CENTRAL SAN

CENTRAL CONTRA COSTA SANITARY DISTRICT

SPILL EMERGENCY RESPONSE PLAN

WDID # 2SSO10105

EFFECTIVE DATE: February, 2007
REVISION 1 DATE: August, 2014
REVISION 2 DATE: February, 2017
REVISION 3 DATE: October, 2020
REVISION 4 DATE: April 2021
REVISION 5 DATE: June 1, 2023
REVISION 6 DATE: June 27, 2025

Approved and Accepted:

Paul Seitz 6/25/25

Paul Seitz, P.E., LRO, CWEA Grade 4 – Collection System Maintenance
Collections System Operations Division Manager

1101-25

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1. CHANGE LOG

Date	Description	Pages	Responsible Person
Feb. 2007	Plan Effective Date	All	William Brennan
Aug. 2014	Major Revision	All	Paul Seitz
Apr. 2017	Minor Updates	All	Paul Seitz
Oct. 2020	Minor Updates - CRW	9	Paul Seitz
Apr. 2021	Minor Updates • Volume estimation photos • Updated flow chart to include EBMUD contact information	14, 27-36	Paul Seitz
June 1, 2023	Major revision • WQ 2022-0103-DWQ Waste Discharge Requirements	All	Paul Seitz
June 1, 2025	Major Updates • Annual review/assess effectiveness/update	All	Paul Seitz

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2. INTRODUCTION

A. Purpose and Policy

Purpose: The purpose of this plan is to ensure that Central Contra Costa Sanitary District (CentralSan) personnel follow established guidelines in responding to, containing, cleaning, and decontaminating sanitary sewer spills and backups that may occur within CentralSan's service area to safeguard public health and the environment. This plan is a companion document to Element 6 of CentralSan's Sewer System Management Plan (SSMP).

Policy: CentralSan employees are required to report all wastewater spills found and to take the appropriate action to secure the wastewater spill area, relieve the cause of the spill, and ensure that the affected area is cleaned as soon as possible to minimize health hazards to the public and to protect the environment.

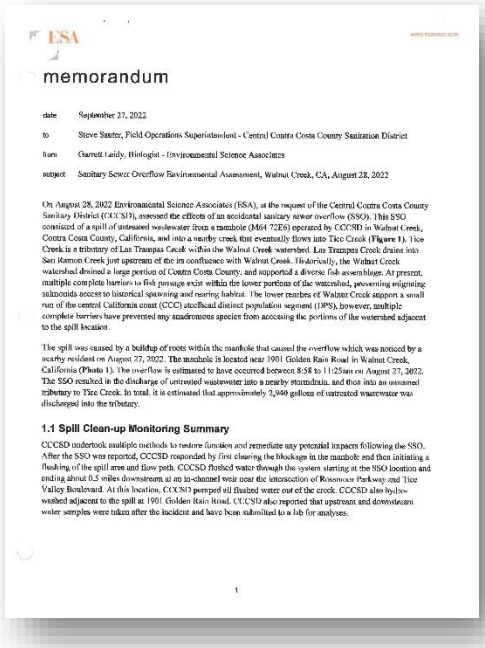
CentralSan's goal is to respond to sanitary sewer spills immediately following notification. CentralSan will follow reporting procedures regarding spills set forth by the San Francisco Bay Regional Water Quality Control Board (RWQCB) and the State Water Resources Control Board (SWRCB).

Sanitary Sewer Spill Response Policy

1. CentralSan's goals upon receiving notification of a Spill are to:
    - Respond as soon as possible (within 20 minutes during working hours, within 40 minutes after hours);
    - Protect public health, the environment, and property;
    - Prevent the discharge of untreated or partially untreated wastewater to Waters of the State to the extent possible;
    - Prevent, to the extent possible, the creation of a nuisance as defined in CWC Section 13050(m); and
    - Restore affected areas to normal as soon as practicable.
2. CentralSan strives to operate, manage and maintain all parts of the publicly owed Sanitary Sewer System in a manner that will prevent spills and mitigate the impact of the spills that do occur.
3. CentralSan responds to all spills, regardless of the size or location of the spill. High-risk areas shall include, but not be limited to:
    a. the proximity of the spill to sensitive populations, specifically public and private schools, parks, and recreational areas, as well as high-density commercial and residential locales
    b. discharges to surface waters, especially during the recreational season from May to September

c. any other location which poses an imminent and substantial endangerment to the public health or the environment

4. This Plan is designed to ensure that all reasonable steps are taken to contain and prevent the discharge of untreated or partially treated wastewater to the Waters of the State and to minimize or correct any adverse impact on the environment resulting from a spill.
5. CentralSan staff are required to report all spills that have been reported or discovered to CentralSan management.
6. CentralSan is required to take appropriate actions to secure the impacted area, relieve the cause of the spill, and ensure the affected area is cleaned as soon as possible to minimize health hazards to the public and protect the environment. If there is any reasonable risk that the public may come into contact with sewage, CentralSan will post and maintain appropriate notification signs and place barricades and other traffic control devices to keep vehicle and pedestrian traffic away from contact with sewage.
7. CentralSan only collects water quality samples for ALL Category 1 Spills over 50,000 gallons. The Field Superintendent or a Field Supervisor will collect, transport, and submit water quality samples for analysis to Central San's Laboratory at our Treatment Plant in Martinez, California. Samples are taken at or near where the spill reaches the surface water (site), approximately 100 feet upstream and downstream of the entry point. The samples are collected as soon as the blockage has been cleared, or if additional staff are available. Completing the sampling activities is in concurrence with clearing the blockage. The samples are analyzed for ammonia, total coliform, fecal coliform, enterococcus, and e-coli. Additional follow-up samples are recommended to confirm the extent that the impact reverts to baseline levels. If signs were posted, follow-up samples are performed to determine if the posting of warning signs should be discontinued. Collaboration with the Office of Emergency Services, Fish and Wildlife, and the County Health Department shall continue until closures have been removed.
8. In addition, CentralSan hires a third-party Biologist to inspect and review the clean-up and provide any further remediation recommendations for all Category 1 spills regardless of the volume. We request that the biologist perform their inspection within 48 hours of the notification of a Category 1 spill. Once the biologist has completed their inspection, a report is submitted to CentralSan documenting the clean-up, remedial recommendations, and any impacts to the receiving waters. The biologist report is then attached to the Category 1 spill report and records.



ESA

memorandum

date September 27, 2022

to Steve Sauter, Field Operations Superintendent - Central Contra Costa County Sanitation District

from Garrett Laidy, Biologist - Environmental Science Associates

subject Sanitary Sewer Overflow Environmental Assessment, Walnut Creek, CA, August 28, 2022

On August 28, 2022 Environmental Science Associates (ESA), at the request of the Central Contra Costa County Sanitary District (CCCSD), assessed the effects of an accidental sanitary sewer overflow (SSO). This SSO consisted of a spill of untreated wastewater from a manhole (M64 72E6) operated by CCCSD in Walnut Creek, Contra Costa County, California, and into a nearby creek that eventually flows into Tice Creek (**Figure 1**). Tice Creek is a tributary of Las Trampas Creek within the Walnut Creek watershed. Las Trampas Creek drains into San Ramon Creek just upstream of the its confluence with Walnut Creek. Historically, the Walnut Creek watershed drained a large portion of Contra Costa County, and supported a diverse fish assemblage. At present, multiple complete barriers to fish passage exist within the lower portions of the watershed, preventing migrating salmonids access to historical spawning and rearing habitat. The lower reaches of Walnut Creek support a small run of the central California coast (CCC) steelhead distinct population segment (DPS), however, multiple complete barriers have prevented any anadromous species from accessing the portions of the watershed adjacent to the spill location.

The spill was caused by a buildup of roots within the manhole that caused the overflow which was noticed by a nearby resident on August 27, 2022. The manhole is located near 1901 Golden Rain Road in Walnut Creek, California (**Photo 1**). The overflow is estimated to have occurred between 8:58 to 11:25am on August 27, 2022. The SSO resulted in the discharge of untreated wastewater into a nearby stormdrain, and then into an unnamed tributary to Tice Creek. In total, it is estimated that approximately 2,940 gallons of untreated wastewater was discharged into the tributary.

1.1 Spill Clean-up Monitoring Summary

CCCSD undertook multiple methods to restore function and remediate any potential impacts following the SSO. After the SSO was reported, CCCSD responded by first clearing the blockage in the manhole and then initiating a flushing of the spill area and flow path. CCCSD flushed water through the system starting at the SSO location and ending about 0.5 miles downstream at an in-channel weir near the intersection of Rosemont Parkway and Tice Valley Boulevard. At this location, CCCSD pumped all flushed water out of the creek. CCCSD also hydro-washed adjacent to the spill at 1901 Golden Rain Road. CCCSD also reported that upstream and downstream water samples were taken after the incident and have been submitted to a lab for analyses.

Authority: (See References)

- Health & Safety Code Sections 5410 - 5416
- Fish and Game Code Sections 5650 - 5656
- California Water Code Section 13271
- SWRCB Order Number WQ 2022-0103-DWQ

B. Prohibitions

Prohibitions as outlined in Order Number WQ 2022-0103-DWQ Statewide Waste Discharge Requirements (WDR), Sections 4.1, 4.2 and 4.3.

- **Discharge of Sewage from a Sanitary Sewer System**

  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. (WDR section 4.1, page 17)

- **Discharge of Sewage to Waters of the State**

  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. (WDR 4.2, pgs. 16-17)

- **Discharge of Sewage Creating a Nuisance**

  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. (WDR 4.3, pg. 18)

3. REQUIREMENTS

A. Spill Emergency Response Plan Requirements

The Spill Emergency Response Plan (SERP) requirements are included in the Statewide Waste Discharge Requirements for Sewer Systems – Order WQ 2022-0103-DWQ (WDR), dated December 6, 2022, and effective of June 5, 2023.

Section 5.12, page 23 of the WDR specifically states:

Spill Emergency Response Plan and Remedial Actions

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.**(Continuation of Regulatory Coverage has been confirmed by SWRCB per letter dated April 5, 2023).**

For New Enrollees:

Within six (6) months of the Application for Enrollment approval date, the Enrollee shall develop and implement a 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:

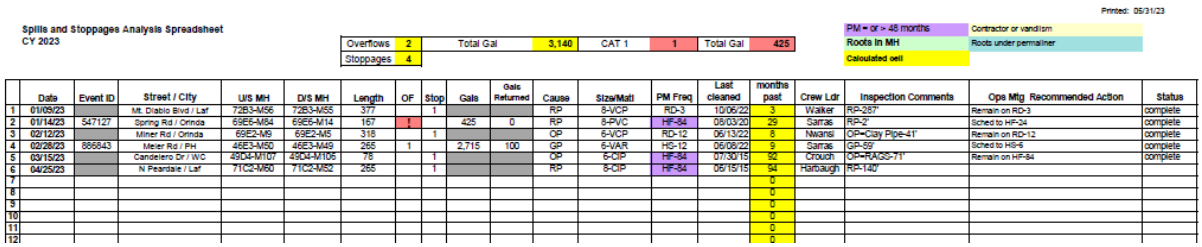
- Immediately stopping the spill and preventing/minimizing a discharge to waters of the State;
- Intercepting sewage flows to prevent/minimize spill volume discharged into waters of the State;
- Thoroughly recovering, cleaning up and disposing of sewage and wash down water; and
- Cleaning publicly accessible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

CentralSan had existing regulatory coverage under Order 2006-0003-DWQ and is subject to the abovementioned requirements. The WDR is dated December 6, 2022, and therefore, CentralSan must update and submit our revised SERP by June 5, 2022.

Additionally, the WDR requires that the SERP be updated and implemented per Attachment D, section 6 (Spill Emergency Response Plan). Attachment D, section 6 specifically states:
ATTACHMENT D - SECTION 6. SPILL EMERGENCY RESPONSE PLAN

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

- Notify primary responders, appropriate local officials, and appropriate regulatory agencies of a spill in a timely manner; **(See Section 3A-E pgs. 6-10, 4D pg. 16, 5C pgs. 62-63)**
- Notify other potentially affected entities (for example, health agencies, water suppliers, etc.) of spills that potentially affect public health or reach waters of the State; **(See Section 3A-E pgs. 6-10)**
- Comply with the notification, monitoring and reporting requirements of this General Order, State law and regulations, and applicable Regional Water Board Orders; **(See Section 3A-E pgs. 6-10)**
- Ensure that appropriate staff and contractors implement the Spill Emergency Response Plan and are appropriately trained; **(See Section 7B pg. 86)**
- Address emergency system operations, traffic control and other necessary response activities; **(See Section 5C, 8A, 11)**
- Contain a spill and prevent/minimize discharge to waters of the State or any drainage conveyance system; **(See Section 4E)**
- Minimize and remediate public health impacts and adverse impacts on beneficial uses of waters of the State; **(See Section 5C)**
- Remove sewage from the drainage conveyance system; **(See Section 5C)**
- Clean the spill area and drainage conveyance system in a manner that does not inadvertently impact beneficial uses in the receiving waters; **(See Section 5C)**
- Implement technologies, practices, equipment, and interagency coordination to expedite spill containment and recovery; **(See Section 5C)**
- Implement pre-planned coordination and collaboration with storm drain agencies and other utility agencies/departments prior, during, and after a spill event; **(See Section 5C)**
- Conduct post-spill assessments of spill response activities; **(Review All Spills, Stoppages, and Failed QA/QC at Biweekly Operations Meeting. Document findings on the Spills and Stoppages Analysis Spreadsheet)**



Printed: 05/31/23

Spills and Stoppages Analysis Spreadsheet
CY 2023

Overflows	2	Total Gal	3,140	CAT 1	1	Total Gal	425
Stoppages	4						

PM + or > 48 months	Contractor or vandlism
Roots in MH	Roots under permaliner
Calculated cell	

	Date	Event ID	Street / City	U/S MH	D/S MH	Length	OF	Stop	Gals	Gals Returned	Cause	Size/Matl	PM Freq	Last cleaned	months past	Crew Ldr	Inspection Comments	Ops Mtg Recommended Action	Status
1	01/05/23		Mt. Diablo Blvd / Laf	72B3-M56	72B3-M55	377		1			RP	8-VCP	RD-3	10/06/22	3	Walker	RP-287'	Remain on RD-3	complete
2	01/14/23	547127	Spring Rd / Orinda	69E6-M84	69E6-M14	167	1		425	0	RP	8-PVC	HF-84	05/03/20	29	Sarras	RP-2'	Sched to HF-24	complete
3	02/12/23		Miner Rd / Orinda	69E2-M6	69E2-M5	318		1			OP	6-VCP	RD-12	06/13/22	8	Nwansi	OP=Clay Pipe-41'	Remain on RD-12	complete
4	02/26/23	866843	Meier Rd / PH	46E3-M50	46E3-M49	265	1		2,715	100	GP	6-VAR	HS-12	06/08/22	9	Sarras	GP-89'	Sched to HS-6	complete
5	03/15/23		Candelero Cr / WC	49D4-M107	49D4-M105	75		1			OP	8-CIP	HF-84	07/30/15	92	Crouch	OP=RAGS-71'	Remain on HF-84	complete
6	04/25/23		N Peardale / Laf	71C2-M60	71C2-M52	265		1			RP	8-CIP	HF-84	05/15/15	94	Harbaugh	RP-140'		
7															0				
8															0				
9															0				
10															0				
11															0				
12															0				

- Document and report spill events as required in this General Order; and **(See Section 5C, Library, CityWorks)**

- Annually, review and assess effectiveness of the Spill Emergency Response Plan, and update the Plan as needed. **(See Section 7A and tracked in regulatory calendar)**

In addition to the new requirements outlined in the WDR for the SERP, there has been a large change in the Notification, Monitoring, and Reporting requirements for Spills. These changes are summarized in Attachment E1 – Notification, Monitoring and Reporting, and Record Keeping Requirements of the WDR. (See Appendix B)

Below are Tables E2-1 through E2-5 that specifically state the requirements for Notification, Monitoring, and Reporting Spills.

B. Spill Category 1: Spills to Surface Waters

Spill Requirement	Due	Method
Notification	**Within two (2) hours** of the Enrollee's knowledge of a Category 1 spill of 1,000 gallons or greater, discharging or threatening to discharge to surface waters: Notify the California Office of Emergency Services and obtain a notification control number.	California Office of Emergency Services at: (800) 852-7550 (Section 1 of Attachment E1)
Monitoring	• Conduct spill-specific monitoring; • Conduct water quality sampling of the receiving water within **18 hours** of initial knowledge of spill of 50,000 gallons or greater to surface waters.	(Section 2 of Attachment E1)
Reporting	• Submit Draft Spill Report **within three (3) business days** of the Enrollee's knowledge of the spill; • Submit Certified Spill Report **within 15 calendar days** of the spill end date; • Submit Technical Report **within 45 calendar days** after the spill end date for a Category 1 spill in which **50,000 gallons or greater**	(Section 3.1 of Attachment E1)

	discharged to surface waters; and • Submit Amended Spill Report **within 90 calendar days** after the spill end date.	

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

Spill Requirements	Due	Method
Notification	**Within two (2) hours** of the Enrollee's knowledge of a Category 2 spill of 1,000 gallons or greater, discharging or threatening to discharge to waters of the State: Notify California Office of Emergency Services and obtain a notification control number.	California Office of Emergency Services at: (800) 852-7550 (Section 1 of Attachment E1)
Monitoring	Conduct spill-specific monitoring.	(Section 2 of Attachment E1)
Reporting	• Submit Draft Spill Report **within three (3) business days** of the Enrollee's knowledge of the spill; • Submit Certified Spill Report **within 15 calendar days** of the spill end date; and • Submit Amended Spill Report **within 90 calendar days** after the spill end date.	(Section 3.2 of Attachment E1

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

Spill Requirements	Due	Method
Notification	Not Applicable	Not Applicable
Monitoring	Conduct spill-specific monitoring.	(Section 2 of Attachment E1)
Reporting	• Submit monthly Certified Spill Report to the online CIWQS Sanitary Sewer System Database within **30 calendars days** after the end of the month in which the spills occur; and • Submit Amended Spill Reports **within 90 calendar days** after the Certified Spill Report due date.	(Section 3.3 and 3.5 of Attachment E1)

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

Spill Requirements	Due	Method
Notification	Not Applicable	Not Applicable
Monitoring	Conduct spill-specific monitoring.	(Section 2 of Attachment E1)
Reporting	• If, during any calendar month, Category 4 spills occur, certify monthly, the estimated total spill volume exiting the sanitary sewer system, and the total number of all Category 4 spills into the online CIWQS Sanitary Sewer System Database, within 30 days after the end of the calendar month in which the spills occurred. • Upload and certify a report, in an acceptable digital format, of all Category 4 spills to the online CIWQS Sanitary Sewer System Database, by February 1st after the end of the calendar year in which the spills occur.	(Section 3.4, 3.6, 3.7 and 4.4 of Attachment E1)

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

Spill Requirements	Due	Method
Notification	**Within two (2) hours** of the Enrollee's knowledge of a spill of 1,000 gallons or greater, from an enrollee-owned and/or operated lateral, discharging or threatening to discharge to waters of the State: Notify California Office of Emergency Services and obtain a notification control number. Not applicable to a spill of less than 1,000 gallons.	California Office of Emergency Services at: (800) 852-7550 (Section 1 of Attachment E1)
Monitoring	Conduct visual monitoring.	(Section 2 of Attachment E1)
Reporting	• Upload and certify a report, in an acceptable digital format, of all lateral spills (that do not discharge to a surface water) to the online CIWQS Sanitary Sewer System Database, by February 1st after the end of the calendar year in which the spills occur. • Report a lateral spill of any volume that discharges to a surface water as a Category 1 spill.	(Sections 3.6, 3.7 and 4.4 of Attachment E1)

4. PROCEDURES

A. Customer Relations and Communication Tips

Customer Relations

Employees must communicate effectively with CentralSan customers, especially when there are spills. How we communicate – on the phone, in writing, or in person – is how we are perceived. Good communication with customers results in greater confidence in our ability to address their problems satisfactorily. There will be less chance of having a customer prolong the claims process and less opportunity that a customer will exaggerate the damage done to their property.

As a representative of CentralSan, you will occasionally have to deal with an irate customer. A sewer spill is a stressful event, and even a reasonable person can become irate if they perceive us as indifferent, uncaring, unresponsive, or incompetent.

Although sometimes difficult, effective management of a spill situation is critical. If it is not well managed, the situation can end up in a costly, prolonged process with the customer. We want the customer to feel assured that we are responsive and that our top priority is the customer's best interest.

Communication Tips

- Give the customer ample time to explain the situation or to vent. Show interest in what the customer has to say, no matter how often you've heard it before or how well you understand the problem.
- As soon as possible, let the customer know that you will determine if the source of the sewer spill is in the main and, if it is, that you will have it corrected as quickly as you can.
- Acknowledge the customer's concerns. For example, if the customer seems angry or worried about property damage, you could say something like, "I understand you're concerned about the possible damage to your property, but a professional clean-up crew can restore the area, and if it is determined that CentralSan is at fault, the property owner has the right to file a claim for any reasonable repairs or losses resulting from this incident."
- Express understanding and empathy for any inconvenience caused by the incident but do not admit fault.
- As much as possible, keep the customer informed on what is being done and what will be done to correct the problem.
- Keep focused on getting the job done in a very professional manner. Don't wander from the problem with too much unnecessary small talk with the customer.
- Do not find fault or place blame on anyone.

B. How to Clear a Stoppage With a Rodder

Follow All Required Safety Procedures

* All Employees Shall Have and Use All Appropriate PPE
* All Necessary Traffic Controls Shall be in Place
* Follow all Safety Directive Requirements (Air Monitoring, Respiratory Protection etc.)

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Identify the location of the stoppage.

- ☐ Locate spilling manhole or rodding inlet. Isolate plugged portion by finding non-standing manholes connected to standing manholes.
- ☐ Take photos of the spilling structure and spill area, then notify your supervisor.
- ☐ Set up on appropriate manhole. Usually this is downstream of the blockage. Depending on location, geography, safety or other concerns, it may be necessary to set up on the upstream manhole.

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Rodding

- ☐ Attach an undersized auger to the rod (i. e. 4” auger for a 6” line) and lower into the line.
- ☐ Rotate the auger and advance the rod until you achieved blow down. Make note of your footage.
- ☐ Run up to the next structure, after blow down has relieved itself, rum auger to upstream structure (verify by visual inspection).
- ☐ Once the line is open and you have sewage blow-down into the manhole, change to a cutter blade to re-clean the line and remove the rest of the debris.

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Follow Up

- ☐ Once the spill has stopped, use approved methods for estimating total spill volume and amount of spill returned to the collection system where applicable. Attach photos to estimate.
- ☐ Complete the Spill/Stoppage Response Form (Orange sheet). Attach copies of maps, GPS Coordinates, spill estimates, photos and line maintenance history to the form. Submit these items to your supervisor by the start of the next workday.
- ☐ CCTV line within two days for all Sanitary Sewer Spills and Stoppages.

C. Spill Response Tactics

The following chart is intended as a guide to generate ideas about responding to sewer spills. Each indicated response tactic might not be appropriate for a given sewer spill. Always choose the tactic that best meets the circumstances at the time and the resources available. Protecting our employees, the public, and environmental health should always be considered when responding to a sewer spill.

	SPILL Cause										
Possible Solutions	Capacity due to gradient	Capacity due to undersized line	Capacity due to surcharged system	Collapse	Debris in Manhole	Debris in Line	Grease	Miscellaneous Plug	Roots	Pump Station Failure	Power Failure
Hydro Jet				✓		✓	✓	✓	✓		
Rodder				✓		✓	✓	✓	✓		
Vacuum Truck	✓	✓		✓	✓	✓	✓	✓	✓		
TV Van						✓	✓	✓	✓		
Backhoe *				✓							
Hand Tools					✓						
Bypass Piping	✓	✓		✓				✓	✓		
Bypass Pumping	✓	✓		✓				✓	✓	✓	✓
Manhole Entry **					✓						
Storage Tanks or Set Up Ponds	✓	✓	✓								
USA Request *				✓							
Backup Generators										✓	✓

* USA Requests: 811

** Confined Space Entry Procedures are required

D. Spill Containment Procedures

The spill must be contained. Containment becomes more complicated if the spill reaches the storm drain system or a drainage channel since the spill can rapidly contaminate receiving waters such as creeks, streams, rivers, and other bodies of water. During dry weather, the storm drain system can be used to store the spill if it can be plugged downstream or if the downstream storm drain pump station can be deactivated.

Options for Containing the Spill

Spill onto Ground:

- □ Place rubber mats at the catch basin or inlet
- □ Place sand bags in the gutter and around catch basin or inlet
- □ Use plastic sheeting to prevent the flow from advancing toward storm drain and culverts
- □ Dig an earthen trench or build a berm to create a pond

Spill into Building:

- □ Evacuate affected people if necessary
- □ Remove backwater cap or plug from the cleanout as soon as possible to reduce flow into the building
- □ Use sand bags and plastic sheeting as necessary
- □ Avoid electrical shock by turning power off if outlets or other energized equipment is wet or sitting in water

Spill into Storm Drain or Drainage Channel:

- □ Trace the spill in the storm drain system to it's downstream end point
- □ Plug all affected storm system outlets and coordinate with appropriate personnel to implement a containment strategy
- □ Turn off storm water pump station
- □ Quick dam deployment

Required Equipment

Spills onto Ground or into Buildings:

□ Rubber Mats	□ Absorbent Materials	□ Bypass Pumps and Pipe/Hose
□ Sand Bags	□ Plastic Sheeting	□ Vacuum Truck

Spills into Storm Drain or Drainage Channel:

□ Plugs	□ Vacuum Truck
□ Bypass Pump	□ Sand Bags

Spills at a Pump Station:

□ Bypass Pump/Hoses	□ Emergency Generator
	□ Vacuum Truck

E. Post-Spill Sampling for CAT 1 Spills over 50,000 gallons and Posting Procedure

1. Get four (4) Field Sampling Kits from the yard and fill the coolers with ice from the warehouse and binder.

2. Determine the point where the spill entered the waterway. Photograph this location. Be sure to include a reference point in the photo.

3. Don appropriate PPE for sampling activities.

4. Sampling Notes:

- Collect all samples against the direction of water flow.
- First take a reference sample: move 100' upstream of the spill entry point into the waterway.
- Take another sample at the spill entry point into the waterway.
- Take another sample at least 100' downstream of the spill entry point into the waterway.
- If the spill went through a drainage conveyance system, collect a sample at the entry point of the drainage conveyance system (DCS-001)
- Photograph evidence of any dead fish or other aquatic life loss.

5. Sampling Procedure:

a) Collect samples well away from the bank, preferably at a point where the water is visibly flowing.

b) **Bottle 1 & 2 & sacrificial sample collection vessel: e.Coli & Coliform/Enterococcus Sample** (3-290mL plastic with sodium thiosulfate)

- Remove the seal and cap from the sacrificial sterile sampling container. This container will be used to fill bottles 1 and 2.
- Remove the seal from bottle 1 just prior to collecting the sample. A chemical has been added to the sample container. Leave the chemical in the bottle and do not rinse.
- Remove the cap immediately before collecting each sample.
- Do not allow the inside of the cap to touch anything.
- Collect the sample using the sacrificial steril container and fill bottle 1 to the 250mL line and immediately replace the cap.
- Label the bottle with the site ID and time/date of collection and fill out COC
- Repeat for Bottle 2

c) **Bottles 3a & 3b: Ammonia Sample** (290mL plastic with sodium thiosulfate & 250mL plastic with Sulfuric Acid)

- First fill bottle 3a (using the sacrificial sample bottle from step b) with sample (bottle 3a contains sodium thiosulfate to dechlorinate the sample, do not rinse the container)
- Second pour the contents of bottle 3a into bottle 3b (bottle 3b contains Sulfuric Acid to preserve the sample, do not rinse the container and observe safe handling with Acid)
- Label Bottle 3b with the site ID and time/date of collection and fill out COC

d) Label the samples with their location and note the date and time collected.

e) Place the samples in the cooler.

f) Photograph the sample location. Be sure to include a reference point in the photo.

6. Complete the Chain of Custody form from the Sampling Kit (see example on page 73).

7. Immediately contact Central San lab to advise them that the following samples require processing:
Enterococcus/Coliform/e.Coli – Holding Time = <6 hours

8. Take coolers containing the samples and completed Chain of Custody form to the lab.

9. Post warning signs as directed by the County Environmental Health Department.

10. Repeat Ammonia (Hach) sampling until the results of two consecutive set of samples indicate normal levels.

11. Remove warning signs and lift restrictions, if applicable.

Field Sampling Kit Inventory

☐ Cooler with ice (4 ea)
☐ Safety Glasses
☐ Latex Gloves
☐ Digital/Disposable Camera
☐ Chain of Custody Binder
☐ Chain of Custody Form
☐ 30 sample bottle labels
☐ Waterproof pen (e.g. Sharpie)
☐ Sacrificial bottle for sampling (290mL sterile plastic), 1 per cooler
☐ Bottle 1 & 2 (Enterococcus/Coliform & e.coli Samples) (290 ml sterile plastic bottle), 1 set of 2 per cooler
☐ Bottles 3a & 3b (Ammonia Sample) bottles (290mL dechlorination bottle & 250mL plastic w/H2SO4), 1 set of 2 per cooler

F. Methods for Determining Flow Volume

1. Eyeball Estimation Method

Form #_____

Eyeball Estimation Method Worksheet

Use this method only for small spills of less than 200 gallons.

Spill Date: _____ Location: _____

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

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

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

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

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

STEP 5: Is rainfall a factor in the spill? ☐ Yes ☐ No
If yes, what volume of the observed spill volume do you estimate is rainfall? _____ gallons
If yes, describe how you determined the amount of rainfall in the observed spill?

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

_____ gallons - _____ gallons = _____ gallons
Estimated Spill Volume — Rainfall — **Total Estimated Spill Volume**

Do you believe that this method has estimated the entire spill? ☐ Yes ☐ No
- If no, you MUST use additional methods to estimate the entire spill.
- If yes, it is advisable to use additional methods to support your estimation.

Explain why you believe this method has or has not estimated the entire spill:

This worksheet completed by:
Name: _____ Signature: _____
Job Title: _____ Date: _____

2. Area/Volume Method: Ponded Sewage

Form #_____

Area/Volume Method Worksheet: Ponded Sewage ***(Page 1 of 2)***

Spill Date: _____ Location: _____

STEP 1: Describe spill area surface: □Asphalt □Concrete □Dirt □Landscape □Inside Building
□Other: _____

STEP 2: Draw/sketch the outline (footprint) of the spill. Then break the footprint down into recognizable shapes. Refer to the example on the **Area/Volume Method: Ponded Sewage Reference Page 1.**

STEP 3: Calculate the area of the footprint. Complete the table below for each shape identified in Step 2. If two shapes overlap, select one of the two shapes and estimate the percentage of that shape that does not overlap. Enter that percentage in the % Not Overlapping column. This will ensure that the overlap area is only counted once. Refer to the example on the Area/Volume Method: Ponded Sewage Reference Page 1.

Rectangles	Length	X	Width	X	% Not Overlapping	=	Area
	ft	X	ft	X	%	=	ft²
	ft	X	ft	X	%	=	ft²
	ft	X	ft	X	%	=	ft²

Triangles	Base	X	Height	Multiplier	X	% Not Overlapping	=	Area
	ft	X	ft	÷ 2	X	%	=	ft²
	ft	X	ft	÷ 2	X	%	=	ft²
	ft	X	ft	÷ 2	X	%	=	ft²

Circles	π	X	Radius	X	Radius	X	% Not Overlapping	=	Area
	3.14	X	ft	X	ft	X	%	=	ft²
	3.14	X	ft	X	ft	X	%	=	ft²
	3.14	X	ft	X	ft	X	%	=	ft²

Total Spill Area (sum of all three tables above): _____ ft²

STEP 4: Calculate the volume of the spill that **was NOT absorbed** into the ground. If the entire spill was absorbed, skip to Step 5.

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

_____ inches ÷ _____ = _____ inches ÷ 12 = _____ feet
sum of measurements | # of measurements | average depth in inches | average depth in feet of ponded sewage

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

_____ ft² x _____ ft = _____ ft³ x 7.48 gal = _____ gallons
spill area (Step 3) | average depth (Step 4a) | spill volume in cubic feet | estimated volume of ponded sewage

GO TO PAGE 2

Form #_____

Area/Volume Method Worksheet: Ponded Sewage *(Page 2 of 2)*

STEP 5: Calculate the volume of the spill that **was absorbed** into the ground. If only a wet stain is observed, use the guidelines from the **Area/Volume Method: Ponded Sewage Reference Page 1** for the average depth instead of performing the calculations in Steps 5a and 5b below.

a. In order to perform this calculation, you must first determine the water content in the soil using the method described on **Area/Volume Method: Ponded Sewage Reference Page 2:**

Volume of known quantity of water:	V_1 = _____ gallons
Area of wetted footprint:	A = _____ ft^2
Average Depth of Wet Soil:	D = _____ ft
Volume of Wet Soil in Feet = A x D	V_2 = _____ ft^3
Convert cubic feet to gallons = V_2 x 7.48	V_3 = _____ gallons
Calculate water content in soil $V_1 \div V_3$ x 100	Water Content = _____ %

b. Calculate the depth of the actual sewage spill that was absorbed into the ground. First, measure the depth of the wet soil in several locations within the wetted area of the sewage spill. Determine the average depth of the wet soil by taking several measurements at different depths and finding the average. Convert the measurement to feet:

_____ inches	÷ _____	= _____ inches	÷ 12 = _____ feet
sum of measurements	# of measurements	average depth in inches	average depth in feet

c. Calculate volume of the spill that was absorbed into the ground in cubic feet by multiplying the Total Spill Area from Step 3 by the average depth calculated in Step 5b. Then convert from cubic feet to gallons by multiplying by 7.48. Then multiply by the water content percentage determined in Step 5a.

_____ ft^2	÷ _____ ft	= _____ ft^3	x 7.48 gal x	_____ %	= _____ gallons
spill area (Step 3)	average depth (Step 5b)	spill volume in cubic feet		water content (Step 5a)	estimated volume of absorbed sewage

STEP 6: Add the volume not absorbed (Step 4) plus the volume absorbed (Step 5) to get the total estimated volume:

_____ gallons	+ _____ gallons	= _____ gallons
volume not absorbed	volume absorbed	**Total Estimated Spill Volume**

Do you believe that this method has estimated the entire spill? ☐ Yes ☐ No

- If no, you MUST use additional methods to estimate the entire spill.
- If yes, it is advisable to use additional methods to support your estimation.

Explain why you believe this method has or has not estimated the entire spill:

This worksheet completed by:

Name: _____ Signature: _____

Job Title: _____ Date: _____

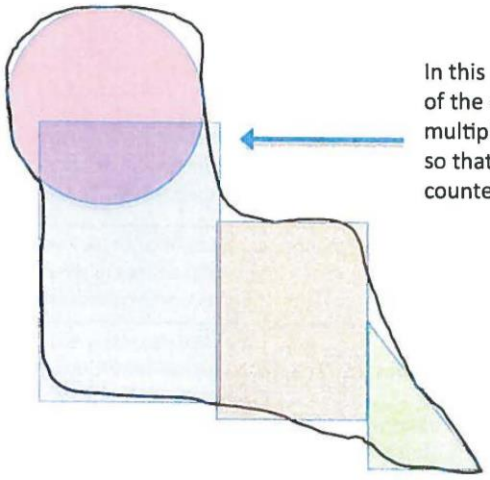
Area/Volume Method: Ponded Sewage Reference

Miscellaneous computations:

Computation	Formula/Guide
To convert inches to feet	Divide the inches by 12 or use the chart on the bottom right of this page.
Volume of one cubic foot	7.48 gallons of water
Area: Two-dimensional measurement represented in square feet.	Square/rectangle: Area = Length x Width Circle: Area = πr^2 (where $\pi \approx 3.14$ and r = radius = ½ diameter) Triangle: Area = ½ (Base x Height)
Volume: Three-dimensional measurement represented in cubic feet.	Rectangle/square footprint: Volume = Length x Width x Depth Circle footprint (cylinder): Volume = πr^2 x Depth (where $\pi \approx 3.14$ and r = radius = ½ diameter) Triangle footprint: Volume = ½ (Base x Height) x Depth
Depth: Contained or "Ponded" sewage	Measure actual depth of standing sewage whenever possible. When depth varies, measure several representative sample points and determine the average. Add the depth of the sample points and then divide that total by the number of sample points. If the depth is not measurable because it is only a wet stain, use the following depths: • Depth of a wet stain on concrete surface: 0.0026' (1/32") • Depth of a wet stain on asphalt surface: 0.0013' (1/64")

Example of how to draw/sketch the outline (footprint) of the spill for Step 2:

1. Sketch the outline of the spill (black line).
2. Break the sketch down into recognizable shapes (circles, squares, etc.) as well as you can.



In this example, after the volume of the circle is determined, multiply it by approximately 65% so that the overlap area isn't counted twice.

Convert Inches to Feet

Inches	Feet
1/8"	0.01'
1/4"	0.02'
3/8"	0.01'
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'

Example of how to determine the water content in wetted soil, measured as a percentage.

By determining the water content in the soil when a known quantity of water is used, it will be possible to estimate the sewage content in the soil where the actual spill occurred.

	Step	Example
	Select an area of dry soil (near the wetted footprint of the spill) to sample. If possible, use a form to keep the water contained to a geometric shape (circle, square, rectangle, etc.).	Place a 2 foot diameter form onto an area of dry soil.
V_1	Pour a known amount of water onto the soil and let it soak in for an adequate amount of time. (This quantity is V_1 in Step 5 on the worksheet)	Pour one gallon of water into the form and let it soak in for 15 minutes.
A	Pull the form and measure the AREA of the wetted soil. It will likely be larger than the form. (This measurement is A in Step 5 on the worksheet)	In this example, let's say the wetted soil footprint's diameter is 2 ft 2 in. We convert the inches to feet and get a diameter of 2.17 ft. The radius is ½ of the diameter, so r = 1.085 ft So using the formula: Area = πr^2 (where $\pi \approx 3.14$) the area of the footprint is 3.14 x 1.085 ft x 1.085 ft = 3.70 ft^2
D	Using a small hand tool, dig down into the soil until dry soil is reached. Measure the DEPTH of the wet soil. Do this in multiple locations and average the measurements. Convert to feet. (This measurement is D in Step 5 on the worksheet)	Dig into the soil in 3 locations and measure the depth of the wetted soil. It is usually easiest to measure this depth in inches, so in this example we will measure in inches and then convert to feet. In this example, let's say we take the following measurements: 2½ inches, 1½ inches and 3¾ inches We convert the measurements to decimals and get 2.5 in, 1.5 in, and 3.75 in. Then we average the 3 measurements by adding them together and then dividing by 3: 2.5 in + 1.5 in + 3.75 in = 7.75 in 7.75 in ÷ 3 = 2.58 in Convert the number to feet by dividing by 12: 2.58 in ÷ 12 in = 0.215 ft
V_2	Multiply the AREA of the wet soil by the average DEPTH of the wet soil to determine the VOLUME of the wet soil in cubic feet. (This measurement is V_2 in Step 5)	3.70 ft^2 x 0.215 ft = 0.80 ft^3
V_3	Multiply by 7.48 to convert the volume in cubic feet (ft^3) to the volume in gallons (gal). *NOTE: This measurement is V_3 in Step 5*	Multiply the volume in cubic feet by the conversion multiplier to get the volume in gallons 0.80 ft^3 x 7.48 gal/ft^3 = 6 gal
Water Content	Calculate the water content in the soil: • Since you started with a known amount, you know how much water is in the soil. • Divide that known amount of water by the calculated volume of soil to get the percent of water content in the soil.	Divide the known volume of water by the calculated volume of soil 1 gal ÷ 6 gal = .17 so 17% is the water content in the soil.

General Reference – Calculations to be used for Area Method

SMART Sewer Overflow Volume Estimation Workbook

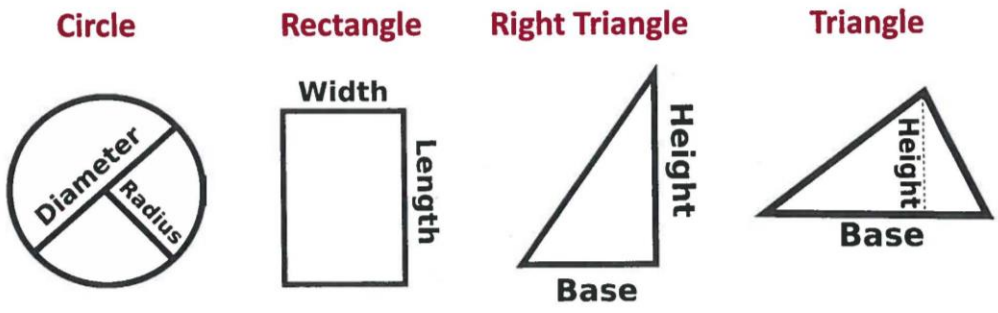
General Reference
Page 1 of 2

Abbreviations and Symbols:

gal	gallons
gpm	gallons per minute
mgd	millions of gallons per day
in	inch
ft	foot
ft^2	square foot
ft^3	cubic foot
min	minute
sec	second
cfs	cubic feet per second
d	diameter
r	radius = 1/2 diameter
π	pi ≈ 3.14

+	add
-	subtract
x	multiply
÷	divide
=	equal
≈	approximately equal
%	percent
CCTV	sewer inspection camera
EDU	Equivalent dwelling unit. A dwelling unit is a single-family home. Commercial buildings may count as more or less than a single dwelling unit.

Diagrams:



Conversions:

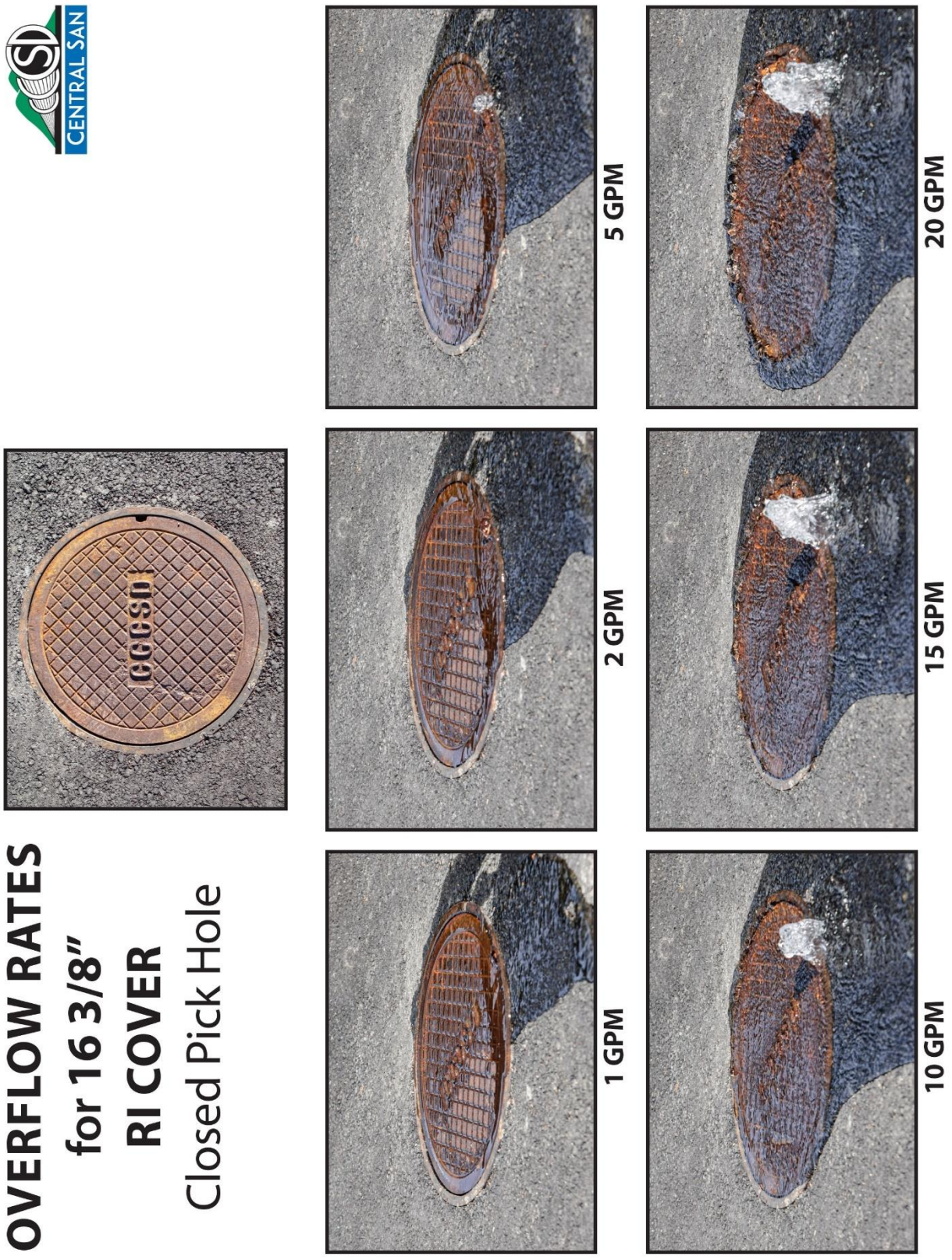
Convert FROM	Convert TO	Formula
hours	minutes	hours x 60 = minutes
days	minutes	days x 1440 = minutes
inches	feet	inches ÷ 12 = feet
feet	inches	feet x 12 = inches
square inches	square feet	$in^2 \div 144 = ft^2$
square feet	square inches	$ft^2 \times 144 - in^2$
cubic inches	cubic feet	$in^3 \div 1728 = ft^3$
cubic feet	cubic inches	$ft^3 \times 1728 = in^3$
cubic feet	gallons	$ft^3 \times 7.48$ = gallons

Convert Inches to Feet	
Inches	Feet
1/8"	0.01'
1/4"	0.02'
3/8"	0.01'
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'

Computations:

Computation	Formula/Guide
Area: Two-dimensional measurement represented in square feet.	Square/rectangle: Area = Length x Width Circle: Area = πr^2 (where $\pi \approx 3.14$ and r = radius = ½ diameter) Triangle: Area = ½ (Base x Height)
Volume: Three-dimensional measurement represented in cubic feet.	Rectangle/square footprint: Volume = Length x Width x Depth Circle footprint (cylinder): Volume = πr^2 x Depth (where $\pi \approx 3.14$ and r = radius = ½ diameter) Triangle footprint: Volume = ½ (Base x Height) x Depth
Depth: Contained or "Ponded" Sewage	Measure actual depth of standing sewage whenever possible. When depth varies, measure several representative sample points and determine the average. Add the depth of the sample points and then divide that total by the number of sample points. If the depth is not measurable because it is only a wet stain, use the following depths: • Depth of a wet stain on concrete surface: 0.0026' (1/32") • Depth of a wet stain on asphalt surface: 0.0013' (1/64")

3. Volume/Duration and Flow Rate: Photo Comparison



25 GPM

30 GPM

50 GPM

75 GPM

100 GPM

125 GPM

150 GPM

175 GPM

200 GPM

3001A-7/20

OVERFLOW RATES for 25 1/4" NEW STYLE COVER

Open Pick Hole

1 GPM

2 GPM

5 GPM

10 GPM

15 GPM

20 GPM

25 GPM

30 GPM

50 GPM

75 GPM

100 GPM

125 GPM

150 GPM

175 GPM

200 GPM

OVERFLOW RATES for 25 1/4" NEW STYLE COVER

Closed Pick Hole

1 GPM

2 GPM

5 GPM

10 GPM

15 GPM

20 GPM

25 GPM

30 GPM

50 GPM

75 GPM

100 GPM

125 GPM

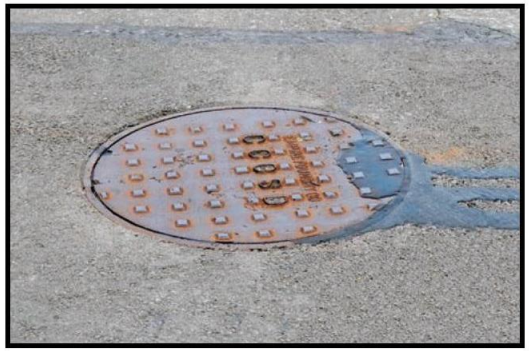
150 GPM

175 GPM

200 GPM

3001D-7/20

OVERFLOW RATES for 27 3/4" OLD STYLE COVER



1 GPM

2 GPM

5 GPM

10 GPM

15 GPM

20 GPM

25 GPM

30 GPM

50 GPM

75 GPM

100 GPM

125 GPM

150 GPM

175 GPM

200 GPM

3001C-7/12

OVERFLOW RATES for Private Lateral OPD

1 GPM

2 GPM

5 GPM

10 GPM

15 GPM

20 GPM

25 GPM

30 GPM

50 GPM

OVERFLOW RATES
for
Private Lateral OPD
below grade

CENTRAL SAN

1 GPM

2 GPM

5 GPM

10 GPM

15 GPM

20 GPM

25 GPM

30 GPM

50 GPM

3001E-7/20

G. CLAIMS HANDLING

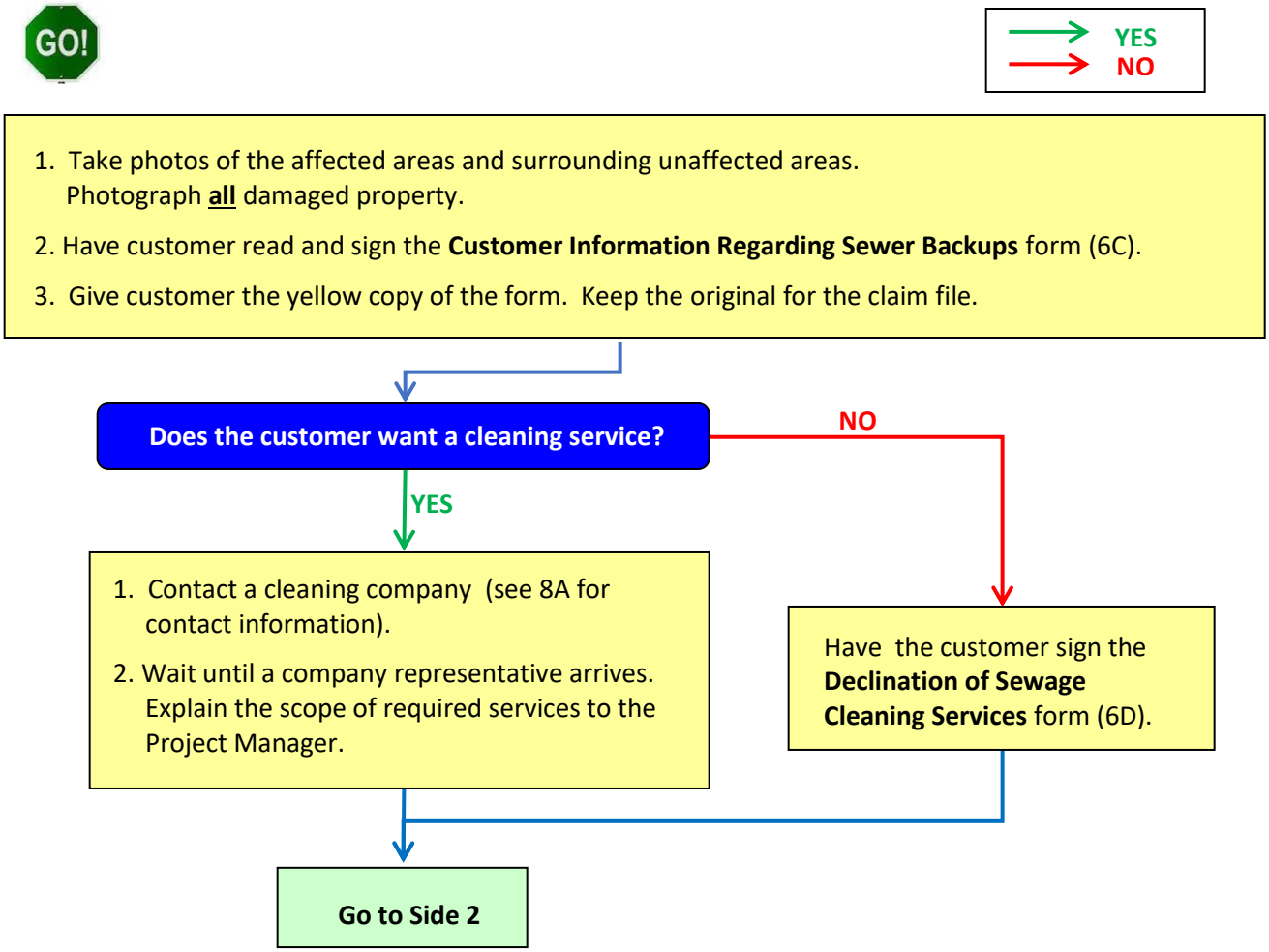
CentralSan staff shall offer a claim form to anyone upon request. All claims will be investigated, and decisions regarding claims will be made as required by government code 910 et. seq.

CentralSan staff's responsibility is to gather information regarding the incident and notify the appropriate CentralSan manager or designee.

The Risk Management Administrator or their designee is responsible for reviewing all claims and overseeing the adjustment and administration of each claim to closure.

Whenever an overflow causes or potentially causes damage to a home or business, contact Risk Management at 925-229-7313 (o) or 925-808-0510 (c).

If Risk Management staff is unavailable, field supervisors should follow these steps to resolve the immediate needs.



From Side 1

Can the customer stay in the house or continue to operate the business before, during and after the clean up (refer to Form 6G for additional details)?

NO

For Residents: Coordinate alternative lodging (Form 6I).

For Businesses: Discuss and begin collecting data for a business interruption claim.

YES

Complete the **Spill/Stoppage Response Form** (6B). Note all actions

Give customer your contact information and advise of your next steps in the response, if any.

Provide customer with a **Claim Form** (6E) and explain the District's claims handling process.

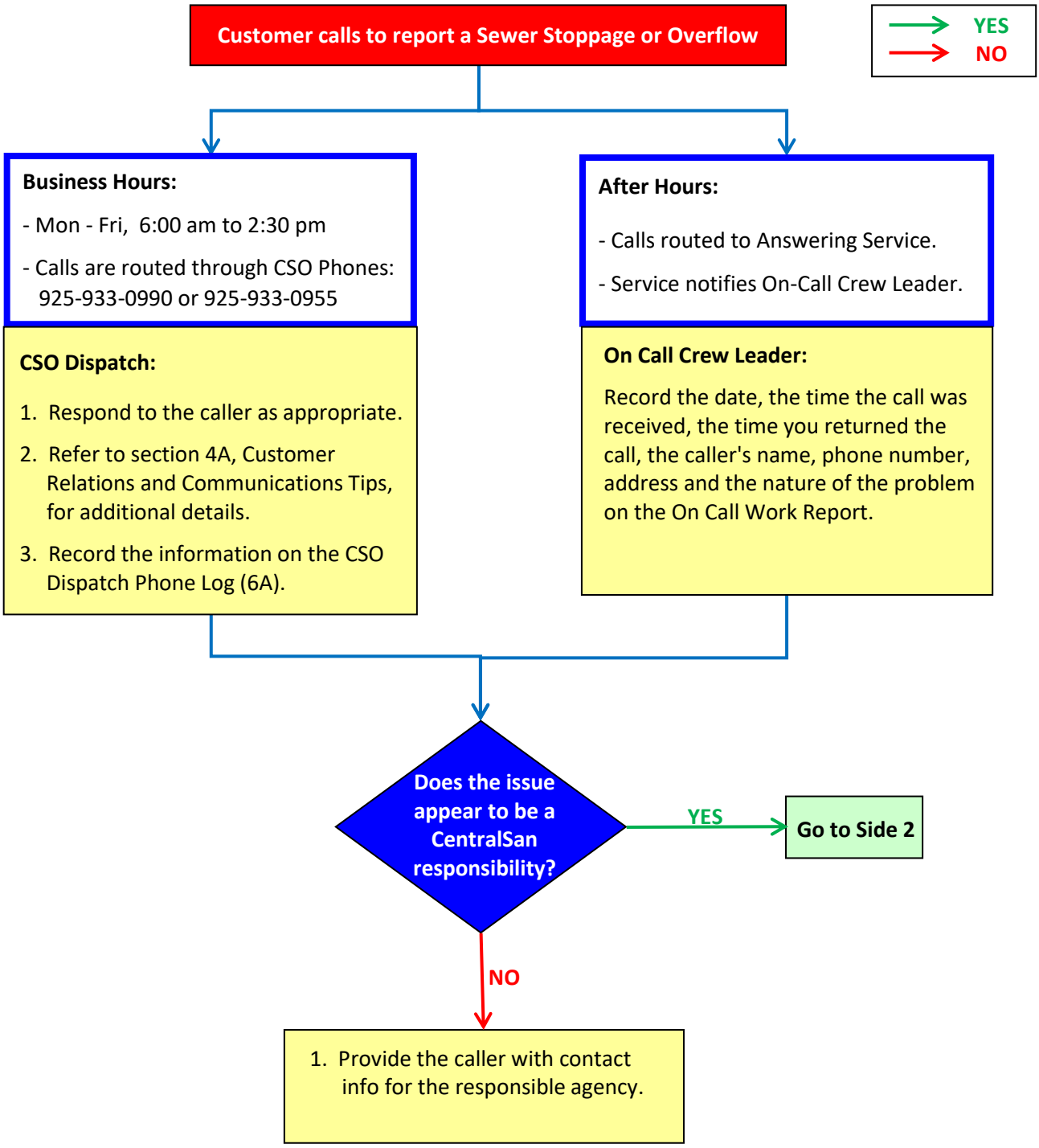
Upon notice of the loss Risk Management staff will make contact with the affected customer(s) and coordinate additional or ongoing needs (lodging, further clean up, reconstruction, etc.).

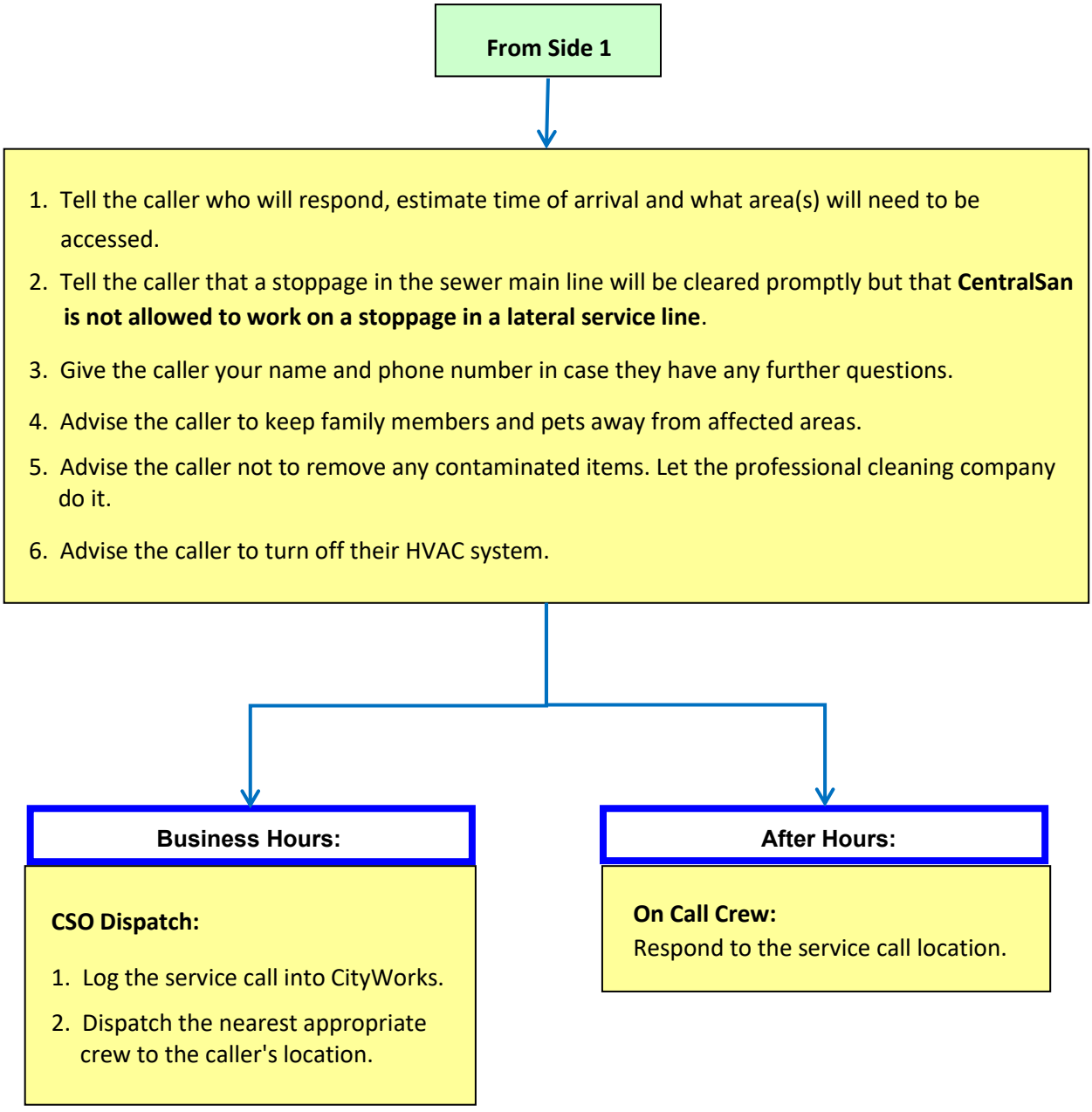
CSO field staff shall forward all documents, reports, photos and notes arising out of the loss to Risk Management as soon as possible to faciliate timely claims handling and resolution.

NOTE: All forms regarding property loss or damage are included in the Incident Envelope.

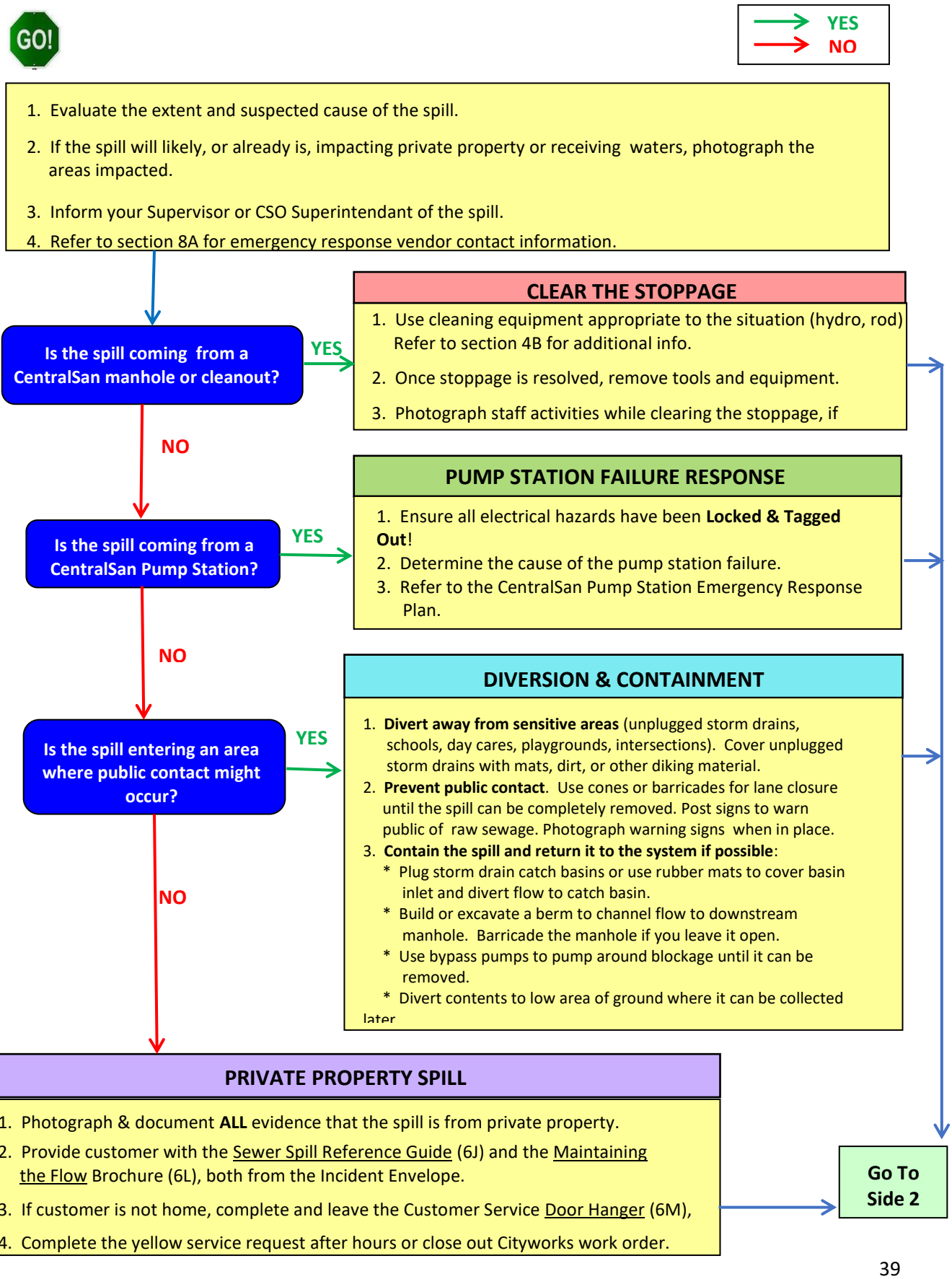
5. WORKFLOW DIAGRAMS

A. INTAKE PROCEDURE




From Side 1
1. Tell the caller who will respond, estimate time of arrival and what area(s) will need to be accessed.
2. Tell the caller that a stoppage in the sewer main line will be cleared promptly but that CentralSan is not allowed to work on a stoppage in a lateral service line.
3. Give the caller your name and phone number in case they have any further questions.
4. Advise the caller to keep family members and pets away from affected areas.
5. Advise the caller not to remove any contaminated items. Let the professional cleaning company do it.
6. Advise the caller to turn off their HVAC system.
Business Hours:
CSO Dispatch:
1. Log the service call into CityWorks.
2. Dispatch the nearest appropriate crew to the caller's location.
After Hours:
On Call Crew:
Respond to the service call location.

B. RESPONDING TO A SANITARY SEWER SPILL



From Side 1

Has the spill reached/likely to reach a creek or other natural water body or is there evidence of a fish kill?

NO → **Were storm drains**

NO

YES

Use the Hach Ammonia Kit (in Field Sampling Kit) to trace the extent of the spill in the storm drain.

YES

For Spills greater than 1,000 gallons discharging or threatening to discharge to surface waters , notify CAL-OES within two hours. For CAT 1 Spills greater than 1,000 gallons into San Pablo Creek, notify EBMUD at 1-866-403-2683.

COLLECT WATER SAMPLES

1. Use the Field Sampling Kit and follow SOP. See 4F for additional info.
2. Assign staff to post the **Warning - Raw Sewage** sign (8C) along the shoreline of impacted waters or as directed by the County Environmental Health Dept.

Is it feasible or practical to contain/recover any of the spill from the contained area (i. e. small canal, ditch, creek etc.)?

NO

YES

CONTAINMENT

1. Contact your supervisor if additional containment assistance is required.
2. If the spill is sufficiently large, contact PSC as directed by Supervisor (see 8A).
3. Describe the situation and request assistance.

STORM DRAIN CLEANING

1. Seal or berm the storm drain immediately downstream of where the spill reached.
2. Photograph impacted storm drain catch basins before cleaning.
3. Vaccuum any visible sewage and **record the volume of sewage recovered**.
4. Flush impacted sections of storm drain (with 3x amount of spill, if possible) and **record the volume of flush water recovered**.
5. Remove all visible signs of sewage.
6. Return flush water (if chlorinated) to sanitary sewer and **record the volume of flush water recovered.**
7. Photograph all storm drain catch basins after cleaning is completed.

AREA CLEANUP

1. **Assign staff to begin cleanup**.
   NOTE: If spill was caused by a lateral or private line failure, clean up impacted public areas and document staff time, equipment used and expenses incurred.
2. **Remove all signs of gross pollution** (toilet paper, solids, grease etc.)
3. **Flush area** with metered water, unless its raining (3x amount of spill, if possible).
   - Continue flushing until clear Hach test.
   - Set up berm/other containment to **collect all dechlorinated flush water** so it can be returned to the sewer.
   - Don't use disinfectants that may enter the storm drain or other water body.
4. **Photograph the area** when cleanup operation is complete.

ESTIMATE SPILL VOLUME

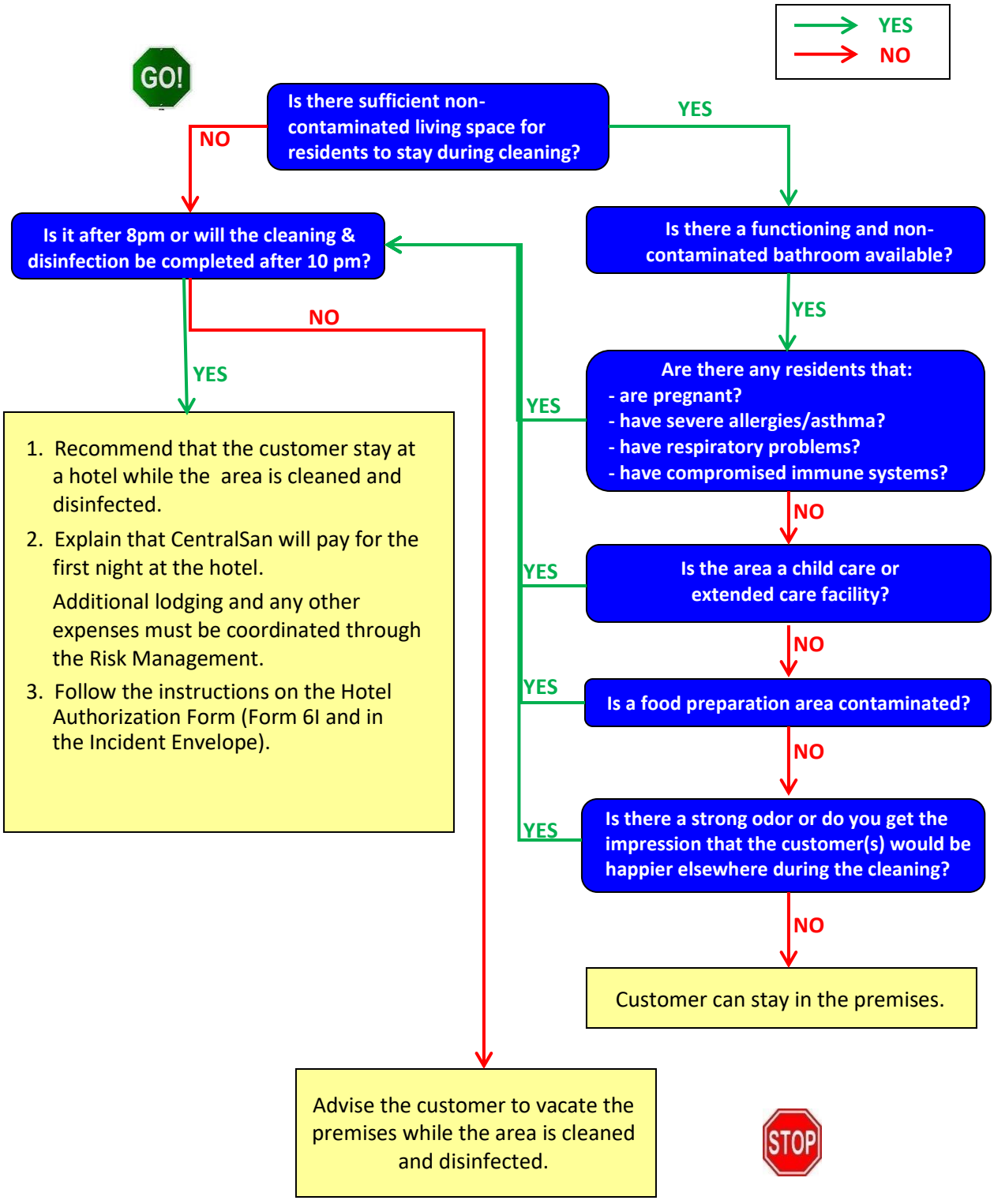
1. Estimate spill volume using one of the methods listed in section 4G.
2. **Remember** that the spill probably started some time before it was reported. Account for this when estimating spill volume.

DOCUMENTATION & REPORTING

1. Complete the **Spill/Stoppage Response Form** (6B) and place in the Incident Envelope.
2. Include **printed copies** of digital **photos** in the Incident Envelope.
3. Include all **notes, drawings, calculations and any other documentation** from the spill in the Incident Envelope.
4. Seal the envelope and forward the entire package to the Field Operations Superintendent.

STOP

C. LIVABILITY ASSESSMENT



6. FORMS

A. CSO DISPATCH PHONE LOG

Dispatch Phone Log

New Customer Call		
Date:_____ Resident Business	Name: _____ Business Name:	Home: _____ Work: _____ Cell:
Time:	Address:	
Cross Street:		City:
Description of problem:		
Time caller noticed spill: A.M. P.M.		Date:
Map #	Confirmed information above (name, address, phone #)	
D/S Structure:	U/S Structure:	
Crew Dispatched:		Time:
Dispatcher:		

New Customer Call		
Date:_____ Resident Business	Name: _____ Business Name:	Home: _____ Work: _____ Cell:
Time:	Address:	
Cross Street:		City:
Description of problem:		
Time caller noticed spill: A.M. P.M.		Date:
Map #	Confirmed information above (name, address, phone #)	
D/S Structure:	U/S Structure:	
Crew Dispatched:		Time:
Dispatcher:		

B. SPILL/STOPPAGE RESPONSE FORM

CENTRAL SAN
CENTRAL CONTRA COSTA SANITARY DISTRICT

SPILL RESPONSE FORM

Event ID: _____ **Spill Category:** _____ **Spill Date:** _____

Estimated Gallons: _____ **Estimated Gallons Returned:** _____

Draft Due Date: _____ **Submitted Date:** _____ **Submitted by:** _____

Cert. Due Date _____ **Certified Date:** _____ **Submitted by:** _____

SPILL LOCATION INFORMATION

Street Address: _____ **City:** _____

Reporting Party / Homeowner Name: _____ **Contact No:** _____

SPILL RESPONSE INFORMATION

Upstream Map and Structure: _____

Downstream Map and Structure: _____

First Responder: _____ **Date:** _____ **Work Order #** _____

1. **Initial Action:** _____ **Work Order #** _____ **Crew Leader:** _____

   Results: _____ **Spot of Plug:** _____ **U/S**☐ **D/S**☐

2. **Re-Run Action:** _____ **Work Order #** _____ **Crew Leader:** _____

   Results: _____ **Follow Up:** _____

3. **CCTV:** _____ **Work Order #** _____ **Crew Leader:** _____

   Results: _____

4. _____ **Work Order #** _____ **Crew Leader:** _____

   Results: _____ **Follow Up:** _____

Time Caller/Crew Noticed Spill: _____ **Date:** _____

Time Call was Received: _____ **Date:** _____

Time Arrived at Job Site: _____ **Date:** _____

Blow Down/Stop Time: _____ **Date:** _____

Photos attached: ☐ **Yes** ☐ **No**

Form Reviewed: _____ _____ _____ _____
Field Ops Superintendent **Date** **CSOD Division Manager** **Date**

Spill Amount Estimation Methods:

ASPHALT/CONCRETE AREA METHOD:

_____ x _____ x _____ x 7.48 x _____ = _____
L W D % of area wet TOTAL
(length) x (width) x (depth)

UNPAVED SURFACE AREA METHOD:

_____ x _____ x _____ x 7.48 x _____ x _____ = _____
L W D % of area wet saturation % TOTAL
(length) x (width) x (depth)

SPILL CHART

_____ X _____ = _____
GPM TIME TOTAL GALS.

CONVERSION	
Inches	Feet
Asphalt	.0013
Concrete	.0026
1/8"	.01'
1/4"	.02'
3/8"	.03'
1/2"	.04'
5/8"	.05'
3/4"	.06'
7/8"	.07'
1"	.08'
2"	.17'
3"	.25'
4"	.33'
5"	.42'
6"	.50'
7"	.58'
8"	.67'
9"	.75'
10"	.83'
11"	.92'
12"	1.00'

EYEBALL ESTIMATE

Size	How Many	Total
1 Gallon		
5 Gallons		
30 Gallons		
55 Gallons		

COMMENTS:

C. CUSTOMER INFORMATION REGARDING SEWER BACKUPS

Customer Information Regarding Sewer Backups

Address:	Date:

Dear Mr./Ms.: _____

We recognize that sewer backup incidents can be stressful and require immediate response before all facts concerning how an incident occurred are known. Rest assured that we do all we can to prevent this type of event from occurring. Nevertheless, occasionally tree roots or other debris in the sewer lines will cause a backup into homes or businesses immediately upstream of the blockage. At this time, the Central Contra Costa Sanitary District (Central San) is investigating the cause of the incident.

If Central San is found to be responsible for the incident, we are committed to cleaning and restoring your property and to protect the health of those affected during the remediation process.

We have contacted the following company to perform emergency clean up and decontamination in accordance with IICRC protocols.

Company Name/Phone:

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

If you wish to submit a claim for damages, please contact Central San Risk Management at 925-229-7313.

What You Need To Do Now:

- Do not attempt to clean the area yourself. Let the cleaning company handle this.
- Keep people and pets away from the affected area(s).
- Do not remove items from the affected area(s). The cleaning company will do this while they create an inventory of affected items.
- If you had recent plumbing work performed, contact your plumber or contractor to inform them of this incident.
- If you intend to file a claim, please do so as soon as practical. The California Government Code (Sec. 900-960) requires the filing of written claim and specifies timelines and notice procedures required in order to have your claim considered.

I/We acknowledge receipt of this notice:

Customer Signature: _____ **Date:** _____

CCCSD Signature: _____ **Date:** _____

Distribution: Original to Risk Management, Copy to Field Ops. Supt., Copy to Customer

5019 Imhoff Place Martinez, CA 94553 *925-228-9500*

D. DECLINATION OF SEWAGE CLEANING SERVICES

Declination of Sewage Cleaning Services

Customer Name:		
Address:		
Phone:		
Incident Date:	Incident Time:	Est. # Gallons:
Photos Taken: ☐ Yes ☐ No	Suspected Cause of Overflow:	

Contents	Overflowed from	Areas Affected
☐ Wastewater	☐ Toilet	☐ Bathroom(s) _____
☐ Grey Water	☐ Shower/Tub	☐ Hallway
☐ Toilet Bowl Water	☐ Sink	☐ Kitchen
☐ Other (Describe)	☐ Washer	☐ Bedroom(s) _____
	☐ Backflow Prevention Device	☐ Garage
	☐ Other (Describe)	☐ Crawlspace
		☐ Exterior Only

Flooring Affected: ☐ Tile ☐ Linoleum ☐ Carpet ☐ Hard Wood ☐ Laminate ☐ Unfinished ☐ Other (Describe)

Personal Property Affected: ☐ Area Rugs ☐ Towels ☐ Bathmats ☐ Clothing ☐ Other (Describe below)

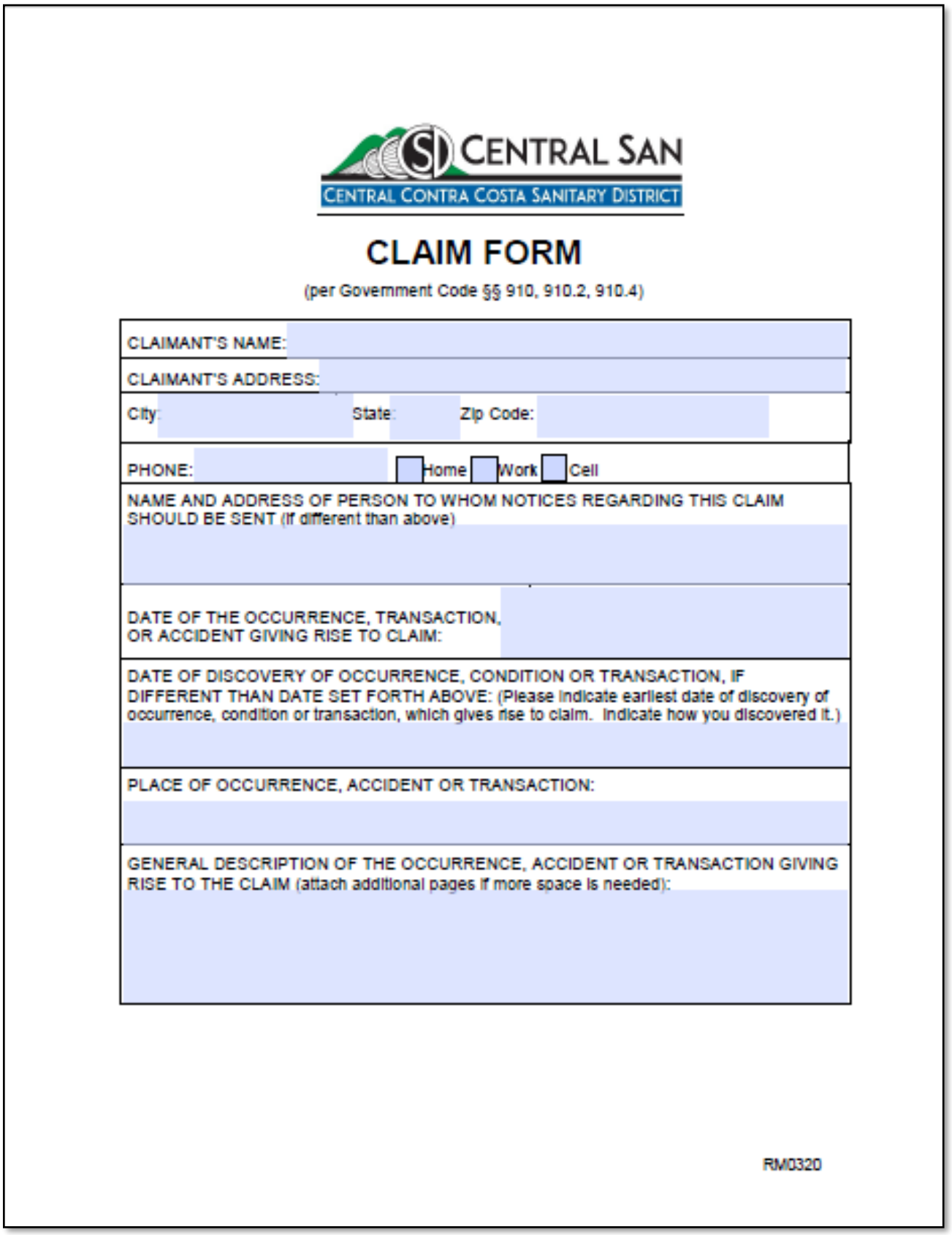
Customer – Please Read and Sign Below

I/We acknowledge that the Central Contra Costa Sanitary District (Central San) has offered to provide professional cleaning and decontamination services to remediate the sewage backup and/or overflow described above and that we declined the offer. We further understand and acknowledge that because we have declined this offer, any necessary remediation activities will be conducted without Central San assistance and that Central San will not accept responsibility for work performed by persons other than those engaged by Central San. Central San will also not accept responsibility for any charges related to this incident that are not usual and customary. Please contact the Central San Risk Management at 925-229-7313 if you have any questions.

The information above was explained to the Customer by:	
Employee Signature:	**Title:**
Customer Signature:	**Date:**

Distribution: Original to Risk Management Copy to Customer

E. CLAIM FORM



CENTRAL SAN
CENTRAL CONTRA COSTA SANITARY DISTRICT

CLAIM FORM

(per Government Code §§ 910, 910.2, 910.4)

CLAIMANT'S NAME:
CLAIMANT'S ADDRESS:
City: State: Zip Code:
PHONE: ☐ Home ☐ Work ☐ Cell
NAME AND ADDRESS OF PERSON TO WHOM NOTICES REGARDING THIS CLAIM SHOULD BE SENT (if different than above)
DATE OF THE OCCURRENCE, TRANSACTION, OR ACCIDENT GIVING RISE TO CLAIM:
DATE OF DISCOVERY OF OCCURRENCE, CONDITION OR TRANSACTION, IF DIFFERENT THAN DATE SET FORTH ABOVE: (Please indicate earliest date of discovery of occurrence, condition or transaction, which gives rise to claim. Indicate how you discovered it.)
PLACE OF OCCURRENCE, ACCIDENT OR TRANSACTION:
GENERAL DESCRIPTION OF THE OCCURRENCE, ACCIDENT OR TRANSACTION GIVING RISE TO THE CLAIM (attach additional pages if more space is needed):

RM0320

GENERAL DESCRIPTION OF THE OBLIGATION, LOSS, INJURY OR DAMAGE SUFFERED:
PROVIDE NAMES, IF KNOWN, OF ANY PUBLIC EMPLOYEES CAUSING THE INJURY OR LOSS:
TOTAL AMOUNT CLAIMED: $

Claimant Signature	or	Representative of Claimant Signature
Date		Representative Capacity (attorney, guardian, etc.)

Send completed claim form and documentation supporting your claim to:

Central Contra Costa Sanitary District
Secretary of the District
5019 Imhoff Place
Martinez, CA 94553

RM0320

F. AFFECTED PERSONAL PROPERTY INVENTORY LOG

Affected Personal Property Inventory Log

Instructions: Complete this form as completely as possible and send to the Central Contra Costa Sanitary District, Attn: Risk Management, 5019 Imhoff Place, Martinez, CA 94553. Please keep a copy for your records.

If you have any questions, please call 925-229-7320.

Quantity	Description	Where Purchased?		Age	Cost	Replacement Value
		Store	City			

Name: _____ **Date of Overflow:** _____

Affected Address: _____

Signature: _____ **Date:** _____

G. BUILDING HISTORY FORM

Building History Form *Complete this form as thoroughly as possible.*	
Your Name:	
Today's Date:	Date of Overflow:
Affected Property Address:	
Primary Resident's Name:	
Any other residents at this address? ☐ Yes ☐ No Approximate Ages:	
Is resident the owner? ☐ Yes ☐ No If No, list owner's name, address and phone number:	
Were the residents relocated to a hotel? ☐ Yes ☐ No If Yes, Hotel Name and City:	
Name of cleaning company called: Project Manager Name and Phone:	
Year Home Built:	# of Bathrooms:
List Rooms Affected:	
How long was sewage sitting?	
Is there an OPD? ☐ Yes ☐ No	Was it functional? ☐ Yes ☐ No
Any plumbing permits within last 3 years? ☐ Yes ☐ No If Yes, describe:	
Any active plumbing projects observed? ☐ Yes ☐ No If Yes, describe:	
Last cleaning of line segment:	Last repair of line segment:
Any prior spills at this location? ☐ Yes ☐ No If Yes, when:	

H. HOTEL AUTHORIZATION FORM

Hotel Authorization Form

INSTRUCTIONS TO EMPLOYEE:

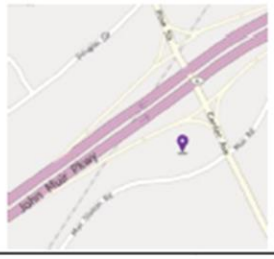
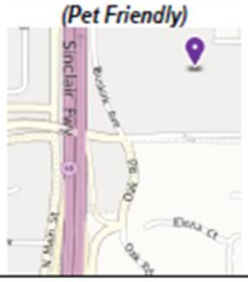
- ☐ Review this form with the customer and ask them to select, in order of preference, which of the hotels they wish to stay at.
- ☐ Call the hotels to determine vacancy.
- ☐ Explain to the customer that only the first night's room and tax will be covered. All other hotel expenses will be their responsibility. Additional nights and other expenses must be approved by Risk Management.
- ☐ Have the resident complete and sign the acknowledgement section at the bottom of the form.
- ☐ Give the resident the bottom copy of the form.

INSTRUCTIONS TO CUSTOMER:

This emergency lodging authorization is granted under the following conditions:

1. The voucher is good for one night's **room and tax only**. Phone, food and other charges will be your responsibility.
2. Additional nights or approval of other expenses must be approved by Risk Management. Phone is (925) 229-7320.
3. Please bring a photo ID with you for hotel check-in.

HOTEL OPTIONS:

☐ ***Best Western John Muir Inn*** 445 Muir Station Rd. Martinez, 229-1010	☐ ***Extended Stay America*** 3220 Buskirk Ave. Pleasant Hill, 945-6788 ***(Pet Friendly)***	☐ ***Lafayette Park Hotel*** 3287 Mt. Diablo Blvd. Lafayette, 283-3700
		

Emergency Hotel Authorization Voucher

Good for one night's stay at the hotel selected above on (date): _____

Guest(s) Name: _____

Field Supervisor Name: _____

Customer Acknowledgement

I/we have read the terms and conditions governing this offer of temporary relocation and agree to abide by them as described above.

Name *(Please print)*: _____

Affected Address: _____

Phone # where you can be reached: _____

Signature: _____ Date: _____

Original to Risk Management. Copies to Customer and Field Ops Superintendent.

Chain of Custody

Central Contra Costa Sanitary District
5019 Imhoff Place
Martinez, CA 94553

ERC-LAB-CSO-SAM-COC-FOR
Revision: 5
Effective: 05/15/2025

Cityworks Workorder:

Report To: Steve Sauter, Alex Benavidez, Paul Seltz
Steve@centralsan.org, abenavidez@centralsan.org, pseltz@centralsan.org

Sampled by:

Sampler Signature:

Site Address:

Instructions:
Bottle 1 & 2:
Remove the seal from the container and pour sample into bottle using the sacrificial sterile bottle without touching the rim of the bottle. Fill the bottle to the 250mL line. Do not overfill, the bottle contains dechlorination agent. (fill both bottles 1 and 2)
Bottle 3a & 3b:
Fill bottle 3a first, cap and invert to dissolve sodium thiosulfate. (do not over fill the bottle)
Pour contents of bottle 3a into bottle 3b. Use caution when pouring, bottle 3b contains concentrated acid.

Sample ID	LIMS ID	Sample Type1	Collection Date	Collection Time	Bottle Type2	Number of Bottles	Parameters To Be Analyzed: Dissolved Oxygen	pH	Total Residual Chlorine	Ammonia	COD	Enterococcus (Enterolert)	E. Coli (Colilert-18)	Fecal Coliform (Colilert-18)	Total Coliform	Preservative: H2SO4 (Preservation upon collection)	Temp 0-6C	Sodium Thiosulfate dechlorination tablet
Drainage Conveyance DCS-001 (Bottle 1)		G			P	1						x	x	x			x	x
Drainage Conveyance DCS-001 (Bottle 2)		G			P	1									x		x	x
Drainage Conveyance DCS-001 (Bottles 3a & 3b)[3]		G			P	1				x						x	x	x
Upstream-RSW-001U (Bottle 1)		G			P	1						x	x	x			x	x
Upstream-RSW-001U (Bottle 2)		G			P	1									x		x	x
Upstream-RSW-001U (Bottles 3a & 3b)[3]		G			P	1				x						x	x	x
Site-RSW-001 (Bottle 1)		G			P	1						x	x	x			x	x
Site-RSW-001 (Bottle 2)		G			P	1									x		x	x
Site-RSW-001 (Bottles 3a & 3b)[3]		G			P	1				x						x	x	x
Downstream-RSW-001D (Bottle 1)		G			P	1						x	x	x			x	x
Downstream-RSW-001D (Bottle 2)		G			P	1									x		x	x
Downstream-RSW-001D (Bottles 3a & 3b)[3]		G			P	1				x						x	x	x
							Total Number of Bottles											

[1] Sample Type; C= Composite, G = Grab, CG = Composite Grab

[2] Bottle Type: AG = Amber Glass, CG = Clear Glass, P = Poly, V = VOA

*Time of preservation is the same as collection.

Comments:

Relinquished by:	Date	Time	Received by:	Date	Time

Reviewed: _____ Date:_____

Instructions

Remove seal and lid from **Sacrificial Subsampling Bottle** and fill the bottle with sample. Remove the lid and seal from **Bottle 1** and do not set the lid down. Pour sample from the **Sacrificial Subsampling Bottle** into **Bottle 1** and avoid touching anything to the rim of the bottle. Fill to the 250 mL line, **but do not overfill!**

Refill the **Sacrificial Subsampling Bottle** with sample. Remove the lid and seal from **Bottle 2** and do not set the lid down. Pour sample from the **Sacrificial Subsampling Bottle** into **Bottle 2** and avoid touching anything to the rim of the bottle. Fill to the 250 mL line, **but do not overfill!**

Using either the **Sacrificial Subsampling Bottle**, or another sampling device, collect the sample. Remove lid and seal from **Botle 3a** and fill to the 250 mL line with sample, **but do not overfill!** Replace the lid and shake to dissolve the sodium thiosulfate to dechlorinate sample. Remove the lid from **Bottle 3b**, but take caution as the bottle contains strong acid. Pour sample from **Bottle 3a** into **Bottle 3b** and replace the lid on Bottle 3b.

SEWER SPILL REFERENCE GUIDE
Your Responsibility as a Private Property Owner

What is a Sewage Spill?
Sewage spills occur when the wastewater being transported via underground pipes spills through a manhole, cleanout, or broken pipe. Sewage spills can cause health hazards, cause damage to homes and businesses and threaten the environment, local waterways and beaches.

Common Causes of Sewage Spills:

- Grease builds up and can eventually block the sewer pipes. Grease gets into the sewer from food establishments, household drains, and from poorly maintained commercial grease traps and interceptors. Grease is a common cause of pipe blockages.
- Structure problems including tree roots in the sewer lines, broken or cracked pipes, missing or broken clean-out caps, or undersized sewers.
- Infiltration and Inflow (I&I) impacts pipe capacity and is caused when groundwater or rainwater enters the sewer system through pipe defects and illegal connections.

Who Is Responsible for Sewer Repairs and Maintenance?
Each home or commercial building has a separate connection to the public sanitary sewer main. That connection is called a 'lateral'. It is the property owner's responsibility to maintain and repair their own sewer lateral from the house to the point of connection with the public sewer main. The Uniform Plumbing Code and the Central San Sewer Use Ordinance requires property owners to install and maintain a sanitary sewer spill protection device on their private sanitary sewer service lateral.

You Are Responsible for a Sewage Spill Caused by a Blockage or Break in Your Sewer Lines
Time is of the essence in dealing with sewage spills. You are required to do the following immediately:

- Control and minimize the spill. Keep spills contained on private property and out of gutters, storm drains, and public waterways by shutting off or not using the water.
- Use sandbags, dirt and/or plastic sheeting to prevent sewage from entering the storm drain system.
- It is recommended that you call a plumbing professional to clear blockages and make necessary repairs.
- Always notify Central San of sewage spills. If the spill exceeds 1,000 gallons, notify the California Office of Emergency Services (phone number on reverse).

You Could Be Liable for Not Protecting the Environment
Allowing sewage from your home, business or property to discharge to a gutter or storm drain may subject you to penalties and other out-of pocket costs to reimburse public agencies for clean-up and enforcement efforts.

California Health and Safety Code Sections 5410-5416 says that no person shall discharge raw or treated sewage or other waste in a manner that results in contamination, pollution, or nuisance. Any person who causes or permits a sewage discharge to any state waters 1) must immediately notify the local health agency of the discharge and 2) shall reimburse the local health agency for services that protect the public's health and safety. Persons who fail to provide this notice are guilty of a misdemeanor and shall be punished by a fine and/or imprisonment for less than one year.

California Water Code, Article 4, Chapter 4, Sections 13268-13271 and the California Code of Regulations, Title 23, Division 3, Chapter 9.2, Article 2, Sections 2250-2260 require that any person who causes or permits sewage in excess of 1,000 gallons to be discharged into state waters shall immediately notify the Office of Emergency Services. Persons who fail to provide this notice are guilty of a misdemeanor and shall be punished by a fine and/or imprisonment for less than one year.

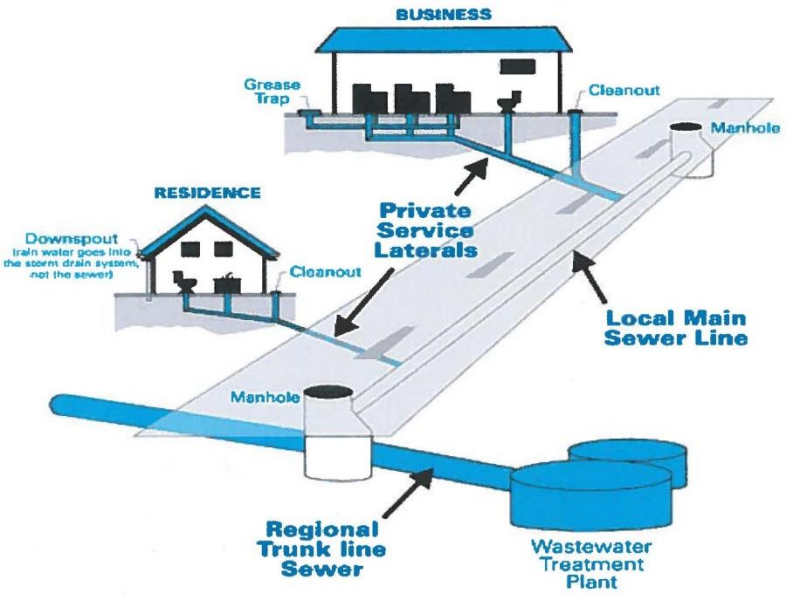
What to Look For:
Sewage spills can include water gushing from a manhole to less noticeable leaks that may take time to be noticed. Look for the following:

- Drain backups inside the building
- Wet ground and water leaking around manhole covers onto your street
- Leaking water from clean-outs or outside drains
- Unusual odorous wet areas, sidewalks, external walls, grounds or landscaping around a building

Caution!
When trying to locate a sewer problem, never open manholes or other public sewer structures. Because of potential hazards, only Central San personnel are allowed to open and inspect these structures.

Keep people and pets away from an area affected by a sewage spill. Untreated sewage has high levels of disease-causing viruses and bacteria. Always wear gloves whenever working around raw sewage and remember to wash your hands thoroughly when done.

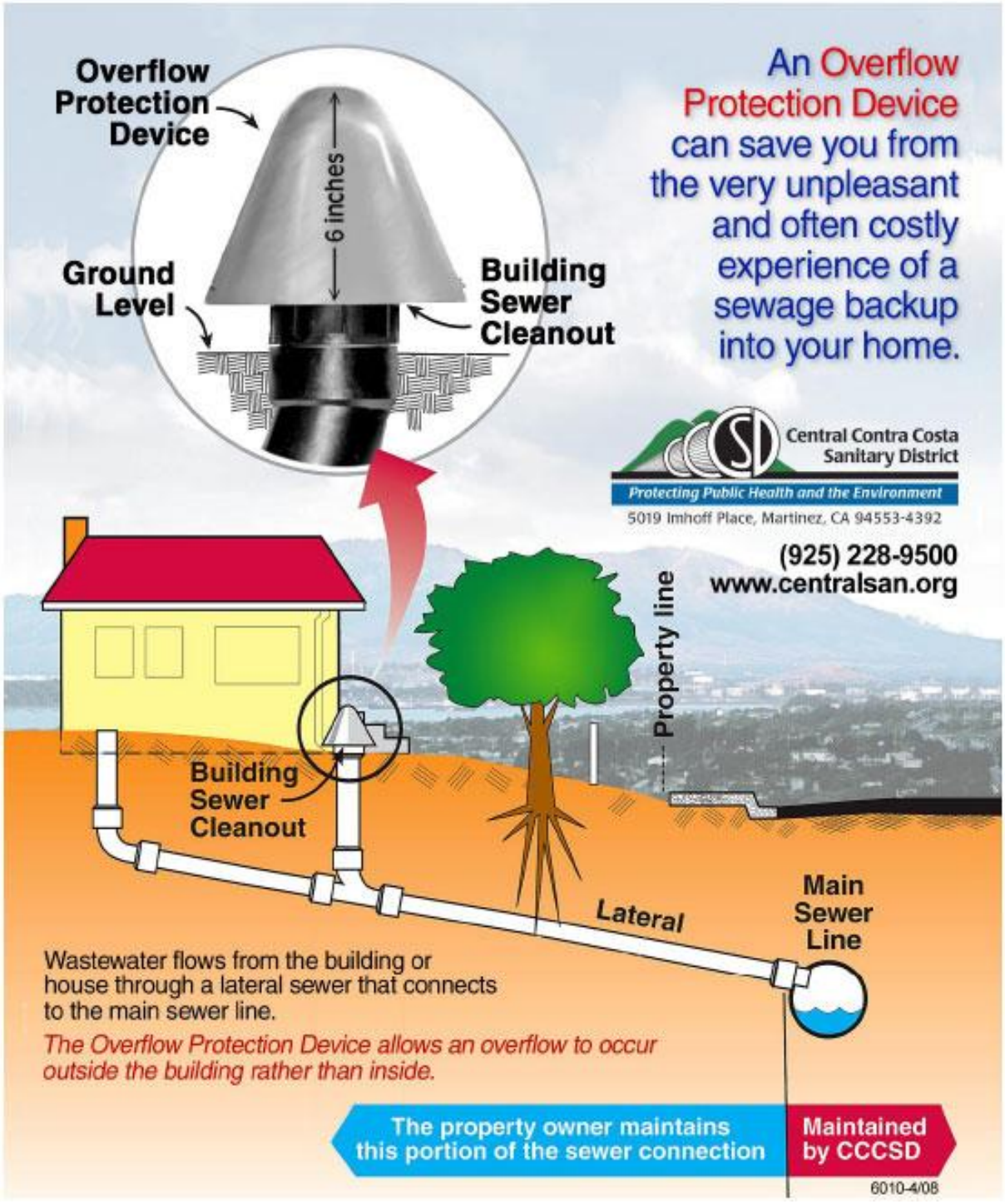
How a Sewer System Works
A property owner's sewer pipe is called a lateral and is connected to larger local main and regional trunk sewer lines. Service laterals run from the connection at the building to the connection with the public sewer, sometimes including areas under the street. These laterals are the property owner's responsibility to maintain and repair.



IF YOU HAVE A SEWAGE SPILL FROM YOUR PRIVATE SEWER LINE, CONTACT:

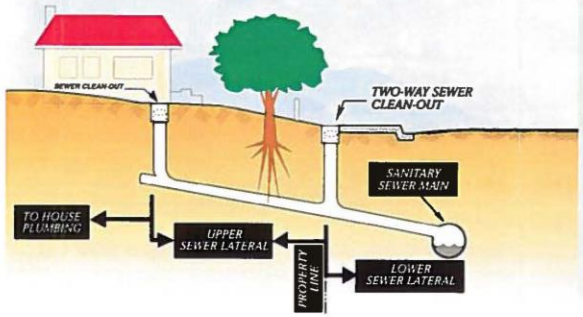
Central San	925-933-0990 or 925-933-0955
Contra Costa County Department of Environmental Health	925-646-2286
	or 925-646-1112 in case of emergency
Regional Water Quality Control Board	510-622-2460
California Office of Emergency Services	800-852-7550

K. SPILL PROTECTION DEVICE HANDOUT



What We Do NOT Do

We do not clean, maintain or repair side sewers, lateral sewers or house sewers -- these are the responsibility of the property owner. The side sewer connects the plumbing system of the building to the public sewer. **The side sewer begins with and includes the connection to the public sewer, and terminates at the point of connection to the building plumbing system (usually two feet outside the foundation line or building wall).** The side sewer includes the lateral sewer and the house sewer. The lateral sewer is the portion of the side sewer which is within the public right-of-way or District easement. The house sewer is that portion of the side sewer from the lateral sewer to its connection to the building plumbing system.



Overflows/sewage spills from side sewers, lateral sewers or house sewers must be dealt with by the property owner. Immediate action should be taken to control and minimize the spill and clear the sewer blockage (a plumber may be necessary). Under no circumstances should sewage from your property be allowed to discharge into a gutter or storm drain.

How To Contact Us

General Information	(925) 228-9500
Sewer Overflows (24 Hours)	(925) 933-0955 or 933-0990
Treatment Plant InfoLine (To Report Odors)	(925) 335-7703
Household Hazardous Waste InfoLine	(800) 646-1431
Sewer Connection Permits	(925) 229-7371
Illegal Discharges into Sewer System	(925) 229-7288 or 229-7214
Safety & Risk Management	(925) 229-7390
Job Hotline	(925) 229-7109
Student Education Programs	(925) 229-7310
Public InfoLine	(925) 335-7702

Or visit our website at
www.centralsan.org

Take precautions

when dealing with a sewage spill. Always wear gloves and wash your hands. Keep people and pets away. Untreated sewage can cause health hazards and threaten the environment.

COLLECTION SYSTEM OPERATIONS

Maintaining the Flow

How we protect the public health and the environment by keeping your public sewers operating at peak efficiency

Central Contra Costa Sanitary District

Introduction

The purpose of this brochure is to provide you with information about Central Contra Costa Sanitary District (CCCSD) and, more specifically, our Collection System Operations (CSO) Department. You may have seen our CSO work crews in your neighborhood and wondered what they were doing and why. This brochure is intended to provide answers to those questions.

Sewage collection and wastewater treatment for 294,170 people and HHW collection service

Wastewater treatment for 126,300 residents in Concord and Clayton by contract and HHW collection service

HHW collection service only

Central San's Headquarters Office Building, treatment plant, and HHW Collection Facility are located in Martinez

The District's Collection System Operations Department (sewer maintenance) is based in Walnut Creek

Who We Are

CCCSD is a special district with a five-member elected Board of Directors. Our primary responsibility is to protect the health of the public and the environment through safe and effective sewage collection, treatment and disposal. With about 250 employees, CCCSD also operates a household hazardous waste collection facility, recycles high-quality water, and promotes pollution prevention through various educational, informational and inspection programs. Located at the intersection of State Highway 4 and Interstate 680, CCCSD's modern wastewater treatment facility treats an average of 45 million gallons of wastewater per day for more than 400,000 residents and businesses in central Contra Costa County.

What We Do

CCCSD's collection system includes more than 1,400 miles of underground pipeline ranging in size from 6 to 102 inches in diameter. To ensure a constant, efficient flow through those lines, our Collection System Operations (CSO) crews conduct critical cleaning, television inspection, and repair operations on an ongoing basis. They also handle occasional sewer replacement projects. With all of this activity, these crews are bound to cross your path at some time or another. And since our work could impact your life with noise or traffic delays, it's important to us that you know why we're there.

Cleaning and Maintenance Services

"Routine" maintenance is performed on all collection system pipelines once every 10 years. "Scheduled" maintenance is performed more frequently, sometimes even monthly, on lines especially susceptible to clogging. Our crews clean/maintain an average of 400 miles of pipeline each year. So 90% percent of the time, the people you see in CCCSD orange shirts and hard hats are CSO crews working to clean, repair and inspect sewer lines.

The majority of plugged sewers are caused by roots infiltrating the sewer lines. The most effective way to deal with infiltrating roots is with the power-rodding truck, which can reach 1,000 feet or more of continuous pipeline. An auger or scraper is attached to the truck's 3/8-inch rod and pushed through the line. As the auger is slowly pulled back, it scrapes along the sides of the pipes, taking with it any roots it encounters. The power rodder, however, cannot be used on every sewer line. Rodding required in easements or other out-of-the-way places must be done by hand with a portable rodder. This piece of equipment is removed from the truck and carried wherever necessary. Its range is 300 feet of pipeline.

In addition, CSO cleaning crews treat about 60,000 feet of sewer pipeline each year with a chemical foam that kills roots on contact.

Another major cause of plugged sewers is grease. Sewer lines located downstream from restaurant areas are especially prone to heavy grease build-up and blockage. To clean out the layers of hardened grease from the sewer lines, the crew uses a technique called hydroflushing. The hydroflush truck uses a water hose with a special nozzle that creates a high-pressure spray (2,000 psi) to scour the inside of a pipe. The high-pressure water knocks material loose from the pipe walls, and also pushes out any other loose material such as sand, grit and mud. A circular hydro-root saw can be attached to the nozzle of the hydroflush and used to cut through the hardest grease and, when necessary, through roots. Up to 850 feet of continuous pipeline can be cleaned this way.

Another valuable piece of equipment is the Vactor Jet Rodder. It also uses high-pressure water to clean out sewer lines, but has the additional feature of vacuuming up all the loosened debris at the same time the line is being cleaned. This virtually eliminates the need for crews to make manhole entries to remove debris after a hydroflush cleaning.

On-Call/Emergency Se...

Overflows/...

Pipeline Repair & Replacement Services

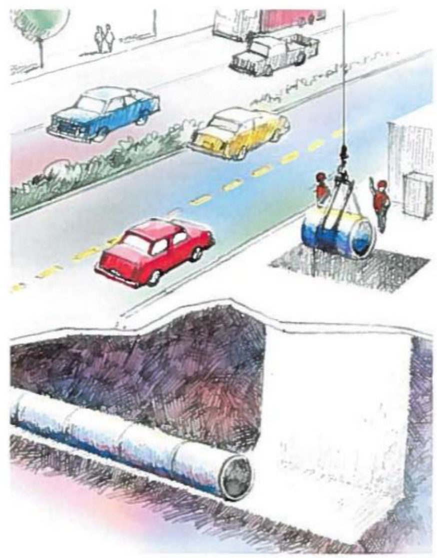
On other, more rare occasions, you'll see our crews working to repair or replace sewer lines. CCCSD has been around since 1946, and some of the pipes we acquired over the years have been in place long before we came along. Dilapidated or undersized sewers that no longer function properly must be repaired or replaced.

TV inspections are also performed on newly constructed lines

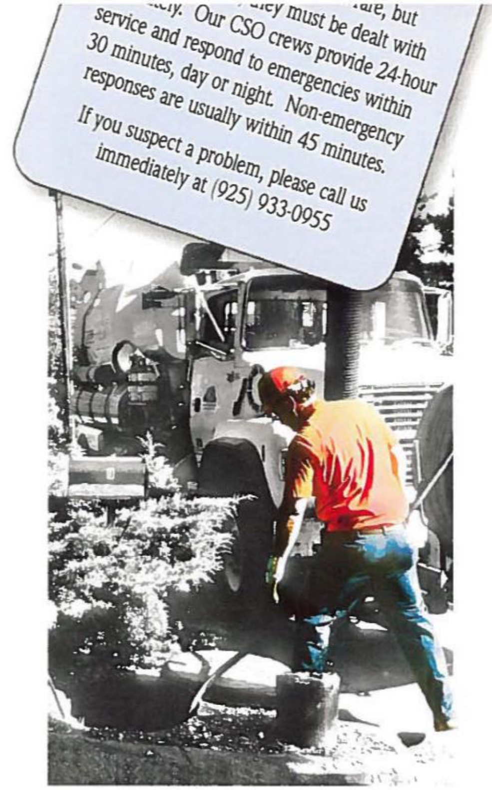
Often, the first step in repairing or replacing a sewer line involves Close Circuit Television/Locating. When a problem area in a main line is suspected, a small video camera on wheels/skids, with a locating device attached to it, is pulled through the line. Viewing the images on a remote television monitor, CSO crew members can pinpoint problem areas within the pipes and determine the best corrective action to take. TV inspections are also performed on newly constructed lines to verify the quality of construction.

When repairs or replacements are necessary, we use trenchless or "no-dig" technology whenever possible. "No-dig" technology drastically reduces the amount of surface disruption that occurs with pipeline replacement. It saves money and reduces construction impacts on residents and businesses. This technique is especially useful in high-density areas where backyard easements, landscaping and structural barriers make open-cut construction extremely expensive.

A state-of-the-art piece of equipment that has revolutionized the method for replacing old sewer pipe is the pipe insertion machine. It can replace pipe in half the time of conventional methods which involve digging up the ground, removing the old pipe, installing a new one, and covering it up. The new technique is called pipe bursting. The pipe insertion machine is pneumatically driven through the soil. It disintegrates old pipe, enlarges the ensuing hole, and pulls in new pipe -- all in the same operation. The only excavation required is two pits every 400-500 feet for the launch and retrieval of the equipment, and a small pit at each side-sewer connection.



"No-dig" technology drastically reduces the amount of surface disruption



Using this method is much more preferable to the long and deep trenches dug with the old method.

Another "no dig" technique is called horizontal boring. A drill rig laid on its side bores through the soil horizontally, creating a hole through which a pipe is pulled. This technique is particularly useful in hilly areas.

Cured in-place pipe (CIPP), or inversion lining is another trenchless technology. This technique leaves the old pipeline in place while a polyester felt liner, impregnated with a thermosetting resin, is inserted and filled with hot water for curing. Once the curing process is completed, the sewer is as good as new.

M. DOOR HANGER

Central Contra Costa Sanitary District

5019 Imhoff Place, Martinez, CA 94553 (510) 228-9500

Emergency Service: (510) 933-0990
(510) 933-0955

WHILE YOU WERE OUT, THESE SERVICES WERE PERFORMED...

- ❑ Dye test
- ❑ Main line rodded
- ❑ Overflow device installed
- ❑ Structure located
- ❑ Sewer line located
- ❑ Water sample tested
- ❑ Sewer line repair
- ❑ Sewer manhole repair
- ❑ Televised sewer line
- ❑ Other _____

Remarks: _____

_____

_____

_____

_____

Crew Leader: _____

Date: _____

Signed _____

3211-11/93

7. UPDATE OF PLAN

A. Plan Review and Updates

The SERP will be reviewed in January of each calendar year to ensure that it is up to date with the WDR and emergency response activities performed by CentralSan. It is a requirement of Section 5.12, of the WDR, that the Enrollee shall certify, in its Annual Report, that its SERP is up to date. The Annual Report is due by April 1st of each year after the Effective date of this General Order for each calendar year, per section 3.9 of the WDR.

The Field Operations Superintendent and Senior Engineer will ensure that material or significant changes to the Plan are incorporated into the document, are recorded on the Review and Revision Log (Page 1), and ensure that the contents of this Plan are consistent with Element 6 of Central San's Sewer System Management Plan.

B. Training

The Collection System Operations Division Manager, Collection System Operations Senior Engineer and/or Field Operations Superintendent will provide training on the SERP to field staff annually and will advise field crews of any changes made to the Plan between such trainings in a timely manner.

CentralSan staff training will include:

- WDR
- SERP and Pumping Stations Emergency Response Plan
- SSMP
- Overflow estimation using the CentralSan overflow simulator
- Start Time determination
- Bypass pump setup

In addition, training will be provided to contractors working on collection system projects. This training will be provided at the Pre-Construction meeting. Contractors will be responsible for containing spills originating from their construction activities. CentralSan staff will provide all repairs, clean-up, sampling, and reporting for the spill.

Contractor Training will include:

- Terminating the spill
- Containing the spill
- 24-hour emergency dispatch and contact information
- Mitigating damage

8. RESOURCES

A. Emergency Vendor Contact Information

SERVICE/SUPPLIES	VENDOR NAME	PHONE NUMBER
Hazardous Materials Response	Phillips Service Corp. (PSC)	800-800-7472 (Benicia)
	NRC Environmental Services	877-880-4672
Spills to Creeks or Other Waterways	Phillips Service Corp. (PSC)	707-748-3058
	NSC Environmental Services	800-337-7455
Sewer Backup Cleanup	Restoration Management	800-400-5058
	ServiceMaster Restore	800-480-8439
Generators / Lane Closure / Equipment Rental	Cresco Equipment Rental	925 827-1742 (Pleasant Hill) 925 284-4595 (Lafayette) 925 837-4475 (Danville) 925 228-9811 (Martinez)
	United Rental	510-562-3000 (Oakland) 925-370-1000 (Martinez)
	Construction Zone	925-969-7508
	Road Safe Traffic Systems	925-686-1089
Other	Trench Shoring Company	510-900-0595 (Newark)
	Rain for Rent	925-679-2803(Oakley)
	Herc Rentals	925-680-0316(Pacheco)

B. Other Agency Contact Information

CentralSan coordinates with our local cities, counties, and municipalities regularly. The coordination focuses on many different items, such as:

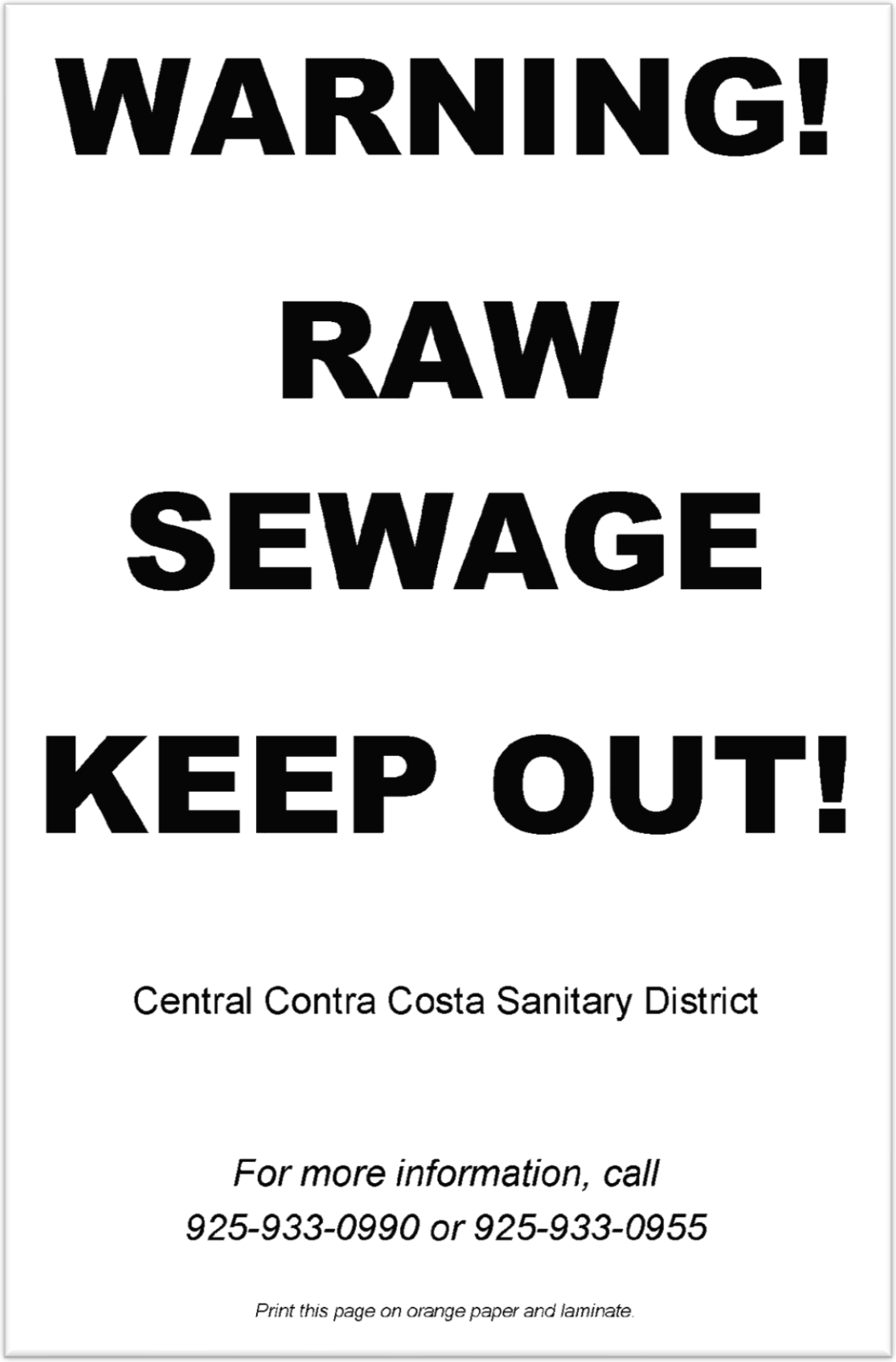
- Preventative maintenance activities within the Public Right of Way.
- Encroachment permits for repairs
- Manhole adjustments to existing grade
- City Paving project coordination
- Facility inspections
- Emergency Response

Over the last 15 years, CentralSan has worked with our cities, county, and agencies to receive their electronic system maps. We have received the system maps for all storm drains and water lines within our service area. The electronic files have been added as a layer to our ESRI electronic mapping system and can be accessed by field crews during emergency response.

In addition, the San Pablo Reservoir is located in Suisun Basin as defined by the SWRCB Region 2 Basin Plan. San Pablo Creek and its tributaries are upstream of the reservoir. CentralSan has a verbal agreement with the East Bay Municipal Utility District (EBMUD) that if there is a spill greater than or equal to 1,000 gallons into San Pablo Creek or its tributaries, we will notify them immediately after our call to Cal-OES. This notification is outlined in our "Responding to a Spill" procedure.

AGENCY NAME	**PHONE NUMBER**
City of Concord	925-671-3448
City of San Ramon	925-973-2500
City of Danville	925-314-3450
City of Walnut Creek	925-256-3586
City of Pleasant Hill	925-671-4646
City of Martinez	925-372-3580
City of Lafayette	925-934-3908
City of Moraga	925-888-7050
City of Orinda	925-253-4231
Diablo San Ramon Sanitary District	925-828-0515
East Bay MUD	866-403-2683
Contra Costa Water District	925-688-8000
Mt. View Sanitary District	925-228-5635
Contra Costa County	925-313-2000
Zone 7	925-454-5000

C. Public Posting Notice



WARNING!

RAW SEWAGE

KEEP OUT!

Central Contra Costa Sanitary District

For more information, call
925-933-0990 or 925-933-0955

Print this page on orange paper and laminate.

9. DEFINITIONS

Definitions as used in this Plan and as outlined in Order Number WQ 2022-0103-DWQ Statewide Waste Discharge Requirements (WDR):

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

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

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

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

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

Disadvantaged Community
A disadvantaged community is a community with a median household income of less than eighty percent (80%) of the statewide annual median household income.
For the purpose of this General Order, there is no differentiation between a small and large disadvantaged community.

Drainage Conveyance System
A drainage conveyance system is a municipal separate storm sewer system or other municipal/non-municipal drainage canal, channel, pipeline, or conveyance system constructed to provide drainage through transport of stormwater and non-stormwater flows.

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

Exfiltration
Exfiltration is the underground exiting of sewage from a sanitary sewer system through cracks and/or corrosion in pipes, misaligned joints, or broken/failed infrastructure.

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

Governing Entity
A governing entity includes but is not limited to the following:
• A publicly elected governing board, council, or commission of a municipal agency;
• A Department or Division director of a federal or state agency that is not governed by a board;
• A governing board or commission of an organization or aspillciation; and
• A private system owner/manager that is not governed by a board.

Hydrologically Connected
Two waterbodies are hydrologically connected when one waterbody flows, or has the potential to flow, into the other waterbody. For the purpose of this General Order, groundwater is hydrologically connected to a surface water when the groundwater feeds into the surface water (The surface water in this example is termed a gaining stream as it gains flow from surrounding groundwater.)

Lateral (including Lower and Lower and Upper Lateral)
A lateral is an underground segment of pipe that transports sewage from a building or property (residential, commercial, or industrial) to a sanitary sewer system main in a street or easement. A lower lateral is the portion of the lateral located between: (1) the sanitary sewer system main, and (2) either the property line or the boundary of an established easement. An upper lateral is the portion of the lateral from the building or property, to a clean out closest to the property line or boundary of an established easement.

Legally Responsible Official
A Legally Responsible Official is an official representative, designated by the Enrollee, with authority to sign and certify submitted information and documents required by this General Order.

Nuisance
For the purpose of this General Order, a nuisance, as defined in Water Code section 13050(m), is anything that meets all of the following requirements:
• Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property;
• Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal; and
• Occurs during, or as a result of, the treatment or disposal of wastes.

Private Sewer Lateral
A private sewer lateral is the privately-owned lateral that transports sewage from private property(ies) into a sanitary sewer system.

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

Receiving Water
A receiving water is waters of the State that receive a discharge of waste.

Resilience
Resilience is the ability to plan, prepare for, mitigate, and adapt to changing conditions from hazards to enable rapid recovery of physical, social, economic, and ecological infrastructure. Improving resilience before or following a hazard event should engage physical infrastructure and social systems with adaptive capacity to ensure rapid return to functionality, accounting for interdependencies within and across all sectors.

Satellite Sewer System
A satellite sewer system is a portion of a sanitary sewer system owned or operated by a different owner than the owner of the downstream wastewater treatment facility ultimately treating the sewage.

Sewer System Management Plan
A sewer system management plan is a living document an Enrollee develops and implements to effectively manage its sanitary sewer system(s) in accordance with this General Order.

Sewage
Sewage is untreated or partially treated domestic, municipal, commercial and/or industrial waste (including sewage sludge) conveyed in a sanitary sewer system.

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

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 storm water 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 a blockage in the sanitary sewer system is a Category 4 spill.

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

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

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

Waters of the State
Waters of the State are surface 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 if flow or water exists during dry conditions. Waters of the State include waters of the United States.

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

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

Notifications, Monitoring and Reporting for Category 1 and 2 Spills as outlined in Order Number WQ 2022-0103-DWQ Statewide Waste Discharge Requirements (WDR), Attachment E-2

10. APPENDICES

Appendix A – Water Quality Monitoring Program

WDR REQUISITES

This Water Quality Monitoring Program provides the District's response activities and standard operating procedures to be utilized in the Spill Emergency Response Plan (SERP), in the event a sanitary sewer spill (SSS) is 50,000 gallons or greater discharged to surface waters. This program is reviewed periodically and may be updated as necessary.

State Water Resources Control Board Order No. WQ 2022-0103-DWQ, Amending Monitoring and Reporting Program for Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (WDR), effective June 5, 2023, requires the following:

WDR Attachment E-1 – Notification, Monitoring, Reporting and Recordkeeping Requirements

To comply with subsection 2.32 – Receiving Water – Water Quality Sampling and Analysis, 2.3.3 - Water Quality Analysis Notifications, and 2.34 – Receiving Water Sampling Locations, Central San has developed and implemented an SSS Water Quality Monitoring Program to assess impacts from SSSs to surface waters in which 50,000 gallons or greater are spilled to surface waters. The SSS Water Quality Monitoring Program, shall, at a minimum:

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

Additionally, for spills greater than 50,000 gallons, an SSS Technical Report is required and must be submitted within 45 calendar days from the SSS end date. The SSS Technical Report requirements are described in Attachment E-1 – Notification,

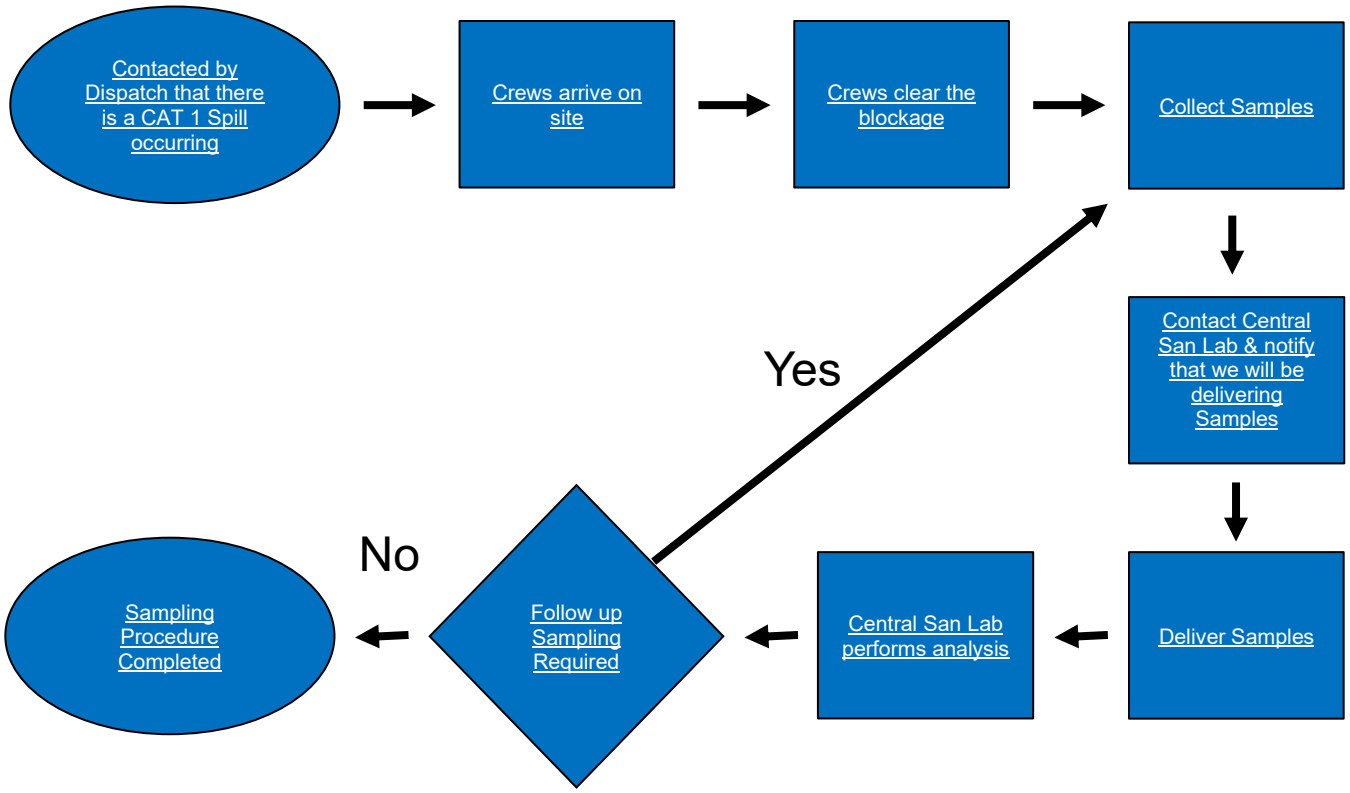
Monitoring, Reporting and Recordkeeping Requirements, Section 3.1.3, Page E1-10 of the WDR.

CENTRAL SAN COMPLIANCE

1.0 CONTAIN PROTOCOLS FOR WATER QUALITY MONITORING

Central San collects water quality samples for Category 1 SSS's with a volume of **50,000 gallons or greater**. The Field Superintendent or a Field Supervisor will collect, transport, and submit water quality samples for analysis to Central San's Laboratory at our Treatment Plant in Martinez, California. Samples are taken at or near where the SSS reaches the surface water (entry point), approximately 100 feet upstream, and downstream of the entry point. The samples are collected as soon as the blockage has been cleared or if additional staff is available the sampling activities will be completed in concurrence with clearing the blockage. The samples are analyzed for ammonia, total coliform, fecal coliform, enterococcus and e-coli. Additional follow up samples are recommended to confirm the extent that the impact reverts to baseline levels. Follow up samples can be used to determine if posting of warning signs should be discontinued, if signs were posted. Collaboration with the Office of Emergency Services, Fish and Wildlife and the County Health Department shall continue until closures have been removed.

In addition, Central San has contracted with Environmental Science Associate to provide a certified Biologist to review and provide recommendations for **ALL** Category 1 SSS's. Central San staff performs the creek cleanup and the biologist is required, within 48-hours, to inspect the site for any additional cleanup activities. The Biologist then submits a report to Central San outlining the findings. Biologist reports are attached to the SSS backup documentation and kept at the Collection System Operations location in Walnut Creek.



2.0 ACCOUNT FOR SPILL TRAVEL TIME IN THE SURFACE WATER AND SCENARIOS WHERE MONITORING MAY NOT BE POSSIBLE

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

Method 1: Use a **velocity probe** (such as a Global Water FP111-S Flow Probe). To determine the rate of flow in the surface water or

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

Method 3: **Hach Ammonium Field Test.** The Field Superintendent, Supervisors and maintenance staff are equipped with Ammonium Filed Test kits. This allows staff to determine the extent of the spill in the surface water which assists them in determining where to setup pumps to clean the waterway.

Either of these methods will provide a means to estimate the distance traveled and identify where the SSS may be headed within the waterway.

The following are scenarios where monitoring may not be possible.

Be aware of safety issues and do not subject personnel to unsafe conditions in order to comply with this Water Quality Monitoring Plan. Sampling will not be conducted if there are any concerns regarding field crew safety. These concerns may include:

- Heavy rain events that compromise access points through flooding and swift currents
- Rain events that include lightning
- Steep creekbanks that limit access
- Large flows in creek that are not conducive to sampling

3.0 REQUIRE WATER QUALITY ANALYSIS FOR AMMONIA AND BACTERIAL INDICATORS TO BE PERFORMED BY AN ACCREDITED OR CERTIFIED LABORATORY

Central San is required to meet dozens of stringent water quality regulations. We operate a laboratory at our wastewater treatment plant, 5019 Imhoff Place in Martinez, CA. Central San's laboratory is certified by the California State Environmental Laboratory Accreditation Program. Approximately 35,000 tests are conducted annually to identify various wastewater constituents, including ammonia, bacteria, metals, toxic organic compounds, and pathogens.

CALIFORNIA
Water Boards
STATE WATER RESOURCES CONTROL BOARD
REGIONAL WATER QUALITY CONTROL BOARDS

CALIFORNIA STATE

ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM

CERTIFICATE OF ENVIRONMENTAL ACCREDITATION

Is hereby granted to

Central Contra Costa Sanitary District, Dr. Mario M. Menesini Environmental Laboratory

5015 Imhoff Place

Martinez, CA 94553

Scope of the certificate is limited to the "Fields of Testing" which accompany this Certificate.

Continued accredited status depends on successful completion of on-site inspection, proficiency testing studies, and payment of applicable fees.

This Certificate is granted in accordance with provisions of Section 100825, et seq. of the Health and Safety Code.

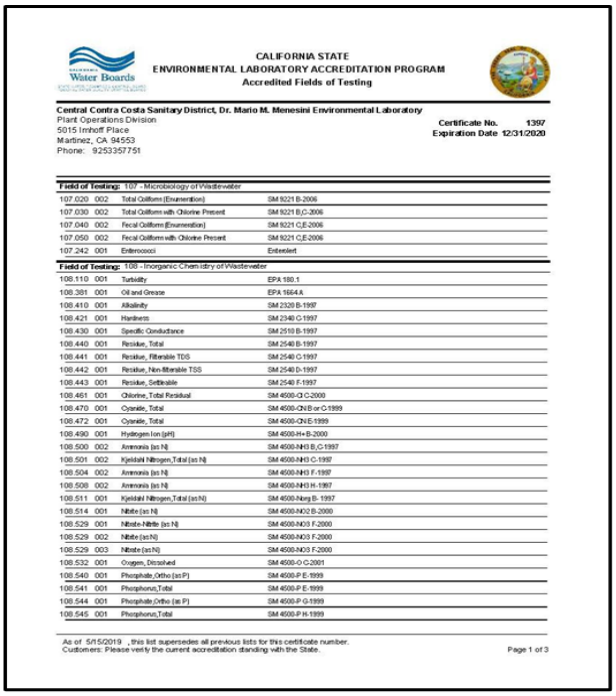
Certificate No.: **1397**

Expiration Date: **12/31/2020**

Effective Date: **1/1/2019**

Sacramento, California
subject to forfeiture or revocation

Christine Solelo, Chief
Environmental Laboratory Accreditation Program



Water Boards

CALIFORNIA STATE
ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM
Accredited Fields of Testing

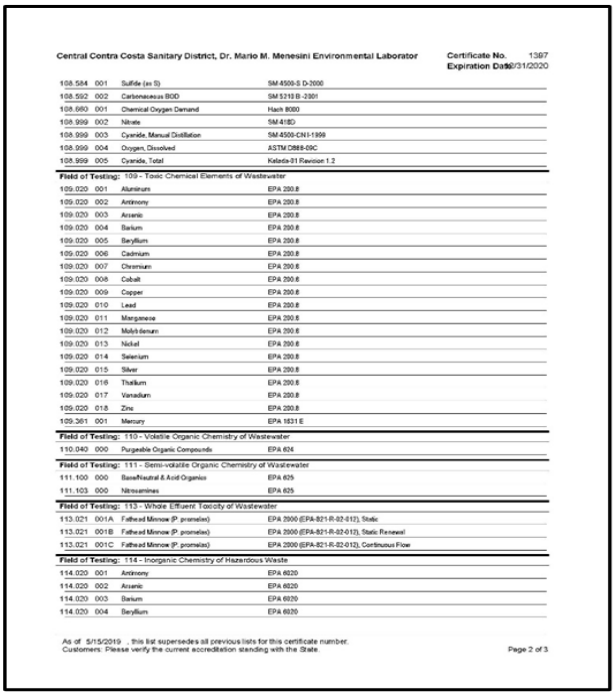
Central Contra Costa Sanitary District, Dr. Mario M. Menesini Environmental Laboratory
Plant Operations Division
5015 Imhoff Place
Martinez, CA 94553
Phone: 9253357751

Certificate No. 1397
Expiration Date 12/31/2020

Field of Testing: 107 - Microbiology of Wastewater			
107.020	002	Total Coliform (Enumeration)	SM 9221 B-2006
107.030	002	Total Coliform with Chlorine Present	SM 9221 B,C-2006
107.040	002	Fecal Coliform (Enumeration)	SM 9221 C,E-2006
107.050	002	Fecal Coliform with Chlorine Present	SM 9221 C,E-2006
107.242	001	Enterococci	Enterolert
Field of Testing: 108 - Inorganic Chemistry of Wastewater			
108.110	001	Turbidity	EPA 180.1
108.381	001	Oil and Grease	EPA 1664 A
108.410	001	Alkalinity	SM 2320 B-1997
108.421	001	Hardness	SM 2340 C-1997
108.430	001	Specific Conductance	SM 2510 B-1997
108.440	001	Residue, Total	SM 2540 B-1997
108.441	001	Residue, Filterable TDS	SM 2540 C-1997
108.442	001	Residue, Non-filterable TSS	SM 2540 D-1997
108.443	001	Residue, Settleable	SM 2540 F-1997
108.461	001	Chlorine, Total Residual	SM 4500-Cl G-2000
108.470	001	Cyanide, Total	SM 4500-CN B or C-1999
108.472	001	Cyanide, Total	SM 4500-CN E-1999
108.490	001	Hydrogen Ion (pH)	SM 4500-H+ B-2000
108.500	002	Ammonia (as N)	SM 4500-NH3 B,C-1997
108.501	002	Kjeldahl Nitrogen,Total (as N)	SM 4500-NH3 C-1997
108.504	002	Ammonia (as N)	SM 4500-NH3 F-1997
108.508	002	Ammonia (as N)	SM 4500-NH3 H-1997
108.511	001	Kjeldahl Nitrogen,Total (as N)	SM 4500-Norg B- 1997
108.514	001	Nitrite (as N)	SM 4500-NO2 B-2000
108.529	001	Nitrate-Nitrite (as N)	SM 4500-NO3 F-2000
108.529	002	Nitrate (as N)	SM 4500-NO3 F-2000
108.529	003	Nitrate (as N)	SM 4500-NO3 F-2000
108.532	001	Oxygen, Dissolved	SM 4500-O C-2001
108.540	001	Phosphate,Ortho (as P)	SM 4500-P E-1999
108.541	001	Phosphorus,Total	SM 4500-P E-1999
108.544	001	Phosphate,Ortho (as P)	SM 4500-P G-1999
108.545	001	Phosphorus,Total	SM 4500-P H-1999

As of 5/15/2019 , this list supersedes all previous lists for this certificate number.
Customers: Please verify the current accreditation standing with the State.

Page 1 of 3



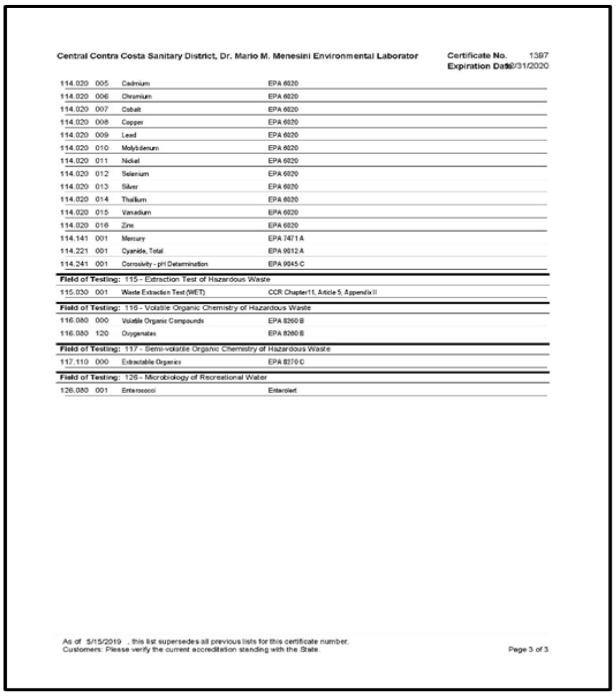
Central Contra Costa Sanitary District, Dr. Mario M. Menesini Environmental Laborator

Certificate No. 1397
Expiration Date 12/31/2020

108.584	001	Sulfide (as S)	SM 4500-S D-2000
108.592	002	Carbonaceous BOD	SM 5210 B -2001
108.680	001	Chemical Oxygen Demand	Hach 8000
108.999	002	Nitrate	SM 4110
108.999	003	Cyanide, Manual Distillation	SM 4500-CN I-1999
108.999	004	Oxygen, Dissolved	ASTM D888-09C
108.999	005	Cyanide, Total	Kelada-01 Revision 1.2
Field of Testing: 109 - Toxic Chemical Elements of Wastewater			
109.020	001	Aluminum	EPA 200.8
109.020	002	Antimony	EPA 200.8
109.020	003	Arsenic	EPA 200.8
109.020	004	Barium	EPA 200.8
109.020	005	Beryllium	EPA 200.8
109.020	006	Cadmium	EPA 200.8
109.020	007	Chromium	EPA 200.8
109.020	008	Cobalt	EPA 200.8
109.020	009	Copper	EPA 200.8
109.020	010	Lead	EPA 200.8
109.020	011	Manganese	EPA 200.8
109.020	012	Molybdenum	EPA 200.8
109.020	013	Nickel	EPA 200.8
109.020	014	Selenium	EPA 200.8
109.020	015	Silver	EPA 200.8
109.020	016	Thallium	EPA 200.8
109.020	017	Vanadium	EPA 200.8
109.020	018	Zinc	EPA 200.8
109.361	001	Mercury	EPA 1631 E
Field of Testing: 110 - Volatile Organic Chemistry of Wastewater			
110.040	000	Purgeable Organic Compounds	EPA 624
Field of Testing: 111 - Semi-volatile Organic Chemistry of Wastewater			
111.100	000	Base/Neutral & Acid Organics	EPA 625
111.103	000	Nitrosamines	EPA 625
Field of Testing: 113 - Whole Effluent Toxicity of Wastewater			
113.021	001A	Fathead Minnow (P. promelas)	EPA 2000 (EPA-821-R-02-012), Static
113.021	001B	Fathead Minnow (P. promelas)	EPA 2000 (EPA-821-R-02-012), Static Renewal
113.021	001C	Fathead Minnow (P. promelas)	EPA 2000 (EPA-821-R-02-012), Continuous Flow
Field of Testing: 114 - Inorganic Chemistry of Hazardous Waste			
114.020	001	Antimony	EPA 6020
114.020	002	Arsenic	EPA 6020
114.020	003	Barium	EPA 6020
114.020	004	Beryllium	EPA 6020

As of 5/15/2019 , this list supersedes all previous lists for this certificate number.
Customers: Please verify the current accreditation standing with the State.

Page 2 of 3



Central Contra Costa Sanitary District, Dr. Mario M. Menesini Environmental Laborator

Certificate No. 1397
Expiration Date 12/31/2020

114.020	005	Cadmium	EPA 6020
114.020	006	Chromium	EPA 6020
114.020	007	Cobalt	EPA 6020
114.020	008	Copper	EPA 6020
114.020	009	Lead	EPA 6020
114.020	010	Molybdenum	EPA 6020
114.020	011	Nickel	EPA 6020
114.020	012	Selenium	EPA 6020
114.020	013	Silver	EPA 6020
114.020	014	Thallium	EPA 6020
114.020	015	Vanadium	EPA 6020
114.020	016	Zinc	EPA 6020
114.141	001	Mercury	EPA 7471 A
114.221	001	Cyanide, Total	EPA 9012 A
114.241	001	Corrosivity - pH Determination	EPA 9045 C
Field of Testing: 115 - Extraction Test of Hazardous Waste			
115.030	001	Waste Extraction Test (WET)	CCR Chapter11, Article 5, Appendix II
Field of Testing: 116 - Volatile Organic Chemistry of Hazardous Waste			
116.080	000	Volatile Organic Compounds	EPA 8260 B
116.080	120	Oxygenates	EPA 8260 B
Field of Testing: 117 - Semi-volatile Organic Chemistry of Hazardous Waste			
117.110	000	Extractable Organics	EPA 8270 C
Field of Testing: 126 - Microbiology of Recreational Water			
126.080	001	Enterococci	Enterolert

As of 5/15/2019 , this list supersedes all previous lists for this certificate number.
Customers: Please verify the current accreditation standing with the State.

Page 3 of 3

CALIFORNIA STATE
ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM
Fields of Accreditation

Central Contra Costa Sanitary District, Dr. Mario M. Menesini Environmental Laboratory
Environmental and Regulatory Compliance
5015 Imhoff Place
Martinez, CA 94553
Phone: 9253357751

Certificate Number: 1397
Expiration Date: 12/31/2026

Field of Accreditation: 107 - Microbiological Methods for Non-Potable Water and Sewage Sludge			
107.050	001	Total Coliform (Enumeration)	SM 9221 B-2014
107.052	001	Fecal Coliform (Enumeration)	SM 9221 E-2014
107.066	001	Enterococci	SM 9230 D-2013 Enterolert
107.070	001	E. coli (Enumeration)	SM 9223 B-2016 Colilert 18
107.070	002	Fecal Coliform (Enumeration)	SM 9223 B-2016 Colilert 18
Field of Accreditation: 108 - Inorganic Constituents in Non-Potable Water			
108.009	001	Turbidity	EPA 180.1
108.025	001	Ammonia (as N)	EPA 350.1
108.033	001	Nitrate-Nitrite (as N)	EPA 353.2
108.033	002	Nitrite (as N)	EPA 353.2
108.035	001	Phosphate,Ortho (as P)	EPA 365.1
108.035	002	Phosphorus,Total	EPA 365.1
108.053	001	Oil & Grease, Total Recoverable	EPA 1664 A
108.063	001	Alkalinity	SM 2320 B-2011
108.067	001	Hardness	SM 2340 C-2011
108.069	001	Specific Conductance	SM 2510 B-2011
108.070	001	Residue, Total	SM 2540 B-2015
108.072	001	Residue, Filterable TDS	SM 2540 C-2015
108.074	001	Residue, Non-filterable TSS	SM 2540 D-2015
108.078	001	Residue, Settleable	SM 2540 F-2015
108.105	001	Chlorine, Total Residual	SM 4500-Cl C-2011
108.137	001	Hydrogen Ion (pH)	SM 4500-H+ B-2011
108.139	001	Ammonia (as N)	SM 4500-NH3 C-2011
108.139	002	Kjeldahl Nitrogen,Total (as N)	SM 4500-NH3 C-2011
108.149	001	Ammonia (as N)	SM 4500-NH3 H-2011
108.166	001	Oxygen, Dissolved	SM 4500-O C-2016
108.181	001	Phosphorus,Total	SM 4500-P H-2011
108.201	001	Sulfide (as S)	SM 4500-S D-2011
108.206	002	Carbonaceous BOD	SM 5210 B-2016
108.250	001	Oxygen, Dissolved	ASTM D888-12 (C)
108.325	001	Chemical Oxygen Demand	Hach 8000
108.335	001	Cyanide, Total	Kelada-01
Field of Accreditation: 109 - Metals and Trace Elements in Non-Potable Water			

As of 12/31/2024 , this list supersedes all previous lists for this certificate number.
Customers: Please verify the current accreditation standing with the State.

109.625	002	Antimony	EPA 200.8
109.625	003	Arsenic	EPA 200.8
109.625	004	Barium	EPA 200.8
109.625	005	Beryllium	EPA 200.8
109.625	007	Cadmium	EPA 200.8
109.625	008	Chromium	EPA 200.8
109.625	009	Cobalt	EPA 200.8
109.625	010	Copper	EPA 200.8
109.625	013	Lead	EPA 200.8
109.625	014	Manganese	EPA 200.8
109.625	015	Molybdenum	EPA 200.8
109.625	016	Nickel	EPA 200.8
109.625	017	Selenium	EPA 200.8
109.625	018	Silver	EPA 200.8
109.625	019	Thallium	EPA 200.8
109.625	022	Vanadium	EPA 200.8
109.625	023	Zinc	EPA 200.8
109.635	001	Mercury	EPA 245.1

Field of Accreditation: 110 - Volatile Organic Constituents in Non-Potable Water

110.040	003	Acrolein	EPA 624.1
110.040	004	Acrylonitrile	EPA 624.1
110.040	005	Benzene	EPA 624.1
110.040	006	Bromodichloromethane	EPA 624.1
110.040	007	Bromoform	EPA 624.1
110.040	008	Bromomethane (Methyl Bromide)	EPA 624.1
110.040	010	Carbon Tetrachloride	EPA 624.1
110.040	011	Chlorobenzene	EPA 624.1
110.040	012	Chloroethane	EPA 624.1
110.040	013	2-Chloroethyl vinyl Ether	EPA 624.1
110.040	014	Chloroform	EPA 624.1
110.040	015	Chloromethane (Methyl Chloride)	EPA 624.1
110.040	016	Dibromochloromethane (Chlorodibromomethane)	EPA 624.1
110.040	017	1,2-Dichlorobenzene	EPA 624.1
110.040	018	1,3-Dichlorobenzene	EPA 624.1
110.040	019	1,4-Dichlorobenzene	EPA 624.1
110.040	020	1,1-Dichloroethane	EPA 624.1
110.040	021	1,2-Dichloroethane (Ethylene Dichloride)	EPA 624.1
110.040	022	1,1-Dichloroethylene (1,1-Dichloroethene)	EPA 624.1
110.040	023	trans-1,2-Dichloroethylene (trans- 1,2 Dichloroethene)	EPA 624.1
110.040	024	1,2-Dichloropropane	EPA 624.1
110.040	025	cis-1,3-Dichloropropylene (cis 1,3 Dichloropropene)	EPA 624.1
110.040	026	trans-1,3-Dichloropropylene (trans-1,3 Dichloropropene)	EPA 624.1

110.040	029	Ethylbenzene	EPA 624.1
110.040	031	Methylene Chloride (Dichloromethane)	EPA 624.1
110.040	034	1,1,2,2-Tetrachloroethane	EPA 624.1
110.040	035	Tetrachloroethylene (Tetrachloroethene)	EPA 624.1
110.040	037	Toluene	EPA 624.1
110.040	038	1,1,1-Trichloroethane	EPA 624.1
110.040	039	1,1,2-Trichloroethane	EPA 624.1
110.040	040	Trichloroethylene (Trichloroethene)	EPA 624.1
110.040	041	Vinyl Chloride	EPA 624.1
110.040	043	o-Xylene	EPA 624.1
110.040	045	Trichlorofluoromethane	EPA 624.1
110.040	046	m+p-Xylene	EPA 624.1

Field of Accreditation: 111 - Semi-volatile Organic Constituents in Non-Potable Water

111.160	001	Acenaphthene	EPA 625.1
111.160	002	Acenaphthylene	EPA 625.1
111.160	003	Anthracene	EPA 625.1
111.160	004	Benzidine	EPA 625.1
111.160	005	Benzo(a)anthracene	EPA 625.1
111.160	006	Benzo(a)pyrene	EPA 625.1
111.160	007	Benzo(b)fluoranthene	EPA 625.1
111.160	008	Benzo(g,h,i)perylene	EPA 625.1
111.160	009	Benzo(K)fluoranthene	EPA 625.1
111.160	010	Bis(2-chloroethoxy) Methane	EPA 625.1
111.160	011	Bis(2-chloroethyl) Ether	EPA 625.1
111.160	012	bis(2-Chloroisopropyl) ether (2,2'-Oxybis[1-chloropropane])	EPA 625.1
111.160	013	Bis(2-ethylhexyl)phthalate (Di(2-ethylhexyl) phthalate)	EPA 625.1
111.160	014	4-Bromophenyl Phenyl Ether	EPA 625.1
111.160	015	Butyl Benzyl Phthalate	EPA 625.1
111.160	016	2-Chloronaphthalene	EPA 625.1
111.160	017	4-Chlorophenyl Phenyl Ether	EPA 625.1
111.160	018	Chrysene	EPA 625.1
111.160	019	Dibenz(a,h)anthracene	EPA 625.1
111.160	020	3,3'-Dichlorobenzidine	EPA 625.1
111.160	021	Diethyl Phthalate	EPA 625.1
111.160	022	Dimethyl Phthalate	EPA 625.1
111.160	023	Di-n-butyl Phthalate	EPA 625.1
111.160	024	2,4-Dinitrotoluene	EPA 625.1
111.160	025	2,6-Dinitrotoluene	EPA 625.1
111.160	026	Di-n-octyl Phthalate	EPA 625.1
111.160	027	Fluoranthene	EPA 625.1
111.160	028	Fluorene	EPA 625.1
111.160	029	Hexachlorobenzene	EPA 625.1

111.160	030	Hexachlorobutadiene	EPA 625.1
111.160	031	Hexachloroethane	EPA 625.1
111.160	032	Indeno(1,2,3-c,d)pyrene	EPA 625.1
111.160	033	Isophorone	EPA 625.1
111.160	034	Naphthalene	EPA 625.1
111.160	035	Nitrobenzene	EPA 625.1
111.160	036	N-nitroso-di-n-propylamine (NDPA)	EPA 625.1
111.160	037	Phenanthrene	EPA 625.1
111.160	038	Pyrene	EPA 625.1
111.160	039	1,2,4-Trichlorobenzene	EPA 625.1
111.160	040	4-Chloro-3-methylphenol	EPA 625.1
111.160	041	2-Chlorophenol	EPA 625.1
111.160	042	2,4-Dichlorophenol	EPA 625.1
111.160	043	2,4-Dimethylphenol	EPA 625.1
111.160	044	2,4-Dinitrophenol	EPA 625.1
111.160	045	2-Methyl-4,6-dinitrophenol	EPA 625.1
111.160	046	2-Nitrophenol	EPA 625.1
111.160	047	4-Nitrophenol	EPA 625.1
111.160	048	Pentachlorophenol	EPA 625.1
111.160	049	Phenol	EPA 625.1
111.160	050	2,4,6-Trichlorophenol	EPA 625.1
111.160	098	Hexachlorocyclopentadiene	EPA 625.1
111.160	108	N-nitrosodimethylamine (NDMA)	EPA 625.1
111.160	110	N-nitrosodiphenylamine	EPA 625.1
111.160	143	1,2-Diphenylhydrazine	EPA 625.1

Field of Accreditation: 113 - Environmental Toxicity Methods

113.011	001C	Fathead Minnow (P. promelas)	EPA 2000.0, Continuous Flow

Field of Accreditation: 114 - Inorganic Constituents in Hazardous Waste

114.335	002	Antimony	EPA 6020
114.335	003	Arsenic	EPA 6020
114.335	004	Barium	EPA 6020
114.335	005	Beryllium	EPA 6020
114.335	006	Cadmium	EPA 6020
114.335	007	Chromium	EPA 6020
114.335	008	Cobalt	EPA 6020
114.335	009	Copper	EPA 6020
114.335	010	Lead	EPA 6020
114.335	012	Nickel	EPA 6020
114.335	013	Silver	EPA 6020
114.335	014	Thallium	EPA 6020
114.335	015	Zinc	EPA 6020
114.335	016	Molybdenum	EPA 6020

114.335	017	Selenium	EPA 6020
114.335	018	Vanadium	EPA 6020
114.535	001	Mercury	EPA 7471 A
Field of Accreditation: 115 - Leaching/Extraction Tests and Physical Characteristics of Hazardous Waste			
115.135	001	Corrosivity - pH Determination	EPA 9045 C
Field of Accreditation: 116 - Volatile Organic Compounds in Hazardous Waste			
116.265	001	Benzene	EPA 8260 B
116.265	004	Bromodichloromethane	EPA 8260 B
116.265	005	Bromoform	EPA 8260 B
116.265	006	Bromomethane (Methyl Bromide)	EPA 8260 B
116.265	010	Carbon Disulfide	EPA 8260 B
116.265	011	Carbon Tetrachloride	EPA 8260 B
116.265	012	Chlorobenzene	EPA 8260 B
116.265	013	Chlorodibromomethane (Dibromochloromethane)	EPA 8260 B
116.265	014	Chloroethane	EPA 8260 B
116.265	015	Chloroform	EPA 8260 B
116.265	016	Chloromethane (Methyl Chloride)	EPA 8260 B
116.265	018	Dichlorodifluoromethane (Freon 12)	EPA 8260 B
116.265	019	cis-1,2-Dichloroethylene (cis 1,2 Dichloroethene)	EPA 8260 B
116.265	020	trans-1,2-Dichloroethylene (trans- 1,2 Dichloroethene)	EPA 8260 B
116.265	021	cis-1,3-Dichloropropylene (cis 1,3 Dichloropropene)	EPA 8260 B
116.265	022	trans-1,3-Dichloropropylene (trans-1,3 Dichloropropene)	EPA 8260 B
116.265	023	Ethylbenzene	EPA 8260 B
116.265	025	Methyl tert-butyl Ether (MTBE)	EPA 8260 B
116.265	026	Methylene Chloride (Dichloromethane)	EPA 8260 B
116.265	030	Styrene	EPA 8260 B
116.265	031	Tetrachloroethylene (Tetrachloroethene)	EPA 8260 B
116.265	032	Toluene	EPA 8260 B
116.265	033	Trichloroethylene (Trichloroethene)	EPA 8260 B
116.265	034	Trichlorofluoromethane	EPA 8260 B
116.265	035	Vinyl Chloride	EPA 8260 B
116.265	036	m+p-Xylene	EPA 8260 B
116.265	037	o-Xylene	EPA 8260 B
116.265	040	1,1-Dichloroethane	EPA 8260 B
116.265	041	1,1-Dichloroethylene (1,1-Dichloroethene)	EPA 8260 B
116.265	042	1,1,1-Trichloroethane	EPA 8260 B
116.265	044	1,1,2,2-Tetrachloroethane	EPA 8260 B
116.265	045	1,1,2-Trichloroethane	EPA 8260 B
116.265	046	1,2-Dichlorobenzene	EPA 8260 B
116.265	047	1,2-Dichloroethane (Ethylene Dichloride)	EPA 8260 B
116.265	050	1,2-Dichloropropane	EPA 8260 B
116.265	053	1,3-Dichlorobenzene	EPA 8260 B

116.265	054	1,4-Dichlorobenzene	EPA 8260 B
116.265	055	2-Chloroethyl vinyl Ether	EPA 8260 B
116.265	057	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	EPA 8260 B

Field of Accreditation: 117 - Semi-volatile Organic Chemistry of Hazardous Waste

117.435	001	Acenaphthene	EPA 8270 C
117.435	002	Acenaphthylene	EPA 8270 C
117.435	004	Anthracene	EPA 8270 C
117.435	005	Benzidine	EPA 8270 C
117.435	007	Benzo(a)anthracene	EPA 8270 C
117.435	008	Benzo(b)fluoranthene	EPA 8270 C
117.435	009	Benzo(k)fluoranthene	EPA 8270 C
117.435	010	Benzo(g,h,i)perylene	EPA 8270 C
117.435	011	Benzo(a)pyrene	EPA 8270 C
117.435	013	Bis(2-chloroethoxy) Methane	EPA 8270 C
117.435	014	Bis(2-chloroethyl) Ether	EPA 8270 C
117.435	015	Bis(2-ethylhexyl)phthalate (Di(2-ethylhexyl) phthalate)	EPA 8270 C
117.435	016	Butyl Benzyl Phthalate	EPA 8270 C
117.435	017	Chrysene	EPA 8270 C
117.435	018	Dibenz(a,h)anthracene	EPA 8270 C
117.435	020	Di-n-butyl Phthalate	EPA 8270 C
117.435	021	Diethyl Phthalate	EPA 8270 C
117.435	022	Dimethyl Phthalate	EPA 8270 C
117.435	023	Di-n-octyl Phthalate	EPA 8270 C
117.435	024	Fluoranthene	EPA 8270 C
117.435	025	Fluorene	EPA 8270 C
117.435	026	Naphthalene	EPA 8270 C
117.435	027	Nitrobenzene	EPA 8270 C
117.435	029	Pentachlorophenol	EPA 8270 C
117.435	034	2-Chloronaphthalene	EPA 8270 C
117.435	035	2-Chlorophenol	EPA 8270 C
117.435	036	2,4-Dichlorophenol	EPA 8270 C
117.435	037	2,4-Dimethylphenol	EPA 8270 C
117.435	038	2,4-Dinitrophenol	EPA 8270 C
117.435	039	2,4-Dinitrotoluene	EPA 8270 C
117.435	041	2,6-Dinitrotoluene	EPA 8270 C
117.435	043	2-Nitrophenol	EPA 8270 C
117.435	045	3,3'-Dichlorobenzidine	EPA 8270 C
117.435	047	4-Chloro-3-methylphenol	EPA 8270 C
117.435	048	4-Bromophenyl Phenyl Ether	EPA 8270 C
117.435	049	4-Chlorophenyl Phenyl Ether	EPA 8270 C
117.435	051	4-Nitrophenol	EPA 8270 C
117.435	088	N-nitrosodimethylamine (NDMA)	EPA 8270 C

117.435	089	N-nitrosodiphenylamine	EPA 8270 C
117.435	090	N-nitroso-di-n-propylamine (NDPA)	EPA 8270 C
117.435	091	Indeno(1,2,3-c,d)pyrene	EPA 8270 C
117.435	092	Isophorone	EPA 8270 C
117.435	094	Phenanthrene	EPA 8270 C

4.0 REQUIRE MONITORING INSTRUMENTS AND DEVICES USED TO IMPLEMENT THE SSS WATER QUALITY MONITORING PROGRAM TO BE PROPERLY MAINTAINED AND CALIBRATED, INCLUDING ANY RECORDS TO DOCUMENT MAINTENANCE AND CALIBRATION, AS NECESSARY, TO ENSURE THEIR CONTINUED ACCURACY

The below list references documents where persons reviewing SSS data would look to answer questions about calibration and maintenance of equipment used to measure parameters for an SSS sample. The three documents listed below are kept at Central San's Laboratory in Martinez, California. Records pertaining to maintenance and calibration of equipment used to analyze SSS samples are available by request.

1. Central Contra Costa Sanitary District Dr. Mario M. Menesini Environmental Laboratory Quality Assurance Manual.

2. Standard Operating Procedures for methods used to analyze sanitary sewer spill samples. (These will have calibration procedures/frequency along with quality control frequencies and acceptance limits.)

3. Instrument logbooks where preventative or reactive maintenance along with software updates are described.

5.0 WITHIN 18 HOURS OF THE ENROLLEE BECOMING AWARE OF THE SSS, REQUIRE WATER QUALITY SAMPLING FOR, AT A MINIMUM, THE FOLLOWING CONSTITUENTS:

- AMMONIA
- APPROPRIATE BACTERIAL INDICATOR(S) PER THE APPLICABLE BASIN WATER PLAN WATER QUALITY OBJECTIVE OR REGIONAL BOARD DIRECTION WHICH MAY INCLUDE TOTAL AND FECAL COLIFORM, ENTEROCOCCUS, AND E-COLI

SSS Sampling Contact Information

Company	Contact Person	Phone #
Central San Laboratory Program Administrator	Blake Brown	925-229-7237 925-324-5721 cell
Central San Supervising Chemist	Jesse McDermott	925-229-7216 530-966-4056 cell
Central San Collection System Superintendent	Steve Sauter	925-229-7150 925-260-2046 cell
Central San Collection System Supervisor	Alex Benavidez	925-229-7175 925-383-0795 cell
Central San Collection System Division Manager	Paul Seitz	925-335-7743 925-383-0033 cell
Environmental Science Associates Biologist	Garrett Leidy	510-463-6738
Environmental Science Associates Vice President	Erich Fischer	916-564-4500

FIELD EQUIPMENT SUPPLIES NEEDED FOR SAMPLING

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

1. Personnel protective equipment including latex/nitrile gloves and eye protection
2. Four Coolers for samples –
    a. Storm drain entry point (DCS-001)
    b. entry point sample (RSW-001)
    c. upstream sample (RSW-001U)
    d. downstream sample (RSW-001D)
3. Ice for coolers to keep samples cold
4. 12 –290mL Sterile plastic containers (containing sodium thiosulfate preservative) for Bacteria sample collection –
    a. Bottle 1 for Coliform & Enterococcus (1 bottle per kit)
    b. Bottle 2 for E. coli (1 bottle per kit)
    c. Sacrificial sterile bottle for sample collection (1 bottle per kit)
5. 4 Sets of dechlor/preservation kits (3a & 3b) –
    a. Bottle 3a (290mL sterile container containing sodium thiosulfate preservative) (1 per kit)
    b. Bottle 3b (250mL plastic bottle with Sulfuric Acid) (1 per kit)
6. 1 ⎯ Sampling apparatus with 10’ extension handle
7. 1 Gallon plastic bags used for any trash
8. Chain of Custody Forms

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

SAMPLE COLLECTION BEST PRACTICE

1. Collect all grab samples approximately 3”– 6" below the surface (or if shallower, as close as possible to this depth) to avoid sampling debris or scum from the surface.
2. Collect the sample in a safe manner in the middle of the flow, against the direction of water flow.
3. Once the lid is opened for the individual sample bottle, do not touch the inside surface of the bottle or lid.
4. For sample bottles that contain a preservative, take care to keep the preservation material in the container and do not overfill.
5. Once samples have been gathered, immediately place all sample bottles on ice.
6. Deliver samples to Centra San’s Laboratory.

SAMPLING TIME CONSTRAINTS

Bacteria samples have a 6-hour (preserved and cooled) regulatory holding time. Samples will not be analyzed if the holding time has been exceeded. Central San's Laboratory needs about 1 hour to set up the tests.

Samples must be maintained at 6°C/ 43°F (on ice or refrigerated) from the time of collection until receipt by Central San's Laboratory.

SAMPLING PROCEDURE

1. Remove four (4) ice chests from Spill Response Cabinet located in the CSO Warehouse.
2. Verify all four ice chests each have the following:

   - (1) – Sacrificial sterile sampling bottle (for pouring) with sterility seal intact
   - (2) – 290ml bottle (Bottles 1 & 2) (with dichlorination reagent already inside and plastic sterility seal intact)
   - (1) dechlor/preservation kit taped together (Bottles 3a & 3b)
     - 1 290mL sterile bottle with dechlorination agent
     - 1 250mL plastic bottle with Sulfuric acid

3. Fill ice chests approximately half-full of ice.

4. Spill location samples should be taken at the entry point (site) of spill (RSW-001), approximately 100' upstream of entry point (RSW-001U) and 100' downstream of entry point location (RSW-001D). If the spill enters a drainage conveyance system, additionally collect at the entry point to the drainage conveyance system (DCS-001).

5. Sampling Instructions
    - Bottles 1 & 2 (2)-290mL sterile plastic bottles & (1) 290mL sacrificial sterile pouring bottle

        - Remove the plastic sterility seal
        - Remove the cap of bottle 1 and do not allow the inside of the cap to touch anything (to prevent contamination)
        - Use sacrificial 290mL sterile container to fill bottles 1 and 2 to the 250mL fill line taking caution not to overfill.
        - Replace the lid and retain the sacrificial bottle to fill sample 3a.
        - Fill in the label with collection date/time
    - Sample bottles 3a & 3b (3a is a 290mL Dechlor container and 3b is a 250mL preservation container)

        - Fill bottle 3a with the sacrificial bottle used above without overfilling, this bottle contains dechlorination agent.
        - Cap 3a and shake to dissolve the dechlorination agent.
        - Pour the contents of bottle 3a into bottle 3b without overfilling. Bottle 3b contains sulfuric acid to preserve the sample. Use caution, Sulfuric acid could cause acid burns.
        - Cap 3b.

- Fill in the label with the collection date/time.

6. Repeat Step 5 for each of the sampling locations.

7. Fill out labels with appropriate information (see below). Use Sharpie ultra-fine point or similar, to avoid smearing.

8. Put all sample bottles in their corresponding ice chests and deliver to lab within 5 hours

9. Fill out Chain of Custody Form for each location where samples were taken

Chain of Custody

Central Contra Costa Sanitary District
5019 Imhoff Place
Martinez, CA 94553

ERC-LAB-CSO-SAM-COC-FOR
Revision: 5
Effective: 05/15/2025

Cityworks Workorder:

Report To: Steve Sauter, Alex Benavidez, Paul Seitz
Steve@centralsan.org, abenavidez@centralsan.org, pseitz@centralsan.org

Sampled by:

Sampler Signature:

Site Address:

Instructions:
Bottle 1 & 2:
Remove the seal from the container and pour sample into bottle using the sacrificial sterile bottle without touching the rim of the bottle. Fill the bottle to the 250mL line. Do not overfill, the bottle contains dechlorination agent. (fill both bottles 1 and 2)
Bottle 3a & 3b:
Fill bottle 3a first, cap and invert to dissolve sodium thiosulfate. (do not over fill the bottle)
Pour contents of bottle 3a into bottle 3b. Use caution when pouring, bottle 3b contains concentrated acid.

Sample ID	LIMS ID	Sample Type1	Collection Date	Collection Time	Bottle Type2	Number of Bottles	Parameters To Be Analyzed: Dissolved Oxygen	pH	Total Residual Chlorine	Ammonia	COD	Enterococcus (Enterolert)	E. Coli (Colilert-18)	Fecal Coliform (Colilert-18)	Total Coliform	Preservative: H2SO4 (Preservation upon collection)	Temp 0-6C	Sodium Thiosulfate dechlorination tablet
Drainage Conveyance DCS-001 (Bottle 1)		G			P	1						x	x	x			x	x
Drainage Conveyance DCS-001 (Bottle 2)		G			P	1									x		x	x
Drainage Conveyance DCS-001 (Bottles 3a & 3b)[3]		G			P	1				x						x	x	x
Upstream-RSW-001U (Bottle 1)		G			P	1						x	x	x			x	x
Upstream-RSW-001U (Bottle 2)		G			P	1									x		x	x
Upstream-RSW-001U (Bottles 3a & 3b)[3]		G			P	1				x						x	x	x
Site-RSW-001 (Bottle 1)		G			P	1						x	x	x			x	x
Site-RSW-001 (Bottle 2)		G			P	1									x		x	x
Site-RSW-001 (Bottles 3a & 3b)[3]		G			P	1				x						x	x	x
Downstream-RSW-001D (Bottle 1)		G			P	1						x	x	x			x	x
Downstream-RSW-001D (Bottle 2)		G			P	1									x		x	x
Downstream-RSW-001D (Bottles 3a & 3b)[3]		G			P	1				x						x	x	x
																		Total Number of Bottles

[1] Sample Type; C= Composite, G = Grab, CG = Composite Grab

[2] Bottle Type: AG = Amber Glass, CG = Clear Glass, P = Poly, V = VOA

*Time of preservation is the same as collection.

Comments:

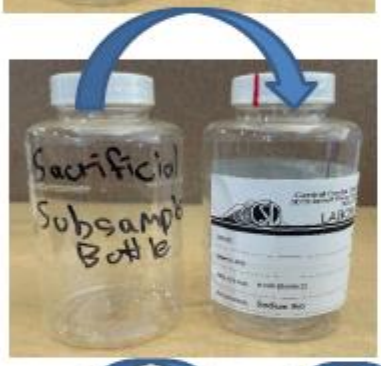
Reviewed: _____ **Date:**_____

Relinquished by:	Date	Time	Received by:	Date	Time

CHAIN OF CUSTODY FORM – INSTRUCTION PAGE

Instructions

Remove seal and lid from **Sacrificial Subsampling Bottle** and fill the bottle with sample. Remove the lid and seal from **Bottle 1** and do not set the lid down. Pour sample from the **Sacrificial Subsampling Bottle** into **Bottle 1** and avoid touching anything to the rim of the bottle. Fill to the 250 mL line, **but do not overfill!**



Refill the **Sacrificial Subsampling Bottle** with sample. Remove the lid and seal from **Bottle 2** and do not set the lid down. Pour sample from the **Sacrificial Subsampling Bottle** into **Bottle 2** and avoid touching anything to the rim of the bottle. Fill to the 250 mL line, **but do not overfill!**

Using either the **Sacrificial Subsampling Bottle**, or another sampling device, collect the sample. Remove lid and seal from **Botle 3a** and fill to the 250 mL line with sample, **but do not overfill!** Replace the lid and shake to dissolve the sodium thiosulfate to dechlorinate sample. Remove the lid from **Bottle 3b**, but take caution as the bottle contains strong acid. Pour sample from **Bottle 3a** into **Bottle 3b** and replace the lid on Bottle 3b.

11. REFERENCES

A. Pumping Stations Emergency Response Plan

B. Statewide Waste Discharge Requirements Order WQ 2022-0103-DWQ

C. Water Quality Code Sections (please refer to page 5 for Authority list)