Attachment

Sewer System Management Plan (SSMP)

2026 Update

Sanitary Sewer Collection System for
Waste Discharge ID (WDID): #5SSO10883, #5SSO10884, #5SSO11020
Camanche North Shore, Camanche South Shore, and Pardee Recreation Areas

REVIEWED AND APPROVED BY:

Roberto Cortez, Manager of Water Operations

Legally Responsible Official
East Bay Municipal Water District

Sanitary Sewer Collection System

Date Signed

PREPARED BY:

FISCHER COMPLIANCE LLC
PRACTICES THAT COMPLY

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Summary of SSMP Action Items

This table provides a chronological summary of the items found in each Section's "Implementation Plans and Schedules" table. Items are sorted by date, to assist the District in determining when actions are needed. Additional information regarding each action item is found in the discussion within each section of the SSMP.

Schedule	Action Item	Section
As Needed	• After each spill event, review Chain of Communication. • Review agreements with contractors and/or pre-job meeting minutes to ensure contract personnel have received instruction for responding to sewage spills. • Ensure all project plans are approved in accordance with the District's Standard Details and Specifications. • For each project, verify inspection procedures are adequate and consistent with current standards of practice. • Prior to each project, verify design standards and hydraulic model previously completed are adequate and consistent with current standards of practice. • Review/evaluate enforcement and inspection findings and implement changes as necessary. • Hold meetings to discuss any issues that may result from climate change. • Monitor/evaluate to see if they exceed the design storm in the hydraulic model. • Monitor flows in each basin and update the hydraulic model. • If the District anticipates a significant expansion to any of the recreation areas, then update the Wastewater Master Plan to consider all factors listed in Attachment D, Section 8.2 of the WDR. • For each CIP update: Utilize all available data for prioritizing corrective actions considering severity and consequences of potential spills. • For CIP projects: For schedules that are not followed, justify and document the reason. • For CIP projects: Hold regular coordination meetings with all parties, to help keep the projects on track and resolve issues that may arise in a timely manner. • Ensure work programs and the SSMP are updated based on assessments.	2.2 4.3.2 5.1.1 5.2.1 5.2.2 8.1.1 8.1.3 8.2.1 8.2.2 8.2.3 8.3.1 8.4.1 8.4.2 9.2
Continuously	• Monitor and document occasions when Ordinance(s) failed to address issues as intended. • Maintain documents and recordkeeping of system evaluation and condition assessment inspections and activities.	3.2 8.3.2

Schedule	Action Item	Section
Semi-annually: By June 30 and December 31 each year	• Review names, contact information and position responsibilities in Section 2; update as needed. • Review Organizational Chart for any changes; update as needed. • Review preventative operation and maintenance work completed to date to ensure critical work is being completed. • Review training documentation to ensure all staff have received required training.	2.1 2.3
Annually: By December 31 each year	• Review map update procedures with all affected staff. • Review/ensure all newly installed facilities have been updated and included in the maps. • Review scheduled Preventative Maintenance to ensure the prescribed schedule remains appropriate. • Review training documentation to ensure all staff have received required training. • Audit inventory lists to ensure stock is adequate. • Check with vendors to ensure lead times for critical parts are as expected. • Ensure contracts with emergency support services are current. • Conduct SERP training including practice drills. • Review Post Spill Assessments to ensure adherence with the SERP and to identify any trends that should be addressed. • For FOG program: review/evaluate enforcement and inspection findings and implement changes as necessary. • For FOG program: review spill rates and causes and make changes to maintenance programs, as necessary. • For Annual Report: Review spill rates and causes and make changes to maintenance programs, as necessary. • Assess work programs to ensure outcomes are as intended. • Monitor and evaluate spill trends, document efforts. • Ensure the SSMP is posted on the District website and the link functions properly. • Ensure Sewage Spill Warning signs are readily available to communicate with the public when necessary.	4.1.1 4.1.2 4.2.1 4.2.2 4.3.4 4.4.1 4.4.2 4.4.3 6.1 6.2 7.1 7.2 8.1.2 8.2 8.3 9.1 9.3 11.1 11.4
By August 2, 2026	• Board approval deadline for 2026 SSMP update. SSMP must be uploaded to CIWQS by this date.	1.2.1 11.1
By September 30, 2026	• Replace prior SSMP with 2026 SSMP on District's website (Sewers page).	1.2.2
By June 30, 2027	• Complete the CIP for CANS, CASS, and PARA. Identify project schedules and funding.	8.4.3
By August 2, 2028	• Begin 2028 SSMP Audit. • Review District-owned asset statistics and element description; update as necessary.	1.2.3 1.3.2 10.1

Schedule	Action Item	Section
By February 2, 2029	• Complete 2028 SSMP Audit, upload into CIWQS, incorporate Audit Findings into SSMP and update Change Log. • Ensure a plan and schedule is developed to address deficiencies found during Audit.	1.2.4 10.2
By August 2, 2031	• Begin 2031 SSMP Audit. • Review District-owned asset statistics and element description; update, as necessary.	1.2.5 1.3.2 10.1
By February 2, 2032	• Upload 2031 SSMP Audit into CIWQS, incorporate Audit Findings into SSMP and update Change Log. • Ensure a plan and schedule is developed to address deficiencies found during Audit.	1.2.6 10.2
Begin February 2, 2032	• Prepare for 2032 SSMP Update • Review District-owned asset statistics and element description; update, as necessary. • Review Ordinance(s) to confirm all documents provide necessary required legal authority.	1.2.7 1.3.1 3.1
August 2, 2032	• Board approval deadline for 2032 SSMP Update. Must be uploaded to CIWQS by this date.	1.2.8 11.1

Table 1 – Summary of SSMP Action Items

SSMP Change Log of Revisions and Completed Action Items[1]

Revision Date	SSMP Section	Approval Date	Description of Change/Revision/Activity	Initials

[1] *Use this Change Log to document any edits/changes or action items as they are identified and document when they are completed.*

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Introduction

This Sewer System Management Plan (SSMP or Plan) has been prepared for the East Bay Municipal Utility District's (District) Camanche North Shore Recreation Area (CANS), Camanche South Shore Recreation Area (CASS), and Pardee Recreation Area (PARA) sanitary sewer collection systems (Systems). The District has determined that one SSMP is adequate as it owns and operates all three of the limited size Systems. For regulatory reporting purposes, the District reports separately on each System.

The SSMP, prepared with technical assistance from Fischer Compliance LLC., complies with the State Water Resources Control Board (SWRCB) 2022 General Waste Discharge Requirements, Order No. WQ 2022-0103-DWQ for Sanitary Sewer Systems (referred to throughout this document as the WDR). The District provided all details, information and institutional insights for preparation of the SSMP. This living document has been developed to meet the size, scale, and complexity of the CANS, CASS, and PARA Systems. Additionally, the latest 2024 Sewer System Management Plan Guidance Manual published by the Bay Area Clean Water Agencies (BACWA) was utilized as a model for development of the document to harmonize formatting/content and incorporate recommended suggested guidance wherever possible.

The District's commitment to meeting regulatory requirements, along with its proactive approach to operation and management of the collection system, has served it well, as evidenced by the performance of each of the three systems relative to other agencies in the region and the state.

Table 1 provides key spill metrics, including data comparing the three collections system's spill records with state and regional system data for the 5.5-year period of January 2020 through November 2025. For both the CANS and CASS systems, the District consistently performs better than both statewide and regional spill rate indices and net spill volumes for all categories of spills except for Category 3 spills for CANS and CASS. Category 3 spills are between 50 and 1,000 gallons that do not discharge to surface water.

Collection System Spill Summary

Operational Indices: Camanche South Shore CS, Camanche North Shore CS, and Pardee CS

Spill Rate Indice (spills/100mi/yr)

	Category 1			Category 2		Category 3	
	Main System	Laterals	Other	Main System	Other	Main System	Other
Camanche South Shore CS	0.0	0.0	0.0	0.0	0.0	6.63	0.0
Camanche North Shore CS	0.0	0.0	0.0	0.0	0.0	8.29	0.0
Pardee CS	0.0	0.0	0.0	0.0	0.0	0.0	0.0
State Municipal(Public) Average	1.44	5.55	0.72	0.79	0.98	2.03	0.37
Region Municipal Average	1.74	1.07	2.24	1.35	2.45	3.03	0.44

Net Volume Spills Indice (gallons/1000 Capita/yr)

	Category 1			Category 2		Category 3	
	Main System	Laterals	Other	Main System	Other	Main System	Other
Camanche South Shore CS	0.0	0.0	0.0	0.0	0.0	249.11	0.0
Camanche North Shore CS	0.0	0.0	0.0	0.0	0.0	243.24	0.0
Pardee CS	0.0	0.0	0.0	0.0	0.0	0.0	0.0
State Municipal(Public) Average	3267.26	109.42	1390.32	157.69	804.31	37.39	11.2
Region Municipal Average	8088.27	288.72	4573.02	308.22	2268.09	63.71	14.75

Figure 1 – Collection Spill Summary: Operational Indices for District with State and Regional Data

SSMP Organization

This SSMP includes the 11 required elements in accordance with the WDR. The layout for each element states the specific WDR requirement, followed by an analysis of the relevant Item Nos. 2 through 4, listed below. In addition, identified WDR specifications and provisions are included, plus reference for any applicable appendix.

1. Compliance – Describes the District's approach to complying with the element.
2. Effectiveness – Describes the District's effectiveness toward achieving compliance with the element as measured by Key Performance Indicators (KPIs.)
3. Implementation – Demonstrates how the District implements the element as described.
4. Resilience – Describes the District's developed resilience measures to ensure compliance with the element.
5. Appendix Inclusions – References the relevant appendix for the element.

Abbreviations and Acronyms

BMP	Best Management Practices
CCTV	Closed Circuit Television
CASS	Camanche South Shore Recreation Area
CANS	Camanche North Shore Recreation Area
CIP	Capital Improvement Program
CIPP	Cured in Place Pipe
CIWQS	California Integrated Water Quality System (State Water Board Online Spill Database)
CMMS	Computerized Maintenance Management System
District or EBMUD	East Bay Municipal Utility District
EPA	US Environmental Protection Agency
FOG	Fats, Oils and Grease
FSE	Food Service Establishment
GCD	Grease Control Device
GIS	Geographic Information System
I & I	Inflow and Infiltration
LRO	Legally Responsible Official
PARA	Pardee Recreation Area
RWQCB	Regional Water Quality Control Board
SCADA	Supervisory Control and Data Acquisition
SERP	Spill Emergency Response Plan
SOP	Standard Operating Procedure
SSMP	Sewer System Management Plan
Spill	Sanitary Sewer Spill
SWRCB	State Water Resources Control Board
WDID	Waste Discharge ID Number (CIWQS)
WDR	Sanitary Sewer Systems General Wastewater Discharge Requirements Order issued by the State Water Resources Control Board (Order No. 2022-0103-DWQ)
WWTP	Wastewater Treatment Plant

Table 2 – Abbreviations and Acronyms

1. Goal and Introduction

WDR REQUIREMENTS

Att. D-1 (pg. D-2)

"The goal of the Sewer System Management Plan (Plan) is to provide a plan and schedule to: (1) properly manage, operate, and maintain all parts of the Enrollee's sanitary sewer system(s), (2) reduce and prevent spills, and (3) contain and mitigate spills that do occur.

The Plan must include a narrative Introduction section that discusses the following items:"

1.1. Regulatory Context

WDR REQUIREMENTS

Att. D-1.1 (pg. D-2)

"The Plan Introduction section must provide a general description of the local sewer system management program and discuss Plan implementation and updates".

COMPLIANCE

The District is committed to implementing the 11 elements of the SSMP. The District is dedicated to maintaining its Systems in a systematic manner by implementing specific work programs, with a focus on critical areas, to prevent spills, allowing for a comprehensive approach to maintenance. The District's established work programs include pipe cleaning, CCTV inspections, manhole inspections, and lift station inspections. Work programs are described in more detail in Specifications 5.19 – Operation and Maintenance of this SSMP.

By prioritizing the described proactive maintenance measures with a comprehensive approach, the District has a successful record of effectively operating its Systems and reducing and/or eliminating sewage spills.

EFFECTIVENESS

N/A

IMPLEMENTATION PLAN/SCHEDULE

N/A

1.2. SSMP Update Schedule

WDR REQUIREMENTS

Att. D-1.2 (pg. D-3)

"The Plan Introduction section must include a schedule for the Enrollee to update the Plan, including the schedule for conducting internal audits. The schedule must include milestones for incorporation of activities addressing prevention of sewer spills."

COMPLIANCE

The District utilizes the SWRCB's online lookup tool, in addition to the District's own schedule tracking system to ensure compliance with all required due dates for updating its SSMP and completing its required SSMP Audits. The information in the Figure below is taken from the SWRCB's SSMP & Audit Required Due Dates lookup tool[2].

The District's most recent SSMP audit was completed for the period August 2022 through August 2025. The Audit Findings have been incorporated into this SSMP Update.

Sewer System Management Plan and Subsequent Update Due Dates					
System Name	**WDID Number**	**Original Plan Required Due Date**	**Required Plan Update Due Date**	**Required Plan Update Due Date**	**Required Plan Update Due Date**
Camanche North Shore	5SSO10883	5/2/2010	5/2/2015	5/2/2020	8/2/2026
Camanche South Shore	5SSO10884	5/2/2010	5/2/2015	5/2/2020	8/2/2026
Pardee Recreation Area	5SSO11020	5/2/2010	5/2/2015	5/2/2020	8/2/2026

Audit Due Dates								
System Name	**WDID Number**	**Original Audit Due Date**	**Required Audit Due Date**	**Required Audit Due Date**	**Required Audit Due Date**	**Required Audit Due Date**	**Required Audit Due Date**	**End of 3-year Audit Period**
Camanche North Shore	5SSO10883	5/2/2012	5/2/2014	5/2/2016	5/2/2018	5/2/2020	5/2/2022	8/2/2025
Camanche South Shore	5SSO10884	5/2/2012	5/2/2014	5/2/2016	5/2/2018	5/2/2020	5/2/2022	8/2/2025
Pardee Recreation Area	5SSO11020	5/2/2012	5/2/2014	5/2/2016	5/2/2018	5/2/2020	5/2/2022	8/2/2025

Table 3 – Sewer System Management Plan, Subsequent Update and Audit Due Dates for all Three Collection Systems.

[2] The Lookup Tool erroneously shows that the Camanche South Shore SSMP update is due on May 2, 2026, while the Camanche North Shore and Pardee updates are due on August 2, 2026. The Tool also shows that the Camanche South Shore audit period ends due May 2nd every three years, while the audit period for the other two systems ends on August 2nd every three years. The District contacted State Water Board staff who agree that all three updates are due on August 2, 2026, while all audit periods end due August 2nd every three years. As of this writing, the Lookup Tool has not been corrected; however, Figure 2 shous the correct dates.

EFFECTIVENESS

The District utilizes the following key performance indicators for measuring effectiveness of this element:

- Are SSMP Audits and SSMP updates being performed as scheduled?
- Has the SSMP been approved by the governing board on the required schedule (i.e., every six years)?
- Are specific internally established sewer program milestones being monitored?

IMPLEMENTATION PLAN/SCHEDULE

No.	Plan	Schedule	Responsible Party		
			MGR	ENG	SUP
1.2.1	Board approval deadline for 2026 SSMP update. SSMP must be uploaded to CIWQS by this date.	August 2, 2026	X		X
1.2.2	Replace prior SSMP with 2026 SSMP on District's website (Sewers page).	September 30, 2026	X		X
1.2.3	Begin 2028 SSMP Audit.	August 2, 2028	X		X
1.2.4	Complete 2028 SSMP Audit, upload into CIWQS, incorporate Audit Findings into SSMP and update Change Log.	By February 2, 2029	X		X
1.2.5	Begin 2031 SSMP Audit.	August 2, 2031	X		X
1.2.6	Complete 2031 SSMP Audit, upload into CIWQS, incorporate Audit Findings into SSMP and update Change Log.	By February 2, 2032	X		X
1.2.7	Prepare for 2032 SSMP Update.	Begin February 2, 2032	X		X
1.2.8	Board approval deadline for 2032 SSMP Update. Must be uploaded to CIWQS by this date.	August 2, 2032	X		X

1.3. Sewer System Asset Overview

WDR REQUIREMENTS

Att. D-1.3 (pg. D-3)

"The Plan Introduction section must provide a description of the Enrollee-owned assets and service area, including but not limited to:

- *Location, including county(ies);*
- *Service area boundary;*
- *Population and community served;*
- *System size, including total length in miles, length of gravity mainlines, length of pressurized (force) mains, and number of pump stations and siphons;*
- *Structures diverting stormwater to the sewer system;*
- *Data management systems;*
- *Sewer system ownership and operation responsibilities between Enrollee and private entities for upper and lower sewer laterals;*
- *Estimated number or percentage of residential, commercial, and industrial service connections; and*
- *Unique service boundary conditions and challenge(s).*

Additionally, the Plan Introduction section must provide reference to the Enrollee's up-to-date map of its sanitary sewer system, as required in section 4.1 (Updated Map of Sanitary Sewer System) of this Attachment."

COMPLIANCE

The District owns and operates the Systems and respective wastewater treatment plant (WWTP) at each of three recreation areas within the Mokelumne River watershed. The Camanche North Shore Recreation Area (CANS) is in Amador County, and the Camanche South Shore Recreation Area (CASS) is in Calaveras County. These recreation areas are on the north and south side of Camanche Reservoir. The Pardee Recreation Area (PARA) is in Amador County, on the north side of Pardee Reservoir. Due to the limited size and joint management of the Systems, the District determined that one SSMP is adequate to cover all three.

The three Systems serve campgrounds, recreational vehicle (RV) dump stations, RV hookups, laundry facilities, rental cottages, swimming pools, day use areas, boat rentals and launches, fish cleaning stations, mobile home parks, and restaurants. The contracted concessionaires manage the daily operation of the recreation areas. The mobile homes are privately owned. They are either owner occupied or leased to a tenant; however, the land underlying the mobile homes is owned by the District.

Additional information about each of the recreation areas is found below.

Camanche Area North Shore (CANS)

The CANS System consists of approximately 4.0 miles of gravity and 0.6 miles of force main sewer piping supported by 36 manholes and five lift stations. The System serves 142 mobile home and RV connections within two distinct locations: west of the marina, Mobile Home Park No. 1, and east of the marina, Mobile Home Park No. 2. In addition, the CANS System provides wastewater service for 17 rental units, duplex and

"motel" residences, a centrally located marina, administration office, and coffee shop, in addition to approximately 200 dry campsites equipped with public restrooms, showers, and laundry facilities. All collected wastewater is pumped to the CANS wastewater treatment plant through Lift Station No. 1, which is equipped with three pumps, in addition to a primary wet well and an overflow wet well.

Camanche Area South Shore (CASS)

CASS encompasses 1,744 acres of land, with approximately 140 acres developed for camping and recreation, including a marina, a mobile-home park, ranger station, general store, snack bars, a water treatment plant, and a wastewater treatment plant. The CASS System consists of approximately 5.4 miles of gravity and 0.9 miles of force main sewer piping, including laterals from 278 mobile homes and RV campground connections. The System has 22 manholes, seven lift stations, and a wastewater treatment plant.

Pardee Recreation Area (PARA)

PARA includes mobile homes, designated RV area, "dry" campsites, a marina, and a coffee shop. The wastewater treatment facility is located at the north end of the Pardee Reservoir, approximately 10 miles north of Valley Springs. The System consists of approximately 2.0 miles of gravity sewer piping that serves the 103 mobile homes and 98 RV connections. Shower and laundry facilities are available for the RV residents and mobile home occupants, with public restrooms servicing the 95 "dry" campsites, plus the marina area. Laterals from an onsite RV dump station and fish cleaning station discharge by gravity into the System. PARA's wastewater flow is lower in the winter months as the recreation area is closed from November through January.

The District's sewer collection systems are used by both permanent residents and short-term recreational users. To estimate the annual population of each recreation area, the District counts full-time residents and uses Concessionaire attendance records to determine recreational users, providing data for Transient, Non-Transient, and full time Residents. The District reports the same population served in both the WDR's Annual Report and the Annual Report due to the State Water Board's Division of Drinking Water.

Table 4 shows the estimated population (sum of permanent and short-term residents) of each recreation area for 2024 and 2025, as reported in the District's Annual Reports.

Recreation Area	2024 Population	2025 Population
Camanche North Shore (CANS)	507	205
Camanche South Shore (CASS)	350	111
Pardee Area (PARA)	254	116

Table 4 – Population of each Recreation Area, 2024 and 2025

Figure 2, below, is a map with a general overview of the reservoirs and recreation areas. Appendix 1.1 contains maps of each collection system and WWTP.

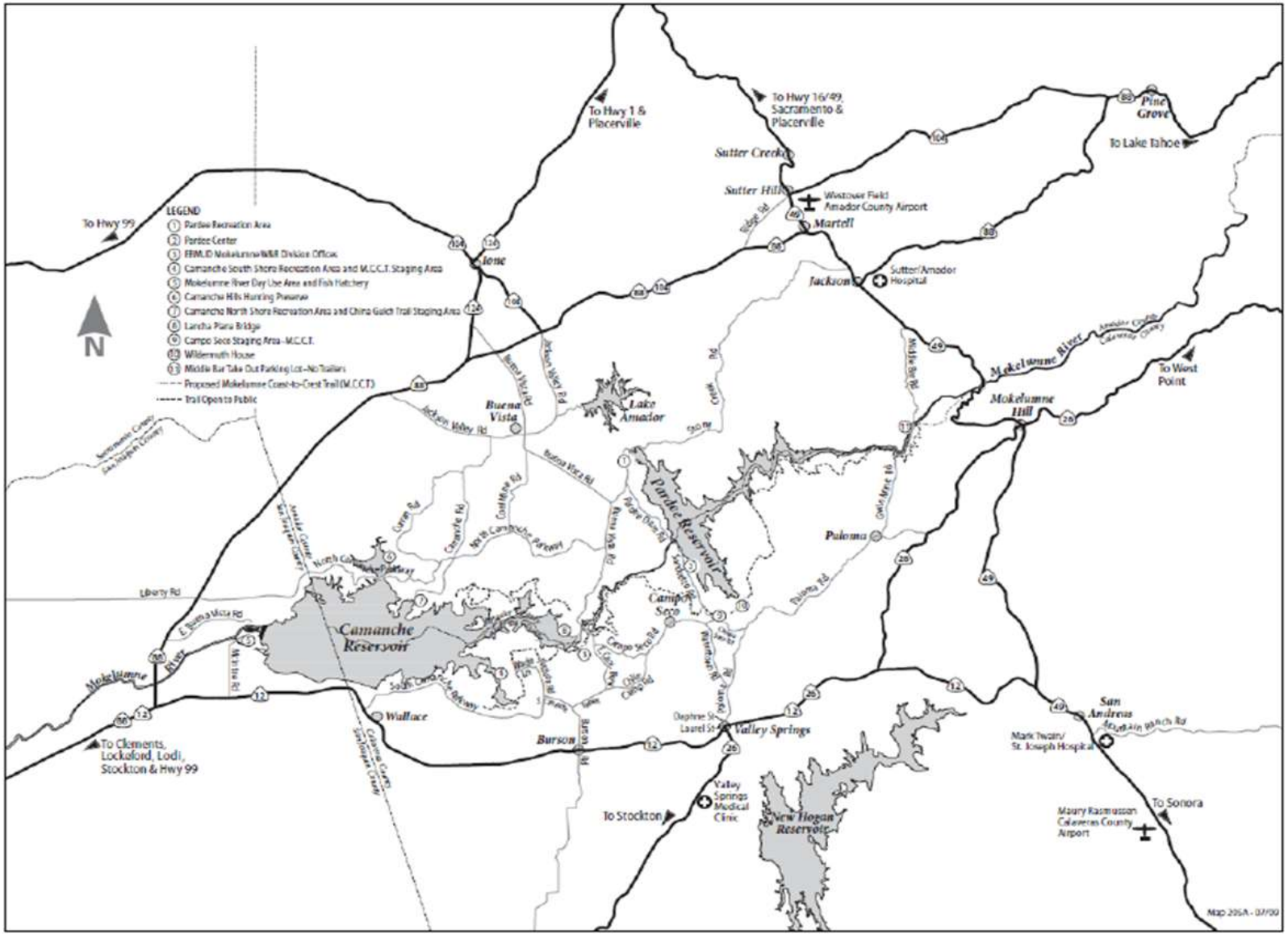


Figure 2 – Overview of Reservoirs and Recreation Areas

Sewer Element	Camanche Area North shore (CANS)	Camanche Area South Shore (CASS)	Pardee Area (PARA)
Gravity lines	4.0 miles	5.4 miles	2.0 miles
Force mains	0.6 miles	0.9 miles	none
Sewer laterals	159	342	132
Lift stations	5	7	none

Table 5 – Summary of Sewer Assets

Table 5, above, summarizes the miles of gravity flow lines, miles of force mains, number of sewer laterals, and number of lift stations for each of the three recreation areas[3]. For all three recreation areas, main sewer lines have diameters of 4-8", laterals have a diameter of 4", and force mains have diameters of 3-4".

The CANS, CASS, and PARA Systems do not include siphons or structures that divert stormwater to the Systems. There are no surface water crossings.

The District developed its own Computerized Maintenance Management System which is known as the "Asset and Infrastructure Management System" or AIM. AIM is used to track equipment inventory, plan and prioritize maintenance work, and document work which has been completed.

The CANS, CASS, and PARA Systems do not include upper and lower laterals in the traditional sense because the District owns all the land upon which the mobile homes are stationed, and campgrounds are constructed. At the mobile home parks, the homeowner is responsible for maintenance of the connection from the mobile home to the cleanout, while the District is responsible for the lateral below the cleanout. At campgrounds, the camper is responsible for their temporary hose which connects a trailer or motor home to the lateral. The District is responsible for the lateral.

The percentage of residential, commercial, and industrial service connections is shown in Table 6, below.

Use Type	Number or % of Connections
Residential	99%
Commercial/ Industrial	1%
Institutional	0%
Total	100%

Table 6 – Summary of Use Types

[3] It is noted that erroneous data was used for the previous SSMP and was carried over into the subsequent Annual Reports. The District has confirmed that the numbers in Table 4 are accurate and will be used in future Annual Reports.

The District's unique challenges come from owning and operating three separate recreation areas, each with its own collection system and WWTP. While the mobile home park residents are year-round, most seasonal users visit during the summer months and may be less familiar with proper sewer system practices than permanent residents.

The District maintains up-to-date maps of its System.

Overall, the District is in a good position to maintain its Systems.

EFFECTIVENESS

The District utilizes the following key performance indicators for measuring effectiveness of this element:

- Are asset statistics periodically reviewed and updated as necessary?
- Are omissions or errors addressed in a timely manner?
- Are system maps up to date?

IMPLEMENTATION PLAN/SCHEDULE

No.	Plan	Schedule	Responsible Party		
			MGR	ENG	SUP
1.3.1	Review District-owned asset statistics and element description; update, as necessary.	At the beginning of the audit cycle and when significant changes have been made.		X	X

RESILIENCE

Resilience is addressed in Element 1 by:

- Implementing a system for collecting and managing asset data.
- Building redundancy, so more than one staff member is trained and able to retrieve and manage the data.
- Implementing a QA/QC process to help ensure information is accurate.
- Using AIM and routinely reviewing the "Summary of SSMP Action Items" table to ensure that timely compliance with deadlines is met.

APPENDIX 1 INCLUSION:

- 1.1 Service Area and Wastewater System for each Recreation Area

Specifications 5.2 – SSMP Development and Implementation

WDR REQUIREMENTS

Specification 5.2 (page 18)

"To facilitate adequate local funding and management of its sanitary sewer system(s), the Enrollee shall develop and implement an updated Sewer System Management Plan. The scale and complexity of the Sewer System Management Plan, and specific elements of the Plan, must match the size, scale, and complexity of the Enrollee's sanitary sewer system(s). The Sewer System Management Plan must address, at minimum, the required Plan elements in Attachment D (Sewer System Management Plan – Required Elements) of this General Order. To be effective, the Sewer System Management Plan must include procedures for the management, operation, and maintenance of the sanitary sewer system(s). The procedures must: (1) incorporate the prioritization of system repairs and maintenance to proactively prevent spills, and (2) address the implementation of current standard industry practices through available equipment, technologies, and strategies."

COMPLIANCE

The District's SSMP has been updated to meet the requirements of the WDR. The SSMP addresses management, operations and maintenance procedures specific to the District's Systems. The District maintains a proactive Operations and Maintenance (O&M) Program to operate its Systems and identify defects, which are then prioritized for repair, replacement, rehabilitation, or placed on modified maintenance schedules. See Elements 4 and 8 and Specifications 5.19 of this SSMP for more detail.

The District stays current with industry standards, technology and best practices through membership in, and continuing education with, the California Water Environment Association (CWEA), by reviewing industry periodicals, networking, attending training classes, and attending industry conferences and workshops. The District evaluates emerging practices, equipment and technologies for possible implementation to enhance sewer operations.

Specifications 5.7 – Allocation of Resources

WDR REQUIREMENTS

Specification 5.7 (pg. 22)

"The Enrollee shall comply with the following requirements:

- *Establish and maintain a means to manage all necessary revenues and expenditures related to the sanitary sewer system; and*
- *Allocate the necessary resources to its sewer system management program for:*
- *Compliance with this General Order,*
- *Full implementation of its updated Sewer System Management Plan,*
- *System operation, maintenance, and repair, and*
- *Spill responses."*

COMPLIANCE

The District's operating budget for the three recreation areas consists of the resources necessary to operate and maintain the Systems and the respective wastewater treatment facilities. In general, these operations are funded by the District's ratepayers. Bonds and revenue are the main sources of funding for operation, maintenance, rehabilitation, and replacement of the Systems. Capital improvement project costs may be partially offset by revenue collected from the operation of the recreation areas and leases at the mobile home parks.

Provisions 6.1 – Enforcement Provisions

WDR REQUIREMENTS

Provisions 6.1 (pg. 27)

> *"The following enforcement provisions are based on existing federal and state regulations, laws and policies, including the federal Clean Water Act, the state Water Code and the State Water Board Enforcement Policy."*

COMPLIANCE

The District maintains a proactive stance with full implementation of its SSMP. The District is aware of the consequences for noncompliance including associated penalties for violations.

Noncompliance with requirements of this WDR or discharging sewage without enrolling in this WDR constitutes a violation of the Water Code and a potential violation of the Clean Water Act and is grounds for an enforcement action by the SWRCB or the applicable Regional Water Board. Failure to comply with the notification, monitoring, inspection, entry, reporting, and recordkeeping requirements may subject the District to administrative civil liabilities of up to $10,000 a day per violation pursuant to Water Code section 13385; up to $1,000 a day per violation pursuant to Water Code section 13268; or referral to the Attorney General for judicial civil enforcement. Discharging waste not in compliance with the requirements of this WDR or the Clean Water Act may subject the District to administrative civil liabilities up to $10,000 a day per violation and additional liability up to $10 per gallon of discharge not cleaned up after the first 1,000 gallons of discharge; up to $5,000 a day per violation pursuant to Water Code section 13350 or up to $20 per gallon of waste discharged; or referral to the Attorney General for judicial civil enforcement.

Provisions 6.3 – Sewer System Management Plan Availability

WDR REQUIREMENTS

Provisions 6.3 (pg. 31)

> *"The Enrollee's updated Sewer System Management Plan must be maintained for public inspection at the Enrollee's offices and facilities and must be available to the public through CIWQS and/or on the Enrollee's website, in accordance with section 3.8 (Sewer System Management Plan Reporting Requirements) of Attachment E1 (Notification, Monitoring, Reporting and Recordkeeping Requirements) of this General Order."*

COMPLIANCE

The District maintains a hard copy of the SSMP at its Pardee Center facility, which is available for review during regular business hours. An online copy is also maintained on the District's website (Sewers page).

2. Organization

WDR REQUIREMENTS

Attachment D-2 (page D-3)

"The Plan must identify organizational staffing responsible and integral for implementing the local Sewer System Management Plan through an organization chart or similar narrative documentation that includes:

- *The name of the Legally Responsible Official as required in section 5.1 (Designation of a Legally Responsible Official) of this General Order;*
- *The position titles, telephone numbers, and email addresses for management, administrative, and maintenance positions responsible for implementing specific Sewer System Management Plan Element;*
- *Organizational lines of authority; and*
- *Chain of communication for reporting spills from receipt of complaint or other information, including the person responsible for reporting spills to the State and Regional Water Boards and other agencies, as applicable. (For example, county health officer, county environmental health agency, and State Office of emergency Services.)"*

COMPLIANCE

The Director of the Operations and Maintenance Department, David Briggs, is the Legally Responsible Official. He has delegated the duties of the LRO to the Manager of Water Operations, Roberto Cortez, who has full responsibility for the development and implementation of the SSMP.

The following tables list (a) the SSMP management team with individual's name and respective title, and (b) the position title responsible for each Element of the SSMP.

Responsible Position Contact Information	Phone	Email
Roberto Cortez, Manager of Water Operations	(510)-287-1035	roberto.cortez@ebmud.com
Vacant, Manager of Water Supply		
Dillon Cowan, Pardee Superintendent	(209) 772-8201	dillon.cowan@ebmud.com
David McGeorge, Pardee Assistant Superintendent	(209) 772-8267	david.mcgeorge@ebmud.com
Charles Beckman, Manager Watershed and Recreation	(209) 772-8203	charles.beckman@ebmud.com
Chandra Johannesson, Manager of Environmental Compliance	(510) 287-0412	chandra.johannesson@ebmud.com

Table 7 – Responsible Position Contact Information

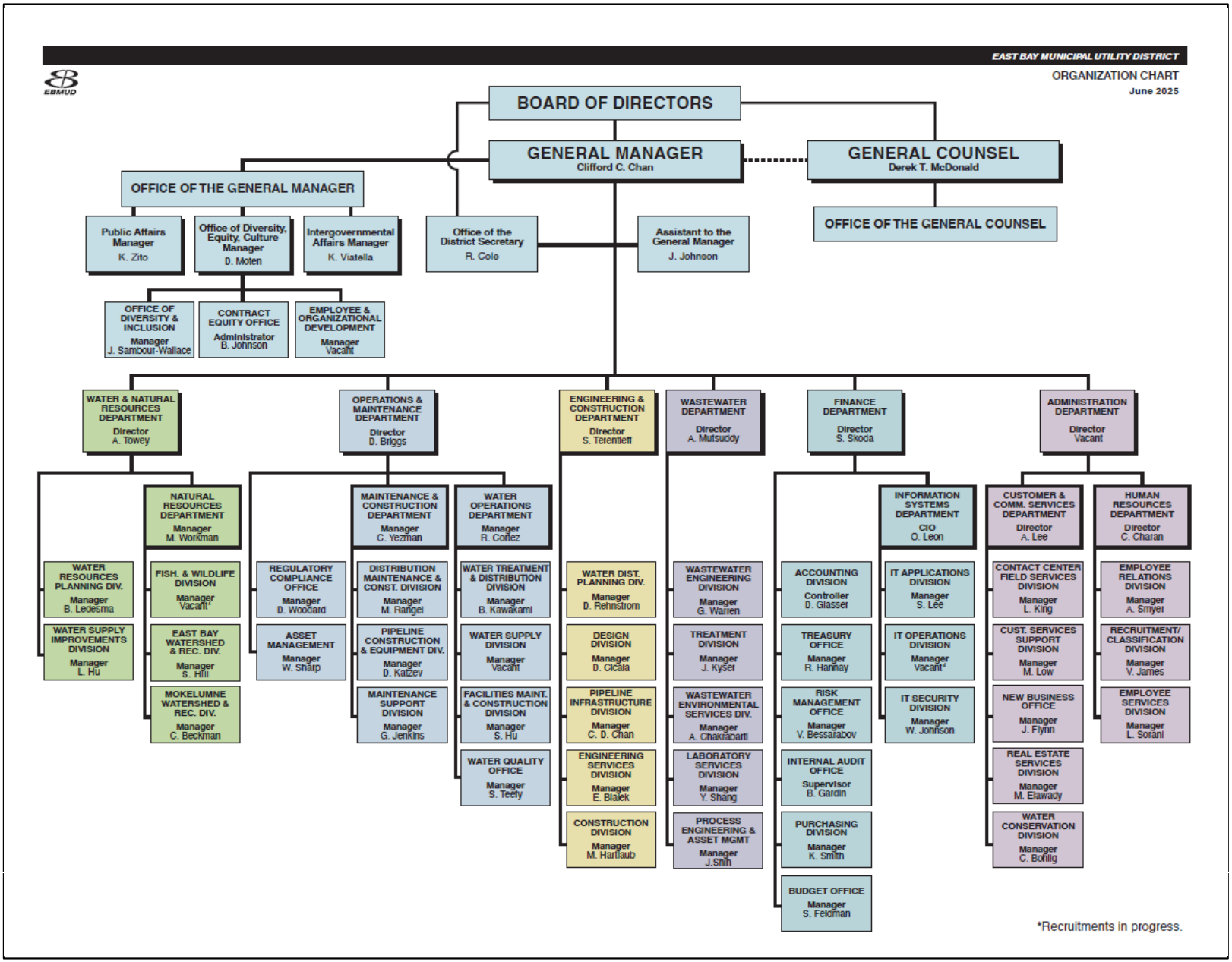
IMPLEMENTATION RESPONSIBILITIES

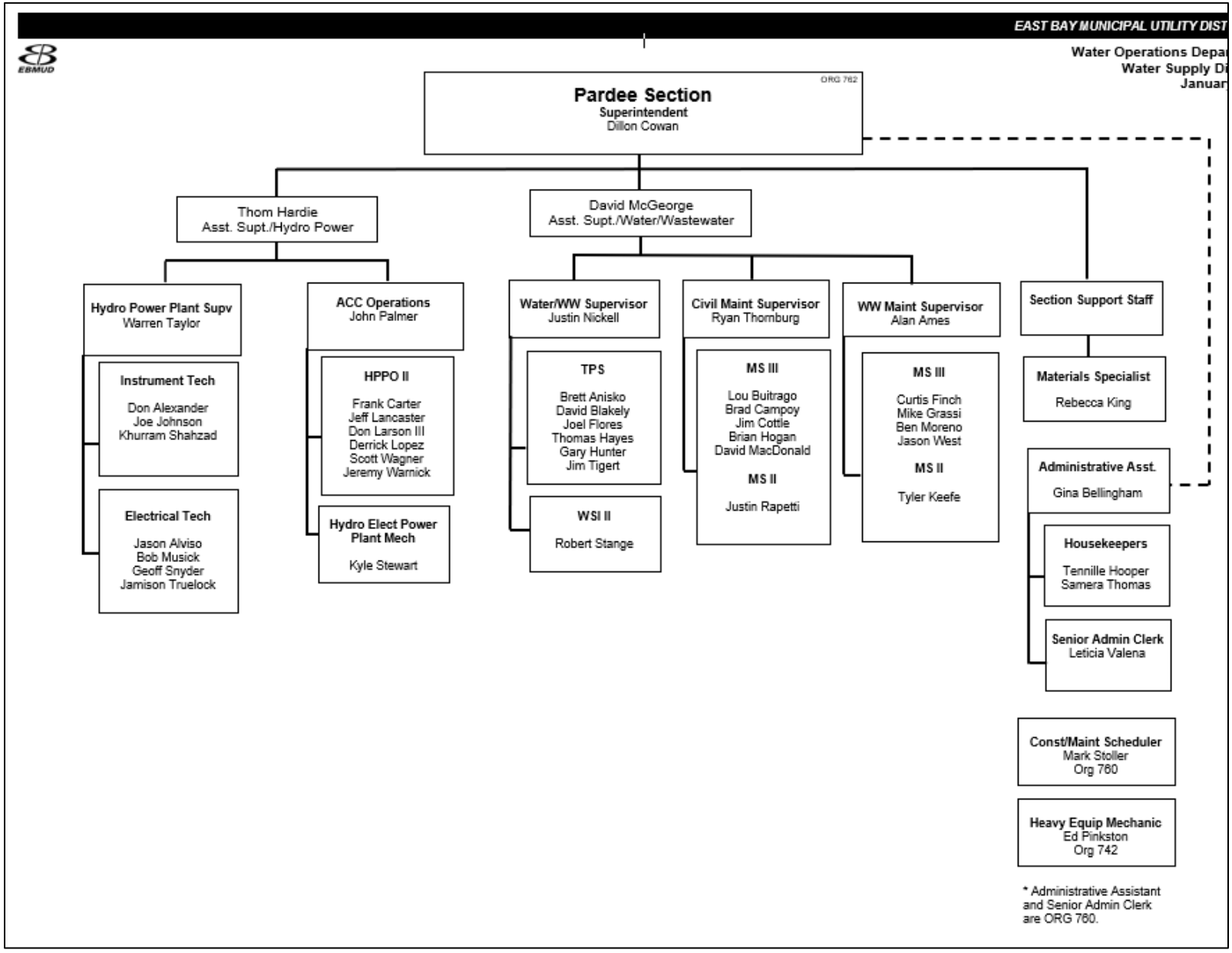
Sewer System Management Plan Elements	Responsible Position
1. SSMP Plan, Goal and Introduction	Manager of Water Operations
1.1. Regulatory Context	Manager of Water Operations
1.2. SSMP Update Schedule	Manager of Water Operations
1.3. Sewer System Asset Overview	Manager of Water Operations
2. Organization	Manager of Water Operations
3. Legal Authority	Manager of Water Operations
4. Operations and Maintenance Program	Pardee Assistant Superintendent
4.1. Updated maps of Sanitary Sewer System	Pardee Assistant Superintendent
4.2. Preventive Operation & Maintenance	Pardee Assistant Superintendent
4.3. Training	Pardee Assistant Superintendent
4.4. Equipment Inventory	Pardee Assistant Superintendent
5. Design/Performance	Senior Engineer
5.1. Updated Design Criteria & Construction Standards	Senior Engineer
5.2. Procedures and Standards	Senior Engineer
6. Spill Emergency Response Plan	Manager of Environmental Compliance
7. Sewer Pipe Blockage Program	Pardee Assistant Superintendent
8. System Eval, Capacity Assurance, Capital Imp.	Senior Engineer
8.1. System Evaluation and Condition Assessment	Senior Engineer
8.2. Capacity Assessment and Design Criteria	Senior Engineer
8.3. Prioritization of Corrective Action	Senior Engineer
8.4. Capital Improvement Plan	Senior Engineer
9. Monitoring, Measurement & Program Modifications	Pardee Assistant Superintendent
10. Internal Audits	Pardee Assistant Superintendent
11. Communication Program	Pardee Assistant Superintendent

Table 8 – Implementation Responsibilities

2.1. Organizational Chart

The following two pages depict the District's organizational layout with respect to management of the Mokelumne Watershed Systems. Figure 3 is the Organizational Chart for the entire District, while Figure 4 is the Organizational Chart for the Pardee Section.





2.2. Organizational Staffing Responsibilities

The District's organizational lines of authority and staffing, with respect to the sanitary sewer systems, are as shown below. The work groups responsible for the development, maintenance, and implementation of the SSMP report to either the Director of Operations and Maintenance Department (OMD) or the Director of Water and Natural Resources Department. Both Directors report to the General Manager. The General Manager reports to the EBMUD Board of Directors.

The Director of OMD oversees the entire Operations and Maintenance Department, including approximately 1000 employees. The Director of OMD is responsible for the safe, effective, and compliant operation of the CANS, CASS, and PARA sanitary sewer systems. The Director of OMD has delegated the duties of the LRO to the Manager of Water Supply.

The Manager of Water Operations reports to the Director of OMD. The Manager of Water Operations oversees the Water Quality Office and the following divisions: Water Supply, Water Treatment & Distribution, and Facilities Maintenance & Construction.

The Manager of Water Supply reports to the Manager of Water Operations. The Manager of Water Supply is responsible for the development and implementation of the SSMP, planning strategy, setting direction, leading staff, allocating resources, and delegating responsibility.

The Superintendent of Pardee Section reports to the Manager of Water Supply. The Superintendent of Pardee Section oversees a group of highly skilled staff and is responsible for operations and maintenance of all wastewater collection systems.

The Assistant Superintendent of Pardee Section reports to the Superintendent of Pardee. The Assistant Superintendent plans, organizes, schedules, and directs the operation and maintenance of all wastewater collection systems.

The Power, Treatment and Transmission Maintenance Supervisors report to the Assistant Superintendent of Pardee Section. The Power, Treatment and Transmission Maintenance Supervisors oversee the daily work of Maintenance Specialists, Instrument Technicians, and Electrical Technicians. Supervisors are responsible for managing work orders, setting priorities of work performed, and for completing the corrective and preventive maintenance of the wastewater collection system.

Maintenance Specialists, Instrument Technicians, and Electrical Technicians report to Power, Treatment and Transmission Maintenance Supervisors. The Maintenance Specialists, Instrument Technicians, and Electrical Technicians are responsible for completing the corrective and preventive maintenance work on the wastewater collection system as determined by work orders and/or Supervisors.

Treatment Plant Specialists report to the Water and Wastewater Supervisor. The Treatment Plant Specialists are licensed water and wastewater treatment operators. They are responsible for operating the water and wastewater treatment systems at CANS, CASS, and PARA.

Regulatory Compliance Office (RCO) staff include Environmental Compliance and Workplace Health and Safety Specialists. They report respectively to the Manager of Environmental Compliance and Manager of Workplace Health and Safety. They are responsible for managing regulatory permits, including the WDR, and ensuring the District's compliance with environmental regulations. They prepare regulatory permit applications and reports. They communicate with regulatory agencies and report events related to sanitary sewer spills.

Plant Engineering Services staff report to the Manager of Facilities Maintenance & Construction, who reports to the Manager of Water Operations. Plant Engineering Services provides engineering support for the operations and maintenance staff and manages small capital improvement projects.

Engineering and Construction staff report to the Director of Engineering and Construction. Engineering and Construction is responsible for developing a comprehensive capital improvement program, prioritizing needed improvements, and providing planning, design, and construction management services.

The Manager of Mokelumne Watershed and Recreation Division (MWRD) is responsible for the management of EBMUD's recreation areas at Pardee and Camanche Reservoirs. The Manager of MWRD supervises EBMUD's rangers. The work group enforces local ordinances, rules and regulations relating to use of recreation areas. They are also responsible for interacting and communicating with permanent residents, seasonal tenants, and visitors at CANS, CASS, and PARA.

2.3. Chain of Communication for Reporting Spills

During normal business hours, Pardee Section Supervisors may receive information regarding potential spills from District staff, concessionaires, contractors, or the public. After normal business hours, reports of potential spills are directed to either the Pardee Area Control Center (ACC) operators, or when the operators are off duty, to the Oakland Control Center (OCC) operators.

A Pardee Section Supervisor or the Pardee Standby Supervisor will evaluate the reported information and dispatch staff to the site. Upon confirmation of the spill, additional resources may be requested and further notifications made in accordance with procedures described in the Spill Emergency Response Plan (SERP; see Element 6). Spills which occur after hours (evenings and weekends) are evaluated by the Standby Supervisor who will dispatch maintenance staff. Spills are responded to in accordance with the District's SERP.

EFFECTIVENESS

The District utilizes the following key performance indicators for measuring effectiveness of this element:

- Have there been any changes requiring updates to the Organizational Chart?
- Have there been instances when a service call for a spill was not properly routed to response personnel?
- Were all spill response activities documented and forwarded to the LRO?
- Have there been any changes in assigned responsibilities for implementing the SSMP?
- Is there a process in place to ensure all contact information remains up to date?

IMPLEMENTATION PLAN/SCHEDULE

No.	Plan	Schedule	Responsible Party		
			MGR	ENG	SUP
2.1	Review names, contact information and position responsibilities. Update, as necessary.	Semi-Annually	X		X
2.2	Review Chain of Communication outcomes for all spill responses.	Each Spill Event	X		X
2.3	Review Organizational Chart for any changes. Update, as necessary.	Semi-Annually	X		X

RESILIENCE

Resilience is addressed in Element 2 by:

- Ensuring that more than one person is capable and responsible for specific duties for SSMP implementation, e.g., back-up personnel.
- Designating more than one LRO to help ensure full and continuous coverage of duties.
- Routinely testing the phone notification system to ensure calls are received and routed to appropriate personnel.

3. Legal Authority

WDR REQUIREMENTS

Attachment D-3 (page D-4)

"The Plan must include copies or an electronic link to the Enrollee's current sewer system use ordinances, service agreements and/or other legally binding procedures to demonstrate the Enrollee possesses the necessary legal authority to:

- *Prevent illicit discharges into its sanitary sewer system from inflow and infiltration (I&I); unauthorized stormwater; chemical dumping; unauthorized debris; roots; fats, oils, and grease; and trash, including rags and other debris that may cause blockages;*
- *Collaborate with storm sewer agencies to coordinate emergency spill responses, ensure access to storm sewer systems during spill events, and prevent unintentional cross connections of sanitary sewer infrastructure to storm sewer infrastructure;*
- *Require that sewer system components and connections be properly designed and constructed;*
- *Ensure access for maintenance, inspection, and/or repairs for portions of the service lateral owned and/or operated by the Enrollee;*
- *Enforce any violation of its sewer ordinances, service agreements, or other legally binding procedures; and*
- *Obtain easement accessibility agreements for locations requiring sewer system operations and maintenance, as applicable. "*

COMPLIANCE

The above items are addressed in order below:

Authority to prevent illicit discharges into the District's wastewater collection systems.

The District's "Watershed and Recreation Rules and Regulations" (Resolution No. 35128-18) contains regulations for the recreation areas. Sections 10.22 and 10.23 apply to the sewer collection systems and are quoted below.

10.22 It shall be unlawful for any person: To discharge waste into the sewerage facilities, which causes, threatens to cause or is capable of causing, either alone or by interaction with other substances:

a). Interference with the wastewater treatment process, or overloading of the sewerage facilities, or excessive collection or treatment costs, or use of a disproportionate share of the capacity of the sewerage facilities;

b). Interference with any wastewater reclamation process which does or may operate in conjunction with the sewerage facilities, or overloading, or a breakdown of such reclamation process, or excessive reclamation costs, or any product of the treatment process which renders such reclamation process impracticable or not feasible under normal operating conditions;

c). A detrimental environmental impact, or a nuisance wherever located, or a condition unacceptable to any public agency having regulatory jurisdiction over operation of the sewerage facilities;

d). Discoloration, or any other adverse condition in the quality of the effluent from the sewerage facilities such that receiving water quality requirements established by any statute, rule, regulation, ordinance, or permit condition cannot be met by the District;

e). Conditions at or near the sewerage facilities, or any portion thereof, which cause or may cause the District to be in violation of the requirements of the law;

f). Pollutants introduced into the sewerage facilities that pass through or interfere with the operation of the sewerage facilities;

g). Any substance which will cause the sewerage facilities to violate its National Pollutant Discharge Elimination System permit and/or State Waste Discharge Requirements or the receiving water quality standards.

10.23 It shall be unlawful for any person to fail to immediately report to an EBMUD or concession representative, the discharge to the environment of sewage from an RV, trailer, camper, other vehicle or structure.

The District has adopted similar regulations for the PARA RV Park Site, CASS Long-Term RV Park, CASS Long-Term Mobile Home Park, and CANS Long-Term Mobile Home Park. Appendix 3.1 contains excerpts from these regulations that pertain to illicit discharges to the sewer system.

The District's pre-planned collaboration and coordination with storm drain agencies.

The District owns the storm drains within the recreation areas and therefore there is no need to coordinate with outside storm drain agencies.

Require that sewer system components and connections be properly designed and constructed.

The District's recreational facilities are generally built out, and the District does not anticipate adding new facilities. If sewer system components must be replaced, then District staff and/or contractors will use the documents contained within the District's Wastewater Design Section library of standards and guidelines, as described in Section 5 of the District's East Bay SSMP, found on the Sewers page of the District's website.

Ensure access for maintenance, inspection, and/or repairs for portions of the service lateral owned and/or operated by the Enrollee.

The District's Systems does not include upper and lower service laterals in the traditional sense because the District owns the land upon which the mobile homes and campgrounds are established. At the mobile home parks, the homeowner is responsible for maintenance of the connection from the mobile home to the cleanout, while the District is responsible for the lateral below the cleanout. At campgrounds, the camper is responsible for the temporary hose which connects a trailer or motor home to the lateral. The District is responsible for the lateral. In summary, the District can access all portions of the service laterals.

Enforce any violation of its sewer ordinances, service agreements, or other legally binding procedures.

The District relies on its concessionaire to enforce the sewer ordinance found in the "Watershed and Recreation Rules and Regulations" (Resolution No. 35128-18). With respect to enforcement, the Resolution states:

1.5 Pursuant to Section 12821 (b) of the Public Utilities Code, any violation of the following Regulations is an infraction and punishable by (1) a fine not exceeding $50 for the first violation; (2) a fine not

exceeding $100 for a second violation of the same regulation within one year; and (3) a fine not exceeding $250 for each additional violation of the same regulation within one year.

1.6 The District or its authorized representative may withdraw or revoke the privilege of access to District watershed lands and/or waterways or the use of any facility for reasons of safety, security or environmental protection, or from any person violating any provision of these Regulations or any other statute. Privileges may also be revoked permanently or on a long-term basis depending on the severity of the offense in accordance with the Access Revocation Procedure.

Obtain easement accessibility agreements for locations requiring sewer system operations and maintenance, as applicable.

The District owns the land within the recreation areas and therefore there are no easements.

EFFECTIVENESS

The District utilizes the following key performance indicators for measuring effectiveness of this element:

- Are the District ordinances and standards adequate for fulfilling the SSMP legal requirements?
- Does the District have a process in place for periodic review and evaluation of ordinances?
- Have there been instances when the code or ordinance did not address a need or circumstance?

IMPLEMENTATION PLAN/SCHEDULE

No.	Plan	Schedule	Responsible Party		
			MGR	ENG	SUP
3.1	Review Ordinance(s) to confirm all documents provide necessary required legal authority.	Once per 6-year SSMP Update Cycle	X	X	
3.2	Monitor and document occasions when Ordinance(s) failed to address issues as intended.	Continuously	X	X	X

RESILIENCE

Resilience is addressed in Element 3 by:

- Keeping abreast of industry trends and local ordinances that may affect operations.

APPENDIX 3 INCLUSIONS

- 3.1 Legal Citations:
  - Resolution No. 35128-18, “Amending Rules and Regulations Relating to Public Use of East Bay Municipal Utility District Watershed, Reservoirs and Recreation Areas
  - Pardee RV Park Site Use Conditions
  - Camanche South Shore Long-Term Recreational Vehicle Park Rules and Regulations
  - Rules and Regulations for Camanche South Shore Long-Term Mobile Home Park
  - Rules and Regulations for Camanche North Shore Long-Term Mobile Home Park

4. Operations and Maintenance Program

WDR REQUIREMENTS

Attachment D-4 (page D-4)

"The Plan must include the items listed below that are appropriate and applicable to the Enrollee's system."

4.1. Updated Map of Sewer System

WDR REQUIREMENTS

Attachment D-4.1 (page D-4)

"An up-to-date map(s) of the sanitary sewer system, and procedures for maintaining and providing State and Regional Water Board staff access to the map(s). The map(s) must show gravity line segments and manholes, pumping facilities, pressure pipes and valves, and applicable stormwater conveyance facilities within the sewer system service area boundaries."

COMPLIANCE

The District used an online GIS database to create maps for its three Systems. Each map depicts the respective System's manholes, pipelines, pump stations, and wastewater treatment facility. The GIS database was built from the following resources:

- Global Positioning System (GPS) data – The GPS locations of the manholes were collected by District staff.
- As-built drawings – The rim and invert elevations of the manholes were added from as-built drawings and field verifications.
- Aerial photos – Include depictions of roads, wastewater service areas and property boundaries, general overview of facilities, locations of lift stations, sizes and types of pipes, force mains, manholes, cleanouts, valves, and other relevant structures.

Access to the database is through the District's established AIM (Asset Information and Management) System. The District rarely needs to edit maps and there are no plans to expand the collection system. If a map does need editing, notes will be made on a pdf and/or the information will be sent to the District's Information Services Department. Recently, the District hired a locating contractor to update the maps of all its underground utilities, including electrical, water, and wastewater for all three Systems. These maps were completed in 2021 for PARA, 2022 for CASS, and 2024 for CANS.

Maps are available to Water Board staff upon request.

EFFECTIVENESS

The District utilizes the following key performance indicators for measuring effectiveness of this element:

- Were all map updates completed in a timely manner?
- Are all staff trained in the procedure for providing map update information?
- Are newly installed sewer assets incorporated into the maps?
- Are there terrain features or assets that should be incorporated in future map updates (e.g. exposed pipe, siphons, ARVs, surface water, etc.)

IMPLEMENTATION PLAN/SCHEDULE

No	Plan	Schedule	Responsible Party		
			MGR	ENG	SUP
4.1.1	Review map update procedures with all affected staff.	Annually	X	X	X
4.1.2	Review/ensure all newly installed facilities have been updated and included in the maps.	Annually	X	X	X

4.2. Preventive Operation and Maintenance Activities

WDR REQUIREMENTS

Attachment D-4.2 (pages D-4/D-5)

"A scheduling system and a data collection system for preventive operation and maintenance activities conducted by staff and contractors. The scheduling system must include:

- *Inspection and maintenance activities;*
- *Higher-frequency inspections and maintenance of known problem areas, including areas with tree root problems;*
- *Regular visual and closed-circuit television (CCTV) inspections of manholes and sewer pipes.*

The data collection system must document data from system inspection and maintenance activities, including system areas/components prone to root-intrusion potentially resulting in system backup and/or failure."

COMPLIANCE

The District's online AIM System is used by Pardee Section staff to:

- Request maintenance services and manage both planned and unplanned maintenance activities.
- Track equipment inventory and maintenance.
- Plan and prioritize maintenance work.
- Maintain timely and accurate activity records, readily accessible for appropriate analysis and reporting.

All identified maintenance and job plans are documented and stored in AIM. Its asset hierarchy includes the three Systems and respective wastewater treatment plants. Components specific to the Systems in AIM include:

- Sanitary sewer system mains and laterals
- Sewer lift stations
- Manholes
- Cleanouts
- Other utilities that impact or may be impacted by the operation and maintenance of the District's sanitary sewer system.

AIM generates work orders for lift stations, manholes, and grease trap inspections, as well as line cleaning and CCTV'ing.

EFFECTIVENESS

The District utilizes the following key performance indicators for measuring effectiveness of this element:

- Are the District's maintenance, operations, and engineering work orders periodically audited for accuracy and completeness?
- Does the District monitor "open," "overdue," or "not yet completed" work orders to ensure completion of tasks?
- Are inspection and maintenance activities reducing the number and volume of spills?
- Is maintenance work being completed as scheduled?

IMPLEMENTATION PLAN/SCHEDULE

No.	Plan	Schedule	Responsible Party		
			MGR	ENG	SUP
4.2.1	Review work completed to date to ensure critical work is being completed.	Semi-annually			X
4.2.2	Review scheduled Preventative Maintenance to ensure the prescribed schedule remains appropriate.	Annually			X

4.3. Training

WDR REQUIREMENTS

Attachment D-4.3 (page D-5)

"In-house and external training provided on a regular basis for sanitary sewer system operations and maintenance staff and contractors. The training must cover:

- *The requirements of this General Order;*
- *The Enrollee's Spill Emergency Response Plan procedures and practice drills;*
- *Skilled estimation of spill volume for field operators; and*
- *Electronic CIWQS reporting procedures for staff submitting data."*

COMPLIANCE

Spill Response Training. All identified Pardee Section personnel receive initial training, followed by annual refresher training in proper spill response procedures. The training includes practice drills, volume estimations, and CIWQS reporting. In addition to assigned field response and event responsibilities, these employees are trained to be up to date on new and emerging industry technologies, new and upgraded local facilities, and new and revised regulatory requirements.

Contractor Training. Contractors are not typically used for routine maintenance and operation of the sanitary sewer systems. When contractors are retained for specific projects, they are required to submit appropriate training and qualification records which are then verified by the District.

Environmental Compliance Training. The Environmental Compliance Section (ECS) conducts annual environmental compliance refresher training to ensure that the Pardee Section operation and maintenance staff are current on environmental issues, including guidelines on proper emergency response and reporting procedures for sanitary sewer spills. Additional systems training for Pardee staff is conducted by Supervisors and other relevant Pardee subject matter experts through on-the-job training. Training records are maintained by the work groups conducting the training as well as by the Pardee Section.

Maintenance Specialist Training. The Wastewater Crew consists of a supervisor and five maintenance specialists. The District retains dedicated multi-skilled maintenance staff, through providing ongoing skill-based and site-specific training programs. Prior to journey-level employment, an individual must meet basic-level job classification requirements. A probationary employment period is used to assess skill and competency levels. Training is provided through several platforms, including on-the-job training, independent study, meetings, classroom lectures, vendor presentations, and orientations on new equipment/facility.

Operations Training. The Systems are operated and maintained by the Pardee Wastewater Crew. The Wastewater Crew works together with the Pardee Water Quality Crew, which operates the wastewater treatment plants at CANS, CASS, and PARA. The two workgroups receive routine Systems training, in addition to the general training detailed above.

EFFECTIVENESS

The District utilizes the following key performance indicators for measuring effectiveness of this element:

- Has all training been completed as scheduled?
- Have records of training and attendance been documented and maintained?
- Have all staff demonstrated ability and knowledge after each training event?
- Have contractors received, at a minimum, direction for reporting and responding to spills?

IMPLEMENTATION PLAN/SCHEDULE

No.	Plan	Schedule	Responsible Party		
			MGR	ENG	SUP
4.3.1	Review training documentation to ensure all staff have received required training.	Annually	X		X
4.3.2	Review agreements with contractors and/or pre-job meeting minutes to ensure contract personnel have received instruction for responding to sewage spills.	Each Contract	X	X	
4.3.3	Conduct refresher training on the SERP, including flow measurement.	Annually			X

4.4. Equipment Inventory

WDR REQUIREMENTS

Attachment D-4.4 (page D-5)

> *"An inventory of sewer system equipment, including the identification of critical replacement and spare parts."*

COMPLIANCE

The District owns and maintains a limited supply of emergency response equipment such as pumps, generators, and piping. In addition, the District maintains contracts with local vendors to provide emergency equipment to supplement the inventory on an as-needed basis.

The District maintains a spare parts inventory for its Systems, including lift stations. These parts are selected based on the manufacturer' recommendations and experience with identified parts that are likely to cause a failure, i.e. critical parts. The spare parts inventory records are kept in the Pardee Wastewater Supervisor's Office.

The spare parts inventory includes:

- Spare Pump -1 ea 230/460 volt 14 hp ABS LS #3 CASS
- Spare Pump -1 ea 208/230/430 volt 5 hp XGVHSONZ (Multi Tap)
- Spare Pump -2 ea 230 volt 5 hp SGV5032L
- Spare Pump - 2 ea 480 volt 3 hp SGV3042L
- Spare Pump - 1ea 460 volt 14.1 hp XFP/08
- Aerator Motors – 3 ea multi voltage taps 3 hp 1 each – 5 hp 2 each
- Transfer Pump – 1 ea 15 hp for PAR ponds
- Lower end repair kit for aerators 2 ea
- Moyno pump- repair kits. PPH
- 30-40 ABS 4 inch Fittings.
- Sewer Balloons 8 various sizes
- 2 ea lift station shut off valves
- 2 plastic inline check valves for Lift stations.
- 4 ea 65 gallon spill kit located at all Rec site FP
- 10 ea Bioesque 1 gallon jugs for disinfection
- 8 ea float switches
- 1 ea Siemens Level control
- Assorted electrical relays and Starters.
- Emergency generator batter chargers 3 ea.
- Various Nuts and Bolts different sizes
- 3 Cutter kits – Truck #03249 & 03081 x2
- 8 units of ROOTX root control
- 60 LF of 4", 6" & 8" SDR-35 with 6 repair couplers per line size

EFFECTIVENESS

The District utilizes the following key performance indicators for measuring effectiveness of this element:

- Have inventory lists been audited as scheduled?
- Have any inventory deficiencies or omissions been discovered and rectified?
- Has the District experienced any equipment failure that inhibited a spill response?

IMPLEMENTATION PLAN/SCHEDULE

No.	Plan	Schedule	Responsible Party		
			MGR	ENG	SUP
4.4.1	Audit inventory lists to ensure stock is adequate.	Annually			X
4.4.2	Check with vendors to ensure lead times for critical parts are as expected.	Annually			X
4.4.3	Ensure contracts with emergency support services are current.	Annually	X		X

RESILIENCE

Resilience is addressed in Element 4 by:

- Developing an SOP for updating maps when discrepancies or omissions are discovered.
- Developing and using forms (hard copy and/or electronic) for data collection to ensure all pertinent information is consistently collected.
- Periodically evaluating inspection cycle intervals to ensure they are optimized.
- Requiring staff to demonstrate ability and/or knowledge for all training activities.
- Monitoring equipment and critical spare parts usage and trends.
- Performing periodic audits of the vehicle and equipment inventory list.

APPENDIX 4 INCLUSIONS:

- 4.1 Sewer Cleanout and Lower Lateral Inspection Form
- 4.2 Manhole Inspection Form
- 4.3 Lift Station Maintenance Checklist

Specifications 5.19 – Operations and Maintenance

WDR REQUIREMENTS

Specifications 5.19 (page 27)

> *"To prevent discharges to the environment, the Enrollee shall maintain in good working order, and operate as designed, any facility or treatment and control system designed to contain sewage and convey it to a treatment plant."*

COMPLIANCE

The District has an established routine sewer main and lateral cleaning program to preserve wastewater equipment and facilities from failure and deterioration that could lead to System spills. The Pardee Wastewater Maintenance staff performs the inspections, cleaning, and other preventative maintenance activities for all wastewater collection, lift stations, and treatment systems. The program's intent is to complete all aspects of the inspection and cleaning for each System on a three-year cycle.

Condition assessment inspections may be conducted if routine and non-routine inspections and testing show accumulation of debris and/or other items of concern in the sewer main line(s). Final assessments of completed capital improvement projects may require smoke testing, video inspections, leak check of manholes, root treatment, and/or inflow assessments.

The Pardee Wastewater Maintenance staff have the expertise and equipment available to conduct all required activities, including CCTV inspection, hydro-jetting, mechanical rodding, vacuuming, root treatment and removal, and flushing.

Gravity Sewer Cleaning, Manhole Maintenance, and CCTV Inspection

The District strives to conduct proactive maintenance on each of its System on a triannual basis. The activities include cleaning gravity sewer lines, inspecting manholes, and conducting CCTV inspections[4]. The intent is for each recreation area to be cleaned on a three-year cycle.

Cleaning of sewers and lower laterals is documented using the "Sewer Cleanout and Lower Lateral Inspection" form, which is included in Appendix 4.1. The completed form is scanned into a digital folder, with the hard copy readily available at Pardee Center. Defects are noted on the form but are not formally rated. Defects are corrected in a timely manner, and in the meantime the pipes may need to be cleaned more frequently.

Manholes are inspected while lines are cleaned and results are recorded on the established "Manhole Inspection" form, which is included in Appendix 4.2. CCTV inspections are completed after a line is cleaned.

Hot Spots

The District maintains a list of identified hot spots, which are rectified by staff in a timely manner. The current hot spot list is below but will change over time.

[4] It is noted that the 2023 and 2024 Annual Reports show that this schedule was not met.

- Para WW- Service Lateral, PR-Front Gate, PRF2 (service lateral from Café to MH #PR000014ND)
- CASS WW- Service Lateral, CS-Mobile Home, Space #59 (roots)
- CANS Blue Oaks LS #2 to MH #CN02003ND (sag in line)
- CASS MHP Mainline Ponds to MH # CS000054 (flat line)
- CASS Monument campground MH#CS04021ND to Site #1 (multiple sags in line)
- CANS Cottage laterals (roots-sags)
- CANS LS #1 to manhole CN00301ND (sags)
- CANS LS #1 to manhole CN02102LK (flat line)
- PARA Marina mainline PR90081MH to PR00008MH (three sags in line)
- CASS LS #1 to MH CS11002 (sag in line)
- CASS LS #2 to restroom #5 (flat line)

Lift Stations

The District's goal is to inspect lift stations on a monthly basis, with cleanings on a quarterly basis by a contractor. Lift inspection results are recorded on an established "Lift Station Maintenance Checklist" form, which is included in Appendix 4.3.

Smart Covers

The District has determined that utilizing Smart Covers on its manholes is unnecessary for its Systems.

Force Mains

Force mains are cleaned on an as-needed basis.

Root Foaming

Roots are generally not an issue within the System.

Sewer Laterals

The District strives to inspect laterals on the same three-year cycle as the gravity lines. Laterals are inspected from the cleanout to the main using a push camera.

5. Design and Performance Provisions

5.1. Updated Design Criteria and Construction Standards and Specifications

WDR REQUIREMENTS

Attachment D-5.1 (page. D-5)

> *"Updated design criteria, and construction standards and specifications, for the construction, installation, repair, and rehabilitation of existing and proposed system infrastructure components, including but not limited to pipelines, pump stations, and other system appurtenances. If existing design criteria and construction standards are deficient to address the necessary component-specific hydraulic capacity as specified in section 8 (System Evaluation, Capacity Assurance and Capital Improvements) of this Attachment, the procedures must include component-specific evaluation of the design criteria."*

COMPLIANCE

The District's Design Section maintains a library of standards and guidelines for the design, construction, testing, and inspection process of its wastewater facilities. These standards and guidelines, applicable to new installations and rehabilitation of existing facilities, are regularly implemented for District wastewater projects. The library for standards and guidelines includes the following documents.

- Industrywide Standard Codes, Specifications and Practices
- Design Criteria
- Standard Drawings and Typical Details
- Data on Collection System Rehabilitation Methods
- Master Technical Specifications Division 33 – Utilities
- Construction Control and Procedure Requirements
- Master Specifications Division 01 – General Requirements
- Inspection and Testing Standards
- Contract Documents for EBMUD's existing wastewater facilities.

Electronic copies are available through the District's 2025 East Bay SSMP, on the District's public website at East Bay MUD/sewers.

EFFECTIVENESS

The District utilizes the following key performance indicators for measuring effectiveness of this element:

- Are the plan checking QA/QC processes helping to ensure adherence to the standards?

IMPLEMENTATION PLAN/SCHEDULE

No.	Plan	Schedule	Responsible Party		
			MGR	ENG	SUP
5.1.1	Ensure all project plans are approved in accordance with the District's Standard Details and Specifications.	Each Project		X	

5.2. Procedures and Standards

WDR REQUIREMENTS

Attachment D-5.2 (page D-5)

"Procedures, and standards for the inspection and testing of newly constructed, newly installed, repaired, and rehabilitated system pipelines, pumps, and other equipment and appurtenances."

COMPLIANCE

Procedures and standards for the inspection and testing of newly constructed, newly installed, repaired, and rehabilitated system pipelines, pumps, and other equipment are found under the District's "Specification Section 01 45 00 – Quality Control" located at:

https://eastbaymud.sharepoint.com/:f:/r/sites/SpecsEngSupportSite/MasterSpecs/Masterspecs/Division 01 - General Requirements?csf=1&web=1&e=BSuhSS.

The District's inspection staff are responsible for providing lead and/or quality assurance inspections of construction projects executed by contractors, to ensure compliance with the contract plans and specifications, as well as all applicable codes, standards and safety requirements. Duties of inspection staff include, but are not limited to:

- Review of plans and specifications for constructability
- Perform daily inspections of project construction.
- Ensure compliance with the plans and specifications by the construction contractor regarding construction methods, quality of materials, workmanship, related codes, noted standards and safety requirements.
- Ensure overall project quality and contract compliance.
- Perform some special inspections such as mechanical systems, medium voltage and general electrical systems, process controls, structural steel, welding, special coatings, and complex structural concrete.
- Coordinate construction-related outages with Operations and Maintenance staff.
- Confer with Contractor noting deficient work and ensure corrective measures are completed.
- Prepare inspection reports and daily logs.
- Keep detailed records of construction progress, changed conditions, and as-built drawings.

Special inspections for items such as compaction testing, batching of concrete cylinders, rebar dowel/thread anchor pull testing, concrete resurfacing pull testing, coatings pull testing, welding dye penetrant testing, etc., are performed by independent special inspectors, as required by the California Building Code.

EFFECTIVENESS

The District utilizes the following key performance indicators for measuring effectiveness of this element:

- Were any design or installation deficiencies found during warranty inspections?
- Are deviations from standard procedures and/or specs, testing, etc., justified and documented?
- Does the District stay abreast of industry design standards and technical advances in the industry?

IMPLEMENTATION PLAN/SCHEDULE

No.	Plan	Schedule	Responsible Party		
			MGR	ENG	SUP
5.2.1	Verify inspection procedures are adequate and consistent with current standards of practice	Each Project		x	
5.2.2	Verify design standards and hydraulic model previously completed are adequate and consistent with current standards of practice.	Prior to Each Project		X	

RESILIENCE

Resilience is addressed in Element 5 by:

- Staying abreast of industry trends and standards.
- Performing warranty inspections of newly installed or repaired assets to evaluate design and installation practices.
- Evaluating as-built changes for trends and areas for design and performance improvements.

APPENDIX 5 INCLUSIONS:

- None

6. Spill Emergency Response Plan

WDR REQUIREMENTS

Attachment D-6 (page D-6)

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

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

COMPLIANCE

The District updated its Spill Emergency Response Plan (SERP) in January 2025 to incorporate the requirements included in the WDR. The Introduction states, in part, "The Spill Plan identifies measures to protect public health and the environment through its established guidelines and procedures for managing sanitary sewer system spills that may occur within the Camanche and Pardee Recreation Areas (referred to henceforth as Pardee Area). The Spill Plan, in addition to routine training, allows Pardee staff to implement an appropriate, sound response for sewage spills, including regulatory notifications, to ensure compliance with the Order's requirements and protection of public health. The Spill Plan is reviewed annually to assess its effectiveness and updated accordingly".

The District's SERP is found as Appendix 6.1.

EFFECTIVENESS

The District utilizes the following key performance indicators for measuring effectiveness of this element:

- Have staff's spill response efforts helped to prevent the discharge of sewage to surface waters?
- Do post-spill assessments indicate staff are following the procedures outlined in the SERP?
- Is SERP training effective?
- Are trainees demonstrating adequate knowledge and abilities?

IMPLEMENTATION PLAN/SCHEDULE

No.	Plan	Schedule	Responsible Party		
			MGR	ENG	SUP
6.1	Conduct SERP training including practice drills.	Annually	X		X
6.2	Review Post Spill Assessments to ensure adherence with the SERP and to identify any trends that should be addressed.	Annually	X		X

RESILIENCE

Resilience is addressed in Element 6 by:

- Training multiple staff to respond to spill events.
- Conducting post-spill assessments to evaluate staff's adherence to the SERP and to identify areas for improvement.
- Using established data collection forms to direct staff to collect all the required data to be submitted to CIWQS and guide staff to conduct a proper spill event response.
- Using identified spill volume estimation methods to account for different circumstances.

APPENDIX 6 INCLUSIONS:

- 6.1 January 2025 Spill Emergency Response Plan

7. Sewer Pipe Blockage Control Program

WDR REQUIREMENTS

Attachment D-7 (page D-7)

"The Sewer System Management Plan must include procedures for the evaluation of the Enrollee's service area to determine whether a sewer pipe blockage control program is needed to control fats, oils, grease, rags and debris. If the Enrollee determines that a program is not needed, the Enrollee shall provide justification in its Plan for why a program is not needed.

The procedures must include, at minimum:

- *An implementation plan and schedule for a public education and outreach program that promotes proper disposal of pipe-blocking substances;*
- *A plan and schedule for the disposal of pipe-blocking substances generated within the sanitary sewer system service area. This may include a list of acceptable disposal facilities and/or additional facilities needed to adequately dispose of substances generated within a sanitary sewer system service area;*
- *The legal authority to prohibit discharges to the system and identify measures to prevent spills and blockages.*
- *Requirements to install grease removal devices (such as traps or interceptors), design standards for the removal devices, maintenance requirements, best management practices requirements, recordkeeping and reporting requirements;*
- *Authority to inspect grease producing facilities, enforcement authorities, and whether the Enrollee has sufficient staff to inspect and enforce the fats, oils, and grease ordinance;*
- *An identification of sanitary sewer system sections subject to fats, oils, and grease blockages and establishment of a cleaning schedule for each section; and*
- *Implementation of source control measures for all sources of fats, oils, and grease reaching the sanitary sewer system for each section identified above."*

COMPLIANCE

The WDR's requirements listed above are addressed as follows:

Public Outreach

The District's Fats, Oil, and Grease (FOG) Control Program includes public education and outreach on proper handling and disposal of FOG. Sewer use concerns and issues are discussed at routine meetings between the District and Camanche Regional Park Advisory Board members, as necessary. Outreach material include: a plastic grease scraper to remove grease from cooking utensils, and two informative brochures, one on proper handling and disposal of FOG, with the second on general best management practices on how to protect the home from sewage backups and overflows. The outreach material is placed in a door hangar, which is then distributed to homeowners through the concessionaires. In addition, the District has posted signage at the campground restrooms and RV dump stations, describing what can be disposed of in the sewer system. Example public outreach material is found in Appendix 7.1.

Disposal

FOG, generated by the Food Service Establishments (FSEs) at each of the recreation areas, is collected in grease interceptors or grease traps, which are maintained by the FSEs. The accumulated FOG is pumped out by a licensed hauler (typically Sweet Pea) hired by the District and taken to either Forward Landfill or Sierra Septic Services. The District's sewer maintenance crew removes observed FOG accumulation in the collection system during routine maintenance activities. This grease is disposed of on an as-needed basis at one of the District's WWTPs.

Legal authority to prohibit discharges.

As described in Element 3, Legal Authority, the District's "Watershed and Recreation Rules and Regulations" (Resolution No. 35128-18) limits the discharge of pollutants which could adversely affect a sewer collection system or a wastewater treatment plant.

Requirement to install grease interceptors, design standards, etc.

The District owns the land and facilities within the recreation areas. Although the operation of the recreation areas is leased to a concessionaire, the District retains the right to determine whether a grease trap or interceptor needs to be installed in an FSE. The District has not required a grease interceptor at any of the three Systems in many years and doesn't envision the need to do so in the future. However, if a grease interceptor were required, the District would refer to the East Bay SSMP for guidance.

Authority to inspect and enforce.

The District, through its concessionaire, can take enforcement action against users and occupants identified as the source, or contributing source, of a FOG obstruction. Enforcement response may range from issuance of a Notice of Violation to termination of sewerage service for egregious violators.

FOG-related problem areas.

Hotspots are prioritized for sewer lateral system inspections to identify the inflow source(s) and potential blockage points and/or causes, e.g. FOG, roots, debris, rocks, solid materials, etc. Accelerated maintenance schedules are implemented as necessary. The current hot spot list is found in Element 4.

Source control measures.

Wastewater discharges from residential mobile home park sites, RV hook-up connections, common area use sites, and the recreation area food service facilities are potential sources for grease-related blockages in the sanitary sewer systems. Source control measures include appropriate level of inspections and maintenance upstream of identified sanitary sewer hot spot areas of blockages. Routine maintenance is performed on grease traps and interceptors at the concessionaire's food service locations.

EFFECTIVENESS

The District utilizes the following key performance indicators for measuring effectiveness of this element:

- Have there been any blockages and/or spills from any identified problem area?
- Is the District receiving feedback on public outreach efforts?
- Are the debris and other sewage solids collected during cleaning activities being disposed of appropriately?
- Have there been spills due to excessive FOG, roots, or non-dispersible wipes discovered in the sewer system during the audit period?
- Are there repeat offenders?
- Are enforcement trends decreasing?

IMPLEMENTATION PLAN/SCHEDULE

No	Plan	Schedule	Responsible Party		
			MGR	ENG	SUP
7.1	Review/evaluate enforcement and inspection findings and implement changes as necessary.	Annually	X	X	X
7.2	Review spill rates and causes and make changes to maintenance programs, as necessary.	Annually	X	X	X

RESILIENCE

Resilience is addressed in Element 7 by:

- Inspection of select assets directly downstream of grease producing FSE to ensure installed source control, including grease interceptors, are effective.
- Development and distribution of sound residential FOG outreach and education program.
- Performance of regular assessments of system assets to monitor performance.
- QA/QA process for evaluating pipe cleaning effectiveness.
- Daily disposal of pipe blocking materials retrieved during maintenance activities.

APPENDIX 7 INCLUSIONS:

- 7.1 Scraper and Public Outreach Material

8. System Evaluation, Capacity Assurance, and Capital Improvements

WDR REQUIREMENTS

Attachment D-8 (page D-7/D-8)

"The Plan must include procedures and activities for:

- *Routine evaluation and assessment of system conditions;*
- *Capacity assessment and design criteria;*
- *Prioritization of corrective actions; and*
- *A capital improvement plan."*

8.1. System Evaluation and Condition Assessment

WDR REQUIREMENTS

Attachment D-8.1 (pages D-7/D-8)

"The Plan must include procedures to:

- *Evaluate the sanitary sewer system assets utilizing the best practices and technologies available;*
- *Identify and justify the amount (percentage) of its system for its condition to be assessed each year;*
- *Prioritize the condition assessment of system areas that:*
  - *Hold a high level of environmental consequences if vulnerable to collapse, failure, blockage, capacity issues, or other system deficiencies;*
  - *Are located in or within the vicinity of surface waters, steep terrain, high groundwater elevations, and environmentally sensitive areas;*
  - *Are within the vicinity of a receiving water with a bacterial-related impairment on the most current Clean Water Act section 303(d) List.*
- *Assess the system conditions using visual observations, video surveillance and/or other comparable system inspection method;*
- *Utilize observations/evidence of system conditions that may contribute to exiting of sewage from the system which can reasonably be expected to discharge into a water of the State;*
- *Maintain documents and recordkeeping of system evaluation and condition assessment inspections and activities; and*
- *Identify system assets vulnerable to direct and indirect impacts of climate change, including but not limited to: sea level rise; flooding and/or erosion due to increased storm volumes, frequency, and/or intensity; wildfires; and increased power disruptions."*

COMPLIANCE

The above requirements are addressed below:

System Evaluation:

The District's System evaluation involves every component of the collection system. The District recognizes that it is of key importance to regularly perform pipeline condition assessments, to initially establish a baseline condition, and to monitor changes over time. The District uses visual inspections, CCTV inspections, and spill data to evaluate the performance of system assets, adjusting as necessary.

Justify the amount of system assessed each year:

The District maintains its System with a low spill rate. The District's goal is to clean and CCTV its entire System once every three years, with one recreation area cleaned per year. The District uses its CCTV results to address any issues in a timely manner.

Prioritize condition assessment areas:

The District does not prioritize condition assessments based on environmental consequences or proximity to surface waters because it conducts an aggressive cleaning and inspection schedule, in addition to timely maintenance.

Assess system using visual observations, etc.:

The District assesses its Systems' condition using visual observation, cleaning, and video surveillance.

Evidence of flow exiting from system:

The District is currently unaware of sewage exiting its Systems. The District actively inspects and maintains its Systems to prevent sewage from exiting and impacting the environment.

Maintain documents:

The District maintains records of inspections, maintenance, and System evaluations. These records are currently stored at the District offices or within its AIM System.

Climate change:

The District's recreation areas are vulnerable to wildfires and associated power disruption. To address climate change impacts, the District provides backup power to lift stations for use during emergency power loss events. This is achieved using permanently installed generators and portable generators. The District rents additional generators as needed to prepare for Public Safety Power Shutoffs.

EFFECTIVENESS

The District utilizes the following key performance indicators for measuring effectiveness of this element:

- Has the District maintained its schedule for inspecting the sewer assets listed below and is data being reviewed in a timely manner?
  - CCTV Gravity Mains
  - Laterals
  - Manholes
  - Pump Stations
- Are inspection efforts discovering deficiencies in a timely manner?
- Are maintenance and inspection activities being properly documented?

IMPLEMENTATION PLAN/SCHEDULE

No.	Plan	Schedule	Responsible Party		
			MGR	ENG	SUP
8.1.1	Review/evaluate enforcement and inspection findings and implement changes as necessary.	As needed			X
8.1.2	Review spill rates and causes and make changes to maintenance programs, as necessary.	As part of Annual Report	X		X
8.1.3	Hold meetings to discuss any issues that may result from climate changes.	As needed	X	X	X

8.2. Capacity Assessment and Design Criteria

WDR REQUIREMENTS

Attachment D-8.2 (pages D-8/D-9)

"The Plan must include procedures to identify system components that are experiencing or contributing to spills caused by hydraulic deficiency and/or limited capacity, including procedures to identify the appropriate hydraulic capacity of key system elements for:

- *Dry-weather peak flow conditions that cause or contributes to spill events;*
- *The appropriate design storm(s) or wet weather events that causes or contributes to spill events.*
- *The capacity of key system components; and*
- *Identify the major sources that contribute to the peak flows associated with sewer spills.*
- *The capacity assessment must consider:*
- *Data from existing system condition assessments, system inspections, system audits, spill history, and other available information;*
- *Capacity of flood-prone systems subject to increased infiltration and inflow, under normal local and regional storm conditions;*
- *Capacity of systems subject to increased infiltration and inflow due to larger and/or higher-intensity storm events as a result of climate change;*
- *Increases of erosive forces in canyons and streams near underground and above-ground system components due to larger and/or higher-intensity storm events;*
- *Capacity of major system elements to accommodate dry weather peak flow conditions, and updated design storm and wet weather events; and*
- *Necessary redundancy in pumping and storage capacities."*

COMPLIANCE

The District's Systems have not changed appreciably since the 2002 Master Plan (described below) was completed. The District is not considering significant expansions to its recreation areas. Therefore, there are no plans to update the 2002 Master Plan. If the District considers a substantial expansion to any of the recreation areas, the Master Plan will be updated in accordance with the Capacity Assessment and Design Criteria detailed in Attachment D, Section 8.2, of the WDR.

2002 Master Plan

The District's Upcountry Wastewater Systems Master Plan (Master Plan), dated June 2002, was developed to provide a comprehensive plan to upgrade the three Systems to meet new regulatory standards and to minimize the potential for sanitary sewer spills. The Master Plan identifies necessary capacity-related improvement projects based on an evaluation of the existing capacity in addition to identifying inflow and infiltration (I&I) issues.

In 2005, the District conducted a comprehensive condition assessment of the three Systems. The capacity assessment element included hydraulic modeling of the CANS, CASS, and PARA Systems under current and future flows. The I&I data collected through the Master Plan was included in the model. The following provides a summary of the capacity assessment's methodology, data, and findings.

Hydraulic Model

A static sanitary sewer hydraulic model was developed using a Microsoft Excel spreadsheet calculation tool. Diameters, slopes, and lengths of identified sanitary sewer mainlines were recorded in the spreadsheet. Using a combination of recorded flow monitoring data and flow estimation, peak hour, maximum day, and average day flow inputs were calculated.

The existing sanitary sewer system was assessed for capacity deficiencies based on the following:

- Criteria that identified maximum values for the depth of flow in a pipe under peak hour flow conditions
- Minimum scouring velocity requirement under peak day conditions
- Flows quantified from a combination of the recorded flow monitoring data and flow estimations.

The flow basin development and monitoring were completed as follows:

- Reviewed the existing sanitary sewer systems to identify flow-monitoring basins.
- Consolidated sanitary sewer system features into basins that generally grouped facilities by geographic location and types of users.
- Included wet and dry season monitoring.

The flow estimation required the following:

- Flow input data for each point along a pipe alignment to develop the peak hour, peak day, and average day flow inputs for the model.
- Identification of individual flow contributions for each asset along the pipe alignments that made up each flow basin.

The analysis of the collected model capacity data included the following:

- Using predetermined criteria, flagging for sanitary sewer overflow potential, surcharging, and hydraulic diameter (d/D values) greater than standard design objectives
- Identifying pipe slope and flow velocity that were less than the recommended minimum standard design values.
- Developing improvement recommendations

2002 Master Plan's Major Findings

- Sanitary Sewer Systems: All the pipe segments analyzed met the capacity assessment under the peak hour, peak day, and average day, conditions. A limited number of pipe segments did not meet the capacity criteria under the peak hour conditions; however, these segments were in a portion of the system very unlikely to experience a peaking factor condition.
- Lift Stations: No capacity limitations were identified.
- Force Mains: No capacity limitations were identified.

EFFECTIVENESS

The District utilizes the following key performance indicators for measuring effectiveness of this element:

- How many capacity-related spills or surcharge conditions have occurred during the audit period?
- Has the system responded to rain events as indicated by the hydraulic model?
- Has there been any changes to zoning designations (residential, commercial, industrial)?

IMPLEMENTATION PLAN/SCHEDULE

No	Plan	Schedule	Responsible Party		
			MGR	ENG	SUP
8.2.1	Monitor/evaluate significant rain events to see if they exceed the design storm in the hydraulic model.	As needed		X	X
8.2.2	Monitor flows in each basin and update the hydraulic model	Per Engineering Department schedule		X	X
8.2.3	If the District anticipates a significant expansion to any of the recreation areas, then update the Wastewater Master Plan to consider all factors listed in Attachment D, Section 8.2 of the WDR.	As needed	X	X	X

8.3. Prioritization of Corrective Action

WDR REQUIREMENTS

Attachment D-8.3 (page D-9)

"The findings of the condition assessments and capacity assessments must be used to prioritize corrective actions. Prioritization must consider the severity of the consequences of potential spills."

COMPLIANCE

The District recently completed a comprehensive condition assessment and value engineering process aimed at identifying capital projects for completion in the future. The assessment produced a recommended list of prioritized repairs/improvements, which are described in Element 8.4. The prioritization process was based upon the likelihood and consequences of failures associated with potential spills. The District intends to complete the recommended capital improvements over the next five to ten years.

EFFECTIVENESS

The District utilizes the following key performance indicators for measuring effectiveness of this element:

- Has the District adhered to its system evaluation and condition assessment schedule?
- Has the District adhered to its prioritization and corrective procedures for sewer repair and capacity improvement projects?
- Have projects been completed before deficiencies caused failures?

IMPLEMENTATION PLAN/SCHEDULE

No.	Plan	Schedule	Responsible Party		
			MGR	ENG	SUP
8.3.1	Utilize all available data for prioritizing corrective actions considering severity and consequences of potential spills.	Each CIP Update	X	X	X
8.3.2	Maintain documents and recordkeeping of system evaluation and condition assessment inspections and activities.	Continuously		X	X

8.4. Capital Improvement Plan

WDR REQUIREMENTS

Attachment D-8.4 (page D-9)

"The capital improvement plan must include the following items:

- *Project schedules include completion dates for all portions of the capital improvement program;*
- *Internal and external project funding sources for each project; and*
- *Joint coordination between operation and maintenance staff, and engineering staff/consultants during planning, design, and construction of capital improvement projects; and Interagency coordination with other impacted utility agencies."*

COMPLIANCE

Improvements

The District's 2025 Audit states that with respect to I&I Issues, the District has previously addressed I&I by:

- In 2006, completed a cured-in-place lining project at PARA that reduced I&I flows in the collection system by 50% in the lined pipelines.
- In 2008, replaced 50% of the mains and laterals at the CASS mobile home park.
- In 2012, replaced 100% of the mains and laterals at CANS mobile home park #1.
- In 2017, replaced the mains and laterals with the PARA seasonal RV park.

The District is in the process of updating the capital improvement program for the Systems at the Pardee CANS and CASS recreation areas. The District recently completed a comprehensive condition assessment and value engineering process aimed at identifying capital projects for completion in the future.

As part of the condition assessment and value engineering process, the following collection system capital improvements are proposed:

- Repair or replace identified pipe segments with significant risks or defects.
- Address identified manhole and cleanout issues.
- Rehabilitate all seven existing lift stations at CASS.
- Install permanent standby generators at CASS lift stations 1, 2, 3, and 4.
- Install new lift station and force main at CASS to replace gravity line between mobile home park and WWTP.
- Rehabilitate all five existing lift stations at CANS.

The District intends to complete the capital improvements listed above over the next five to ten years. The estimated cost to complete all the above projects is approximately $8 million.

EFFECTIVENESS

The District utilizes the following key performance indicators for measuring effectiveness of this element:

- Has the District's capital improvement plan schedule been adhered to?

IMPLEMENTATION PLAN/SCHEDULE

No.	Plan	Schedule	Responsible Party		
			MGR	ENG	SUP
8.4.1	Hold regular coordination meetings, with all parties, to help keep the projects on track and resolve issues that may arise in a timely manner.	As needed	X	X	X
8.4.2	For schedules that are not followed, justify and document the reason.	Each Delayed Project	X		X
8.4.3	Complete the CIP for CANS, CASS, and PARA. Identify project schedules and funding.	June 30, 2027	X	X	X

RESILIENCE

Resilience is addressed in Element 8 by:

- Conducting an annual review of the Capital Improvement Plan by all appropriate individuals including both Engineering and Operations.

APPENDIX 8 INCLUSIONS

- None

9. Monitoring, Measurement, and Program Modifications

WDR REQUIREMENTS

Attachment D-9 (page D-9)

"The Plan must include an Adaptive Management section that addresses Plan-implementation effectiveness and the steps for necessary Plan improvement, including:

- *Maintaining relevant information, including audit findings, to establish and prioritize appropriate Plan activities;*
- *Monitoring the implementation and measuring the effectiveness of each Plan element;*
- *Assessing the success of the preventive operation and maintenance activities;*
- *Updating Plan procedures and activities, as appropriate, based on results of monitoring and performance evaluations; and*
- *Identifying and illustrating spill trends, including spill frequency, locations, and estimated volumes".*

COMPLIANCE

The above requirements are addressed as follows:

Maintaining Information:

The District maintains accurate and relevant inspection and maintenance records for the Systems, including field data such as pipe cleaning and inspection frequencies, FSE inspections, and information regarding spills. Much of the documentation is maintained electronically, which allows for ease of access and analysis. This helps District staff to make sound decisions and prioritize activities when dealing with the routine and the unexpected.

Monitoring SSMP elements:

The District developed specific key performance indicators, so it can monitor the effectiveness for each element of its SSMP. In addition, roles and responsibilities are identified to ensure the SSMP is implemented as intended.

Assessing Preventative Operations:

The District assesses the success of maintenance and operation activities by ensuring activities are performed as expected through monitoring actual outcomes compared to intended outcomes, as well as spill trends.

Updating the SSMP:

The District is committed to updating its SSMP as needed. Improvements for the document are identified by monitoring and evaluating performance of work programs and SSMP elements to ensure intended outcomes are achieved while looking for areas for improvement. Although the SWRCB requires that the SSMP be updated every six years, the SSMP is considered a living document and may require updating on a more frequent basis. Minor changes will likely be required to address improvements identified through the SSMP

Audit or through modifications required as conditions change. These edits will be identified in the Change Log.

Identifying Spill Trends:

The District monitors spill trends, at a minimum every three years during required audits, utilizing its AIM database inspection records, and CIWQS data. These resources are helpful in planning and programing work, enabling the District to be adaptive and capitalize on lessons learned.

EFFECTIVENESS

The District utilizes the following key performance indicators for measuring effectiveness of this element:

- Are SSMP elements being periodically evaluated for effectiveness?
- Are work activities and spill events being documented?
- Has a plan and schedule been established to address audit findings and deficiencies from the prior audit?
- Is trend analysis being performed on spill causes?
- Have work programs been assessed and updated as necessary?

IMPLEMENTATION PLAN/SCHEDULE

No.	Plan	Schedule	Responsible Party		
			MGR	ENG	SUP
9.1	Assess work programs to ensure outcomes are as intended.	Annually		X	X
9.2	Ensure work programs and the SSMP are updated based on assessments.	As Needed	X	X	X
9.3	Monitor and evaluate spill trends; document efforts.	Annually	X	X	X

RESILIENCE

Resilience is addressed in Element 9 by:

- Development of key performance indicators to measure effectiveness of the SSMP.
- Performing periodic reviews of the SSMP to help ensure it is being properly implemented.
- Developing and adhering to a timeline to correct deficiencies found during the audit process.
- Periodically evaluating work programs to help ensure effectiveness.

APPENDIX 9 INCLUSIONS:

- None

10. Internal Audits

WDR REQUIREMENTS

Attachment D-10 (page D-10)

> *"The Plan shall include internal audit procedures, appropriate to the size and performance of the system, for the Enrollee to comply with section 5.4 (Sewer System Management Plan Audits) of this General Order."*

COMPLIANCE

Internal audits are performed on a three-year basis to determine relevance and effectiveness of each element of the SSMP. Audits include a review of progress on deficiencies identified in the previous audit report. The audit reports are uploaded into CIWQS within the permitted six months' timeline after the end of the required three-year audit period.

Audits include a review of progress and success for corrected deficiencies identified in the previous audit report. If deficiencies or modifications are identified as part of the audit, the SSMP shall be updated accordingly. Significant updates are assigned to a lead individual, including a proposed schedule for implementation. Copies of the internal audits are kept on file with the SSMP at Pardee Center and/or electronically in the SSMP folder.

The most recent three-year audit was for 2022-2025. The District completed this audit and has uploaded it to CIWQS for each of the three Systems. The audit finds that:

- During the three-year period, there were four reportable spills, Category 3 and Category 4, ranging in volume from 20 gallons to 724 gallons.
- The Organization table listing responsible staff needs updating. (This has been completed in Section 2 of this SSMP update).
- Sewer system maps were accurate, except for a need to update the PARA map due to new construction in the Pardee Recreation Area. (This has been addressed through a recently completed project to map all underground utilities in CANS, CASS and PARA).
- The Rehabilitation and Replacement Plan, including budget, should be revised to reflect changes in the District's Capital Improvement Plan. (This has been addressed in Section 8.4 of this SSMP update).
- The District has completed several projects to reduce I&I impacting its collection system. Additional projects identified for the next four years will further reduce I&I flows. These projects are described in Section 8.4 of this SSMP update.

The District will continue to complete internal Audits on a three-year schedule. The objective is to evaluate compliance, implementation and effectiveness of the SSMP. Additionally, the SSMP includes a description of how the District will comply with the requirements of each element.

Implementation is evaluated by determining if the District is executing the SSMP as stated.

Effectiveness is evaluated by using key performance indicators, which have been developed specifically for each element. An additional evaluation is performed to comply with WDR Specifications 5.6, addressing resilience.

Resilience indicators have been developed for each element. These indicators serve to demonstrate how resilience is built into the SSMP, in addition to inspection, maintenance, and spill response activities.

Any deficiencies discovered through the audit process are noted and a plan and schedule to implement corrective measures are established. All audit reports will be certified by the District's LRO. All changes or modifications of the SSMP resulting from the audit shall be listed in the SSMP Change Log.

EFFECTIVENESS

The District utilizes the following key performance indicators for measuring effectiveness of this element:

- Have audits been performed as required?
- Have the audits assessed compliance, implementation, and effectiveness?
- Have deficiencies been identified?
- Has a plan and schedule to rectify the deficiencies been established?

IMPLEMENTATION PLAN/SCHEDULE

No.	Plan	Schedule	Responsible Party		
			MGR	ENG	SUP
10.1	Schedule audits in advance of due dates to ensure adequate time to complete.	Beginning at end of audit period	X		X
10.2	Ensure a plan and schedule is developed to address deficiencies.	As each audit is completed	X		X

RESILIENCE

Resilience is addressed in Element 10 by:

- Periodically evaluating key performance indicators during the audit period to assess effectiveness and make corrections, if necessary, prior to the audit.
- Evaluating previous audits to ensure deficiencies have been rectified.
- Scheduling the audit due dates and completing the audit on time.

APPENDIX 10 INCLUSIONS:

- None

11. Communication Program

WDR REQUIREMENTS

Attachment D-11 (page D-10)

"The Plan must include procedures for the Enrollee to communicate with:

- *The public for:*
- *Spills and discharges resulting in closures of public areas, or that enter a source of drinking water; and*
- *The development, implementation, and update of its Plan, including opportunities for public input to Plan implementation and updates.*
- *Owners/operators of systems that connect into the Enrollee's system, including satellite systems, for:*
- *System operation, maintenance, and capital improvement-related activities."*

COMPLIANCE

Spills:

When the District experiences a spill, it is standard procedure to secure the affected area from public access. The area is generally cordoned off using barricades, cones, and caution tape. Should the District experience a spill that may require closure of public areas or enter a source drinking of water, the District will post a warning sign that states the issue and provides contact information.

Staff may need to remain onsite to provide an additional safety factor until appropriate authorities respond and direct otherwise. In all cases, the District will implement requirements issued by the local environmental health department and/or other regulatory authorities.

Public Participation:

The District maintains public outreach and communications efforts through its concessionaires. Pertinent information may be provided upon admittance to the recreation areas and/or posted on public access bulletin boards. The public has 24-hour access to District staff for reporting sanitary sewer concerns, including spills.

The District's public communication and outreach implementation efforts supporting the WDR requirements include:

- Posting of the SSMP on the District's public website (Sewers page), listing contact information to facilitate questions and comments.
- Posting signage during emergency response to supplement the District's public website advisory postings. Listed contact information provides access to District staff who can address questions and provide additional information.
- Training of concessionaires to direct public questions or concerns regarding the SSMP development or implementation to the Environmental Compliance Section.

- Incorporating specific mechanisms for community participation, including input, coordination, and facilitation by the Mokelumne Watershed and Recreation Division and the District's Public Affairs Office; and
- Participating in the Camanche Regional Park Advisory Board meetings, which include local officials, concessionaires, residents, and the public.

Satellite Systems:

There are no satellite systems that are tributary to the District.

EFFECTIVENESS

The District utilizes the following key performance indicators for measuring effectiveness of this element:

- Does the District have signage, or other means, readily available to notify the public of environmental or public risk factors related to a sewage spill?
- Does the District perform outreach to its residential customers?

IMPLEMENTATION PLAN/SCHEDULE

No.	Plan	Schedule	Responsible Party		
			MGR	ENG	SUP
11.1	Ensure the District Board of Directors approves the SSMP per schedule.	Every 6 years	X		X
11.2	Ensure the SSMP is posted on the District website and the link functions properly.	Annually	X		X
11.4	Ensure Sewage Spill Warning signs are readily available to communicate with the public when necessary.	Annually			X

RESILIENCE

Resilience is addressed in Element 11 by:

- Using the SSMP as a tool to communicate to the public how the District manages its Systems.
- Maintaining a consistent presence in the service area by attending community events and/or issuing periodic newsletters or other communications to the public.
- Providing the public access to District staff.

APPENDIX 11 INCLUSIONS

- None

List of Appendices

APPENDIX 1	• 1.1 Service Area and Wastewater System for each Recreation Area
APPENDIX 2	• None
APPENDIX 3	• 3.1 Legal Citations from: ○ Resolution No. 35128-18, "Amending Rules and Regulations Relating to Public Use of East Bay Municipal Utility District Watershed, Reservoirs and Recreation Areas ○ Pardee RV Park Site Use Conditions ○ Camanche South Shore Long-Term Recreational Vehicle Park Rules and Regulations ○ Rules and Regulations for Camanche South Shore Long-Term Mobile Home Park ○ Rules and Regulations for Camanche North Shore Long-Term Mobile Home Park
APPENDIX 4	• 4.1 Sewer Cleanout and Lower Lateral Inspection Form • 4.2 Manhole Inspection Form • 4.3 Lift Station Maintenance Checklist
APPENDIX 5	• None
APPENDIX 6	• 6.1 Spill Emergency Response Plan (updated 2025)
APPENDIX 7	• 7.1 Scraper and Public Outreach Material
APPENDIX 8	• None
APPENDIX 9	• None
APPENDIX 10	• None
APPENDIX 11	• None

APPENDIX 1.1:
Service Area and Wastewater System for Each Recreation Area

Camanche Area North Shore (CANS) Service Area

Camanche Area North Shore (CANS) Sewer System

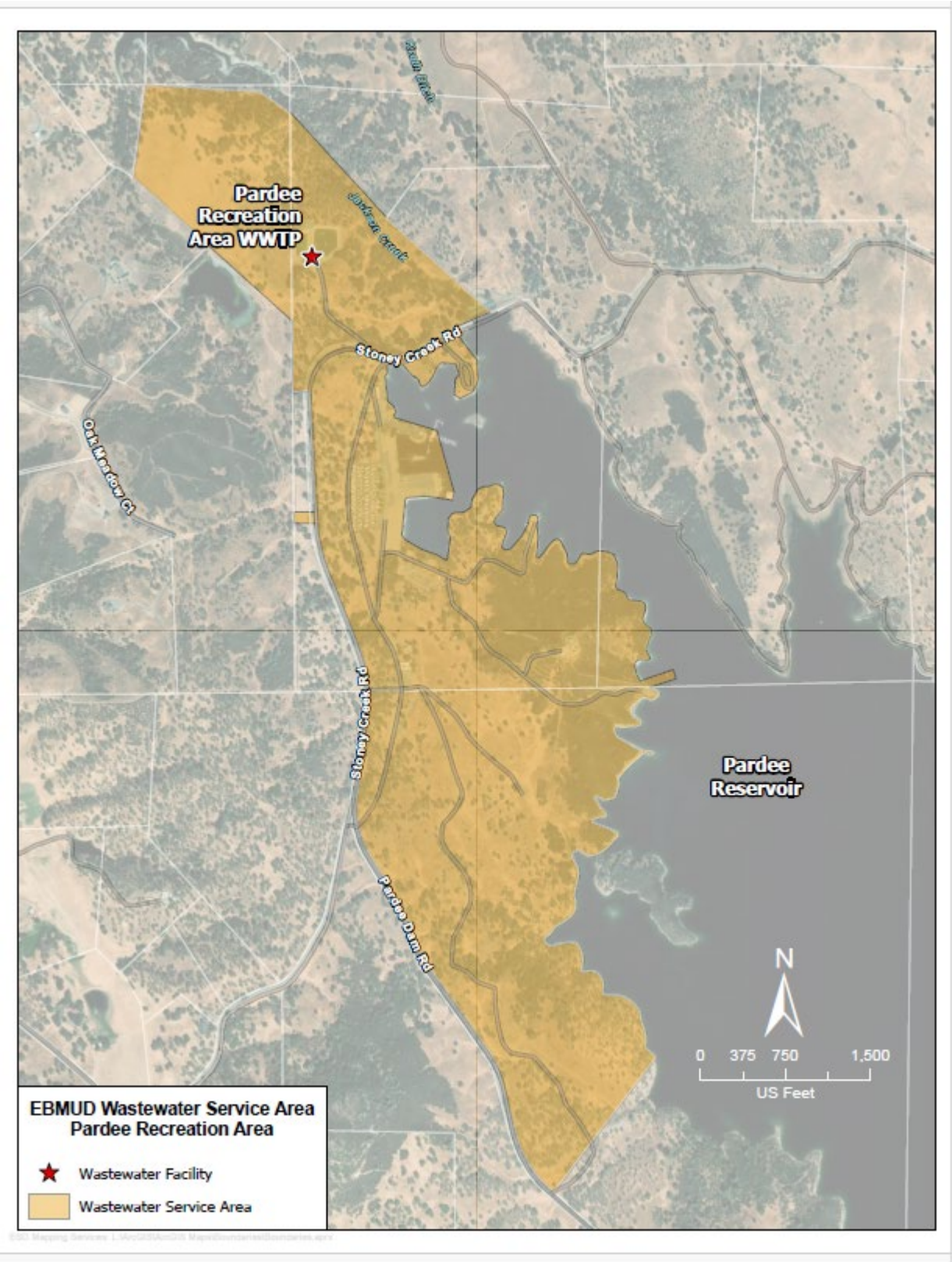
Yellow = sewer laterals. Green = sanitary sewer lines.
Purple = force mains (including treated effluent discharge to spray-fields)

Camanche Area South Shore (CASS) Service Area

Camanche Area South Shore (CASS) Wastewater System

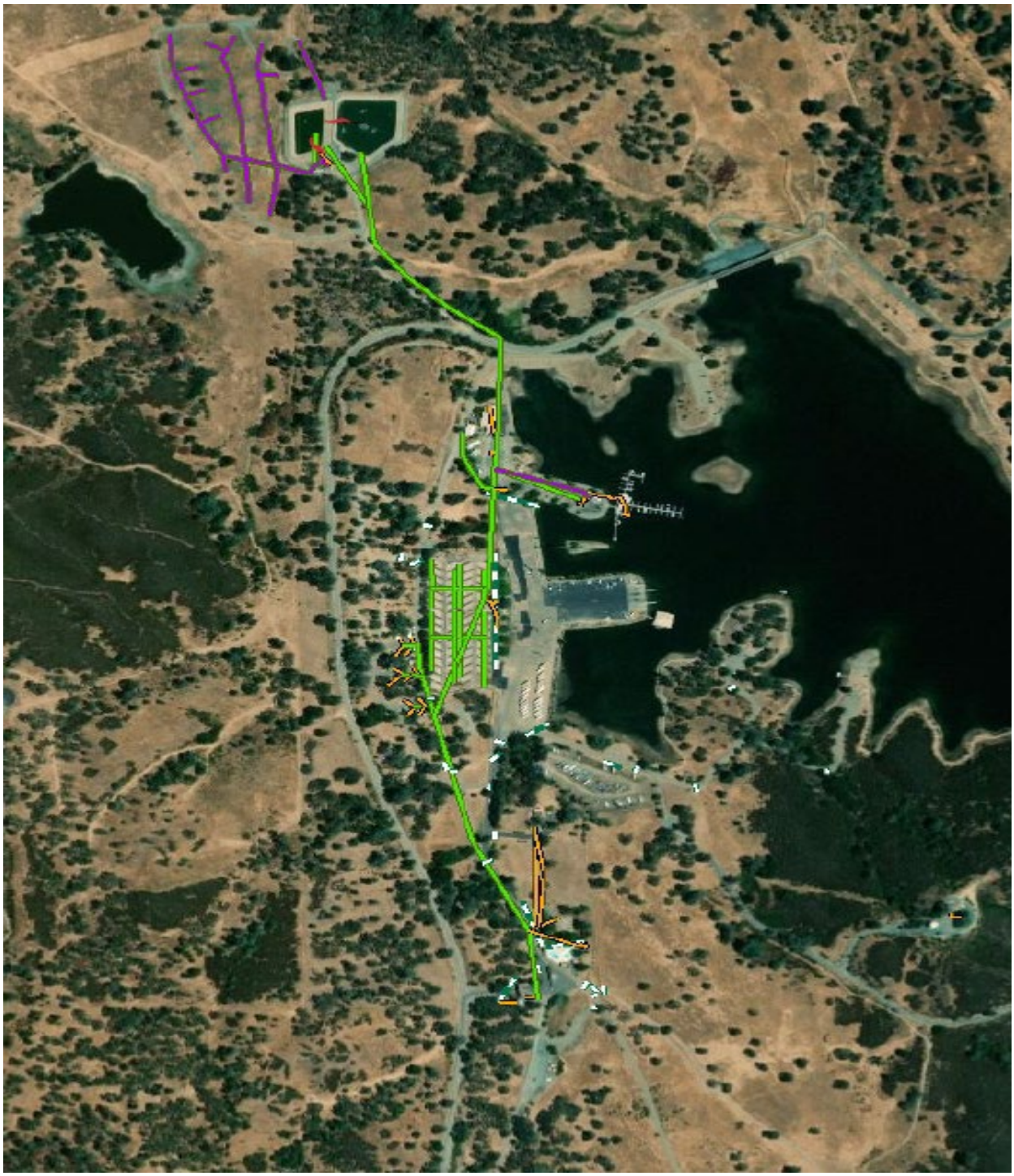
Yellow = sewer laterals. Green = sanitary sewer lines.
Purple = force mains (including treated effluent discharge to spray-fields)

Pardee Area (PARA) Service Area



Pardee Area (PARA) Wastewater System

Yellow = sewer laterals. Green = sanitary sewer lines.
Purple = force mains (including treated effluent discharge to spray-fields)



Pardee Center Wastewater System

PACT Wastewater System - yellow = sewer laterals, green = sanitary sewer lines, purple = permanently disabled effluent spray line, and storage pond

Appendix 3.1: Legal Citations

Excerpt from Resolution No. 35128-18, "Amending Rules and Regulations Relating to Public Use of East Bay Municipal Utility District Watershed, Reservoirs and Recreation Areas (adopted December 11, 2018):

1.4 Authority: All sections of these Rules and Regulations are adopted by the District Board pursuant to Sections 117060 and 117105 of the Health & Safety Code, and apply to all District lands, waters and facilities unless expressly indicated otherwise.

1.5 Pursuant to Section 12821 (b) of the Public Utilities Code, any violation of the following Regulations is an infraction and punishable by (1) a fine not exceeding $50 for the first violation; (2) a fine not exceeding $100 for a second violation of the same regulation within one year; and (3) a fine not exceeding $250 for each additional violation of the same regulation within one year.

1.6 The District or its authorized representative may withdraw or revoke the privilege of access to District watershed lands and/or waterways or the use of any facility for reasons of safety, security or environmental protection, or from any person violating any provision of these Regulations or any other statute. Privileges may also be revoked permanently or on a long-term basis depending on the severity of the offense in accordance with the Access Revocation Procedure.

It shall be unlawful for any person:

10.22 To discharge waste into the sewerage facilities, which causes, threatens to cause or is capable of causing, either alone or by interaction with other substances:

a) Interference with the wastewater treatment process, or overloading of the sewerage facilities, or excessive collection or treatment costs, or use of a disproportionate share of the capacity of the sewerage facilities;

b) Interference with any wastewater reclamation process which does or may operate in conjunction with the sewerage facilities, or overloading, or a breakdown of such reclamation process, or excessive reclamation costs, or any product of the treatment process which renders such reclamation process impracticable or not feasible under normal operating conditions;

c) A detrimental environmental impact, or a nuisance wherever located, or a condition unacceptable to any public agency having regulatory jurisdiction over operation of the sewerage facilities;

d) Discoloration, or any other adverse condition in the quality of the effluent from the sewerage facilities such that receiving water quality requirements established by any statute, rule, regulation, ordinance, or permit condition cannot be met by the District;

e). Conditions at or near the sewerage facilities, or any portion thereof, which cause or may cause the District to be in violation of the requirements of the law;

f) Pollutants introduced into the sewerage facilities that pass through or interfere with the operation of the sewerage facilities;

g) Any substance which will cause the sewerage facilities to violate its National Pollutant Discharge Elimination System permit and/or State Waste Discharge Requirements or the receiving water quality standards.

10.23 To fail to immediately report to an EBMUD or concession representative, the discharge to the environment of sewage from an RV, trailer, camper, other vehicle or structure.

Excerpt from Appendix A, Pardee RV Park Site Use Conditions (revised January 31, 2019):

Sanitary Sewer Prohibitions

The following discharges/actions are prohibited:

1. Discharge on the ground (including grey water) that may cause detrimental environmental impact or a nuisance.
2. Discharge that causes obstruction of flow (diapers, fats, oils, grease, cobbles, solids, etc.) or damage to the sewerage facilities.
3. Construction of appurtenances that cause conditions inhibiting or preventing effective maintenance.
4. Disposal via the toilet or sink drain of non-household waste or material that is:
    a. TOXIC - capable of producing injury, illness or damage to humans, livestock or wildlife through ingestion, inhalation, or absorption through any body surface,
    b. CORROSIVE - capable of destroying by chemical action living tissue through contact,
    c. IRRITANTS - capable of causing a local inflammatory reaction,
    d. STRONG SENSITIZERS - capable of causing allergic or hypersensitive reactions,
    e. FLAMMABLE - capable of burning during normal handling and which may produce harmful gas or particles.

Discharge of waste into the sewerage facilities which causes, threatens to cause, or is capable of causing, either alone or by interaction with other substances:

1. Interference with the wastewater treatment process, or overloading of the sewerage facilities, or excessive collection or treatment costs, or use of a disproportionate share of the capacity of the sewerage facilities;
2. Interference with any wastewater reclamation process which does or may operate in conjunction with the sewerage facilities, or overloading, or a breakdown of such reclamation process, or excessive reclamation costs, or any product of the treatment

process which renders such reclamation process impracticable or not feasible under normal operating conditions;

3. A detrimental environmental impact, or a nuisance wherever located, or a condition unacceptable to any public agency having regulatory jurisdiction over operation of the sewerage facilities;
4. Discoloration, or any other adverse condition in the quality of the effluent from the sewerage facilities such that receiving water quality requirements established by any statute, rule, regulation, ordinance, or permit condition cannot be met by EBMUD;
5. Conditions at or near the sewerage facilities, or any portion thereof, which cause, or may cause, EBMUD to be in violation of the requirements of law.
6. Pollutants introduced into the sewerage facilities that pass through or interfere with the operation or performance of the sewerage facilities.
7. Any substance, which will cause the sewerage facilities to violate its National Pollutant Discharge Elimination System and/or State Waste Discharge Requirements permit(s) or the receiving water quality standards.

Excerpt from Camanche South Shore Long-Term Recreational Vehicle Park: Rules and Regulations (March 2019):

SANITARY SEWER PROHIBITIONS

A. No person shall discharge on the ground any substance (including greywater) that may cause detrimental environmental impact, or create a public nuisance.

B. No person shall discharge any substance or material that causes obstruction of flow (such as diapers, grease, cobbles, solids) or damage to the sewerage facilities.

C. No person shall install appurtenances that cause conditions inhibiting or preventing effective maintenance of sewerage facilities.

D. No person shall dispose via the toilet or sink drain any waste or material that is:

(1) TOXIC - capable of producing injury, illness or damage to humans, livestock or wildlife through ingestion, inhalation or absorption through any body surface,

(2) CORROSIVE - capable of destroying by chemical action living tissue through contact,

(3) IRRITANTS - capable of causing a local inflammatory reaction,

(4) STRONG SENSITIZERS - capable of causing allergic or hypersensitive reactions,

(5) FLAMMABLE - capable of burning during normal handling and which may produce harmful gas or particles.

E. No person shall discharge waste into the sewerage facilities, which causes, threatens to cause, or is capable of causing, either alone or by interaction with other substances:

(1) Interference with the wastewater treatment process, or overloading of the sewerage facilities, or excessive collection or treatment costs, or use of a disproportionate share of the capacity of the sewerage facilities;

(2) Interference with any wastewater reclamation process, which does or may operate in conjunction with the sewerage facilities, or overloading, or a breakdown of such reclamation process, or excessive reclamation costs, or any product of the treatment process which renders such reclamation process impracticable or not feasible under normal operating conditions;

(3) A detrimental environmental impact, or a nuisance wherever located, or a condition unacceptable to any public agency having regulatory jurisdiction over operation of the sewerage facilities;

(4) Discoloration, or any other adverse condition in the quality of the effluent from the sewerage facilities such that receiving water quality requirements established by any statute, rule, regulation, ordinance, or permit condition cannot be met by the District;

(5) Conditions at or near the sewerage facilities, or any portion thereof, which cause, or may cause, the District to be in violation of the requirements of law.

(6) Pollutants introduced into the sewerage facilities that pass through or interfere with the operation or performance of the sewerage facilities.

(7) Any substance, which will cause the sewerage facilities to violate its National Pollutant Discharge Elimination System and/or State Waste Discharge Requirements permit(s) or the receiving water quality standards.

Excerpt from Rules and Regulations for Camanche South Shore Long-Term Mobile Home Park (Effective September 1, 2014) and from Rules and Regulations for Camanche North Shore Long-Term Mobile Home Park (Effective September 1, 2014):

8. GENERAL MAINTENANCE OF HOMESITE.

E. Sanitary Sewer Prohibitions. The following discharges are prohibited:

(1) No discharges on the ground (including greywater) that may cause detrimental environmental impact or a nuisance.
(2) No discharges to the sanitary sewer system that causes obstruction of flow (diapers, grease, cobbles, solids) or damage to the sewerage facilities.
(3) No construction of appurtenances that cause conditions inhibiting or preventing effective maintenance of the sanitary sewer system.
(4) No disposal via the toilet or sink drain of non-household waste or material that is:
(a) TOXIC – capable of producing injury, illness or damage to humans, livestock or wildlife through ingestion, inhalation or absorption through any body surface,
(b) CORROSIVE – capable of destroying by chemical action living tissue through contact,
(c) IRRITANTS – capable of causing a local inflammatory reaction,
(d) STRONG SENSITIZERS – capable of causing allergic or hypersensitive reactions,
(e) FLAMMABLE – capable of burning during normal handling and which may produce harmful gas or particles.

(5) No person shall discharge waste into the sewerage facilities, which causes, threatens to cause, or is capable of causing, either alone or by interaction with other substances:

(a) Interference with the wastewater treatment process, or overloading of the sewerage facilities, or excessive collection or treatment costs, or use of a disproportionate share of the capacity of the sewerage facilities;

(b) Interference with any wastewater reclamation process, which does or may operate in conjunction with the sewerage facilities, or overloading, or a breakdown of such reclamation process, or excessive reclamation costs, or any product of the treatment process which renders such reclamation process impracticable or not feasible under normal operating conditions;

(c) A detrimental environmental impact, or a nuisance wherever located, or a condition unacceptable to any public agency having regulatory jurisdiction over operation of the sewerage facilities;

(d) Discoloration, or any other adverse condition in the quality of the effluent from the sewerage facilities such that receiving water quality requirements established by any statute, rule, regulation, ordinance, or permit condition cannot be met by the District;

(e) Conditions at or near the sewerage facilities, or any portion thereof, which cause, or may cause, the District to be in violation of the requirements of law.

(f) Pollutants introduced into the sewerage facilities that pass through or interfere with the operation or performance of the sewerage facilities.

(g) Any substance, which will cause the sewerage facilities to violate its National Pollutant Discharge Elimination System and/or State Waste Discharge Requirements permit(s) or the receiving water quality standards.

Cleanout Inspection

Inspection Date: _____ **Inspector:** _____

Cleanout ID: _____ **Street Name:** _____

Access Point	***Box***	***Cap***	***Sweep Type***	***Weather at time of Inspection***
clear of obstructions ☐	Serviceable ☐	Serviceable ☐	Tee ☐	Dry ☐
☐	Cracked/Broken ☐	Cracked/Broken ☐	Dpuble Tee ☐	Heavy Rain ☐
☐	Damaged ☐	Damaged ☐	Mitered Bend ☐	Light Rain ☐
☐	Sealed ☐	Sealed ☐	Sweep ☐	
	Other ☐	Other ☐	Other ☐	

COMMENTS:

Sewer Lower Lateral Inspection

Inspection Date: _____ **Inspector:** _____

Lateral Segment ID: _____ **Street Name:** _____

Lateral Size: _____ **Segment Distance:** _____

Issues Identified	***Backflow Preventer***	***Weather at time of Inspection***	***Problems Encountered***
None ☐	Present ☐	Dry ☐	
Grease ☐	Not Present ☐	Heavy Rain ☐	
Roots ☐	Functioning ☐	Light Rain ☐	
Pipe Damage ☐	Not Functioning ☐		
I & I ☐			
Out Of Round ☐			
Other ☐			

COMMENTS:

Manhole inspection - Level 1

level 1 inspection to provide information about components gathered from a visual inspection at the top of the manhole without entry

Inspection Date: _____ **Inspector:** _____

Manhole ID: _____ **Street Name:** _____

Condition

Cover:		***Ring &Frame***		***Cone & Riser:***		***Barrel:***		***Rungs:***	
Serviceable		Serviceable		Serviceable		Serviceable		Serviceable	
Loose		Loose		Cracked/Broken		Cracked/Broken		Unsafe	
Below Grade		Displaced		Corroded		Corroded		Missing any	
Damaged		Missing Grout		Misaligned		Misaligned		Corroded	
Sealed		Raise		Infiltration		Infiltration		N/A - no rungs	
Holes (# of holes)		Lower		Roots at Joints		Roots at Joints			

Bench:		***Channel:***		***Weather at time of survey***	
Serviceable		Serviceable		Dry	
Cracked/Broken		Obstructed		Heavy Rain	
Bad base joint		Bad joints		Light Rain	
		Roots at connection			

Hydraulics

Indications of Surcharge?:		***Indications of Infiltration?:***		***Issues:***		***Describe Flow:***	
None		None		Grease		Steady	
Minor		Minor		Debris		Pulsing	
Yes, need followup		Yes, need followup		Silt		Turbulent	
						Surcharging	
						Sluggish	

COMMENTS:

Sewer Line Cleaning

Inspection Date: _____ **Inspector:** _____

Line Segment ID: _____ **Street Name:** _____

Line Size: _____ **Segment Distance:** _____

Problems Encountered _____

Type of material Removed

Grease	
Roots	
Pipe material	
Sand & Grit	
Rocks	
Other	

COMMENTS:

EBMUD – Lift Station Maintenance Checklist

(Monthly Inspection)

Station Name: _____ **Date:** _____

Technicians Name: _____ **Technicians signature:** _____

General

- ☐ Site secure (fencing, locks, signage in place)
- ☐ Area free of debris / hazards
- ☐ Access hatches operational

Wet Well

- ☐ Level sensors / floats clean & working
- ☐ Odor / grease buildup checked
- ☐ No visible inflow & infiltration issues

Pumps & Motors

- ☐ Run each pump manually
- ☐ Check vibration / unusual noise
- ☐ Motor condition (no leaks)
- ☐ Record pump hours and calculate runtimes

Electrical / Controls

- ☐ Control panel clean, doors sealed
- ☐ Test wet well float alarms
- ☐ SCADA telemetry communicating (Verify with ACC)

Valves & Piping

- ☐ Isolation valves operable
- ☐ No leaks at flanges or fittings
- ☐ Check for corrosion
- ☐ Safety equipment (rails, ladder, lighting) intact

Notes / Corrective Action(s):

SSMP - Spill Emergency Response Plan
Camanche & Pardee Recreation Areas

Water Operations Department

EBMUD

rev. 4, May 2026

SECTION 1 - Definitions

California Integrated Water Quality System (CIWQS)
The State Water Resources Control Board online electronic reporting system.

Cleanout
Cleanout refers to a pipe fitting and associated piping connected to the sewer lateral that provides access to the sewer lateral for purposes of flushing, prodding, cleaning, and other maintenance, and diagnostic purposes.

Closed Circuit Television (CCTV)
Refers to the process and equipment used to internally inspect the condition of gravity flow sanitary sewers.

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

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

Fats, Oils, and Grease (FOG)
Products typically associated with food preparation and cooking activities that can cause blockages in the sanitary sewer system.

Force Main
Pumps may be necessary where gravity sewers serve areas at lower elevations than the sewage treatment plant, or distant areas at similar elevations.

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.

Lateral
The piping that conveys wastewater, including domestic sewage from a building to the sanitary sewer system.

Lift Station
A lift station is a sewer sump that lifts accumulated sewage to a higher elevation. The pump may discharge to another gravity sewer at that location or may discharge through a pressurized force main to some distant location

Manhole
An engineered structure that provides access to a sanitary sewer for maintenance and inspection.

Mokelumne Watershed and Recreation Division
EBMUD's work groups responsible for protecting the Mokelumne Watershed and recreational areas, including CANS, CASS, and PARA.

Nuisance
California Water Code section 13050, subdivision (m), defines nuisance as anything which meets all of the following requirements:

a. 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.
b. 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.
c. Occurs during, or as a result of, the treatment or disposal of wastes.

Oakland Control Center (OCC)
EBMUD's secondary location to operate facilities around Pardee and Camanche Reservoirs remotely.

Pardee Area Control Center (ACC)
EBMUD's primary location to operate facilities around Pardee and Camanche Reservoirs remotely.

Pardee Section
EBMUD work group responsible for the operation and maintenance of the sanitary sewer system at CANS, CASS, and PARA.

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

Regulatory Compliance Office (RCO)
EBMUD's division that includes ECS and WHS work groups.

Sanitary Sewer Spills/SSOs
Discharge of any quantity of partially treated or untreated wastewater from the sanitary sewer system at any point upstream of the wastewater treatment plant. Spills/SSOs are typically caused by blockages, pipe failure, pump station failure, or capacity limitation.

Spills include:

a. Overflows or releases of untreated or partially treated wastewater that reach waters of the State
b. Overflows or releases of untreated or partially treated wastewater that do not reach waters of the State
c. Wastewater backups into buildings and on private property that are caused by blockages or flow conditions within the publicly owned portion of a sanitary sewer system

Sanitary Sewer System
Publicly owned system of pipes, pump stations, or other conveyances, upstream of the wastewater treatment plant headworks that collect and convey wastewater to the publicly-owned wastewater treatment plant.

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

Sanitary Sewer System
A sanitary sewer system is a system that is designed to convey sewage, including but not limited to, pipes, manholes, pump stations, siphons, wet wells, diversion structures and/or other pertinent infrastructure, upstream of a wastewater treatment plant headworks, including sewer laterals if owned by operator, and temporary conveyance and storage facilities, including but not limited to temporary piping, vaults, construction trenches, wet wells, impoundments, tanks and diversion structures.

Sewer Lateral Sewage Discharges
Sewage discharges that are caused by blockages (often FOG) or other problems within a sewer lateral.

Sewer Main
A principal pipe in the sanitary sewer system that collects wastewater from private sewer laterals. The sewer main may connect to a larger sewer main, which then discharges to the wastewater treatment facility.

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

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

Untreated or partially treated wastewater
Any volume of waste discharged from the sanitary sewer system upstream of a wastewater treatment plant headworks.

Waters of the State
Waters of the State are surface waters or groundwater within boundaries of the state as defined in Water Code section 13050(e), in which the State and Regional Water Boards have authority to protect beneficial uses. Waters of the State include, but are not limited to, groundwater aquifers, surface waters, saline waters, natural washes and pools, wetlands, sloughs, and estuaries, regardless of flow or whether water exists during dry conditions. Waters of the State include waters of the United States.

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

SECTION 2 – Introduction

East Bay Municipal Utility District (EBMUD) developed this Spill Emergency Response Plan (Spill Plan) as a component of its Sewer System Management Plan (SSMP) for Camanche and Pardee Recreation Areas, in accordance with the requirements set forth in Order No. 2006-0003-DWQ. As prescribed, the Spill Plan, element six of the SSMP, incorporates the updated requirements included in the new State Water Resources Control Board (State Board) General Order No. WQ 2022-0103-DWQ (Order), adopted on December 6, 2022, effective June 5, 2023.

The Spill Plan identifies measures to protect public health and the environment through its established guidelines and procedures for managing sanitary sewer system spills that may occur within the Camanche and Pardee Recreation Areas (referred to henceforth as Pardee Area). The Spill Plan, in addition to routine training, allows Pardee staff to implement an appropriate, sound response for sewage spills, including regulatory notifications, to ensure compliance with the Order's requirements and protection of public health. The Spill Plan is reviewed annually to assess its effectiveness and updated accordingly.

The Spill Plan includes spill response procedures for the following three sanitary sewer systems:

- Camanche North Shore Recreation Area, CANS (WDID No. 5SSO10883)
- Camanche South Shore Recreation Area, CASS (WDID No. 5SSO10884)
- Pardee Recreation Area, PARA, (WDID No. 5SSO11020)

In addition to this Spill Plan, Pardee has also developed its *Pardee Area Control Center Emergency Notification Guidelines* and *Pardee Area Go-to-Response Kit* for all potential types of sewage releases that could occur within the Pardee Area.

The CANS, CASS, and PARA wastewater treatment systems are permitted through waste discharge requirements, managed by the Central Valley Regional Water Quality Control Board (CVRWQCB). CANS and PARA treatment plants have coverage through the State Board's General Order for Small Domestic Wastewater Treatment Systems. The CASS wastewater treatment system is regulated through an individual permit issued by the CVRWQCB. These permits require reporting of sewage releases from the collection and treatment systems to the CVRWQCB.

SECTION 3 - Spill Plan Elements

The Spill Plan's objectives are to protect public health and the environment, ensuring compliance with the State's Order and CVRWQCB-issued permits. These objectives are achieved by the established procedures as follows:

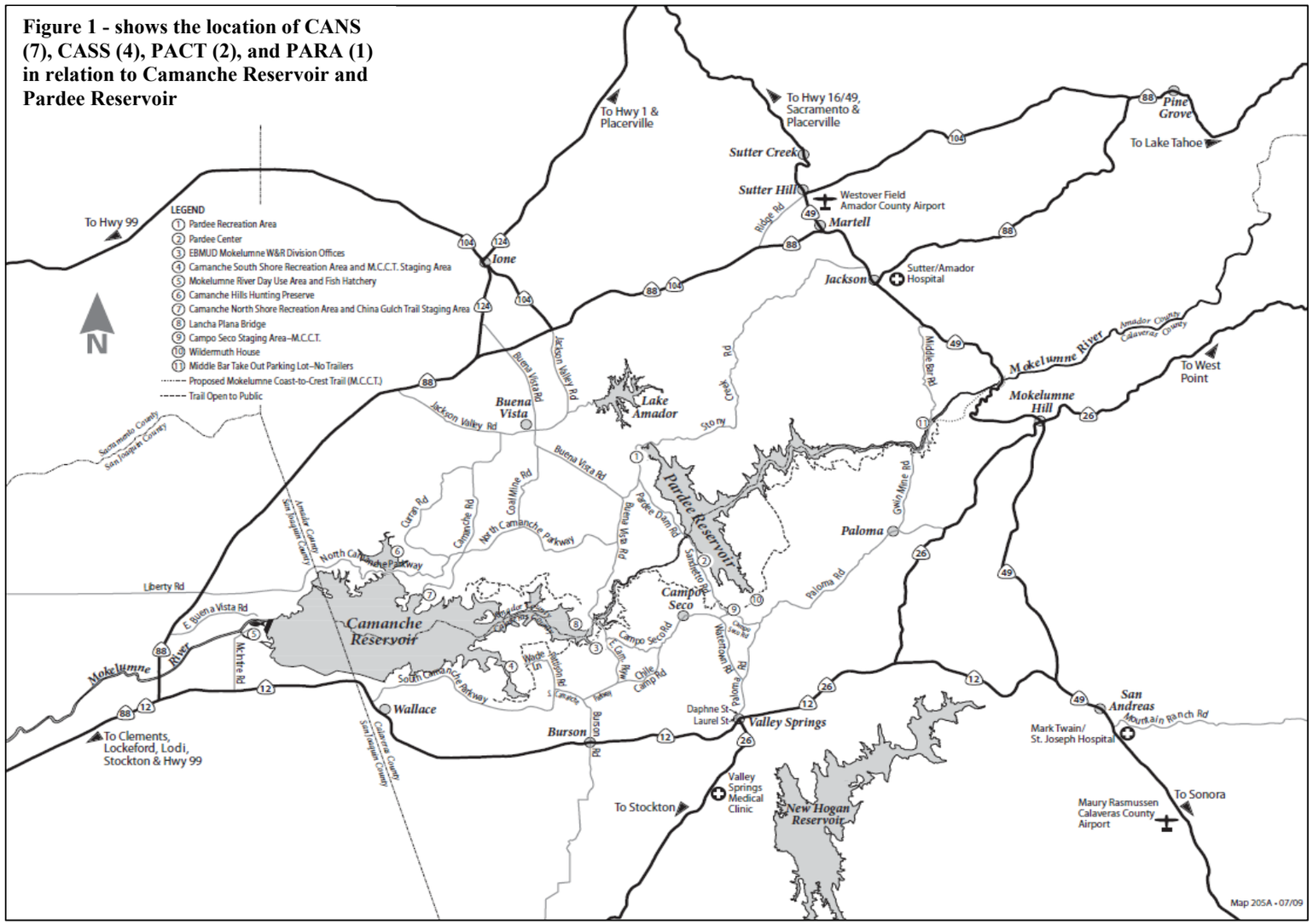
- Notification of a spill to appropriate regulatory agencies in a timely manner
- Field documentation for spill event reporting through the State Board's CIWQS database and the CVRWQCB's Notification of Spill Report

- Monitoring and reporting requirements included in the Order, and wastewater treatment plants discharge permits issued by the CVRWQCB
- Appropriate training for staff and contractors to ensure effective implementation of the Spill Plan, including necessary response activities
- Effective spill containment and clean-up measures to prevent and/or minimize a sewage release to waters of the State or drainage conveyance system
- Prompt clean-up of spill to minimize and remediate impacts to public health and beneficial uses of waters of the State, without inadvertently impacting beneficial uses in the receiving water through the clean-up process
- Debriefing on spill response activities to identify improvements for future events
- Annual review and assessment for effectiveness of this Spill Plan, updating as necessary

SECTION 4 – Pardee Area Wastewater Facilities

This section of the Spill Plan provides an outline map of the Paredee Area, followed by a overview and aerial map for each of the three sanitary sewer systems, including CANS, CASS, and PARA.

Figure 1 - shows the location of CANS (7), CASS (4), PACT (2), and PARA (1) in relation to Camanche Reservoir and Pardee Reservoir



CANS Sanitary Sewer System and Wastewater Treatment Plant

EBMUD owns and operates the CANS sanitary sewer system and wastewater treatment plant, located in Camanche North Shore Recreation Area near the Town of Ione in Amador County. The CANS sanitary sewer system consists of 31,300 feet of sewer pipe supported by 36 manholes and five lift stations. The sanitary sewer system serves 142 mobile home and recreational vehicle (RV) connections within two distinct locations: west of the marina, Mobile Home Park No. 1, and east of the marina, Mobile Home Park No. 2. In addition, the CANS sanitary sewer system provides wastewater service for 17 rental units, duplex and "motel" residences, a centrally located marina, administration office, and coffee shop, in addition to approximately 200 dry campsites equipped with public restrooms, showers, and laundry facilities.

All collected wastewater is pumped to the CANS treatment plant through Lift Station No. 1, which is equipped with three pumps, in addition to a primary wet well and an overflow wet well.

The CANS treatment plant includes six wastewater storage ponds, five unlined and one clay lined (Pond No. 5). Pond Nos. 1 through 3 are aerated ponds, Pond Nos. 4 and 5, oxidation ponds, and Pond No. 6, effluent storage pond. Wastewater enters Pond No. 1, then gravity flows into Pond No. 2, and from there to Pond No. 3. These three ponds function with floating mechanical aeration. Treated wastewater from Pond No. 3 gravity flows into Pond No. 6, which supplies effluent wastewater for the spray irrigation fields. Stored effluent wastewater is land applied typically from April through October. Pond Nos. 4 and 5 are auxiliary ponds, providing storage capacity for wet weather events.

CANS Wastewater System - yellow = sewer laterals, green = sanitary sewer lines, and purple = force mains, including effluent application to sprayfields

CASS Sanitary Sewer System and Wastewater Treatment Plant

The Camanche South Shore Recreation Area encompasses 1,744.46 acres of land, with approximately 140 acres developed for camping and recreation, including a marina, a mobile-home park, ranger station, general store, snack bars, a water treatment plant, and a sanitary sewer system, with respective treatment plant. EBMUD owns and operates the CASS sanitary sewer system and the treatment plant.

The CASS sanitary sewer system consists of approximately 47,600 feet of piping, including laterals from 278 mobile homes and RV campground connections. CASS has 22 manholes and seven lift stations. The treatment plant consists of three treatment ponds that receive wastewater from the entire park through a series of lift stations and a single force main. Pond Nos. 1 and 2 are equipped with floating mechanical aerators, which perform treatment through oxidation and reduction. Pond No. 3 is the effluent pond, disposing of the treated wastewater through evaporation and percolation.

CASS Wastewater System - yellow = sewer laterals, green = sanitary sewer lines, and purple = force mains

PARA Sanitary Sewer System and Wastewater Treatment Plant

EBMUD owns and operates the Pardee Recreation Area sanitary sewer system and respective treatment plant. The recreational area includes mobile homes, designated RV area, “dry” campsites, a marina, and a coffee shop. The wastewater treatment facility is located at the north end of the Pardee Reservoir, approximately 10 miles north of Valley Springs.

The PARA sanitary sewer system consists of approximately 4,800 feet of gravity fed piping that serves the 103 mobile homes and 98 RV connections. Shower and laundry facilities are available for the RV residents and mobile home occupants, with public restrooms servicing the 95 “dry” campsites, plus the marina area. Laterals from an onsite RV holding tank dump station and fish cleaning station discharge by gravity into the sanitary sewer system.

PARA’s wastewater flow is lower in the winter months as the recreation area is closed during November through January. Only five permanent residents, concessionaire caretaker and maintenance crews, remain onsite year-round.

The PARA treatment plant includes two concrete-lined ponds and an effluent spray land application area. The two ponds store the collected wastewater during the wet weather months. The pond area is surrounded by gunite diversion ditches which capture stormwater runoff and direct it away from the ponds. The ponds are eight to ten feet deep, with an emergency overflow set below the top of Pond No. 1, where wastewater then drains into Pond No. 2.

PARA Wastewater System - yellow = sewer laterals, green = sanitary sewer lines, and purple = force main, including effluent application to sprayfields, i.e., purple lines by the wastewater treatment ponds

SECTION 5 – Order Prohibitions

The intent of this Spill Plan is to comply with the Order's three prohibitions, as listed below:

- 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

- 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

- 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, see Definitions.

SECTION 6 – Order's Spill Categories and Required Regulatory Notifications

A sewage spill is defined as *a discharge of sewage caused by an overflow, release, or diversion of untreated wastewater of any volume from the sanitary sewer system*. Pardee Area sanitary sewer systems consist of upper and lower sewer laterals, collection pipeline systems, and lift stations (CANS and CASS), that deliver domestic sewage for treatment to the respective permitted wastewater treatment plant. For CIWQS reporting, a spill from a lateral that does not impact a water body is referred to as a "Non-Category 1 Lateral Spill."

The following table includes a summary for the five spills category, as listed in the Order:

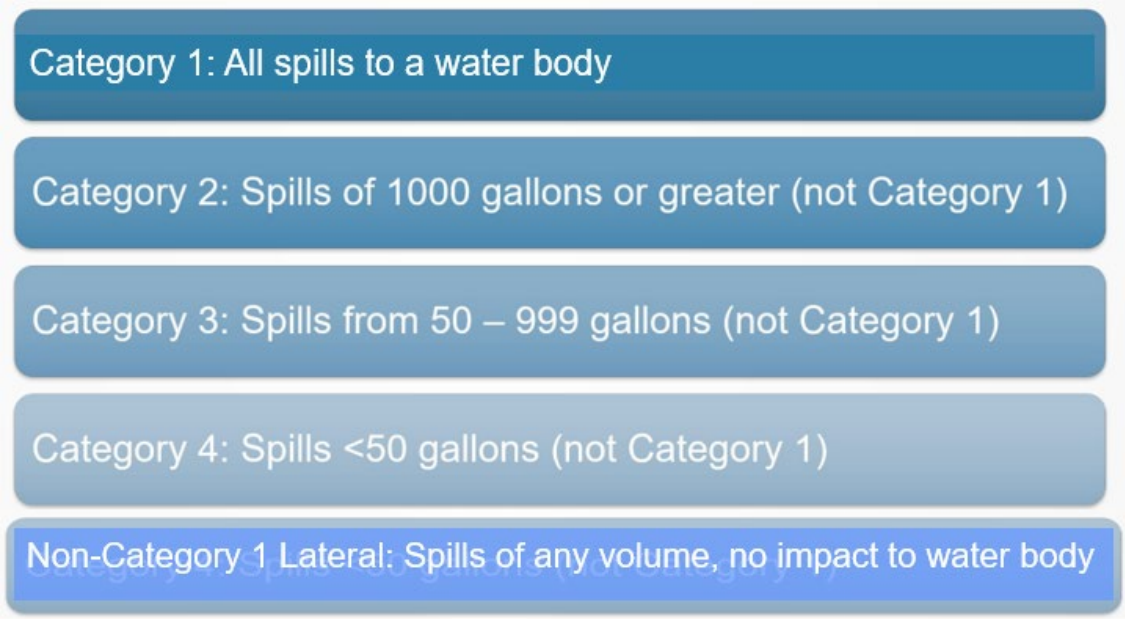
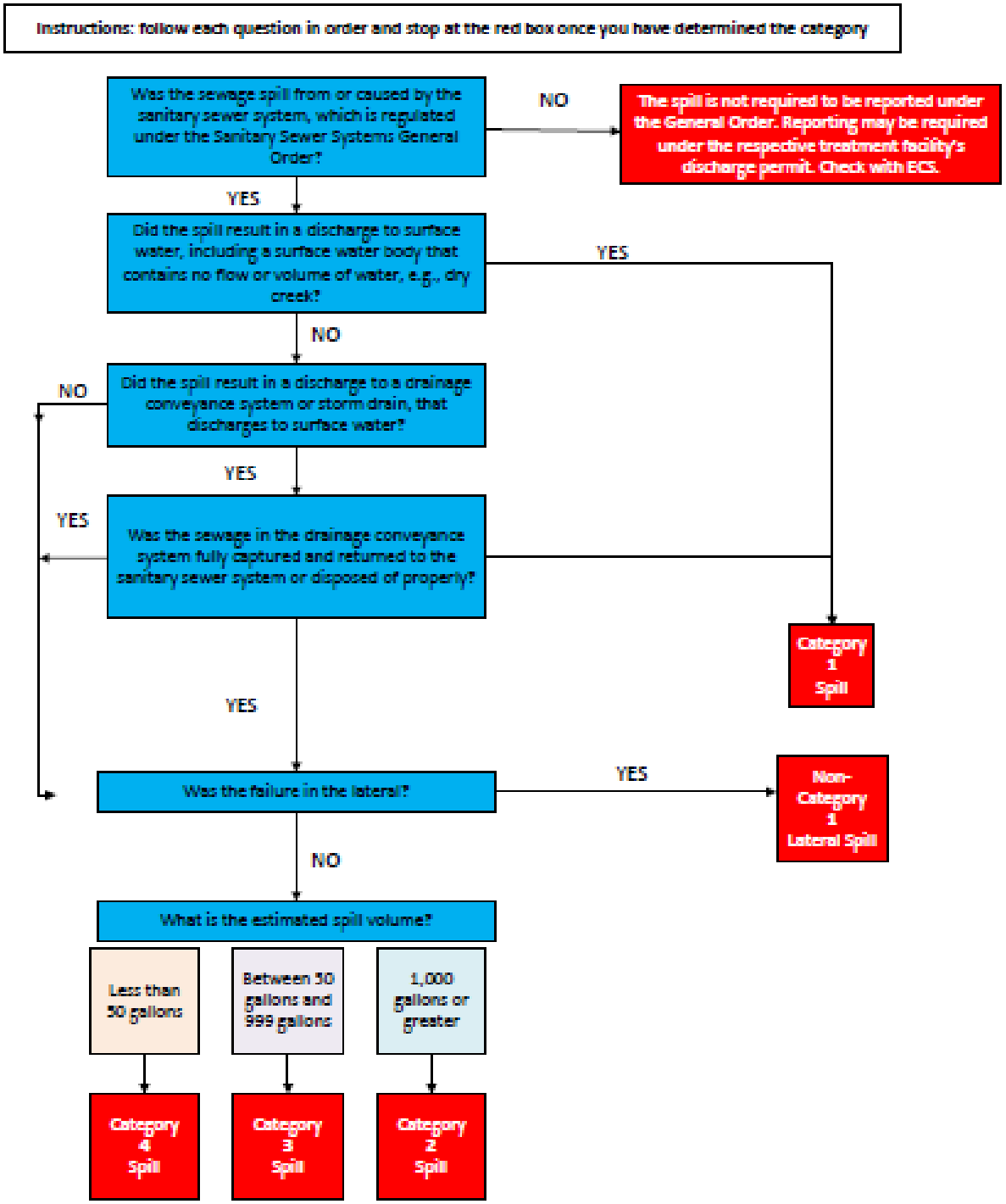


Table 1 below includes a flowchart that facilitates spill categorization as defined in the State Board's Order:

Table 1 - Spill Category Determination Flowchart



The Order has specific reporting and monitoring requirements for each spill category as detailed in the respective tables below. Note certain spills categories are required to be reported to California Office of Emergency Services (Cal OES) within two hours after becoming aware of the spill. It is important Pardee Area staff notify the assigned Environmental Compliance Section Specialist for Pardee Area (ECS Specialist) or Regulatory Compliance Office (RCO) standby staff as soon as possible, so they can perform the required notifications. Refer to Section 7 for reporting details.

All spill categories are required to be reported through CIWQS, the State Board's sanitary sewer systems' online portal. In addition, CVRWQCB requires notification by telephone and electronic mail, followed by submittal of a Spill Notification Report.

Amador County (CANS and PARA) and Calaveras County (CASS) have requested that EBMUD notify them of all sewage spills to the environment. In addition, due to EBMUD's Federal Energy Regulatory Commission (FERC) license for its Camanche Powerhouse and Pardee Powerhouse, sewage releases within the FERC boundary are required to be reported to the agency. If there is potential impact to raw water intake pipes for Pardee Area's water treatment plants, the Department of Drinking Water must be notified as necessary. Table 3 Notification Flowchart includes details on reporting to regulatory agencies.

The following summary tables include the notification, monitoring, and reporting requirements for each spill category:

Category 1 Spill

Requirement	Spill Category 1: Spills to Surface Waters
Notification	Within two 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.
Monitoring	• Conduct visual monitoring; For spills of 50,000 gallons or greater to surface waters: • Conduct receiving water sampling within 18 hours of initial knowledge of spill
Reporting	• Submit Draft Spill Report within three business days of the 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 of 50,000 gallons or greater; • Submit Amended Spill Report within 90 calendar days after the spill end date.

Category 2 Spill

Requirement	Spill Category 2: Spills of 1,000 Gallons or Greater That Do Not Discharge to Surface Waters
Notification	Within two hours of the 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.
Monitoring	• Conduct visual monitoring.
Reporting	• Submit Draft Spill Report within three business days of the knowledge of the spill; • Submit Certified Spill Report within 15 calendar days of the spill end date; • Submit Amended Spill Report within 90 calendar days after the spill end date.

Category 3 Spill

Requirement	Spill Category 3: Spills of Equal to or Greater than 50 Gallons and Less Than 1,000 Gallons That Do Not Discharge to Surface Waters
Notification	Not Applicable
Monitoring	Conduct visual monitoring.
Reporting	• Submit monthly Certified Spill Report to the online CIWQS Sanitary Sewer System Database within 30 Calendar days after the end of the month in which the spills occurred; • Submit Amended Spill Report within 90 calendar days after the Certified Spill Report due date.

Category 4 Spill

Requirement	Spill Category 4: Spills Less Than 50 Gallons That Do Not Discharge to Surface Waters
Notification	Not Applicable
Monitoring	• Conduct visual monitoring.
Reporting	• Certify monthly, the estimated total spill volume and the total number of all Category 4 spills into CIWQS, within 30 days after the end of the calendar month in which the spills occurred. • Upload and certify a report of all Category 4 spills to CIWQS, by February 1st after the end of the calendar year in which the spills occurred.

Non-Category 1 Lateral Spill

Requirement	Enrollee Owned and/or Operated Lateral Spills That Do Not Discharge to Surface Waters
Notification	Within two 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. • Not applicable to a spill of less than 1,000 gallons.
Monitoring	• Conduct visual monitoring.
Reporting	• Upload and certify a report of all lateral spills (that do not discharge to a surface water) to CIWQS, by February 1st after the end of the calendar year in which the spills occurred. • Report a lateral spill of any volume discharged to a surface water as a Category 1 spill.

SECTION 7 - Spill Response Regulatory Notification Process

During business hours, the ECS Specialist will perform the necessary notifications. For nonbusiness hours, RCO standby staff will perform the notifications, with required follow-up by the ECS Specialist on the next business day.

Cal OES has to be notified within two hours of EBMUD becoming aware of any spill ≥1,000 gallons, discharging or threatening to discharge to waters of the State, i.e., drainage conveyance system and/or surface water body. The Order states that the Cal OES two-hour notification requirement applies to spills classified as Category 1, Category 2, and sewer laterals, where the spill is ≥1,000 gallons.

To avoid misunderstanding on the type of spill and notification requirements, all spills should be immediately reported to RCO standby staff or ECS Specialist. They will determine what type of spill occurred and notify accordingly.

The following details the regulatory notification process:

- Provide Cal OES the required information listed in Table 2 - Spill Reporting Information. This information is provided by Pardee Area staff.

  Obtain and record the Cal OES Control Number provided by the representative.

  Note – RCO standby staff is required to provide updates to Cal OES for substantial changes, discharge volume estimate, spill stop time, and any changes to known environmental impacts, until ECS Specialist for Pardee Area assumes that responsibility during business hours.

- For all sewage spills regardless of volume or category, notify the CVRWQCB, the respective county environmental health department, in addition to identified internal work groups as listed in Table 3 - Notification Flow Chart. The internal work groups will notify other applicable agencies as deemed necessary.

- For all spills where a regulatory agency is notified, submit a Daily Operations Report for the incident through electronic mail, with a cc to ECS Specialist (if completed by RCO standby staff), Process Engineering, and Water Resources, so they can handle any additional communications with FERC and/or other regulatory agencies.

Cal OES and/or other regulatory agencies responding to the initial Cal OES "interagency" notification may inquire on the status of public health alerts and water quality sampling. These tasks are the responsibility of Pardee Area staff. Impacted areas should be cordoned off to restrict public access. State Board Order-required sampling must be conducted within 18 hours of initial knowledge of a Category 1 spill ≥50,000 gallons. Voluntary water quality monitoring can typically wait until daylight if deemed necessary. Refer to Section 8, for response procedure for spill to a water body.

Table 2 below includes the required information for reporting to Cal OES. RCO/ECS need to update Cal OES if spill volumes change.

Table 2 - Spill Reporting Information

Information Items	Details
Staff notifying Cal OES, name, cell phone number	
Estimated spill volume discharged, gals.	
If ongoing, estimated spill discharge rate, gpm	
Brief narrative of incident	
On-scene point of contact, name/cell number	
Date and time staff became aware of spill	
Facility name and address, spill location, coordinates	
Cause of spill, if known	
Whether spill has been contained	
Estimate of volume recovered, if any	
Impact to surface water, name of water body	
Impact to drain conveyance	
Indications potable water supply is/may be impacted	
Other known impacts	

Refer to Table 3 - Notification Flow Chart, on the following page to determine what agencies need to be notified for the specific incident. ECS Specialist will complete the necessary regulatory reporting through the State Board's CIWQS online portal, in addition to the CVRWQCB.

Table 3 - Notification Flow Chart

Event	Location	Agencies	Reporting Requirements	Standby Notification Requirements

SSO
Release from collection system
	• Camanche Reservoir
	  ○ CANS
	  ○ CASS
	• Pardee Reservoir
	  ○ PACT
	  ○ PARA
		• OES
		• Central Valley RWQCB
		• Amador Co. Environmental Health (CANS & PARA)
		• Calaveras Co. Environmental Health (CASS & PACT)
			Notify:
			• OES if SSO is ≥1,000 gallons
			• Central Valley RWQCB
			• Amador Co.
			• Calaveras Co.
			} any volume discharged
				• OES - 2 hours
				• Central Valley RWQCB when OES is notified
				• Amador Co.
				• Calaveras Co.
				} within 24 hours

Non-SSO: Unauthorized discharge from wastewater treatment plant (WWTP)	• CANS WWTP • CASS WWTP • PACT WWTP • PARA WWTP	• OES • Central Valley RWQCB • Amador Co. Environmental Health (CANS & PARA) • Calaveras Co. Environmental Health (CASS & PACT)	Notify: • OES for wastewater containment failures and any volume discharged to surface water • Central Valley RWQCB for all WWTP releases • Amador Co. (CANS & PARA) • Calaveras Co. (CASS & PACT) } any volume discharged to surface water or if impact to public health	• OES • Central Valley RWQCB } asap • Amador Co. (CANS & PARA) • Calaveras Co. (CASS & PACT) } within 24 hours if impact to surface water; asap if impact to public health
Non-SSO: Other scenarios: • Broken RV sewer connection • RV Dump Station overflow	• CANS Recreation Area • CASS Recreation Area • PARA Recreation Area	• OES • Central Valley RWQCB • Amador Co. Environmental Health (CANS & PARA) • Calaveras Co. Environmental Health (CASS)	Notify: • OES • Central Valley RWQCB • Amador Co. • Calaveras Co. } any volume discharged to surface water or impact to public health	• OES • Central Valley RWQCB } asap • Amador Co. (CANS & PARA) • Calaveras Co. (CASS & PACT) } within 24 hours if impact to surface water; asap if impact to public health

Notify internal stakeholders through DOR, including Process Engineering if water treatment plant intake pipe impacted; Water Resources for Federal Energy Regulatory Commission "FERC" notification if reporting release to a regulatory agency

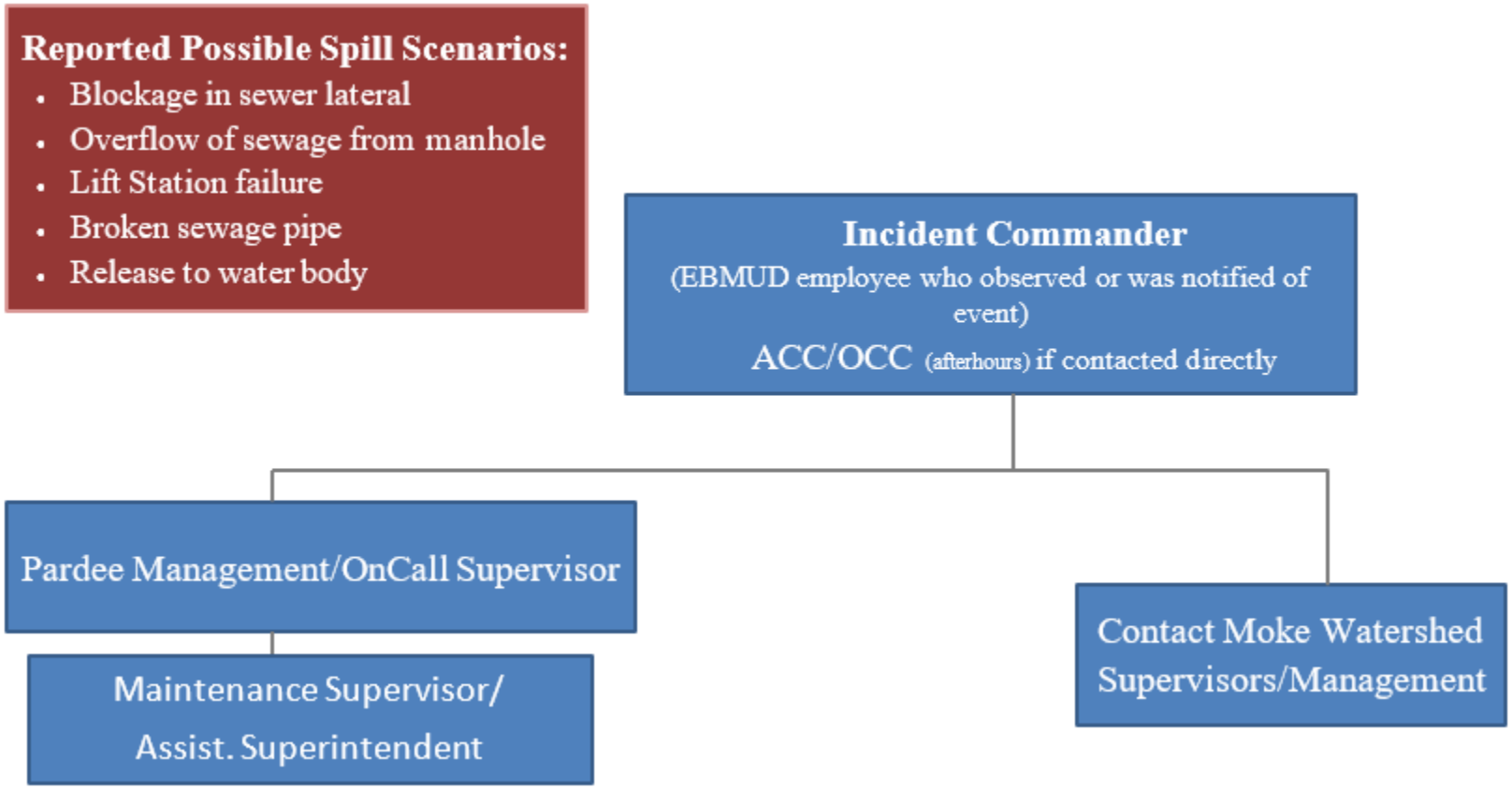
SECTION 8 - Pardee Area Sanitary Sewer Systems Spill Emergency Reporting Procedure

This procedure was developed to protect the waters of the State and public health within the Pardee Area. Key steps for a successful spill response include:

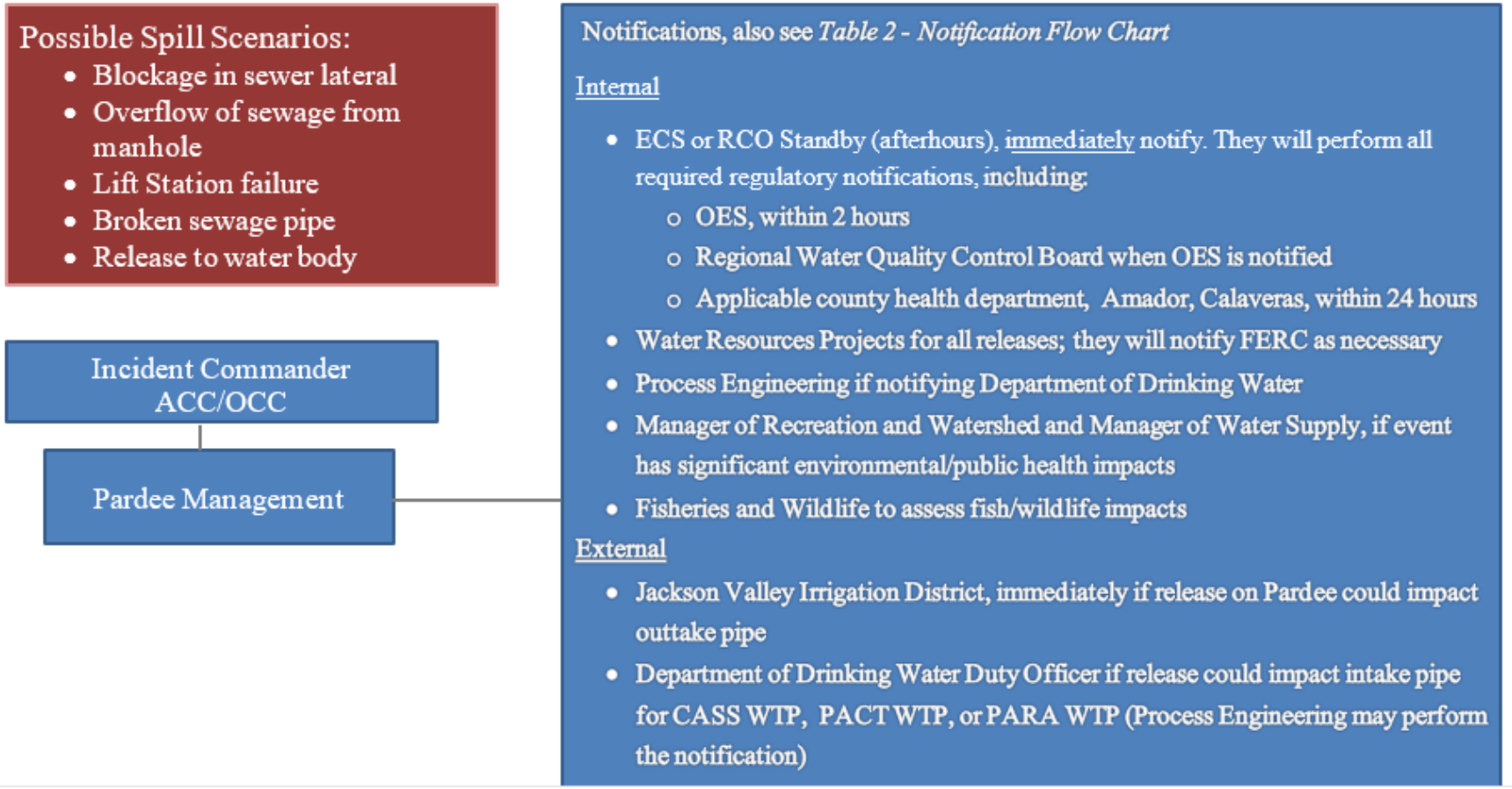
- Identify and deploy necessary resources in a timely manner.
- Delegate notifications, ECS Specialist/RCO is responsible for regulatory notifications and can also notify internal workgroups that manage FERC and Department of Drinking Water permits.
- If possible and safe to do, contain sewage release and prevent it from entering a water body, including drainage conveyance systems.
- Photodocument and video clip event prior to and after conducting any clean-up. Photos and video clips are extremely important for regulatory reporting and justification for estimated volume. At a minimum, include the following photos:
    - System location where spill originated
    - Drainage conveyance system entry location(s)
    - Discharge location(s) for surface water
    - Extent of spill spread, and location(s) of clean-up
- Use the *Spill Response Field Report* worksheets included in the *Go-To-Response Kit* to document the event. ECS/RCO will need the information for regulatory reporting.
- Be familiar with the different methods for calculating sewage release volumes and event start time. Document all calculations. The *Spill Response Field Report* worksheets include guidance on how to perform a sound calculation(s) for estimated spill volume, in addition to how to determine the spill start time.

The following established procedures include identified spill scenarios that potentially could occur within the Pardee Area. These types of spills are regulated through the State Board's Order, in addition to the CVRWQCB's wastewater discharge permits that regulate the wastewater treatment plant treating the sewage from the impacted collection system.

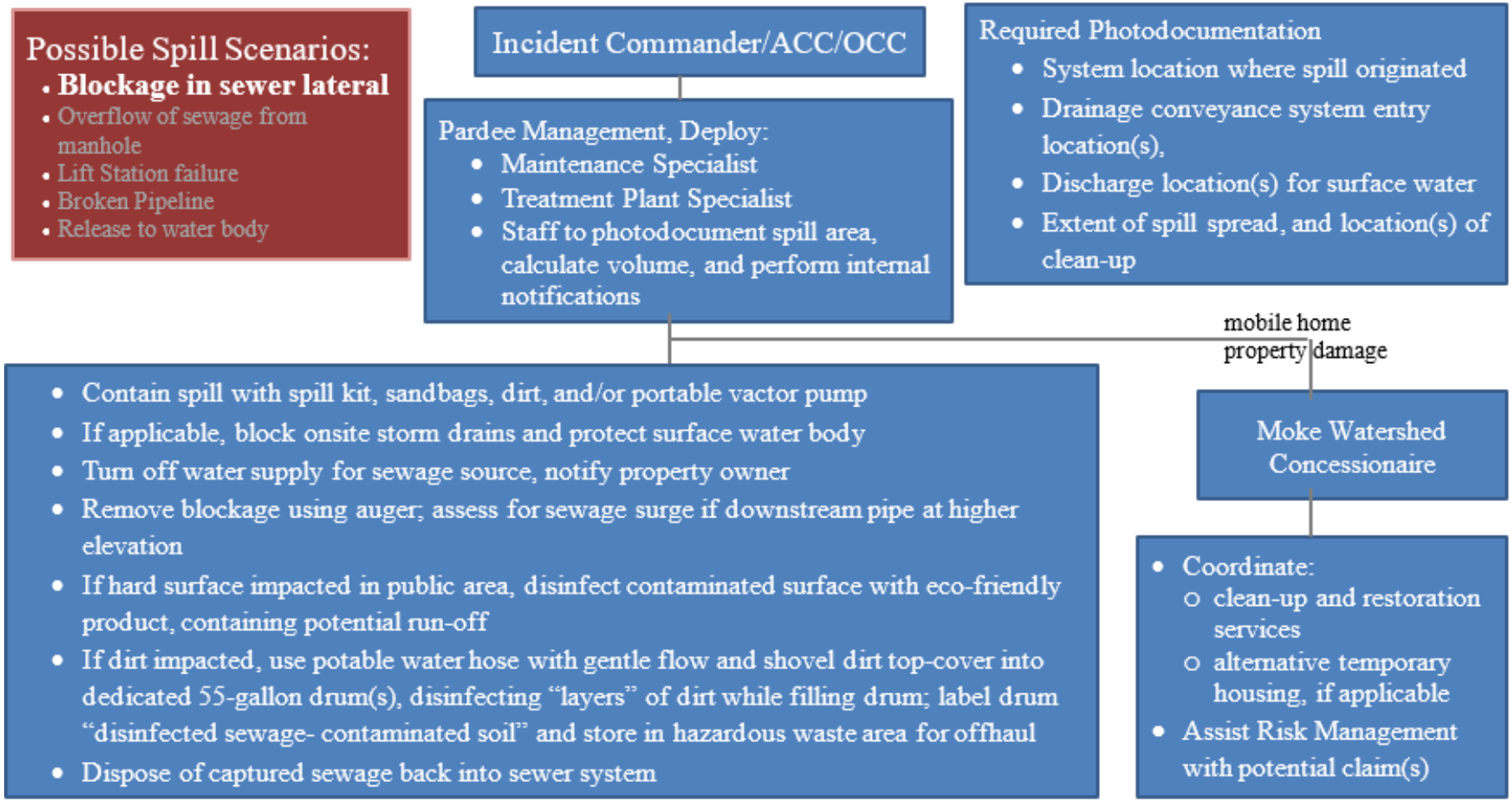
Spill Response – Overview of Spill Scenarios and Communication Process



Spill Response – Notification Process



Spill Scenario – Blockage in Sewer Lateral



Spill Scenario – Overflow of Sewage from Manhole

Possible Spill Scenarios:
- Blockage in sewer lateral
- **Overflow of sewage from manhole**
- Lift Station failure
- Broken sewage pipe
- Release to water body

Incident Commander/ACC/OCC

Pardee Management, Deploy:
- Maintenance Specialist
- Treatment Plant Specialist
- Staff to photodocument spill area, calculate volume, and perform internal notifications

Required Photodocumentation
- System location where spill originated
- Drainage conveyance system entry location(s),
- Discharge location(s) for surface water
- Extent of spill spread, and location(s) of clean-up

- Contain spill with spill kit, sandbags, dirt, and/or portable vactor pump
- If applicable, block onsite storm drains and protect surface water body
- Turn off water supply for sewage source and notify customers
- CCTV line to identify blockage
- Remove blockage using auger or water pressure jetter
- Flush affected line with water hose
- Dispose of captured sewage back into sewer system
- If hard surface impacted, disinfect contaminated area with eco-friendly product, containing potential run-off
- If dirt impacted, use potable water hose with gentle flow and shovel dirt top-cover into dedicated 55-gallon drum(s), disinfecting "layers" of dirt while filling drum; label drum "disinfected sewage-contaminated soil" and store in hazardous waste area for offhaul
- If blockage due to nondisperable product or FOG, provide outreach to nearby property owners
- Debrief on lessons learned
- Develop and implement corrective action(s) to prevent reoccurrence

Spill Scenario – Lift Station Failure

Possible Spill Scenarios:
- Blockage in sewer lateral
- Overflow of sewage from manhole
- **Lift Station failure**
- Broken sewage pipe
- Release to water body

Incident Commander/ACC/OCC

Pardee Management, Deploy:
- Maintenance Specialist
- Treatment Plant Specialist
- Electrician
- Instrument Technician
- Staff to photodocument spill area, calculate volume, and perform internal notifications

Required Photodocumentation
- System location where spill originated
- Drainage conveyance system entry location(s),
- Discharge location(s) for surface water
- Extent of spill spread, and location(s) of clean-up

- Contain spill with spill kit, sandbags, dirt, and portable vactor pump, deploying at upstream manholes as needed
- If applicable, block onsite storm drains and protect surface water body
- Identify failed pump(s) and responsible component(s)
- If possible, turn on back-up pump(s)
- Turn off water supply for sewage source, close valves at bathrooms and PARA fish station, if applicable
- Notify customers of limited or no sanitary sewer service
- Dispose of captured sewage back into sewer system
- If hard surface impacted, disinfect contaminated area with eco-friendly product, containing potential run-off
- If dirt impacted, use potable water hose with gentle flow and shovel dirt top-cover into dedicated 55-gallon drums, disinfecting "layers" of dirt while filling drum; label drum "disinfected sewage-contaminated soil" and store in hazardous waste area for offhaul
- Repair pump(s)
- Debrief on lessons learned
- Develop and implement corrective action(s) to prevent reoccurrence

Spill Scenario – Broken Sewage Pipe

Possible Spill Scenarios:
- Blockage in sewer lateral
- Overflow of sewage from manhole
- Lift Station failure
- **Broken sewage pipe**
- Release to water body

Incident Commander/ACC

- Contain spill with spill kit, sandbags. dirt, and portable vactor pump
- If applicable, block onsite storm drains and protect surface water body
- If possible, turn off lift station pump(s)
- Turn off water supply for sewage source
- Notify customers of limited or no sanitary sewer service
- Remove broken pipe, capping ends of intact pipeline
- Install new piece of pipe, securing both ends to existing pipe
- Dispose of captured sewage back into sewer system
- If hard surface impacted, disinfect contaminated area with eco-friendly product, containing potential run-off
- If dirt impacted, use potable water hose with gentle flow, then shovel dirt top-cover into dedicated 55-gallon drums, disinfecting "layers" of dirt while filling drum; label drum "disinfected sewage-contaminated soil" and store in hazardous waste area for offhaul
- Debrief on lessons learned

Pardee Management, Deploy:
- Maintenance Specialist
- Treatment Plant Specialist
- Staff to photodocument spill area, calculate volume, and perform internal notifications

Required Photodocumentation
- System location where spill originated
- Drainage conveyance system entry location(s),
- Discharge location(s) for surface water
- Extent of spill spread, and location(s) of clean-up

Spill Scenario – Release to Surface Water Body

Possible Spill Scenarios:
- Blockage in sewer lateral
- Overflow of sewage from manhole
- Lift Station failure
- Broken sewage pipe
- **Release to water body**

Incident Commander/ACC/OCC

Pardee Management, Deploy:
- Maintenance Specialist
- Treatment Plant Specialist
- Staff to photodocument spill area, calculate spill volume, and perform internal notifications

- Contain spill with absorbent booms, sandbags – "get-ahead of spill" far enough downstream if safe to do so
- Coordinate public use restrictions with Moke; post public health warnings
- For Pardee Reservoir, determine if release could impact intake pipes for PACT WTP, PARA WTP, or Jackson Valley Irrigation District's outtake pipe
- For Camanche Reservoir, determine if release could impact WTP intake pipes
- Promptly turn off applicable water pumps on impacted reservoir, and/or shutdown WTP with impact potential
- If possible, capture solids with dedicated net, collect in , dedicated bucket or lined garbage bin, and dispose in nonpublic use trash receptacle
- Collect samples as necessary, required for releases ≥50,000 gallons, within 18 hours of knowledge of spill
- Replenish spill kit(s) as necessary
- Debrief on lessons learned
- Develop and implement corrective action(s) to prevent reoccurrence

Required Photodocumentation
- System location where spill originated
- Drainage conveyance system entry location(s), discharge location for surface water, extent of spill spread, and location(s) of clean-up
- Water body bank, including erosion
- Floating matter
- Oil sheen, discoloration, impact to water body
- Sampling access restrictions due to safety concerns

Spill Scenario – Release to Surface Water Body, cont.

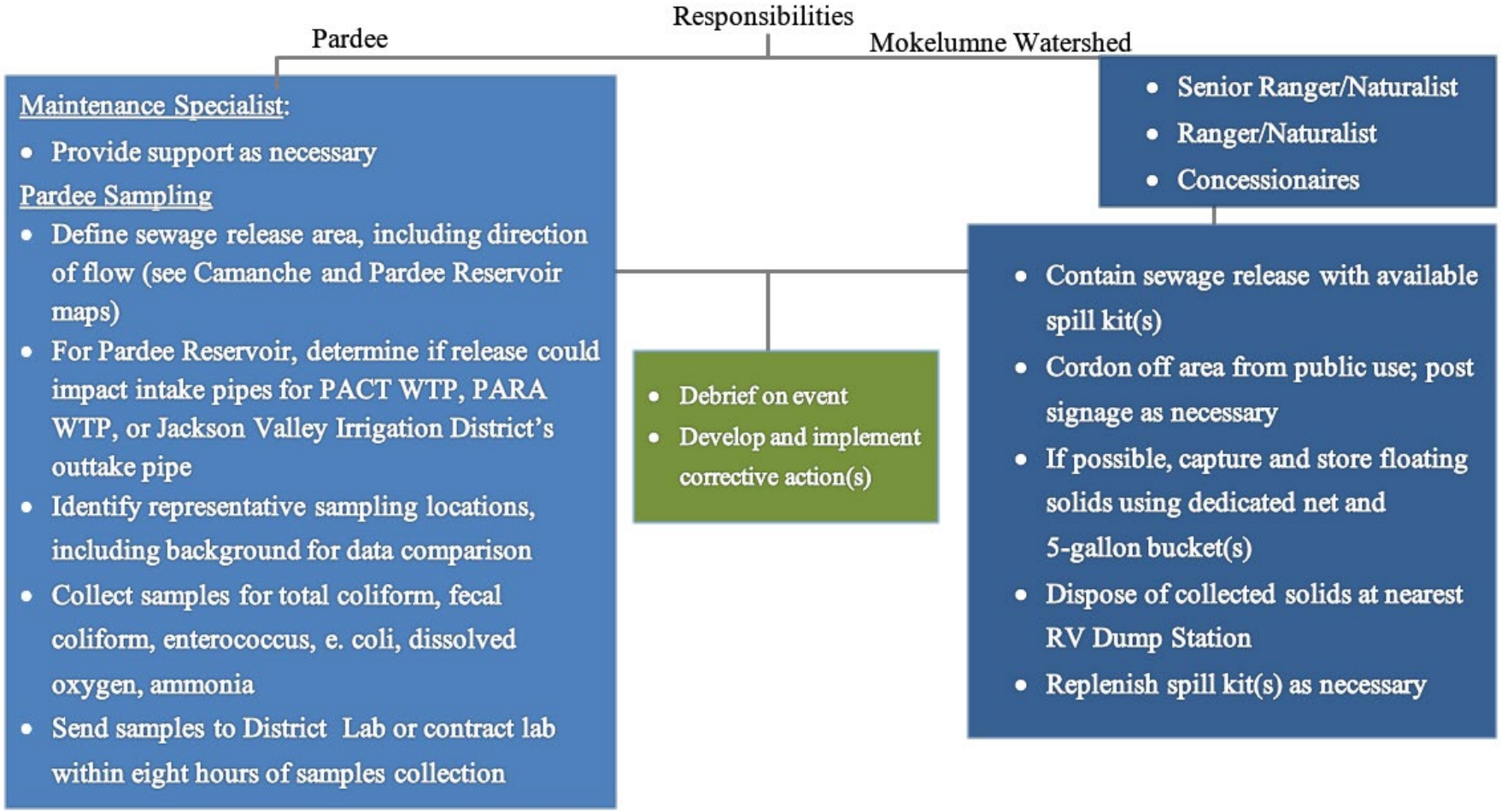
Spill Area and Spread Documentation:

- Define spill area, including direction of flow, use enclosed reservoir maps as reference, print copy for spill mark-ups
- Estimate spill travel time to surface water body; for drainage conveyance system, estimate spill travel time from point of entry to point of discharge to water body

Surface Water Body Sampling:
Required for spills ≥50,000 gallons, conduct within 18 hours of knowledge of spill to water body:

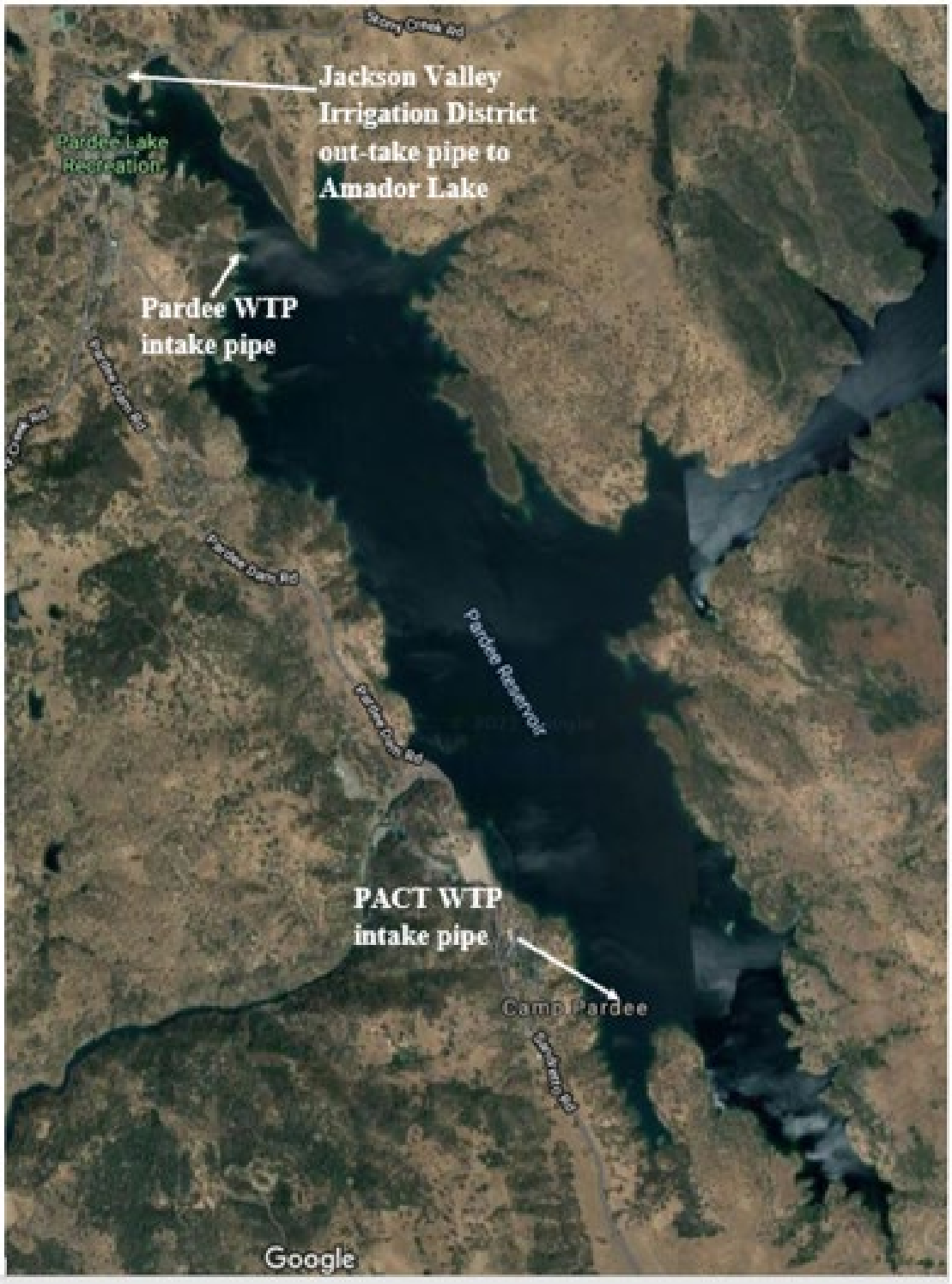
- As applicable, collect water samples at the following four representative locations, for each day of duration of spill:
  - Point in drainage conveyance system, upstream of discharge location to water body
  - Initial sewage discharge location into water body
  - Upstream of sewage discharge location to capture ambient conditions
  - Downstream of sewage discharge location where spill material is fully mixed within water body
- Document access restrictions to locations if safety Identify representative sampling locations, including background for data comparison
- Collect samples for total coliform, fecal coliform, enterococcus, e. coli, ammonia, and dissolved oxygen
- Send samples to District Lab or contract lab within eight hours of samples collection, see enclosed COC link and lab information

Spill Scenario – Release to Surface Water Body, cont.



Camanche Reservoir Aerial Map - CASS WTP Intake Pipe

Pardee Reservoir Aerial Map - Intake Pipes



Chain-of-Custody Links and Laboratory Information

Sampling Event

- Make a copy of attached chain-of-custody (COC) template or download from
  I:\LAB\up country\Alpha - Elk Grove\Emergency Sewage Release Response Camanche.docx
  I:\LAB\up country\Alpha - Elk Grove\Emergency Sewage Release Response Pardee.docx

- Use Alpha, contract laboratory, if applicable

- Make copy of applicable reservoir map to depict defined sewage release area.

- Provide copy of COC and applicable aerial map ECS, with field documentation and estimated estimated sewage release volume

Alpha Analytical Laboratories, Inc.
9090 Union Park Way, Suite 113
Elk Grove, CA 95624
Ph: (916) 686-5190
Hours: M-F 8:00 AM – 5:00 PM

Primary Contact:
Adam Angulo
adam@alpha-labs.com
Ph: (916) 686-5190
Cell (916) 812-8949

Alternate Sample Drop Locations:
Calaveras:
Angels Camp City Hall
584 S. Main St.
If you are facing the building, the box is located in the back right corne
Combination Code is 2800
Pickup Schedule: M-F at 1000/No weekend schedule.

Alpine:
Big Trees
pickup service 1st and 2nd Wednesday a month at 1030

San Andreas:
Calaveras PUD
506 W ST Charles St, San Andreas
Pickup Schedule: M-F at 1000, Sat, Sun/holiday at 1030

Amador Water Agency
12800 Ridge Road
Sutter Creek CA
Pickup Schedule: M-F 1300, Sat-Sun/Holidays 1030.
Bacti and NO3/NO2 bottles available for pickup.

Calaveras County DPH
891 Mountain Ranch Road
San Andreas, CA 95249
Phone: (209) 754-6608
No lock box.
Bacti and NO3/NO2 bottles available for pickup

Chain-of-Custody Template - Camanche Reservoir

EBMUD

Template:	Project Title: [UPC CANS WW] Camanche North Shore Wastewater	Client PM: Anthony Boitano (209) 772-8368	Expect Date:
COC #:	TAT: Standard	Lab PM: Kristi Schwab (510) 287-1696	Sampled By:
			☐ Samples transported on ice

Date	Time	Site/Locator	Sample ID	Type	Matrix	ID	Type	Tests Required
		RES CAMANCHE - MISC	-01	GRAB	Aqueous	-01A	BACT	Colilert 18 QT-AQ (SM 9223B)
						-01B	PLSTL	Ammonia: Titr-AQ (SM 4500-NH3 C)
								Field Test Parameters: DO = mg/L

Field Comments: Sample Location:

Field Instructions: **Sub to Alpha–Elk Grove if unable to submit to EBMUD Laboratory. See emergency response procedure for Alpha contact information.**

Date	Time	Site/Locator	Sample ID	Type	Matrix	ID	Type	Tests Required
		RES CAMANCHE - MISC	-02	GRAB	Aqueous	-02A	BACT	Colilert 18 QT-AQ (SM 9223B)
						-02B	PLSTL	Ammonia: Titr-AQ (SM 4500-NH3 C)
								Field Test Parameters: DO = mg/L

Field Comments: Sample Location:

Field Instructions: **Sub to Alpha–Elk Grove if unable to submit to EBMUD Laboratory. See emergency response procedure for Alpha contact information.**

Total Containers:

	Signature	Print Name	Time	Date
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				

Container Legend:

BACT = Plastic, sterile, Na2S2O3, 120 mL

PLSTL = Plastic, WM, 1000 mL

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C)

Chain-of-Custody Template – Pardee Reservoir

East Bay Municipal Utility District Laboratory Services Subcontract Chain of Custody Record

EBMUD	Template: COC #:	Project Title: [UPC PARA WW] Pardee Rec Area Wastewater Monitoring TAT: Standard	Client PM: Anthony Boitano (209) 772-8368 Lab PM: Kristi Schwab (510) 287-1696

Expect Date:
Sampled By:
☐ Samples transported on ice

Date	Time	Site/Locator	Sample ID	Type	Matrix	ID	Type	Tests Required
		RES PARDEE - MISC	-01	GRAB	Aqueous	-01A	BACT	Colilert 18 QT-AQ (SM 9223B)
						-01B	PLSTL	Ammonia: Titr-AQ (SM 4500-NH3 C)
								Field Test Parameters: DO = mg/L

Field Comments: Sample Location:
Field Instructions: **Sub to Alpha–Elk Grove if unable to submit to EBMUD Laboratory. See emergency response procedure for Alpha contact information.**

Date	Time	Site/Locator	Sample ID	Type	Matrix	ID	Type	Tests Required
		RES PARDEE - MISC	-02	GRAB	Aqueous	-02A	BACT	Colilert 18 QT-AQ (SM 9223B)
						-02B	PLSTL	Ammonia: Titr-AQ (SM 4500-NH3 C)
								Field Test Parameters: DO = mg/L

Field Comments: Sample Location:
Field Instructions: **Sub to Alpha–Elk Grove if unable to submit to EBMUD Laboratory. See emergency response procedure for Alpha contact information.**

Total Containers:

	Signature	Print Name	Time	Date
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				

Container Legend:
BACT = Plastic, sterile, $Na_2S_2O_3$, 120 mL
PLSTL = Plastic, WM, 1000 mL

Page 1 of 1 for C000429

SECTION 9 – Training

Pardee Area staff receive new employee training, followed by annual refresher training, on the applicable spill response procedures for their job responsibilities. Assigned Pardee Area staff include Wastewater Maintenance Crew, Water Quality Crew, Supervisors, Assistant Superintendents, Superintendent, and additional staff who receive 24-hour Standby/OnCall duty assignments. In addition, the Mokelumne Watershed Rangers (Rangers) who may assist in a sanitary sewer spill response are also trained annually on the proper response procedures. A Ranger may be the first staff member to become aware of the spill incident as they oversee the management of the recreational areas by the retained concessionaires. Training includes review of the State Board's Order, Pardee Area spill scenarios, and how to calculate sound estimated spill volumes.

SECTION 10 – Spill Response Field Documentation Procedure

The following worksheets establish the required field documentation for regulatory reporting. The worksheets, plus guidance reference material, are included in the Spill Response Field Report as part of the Go-To- Response Kit.

SPILL RESPONSE FIELD REPORT

NOTIFICATION OF SPILL

Notification Timeframe: ☐ During Business Hours ☐ After Business Hours

Received From: ☐ Public Discovery ☐ Employee Discovery ☐ Other: _____

Caller's Name: _____ Phone No. _____

Received by: _____

CALLER INTERVIEW

This information will be used to determine the estimated start/stop of the spill. Complete additional copies of this page if multiple people are interviewed.

☐ Interview Performed by Other and Attached

Name of person being interviewed: _____ Date: _____/____/_____

Interviewed by: _____ Title: _____

Where is the spill located?

Response: _____

_____

When did you first observe the Spill? _____: _____ ☐ AM ☐ PM Date: _____/_____/_____

Response: _____

_____

Is it currently spilling? ☐ Yes ☐ No If YES, How would you describe the spill? If NO, When did it stop?

Interview Prompt: Is it trickling, or more like a garden hose running full?

Response: _____

_____

Can you recall a time prior to seeing the spill when you observed it was not spilling?

Response: _____

_____

Can you describe where the spill is coming from?

Interview Prompt: Cleanouts are the size of dinner plate; manholes are the size of car wheels.

Response: _____

_____

Can you describe the size of the wetted area?

Interview Prompt: Compared to the size of your driveway

Response: _____

Do you know if the spill has reached a water way, storm drain, or gutter? ☐ Yes ☐ No

Response: _____

Photodocument and video clip event, text photos with brief description to Pardee management

RESPONSE AND ASSESSMENT ☐ ☐

First Responder Name: _____ Arrival Time: _____ AM PM

Additional Response Staff, Names: _____

_____

Response Supervisor, Name: _____responsiblefor internal notifications, coordinating response and clean-up

☐ ☐

RCO Notified, Name: _____ Date: ____/____/____ Time: _____: _____ AM PM (Call immediately upon confirmation of Spill event. RCO report to regulatory agencies required within two hours of event.)

Mokelumne Watershed, Name: _____ Date: ____/____/___ Time: _____: _____ ☐ AM ☐ PM

Actively spilling Upon Arrival? ☐ Yes ☐ No Sanitary Sewer Spill: ☐ Yes ☐ No

if no complete the Unauthorized Sewage Release Event Form on Page 3.

Additional Resources Needed: ☐ None ☐ Supervisor ☐ Hydro-Vac ☐ Containment Items ☐ Traffic
☐ Control Devices ☐ Assistance/Personnel (x _____) ☐ Electrical/Instrument Tech
☐ Maintenance Specialist ☐ Public Notification Signage ☐ Confined Space Equipment
☐ Other:_____ __ Resources Requested Time: _____ ☐ AM ☐ PM ☐ N/A

☐ **Estimated Spill Start Time:** _____ **Date:** ___/____/____ ☐ **AM** ☐ **PM**

By: _____

Notes: _____

UNAUTHORIZED SEWAGE RELEASE EVENT: Yes ☐ No ☐

This type of event is an unauthorized discharge of untreated, or partially treated, sewage and not a spill from sanitary sewer system.

These events must also be reported to RCO for notifications to applicable regulatory agencies. Complete forms as applicable for the following events:

☐ Wastewater Pond(s): _____ ☐ Spray System: _____
☐ RV Dump Station: _____ ☐ RV Broken Connection: _____
☐ RV Sewage Hose Leak: _____ ☐ Restroom Overflow: _____
☐ Fish Station: _____ ☐ Floating Outhouse Overturned/Sinking: _____
☐ Other: _____

Comments:

_____

Sewage Impact(s): ☐ Mobile Home(s) ☐ Paved Surface ☐ Restroom(s) ☐ Storm System
☐ Surface Water ☐ Unpaved Surface ☐ Other: _____

SPILL CATEGORY DETERMINATION

Answer the questions below, in order, beginning with Category 1. A "YES" answer to any question determines the spill category. Also, refer to flow chart included in attached Reference Section.

☐ **Category 1** (if answer to ANY question is Yes)

Discharge surface water? ☐ Yes ☐ No
Discharge to drainage system that discharges to surface water, but NOT fully captured? ☐ Yes ☐ No
Exfiltrated to hydraulically connected surface water? ☐ Yes ☐ No

☐ **Category 2** (if spill is NOT a Category 1, and answer to question is Yes)

Is discharge volume 1,000 gallons or greater? ☐ Yes ☐ No

☐ **Category 3** (if spill is NOT a Category 1, and answer to question is Yes)

Is discharge volume between 50 Gallons and 999 Gallons? ☐ Yes ☐ No

☐ **Category 4** (if spill is NOT a Category 1 and, answer to question is Yes)

Is discharge volume less than 50 Gallons? ☐ Yes ☐ No

CONTAINMENT LOCATION (Select all that apply):

☐ Curb & Gutter ☐ Street ☐ Open Space ☐ Storm Drain System ☐ Drainage Channel
☐ Inside Building ☐ Lawn/Landscaped Area ☐ Creek/Stream ☐ Wetland
☐ Other: _____
Description: _____
_____

CONTAINMENT METHOD (Select all that apply)

☐ Inlet Mats ☐ Sandbags ☐ Dirt Dam/Berm ☐ Rubber Berm ☐ Vacuum Retrieval
☐ Spill Kit ☐ Naturally Contained ☐ Hand Dig Trench ☐ Dry Sweep ☐ Pneumatic Plugs
☐ Divert to Sewer System ☐ Absorbent Waddles ☐ Other: _____
Number of Gallons: _____ (Estimate volume of spill recovered (do not count washdown water))
Description: _____
_____

FAILURE LOCATION

☐ Lateral ☐ Gravity Main ☐ Force Main ☐ Air Release Valve
☐ Lift Station ☐ Manhole ☐ Backflow Prevention Device
☐ Other: _____
List Asset ID(s): _____
Age of Failed Asset: _____ Years. If Failure Location is a Pipe: Material: _____ Diameter: _____
Description: _____
_____

SPILL APPEARANCE POINT(S)

Number of Appearance Points: _____

☐ Lateral Clean Out - Private ☐ Lateral Clean Out - Public ☐ Manhole
☐ Force Main ☐ Lift Station ☐ Inside Building
☐ Other: _____

List Asset ID(s) or Address: _____

_____

_____

☐ GPS Coordinates: Longitude: _____ Latitude: _____

NOTE: If more than one appearance point, use coordinates for the point closest to failure point.

RESTORE FLOW (Select all that apply)

☐ Gravity Line Blockage: ☐ Hydro-Vac ☐ Power Rodder ☐ Hand Rods ☐ Excavation ☐ By-Pass

☐ Manhole: ☐ Hydro-Vac ☐ Hand Rods ☐ Confined Space Entry ☐ By-Pass

☐ Lift Station: ☐ Electrical ☐ Mechanical ☐ De-Rag Pump ☐ By-Pass ☐ Generator

☐ Force Main: ☐ Hydro-Vac ☐ By-Pass ☐ Excavation

☐ Lateral: ☐ Cable Machine/Snake ☐ Hand Rods ☐ Excavation

Description of actions taken to restore flow: _____

_____

☐ **Estimated Spill End Time:** _____ ☐ **AM** ☐ **PM Date:** ___/___/___

By: _____

SPILL CAUSE (Select all that apply)

☐ Debris Dirt/Solids ☐ Debris Rags ☐ Non-Dispersible Wipes ☐ Debris Construction
☐ Lift Station – Power Loss ☐ Lift Station - Telemetry/Controls ☐ Lift Station – Mechanical
☐ Vandalism ☐ Root Intrusion ☐ FOG ☐ Pipe/ Structural Failure
☐ Operator Error ☐ Natural Disaster ☐ Capacity Exceeded- I&I
☐ Other: _____

Description: _____

_____

SPILL RESPONSE ACTIVITIES (select all that apply)

☐ Mitigated Effects of the Spill ☐ Contained all or Portion of Spill ☐ Restored Flow
☐ CCTV Inspection for Cause ☐ Clean Drainage Conveyance System ☐ Cleaned Spill Area
☐ Captured and Removed All Washdown Water ☐ Notify Property Owner
☐ Returned All the Spill to Sewer System ☐ Returned Portion of Spill to the Sewer System
☐ Collected Required Coordinates ☐ Collected Required Photos
☐ Other: _____

Description Of Spill Response Actions: _____

_____

FINAL SPILL DESTINATION

Select all that were contacted by the spill, and record GPS coordinates.

☐ Building/Mobile Home ☐ Drainage Conveyance System ☐ Ground Water Infiltration System
☐ Paved Surface ☐ Street/Curb/Gutter ☐ Unpaved Surface
☐ Landscaped Area ☐ Surface Water ☐ Restroom
☐ Other: _____

Destination 1: Longitude: _____ Latitude: _____
Destination 2: Longitude: _____ Latitude: _____
Destination 3: Longitude: _____ Latitude: _____
Description: _____

_____

_____

IMPACT TO RECEIVING WATERS

☐ N/A ☐ Public Closure ☐ Restricted Public Access ☐ Temporary Restricted Use ☐ Other: _____
Notes: _____

_____

ESTIMATED TRAVEL TIME TO RECEIVING WATERS

☐ N/A Point of Entry to Drainage System to Point of Discharge to Receiving Waters: _____ Minutes
Distance from Entry to Drainage System to Discharge to Surface Waters: _____ Feet
Description of Drainage Conveyance System: _____

_____

Description of Receiving Waters: _____

_____

Method to Estimate Travel Time: _____

_____

_____

☐ N/A Spill Appearance Point to Receiving Waters: _____ Minutes
Distance from Spill Appearance Point to Receiving Waters: _____ Feet
Description of Receiving Waters: _____

_____

Travel Time Estimation Method: _____

_____

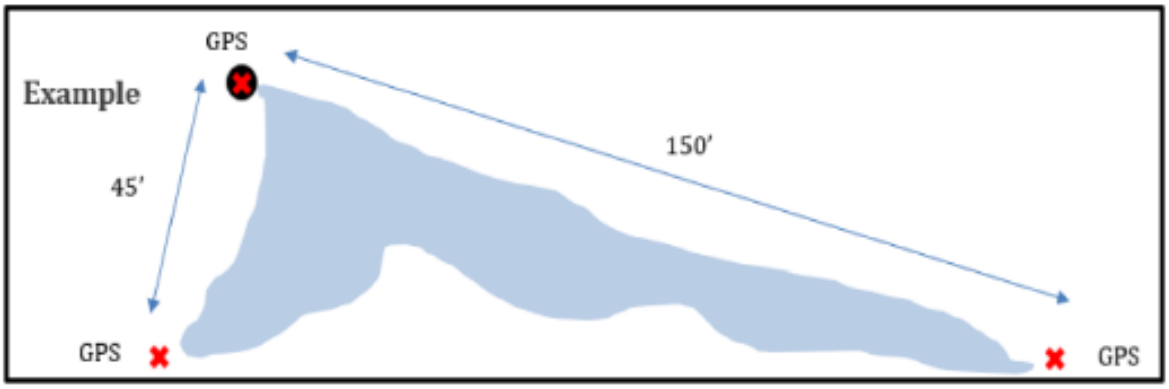
SPILL LOCATION AND SPREAD

Sketch the footprint of the spill and provide dimensions (in feet) for size and extent of spill (use sketch area below).

Include spill appearance point, spill destination(s), and indicate locations where GPS coordinates were taken.

Breakdown the spill footprint into recognizable shapes (area) and determine dimensions of each shape.

Surface Type: ☐ Asphalt ☐ Concrete ☐ Dirt ☐ Other: _____



Spill Event Footprint Sketch

SPILL VOLUME ESTIMATIONS AND METHOD USED

This section documents the data and method used to estimate the volume of the spill. This calculation is an estimate. Please confirm calculated volumes using at least one additional method.

The following methods and tools are industry, standard methods accepted by the State Board. Check all methods and tools that were used to determine the volume:

☐ Eyeball Estimate Method

☐ Measured Volume Method

☐ Duration and Flow Rate Method

☐ Other, Describe below

_____

_____

_____

Eyeball Estimate Method

The volume of small overflows can be estimated using the Eyeball Estimate Method. To use this method, imagine the amount of water that would spill from a container.

Size of bucket(s) or barrel(s)	How many of this Size?	Multiplier	Total Volume Estimated
1 gal. water jug		X 1	
5 gal. bucket		X 5	
32 gal. trash can		X 32	
55 gal drum		X 55	
Total Volume Estimated			

Measured Volume Method

This may take several calculations as you may have to break down the odd shaped spill imprint to rectangles, circles, and polygons. It is important when determining depth, to measure, if possible, in several locations and use an average depth. Industry standard depth for asphalt is 0.0026 feet and concrete 0.0013 feet.

- Draw a sketch of the Spill footprint
- Draw shapes and dimensions used on your sketch
- Use correct formula for various shapes
- Include spill appearance point, spill destination(s), and indicate locations where GPS coordinates were taken.

Rectangle	L x W x D
Circle/Cylinder	Diameter Squared x 0.785 x Depth

Area #1: Depth 1 _____ Depth 2 _____ Depth 3 _____ Depth 4 _____ Depth 5 _____ % Wet_____
Sq/Ft _____ x % Wet_____ = _____Sq/Ft
Ave Depth _____ ☐ Concrete 0.0026' ☐ Asphalt 0.0013'
Volume _____ Cu/Ft

Area #2: Depth 1 _____ Depth 2 _____ Depth 3 _____ Depth 4 _____ Depth 5 _____ % Wet_____
Sq/Ft _____ x % Wet_____ = _____Sq/Ft
Ave Depth _____ ☐ Concrete 0.0026' ☐ Asphalt 0.0013'
Volume _____ Cu/Ft

Area #3: Depth 1 _____ Depth 2 _____ Depth 3 _____ Depth 4 _____ Depth 5 _____ % Wet_____
Sq/Ft _____ x % Wet_____ = _____Sq/Ft
Ave Depth _____ ☐ Concrete 0.0026' ☐ Asphalt 0.0013'
Volume _____ Cu/Ft

Area #4: Depth 1 _____ Depth 2 _____ Depth 3 _____ Depth 4 _____ Depth 5 _____ % Wet_____

Sq/Ft _____ x % Wet_____ = _____Sq/Ft

Ave Depth _____ ☐ Concrete 0.0026' ☐ Asphalt 0.0013'

Volume _____ Cu/Ft

Area #5: Depth 1 _____ Depth 2 _____ Depth 3 _____ Depth 4 _____ Depth 5 _____ % Wet_____

Sq/Ft _____ x % Wet_____ = _____Sq/Ft

Ave Depth _____ ☐ Concrete 0.0026' ☐ Asphalt 0.0013'

Volume _____ Cu/Ft

Area #6: Depth 1 _____ Depth 2 _____ Depth 3 _____ Depth 4 _____ Depth 5 _____ % Wet_____

Sq/Ft _____ x % Wet_____ = _____Sq/Ft

Ave Depth _____ ☐ Concrete 0.0026' ☐ Asphalt 0.0013'

Volume _____ Cu/Ft

Total Volume of all areas:

#1 _____ #2 _____ #3 _____ #4 _____ #5 _____ #6 _____ = _____Cu/Ft

_____ Cu/Ft x 7.48 gallons = _____ Gallons of sewage released

---

Duration and Flow Rate Method

Start Date and Time	1.
End Date and time	2.
Total time elapsed of Spill event (subtract line 1 from line 2. Show time in minutes)	3.
Average flow rate GPM (account for diurnal pattern)	4.
Total volume estimate using duration and flow rate method (Line 3 x Line 4)	5.

Spill Volume Estimation Details: _____

_____

_____

_____

Gals. _____ Estimated volume discharged **to** drainage conveyance system flowing to surface water

Gals. _____ Estimated volume recovered **from** drainage conveyance system flowing to surface water

Gals. _____ Estimated volume discharged **directly** to surface water

Gals. _____ Estimated volume recovered **from** surface water

Gals. _____ Estimated volume discharged **to** land

Gals. _____ Estimated volume recovered **from** discharge to land

Method to Estimate Spill Volume Recovered: _____

_____

_____

☐ Same as Spill Volume Estimation

CLEAN UP TIMELINE

Clean Up Begin: _____: _____ ☐ AM ☐ PM Date: _____/_____/_____

Clean Up Complete: _____: _____ ☐ AM ☐ PM Date: _____/_____/_____

CLEAN UP METHOD: (Select All that Apply):

☐ Fresh Water Washdown ☐ Broom/Rake/Retrieve Solids ☐ Vacuum Retrieval ☐ Soil Removal

☐ Hydro-Jet/Vacuum Retrieve from Storm Conveyance System ☐ Building Restoration

☐ Disinfectants ☐ Other Clean Up Method: _____

_____

Description of Clean Up Activities: _____

_____

_____

_____ Gallons of Washdown Water Used: _____

DISPOSAL OF RECOVERED SEWAGE

☐ Returned to Sewer System ☐ Disposed of at Treatment Plant or Authorized Facility

☐ Other: _____

RESPONSE COMPLETE

Departure Time: _____: _____ ☐ AM ☐ PM Date: _____/_____/_____

SPILL NOTES:

Names of all Spill Response Staff: _____

_____

_____

Date Spill Response Field Report Verified by Response Staff:

Name: _____ Date: _____

Name: _____ Date: _____

Name: _____ Date: _____

Name: _____ Date: _____

OPERATION AND MAINTENANCE DOCUMENTATION

DATE LATERAL/MAINLINE WAS LAST:

CLEANED: _____

CCTV'D: _____

REPLACED/REHABILITATED: _____

DATE LIFT STATION WAS INSPECTED: _____

FOLLOW-UP AND/OR CORRECTIVE ACTION TAKEN

_____

Pardee Checklist for Response to Sewage Spill Event.

Refer to Pardee Sewage Release Go-to-Response Kit for specific procedural steps for event type

- ☐ Determine if sewage spill is from collection system or an unauthorized sewage release
- ☐ Interview person who reported spill event ☐ Respond and assess spill event
- ☐ Identify impacted waters, if applicable
- ☐ Report spill event to Pardee Supervisor, including photos and video clip of source and impacted area
- ☐ Notify RCO immediately upon confirmation of spill event
- ☐ Notify Moke Rangers as necessary
- ☐ Photodocument event for regulatory report, record photos and videos before taking any response measures.
  - ☐ Photos and video of spilling structure, i.e., where spill originated
  - ☐ Photos and video of extent of spill and spill boundaries
  - ☐ Photos and video of drainage conveyance system entry and exit location(s)..... N/A ☐
  - ☐ Photos and video of discharge point(s) into surface water ..... N/A ☐

    If spill entered surface water, photos and video taken of:

  ☐ Water Body Bank Erosion ☐ Water Sheen ☐ Floating Matter ☐ Discoloration ☐ Other Impacts
  - ☐ Photos and video of spill containment in place
  - ☐ Photos and video of post-clean-up site conditions, including entire effected area
  - ☐ Record GPS coordinates for regulatory report:
  - ☐ System location where the spill originated: Longitude: _____, Latitude:_____

  If more than one appearance point, record coordinates for the point closest to failure point

  ☐ If possible, coordinates showing full spread and reach of spill:

  Longitude: _____, Latitude: _____ Longitude: _____, Latitude: _____

  Longitude: _____, Latitude: _____ Longitude: _____, Latitude: _____

  Longitude: _____, Latitude: _____ Longitude: _____, Latitude: _____
- ☐ Implement efforts to contain and return released sewage to the sanitary sewer.
- ☐ Determine spill start time of spill event.
- ☐ Determine spill category, if sewage is from collection system.
- ☐ Sketch out footprint of spill extent, include appearance point(s), destination, locations where coordinates were recorded. Record dimensions in feet.
- ☐ Calculate sewage release volume, using the two most appropriate methods included in resources.
- ☐ Record spill appearance point(s) from collection system.
- ☐ Determine cause of sewage release, using CCTV as necessary.
- ☐ Restore flow to impacted section of collection system.
- ☐ Dispose of recovered sewage back into the collection system.

- ☐ If mobile home property damage, start the claim process with Risk Management, and Moke Rangers.
- ☐ Review all completed forms for accuracy, ensuring consistency with dates, times, volumes, and other data
- ☐ Review photos and videos, including labels and dates.
- ☐ Save all spill event related documentation in a new online Spill Event folder for easy access, including copy of CIWQS print outs and email communication, in addition to copy of Spill Notification Report submitted to the Regional Board R:\Everyone\Regulatory Permits and Plans\SSMP\SSO Incidents.
- ☐ Debrief on spill event and response and determine next steps to prevent recurrence.
- ☐ Review and update asset management, and maintenance records as necessary.
- ☐ Replenish spill response inventory and assets as necessary.

SECTION 11 – Spill Response Key Elements

Key elements for an effective and efficient response to spill events include:

- Review Go-To-Response kit schematics, including communication, notification, and applicable response scenario for spill event.
- Request additional support early on in response for significant events.
- Delegate internal notifications – reminder: RCO standby/ECS specialist is responsible for notifications to regulatory agencies and internal workgroups that manage FERC and DDW permits.
- Photodocument and video clip spill event prior to and after conducting any clean-up. This is extremely important for regulatory reporting and justification for estimated volume.
- To the maximum extent possible, and if safe to do so, contain sewage release and prevent it from entering a water body, including drainage convenance system. Build berms with dirt if no spill kit available or if it is inadequate for event size.
- Use the established Spill Response Field Report worksheets to compile field data for regulatory reporting.
- Be familiar with the different methods for calculating spill volumes and event start time.

Keep your sink a clean, lean draining machine!

Scrape your cooking fats, oils and grease.

EBMUD

Fats, Oils, and Grease are naturally produced during cooking and baking.

Common sources of FOG include:

- Meat fats
- Lard
- Shortening
- Butter
- Margarine
- Fatty/greasy food scraps
- Baked goods and pastries
- Cream-based sauces
- Cooking oil
- Oily salad dressing

Do Not Put Any of These Items Down the Drain

EBMUD

Justin Nickell
209-772-8368
justin.nickell@ebmud.com

EAST BAY MUNICIPAL UTILITY DISTRICT

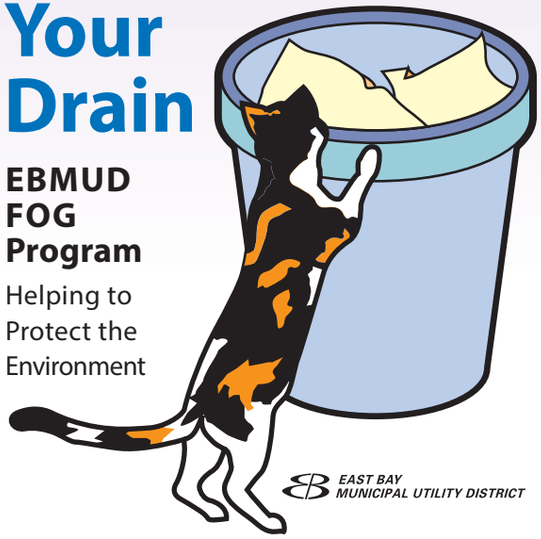
rev. 5/23

Avoid a Clog

Keep Grease Out of Your Drain

EBMUD FOG Program

Helping to Protect the Environment



EAST BAY MUNICIPAL UTILITY DISTRICT

When **fats**, **oils** and **grease (FOG)** are put down your drain they can cause many problems further down the sewer pipe. Liquified grease and fat from animal products will solidify and clog pipes much like a clog in a human artery. Liquid oils can also coat pipes and contribute to blockages. Blockages may cause a sewage backup into your home, resulting in expensive clean up costs and repairs to sewer pipes, your home and belongings. Blockages may also trigger an overflow or backup of sewage into roads or waterways creating a public health risk and threatening the environment.

You Can Help! Please Do Not Dispose of Any Cooking Oils or Grease Down the Drain

By following the guidelines below you may avoid sewer overflows, backups, and costly repairs:

- ✔ Pour all cooled cooking fats, oils and grease that will harden (bacon grease, meat drippings) into a waxed food container such as a milk carton or container with a lid and dispose of it in the garbage or your kitchen scrap recycling.
- ✔ Mix small amounts of liquid grease into your kitchen scrap recycling (where available) or place in a lidded container with an absorbent material such as cat litter, and dispose of in the garbage.
- ✔ Wipe down greasy pots, pans or dishes with a paper towel or newspaper before washing. Dispose of paper in the garbage or your kitchen scrap recycling (where available).
- ✔ Using your EBMUD scraper, scrape greasy food scraps from pots, pans, and dishes into the garbage or kitchen scrap recycling (where available), not a garbage disposal.
- ✔ Do not wash grease down the drain or garbage disposal.

An overflowing toilet can ruin your home in an instant.

Just a small amount of household waste flushed down the toilet (or dumped down the drain or garbage disposal) can clog pipes, cause nasty messes in your home, and result in expensive sewer backups in our community.

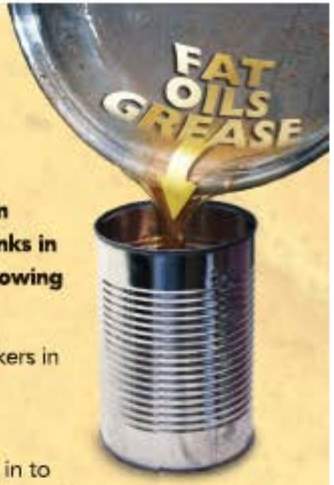
AVOID CLOGS BY KEEPING THESE ITEMS OUT OF YOUR TOILET

Do not flush unused prescription drugs or over the counter medicines.

Did you know?

"Flushable" wipes are the biggest problem for sewer backups in our community. Even if the package says "flushable", they should NEVER be flushed. They belong in the trash.

Flush ONLY human waste and toilet paper.



In the kitchen

Clogged sink drains can ruin your home, too. Keep all sinks in your home clog-free by following these simple steps:

- Put fruit and vegetable stickers in the trash, not the drain.
- Put small amounts of fats, oils and grease (FOG) in to your kitchen composting bin or place into a lidded, disposable container/can and dispose of in the garbage. Never put FOG down your sink drains or toilet.

- Wipe down greasy pots, pans or dishes with a paper towel before washing. Dispose of paper in your kitchen composting bin or in the garbage.

Properly dispose of your hazardous waste

Common household products become hazardous waste when poured down a drain or flushed down a toilet because they may harm our environment and wreck sewers.

Never dump paint, paint thinner, cleaning chemicals, pesticides, fertilizer, root killer or any product marked CAUTION-WARNING-DANGER-POISON. Instead, bring these materials to your local hazardous waste facility.

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EAST BAY MUNICIPAL UTILITY DISTRICT

THINK BEFORE YOU FLUSH

Protect Your Family and Home from Sewage Backups and Overflows