SEWER SYSTEM MANAGEMENT PLAN
2025 UPDATE

For the

LEUCADIA WASTEWATER DISTRICT
1960 La Costa Avenue
Carlsbad, CA
92009

Certified by: _____
Paul Bushee, General Manager

Date: June 24, 2025

6-24-2025

Prepared by:

Dexter Wilson Engineering, Inc.
2234 Faraday Avenue
Carlsbad, CA 92008

DWE Job No. 103-023

Table of Contents

Executive Summary

The purpose of this Sewer System Management Plan (SSMP) is to document and publicly present in a central document the programs and activities utilized by the Leucadia Wastewater District (the District or LWD, system ID: 9SSO11210) in effectively managing its wastewater collection system.

Regulatory Background

On May 2, 2006, in an effort to reduce the occurrences of sanitary sewer spills (spills) within California, a Statewide General Waste Discharge Requirement (Statewide WDR) was adopted that imposed several new requirements on all agencies that operate sewage collection systems. To date, the District has complied with all provisions prescribed in the Statewide WDR, including enrollment in electronic spill reporting, the establishment of its legal authority to enforce sewer ordinances, certification of the complete initial SSMP implementation on June 8, 2009 by the General Manager, and subsequent audits of all SSMPs.

On July 30, 2013, revisions to the Monitoring and Reporting Program for the Statewide WDR were adopted. The adoption included revisions of spill category definitions; revisions to notification, reporting, and record keeping requirements; and enhancement of water quality monitoring requirements.

On December 6, 2022, an overall and comprehensive update to the Statewide WDR was adopted. This update became effective at June 5, 2023. The Statewide WDR update, similar to the 2013 Monitoring and Reporting Program revisions, included revised spill categories, revised spill response activities, adjusted reporting procedures, minor SSMP element and frequency changes, among other ancillary spill related updates.

This 2025 SSMP is the 6-year update to the 2019 SSMP (as required by the Statewide WDR), will be re-certified by the Board of Directors and reported to the State Board.

SSMP Development

Dexter Wilson Engineering, Inc., a consulting engineering firm, was tasked to assist the District in completing its SSMP. Prior to drafting this SSMP, every aspect of the District's activities and programs to prevent spills and to assure the proper system operation and maintenance were carefully reviewed and validated by the District. This included checks of: staff training, programs, operating procedures, historic data, and planning documents like the LWD Standard Specifications, the Asset Management Plan, and the Financial Plan Update. This review determined that the programs, procedures, plans, and management practices required for the Statewide WDR have been in place at the District for many years and are the basis for its outstanding record of environmental protection and regulatory compliance.

As an over-arching document, the SSMP strives to integrate programs and activities from the staff level to the Board level to insure that all components of District are connected and effective in preventing spills. Dexter Wilson Engineering, Inc. completed annual audits of the District's 2009, 2014, and 2019 SSMP and guided the District in the development of this 2025 version. The annual audit exceeds the WDR requirement of triennial audits and reflects the District's commitment to a proactive approach toward preventing spills.

SSMP Future Activities

The performance evaluations and audits of the 2019 SSMP are incorporated into this document. Similarly, performance evaluations and audits of this 2025 SSMP are included by reference and shall be incorporated in the future 2031 update.

Definitions

CIP	Capital Improvement Project
CPM	Capital Project Manager
CWMS	Computerized Work Management System
DE	District Engineer
DFA	Director of Finance and Administration
EDU	Equivalent Dwelling Units
EWA	Encina Wastewater Authority
FOG	Fats, Oil, and Grease
FSS	Field Services Superintendent
gpd	gallons per day
GM	General Manager
LRO	Legal Responsible Officer
LWD	Leucadia Wastewater District
MGD	million gallons per day
PM	Project Manager
SERP	Spill Emergency Response Plan
SMA	Special Maintenance Area
SSMP	Sewer System Management Plan
WDR	Waste Discharge Requirements

Section I – Goal and Introduction

Background, Regulatory Context, and Schedule

The Statewide General Waste Discharge Requirements (Statewide WDRs) governing sanitary sewers specify that the goal of each Sewer System Management Plan (SSMP) is to provide a plan and schedule to properly manage, operate, and maintain all parts of the sanitary sewer system. This SSMP update will be formally approved by the District in 2025 with the next update occurring in 2031. Internal audits are anticipated to continue to be completed on an annul basis.

Sewer System Asset Overview

The Leucadia Wastewater District (District) is a special district that provides wastewater and recycled water services and covers a total service area of 10,200 acres (16 square miles) which includes southern portions of the City of Carlsbad (Carlsbad) and northern portions of the City of Encinitas (Encinitas) in San Diego County. The District provides wastewater collection, treatment, disposal and service to a population of approximately 62,000. The EDU breakdown for the District is approximately 85 percent residential and 15 percent non-residential.

The District's existing wastewater system encompasses approximately 200 miles of gravity sewer pipeline, 5,000 manholes, 10 pump stations, and approximately 16 miles of force mains. Ownership of service laterals are not owned or maintained by the District.

Leucadia Wastewater District Actions

The District Vision Statement is:

> "To be a recognized leader in wastewater services, water recycling, and environmental protection."

The District's Mission Statement is:

> "To serve the public by collecting, transporting, recycling and treating wastewater in a safe, reliable, efficient, cost effective, and environmentally responsive manner, while providing excellent service to our customers."

The District continually updates and evaluates several documents under these guiding Statements which include the:

Strategic Plan – Creating a vision of what the organization's ideal future should be, evaluation of the environment in which the District exists, and the annual development of specific tactics and actions to implement the Vision and Mission.

Financial Plan – A long-term 20-year financial plan to project future financial conditions and provide guidance in the decision making process.

Asset Management Plan – A 5-year short-term and long-term 20-year plan of known and potential capital improvements required for each wastewater collection system asset class.

Sewer System Management Plan – A plan to document and evaluate programs and activities from the staff level to Board level to minimize the occurrence of spills.

Section II – Organization

Background and Regulatory Requirements

The Statewide WDRs governing sanitary sewers specify that the SSMP must identify the appropriate responsible representative, identify the organization and lines of authority, and provide a chain of communication for reporting spills from receipt of a complaint and include the person responsible for reporting spills.

Leucadia Wastewater District Actions

The District's General Manager and Legally Responsible Official, Paul Bushee, was authorized by the District's Board to certify the elements of the SSMP at the District's October 2007 Board meeting.

The District's organizational structure is shown below illustrating the lines of authority within the District and the chart also identifies the District positions responsible for implementing specific measures of the SSMP. The District's "Frequently Called Numbers" contain the contact information for the responsible parties. Complimentary to this is the District's Field Services Procedure for Reporting Spills which identifies the chain of communication for reporting Spills to the appropriate authorities. This Field Services Procedure is an attachment to the Field Services Procedure for Emergency Response to Spills and the District's Spill Emergency Response Plan in Section VI of the SSMP.

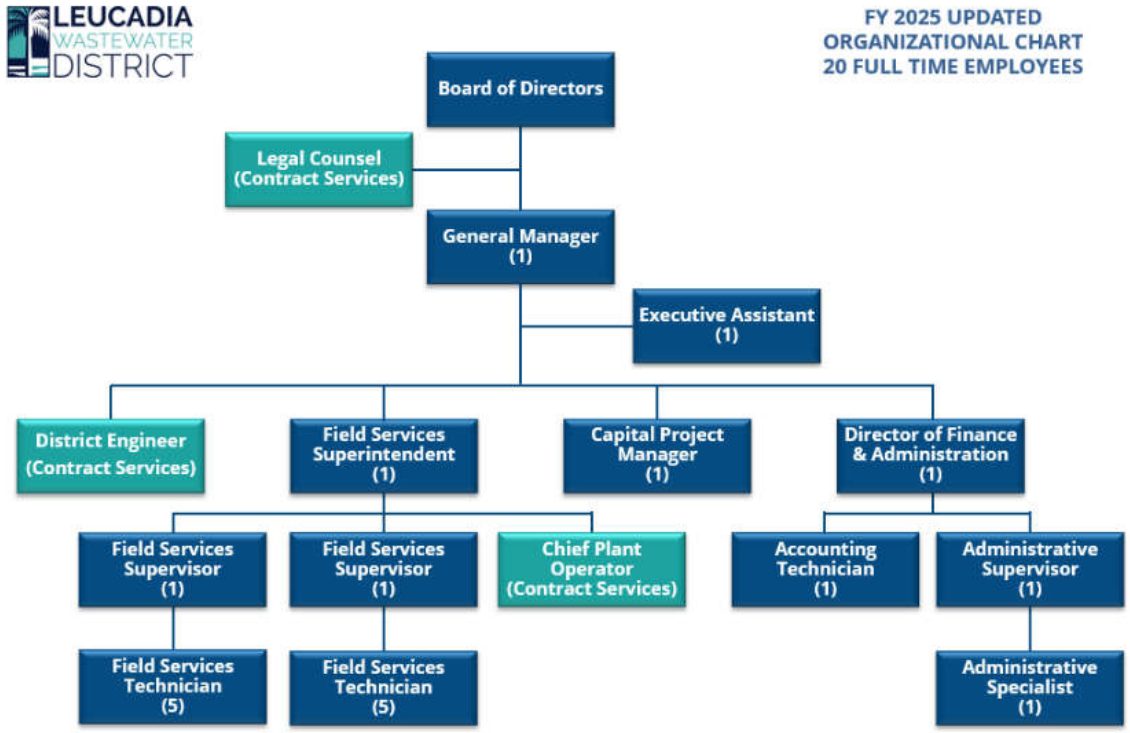
District Documents Included In This Section

- District Organizational Chart and SSMP Implementation
- District list of Frequently Called Numbers

District Documents Referenced By This Section

- SOP – Reporting Spills
- SOP – Emergency Response to Spills
- SSMP Section VI – Spill Emergency Response Plan

Organizational Chart



SSMP Program Responsibilities

SSMP Section	Responsible Party
1. Goal and Introduction	GM
2. Organization	GM
3. Legal Authority	GC
4. Operation and Maintenance Program	CPM, FSS, DE
5. Design and Performance Provisions	CPM, FSS, DE
6. Spill Emergency Response Plan	FSS, DE
7. Sewer Pipe Blockage Control Program	FSS
8. System Evaluation, Capacity Assurance, and Capital Improvements	CPM, DE
9. Monitoring, Measurement, and Program Modifications	CPM, FSS, DE
10. Internal Audits	CPM, FSS
11. Communication Program	DFA, CPM, FSS

Abbreviations for Organizational Chart and SSMP Implementation Plan

- CPM, Capital Project Manager (Ian Riffel)
- DE, District Engineer (Dexter Wilson)
- DFA, Director of Finance and Administration (Ryan Green)
- FSS, Field Services Superintendent (Marvin Gonzalez)
- FSSup, Field Services Supervisor (Mauricio Avalos & Gabriel Mendez)
- GC, General Counsel (Wayne Brechtel)
- GM, General Manager (Paul Bushee)

FREQUENTLY CALLED NUMBERS

1/22/2025

SPILL REPORTS	
OES	(800) 852-7550
AFTER HOURS COUNTY HEALTH	(858) 565-5262
RWQCB (Joeann Lynn)	(619) 521-3362
RWQCB AFTER HOURS	(619) 516-1990
CA FISH/GAME	(858) 467-4201
ATLAS PUMPING	(800) 491-7867
CARLSBAD	
POLICE DEPARTMENT	(760) 931-2197
FIRE DEPARTMENT (ADMIN)	(442) 339-2141
GENERAL INFO.	(442) 339-2820
STREETS/ STORM WATER	(442) 339-2980
WATER/SEWER	(442) 339-2722
WATER HOOK UP	(442) 339-2420
ONCALL OPERATOR	(760) 931-2197
ONCALL SUPERVISOR	(760) 802-4790
SDG&E	(800) 611-7343
David Apple Sr. Project Coord.	(858) 654-1286 work
	(858) 779-1681 cell
FLOODED HOUSE	(855) 763 5898
ENCINITAS	
WATER	(760) 633-2650
SEWER	(760) 633-2850
STORM WATER M-F 8-5:30	(760) 633-2787
EMERGENCY AFTER HOURS	(760) 633-2922
PUBLIC WORKS	(760) 633-2840
WASTEWATER ONCALL OPR.	(760) 685-5541
SHERIFF	(760) 966-3500
FIRE DEPARTMENT	(760) 633-2800
SANITATION	
ENCINA (MAIN)	(760) 438-3941
ENCINA AFTER HOURS	(760) 802-4997
COUNTY OF SAN DIEGO	
PUBLIC WORKS	(858) 694-3273
SCADA	
HANK LOGAN	(760) 390-5038
WATER	
OLIVENHAIN	(760) 753-6466
SANTA FE IRRIGATION	(858) 756-2424
VALLECITOS W.D. (SAN MARCOS)	(760) 744-0460
SAN ELIJO (Treatment Plant)	(760) 753-6203
WAYNE BRECHTEL	
General Counsel	(858) 755-6604
ANSWERING SERVICE	(858) 210-7565
Changes to On-call or Questions	(559) 244-2523

*To place an outgoing call, please dial 9 first

PHONE EXTENSIONS	
NITZE TORRES GARCIA	**3001**
IAN RIFFEL	**3002**
TRISHA HILL	**3003**
COPY ROOM 1st FLR	**3004**
BOARD CHAMBER	**3005**
VACANT	**3007**
GABE MENDEZ	**3008**
TIANNE BAITY	**3009**
ASHLEY BOBB	**3010**
MAURICIO AVALOS	**3011**
RYAN GREEN	**3012**
LUNCH ROOM	**3013**
PAUL BUSHEE	**3014**
CONFERENCE ROOM 2nd FLR	**3015**
SCADA ROOM	**3016**
MARVIN GONZALEZ	**3017**
LEUCADIA PUMP STATION	**3019**
DISTRICT ENGINEER/DEVELOPMENT	**3020**
CONSTRUCTION MANAGER	**3021**
TRAINING ROOM	**3025**
200 BLG OFFICE AREA	**3200**

CELLULAR PHONES		
General Manager	**Paul**	(760) 212-2837
Director of Finance & Admin.	**Ryan**	(760) 481-8052
Field Services Specialist	**Ian**	(760) 450-5150
Field Services Superintendent	**Marvin**	(760) 212-2838
Field Services Supervisor	**Gabe**	(760) 450-5356
Field Services Supervisor	**Mauricio**	(760) 450-5357
Field Services Tech.	**Matthew**	(760) 500-1491
Field Services Tech.	**Johnny**	(760) 207-8249
Field Services Tech.	**Jeffrey**	(760) 212-2836
Field Services Tech.	**Hugo**	(760) 207-8264
Field Services Tech.	**Rick**	(760) 500-6050
Field Services Tech.	**Ryan**	(760) 207-8209
Field Services Tech.	**Curney**	(760) 450-5448
Field Services Tech.	**Angel**	(760) 500-1451
Field Services Tech.	**Gonzalo**	(760) 331-3101
Field Services Tech.	**JC**	(760) 331-3425
On-Call Phone	**On-Call**	(760) 454-9021
MAVERICK MADSEN (cell)		
MAVTECK (Const. Manager)		(619) 977-3856
RANCHO SANTA FE SECURITY		(800) 303-8877
ELEVATOR EMERGENCY SERV		(800) 988-8474
VERVE		(877)837-8348
LWD FAX		(760) 753-3094
BATIQUITOS PUMP STATION		(760) 942-3588
DEXTER WILSON		(760) 438-4422 x105
District Engineer (cell)		(619) 540-3869
Natalie Fraschetti (cell)		(858) 539-9081
Kathleen Noel (cell)		
CONCENTRA		(760) 929-8269
TOSHIBA (Copiers)		(800) 321-5773
NurseTriage (call for work related injuries)		1 (833) 284-3670

Section III – Legal Authority

Background and Regulatory Requirements

The Statewide WDRs governing sanitary sewers specify that each agency must demonstrate, through sanitary sewer system use ordinances, service agreements, or other legally binding procedures, that it possesses sufficient legal authority to prevent illicit discharges, require proper construction, ensure access to facilities, limit discharges of FOG and debris, and enforce any violation of its ordinances.

Leucadia Wastewater District Actions

The District's Wastewater Sewer Ordinance No. 139 in concert with the District's Standard Spec establishes the legal authority necessary to:

- Prevent illicit discharges,
- Collaboration with storm drain agencies to coordinate spill response procedures,
- Require that sewers and connection be properly designed and constructed,
- Ensure access for maintenance, inspection, or repairs for facilities owned by the District,
- Obtain easement accessibility,
- Limit the discharge of fats, oils, and grease, and other debris that may cause blockages, and
- Enforce any violation of its sewer ordinances.

Additionally the District has a service agreement for 18 EDUs to the Cardiff Sanitation Division of the City of Encinitas.

District Documents Referenced By This Section

- Wastewater Ordinance 139, Adopted May 8, 2019
    - https://www.lwwd.org/sites/default/files/2020-11/No.%20139_Adopting_Updated_LWD_Wastewater_Ordinance.pdf
- District Standard Spec, 2019 and updated every three years in the same cycle as the Standard Specifications for Public Works Construction, 2019.

Section IV – Operation and Maintenance Program

Background and Regulatory Requirements

The Statewide WDRs governing sanitary sewers specify the development and implementation of an operation and maintenance program as an element of each Wastewater Collection Agency's Sanitary Sewer Management Plan (SSMP). When appropriate and applicable to the agency's system, the plan must include mapping activities, routine preventative operation and maintenance activities, rehabilitation and replacement plans, training, and equipment and replacement parts inventories.

Leucadia Wastewater District Actions

Database and Mapping Activities

The District maintains an active geographic information system (GIS) database of their collection system. The database includes all gravity sewer piping, manholes, pump stations, force mains, and appurtenances (e.g. cleanouts, air release valves, blow-offs, and cathodic test stations). The District's GIS also includes the storm drain systems owned, operated, and maintained by the City of Carlsbad and the City of Encinitas. This improves response in case of a spill and facilitates the capture and removal of wastewater that enters the storm drain during a spill. The database is continually updated by the Capital Project Manager for new construction, replacement, or repairs. Additionally, when appropriate and feasible, the District strives to maintain the most accurate location of appurtenances. For example, as part of the 2009 force main evaluation efforts, all appurtenances (air release valves, cathodic test stations, etc.) on the District's most crucial force mains, Leucadia and Batiquitos, were GPS located by a licensed surveyor and entered into the District's GIS database.

District staff and field crews utilize Toughbooks with the Inframap program in their daily activities of work order completion and customer service response. If errors in the mapping are found based on field evaluation, the collection system map is promptly updated.

The District, and its consultants, use system mapping in their planning efforts for growth and system capacity evaluations. Attached to this section is an updated map of the District's sanitary sewer collection system by drainage basin illustrating the location of all the District's gravity sewer lines, manholes, pump stations, and force mains.

The database is also used in District planning documents such as the Asset Management Plan for consistent identification of assets between planning documents and actual maintenance and replacement activities.

Preventative Operation and Maintenance Activities

The District's preventative operation and maintenance activities can be classified into three broad categories – preventative maintenance, corrective action, and reactive/customer service response.

Preventative Maintenance.

The preventative maintenance activities for each collection system asset class are discussed in the following paragraphs. In addition to such activities as cleaning and routine monitoring and inspection, preventative maintenance activities also include condition assessment evaluations for integrity and estimated useful life. These efforts are in addition to capacity evaluations and are discussed within each of the sections below.

Gravity Lines and Manholes

The District annually cleans, via Hydrocleaning, approximately 80% of its 200 miles of gravity sewer and visually inspects 98% of its 5,000 manholes. On average the field services staff Hydrocleans/Vactors 30-50 gravity pipeline segments per day depending on the configuration of the manholes and pipelines. The District's computerized maintenance management system (CMMS) generates the Hydrocleaning Work Orders identifying the segments scheduled to be cleaned. To ensure the annual cleaning schedule is adhered to, the District has two (2) Vactors. This ensures that a Vactor is available when one is in need of repair. The remaining 20% of the gravity lines are located in areas which are inaccessible to Vactor equipment. For these lines, Easement Inspection Work Orders are issued on an annual basis for District staff to walk the pipeline, hydraulically flush, and visually inspect the line. Gravity sewer lines in major roadways in the District are cleaned on a separate schedule. El Camino Real is on a three year cleaning cycle and Rancho Santa Fe Road and La Costa Avenue are on a two year cleaning cycle.

In 2011, the District changed its daily focus to emphasize Closed Circuit Television (CCTV) inspections. On a daily basis, video inspection efforts are occurring to visually inspect the gravity lines and manholes. The field services staff video inspect approximately 15 gravity pipeline segments per day. From fiscal year 2020 through 2024 Field Services staff CCTV inspected an average of 72 miles of gravity lines per year. The District plans to CCTV inspect its entire system on a three year cycle. With its two (2) video inspection vehicles, the District is poised and has been able to conduct CCTV inspections as necessary, while also responding to customer service calls and confirming corrective actions have been successfully implemented.

In addition to the regular cleaning and inspection activities, there are approximately two hundred and three (203) locations in the District identified as Special Maintenance Actions (SMAs). The line segments are classified as SMAs if there is an identified reason for more frequent cleaning. The lines are cleaned more frequently on a quarterly basis as set in the work management system and are also available for view in the District's GIS database. These areas are also video inspected on an annual basis. This list is reviewed and revised on an ongoing basis based on observations by FS staff.

Beginning in fiscal year 2016, the District began to regularly implement spray foam treatment as a means of root control in gravity line segments and manholes.

The District's preventative maintenance efforts also include monthly inspection of temporary construction connection plugs or traps. This is performed by District-contracted staff and reported to the District.

The District's Asset Management Master Plan identified and prioritized a list of gravity sewer segments and manholes to be inspected based on a relative remaining useful life.

During preventative maintenance activities, pipelines or manholes which require corrective action are scheduled and addressed as described later in this Section.

Pump Stations

The District operates and maintains ten (10) pump stations. The four most critical stations surrounding the Batiquitos Lagoon are inspected daily. The remaining pump stations are visited weekly at a minimum. Pump station visit tasks include noting pump run times, checking locks and alarms, exercising valves, and cycling and testing equipment as necessary. These tasks are defined on the pump station work orders and are included as part of field staff standard operating procedures. The District's ten pump stations vary greatly in size.

Additional pump station duties include daily monitoring of SCADA systems, noting any abnormal conditions (including failed check valves), and performing a test for proper SCADA function. These duties are identified in the Field Services Procedure – SCADA Alarms and cellular text messages provided in Section 6 – Spill Emergency Response Plan. The wet wells of 8 of the 10 pump stations are cleaned every two months, or more frequently, to further ensure proper and reliable pump station operation. Leucadia and Batiquitos pump stations are cleaned every 5 years.

Finally, comprehensive condition assessments are conducted by technical consultants every five years for each of the pump stations. Capital improvement projects are scheduled as a result of the condition assessment, as necessary.

Force Mains

Redundant (dual) force mains are provided for four of the District's ten pump stations: Avocado, Diana, and the two largest and most critical pump stations, Leucadia and Batiquitos. Of the remaining five, single force main stations, three of them have been replaced since 2008. The remaining two force mains are within their projected useful life.

Additional Preventative Maintenance Activities and Efforts

- On a semiannual basis, field staff exercise and service, as necessary, all of the District's air vacuum release valves. The locations of the air release valves are maintained in the database and CMMS work orders are generated for these activities.
- The District has seven (7) "smart" manhole covers in the collection system to alarm staff of surcharge situations in manholes most at risk.
- The District has a web-based system which provides real time data for seven flow monitors within the collection system (as well as the "smart" manhole covers described above). The data collected by these flow monitors is compiled and reported monthly to the board.

Corrective Action.

The second main component of the District's operations and maintenance activities is the prompt scheduling and execution of corrective action work orders. These work orders are typically initiated due to visual inspection of a problem during preventative maintenance activities which could not be immediately resolved, which would include evidence of roots in a sewer line. A work order to video inspect the line would follow; this is an addition to the regularly scheduled CCTV activity for the line. If the corrective action requires a repair, rehabilitation, or replacement the pipeline segment or manhole will be placed on the Repair Priority list per the District's Rating Repair Lines/Manholes SOP. Any repairs deemed necessary would either be placed on a priority list for subsequent repair as part of a capital improvement project or repaired immediately by using the miscellaneous pipeline and manhole repair funds (e.g., sliplining, dig and replace, or manhole coating).

The District rehabilitates 10-20 manholes per year and maintains a prioritized list of manholes showing signs of deterioration, inflow or infiltration, and damage to the manhole lining.

The District's 2023 Asset Management Plan provides specific and general projects and corresponding cost estimates for short-term (5-year) and long term (20-year) CIP expenditures. These short-term and long-term projects are driven in large part by the Repair Priority List. These estimates of expenditures were then used in the 2018 update of the District's Financial Plan.

Proactive/Customer Response.

The last major component of the District's operation and maintenance activities is the action associated with responding to customer service calls. In response to a customer service call of slow drain or odors, the District verifies if there is a blockage in the main line. If roots are detected, follow up video inspection will be used to assess the problem. If the problem is found to be on the customer side, the customer will be notified along with a request for notifying the District when the plumber takes corrective action. Additionally, the District will notify the resident of its Lateral Reimbursement Program which was developed to assist residents in repair of their laterals when it is necessary. The Lateral Reimbursement Program entails qualifying property owners to receive 50 percent, up to a maximum of $3,000, for lateral work that includes: lateral replacement, a lateral liner, and installation of backflow preventer. This has been determined to be an effective and efficient way to enhance public health and safety and for environmental protection.

If roots in the private lateral are the problem, the District will be on hand during cleaning by the property owner's plumber/contractor to catch the root ball to reduce the likelihood of a downstream blockage. The cleaned segment and manholes will remain within their routine hydrocleaning schedule. Additionally, Paragraphs 4.6 and 4.7 of the District's Wastewater Ordinance outline responsibilities between public and private sewer facilities.

Rehabilitation and Replacement Plans

The District has reached approximately 90 percent of buildout and has transitioned its capital improvement program from growth-based projects to replacement-based projects. Capacity-related improvement projects were identified in the 1999 Master Plan. All of the collection system projects identified were addressed.

To address the timely and appropriate replacement of assets as the end of their useful life approaches, the District developed in 2008 an asset management based master plan to guide the District with a replacement-based capital program. This plan was subsequently updated in January 2013, May 2018, and April 2023. For each wastewater asset class in the District (gravity sewer pipelines, manholes, pump stations, force mains, and jointly-owned facilities), the Asset Management Plan provides operation and maintenance recommendations (as-related to capital replacement), as well as anticipated projects and costs for short-term capital replacement, and long-term capital replacement. The April 2023 projected costs were subsequently incorporated into the District's 2023 Financial Plan Update.

Operations and Maintenance Training

The Field Services Technician Qualification Sheet (Qual Sheet), included at the end of this section, is used to standardize and list the training requirements for each Field Services Technician (FST) level. As the individual completes a task or item on the Qual Sheet, that item is signed off and dated by the trainer. All tasks and line items specified for the specific FST level must be completed in order to be eligible for promotion to that level. For example, a FST I must complete all tasks and line items specified for a FST II to be considered for promotion to FST II.

Additionally, an individual is required to pass an oral board to be considered for either On-Call Duty or to be considered for promotion to FST III. The On-Call oral board consists of three qualified On-Call technicians. The FST III promotion oral board consists of three individuals who are FST III or higher.

In all cases, an individual must be recommended for promotion or assignment to On-Call Duty by the Field Services Supervisor (FS Supervisor) to be promoted or assigned to On-Call Duty.

Upon initial employment, each FST-in-Training is provided with the Qual Sheet. In order to be considered for promotion to FST I, an individual must complete all required FST I items on the Qual Sheet including obtaining a California Water Environment Association (CWEA) Collection System Maintenance Grade I certificate, a Class "B" driver's license with tanker and air brake endorsement, and a State of California Department of Public Health Water Treatment Grade I certificate. Once the individual completes these requirements, has a minimum of one year of FST-in-Training experience and is recommended for promotion by the FS Supervisor, he/she is promoted to FST I.

To be considered for promotion above FST I, an individual is required to obtain the appropriate CWEA Collection System Maintenance Grade certificate for the next level. For example, a FST I is required to obtain a CWEA Collection System Maintenance Grade II certificate to be eligible for promotion to FST II. This requirement is specified on the Qual

Sheet under the Written Exams section. Additionally, an individual will normally be required to have a minimum of one (1) year of experience at their current FST level before being considered for promotion.

Staff is incentivized to achieve higher grades by reimbursement of educational expenses; monetary incentives for passing certification tests, potential promotions, and increases in salary. The FSS and FS Supervisor provide regular training and updates as well as an annual review of all field services standard operating procedures (SOP) for any needed updates. The SOP updates are memorialized as part of the annual SSMP audit.

Equipment and Replacement Parts

The District has identified components and parts which are critical to maintaining proper operation of the sewer system (such as Romac couplings for emergency pipeline repairs and spare submersible pump parts for the satellite pump stations). Most notably for the pump stations, each pump station has 100% redundancy in pumping capacity where if the primary pumping facilities were to fail, secondary pumping facilities will automatically engage. Also, 7 of the 10 pump stations are equipped with emergency generators in event of main power failure to the station. During emergencies, the remaining 3 pump stations are either powered by trailer-mounted emergency generators or can be serviced by Vactor trucks due to the relatively small volume of flow at these satellite pump stations.

District Documents Referenced By This Section

- SOP – Collection System Maintenance Duties
- SOP – Video Inspection Procedure
- SOP – Easement Inspection Duties
- Special Maintenance Area Cleaning Schedule
- SOP – Pump Station Duties
- SOP – Pump Station Odor Control
- Field Service Technician Qualification Sheet
- April 2023, *Asset Management Plan* by Dexter Wilson Engineering, Inc., available at www.lwwd.org
- *Wastewater Financial Plan Study* by Raftelis, available at www.lwwd.org
- SOP – SCADA Alarms and Cellular Pages
- SOP – Rating Repair Lines/Manholes
- SOP – Switching Force Main Lines
- SOP – Bypass Pumping for Avocado and Diana Pump Stations
- SOP – Bypass Pumping for Batiquitos
- SOP – District Pipeline Location and Markout
- SOP – Traffic Control Procedures
- SOP – Switching Force Main Lines

LEGEND

- Service Area Boundary
- District Sphere of Influence

Existing Drainage Basin

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11

Facilities

- Gravity Sewer
- Pump Station
- Force Main

PACIFIC OCEAN

CITY OF CARLSBAD

CITY OF ENCINITAS

CITY OF SAN MARCOS

COUNTY OF SAN DIEGO

Data Source: SANGIS, LWWD

0 1,750 3,500 7,000 Feet

LEUCADIA WASTEWATER DISTRICT

DEXTER WILSON ENGINEERING, INC.
CONSULTING ENGINEERS
(760) 438-4422

EXISTING COLLECTION SYSTEM AND DRAINAGE BASINS

LEUCADIA WASTEWATER DISTRICT
2025 SSMP UPDATE

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DEXTER WILSON ENGINEERING INC.

Section V – Design and Performance Provisions

Background and Regulatory Requirements

The Statewide WDRs governing sanitary sewers specify the development and implementation of design and performance provisions as an element of each Wastewater Collection Agency's Sanitary Sewer Management Plan (SSMP). Specifically, design and construction standards and each project's specifications must be in place for the installation of new facilities and for the rehabilitation and repair of existing facilities. Additionally, procedures and standards for each project should be in place for inspecting and testing the installation of new sewers, pumps, and other appurtenances and for rehabilitation and repair projects.

Leucadia Wastewater District Actions

Certified by the District Engineer, the District maintains a set of standard specifications and drawings which are adopted by Board resolution and called the *Standard Specification and Procedures for Wastewater Facilities*, also known as the "LWD Standard Spec." The District adopted its original set of standard specifications in November 1970, and since that time, has reviewed, updated, and readopted the document periodically to match the changing design and construction environment and to meet the needs of the District. Currently, the District Engineer reviews the LWD Standard Spec every three years to determine if revisions are necessary. A team consisting of District staff, District Legal Counsel, and District Engineer revises the Standard Specs. The LWD Standard Spec is then stamped and signed by the District Engineer prior to Board adoption. The District most recently revised the LWD Standard Spec in April 2025.

The LWD Standard Spec functions as the primary document provided for sewer construction. In addition to the standard specifications and drawings, it also identifies the procedures that must be followed for the District to ultimately accept privately constructed facilities. As the author of these requirements and the enforcer of adherence to these guidelines in acceptance of facilities, the District follows these same standards and specifications in the development of its own CIP projects. As part of the plans and specification for a District CIP project, the Engineer of Record for the capital project incorporates the LWD Standard Spec by reference and oversees and approves any deviations from the sections as necessary for the specific project.

The LWD Standard Spec includes the following:

- Design and Construction Standards and Specifications for the installation of
    - new sanitary sewer systems,
    - pump stations, and
    - appurtenances.
- Design and Construction Standards and Specifications for the rehabilitation and repair of existing sanitary sewer systems
- Procedures and Standards for inspecting and testing the installation of

    - new sanitary sewer systems,
    - pump stations, and
    - appurtenances.
- Procedures and Standards for the rehabilitation and repair of existing sanitary sewer systems

In addition to the above, the LWD Standard Spec also includes:

- review of the preparation and processing of privately constructed wastewater facilities dedicated to the District after design review, construction inspection, testing, and acceptance by LWD,
- sewer system planning guidelines,
- the District Standard Drawings, and
- standardized forms for easements, encroachments, annexations, etc.

District Documents Referenced By This Section

- District Standard Spec, 2025

Section VI – Spill Emergency Response Plan

Background and Regulatory Requirements

The Statewide WDRs governing sanitary sewers specify the development and implementation of a spill emergency response plan as an element of each Wastewater Collection Agency's Sanitary Sewer Management Plan (SSMP). This element identifies the agency's practices to protect public health and the environment in the event of a spill. State Water Resources Control Board Order WQ 2022-0103-DWQ, December 6, 2022.

Leucadia Wastewater District Actions

The District has developed and implemented a Spill Emergency Response Plan (SERP) which standardizes the District's response actions to the report of a possible spill, identifies the safety precautions and industry practices to ensure public and environmental health and safety, and identifies the internal and external notification and reporting requirements. Key required components of this SSMP element are discussed in the following sections.

An essential component of the SERP is the identification of the proper notification procedures to the appropriate parties. This includes regulatory agencies and other external agencies, as well as District management. A list of emergency contractors is also provided. Pages 1 through 3 of the plan provide the specific procedures for who should be contacted regarding the spill, starting with the person who actually receives the initial reporting call. One of the first steps required of the person receiving the call is to notify the Field Services Supervisor and/or Superintendent who has the responsibility, as the plan specifies, to make all required notifications within the required timeframes. The specific officials who are to be notified are listed in the SERP. The plan also identifies procedures to address emergency operations, such as traffic and crowd control, while adhering to District safety procedures.

In addition to general spill response practices, the plan identifies specific additional steps which should be followed for a particular spill cause. For example, if the spill is due to the loss of power at a pump station, the first responder is required to immediately request a portable emergency generator, even though seven of the ten stations have one onsite.

In the event of a spill, the SERP identifies the procedures to contain and prevent any discharge to surface waters and the plan also directs first responders to first make all practical efforts to stop and contain the spill, to correct the cause of the spill, and evaluate the feasibility of secondary containment or collection. These containment steps help to minimize any impact to the environment as a result of the spill.

Additionally, to further minimize or correct any adverse impact, the plan procedures specify that any wash-water, debris, and contaminated soil are collected and properly disposed of. Finally, the Field Service Supervisor/Superintendent directs, in concert with the appropriate agencies, directs sampling protocols, if necessary, to determine the environmental impact and remediation of the spill. For public health and safety, this step also includes working with regulatory agencies for posting of signs, as necessary (e.g., at beach or lagoon). The District maintains a standard posting and sampling procedure which would be modified to incorporate the concerns of any regulatory authorities, as necessary, as part of the spill response. For spills greater than 50,000 gallons, the Water Quality Monitoring Program reporting would be implemented to provide the appropriate sampling and documentation.

To ensure that all appropriate personnel are adequately trained on the spill response plan procedures, the plan discusses how new employees are made aware of the response plan and identifies the Field Services Supervisor and/or Superintendent responsibilities for regular training and hands-on spill response drills. The District's SCADA response procedure details how staff should respond to SCADA alarms.

Prevention of spills is paramount to the District. As part of the new hire process, all field services staff are provided with the standard list of duties which promote safety and emphasize the importance of ensuring that District facilities and infrastructure remain or are returned to operational status as quickly as possible with emphasis on ensuring a prompt and capable response to trouble reports and system alarm conditions.

Contractors performing work within the District, along with approval, are provided spill response information and direction for the related project at the pre-construction meeting.

District Documents Included With This Section

- SOP – Spill Emergency Response Plan
- SOP – Reporting Sanitary Sewer Spills
- SOP – Pump Station Alarm Response
- SOP – Posting and Sampling Procedure
- SOP – SCADA Alarms and Alarm Text Pages
- SOP – Standby Duty Operator (On Call)
- SOP – Emergency Procedures for Air Release Valves

Section VII – Sewer Pipe Blockage Control Program

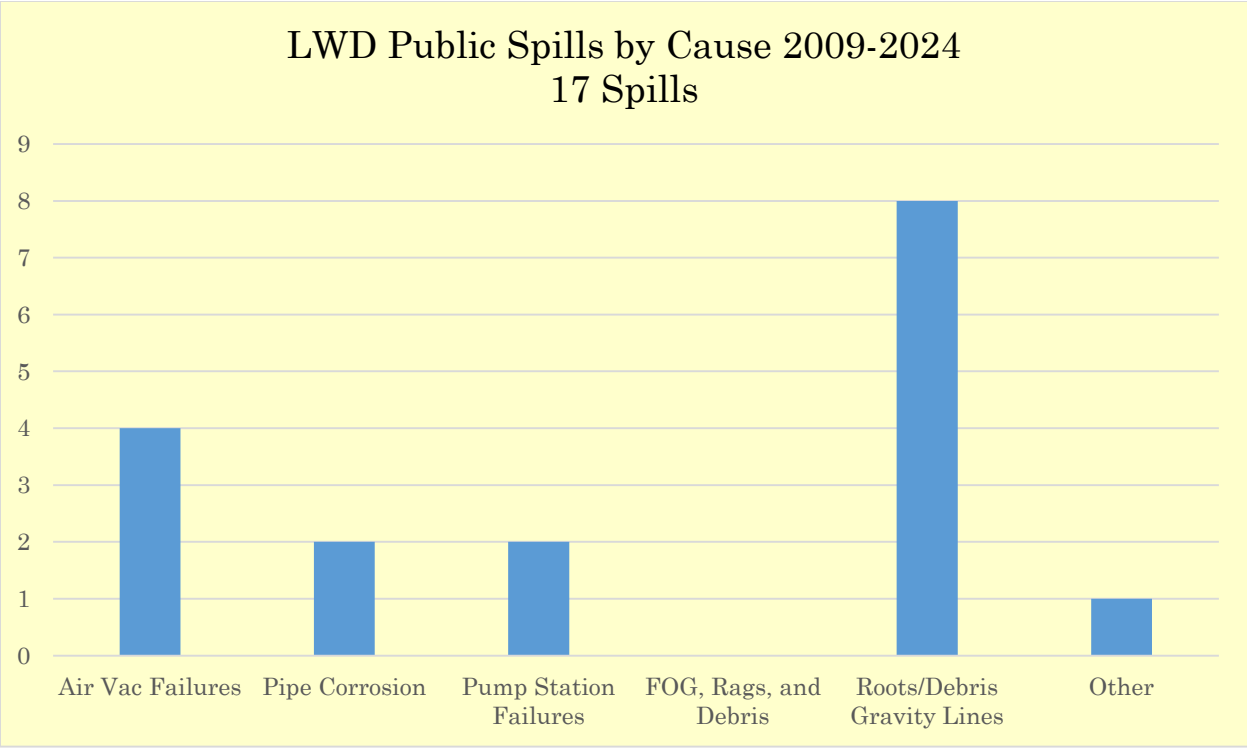
Background and Regulatory Requirements

The Statewide WDRs governing sanitary sewers specify fats, oils, grease, rags, and debris control programs as an element of each Wastewater Collection Agency's SSMP. This element requires each agency to evaluate its service area to determine whether a control program is needed. If the agency determines that a formal program is not needed, justification must be provided for why it is not needed.

Leucadia Wastewater District Actions

The District's FOG program consists of tracking all food service establishments, maintaining a list of SMAs due to FOG, and having legal authority to address FOG related issues. These are discussed further below.

The District's average daily dry weather flow exceeds 4 million gallons per day with a gravity collection system approximately 200 miles in length. There are 559 restaurant and food establishments within the District service area. Since 2009, there have been no public spills attributable to fats, oils, grease, rags, and debris.



The District's spill prevention success with minimal FOG, rags, and debris related sewage spills is, in part, a result of the District practice of cleaning the gravity lines annually and enhanced CCTV inspections, which is discussed further in the SSMP Section IV – Operation and Maintenance Program. In addition to the ongoing cleaning of the sewer system, FOG, rags, and debris prevention remains a key component of the District's review process in the application for all new or amended sewer service permit(s). The permit application process (described in the District's Wastewater Ordinance) includes a review of FOG, rags, and debris prevention mechanisms for food establishment and industrial permits. The permit application process must be completed for any new permit for sewer service or when improvements would require a city permit, such as significant tenant improvements to a restaurant space or the conversion of a commercial space to a restaurant. Finally, for the general public, the District website provides the public with basic information regarding the proper disposal of household FOG, rags, and debris. Inspection of Food Service Establishments occurs on a routine basis.

To date, as evident in the above analysis of FOG, rags, and debris related spills, these practices are considered by the District to be the most effective and efficient practices in preventing FOG related spills. The District's Wastewater Ordinance provides sufficient legal authority to appropriately address any FOG, rags, and debris issues that arise. Specifically, it allows the District to take corrective actions ranging from issuing a written notice that a customer is in violation of the ordinance to suspension or termination of sewer service if a violation is not corrected as directed.

District Documents Referenced By This Section

- Food Establishment Registration/Information Form
- Wastewater Ordinance No. 139
- District Standard Spec, 2025

Section VIII – System Evaluation, Capacity Assurance, and Capital Improvements

Background and Regulatory Requirements

The Statewide WDRs governing sanitary sewers specify that each Wastewater Collection Agency shall prepare and implement a capital improvement plan (CIP) that will provide hydraulic capacity of key sanitary sewer system elements for dry weather peak flow conditions, as well as the appropriate design storm or wet weather event as part of the Sanitary Sewer Management Plan (SSMP).

Leucadia Wastewater District Actions

The District has reached approximately 90 percent of buildout and has transitioned its capital improvement program from growth-based projects to replacement-based projects. The District has never experienced a spill due to a capacity shortfall and has conducted several evaluations of existing and buildout flows to insure this continued success in preventing and minimizing spills. In addition, historical flow data has been analyzed to verify the theoretically established system capacity of 215 gpd/EDU is significantly higher than the actual flow-based EDU estimate of approximately 130-150 gpd/EDU the District has seen over the last 5-10 years. The District has access to real-time web-based flow data to track District flows from five of its eleven basins. The following sections highlight the District's system evaluations, design criteria, capacity enhancement measures, and CIP schedule related to capacity.

Treatment Capacity Evaluation – Flows generated within the District are treated at the regional treatment facility, Encina Water Pollution Control Facility and are monitored on a continual basis by both the District and the Encina Wastewater Authority (EWA). Flow data has been collected for the District for approximately 30 years, allowing for a long-term comparison of flows generated by the District. Flows are reported monthly to the six EWA member agencies as a continual check that each agency is within its contracted treatment capacity. The facility presently has a capacity of approximately 40.5 mgd with the District owning 7.11 mgd of this capacity. With an ultimate flow projection of 6.87 mgd, the District has approximately 0.65 mgd of emergency reserve capacity. Based on actual flow per EDU there is an even greater emergency reserve capacity.

Joint Facilities Conveyance Evaluation – There are five major infrastructure elements, aside from the treatment plant, that the District owns jointly with other agencies. These include: (1) the Batiquitos Influent Sewer, (2) the Batiquitos Pump Station, (3) the Batiquitos Pump Station force mains, (4) the Lanikai Gravity sewer, and (5) the Occidental sewer. These assets are jointly owned with the City of Encinitas. Additionally, the City of Carlsbad is a joint owner of the Occidental sewer. The 2023 Asset Management Plan summarizes these facilities and details the District's ownership percentage in each facility. Like the treatment plant capacity, the flowrate through these facilities is continually monitored by the District and the EWA.

Overall System Evaluation – In 1994, the District completed a Planning Study Update which established the primary system capacity design criteria of 215 gpd/EDU. In 1999 the District's Wastewater Master Plan was completed which evaluated the capacity of the sewer system by sub-basin based on flows existing at the time and the projected ultimate build-out flows of the District. The plan identified capacity-related improvement projects and those projects identified to address short-term capacity concerns were completed. The 2008, 2013, 2018, and 2023 Asset Management Plans confirmed that the conveyance system in place could convey the ultimate projected peak wet weather flow through the system.

The 2023 Asset Management Plan presented a historical comparison of flows, highlighting the downward trend of the District's per EDU generation rate since 2008 from 169 gpd/EDU to 149 gpd/EDU to 129 gpd/EDU to 128 gpd/EDU. The 2023 Asset Management Plan projected an ultimate buildout flow of the District at 4.7 mgd, based on 133 gpd/EDU and a 10% safety factor.

Design Criteria – As discussed in the previous section, for planning purposes utilizing 215 gpd/EDU as a generation rate is a conservative factor for the District. This design criteria is stated in the LWD Standard Spec, which also provides EDU factors for different use types and peaking factors based on population. Lower planning factors may be used at the discretion of the District Engineer.

Pump Station Capacity Evaluation – As part of the 2008 Asset Management Master Plan and confirmed in the 2013, 2018, and 2023 Asset Management Plan updates, all ten of the collection system pump stations were evaluated to have sufficient capacity for both average and wet weather flows as well as 100 percent redundancy.

On-going Evaluation and Capacity Enhancement Measures – Currently, the District utilizes a web-based system to access real-time data and alarms from five flow meters throughout the District. Each of the meters is strategically located to monitor the flow of a sub-basin within the District. On a monthly basis this data is compiled and reported to the Board.

Schedule and Prioritization – As there are no capacity-driven replacement projects currently identified for the District, there is no schedule necessary. Overall system capacity will continue to be evaluated as part of the District's Asset Management Plan process.

Capital Improvement Plan – The District prepares its asset management plans on a 5-year cycle in order to: (1) capture the District's progress in the management of its wastewater and recycled water assets, (2) provide recommendations for operation and assessment/replacement cycle improvements to each of the asset classes, and (3) develop the recommended 5-Year and 20-Year capital improvement program (CIP) based on District and EWA projects.

District Documents Referenced By This Section

- April 1995, *1994 Planning Study Update* by Parsons Engineering Science, Inc.
- *1999 Wastewater Master Plan* by Dudek and Associates, Inc.
- June 11, 2008, *Asset Management Master Plan* by Dexter Wilson Engineering, Inc., available at www.lwwd.org
- District Standard Spec, 2019
- 2013, 2018, and 2023, *Asset Management Plan* update by Dexter Wilson Engineering, Inc.
- February 2021 Hazard Preparedness & Mitigation Plan

Section IX – Monitoring, Measurement, and Program Modifications

Background and Regulatory Requirements

The Statewide WDRs governing sanitary sewers specify that each Wastewater Collection Agency shall:

- maintain relevant information that can be used to establish and prioritize appropriate SSMP activities,
- monitor the implementation and measure the effectiveness of each element of the SSMP,
- assess the success of the preventative maintenance program,
- update program elements, as appropriate, based on monitoring or performance evaluations, and
- identify and illustrate spill trends, including frequency, location, and volume.

Maintaining the applicability of the SSMP to District activities necessitates ongoing evaluation of the activities the District performs, their success, and improvement if necessary. The first two of the following sections describe the ongoing evaluation of spills as they occur and discussion of preventative maintenance evaluations. The last section describes the SSMP Evaluation Checklist used on an annual basis to evaluate the applicability and effectiveness of the District's SSMP. Completion of this evaluation will run concurrent with the annual SSMP audit. It is important to note that the District conducts annual SSMP audits instead of the tri-annual requirement set in the WDR. This proactive approach enables the District to keep the SSMP current, effectively monitor the success of its programs, and update its plans and procedures as required.

Leucadia Wastewater District Actions

Spill Occurrences and Evaluation

For each spill, the District staff critically evaluates the cause and identifies steps to prevent future spills. The District maintains the LWD Spill Summary which lists all spills dating back to 1996. The summary identifies the date, time, location, cause, size, and steps taken to mitigate and prevent future spills. All spills are included on this list whether public or private. The spill summary is included as an attachment to this section. This summary is continually updated and can be checked against California's spill database at:

http://www.waterboards.ca.gov/water_issues/programs/ciwqs/publicreports.shtml

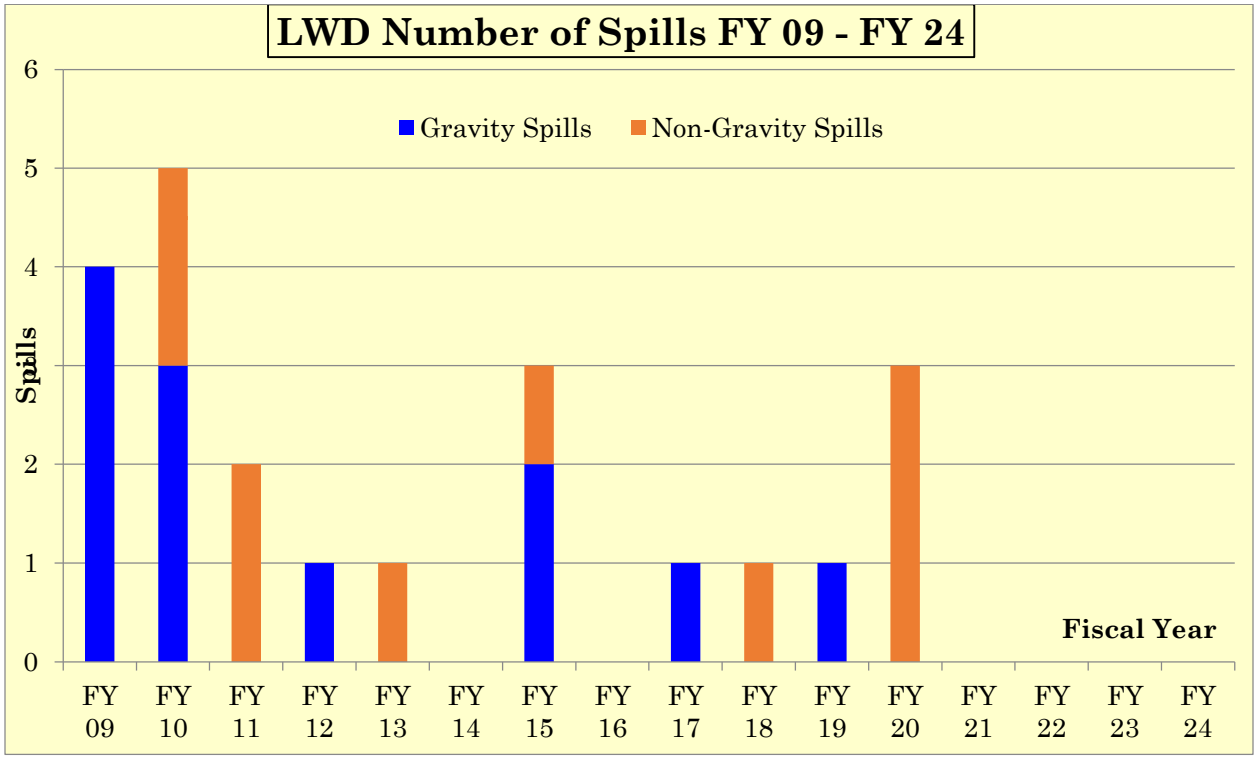
As part of the District's spill response, a debriefing is held by key staff to review the cause of every spill. The spill summary is updated and carefully reviewed for trends in frequency, location, and volume as part of completing the Spill Review Checklist (Attachment J to the Spill Emergency Response Plan).

Preventative Maintenance Program Evaluation

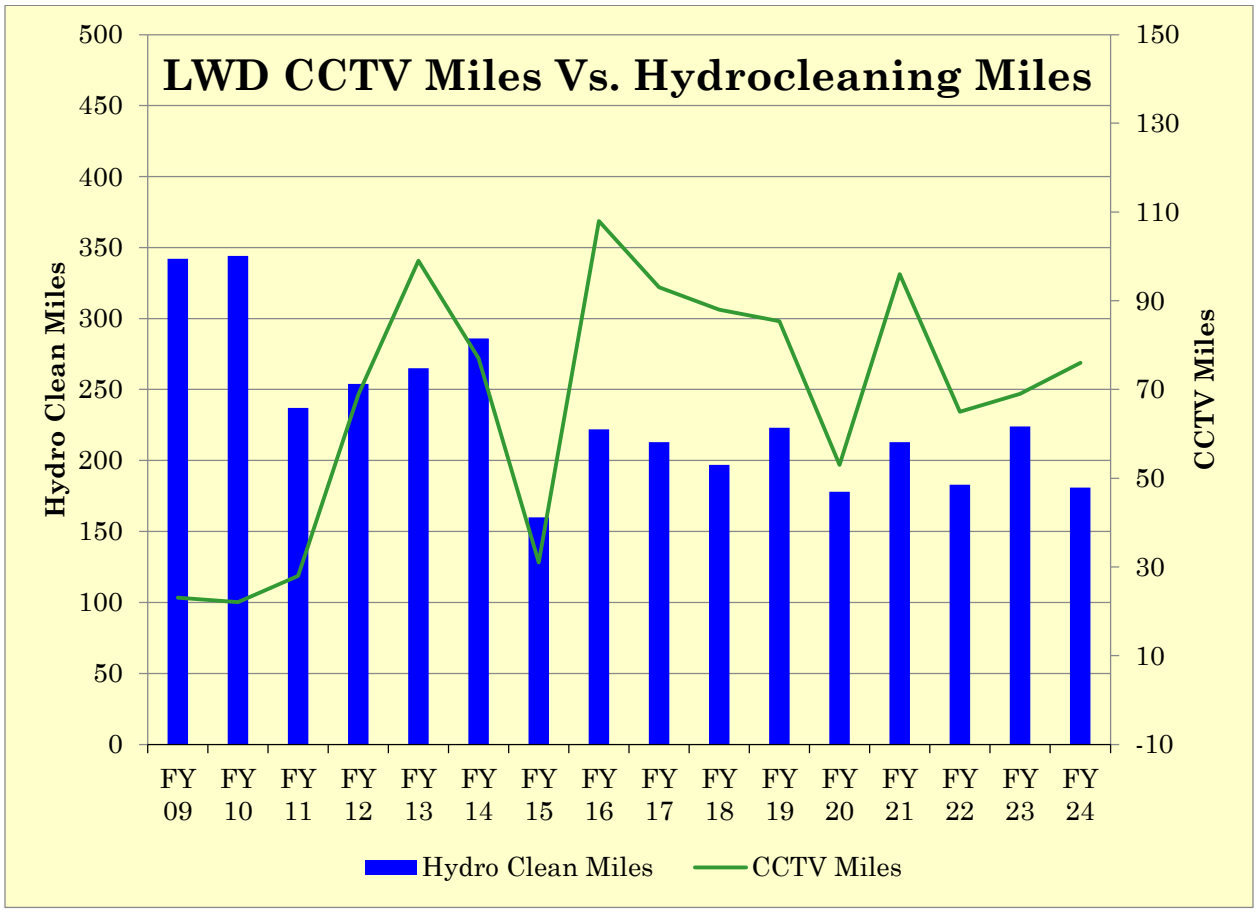
A review of the District's recent spill history clearly demonstrates the District's present preventative maintenance program has been successful. The graph below illustrates the decrease in the occurrence and volume of spills since original SSMP adoption in 2009. This has been accomplished by implementing programs to minimize spills in addition to incentivizing District staff to maintain a no spill record. Examples of preventative maintenance programs implemented to address spill causes are discussed in the following paragraphs.

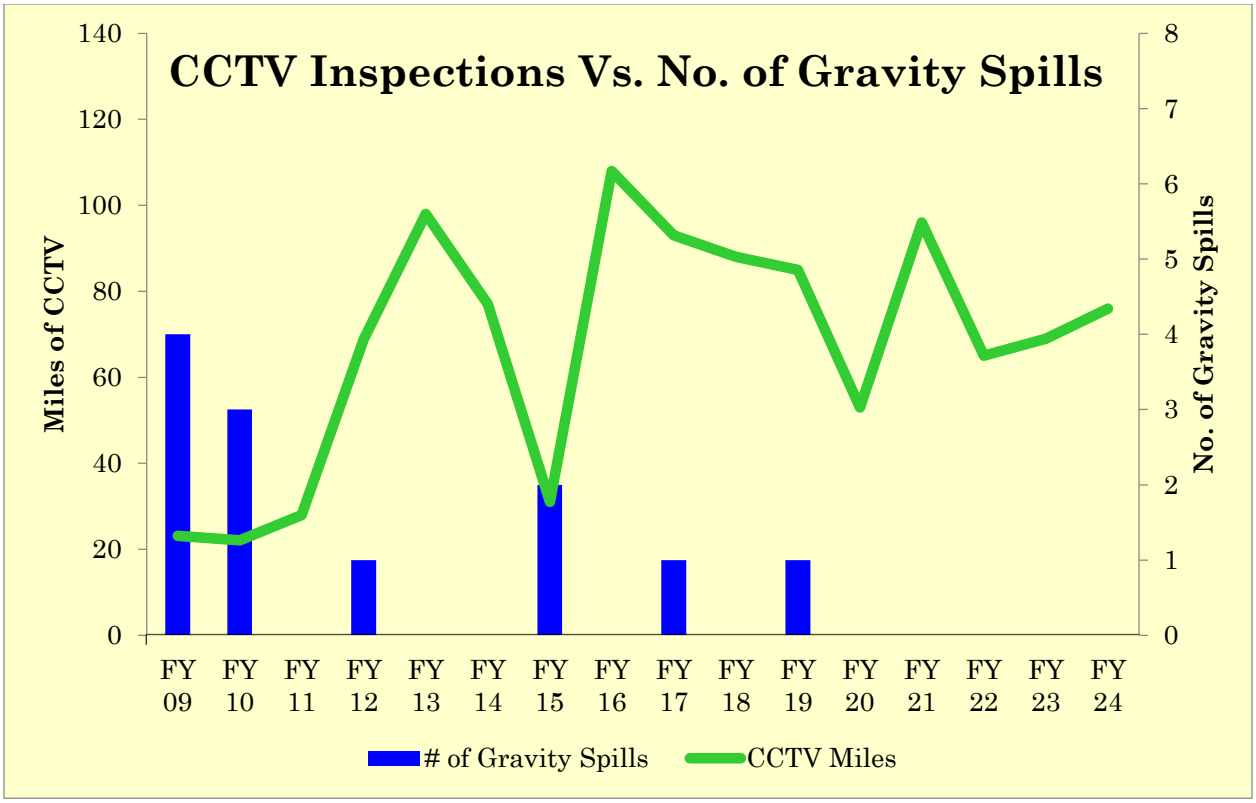
Since the addition of the second Vactor crew in 2000, the majority of the spill causes have been due to unforeseen events that are neither indicators of a lacking preventative maintenance program nor capacity related. In those cases where a potential systematic problem was identified, the District implemented procedures or developed a solution to minimize or eliminate the spill cause. For example, in 2001 and 2002, there were two spills which occurred as a result of failed air release valves on the force mains. To mitigate this, the District replaced all of the air release valves on the two force mains of interest. Additionally, on a semiannual basis, field staff exercise and service, as necessary, all of the District's air release valves. The locations of the air release valves are maintained in the database and CMMS work orders are generated for these activities.

Furthermore, the two spills that occurred in 2017 and 2018 were not a result of inadequate maintenance. The 2017 spill resulted from a single vehicle accident which sheared off an air/vacuum release valve on an off line force main. The 2018 spill resulted from a contractor connecting a housing development to the District's main trunk line.



Additionally, the District has substantially increased its inspection of pipelines using CCTV, greatly enhancing the District's knowledge of the condition of the gravity sewer pipelines over knowledge obtained solely through hydrocleaning efforts. The increased CCTV have resulted in a direct increase in capital replacement projects to address areas of structural concern and has also identified areas which require more frequent preventative maintenance. Visual inspection of gravity sewer pipelines greatly reduces the potential for preventable spills. As such, the District plans to maintain its CCTV efforts as a key ongoing component to their preventative maintenance program. The following two figures illustrate the trends of hydrocleaning, CCTV inspection, and gravity system spills since original SSMP adoption in 2009.





Part of the District's preventative maintenance program includes monthly inspection of any temporary construction connection plugs or traps. This is performed by a District-employed contractor and reported to the District. The District is aware of all food service establishments in the District and has sufficient legal authority through the District's Wastewater Ordinance to appropriately address any FOG issues that arise with a District customer.

Monitoring, Measuring, and Modifying the SSMP Sections

Evaluation of spill trends and the preventative maintenance program are key elements of measuring the success of the District's SSMP. To ensure that all elements of the SSMP are implemented, relevant, and effective, the SSMP Evaluation Checklist is conducted on an annual basis concurrent with the SSMP Audit. The evaluation is conducted by the responsible party as identified in the implementation plan and schedule of SSMP Section 2. The evaluations, along with the annual SSMP audits, will be included as an appendix in this SSMP.

<u>District Documents Included In This Section</u>

- LWD Spill Summary
- Spill Emergency Response Plan, Attachment J – Spill Review Checklist
- SSMP Evaluation Checklist

Leucadia Wastewater District 1960 La Costa Avenue, Carlsbad, CA 92026 (760) 753-0155

Public Sewage Spills (2009 through 2024)

Date	*Time*	*Vol (gal)*	*Duration (min)*	*Location of spill*	*City*	*Type of structure*	*Destination of spill*	*Beach posted*	*Cause of spill*	*Steps taken to mitigate effects of spill*	*OES #*
11/3/2009	0900	500	54	7408 Calle Madero	Carlsbad	manhole # 10-1330	storm drain/ San Marcos Creek	no	Main line blockage roots in manhole	cleared line, CCTV inspection	09-7433
12/3/2009	1101	800	40	1400 Piraeus Street	Encinitas	manhole # 04-0320	storm drain	no	Main line blockage roots thru joint	cleared line, CCTV inspection	09-8081
1/9/2010	1532	1,300	65	2310 La Costa Avenue	Carlsbad	manhole # 10-0210	storm drain	no	Main line blockage, inflatable sewer plug	cleared line, CCTV inspection	10-0179
5/3/2010	1900	10,000	60	2017 N Coast Hwy (101)	Carlsbad	B2 forcemain	contained off road, captured all	no	Galvanic corrosion in 24" DIP	cutout damaged section, replaced with PVC	10-2774
11/19/2010	0:00	69,780	330	2017 N Coast Hwy (101)	Carlsbad	Pump Station	Batiquitos Lagoon/ Ponto Beach	yes	Operator failed to respond to alarm	installed smart cover in overflow wet well	106274
4/27/2011	826	4,600	23	2017 N Coast Hwy (101)	Carlsbad	air release valve (air vac)	Batiquitos Lagoon	yes	Air Release PVC flange cracked	air release valve shut off	11-2727
10/1/2011	1530	120	75	2419 Unicornio	Carlsbad	manhole #11-6020	captured portion/dirt bankment	no	cracked mainline, roots	cleared line, CCTV inspection, install smart cover	Cat 1
2/2/2013	5:35	22,000	11	6500 Ponto Drive	Carlsbad	Force main	captured portion / dirt bankment	yes	Galvanic corrosion in 24" DIP	cutout damaged section, replaced 80 ' pipe with PVC	13-0684
7/13/2014	7:37	500	108	2903 Candil Place	Carlsbad	Manhole #10-9550	homeowners back yard	no	unknown, believed cause from lateral	LWD cleared roots from mainline	Cat 3
12/2/2014	6:50	1200	38	1336 Via Terrassa	Encinitas	Manhole #09-1135	captured portion / storm drain	no	roots in bottom of manhole thru joint	cleared line, CCTV inspection	Cat 1
5/5/2015	7:07	8	24	50 feet West of Carlsbad Blvd	Carlsbad	Blow off valve	dirt/ captured portion	no	contractor left valve open	LWD vactored spill / removed dirt	Cat 3
8/5/2016	13:32	700	28	911 Elmview Drive	Encinitas	Manhole #05-0730	captured all / storm drain / detention pond	no	heavy grit	LWD Vactored out storm drain detention pond	Cat 3
5/22/2018	13:25	11700	18	La Costa Ave	Carlsbad	Blow off valve	La Costa Ave, storm drain /retured to sewer	no	Driver veered off the road hit blow off valve	LWD, Carlsbad & Encinitas vactored storm drain / washed down street	Cat 2
12/4/2018	13:27	50	1	Piraeus St 200 feet south of Christine Place	Encinitas	Manhole #04-0285	Piraeus storm drain, returned to sewer	no	Air plug installed by pvt contractor downstream of spill manhole	Air plug was immediately deflated and removed and overflow subsided	Cat 3
7/23/2019	9:10	1	19	La Costa Ave.	Carlsbad	Blow Off Valve	captured all / washed down / vacuumed	No	ARV Blow Off Failure	LWD washed down Air Vac cement pad	Cat 3
7/24/2019	10:24	116	11	La Costa Ave./ Saxony Road	Carlsbad	Blow Off Valve	captured all / washed down / vacuumed	No	ARV Blow Off Failure	LWD washed down the affected area with vactor and vacuumed up spill	Cat 4
11/28/2019	13:07	5,000	133	2017 N. Coast Hwy (101)	Carlsbad	Pump Station	Batiquitos Lagoon/Ponto Beach	no	Force Main Valve Broken, failed to open	LWD had contractor replace forcemain valve	Cat 1

Spill Review Checklist		
Checklist Items	**YES/Done**	**NO**
Assemble information from:		
a. Emergency Action Report		
b. Work Order / Service Request		
c. Sewer Spill Data Sheet		
Map Location of the Above (provided or attached)		
Compare to previous 5 years and determine if there is a correlation for location		
Review Work Order / Service Request history for correlation with spill location (this includes review of the cleaning schedule and noting the last cleaning date at the spill location.		
a. If correlation, determine if all identified problems have been remedied.		
Record data from Spill Data Sheet to LWD Spill Summary		
Is spill related to food establishment and potentially a FOG related issue?		
a. If line recently cleaned, evaluate whether grease interceptors in area need to be inspected.		
Are there any resources which would have prevented or minimized the occurrence of the spill?		
a. If yes, identify which of the following (can be more than one) could have been improved on:		
i. Staff		
ii. Equipment		
iii. Training		
iv. Coordination with agencies		
v. Other – please explain		
Are there any resources which would have prevented or lessened the environmental impact of the spill?		
a. If yes, identify which of the following (can be more than one) could have been improved on:		
i. Staff		
ii. Equipment		
iii. Training		
iv. Coordination with agencies		
v. Other – please explain		

SSMP Evaluation Checklist				
Date Evaluation Completed:				
Last Date Checklist Revised: October 4, 2024				
	Monitoring, Measurement, and Modification Question	**Yes**	**No**	**Update Needed in SSMP? ***
Sections I, II, III (District Goals, Organization, Legal Authority)				
	1. Has there been an appreciable change in the Strategic Plan?			
	2. Was the current organizational chart included in the annual financial plan?			
	3. Were the District goals addressed in the annual Fiscal Year Tactics & Action Plan?			
	4. Has the District's Legal Authority been reviewed considering new regulations?			
	5. If appropriate for three year review cycle, has the District's Standard Spec been reviewed for necessary changes?			
	6. Was the staff size and organizational chain of command sufficient for implementation of the preventative maintenance programs and SSO spill response?			
	7. In review of the spill causes and environmental impacts (if any), would additional staff or a change in District organization lessened or eliminated the spill cause and environmental impact?			
	8. In review of the spill causes and environmental impacts (if any), was their sufficient legal authority for the District to respond and take action as necessary?			
Section IV (Preventative Maintenance Program)				
	1. Have all new construction or rehabilitation projects been entered into the GIS database?			
	2. Have the new pipelines, manholes, and updates from the field been included in CMMS?			
	3. Were all scheduled preventative maintenance activities in the CMMS completed as scheduled (e.g., hydrocleaning, video inspection, air release valve exercising, pump station inspections, etc.)? If not, determine cause and if additional staff is necessary to complete required schedule.			
	a. Hydrocleaning			
	b. CCTV Video Inspection			
	c. Release Valve Exercising			
	d. Isolation Valve Exercising			
	e. Pump Station Inspection			
	f. Smoke Testing			
	g. Foam Root Control			
	h. Lateral Reimbursement Program			
	4a. Are pipeline CCTV inspections on-track for complete system inspection every three years?			
	4b. Are the "special" areas as identified in Attachment C on track to be CCTV inspected every three years?			
	5. Is the pipeline and manhole Repair Priority List up-to-date and being addressed?			
	6. Have the annual Cathodic inspections been completed and recommendations implemented?			

SSMP Evaluation Checklist			
Date Evaluation Completed:			
Last Date Checklist Revised: October 4, 2024			
Monitoring, Measurement, and Modification Question	**Yes**	**No**	**Update Needed in SSMP? ***
7. Has the Pump Station Condition Assessment been completed and projects scheduled?			
8. Have the following standard operating procedures been reviewed?			
a. SOP – Collection System Maintenance Duties			
b. SOP – Video Inspection Procedure			
c. SOP – Easement Inspection Duties			
e. SOP – Pump Station Operator Duties			
f. SOP – Pump Station Odor Control			
g. SOP – Switching Force Main Lines			
h. SOP – By-pass Pumping for Avocado and Diana Pump Stations			
i. SOP – District Pipeline Location and Markout			
j. SOP – Traffic Control Procedures			
k. SOP – Emergency Procedures for Air Release Valves			
l. SOP – Emergency By-pass Pumping for Batiquitos Pump Station			
9. Has the appropriate ongoing training for these SOPs been conducted and recorded?			
Section V (Design and Performance Provisions)			
1. Has the LWD Standard Spec been sufficient to address design and construction needs?			
2. Has the LWD Standard Spec been sufficient to address inspection and testing needs?			
Section VI (Spill Emergency Response Plan)			
1. Have the following standard operating procedures and their attachments been reviewed and up-to-date?			
a. SOP – Spill Emergency Response Plan			
b. SOP – Pump Station Alarm Response			
c. SOP – Posting and Sampling Procedure			
d. SOP – SCADA Alarms and Alpha Numeric Pages			
e. SOP – Standby Duty Operator (On Call)			
f. SOP – Reporting Spills			
2. Has the appropriate ongoing training for these SOPs been conducted?			
3. Have the newly hired employees been provided with these procedures and trained on these procedures, as appropriate?			
4. Has the LRO certified No Spill for each month (when applicable)?			
5. Has the Annual Report been updated in CIWQS?			
Section VII (Sewer Pipe Blockage Control Program)			
1. Where permits processed for new food establishments in the District?			
a. If so, is there a BMP agreement on file?			
2. In review of the spill causes for the year, have any been attributable to FOG?			
3. In review of the spill causes for the past 24 months have there been three FOG-related spills?			

SSMP Evaluation Checklist				
Date Evaluation Completed:				
Last Date Checklist Revised: October 4, 2024				
	Monitoring, Measurement, and Modification Question	**Yes**	**No**	**Update Needed in SSMP? ***
	4. Were FOG outreach and prevention activities (newsletters, door hangers, inspections, samples) performed?			
Section VIII (System Evaluation, Capacity Assurance, and Capital Improvements)				
	1. Did the monthly board meeting agenda packets include the appropriate flow summary?			
	2. Have evaluations continued with respect to the inflow and infiltration?			
Section IX (Monitoring, Measurement, & Program Modifications)				
	1. Has the checklist evaluation been completed for the fiscal year?			
	2. Are there changes that need to be made to the Spill Review Checklist?			
	3. Are there changes that need to be made to the evaluation checklist?			
	a. If yes, are the changes substantial enough such that the SSMP needs to be revised? SSMP revisions will typically occur on a 5-year basis. The following is a list of items which would trigger a revision of the SSMP prior to the standard 5-year cycle update. Other minor changes within the District's organization, procedures, & activities would not necessitate an SSMP revision, but would be captured in the next revision cycle.			
	i. A substantial change in organization such that the chain of command for spill response or reporting are altered.			
	ii. A substantial change in the regulations such that the District's legal authority (Standard Spec) is deemed by District counsel to provide insufficient authority to the District.			
	iii. A substantial change in regional board reporting policy (or other regulatory agency) such that standard operating procedures for spill response must be substantially re-written.			
	iv. Review SSO causes deems a formal FOG Control Program must be implemented.			
	v. The ongoing monitoring of District flow results indicates that the current conclusion that sufficient capacity exists in the District collection system to accommodate buildout flows is no longer valid.			
	4. Were there any Notice and Order letters issued by the District?			
	a. If yes, are there any recommended changes to Legal Authority (ordinances, agreements, plan check process, etc.) which warrant revision as a result of issuing Notice and Orders?			
Section X Internal Audits)				
	1. Has the SSMP Program Audit been completed for the fiscal year?			
	2. Are there changes that need to be made to the Audit checklist?			
Section XI Communication Program				
	1. Is the SSMP section of the District website up-to-date? And has the SSMP status been relayed to the public?			
	2. Has the District continued to attend meetings with Encina Wastewater Authority, the City of Carlsbad, and the City of Encinitas as appropriate?			

SSMP Evaluation Checklist			
Date Evaluation Completed:			
Last Date Checklist Revised: October 4, 2024			
Monitoring, Measurement, and Modification Question	**Yes**	**No**	**Update Needed in SSMP? ***
3. In review of the spill causes and environmental impacts (if any), would additional ongoing communication with the Encina Wastewater Authority, the City of Carlsbad, or the City of Encinitas lessened or eliminated the spill cause and environmental impact?			

*** If an update is needed in the SSMP,**

1. Determine if the update is significant enough to warrant re-development and re-adoption of the SSMP prior to the 5-year re-adoption schedule and

2. Describe the update needed.

Section X – Internal Audits

Background and Regulatory Requirements

The Statewide WDRs governing sanitary sewers specify that the District shall conduct periodic internal audits, appropriate to the size of the system and the number of spills. These audits must occur at a minimum of every three years and a report must be prepared and kept on file. The audit shall focus on evaluating the effectiveness of the SSMP and the District's compliance with the SSMP requirement, including the identification of any deficiencies in the SSMP and the steps to correct them.

Leucadia Wastewater District Actions

The District performs its SSMP Audit (Attachment A) on an annual basis in concert with the Section IX – Monitoring, Measurement, and Program Modifications checklist. A report is generated which incorporates both of these items and will include the identification of any deficiencies identified and the steps to correct them. The findings of the audit are reported to the Board and the audit report is received and filed. Additionally, the audit report is posted on the District's website for public review.

The District has conducted annual audits of the 2019 SSMP. These audits are included by reference. Audits of this 2025 SSMP shall be subsequently included as an appendix in this SSMP revision.

District Documents Included In This Section

- SSMP Audit Checklist

District Documents Referenced By This Section

- LWD FY20 SSMP Audit Report
- LWD FY21 SSMP Audit Report
- LWD FY22 SSMP Audit Report
- LWD FY23 SSMP Audit Report
- LWD FY24 SSMP Audit Report

ATTACHMENT A

SSMP Audit Checklist			
Section	**Requirement**	**SSMP Current**	**SSMP Implemented**
I - Goals	Reduce, prevent, and mitigate spills		
II - Organization	Designate Legal Responsible Oversight		
	Organizational Chart		
	Contact info for SSMP implementation		
III - Legal Authority	Prevent illicit discharges		
	Require proper design and construction		
	Ensure access to facilities		
	Limit FOG		
	Enforce violations		
IV - O&M Program	Up to date mapping		
	Describe routine PM program		
	Rehabilitation and replacement plan		
	Proper training		
	Equipment and replacement part inventories		
V - Design and Performance Provisions	Design and construction standards for new facilities		
	Design and construction standards for rehab and replacement facilities		
	Procedures and standards for inspection and testing of new facilities		
	Procedures and standards for inspection and testing of rehab facilities		
VI - Spill Emergency Response Plan	Notification procedures		
	Response plan		
	Appropriate training		
	Procedures for emergency operations		
	Program to contain and prevent spills from reaching waters		
VII - FOG Control Program	Determine if applicable		
VIII - System Capacity Assurance	Capacity evaluation up to date		
	Design criteria in place		
	Capacity enhancement measures		
	Schedule		
IX - MMM	Maintain relevant info		
	Monitor implementation		
	Assess success of PM program		
	Update program elements		
	Identify and illustrate spill trends		
X - SSMP Audits	Conduct annual audit		
	Prepare audit report		
	Record changes made/corrective action taken		
XI - Communication Program	Communicate regarding preparation		
	Communicate regarding performance		
	Communicate with surrounding agencies		

Section XI – Communication Program

Background and Regulatory Requirements

The Statewide WDRs governing sanitary sewers specify that the District shall communicate on a regular basis with the public on the development, implementation, and performance of its SSMP. The communication system shall provide the public the opportunity to provide input to the District as the program is developed and implemented. The District shall also create a plan of communication with systems that are tributary or satellite to the District's sanitary sewer system.

Leucadia Wastewater District Actions

The District maintains an approach of open and direct communication with its customers and community. Additionally, the District regularly interacts with the cities served by the District, namely the City of Carlsbad and the City of Encinitas. Finally, as a member agency of the Encina Wastewater Authority, which treats the wastewater generated within the District, staff of both agencies are in frequent contact. The District's communication efforts are further described below.

Communication with the Community

The District maintains two key communication tools to interact with its customers and surrounding community. These include the District's website and newsletter.

Website. The District's website www.lwwd.org, updated in 2014 to improve transparency, provides information on the District ranging from the organizational structure and board meeting minutes to capital improvement projects and planning documents. The District's Asset Management Plan, Financial Plan, SSMP and most recent annual SSMP Audit are posted on the website for public review.

Newsletter. The semi-annual newsletter that the District distributes within its service area is used to announce the completion of the annual SSMP audit and any modification to the SSMP. The District also has a Facebook and Instagram page that is updated weekly to keep the public informed on current events happening in the District.

Communication with Surrounding Cities

The District service area includes portions of the City of Encinitas and the City of Carlsbad, in addition to co-owning wastewater pumping and/or transmission facilities. The District maintains open communication with both cities as necessary in addition to notifying storm water officials of any spills. Field Services Specialist attends utility coordination meetings with the City of Encinitas monthly and with the City of Carlsbad every two months.

Communication with Encina Wastewater Authority

As a member of the jointly owned Encina Water Pollution Control Facilities, which treat the wastewater generated within the District service area, the General Manager attends monthly Encina Wastewater Authority Board of Directors meeting and Member Agency Managers meeting. Additionally, two members of the District Board represent the District on the Encina Wastewater Authority Board of Directors. Agencies also occasionally contract and share resources as appropriate.

Opportunity for Public Comment

The District's SSMP webpage and newsletter provide the community with avenues to contact the District with any questions they may have regarding the SSMP.

The District reports spills electronically to the California Integrated Water Quality System (CIWQS). The electronic spill data, which has a public information section as well as information regarding regulatory actions, is available at:

http://www.waterboards.ca.gov/water_issues/programs/ciwqs/publicreports.shtml

Performance updates are provided in the form of the Operations Report given to the Board, and included in the public meeting minutes, as part of the Section IX – Monitoring, Measurement, and Program Modifications and the Section X – SSMP Program Audits sections.

APPENDIX A

OFFICIAL ADOPTION OF THE 2025 SSMP

APPENDIX B

SSMP CHANGE LOG

LEUCADIA WASTEWATER DISTRICT 2025 SEWER SYSTEM MANAGEMENT PLAN CHANGE LOG			
Date	**SSMP Element/ Section**	**Description of Change/Revision Made**	**Change* Authorized By:**

*See attached email from District Staff

APPENDIX C

AUDITS OF THE 2025 SSMP