

Email Correspondence

May 5, 2023

State Water Resources Control Board

Spill Emergency Response Plan

Correspondents: Walter Mobley, State Water Resources Control Board
Steve Cheung, State Water Resources Control Board
Diann Pay, AKM Consulting Engineers
Jon Nitta, AKM Consulting Engineers
Adrian Hernandez, AKM Consulting Engineers

Subject: Spill Emergency Response Plans

SWRCB Comments in Red.

We have a question about who is allowed to submit and certify spill reports to the CIWQS database.

Per the definition of Data Submitter in Attachment A, it says “A Data Submitter does not have the authority of a Legally Responsible Official to certify reporting entered into the online CIWQS Sanitary Sewer System Database”. We interpreted that to mean that a data submitter could only submit draft spill reports because everything else uses the word “certify” as follows:

1. Certified Spill Reports for Category 1 and 2 Spills
2. Monthly Certified Spill Reports for Category 3 Spills
3. Monthly Certified Reports for Category 4 Spills
4. Annual Certified Reports for Category 4 and Lateral Spills
5. Monthly Certification for No-Spill Reports

The reason we ask is because if a LRO has to submit and certify all of the above listed reports, it means a very high level person might have to submit and certify “no-spill” reporting every single month. This may be a lot for some LROs so we wanted to be sure.

Thank you for your inquiry. The statewide Sanitary Sewer Systems General Order allows Data Submitters to enter data. The Legally Responsible Official is the only person that can certify submittals.

Email Correspondence

May 25, 2023
State Water Resources Control Board
Spill Emergency Response Plan

Correspondents: Walter Mobley, State Water Resources Control Board
Steve Cheung, State Water Resources Control Board
Diann Pay, AKM Consulting Engineers
Jon Nitta, AKM Consulting Engineers
Adrian Hernandez, AKM Consulting Engineers

Subject: Spill Emergency Response Plans

SWRCB Comments in Red.

One of our clients just certified continuation of coverage on CIWQS but said that he did not see a place where he could update or certify the LRO. In their case the LRO will be the same person as it was under the previous order. Do they need to complete the CIWQS "User Registration" form to re-register the LRO (https://ciwqs.waterboards.ca.gov/ciwqs/newUser.jsp)?

What if the LRO needs to change due to the new requirements? What should an agency do to make the change? Do they need to complete the CIWQS "User Registration" form and/or email ciwqs@waterboards.ca.gov per Section 5.1 of the new Order?

Thank you for your inquiry. If the LRO will continue to be the same person, they do not need to re-register to be the LRO under the reissued Order (Order 2022-0103-DWQ). If the LRO needs to be changed to meet the Order (2022-0103-DWQ) requirements, then they would need to follow the steps listed in the attached Frequently Asked Questions guidance document. You are correct, that the link is provided per section 5.1 of Order (Order 2022-0103-DWQ). The attached document will cover the steps necessary to register, I would suggest contacting CIWQS Help Center staff if/when errors occur, for clarifying questions contact me.

APPENDIX D-3

REGIONAL WATER QUALITY CONTROL BOARD

Email Correspondence

April 21, 2023

Regional Water Quality Control Board

Spill Emergency Response Plan

Correspondents: Julio Lara, Regional Water Quality Control Board Region 8
Walter Mobley, State Water Resources Control Board
Steve Cheung, State Water Resources Control Board
Diann Pay, AKM Consulting Engineers
Jon Nitta, AKM Consulting Engineers

Subject: Spill Emergency Response Plans

Email summary of meeting (April 20, 2023) between Jon Nitta (AKM) and Julio Lara (RWQCB Region 8)

Thank you for talking to me yesterday regarding Order 2022-0103-DWQ. I would like to follow up and verify what we had discussed, as some of the RWQCB Region 8 requirements seem to be more conservative than what AKM had understood from our meetings with Walter Mobley and Steve Cheung at the SWRCB.

AKM understands that RWQCB Region 8 is the governing body for the Orange County agencies, and it may have additional and/or more strict requirements than those included in Order 2022-0103-DWQ. Can you please verify the following:

1. According to our talk the RWQCB Region 8 defines a “surface water body” to includes all oceans, lakes, rivers, channels, county storm drain, city storm drains, etc . The curb and cutter and private v-channels would not be considered a surface water body. Basically, the street is the cutoff of where the surface water body begins.

    a. A spill that reaches any of these surface waters (including local catch basins and underground laterals and pipes) would be therefore considered a Category 1 spill (Per Region 8’s definition). This includes when these facilities are dry.

    b. If this is correct, that would mean that by definition, the SWRCB definition of “ Drainage Conveyance Systems” would also be considered “Surface Waters”. Order 2022-0103-DWQ defines the drainage conveyance system as follows:

2. The RWQCB Region 8 does not have a written requirement for agencies to notify the local health care agency in the event of a spill, but it is recommended.

    a. Notification procedures to the OCHCA for Spill Categories 1, 2, and 3 will be recommended for the SERP updates that we are developing for our Orange County agency clients.

Can you please review the summary of our discussion yesterday to verify that our understanding of the RWQCB Region 8 requirements are understood correctly. We would like to make sure we have the correct understanding before finalizing the SERP updates for our Orange County agency clients.

Please let me know if you would like to set up another meeting to discuss it in further detail.

Thank you again so much.

Email Correspondence

May 5, 2023

Regional Water Quality Control Board

Spill Emergency Response Plan

Correspondents: Julio Lara, Regional Water Quality Control Board Region 8
Diann Pay, AKM Consulting Engineers
Jon Nitta, AKM Consulting Engineers

Subject: Spill Emergency Response Plans

Email summary of meeting (May 4, 2023) between Jon Nitta (AKM) and Julio Lara (RWQCB Region 8)

I am working with Jon Nitta at AKM on various Spill Response Plans for our clients. Jon told me that the you two spoke yesterday and that you requested that we send over our definition of "surface waters" as it relates to Category 1 Spills so you could speak with SWRCB staff and your legal team about it and verify that we have the correct understanding.

AKM's primary goal is to update the Spill Emergency Response Plan (SERP) for our Orange County clients so that they are compliant and can be implemented by June 5, 2023, as required by Order 2022-0103-DWQ (Section 5.12).

The Order identifies Category 1 Spills as follows:

Category 1 Spill

> *A Category 1 spill is a spill of any volume of sewage from or caused by a sanitary sewer system regulated under this General Order that results in a discharge to:*
>
> *A surface water, including a surface water body that contains no flow or volume of water; or*
>
> *A drainage conveyance system that discharges to surface waters when the sewage is not fully captured and returned to the sanitary sewer system or disposed of properly.*
>
> *Any spill volume not recovered from a drainage conveyance system is considered a discharge to surface water, unless the drainage conveyance system discharges to a dedicated stormwater infiltration basin or facility.*

As requested, we are attaching a definition of surface water as we have understood from discussions with the SWRCB staff and webinars hosted by the Clean Water Summits Partners. Please verify that this definition of surface water is also acceptable to Region 8.

> *Surface waters are natural water bodies that include but are not limited to: oceans, rivers, streams, lakes, vernal pools, wetlands, and estuaries.*
>
> *If the natural water body or portions of it was rerouted or channelized (includes things like underground pipes, box culverts, concrete channels), it is still considered a surface water*
>
> *If it is water body is manmade and retains water (i.e. golf course pond, HOA lake), it is not a natural water body and therefore not surface water*

A retention basin is not a surface water, unless over time it became full of aquatic life and currently acts more like a natural water body

Groundwater is not a surface water

A local underground stormwater pipeline constructed to collect stormwater for street drainage is not a surface water

The Order does have a definition of Drainage Conveyance System (Attachment A – Definitions) as follows:

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.

The reason the definition of “surface water” and “drainage conveyance system” is so important is because it will be the difference between classifying a spill as Category 1 or Category 3. And there are more stringent monitoring and reporting requirement for Category 1 Spills than there are for Category 3 Spills. We want to be sure that we understand the definitions when updating the spill response plans so that our clients are clear on exactly how to categorize a future spill and what actions they are required to take.

If Region 8 agrees with the aforementioned definitions, it would mean that an agency could contain, remove, and cleanup a spill within an underground stormdrain pipe (drainage conveyance system) and categorize it as Category 3 instead of Category 1.

With the June 5, 2023 deadline rapidly approaching, we will need verification of the “surface water” definition according to Region 8 as soon as possible. Please let us know when we can expect to receive verification of the definition or if you need any further information from us.

Thank you so much.

APPENDIX D-4

ORANGE COUNTY HEALTH CARE AGENCY

Email originally sent to:

Hisham Elmishad & Lauren Robinson

Phone Call with Juan Anzora - notes

May 5, 2023

Orange County Health Care Agency

Spill Emergency Response Plan

Correspondents: Hisham Elmishad, Orange County Health Care Agency
Lauren Robinson, Orange County Health Care Agency
Juan Anzora, Orange County Health Care Agency
Diann Pay, AKM Consulting Engineers
Jon Nitta, AKM Consulting Engineers

Subject: Spill Emergency Response Plans

OCHCA Comments/Responses in red.

AKM Consulting Engineers got your contact information from Tracy Ingebrigtsen and Kimberley Buss at Orange County Flood Control District (OCFCD). We met with them yesterday to discuss the new Statewide Sanitary Sewer Systems General Order 2022-0103-DWQ (Order) which requires sewer agencies to update their Spill Emergency Response Plans (SERP) and specifies new notification, monitoring, reporting, and record keeping requirements. We have several questions/verifications that OCFCD wanted us to direct to the health care agency. The questions/needed verifications are as follows:

1. Verification of when Orange County Health Care Agency (OCHCA) needs to be notified of a sewer spill. Many of our agencies have told us that they notify OCHCA when the spill occurs on private property, especially in a commercial area.
    a. Under what other conditions would OCHCA want to be notified?
        - Recommend contacting OCHCA for any spill except maybe a private residential spill that is contained.
        - Even report the spill on the street that is cleaned up.
        - OCHCA keeps a spill log.
        - They would rather be safe than sorry basically. Err on the side of caution. We should recommend agencies always notify them and let OCHCA decide if they want to come out and investigate.
    b. Is notification dependent spill size? No
    c. Is there an ordinance or code that details the requirement? If so, please provide a copy or link to the code.

- Not necessarily a code specifically for OCHCA. Referred to California Health Codes
- California Health and Safety Code
    i. Public Beach Sanitation – Section 115875-115915
    ii. Ocean Water Contact Sports Areas – Section 116070-116090
    iii. Sewage and Other Wastes – 5410-5416
- California Code of Regulations title 17
    i. Ocean Water Contact Sports Areas – Section 7956-7962

2. Verify contact information for reporting a spill to OCHCA. All numbers below are correct. Calling is the only way to report a spill
    a. General Reporting (714) 433-6000
    b. Office Staff (714) 433-6419
    c. After Hours (714) 628-7008
    d. Is there any other way for an agency to report a spill to OCHCA?
3. Some of our clients have been under the impression that OCHCA would do water sampling in the event of a large spill that reached OCFCD facilities or the ocean. Is this correct? If so, we would like to discuss how sampling is done and if it would meet the requirements of the new Order.
    - OCHCA only samples and monitors waters if spill reaches the bay or ocean. They don't sample in all OCFCD facilities.
    - Juan reviewed the Order and he thinks their current procedures may already cover the sampling and analysis requirements if the spill reached the ocean or bay. But he thinks they will have to do further review and make sure that they comply with the new Order in the future.

APPENDIX D-5

ORANGE COUNTY SANITATION DISTRICT

Email Correspondence

April 21, 2023
Orange County Sanitation District
Spill Emergency Response Plan

Correspondents: Dindo Carillo, OCSD
Diann Pay, AKM Consulting Engineers
Jon Nitta, AKM Consulting Engineers

Subject: Spill Emergency Response Plans

OCSD Comments/Responses in red.

I am with AKM Consulting Engineers in Irvine. We are working on updating Sewer Emergency Response Plans for several of our clients in Orange County. We were listening in to the Clean Water Summit Partners webinar this week and heard your very informative talk. We thought maybe you could help us answer a question or refer us to someone who could help. Our question is whether or not OCSD could provide water sampling and analysis after a spill event. As discussed at the webinar, it is not always easy to find a laboratory that is ELAP certified and operates 24/7 so that they can respond with 18 hours of notification of a spill. We are wondering if OCSD has agreements with any of the local agencies to provide the sampling and laboratory services required by the WDR Order or if there are any future plans to develop this type of agreement/relationship with agencies.

Please let us know if you have any information or could refer us to someone else at OCSD. We would appreciate your response and would also be willing to get on a call if needed.

Generally, OC San does not provide these laboratory services: taking samples and analyzing water quality samples. However, we have partnered with other agencies during special projects to provide these services.

APPENDIX D-6

SOCAL WASTE DISCHARGE REQUIREMENTS GROUP

Meeting Minutes

May 18, 2023
So Cal WDR Group
Spill Emergency Response Plan

Speakers: Dindo Carillo, Orange County Sanitation District
Kimberly Buss with Orange County Flood Control District

Attendees: Diann Pay, AKM Consulting Engineers
Jon Nitta, AKM Consulting Engineers

Subject: Order WQ 2022-0103-DWQ Statewide Waste Discharge Requirements

Location: Buena Park City Yard (6955 Aragon Circle, Buena Park, CA 90620)

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1. A couple of the major changes in the Spill Response Plan requirements is the addition of Category 4 Spill and coordination with stormwater agencies
2. Dindo proposes to consider creating a working group to draft language for SERPs regarding agency ordination, mutual aid, etc.
3. Kim Buss, NPDES Compliance with OCFCD
    a. Current Stormwater Orders requires
        i. 24/7 on-call responders – help control SSOs
        ii. 24/7 access to MS4 facilities
        iii. Limit infiltration/seepage of sewage
        iv. Prevent illicit discharges
    b. OCFCD wants to know any time sewage enters a catch basin, for tracking purposes and studies. Notify of any volume into a catch basin.
    c. WDR Order D.3 Legal Authority requires agencies to “demonstrate necessary legal authority to: collaborate with storm sewer agencies to coordinate emergency spill responses….”.
    d. OCFCD will get GIS data out to all agencies
    e. It is preferred that agencies submit on-line Water Pollution Service Request on the Myoceservices website. This request will go to responders immediately.
        i. Click “Water Pollution”
        ii. Drop pin or put address of spill
        iii. Click “Next”
        iv. Fill out information using drop downs

v. Will receive an email response that request is received

f. If immediate assistance is needed, also use phone numbers
    i. Business Hours (714) 955-0600
    ii. After Hours (877) 897-7455 – goes to Control1
g. Can still call Control1 and submit report via email afterward as well
h. For Category 1 and maybe Category 2 spills – OCFCD response
    i. Assessment upstream
    ii. ID diversions, retention basins
    iii. Provide containment
    iv. Site access
    v. Additional cleanup resources – OCFCD crew and contractors
    vi. Determine cleanup end points
    vii. Response in accordance with County Illicit Discharge Detection & Elimination (IDDE)

APPENDIX D-7

CLEAN WATER SUMMIT PARTNERS

Webinar Notes

March 22, 2023

Clean Water Summit Partners Webinar

Spill Emergency Response Plan

Speakers/Hosts: Mary Cousins (Bay Area Clean Water Agency)
` Walter Mobley (SWRCB)
Afrooz Farsimidan (SWRCB)
Jared Voskuhl
Michael Flores (CWEA and HDR,inc)
Andy Morrison (AM Consulting)

Walter Mobley (SWRCB) presentation

Topic: Spill Emergency Response Plan Requirements in Reissued Order

1. Waters of State - includes groundwater.

   Water of U.S. - surface water managed federally.
2. First annual report due date is 4/1/24
3. Local utility agency coordination is important
4. Lab contracts should be secured
5. Training is part of “implementation” and should be done before 6/5/23
6. Lateral spills
   a. Report on monthly basis “yes/no”
   b. Report total lateral spills annually
7. Category 1 – to surface water; percolate to groundwater is not considered Category 1
8. Updated SERP not required to upload to CIWQS
9. Reenroll and update current SERP
10. Update and implement SERP ASAP
11. If SSO reaches groundwater, considered spill and must be reported
12. If spill reaches a retention basin, not Category 1 if stopped there. So, retention basin must not be considered surface water.
13. Category 3 – provide details of each spill
14. Category 4 – total the spill sin reporting; simplified
15. Inform regional board of private spills occurring chronically. Board will decide on action to take.

Michael Flores presentation (CWEA and HDR,inc)

Topic: Spill Emergency Response Plan Update

1. Annual certification plan up to date 4/1/24
2. Create a process to review performance statistics annually
3. Search Basin Plan for Orange County if you need to know "beneficial uses" for water bodies in Orange County

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Andy Morrison presentation (AM Consulting)

Topic: Spill Emergency Response Plan Implementation

1. Need map of "drainage conveyance systems" and "surface waters"
2. Verify if lab is ELAP certified and can meet the 18-hour water quality sampling requirement that is now required after a large spill. It is 18-hours to get sample, not analyze it.
3. Could contract with a municipal lab (i.e. LBWD WRP and IRWD)
4. SERP can be in SSMP or stand-alone but might be best stand-alone since it is now required to update annually
5. Photographs apply to all category spills
6. It doesn't matter where spill shows up but where the blockage originates (i.e. where the problem is). If in municipal system, it becomes a category spill. If in private system, it is a private or lateral spill.
7. Ask storm agency what facilities they have in area. Do they lead to groundwater or surface waters?

Video recordings and slide from January 11th webinar are available here:

Speaker Presentations – California Association of Sanitation Agencies (casaweb.org)

FAQs document (Q&A)

2023.03.20 CASA SSO WDR FAQ Index.xlsx (sharepoint.com)

CWEA training videos will be posted on SSO Program website

Another training May 3, 2023 – hopefully the forms will be completed and shown

Webinar Notes

May 3, 2023

Clean Water Summit Partners Webinar

Spill Emergency Response Plan

Speakers/Hosts: Mary Cousins (Bay Area Clean Water Agency)
Diana Messina (SWRCB)
` Walter Mobley (SWRCB)
Jared Voskuhl
Steve Jepsen (SCAP)
Bryan Evans (Dudek)
Dindo Carillo (OCSD)

Diana Messina (SWRCB)

Topic: Immediate Compliance Requirements for Existing Enrollees

Topic: Spill Categories and Minimizing Violations

1. Cleanup should be per storm water agencies and NPDES permits
2. Pre, during, and post coordination with storm drain agencies
3. LRO – Call CIWQS help desk for form to change LRO if needed
4. If spill goes to GW, not Category 1. It is a violation of 4.2 but not 4.1. Not a surface water.
5. Only way to check if agency is recertified is to have agency check CIWQS
6. Surface water = natural water body

   If the natural water body was rerouted or channelized, it is still surface water

   Retention pond is not surface water unless over time it became full of aquatic life and more like a surface water
   If it is manmade and retains water, it is not a natural surface water

Dindo Carillo (OCSD)

Topic: Changes to Spill Field Reporting Forms

1. Number field report same as CIWQS report
2. Multiple photos are required
3. Work with health care agency or whoever has jurisdiction of surface waters
4. Identify if 1000 feet from surface water intake locations
5. Identify GW infiltration basin locations

Bryan Evans (Dudek)

Topic: Sewer Spill Monitoring

1. Basin Plan dictates indicators to test for
2. Holding time is 6 hours on ice; sample must get to the lab in 6 hours after taken
3. Plan for potential monitoring locations
4. MS4 is a municipal separate stormwater system
5. Water Quality Basin or Monitoring Plans
    a. Will have maps and GIS
    b. Monitoring locations
    c. Sewershed within watershed
    d. Overlay mapping

Video recordings and slide from January 11th webinar are available here:

Speaker Presentations – California Association of Sanitation Agencies (casaweb.org)

https://casaweb.org/resources/speaker-presentations/

Guide for CIWQS actions needed immediately

Guidance for Uploading an Existing Sewer System Management Plan in the California Integrated Water Quality System (CIWQS)

FAQs document (Q&A)

2023.03.20 CASA SSO WDR FAQ Index.xlsx (sharepoint.com)

Clean Water Summit Partners provided the FAQ document that summarized questions regarding Waste Discharge Requirements from January 2023 to April 2023

Appendix D-7: Clean Water Summit Partners (FAQ)

Q&A Reference Number	Question	Question Date	Answer	Answer Date	Relevant Links
1	What is the statewide "Reissued General Order" and where can I get a copy?		The State Water Board reissued an updated statewide Sanitary Sewer Systems General Order, that will fully replace the existing statewide General Order 2006-0003-DWQ and the existing Monitoring and Reporting Program Order 2013-0058-EXEC, in their entirety. The official statewide General Order can be found linked on the Sanitary Sewer Systems Order Program web page.	1/6/2023	Here
2	When does the Reissued General Order become effective?		The Reissued General Order becomes effective on Monday June 5, 2023. As of this date, the previously existing Orders are officially rescinded.	1/6/2023	
3	How do I continue my existing Enrollee regulatory coverage under the statewide General Order?		See Section 2 of the statewide General Order. The General Order provides a streamlined electronic continuance of existing regulatory coverage for sanitary sewer system owners that are currently enrolled in Order 2006-0003-DWQ, that affirmatively choose to continue regulatory coverage. Note that the streamlined continuance of regulatory coverage is only available to existing Enrollees during the time period of April 5, 2023 through June 4, 2023. Existing enrollees that do not continue regulatory coverage through the established streamlined process by the end of June 4, 2023 will lose regulatory coverage and must proceed through the formal Order application procedure to obtain new regulatory coverage.	1/6/2023	
4	How do I stay updated on the upcoming compliance dates per the statewide General Order?		All existing Enrollees should make sure the contact information for the Legally Responsible Official(s) and Data Submitters, currently in the online California Integrated Water Quality System (CIWQS) is up to date. State Water Board staff will be issuing informational notices through the CIWQS contact information to assist existing Enrollee comply with upcoming requirements and due dates.	1/6/2023	
5	How do I find out the due dates for submitting Sewer System Management Plans and Audit Reports into CIWQS?	1/11/2023	Section 5.4 and Attachment E1, Section 3.10 of the General Order specify the end of the three-year audit period and the audit report due date. *Audit period starts after the end of the Enrollee's last required audit period. Audit reports must be submitted into CIWQS within six months after the end of the 3-year audit period.* Section 5.5 and Attachment E1, Section 3.11 of the General Order specify the Sewer System Management Plan update due dates. The update schedule continues the schedule established in Order 2006-0003-DWQ based on the population served. State Water Board staff created a tool on the Sanitary Sewer Systems General Order program web page to assist enrollees look up their system's audit and Sewer System Management Plan due dates by entering the WDID number. Please see the link provided in the Links column.	1/10/2023	

Appendix D-7: Clean Water Summit Partners (FAQ)

Q&A Reference Number	Question	Question Date	Answer	Answer Date	Relevant Links
6	I have already started the process of helping agencies change their existing OERP into the new SERP and have run into one glaring difference (SBUs Sewer Backups). In the 2006 WDR the definition of a Sanitary Sewer Overflow included this language "Wastewater backups into buildings". The new Order does not include anything wastewater in buildings in the definition of a Spill. So it appears that Sewer Backups into buildings (like a house) and stays in a building are not considered a Spill effective June 5, 2023. Is that correct? This question is about a backup into a building, not about a spill from a lateral, it is clear that a spill out of a lateral and is caused by a failure in the sanitary sewer system is considered a spill.	1/11/2023	Thank you Andy for working so closely with field professionals to understand the details of the reissued Order. The short answer to your question is "Yes", as a backup of sewage due to a cause in the Enrollee's system, to a private building is an exiting of sewage from the system. Let's walk through the different elements of the reissued Order during the Q&A session, for us all to understand how to properly monitor and report a fully contained spill into a building.	1/11/2023	
7	If existing SSMP is already uploaded, do we need to re-upload it by June 5th, or only ensure that is uploaded already?	1/11/2023	If the existing SSMP is already uploaded, simply go into CIWQS before June 5th to make sure it is fully uploaded. No need to re-upload. :)	1/11/2023	
8	If the Legally Responsible Official will change soon, can you still apply for continuation of coverage?	1/11/2023	Yes! The streamlined electronic continuation of coverage is for the existing Legally Responsible Official (under the existing Order) to certify. Since the open window for continuance of coverage is prior to the reissued Order effective date, the existing Order is still in effect, meaning that the existing Legally Responsible Official qualifications are still in effect.	1/11/2023	
9	Dose a local agency need to issue new resolution or ordinance for order 2022-0103 by the council?	1/11/2023	No. The reissued Order does not place a requirement on a local agency to issue new resolutions/ordinances.	1/11/2023	
10	Can we have more than one LRO?	1/11/2023	Yes! An Enrollee may have more than one Legally Responsible Official as long as each Legally Responsible Official meets the qualifications in the reissued Order.	1/11/2023	
11	Question is on due dates of audits. Once the new order goes into effect do we follow the audit and SSMP update schedule of the new order regardless of our previous schedule? There would be 3 years and 4 years between my audits under the new order.	1/11/2023	Per the reissued Order, an audit time period is three years after the last audit due date. Therefore the next audit period is the three years after the last audit due date. The corresponding audit report is due 6 months after the 3-year audit period.	1/11/2023	
12	August 2, 2025 is a Saturday. I'm expecting that the SSMP update due on that date can be submitted on Monday, August 4, 2025. Please confirm. Thank you.	1/11/2023	For this scenario, as staff, we recommend that you have your required submittal uploaded by the Friday August 1st, to avoid CIWQS automated trigger of a reporting violation.	1/11/2023	

Appendix D-7: Clean Water Summit Partners (FAQ)

Q&A Reference Number	Question	Question Date	Answer	Answer Date	Relevant Links
13	If a plan update was late, or not completed, does that change the new required plan update?	1/11/2023	The required due dates in the reissued Order are regulatory due dates established by the State Water Board. An Enrollee's action such as late submittal or no submittal of a required item, does not change a regulatory due date. Also note that CIWQS is being enhanced to electronically identify reporting violations. Therefore, the tracking of violations will be electronic.	1/11/2023	
14	Will service area boundary map be a separate uploaded document or part of the SSMP?	1/11/2023	Yes, the electronic service boundary map is not an SSMP element (Attachment D of the Order), and therefore not part of the SSMP. The uploading of the service boundary map is separate.	1/11/2023	
15	According to a conversation with Dianna it is.	1/11/2023	Yes, the electronic service boundary map is a separate document uploaded in a separate function of the CIWQS system. The electronic service boundary map is not an item of the SSMP eleven elements. The required elements of the SSMP are shown in Attachment D of the Order.	1/11/2023	
16	Is collection system maintenance certification going to be mandatory	1/11/2023	No. The reissued Order does not contain requirements pertaining to operator certification.	1/11/2023	
17	how do we add a new data submitter in CIWQS?	1/11/2023	Section 5.1 of the Order: The Legally Responsible Official shall authorize the designation of Data Submitter(s) through the online CIWQS database (https://ciwqs.waterboards.ca.gov) prior to the individuals establishing a CIWQS user account (https://ciwqs.waterboards.ca.gov/ciwqs/newUser.jsp) and entering spill data into the online CIWQS Sanitary Sewer System Database.	1/11/2023	
18	Do SSMP audits have to be uploaded in CIWQS?	1/11/2023	The audit report, which is due within 6 months after the 3-year audit period, must be uploaded into CIWQS.	1/11/2023	
19	To summarize, the 2022-0101 Reissued Order combines requirements from both the 2006 Order and the 2013 amended MRP into one consolidated document?	1/11/2023	No. The reissued Order 2022-0103-DWQ "replaces" the 2006 Order and 2013 amended MRP - the reissued Order does not combine the previous Orders. The 2006 and 2013 Orders will no longer be in effect as of June 5, 2023. This is an important distinction because certain spill reporting has been reduced and other items have been removed/added.	1/11/2023	
20	Will a template be provided for the requirement to submit the Geospatial data or can we simply submit through our GIS?	1/11/2023	Yes, the specifications for the electronic service boundary maps will be posted on the State Water Board, Sanitary Sewer Systems General Order webpage by June 5, 2023.	1/11/2023	
21	This is a enormous change for agencies. Does the state provide assistance to agencies to update their OERP and response, mitigation, and reporting requirements? Can this support be onsite?	1/11/2023	Unfortunately, the State Water Board's Division of Financial Assistance does not provide this type of funding.	1/11/2023	
22	Where would be the designation for agencies to upload the Boundary map?	1/11/2023	Note that, per the reissued Order, there is a 6-month period in which the electronic service boundary maps are to be uploaded. This specific window of time purposely manages the numerous uploads to ensure that all technical difficulties can be addressed.	1/11/2023	

Appendix D-7: Clean Water Summit Partners (FAQ)

Q&A Reference Number	Question	Question Date	Answer	Answer Date	Relevant Links
23	Attachment E2 Table E2 5 - Enrolle owned and operated lateral spills , can you specify are these laterals hooked up to a collection system?	1/11/2023	Yes, these are laterals connected to the Enrollee's sanitary sewer system. What other laterals are you referring to that are not connected to the main system?	1/11/2023	
24	When does the Sewer Blockage Control Plan need to be prepared and implemented?	1/11/2023	The Sewer Blockage Control Plan is an element of the SSMP. All elements of the SSMP, including the Blockage Control element, are to be addressed in the SSMP update, with the exception of the Spill Emergency Response Plan. Therefore, the Sewer Blockage Control Plan element must be updated with the SSMP update.	1/11/2023	
25	What about privately owned lateral? Residential laterals on private property?	1/11/2023	live answered	1/11/2023	
26	If a industrial waste is spilled, we are required to enforce the new Order and update CIWQS right? So something like water treatment brine waste and managing that spill.	1/11/2023	The current and reissued Order pertains to the enrolled sanitary sewer system. If the industrial waste spill is from the enrolled sanitary sewer system, then the requirements in the Order apply.	1/11/2023	
27	Re: Backup into Building If I understood Diana that a BU into building should be reported as a spill category and not a lateral spill, it is somewhat confusing since a lateral spill would eminate from either a building cleanout or property line cleanout which are both privately owned. So it would seem that a building backup would also be reported as a lateral spill.	1/11/2023	If and how a spill due to a lateral backup into a home depends on the cause of the backup. If the cause of the backup is in the enrolled sewer system, then spill is to reported as a category spill (see corresponding statement in description of categories in reissued Order). If cause is in an Enrollee owned/operated lateral (per definition in Attachment A), then the spill must be reported as a lateral spill. If the cause of the spill is from the portion of the lateral that the Enrollee is not responsible to maintain, then the Enrollee is not required to report the spill.	1/11/2023	
28	Dianna, would your backup into structure response be the same if the blockage is in a public lateral resulting what the occupant(s) are putting down the system backing up and/or overflowing other fixtures or drains? Thus no sewage going up the lateral from the main sewer.	1/11/2023	As discussed during the Q&A session, if the cause of back ups is due to a failure in maintenance or infrastructure of the enrollee owned lateral, then it is a spill. If due to occupants being irresponsible of what is flushed into the lateral, this is not an Enrollee-cause spill. However, the Enrollee may want to provide education to its lateral users before the situation turns into an Enrollee lateral maintenance issues.	1/11/2023	
29	Is there a notication of updates due .	1/11/2023	When the Legally Responsible Official logs into CIWQS to certify continuation of coverage, they can see the system's next annual report and next Sewer System Management Plan update due dates.	1/11/2023	
30	Question on Audits: The audit due date on May 2, 2024, is for the audit years of 2021, 2022, and 2023. Can you please confirm is this is correct?	1/11/2023	Correct. May 2, 2024 is the end of the three year audit period starting on May 2, 2021. The audit report is due within six months after the end of the audit period. The report is due on November 2, 2024.	1/19/2023	
31	Just to clarify, we do not have to report individual lateral spills that are not cat 1 spills? Just a yearly report due by Feb 1st?	1/11/2023	That is correct. However, per Section 3.7 of the General Order, the Enrollee is required to monthly certify in CIWQS if the system had Non-Category 1 Lateral Spills.	1/19/2023	

Appendix D-7: Clean Water Summit Partners (FAQ)

Q&A Reference Number	Question	Question Date	Answer	Answer Date	Relevant Links
32	Is there a template or additional guidance for the appropriate digital format of the annual certified report for the cat 4 and/or lateral spills?	1/11/2023	The State Water Board is not providing a template or guidance documents. Industry associations may provide additional guidance documents.	1/19/2023	
33	Our organization owns from the lower portion of the sewer lateral which is from property line to the Sewer Main. If the blockage is within District owned pipeline and spills within	1/11/2023	If a spill out of a lateral is caused by a failure or blockage in the sanitary sewer system, the sanitary sewer system enrollee is responsible for the spill and must clean up and report per spill category requirements.	1/19/2023	
34	What is the appropriate category for the following SSO: A spill, a portion of which enters a dry earthen roadside drainage ditch, and does not make it to any pipes or surface	1/11/2023	If the spill is not fully captured, it is a Category 1 spill. If the spill is fully captured, depending on the volume of the spill, it must be reported as a Category 2, 3, or 4 spill.	1/19/2023	
35	How about if the spill is due to a blockage upstream of the property line? who is responsible for ceanup and does it have to be reported? TIAfor the clarification	1/11/2023	If a spill out of a lateral is caused by a failure or blockage in the sanitary sewer system, the sanitary sewer system enrollee is responsible for the spill and must report per spill category requirements.	1/19/2023	
36	If the agency's pump stations are maintained and operated by a mechanical section does the WDR require the LRO to be a person in the organization over both the maintanence and collections?	1/11/2023	Yes. The General Order includes pump stations as part of the sanitary sewer system. The Legally Responsible Official must have responsibility over management of the Enrollee's entire sanitary sewer system	1/19/2023	
37	Will the written Q&A be captured some how in the recorded webinar? I'm missing some of this and would like to review at a later date.	1/11/2023	Yes	1/19/2023	
38	The definition of a Category 2 spill in section 5.13.1 says 1,000 gallons or more that does not discharge to a surface water. Table E2-2 includes a notification requirement for Category 2 spills to notify CalOES within 2 hours if the spill is discharging or threatening to discharge to waters of the state. Why is this there for category2 spills? If a spill is threatening to discharge or is discharging to waters of the state, aren't they category 1 spills, not category 2?	1/11/2023	California Water Code requires CalOES notification for spills of larger than 1000 gallons to waters of the State which includes surface waters and the ground water. Therefore CalOES notification applies to Category 2 spills defined as spills of 1000 gallons or greater to a water of the State. A Category 1 spill is a spill to a surface water.	1/11/2023	
39	Walter, can you provide the current FAQ sheet to add a data submitter in the current system.	1/11/2023	Yes, Walter provided the CIWQS Frequently Asked Questions document to the Summit Partners for distribution.	1/11/2023	

Appendix D-7: Clean Water Summit Partners (FAQ)

Q&A Reference Number	Question	Question Date	Answer	Answer Date	Relevant Links
40	The Notification requirement for Spill Category 2 (Table E2-2) doesn't seem appropriate as the definition of a Spill Category 2 is spills of 1,000 gallons or greater that DO NOT discharge to surface waters. So it would seem that the Notification requirement should be modified to just say that if the "spill is threatening to discharge" and delete "discharging or"..	1/11/2023	CalOES notification is for spills of 1000 gallons or greater that discharges or probably will discharge into a water of the State.	1/19/2023	
41	What is considered visual monitoring?	1/11/2023	Please see Attachment E1, Section 2.1. Visual monitoring is visually assessing the spill location and spread using photography, GPS and other available tools.	1/19/2023	
42	For reporting purposes, what is considered a business day? (this is for people working alternate schedules)	1/11/2023	A business day is any day except Saturday, Sunday and official holidays.	1/19/2023	
43	If there is multiple LROs in your agency does each one need to Certify Continuation of Existing Regulatory Coverage? On the slide I see where the LRO and update info on Data submitters but not additional LROs.	1/11/2023	Only one LRO needs to certify the continuation of coverage for the system.	1/19/2023	
44	Per the new order, is Region 9 still madandated to report Private Sewer Lateral Spills?	1/11/2023	Yes. This General Order does not prohibit a Regional Water Board from issuing a region-specific Order.	1/19/2023	
45	Re Building Backup - Additional information : The cause of the building backup is caused by a blockage in the lower lateral or sewer main (both Enrollee owned in our case). Would Building Backup be reported as a spill category or lateral spill. If to be reported as a spill category, why is this different that	1/11/2023	A spill out of a lateral that is caused by a failure or blockage in the sanitary sewer system must be reported per the appropriate spill category because the cause of the spill was not due to a failure in the private portion of the lateral. If the cause of the spill is from the portion of the lateral that the Enrollee is not responsible to maintain, then the Enrollee is not required to report the spill.	1/19/2023	
46	In the old Order, the audit due dates were every two years, and the date of the old Order iwas 2006, so audits were due in even-numbered years. So why, with the audit now due every three years, is the first audit under the new Order due in 2024?	1/11/2023	Per the 2006 Order, audits were due every two years after the Sewer System Management Plan certification. The reissued Order continues the schedule for the Sewer System Management Plan update and audit established in the 2006 Order.	1/19/2023	
47	Can you clarify Element 7 in the SSMP requirement for "evaluation of whether a program is needed" assuming it is; are the program elements required to be documented within the SSMP Section 7, or a separate plan? The "program" elements can be described within the SSMP itself?	1/11/2023	The language in element 7 refers to the need for a sewer pipe blockage control program.	1/19/2023	
48	Clarification - I don't believe the audit reports ever had different deadlines based on system size, unlike the SSMPs.	1/11/2023	Correct. Audit schedule per the 2006 Order was not based on the population, but the Enrollee was required to audit their Sewer System Management Plan every two years.	1/19/2023	

Appendix D-7: Clean Water Summit Partners (FAQ)

Q&A Reference Number	Question	Question Date	Answer	Answer Date	Relevant Links
49	For clarification everyones due date clock resets with the adoption for audit and re-certification.	1/11/2023	Sewer System Management Plan updates and audit schedules continue the previous Order schedules.	1/19/2023	
50	How many years do you need to keep the audit paper work?	1/11/2023	all records must be maintained for 5 years	1/19/2023	
51	If operator input is required on the audits.Why do operators not need be certified?	1/11/2023	The existing Order does not require operator certification. Therefore, the reissued Order maintains the existing.	1/19/2023	
52	I thought the first presentation indicated no updates would be required to the Plan prior to June 5, 2023, but just that your existing SSMP needed to be uploaded by then?	1/11/2023	That is correct.	1/19/2023	
53	So a category 2 spill does not discharge to surface water, but if it discharges to groundwater then it's considered as discharging to waters of the state so the reporting requirement to CalOES kicks in? And category 1 spills only apply to discharges to surface water, not to groundwater?	1/11/2023	Section 5.13.1 of the General Order defines Category 2 spill as a spill of 1,000 gallons or greater, from or caused by a sanitary sewer system regulated under this General Order that does not discharge to a surface water. CalOES notification is for spills of 1000 gallons or greater that discharges or probably will discharge into a water of the State. Correct. A Category 1 spills is any volume of spill to a surface water.	1/19/2023	
54	Sampling is within 18 hours of spill, not 12 hours (a change made on day of hearing 12/6/22)	1/11/2023	That is correct. Receiving water sampling for Category 1 spills of 50,000 gallons or greater is 18 hours after the Enrollee's knowledge of a potential discharge to a surface water.	1/19/2023	
55	I beleve sampling changed from 12 hours to 18 hours, correct?	1/11/2023	That is correct. Receiving water sampling for Category 1 spills of 50,000 gallons or greater is 18 hours after the Enrollee's knowledge of a potential discharge to a surface water.	1/19/2023	
56	Will the format of the graphical metrics be standardized?	1/11/2023	CIWQS will generate system performance analysis graphs. The Enrollee shall include the CIWQS-generated graphs in its Annual Report (Section 5.11 of the Order).	1/19/2023	
57	Seems like the Boundary map should be established by the Local Agency Formation Commission (LAFCO). Why not get the map from them?	1/11/2023	The Order requires the Enrollee to upload a spatial map of the service area boundary per the Specifications that the State Water Board will provide. If the LAFCO boundary map meets the Order specifications, the Enrollee may submit those maps.	1/19/2023	
58	Is the agency's boundary generally coterminous with it's boundaries (for example City limits) or is it the boundary of all parcels that are served by the current sewer system?	1/11/2023	Service Area Boundary Map must show the boundary of the area that the enrollee provides sewer service to. The boundary map does not have to show all parcels served by the sewer system. By June 5, 2023, specifications for the electronic sanitary sewer service area boundary map format will be provided on the statewide Sanitary Sewer Systems Order program website.	1/19/2023	
	But Element 6 must be retitled to Spill Emergency Response Plan and		Element 6 does not need to be updated until the next SSMP update is due.		

Q&A Reference Number	Question	Question Date	Answer	Answer Date	Relevant Links
59	updated prior to June 5, 2023?	1/11/2023	Existing enrollees are required to update and implement their Emergency Response Plan by June 5, 2023. There is no requirement for uploading Emergency Response Plans into CIWQS. The enrollee is also required to certify in its annual report that its Emergency Response Plan is up to date (first annual report is due on April 1, 2024). All elements of the Sewer System Management Plan, including element 6, must be updated and uploaded into CIWQS by the due date per the reissued Order. Please see Section 3.11 of Attachment E1 of the General Order for the next Sewer System Management Plan update due dates based on the population served.	1/19/2023	
60	Where would be the designation for agencies to upload the Boundary map? THANKS	1/11/2023	Specifications for the uploading an electronic spatial map of the sewer system service area boundary map will be provided on the statewide Sanitary Sewer Systems program website by June 5, 2023.	1/19/2023	
61	What should the asset management component of the SSMP generally include?	1/11/2023	The reissued Order acknowledges that the SSMP and components of the SSMP are to be per the scale and complexity of the system. Very small system agencies may be already using a simple method of recording the management of their system; on the other extreme, large agencies have brought in asset management professionals for management that matches the complexity of their system(s), Generally speaking, the reissued Order is requiring that the Enrollee prioritize its operations changes and capital improvement projects to address the preventable spills that have the largest environmental consequences. How each Enrollee performs this element is up to the Enrollee, and the procedures included in the updated SSMP.	1/11/2023	
62	So we went from requiring to not requiring certifications for our operators?	1/11/2023	The existing Order does not require operator certification. Therefore, the reissued Order maintains the existing.	1/11/2023	
63	Can a few examples of "Ground Water" be given?	1/11/2023	Yes. Groundwater is the subsurface waterbodies that are part of our State's water supply for municipal supply, industrial uses, agriculture, etc. (see further information in Findings section of the Order) The largest example is our State's effort to capture stormwater in response to our drought and the need for storage of water for use during dry periods. Therefore, many storm drains are now plumbed to stormwater infiltration basins or other engineered groundwater infiltration basins. This is one example. Other examples include "Low Impact Development" features along public roadways, required in municipal stormwater regulations, that purposely route roadway drainage (which includes spilled sewage on roadways) to groundwater.	1/11/2023	
	For the purpose of infiltration/exfiltration in sewers, such as leaking pipe joints/points of connection, what does the WDR say?		Please see the definition of exfiltration in Attachment A and Section 3.2.4 of the General Order: *Portions of some sanitary sewer systems may leak, causing underground exfiltration*		

Q&A Reference Number	Question	Question Date	Answer	Answer Date	Relevant Links
64		1/11/2023	*(exiting) of sewage from the system. Exfiltrated sewage that remains in the underground infrastructure trench and/or the soil matrix, and that does not discharge into waters of the State (surface water or groundwater) may not threaten beneficial uses.*	1/19/2023	
65	I am not confused about the requirement to notify CalOES about discharges to waters of the state, which can be groundwater or surface water. My question is about category 1 spills vs category 2. Category 1 only applies to discharges to surface water and not to groundwater?	1/11/2023	Waters of the State includes surface waters and groundwater. CalOES notification requirement is for spills of 1000 gallon or greater to waters of the State so it applies to Cat 1 spills of greater than 1000 gallons and Category 2 spills.	1/11/2023	
66	I understand the CalOES reporting requirement. I understand what waters of the state are. I am trying to get clarification on category 1 vs category 2. The definitions says that category 1 is discharges to surface water and category 2 is discharges over 1,000 gallons but not to surface water. So the only way a category 2 can get to a water of the state is if it goes to groundwater?	1/11/2023	Category 1 is a spill of any volume, that reaches a surface water body (regardless of spill size). Category 2, 3 and 4 are the exiting of sewage from the system, out of the system, regardless of whether the spill is to land, to a ditch that is not a surface water, to a field, to groundwater, etc. Please ask follow up questions if this is not clear.	1/11/2023	
67	Still confused about required reporting to OES. For a Cat 2 spill, fully contained with no potential to discharge to a water of the state, is notification required. How is "potential" defined? Is there any latutude to NOT report all cat 2 spills to OES?	1/11/2023	Category 2 spills, per the definition in the Order, are required to be reported to CalOES. The definition of "potential discharge" is included in Attachment A and reads: Potential to Discharge, Potential Discharge Potential to Discharge, or Potential Discharge, means any exiting of sewage from a sanitary sewer system which can reasonably be expected to discharge into a water of the State based on the size of the sewage spill, proximity to a drainage conveyance system, and the nature of the surrounding environment.	1/11/2023	
68	Please clarify, enrollee owned lateral spills, that are not cat 1, do not have to be reported individually, but in one report due by Feb of the next year?	1/11/2023	Yes, you are correct. Annual reporting for spills from Enrollee owned and/or operated laterals. Please make sure to understand the definition of the Enrollee owned/operated lateral in Attachment A.	1/11/2023	
69	How do we change our Agency name in CWIQS? I have sent a couple of emails and have gotten no response. Is this something that can be changed during the certification of continuation of existing coverage or does it require something separate?	1/11/2023	Thank you for asking this question. Walter will reach out to you to address this specific request.	1/11/2023	
70	Does that include perging previous LRO's ?	1/11/2023	The question is not clear	1/19/2023	
71	Is the CIWQS HELP Desk available by phone again. There was only e-mail communication for a long time?	1/11/2023	The CIWQS help center is unavailable to answer phone calls. Please continue emailing.	1/19/2023	

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Q&A Reference Number	Question	Question Date	Answer	Answer Date	Relevant Links
72	How do I register for a CIWQS account? As an LRO?		Step 1: Go to https://ciwqs.waterboards.ca.gov/ Step 2: Click on “User Registration”. Step 3: Select “I am the legally responsible person….” and then click on “Next.” Step 4: Complete the rest of the application form. Items with red stars are required. Then, click on “Next.” Step 5: The next page will need to be printed, signed and mailed to the indicated address. Once the CIWQS Help Center receives the document, they will complete your application. State Water Resources Control Board Division of Water Quality c/o DMR Processing Center / CIWQS Registration PO BOX 100 Sacramento, CA 95812-1000	1/19/2023	CIWQS Frequently Asked Questions
73	How do I register for a CIWQS account? As a Data Submitter?		Step 1: Go to https://ciwqs.waterboards.ca.gov/ Step 2: Click on “User Registration”. Step 3: Select “I wish to be able to submit data on behalf of my facility or location, but am not thelegally responsible person.” Then click on “Next.” Step 4: Complete the rest of the application form. Items with red stars are required. Then click on“Next.” Step 5: Once the registration process is complete, an LRO at your facility needs to log into CIWQS, thengo to “administer system” then, “pending registrations of other dischargers”. There they will beable to approve data submitter registration requests. An automated email will then be sent tothe requestor with login instructions.	1/19/2023	CIWQS Frequently Asked Questions
74	How do I add a new facility in CIWIQS if I already have a CIWQS account?		Step 1: Login to your existing CIWQS account. Step 2: Select "view/change my personal information" and select "request an additional facility" at the bottom of the page. Step 3: Follow the prompts to register as an LRO or Data Submitter for the new facility. • For LROs: Sign and mail the LRO form as instructed. Once received, your existing account will be upgraded to LRO status and you will be able to certify reports. • For Data Submitters: Notify the LRO of the new facility to approve your request. They can do this by navigating to Administer System > Pending Registrations of Other Dischargers > Approve	1/19/2023	CIWQS Frequently Asked Questions
75	I signed up for a data submitter account on CIWIQS, but I am still not able to log-in		When you sign up for a data submitter account, you are given a pending CIWQS account. To activate your account, have the LRO of the requested facility login to their account and approve your data submitter request by navigating to Main Menu > Administer System > Pending Registrations of Other Dischargers. If your request is approved, you will receive an email with your log in information.	1/19/2023	CIWQS Frequently Asked Questions
76	I am an LRO and my staff signed up for a Data Submitter account in CIWIQS. How do I approve their request?		You must log-in to your account and approve your data submitter request by navigating to Main Menu > Administer System > Pending Registrations of Other Dischargers.	1/19/2023	CIWQS Frequently Asked Questions
	My CIWIQS account is locked, what do I do now?		If you account gets locked, contact the CIWQS helpdesk at CIWQS@waterboards.ca.gov		

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Q&A Reference Number	Question	Question Date	Answer	Answer Date	Relevant Links
77			There are two ways to get your account unlocked. The first is to remember the pin that you entered when creating your CIWQS account. If the correct pin is given to the helpdesk, your account will be automatically unlocked. If you cannot remember your pin, then the helpdesk will reset your account and an email will be sent about how to reactivate your account. If you are an LRO, this will involve resubmitting LRO authorization forms.	1/19/2023	CIWQS Frequently Asked Questions
78	What should I do if I forgot my CIWIQS username/password?		Use the links in the CIWQS Log in screen if you have forgotten your User ID or Password. You will need to put in your email to get your User ID. You wll need to put in your User ID to get a temporary password .You may also be required to answer a security question that you created when setting up your account.	1/19/2023	CIWQS Frequently Asked Questions
79	In CIWIQS, why are the certify buttons on the report greyed out?		If you think that you should be able to certify reports, but the certify button is greyed out, then you do not have the correct user rights. Let the CIWQS helpdesk know that you are not able to certify reports even though you need to. They will assist you in getting the correct user righting.	1/19/2023	CIWQS Frequently Asked Questions
80	Who should I tell about CIWQS users that have changed jobs or retired?		Anytime a CIWQS user changes jobs or retires, the CIWQS helpdesk should be told of the change so that they can remove their account from CIWQS.	1/19/2023	CIWQS Frequently Asked Questions
81	What is the difference between an LRO and a Data Submitter?		The only difference between an LRO and a Data Submitter is that a Legally Responsible Official is able to certify and submit reports. A Data Submitter is only able to input the data and save drafts.	1/19/2023	CIWQS Frequently Asked Questions
82	What information is needed for spill reports?		If you have any questions on what needs to be put into a spill report, you may contact the statewide Sanitary Sewer Systems General Order Program Manager, Walter Mobley	1/19/2023	CIWQS Frequently Asked Questions
83	Who can withdraw spill reports that were submitted incorrectly?		Only the General Order Program Manager is able to withdraw or modify incorrect spill reports. Contact the Program Manager, Walter Mobley, when you need a spill report changed.	1/19/2023	CIWQS Frequently Asked Questions
84	Who should I talk to if the eSMR report I need to submit is not showing up?		The regional board staff person assigned to your permit should be able to correct any issues with report expectations. The CIWQS helpdesk can also fix this issue if the regional board staff person is not sure how to fix the problem.	1/19/2023	CIWQS Frequently Asked Questions
85	Who can withdraw eSMR reports that were submitted incorrectly?		Incorrect eSMR reports can be withdrawn by the regional board staff member assigned to your permit.	1/19/2023	CIWQS Frequently Asked Questions
86	How do I correct or update a previously submitted Self Monitoring Report?		The correct or update a previously submitted Self Monitoring Report, you must get the report withdrawn by the regional board staff assigned to your permit. Once the report is withdraw, you will be able to resubmit a correct version of the Self Monitoring Report.	1/19/2023	CIWQS Frequently Asked Questions
87	Why is the DMR tab on my report not working?		If you are having trouble with the DMR tab of your eSMR report, you should contact the DMR helpdesk for assistance.	1/19/2023	CIWQS Frequently Asked Questions

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Q&A Reference Number	Question	Question Date	Answer	Answer Date	Relevant Links
88	What to do about unexpected PET Tool errors?		If you are getting an unexpected error from the PET Tool. Email your PET Tool to the CIWQS helpdesk and also tell the helpdesk what error that you are getting.	1/19/2023	CIWQS Frequently Asked Questions
89	What to do if the PET Tool doesn't have the unit required for your permit?		If the unit you need is not in the PET Tool, you should contact the CIWQS helpdesk. They will be able to add the new unit, but it will take up to 45 days. In the mean time, you should talk to your regional board about how to submit data before the correct unit is added.	1/19/2023	CIWQS Frequently Asked Questions
90	Where can I get the newest verison of the PET Tool?		The most up to date verison of the PET Tool can be found here: https://www.waterboards.ca.gov/water_issues/programs/ciwqs/chc_pet_tool.html	1/19/2023	CIWQS Frequently Asked Questions
91	How do I find out who is connected to my facility in the CIWIQS database?		Use this link to create a facility at a glance report: https://ciwqs.waterboards.ca.gov/ciwqs/readOnly/CiwqsReportServlet?reportName=facilityAtAGlance&inCommand=reset Type the name of your facility and click the "Run Reports" button Click the Place ID of your facility. Click the plus button for related parties to see everyone that is attached to your facility.	1/19/2023	CIWQS Frequently Asked Questions
92	Who do I need to talk to complete a notice of termination?		If you got a email saying that you need to complete a notice of termination, you need to contact the SMARTS helpdesk.	1/19/2023	CIWQS Frequently Asked Questions
93	Where should I go if I need data from CIWQS, but I do not have access to CIWQS?		If you need data from CIWQS, but do not a CIWQS account, you can go to the CIWQS public reports webpage: https://www.waterboards.ca.gov/ciwqs/publicreports.html. This webpage has all data that is available to the public. Including reports for specific facilities, spills, enforcement actions, etc.	1/19/2023	CIWQS Frequently Asked Questions
94	I am confused about the answer to question 59 stating that the SERP needs to be updated by the June 2023 deadline. But that Element 6 doesn't need to be updated until the SSMP update deadline in 2025/2026. So the SSMP that gets uploaded to CIWQS by June 5, 2023, will be compliant with the old WDR and include an oudated SERP?... And the Board is OK with that?	3/9/2023	The updating of the Emergency Response Plan is a stand-alone requirement, and not to be confused with either the requirement to upload the existing Sewer System Management Plan or update the entire Sewer System Management Plan. The reissued Order requires all Enrollees to update and implement its Emergency Response Plan by June 5, 2023.	3/21/2023	
95	Category 3 Additional Reporting requirements? In E-1 3.3 there are some requirements that are not in the Category 1 and Category 2. Those requirements are only found in the Technical Report requirements. Is that how CIWQS will be set up for Cat 3 Spills, more details than cat 1 & 2? Please advise what will be required for Cat 3 Spill Report Records, so that agencies collect the correct data for Category 3 spills.	3/9/2023	Enrollees are required to comply with the reporting requirements in the Board-adopted Order. For Category 3 certified spill reporting, the Enrollee is required to comply with the reporting requirements in Attachment E1, Section 3.3. of the reissued Order.		

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Q&A Reference Number	Question	Question Date	Answer	Answer Date	Relevant Links
	LRO? There are currently LROs in CIWQS that don't meet all of the requirements of the new order, specifically "must have		The Order requires the LRO:	3/9/2023	
	responsibility over management of the Enrollee's entire sanitary sewer system, and		(1) To have responsibility over managment of the entire sanitary sewer system, and	3/21/2023	
	must be authorized to make managerial decisions that govern the operation of the		(2) be authorized to make managerial decisions that govern the operatio of the sanitary sewer system, and		
	sanitary sewer system, including having the explicit or implicit duty of making major		(3) To have explicit or implicit duty of making major capital improvement recommendations to ensure long-term environmental compliance.		
	capital improvement recommendations to ensure long-term environmental compliance." The question is, will the existing LROs have to certify that they meet the new requirements, or is it only the agency needs to have 1 LRO certify that he/she meets the new requirements? If the agency has 1 LRO that meets the new requirements, can the existing LROs that don't meet the requirements still certify Spill reports? In other words, if existing LROs don't meet the requirement, will they be removed from CIWQS or downgraded to Data Submitter?				
96		3/9/2023	The Order requires the Enrollee to have the necessary organizational structure (including to modify the existing organizational structure as necessary) to comply with Section 5.1. If the Enrollee currently does not have an LRO that holds the above responsibilities and authority, the Enrollee is required to give the required authority to a representative that has responsibilty over management of the entire system, to make the managerial decisions and have the duties specified in this Section.		
			The process for an Enrollee to designate/change one or more LROs has not change from the existing regulatory requirements. If the Enrollee must designate different LRO(s) per the reissued Order, the newly designated LRO must obtain its own CIWQS account, and contact the CIWQS help desk at ciwqs@waterboards.ca.gov to further provide the necessary information for addition and/or the deletion of LROs for the subject Enrollee.		
			LRO user accounts and related information are not automatically removed. The removal of an LRO from CIWQS is per the request of the current or newly designated LRO to the CIWQS help desk.		

Q&A Reference Number	Question	Question Date	Answer	Answer Date	Relevant Links
			The above LRO designation process does not require an LRO to certify in CIWQS that they have the qualifications as required in Section 5.1 of the reissued Order. A designated LRO manages and approves the designation of the data submitters through its CIWQS account. Each LRO that certifies required submittals into CIWQS must individually meet all the qualifications in Section 5.1 of the reissued Order.		
97	If we treat and report Category 4 spills in CIWQS as they happen as if they are Categary 3 spills, is the Category 4 spill annual report still necessary?	3/13/2023	CIWQS requires the legally responsible official to certify under the penalty of perjury that all the submitted information is correct. Reporting a Category 4 spill as a Category 3 spills is not correct. The Enrollee must monthly certify in CIWQS the number and volume of Category 4 spills and keep records for each spill per Attachment E1, Section 4.4 and submit the information annually. Additionally, reporting Category 4 spills as Category 3 spills will impact the Enrollee's annually reported performance analysis graphs.	3/21/2023	
98	#96 was answered before I finished typing the question, and does not answer the questions that were asked.	3/9/2023	Please see the the updated response to the response to the question #96.	3/21/2023	
99	Will you be able to provide an example of a pump emergency response plan?		This question should be answered by an expert on emergency response of the site-specific pumps.		
100	Are duly authorized representatives still permitted to certify data in CIWQS?		Please see sections 2.2.3 and 5.1 of the General Order. Only a Legally Responsible Official, as designated by the Enrollee, is permitted to certify data in CIWQS. A duly authorized representative must be designated by the Enrollee as an LRO to conduct the functions of an LRO.	3/21/2023	
101	What are agencies doing now that should be corrected in new spill response plans to avoid issues with enforcement?		Current emergency response plans are Enrollee-specific and system-specific. The Enrollee must update its current Overflow Emergency Response Plan, (as prepared per the 2006 Order) to comply with the elements in Attachment D, Section 6 of the reissued Order. The Enrollee is required to implement its updated Spill Emergency Response Plan per the reissued General Order, by June 5, 2023.	3/21/2023	
102	What are the sections/pages that are required to be updated in the Overflow Response Plan?		The Enrollee must update and implement their Spill Emergency Response Plan per Attachment D, Section 6 of the reissued General Order. Spill Emergency Response Plans are system specific plans.	3/21/2023	
103	What are the reporting requirements from non-Cat 1 spills from laterals?		Please clarify the question.	3/21/2023	

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Q&A Reference Number	Question	Question Date	Answer	Answer Date	Relevant Links
104	If my agency is rsponsible for multiple WDIDs and there is a single SSMP for all the WDIDs must we submit the SSMP for each of the WDIDs?	3/22/2023			
105	Are owned/operated lateral spills required to be reported monthly like cat 4 spills?	3/22/2023			
106	Does the updated SERP need to upload in CIWQS by June 5, 2023? If CIWQS already has the SSMP, do we still need to upload it to CIWQS by June 5, 2023?				
107	How do you anticipate or suggest that Enrollees meet the requirements to train contractors on the Enrollee-specific SERP. Asking for a small sized Enrollee (both in population served and collective miles of sewer). For example, can we make a third party emergency response contractor or plumber aware of the site conditions during a briefing at the start of each workday, and count this as training?	3/22/2023			
108	Can the Beneficial Water uses be narrowed down to the most Beneficial durring a time of Drought? If so, would this be in the form of a notification from SWRCB?	3/22/2023	The Regional Water Boards have adopted region-specific water quality control plans (commonly referred to as Basin Plans) that designate beneficial uses and establish water quality objectives and policies to achieve those objectives. Any change to a Basin Plan needs to go through an extensive public process and be adopted by the Water Boards.	3/22/2023	
109	Can you elaborate on the requirement to coordiante with "other utiliy agencies" in addition to storm water agencies.	3/22/2023			
110	Does the training need to be completed prior to June 5 as well?	3/22/2023			
111	Is there a template that can be made available for agencies to develop their Spill Emergency Response Plans?	3/22/2023			
112	Are owner/operated lateral overflows not cat 1 required to be reported monthly like the cat 4 spills?	3/22/2023			
113	Can you please clarify if a SSO that percolates through the ground into a groundwater table is considered a Cat. 1 spill?	3/22/2023			
114	Does the updated Spill Emergency Response Plan need to be uploaded to CIWQS? To add to that would a SSO that goes into a storm water infiltration gallery that percolates into the ground be considered spills to waters of the State?	3/22/2023			
115	Does Spill Emergency Response Plan is different documentation than SSMP?	3/22/2023			

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Q&A Reference Number	Question	Question Date	Answer	Answer Date	Relevant Links
116	In the FAQ document item 95, there is discussion of addtional reporting requirements for Category 3 spills. Will there be any updates to the reporting requirements for CAT 3 spills?	3/22/2023			
117	in our district we have lots of bio swales on private properties are these considered routes to groundwater?	3/22/2023			
118	Just to confirm, if a spill is on a private lateral who is not an enrollee, we are required to report the spill as soon as we are made aware of it as an enrollee correct?	3/22/2023			
119	When can we exepect to see the updated reporting items in CIWIQS?	3/22/2023			
120	our city do not own private sewer laterals,who would be doing the reporting?	3/22/2023			
121	Are man-made lakes considered to be surface water under the SSS permit (e.g. are they waters of the State or US)?	3/22/2023			
122	if sewer laterals are owned and maintained by the property owners and not the agency and a spill occurs from the lateral or property's clean out, would that be reported?	3/22/2023			
123	How can we confirm if a SSO to land (Cat. 2) has the potential to reach groundwater?	3/22/2023			
124	Will City workers who work on easements be protected When trying to work on overflows on easements, if not how should the overflow be reported and to who should it be reported	3/22/2023			
125	If a spill ends up in a storm station or dedicated retention basin, is that considered a cat. 1 spill?	3/22/2023			
126	Will LRO be required to select the spill category or will CIWQS do this as currently?	3/22/2023			
127	Is the state planning to post an oficial Q/A document to help Enrollees once the Reissued SSS WDR becomes effective?	3/22/2023			
128	who's responsible for private lateral spill	3/22/2023			
129	During the rainy season, are temporary ponds occuring in low lying areas or infiltration basins considered to be surface waters?	3/22/2023			
130	category 3 don't need to report for each indivisual spills during the same month, just need to totallize and submit monthly certified spill report , is that right?	3/22/2023			
131	If a private lateral has spills chronically, what can be done to enforce the necessary maintenance upon the owner?	3/22/2023			
132	What if the agency doesn't own the lateral, but provides courtesy maintenance services to the homeowner?	3/22/2023			

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Q&A Reference Number	Question	Question Date	Answer	Answer Date	Relevant Links
133	What if the resident refuses to repair their private lateral spill. And a fair amount of sewage is constantly flowing to the storm drain?	3/22/2023			
134	Where will the training videos be posted once they are available?	3/22/2023			
135	Can the required training be performed in house?	3/22/2023	Yes		
136	If a spill is 1000 gallons, but only 5 gallons reach Waters of the State, does Cal OES need to be contacted?	3/22/2023			
137	The orginization that I work for impements a spill emergency plan in our SSMP, is this excepted? or should we do a spill plan seperatly?	3/22/2023			
138	Are there any changes to Region 9 regulations in this order?	3/22/2023			
139	Although we do our own SSMP/SSMP Audits in-house, would it be helpful to others if a list of consultants is developed who can provide these services or can help develop SERPs?	3/22/2023			
140	Does the photograph of spill condition mandatory required for all the category reporting or optional on CIWQS?	3/22/2023			
141	Are the CIWQS forms field forms? Will the forms be manditory to use or can we use our existing field forms with updated info feilds?	3/22/2023	The CIWQS forms are the electronic data entry forms used to report spills in CIWQS. You can use your own forms for collecting data being mindful to collect all of the new data items you will need for CIWQS reporting.	3/22/2023	
142	Please confirm that the timing for analytical water quality monitoring for a spill of 50,000 gallons or more is that the sample collection is to be conducted within 18 hours; or does sampling AND analysis need to be conducted within 18 hours?	3/22/2023	The sampling needs to be performed with 18 hours.	3/22/2023	
143	if the City already has an ELAP-certified lab under contract for potable water quality sampling, would you consider the monitoring requirements for the SERP under that contract or do a separate contract specifically for stormwater sampling? (in which case, how would you decide the contract amount for that?)	3/22/2023			
144	Table E2-2 Lists Category 2: Spills of 1,000 gallons or greater that Do Not Discharge to Surface Waters. Within the tables notification box it states "Category 2 spill of 1,000 gallons or greater, discharging to or threatening to discharge to waters of the state" Is this correct? Wouldn't this be considered a category 1 spill if it was over 1,000 gallons and discharged to waters of the state?	3/22/2023			
145	If an agency owns the lower lateral but is not responisble for the maintenance, would we still be required to report a private spill due to roots in the lower lateral?	3/22/2023	If an agency owns a pipe, they are responsible to mainatain it	3/22/2023	
146	If my agency has four WDID but a single SSMP that covers all four agencies must I upload the SSMP four times or will just one upload work?	3/22/2023			

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Q&A Reference Number	Question	Question Date	Answer	Answer Date	Relevant Links
147	If an agency owns only a portion of the lateral but that portion is required to be maintained by the homeonwer, is that required to be reported if there is an SSO from the lateral? In addition, if yes, what if there is an SSO from a lateral, but its not determined what portion of the lateral caused the spill, would that require a spill report (possibly unable to TV because no access for a camera)?	3/22/2023			
148	Are there new requirments to be a LRO?	3/22/2023			
149	Is it typical for certain regions to require notification to other agencies besides OES? if so what other agencies?	3/22/2023			
150	What is the State's definition of a bio swale vs a stormwater infiltraion basin or facility.	3/22/2023			
151	Does the LRO need to obtain a Collection System Certificate training or does having a SWRCB Wastewater Treatment Certification suffice?	3/22/2023			
152	Which Regions require notification to Health Dept? Is there a quick reference for that?	3/22/2023			
153	I'm sorry I missed how do you know if you need to notify other agencies such as health dept? I understand it is region specific but how do we know what is specific for our region?	3/22/2023			
154	Another private lateral question that you've touched on: if the spill comes from a private lateral but is caused by the enrollee's main, that is the responsibility of the city to report?	3/22/2023			
155	But someone within the agency does need to have the collection system certification?	3/22/2023			
156	Just clarification, if a spill is 900 gallons and reaches waters of the state (not surface water), its still just a Cat 3 and doesnt require Cal Oes notification?	3/22/2023			
157	In th Order, the definition of a Cat 1 spill says : "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." If the State could get clarification on this, we would appreciate it!	3/22/2023			
158	Under the new definitions, if a spill of over 1000 gallons ends up in a dry creek channel that pools up and has no expectation to contact surface water before being recovered, is that a Cat 1 or 2?	3/22/2023			
159	What is a vernal pond considered?	3/22/2023			
160	How 'threatening' is "threatening"? An immediate threat? An immediate threat if.... xyz ?	3/22/2023			

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Q&A Reference Number	Question	Question Date	Answer	Answer Date	Relevant Links
161	Do you have suggestion to calculate spilled volume that perculate through the soil? sometime you can recover some on the soil but can't retrieve everything perculate through soil.	3/22/2023			
162	If a backup into a structure is caused by a blockage in the mainline or in the agency-owned portion of the lateral, but only backs up into the toilet or bathtub, is the sewage in the toilet or bathtub considered a spill and will it need to be reported? In the same situation, what if the sewage spills onto the bathroom floor?	3/22/2023			
163	Can we consider spill volume that evaporated as part of the recovery volume?	3/22/2023			
164	Afrooz, you mentioned that earlier that bioswales are considered routes to groundwater, and thus would be threateing WOTS. However, in green infrasturcture language, a bioswale is defined as a pass through treatment system that is typically used when infiltration is not practicable on a site. I am with the OC Flood Control District and we have several infiltration and retention basins within our system; additionally we also have many private and public property which utilize bioswales. For this reason we would like to get better clarification. Not necessarily today! But at some point. Thank you!	3/22/2023			
165	Is a man-made lake or pond with standing water considered surface water? similarly is a storm water rention pond that maintains water in it constantly considered waters of the US?	3/22/2023			
166	How does the WDR apply to the thousands of private lateral spills (and the actions of their private plumbers) that constitute Cat 1 spills when the spill runs down the gutter to a nearby stormdrain?	3/22/2023			
167	For water quality sampling, are presence/absence tests appropriate for monitoring bacterial indicators?	3/22/2023			
168	• In section 2.3.2, the collection of samples is specified with two bullet points separated by an 'and/or' o Am I interpreting this correctly – § If the spill enters a water body through a storm drain, you sample at all four locations (or whatever is accessible/practicable?) § If the spill enters a water body (not via storm drain), you sample at RSW-001, RSW-001U, and RSW-001D only o I guess I am looking for clarification on when the 'and/or' is applied.	4/19/2023			

Appendix D-7: Clean Water Summit Partners (FAQ)

Q&A Reference Number	Question	Question Date	Answer	Answer Date	Relevant Links
169	In the second to last paragraph of 2.2.3 it specifies 'post-spill (after the spill) compliance', does this mean the sample is collected prior to any remediation or after remediation? As I write this question, I guess it would say 'post-cleanup' if they wanted the sample after remediation.	4/19/2023			
170	I'm a data submitter; how can I know if the LRO enrolled in the new regulatory coverage?	4/19/2023			
171	For the first SSMP audit under the new order schedule (e.g. every three years instead of every two), should the SSMP be audited under the old SSMP requirements or the new?	4/26/2023			

APPENDIX E-1

Office of Emergency Services
Emergency Release
Follow-up Notice Reporting Form

EMERGENCY RELEASE FOLLOW - UP NOTICE REPORTING FORM

A

BUSINESS NAME	FACILITY EMERGENCY CONTACT & PHONE NUMBER ( ) -

B

INCIDENT DATE MO DAY YR	TIME OES NOTIFIED (use 24 hr time)	OES CONTROL NO.

C

INCIDENT ADDRESS LOCATION	CITY / COMMUNITY	COUNTY ZIP

D

CHEMICAL OR TRADE NAME (print or type)	CAS Number

CHECK IF CHEMICAL IS LISTED IN 40 CFR 355, APPENDIX A ☐	CHECK IF RELEASE REQUIRES NOTIFI - CATION UNDER 42 U.S.C. Section 9603 (a) ☐

PHYSICAL STATE CONTAINED ☐ SOLID ☐ LIQUID ☐ GAS	PHYSICAL STATE RELEASED ☐ SOLID ☐ LIQUID ☐ GAS	QUANTITY RELEASED

ENVIRONMENTAL CONTAMINATION ☐ AIR ☐ WATER ☐ GROUND ☐ OTHER	TIME OF RELEASE	DURATION OF RELEASE ___DAYS ___HOURS ___MINUTES

E

ACTIONS TAKEN

F

KNOWN OR ANTICIPATED HEALTH EFFECTS (Use the comments section for addition information)

☐ ACUTE OR IMMEDIATE (explain) _____

☐ CHRONIC OR DELAYED (explain) _____

☐ NOTKNOWN (explain)

G

ADVICE REGARDING MEDICAL ATTENTION NECESSARY FOR EXPOSED INDIVIDUALS

H

COMMENTS (INDICATE SECTION (A - G) AND ITEM WITH COMMENTS OR ADDITIONAL INFORMATION)

I

CERTIFICATION: I certify under penalty of law that I have personally examined and I am familiar with the information submitted and believe the submitted information is true, accurate, and complete.

REPORTING FACILITY REPRESENTATIVE (print or type) _____

SIGNATURE OF REPORTING FACILITY REPRESENTATIVE _____ DATE: _____

EMERGENCY RELEASE FOLLOW-UP NOTICE
REPORTING FORM INSTRUCTIONS
(This form may be reproduced, as needed)

GENERAL INFORMATION:
Chapter 6.95 of Division 20 of the California Health and Safety Code requires that written emergency release follow-up notices prepared pursuant to 42 U.S.C. § 11004, be submitted using this reporting form. Non-permitted releases of reportable quantities of Extremely Hazardous Substances (listed in 40 CFR 355, appendix A) or of chemicals that require release reporting under section 103(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 [42 U.S.C. § 9603(a)] must be reported on the form, as soon as practicable, but no later than 30 days, following a release. The written follow-up report is required in addition to the verbal notification.

BASIC INSTRUCTIONS:
- The form, when filled out, reports follow-up information required by 42 U.S.C § 11004. Ensure that all information requested by the form is provided as completely as possible.
- If the incident involves reportable releases of more than one chemical, prepare one report form for each chemical released.
- If the incident involves a series of separate releases of chemical(s) at different times, the releases should be reported on separate reporting forms.

SPECIFIC INSTRUCTIONS:
Block A: Enter the name of the business and the name and phone number of a contact person who can provide detailed facility information concerning the release.

Block B: Enter the date of the incident and the time that verbal notification was made to OES. The OES control number is provided to the caller by OES at the time verbal notification is made. Enter this control number in the space provided.

Block C: Provide information pertaining to the location where the release occurred. Include the street address, the city or community, the county and the zip code.

Block D: Provide information concerning the specific chemical that was released. Include the chemical or trade name and the Chemical Abstract Service (CAS) number. Check all categories that apply. Provide best available information on quantity, time and duration of the release.

Block E: Indicate all actions taken to respond to and contain the release as specified in 42 U.S.C. § 11004(c).

Block F: Check the categories that apply to the health effects that occurred or could result from the release. Provide an explanation or description of the effects in the space provided. Use Block H for additional comments/information if necessary to meet requirements specified in 42 U.S.C. § 11004(c).

Block G: Include information on the type of medical attention required for exposure to the chemical released. Indicate when and how this information was made available to individuals exposed and to medical personnel, if appropriate for the incident, as specified in 42 U.S.C. § 11004(c).

Block H: List any additional pertinent information.

Block I: Print or type the name of the facility representative submitting the report. Include the official signature and the date that the form was prepared.

MAIL THE COMPLETED REPORT TO:

Chemical Emergency Planning and Response Commission (CEPRC) /
Local Emergency Planning Committee (LEPC)
Attn: Section 304 Reports
3650 Schriever Avenue
Mather, CA 95655

NOTE: Authority cited: Sections 25503, 25503.1 and 25507.1, Health and Safety Code. Reference: Sections 25503(b)(4), 25503.1, 25507.1, 25518 and 25520, Health and Safety Code.

Article 3. Minimum Standards for Area Plans

Section 2720. Proposed Area Plans.

The proposed area plan, as required by Section 25503(d) of the Health and Safety Code, shall include:

(a) a description of the extent to which the administering agency has met the requirements of this Article, and a schedule for implementing the final area plan, by December 29, 1987, to include the provisions of Sections 2722-2736 of this Article;

(b) provisions for integrating, in the final area plan, information from business plans submitted by handlers within the jurisdiction of an administering agency;

(c) protocols for responses to pesticide drift exposure incidents; and

(d) a form providing information on the elements within the area plan, substantially equivalent to the following optional model reporting form for area plans.

NOTE: Authority cited: Sections 25503 and 25517.5, Health and Safety Code, Section 12997.7, Food and Agricultural Code. Reference: Section 25503, Health and Safety Code, Section 12997.7, Food and Agricultural Code.

OPTIONAL MODEL REPORTING FORM - AREA PLAN

CHECKLIST for AREA PLAN ELEMENT and reference section	ELEMENT ATTACHED	ELEMENT NOT PROVIDED, JUSTIFICATION ATTACHED	PROPOSED DATE FOR COMPLETION
SECTION 2722 - EMERGENCY RESPONSE PROCEDURES			
Approach, Recognition & Evaluation			
Personnel Monitoring & Decontamination			
Equipment Monitoring & Decontamination			
SECTION 2723 - PREEMERGENCY PLANNING			
Pre-incident Site Surveys			
Planning & Coordination			
Emergency Funding Access			
Disposal Facility Access			
Emergency Response Contractor Access			
Integrated Response Management System			
SECTION 2724 - NOTIFICATION & COORDINATION			
Notification & Coordination			
Emergency Communications			
Responsibility Matrix			
OES Notification			
SECTION 2725 - TRAINING			
Emergency Response Personnel Training			
Training Documentation			
Training Exercises			
SECTION 2726 - PUBLIC SAFETY & INFORMATION			
Site Perimeter Security			
Safety Procedure Information			
Information Release Responsibility			
Medical Notification			
Evacuation Plans			
SECTION 2727 - SUPPLIES AND EQUIPMENT			
Listing & Description			
Testing & Maintenance			
SECTION 2728 -INCIDENT CRITIQUE AND FOLLOWUP			

APPENDIX F-1

Spill Response Evaluation

APPENDIX F-1
MIDWAY CITY SANITARY DISTRICT
Post Spill Response Assessment

Date of Spill:_____ **Date of Assessment**:_____

Location of Spill:_____

□ **Category 1 (MCSD Sewer) -** *A spill of **any** volume of sewage that results in a discharge to a surface water (flow or no flow) or a drainage conveyance system that discharges to a surface water, when the sewage is not fully captured and returned to the sanitary sewer system or disposed of properly.*

□ **Category 2 (MCSD Sewer) -** *A spill of 1,000 gallons or greater that does not discharge to a surface water (spills that enter the drainage conveyance system must be fully captured and recovered).*

□ **Category 3 (MCSD Sewer) -** *A spill equal to or greater than 50 gallons and less than 1,000 gallons that does not discharge to a surface water (spills that enter the drainage conveyance system must be fully captured and recovered).*

□ **Category 4 (MCSD Sewer) -** *A spill of less than 50 gallons that does not discharge to a surface water (spills that enter the drainage conveyance system must be fully captured and recovered).*

□ **MCSD Lateral Spill** - *A MCSD lateral spill is a spill of any volume that originates in a MCSD owned lateral associated with MCSD owned buildings/facilities*

□ **Private Spill -** *A private spill is a spill of any volume that originates in a private sewer system or private lateral. Private spills are the responsibility of the property owner.*

Name(s) of Employee(s):

_____□ Involved with Spill Response □ Involved with Post Response Assessment

_____□ Involved with Spill Response □ Involved with Post Response Assessment

_____□ Involved with Spill Response □ Involved with Post Response Assessment

_____□ Involved with Spill Response □ Involved with Post Response Assessment

_____□ Involved with Spill Response □ Involved with Post Response Assessment

_____□ Involved with Spill Response □ Involved with Post Response Assessment

Spill Start Time: _____ am / pm **Spill Stop Time:** _____ am / pm

Total Spill Volume: _____gal **Spill Calculation Methodology**: _____

Recovered Volume (Street): _____gal **(Drainage Conveyance System):** _____gal

Volume Discharged to Surface Water: _____ gal **Percentage Recovered:** _____%

Identify all procedures that were conducted during the spill event:
(Check all that Apply)

□ Notification	□ Containment	□ Spill Volume Estimation
□ Gravity Sewer Correction	□ Lift Station Correction	□ Forcemain Correction
□ Monitoring	□ Water Sampling	□ Cleanup □ Reporting

1. **Were all the necessary notifications made? (Yes / No)**

   If not, what prevented the notifications from being made? _____

   _____

   Recommendations for improvement to notification procedures:_____

   _____

2. **Was the total spill contained within the street? (Yes / No)**

   Was the total spill contained within the drainage conveyance system? (Yes / No)

   If not, could anything have been done to contain the total spill?_____

   _____

   Recommendations for improvement to containment procedures:_____

   _____

3. **Do you feel that the spill volume estimate is accurate? (Yes / No)**

   How was the spill volume estimated? _____

   Recommendations for improvement to volume estimation procedures:_____

   _____

4. **How was the cause of the spill corrected? _____**

   Recommendations for improvement to correction procedures:_____

   _____

5. **Was the total spill cleaned up? (Yes / No)**

   Recommendations for improvement to cleanup procedures:_____

   _____

6. **Was water sampling required? (Yes / No)**

   If so, did the sampling get done per the WDR Order requirements? (Yes / No)

   Recommendations for improvement to water sampling procedures:_____

   _____

7. **Was all the necessary reporting completed? (Yes / No)**

   Recommendations for improvement to reporting procedures:_____

   _____

Based on responses above, what additional office and/or field training should be conducted? (Check all that Apply)

□ Notification □ Containment □ Spill Volume Estimation

□ Gravity Sewer Correction □ Lift Station Correction □ Forcemain Correction

□ Monitoring □ Water Sampling □ Cleanup □ Reporting

Recommendations for future training:_____

_____

_____

Recommendations for changes to Spill Emergency Response Plan procedures:_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

APPENDIX F-2

Annual Spill Response Evaluation

APPENDIX F-2
MIDWAY CITY SANITARY DISTRICT
Annual Spill Response Evaluation

Calendar Year_____ **Date of Evaluation** _____

Name(s) of Employee(s) Conducting Annual Spill Response Evaluation:

_____ _____

_____ _____

□ **Category 1 (MCSD Sewer) -** *A spill of **any** volume of sewage that results in a discharge to a surface water (flow or no flow) or a drainage conveyance system that discharges to a surface water, when the sewage is not fully captured and returned to the sanitary sewer system or disposed of properly.*

□ **Category 2 (MCSD Sewer) -** *A spill of 1,000 gallons or greater that does not discharge to a surface water (spills that enter the drainage conveyance system must be fully captured and recovered).*

□ **Category 3 (MCSD Sewer) -** *A spill equal to or greater than 50 gallons and less than 1,000 gallons that does not discharge to a surface water (spills that enter the drainage conveyance system must be fully captured and recovered).*

□ **Category 4 (MCSD Sewer) -** *A spill of less than 50 gallons that does not discharge to a surface water (spills that enter the drainage conveyance system must be fully captured and recovered).*

□ **MCSD Lateral Spill** - *A MCSD lateral spill is a spill of any volume that originates in a MCSD owned lateral associated with MCSD owned buildings/facilities*

□ **Private Spill -** *A private spill is a spill of any volume that originates in a private sewer system or private lateral. Private spills are the responsibility of the property owner.*

List Training Dates and Topics During Calendar Year

Training Date _____ **Training Topic** _____

Training Date _____ **Training Topic** _____

Training Date _____ **Training Topic** _____

Training Date _____ **Training Topic** _____

Is additional Office and/or Field training necessary. (Yes / No)
(Check all that Apply)

□ Notification □ Containment □ Spill Volume Estimation

□ Gravity Sewer Correction □ Lift Station Correction □ Forcemain Correction

□ Monitoring □ Water Sampling □ Cleanup □ Reporting

Annual Spill Summary Table

Count	Spill Date	Category				Spill Volume (gallons)	Voume Discharged to a Surface Water (gallons)	Volume Recovered (gallons)	Recommendations from Assessment(s)
		1	2	3	4				
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
	Total								

Total Spill Volume (Discharged and Recovered) _____

Percentage of Recovered Volume to Total Spill Volume (%) _____

1. **Were recommendations made to improve notification procedures? (Yes / No)**

   What action was taken:_____

   _____

2. **Were recommendations made to improve containment procedures (Yes / No)**

   What action was taken:_____

   _____

3. **Were recommendations made to improve spill volume estimation procedures? (Yes / No)**

   What action was taken:_____

   _____

4. **Were recommendations made to improve correction procedures (Yes / No)**

   What action was taken:_____

   _____

5. **Were recommendations made to improve cleanup procedures? (Yes / No)**

   What action was taken:_____

   _____

6. **Were recommendations made to improve water sampling procedures? (Yes / No)**

   What action was taken:_____

   _____

7. **Were recommendations made to improve reporting procedures? (Yes / No)**

   What action was taken:_____

   _____