DEXTER WILSON ENGINEERING, INC.

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LEUCADIA WASTEWATER DISTRICT
SEWER SYSTEM MANAGEMENT PLAN
FISCAL YEAR 2024 AUDIT

November 6, 2024

2234 FARADAY AVENUE • CARLSBAD, CA • (760) 438-4422

LEUCADIA WASTEWATER DISTRICT
SEWER SYSTEM MANAGEMENT PLAN
FISCAL YEAR 2024 AUDIT

November 6, 2024

11-6-2024

Prepared by:
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Job No. 103-019/8

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November 6, 2024 103-019/8

Leucadia Wastewater District
1960 La Costa Avenue
Carlsbad, CA 92009

Attention: Paul Bushee, General Manager

Subject: Leucadia Wastewater District Sewer System Management Plan Fiscal Year 2024 Audit

The Leucadia Wastewater District's (District) Sewer System Management Plan (SSMP) was adopted by the District Board and certified by the General Manager in June 2019. The purpose of the SSMP is to memorialize and publicly present in a central document the programs and activities utilized by the District to effectively manage its wastewater collection system. The SSMP requires audits at least every three years. The District has decided to conduct annual audits.

The purpose of this letter-report is to present the Fiscal Year 2024 (FY24) Audit (the fifth audit of the 2019 readoption of the District's SSMP) in fulfillment of the District's SSMP requirements. The Audit consists of completing the Section IX SSMP Evaluation Checklist and Section X SSMP Audit Checklist. These checklists are accompanied by summaries of the SSMP activities for the year.

Section IX SSMP Evaluation Checklist

The Statewide Waste Discharge Requirements (WDR) governing sanitary sewers specify that each Wastewater Collection Agency shall:

- evaluate the implementation and effectiveness of the Enrollee's SSMP in preventing spills,
- evaluate the Enrollee's compliance with the WDR,
- identify SSMP deficiencies in addressing ongoing spills and discharges to waters of the State; and
- identify necessary modifications to the SSMP to correct deficiencies.

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 Section IX SSMP Evaluation Checklist (Evaluation Checklist) is used on an annual basis to evaluate the applicability and effectiveness of the District's SSMP.

In completing the Evaluation Checklist (found in Attachment A), we find that, in general, the District's activities, programs, and efforts meet or exceed the requirements of the WDR and SSMP. Minor changes have been made to the SSMP to reflect the overall WDR update. However, the changes do not necessitate a re-adoption of the SSMP prior to the scheduled August 2, 2025 revision, per the required six year cycle. In completing the Evaluation Checklist, there are several items to note, as discussed in the Audit Discussion section below.

Section X SSMP Audit Checklist

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, 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 WDR and SSMP requirements, including the identification of any deficiencies in the SSMP and the steps taken to correct them.

The District has chosen to conduct their SSMP audit on an annual basis. In completing the Audit Checklist, we find all requirements of the checklist to be current and implemented. The completed Audit Checklist for FY24 can be found in Attachment B.

Audit Discussion

The following paragraphs highlight notable elements of the FY24 Audit organized by the relevant SSMP Section. Additional notes can be found on the Evaluation Checklist in Attachment A.

Sections I, II, and III (District Goals, Organization, and Legal Authority). No appreciable changes have occurred to the District's Goals, Organization, or Legal Authority since the 2019 SSMP. The statewide WDR which governs the SSMP was revised/updated and became effective on June 5, 2023. District staff took an active role in this process in 2023 regarding reissuance of the WDR including attending virtual State Water Board workshops and updating pertinent SOPs. There was one new field services staff hired in FY24.

Section IV (Preventative Maintenance Program). General statistics regarding the District's preventative maintenance activities are provided in Attachment C. Also in Attachment C, Exhibit C-1 graphically illustrates those areas within the District which are readily accessible for hydrocleaning and closed circuit television (CCTV) inspection and those areas which have additional needs or requirements in order to hydroclean or CCTV, such as the need for significant traffic control procedures or night work due to day time traffic volume or wastewater flows.

Exhibit C-2 tracks the general progress of CCTV inspections in the District. Per the District's SSMP, the District strives to CCTV their entire system every three years. The District is on track to meet its goal of CCTV inspecting its 200 mile gravity sewer system within a three-year timeframe.

The District has decided to reduce the CCTV inspection frequency of select gravity sewer lines with additional requirements (El Camino Real and the Batiquitos influent) to five year intervals similar to the Lanikai sewer line. These will be further assessed and a determination of CCTV inspection frequency will be made at the overall SSMP update.

In FY16, the District began introducing foam treatments in pipelines and manholes for the treatment of roots. The initial results were favorable and the District has incorporated foam treatment into the regular schedule of preventative maintenance activities. Additional line segments and manholes utilized foam treatment for root control in FY24.

In FY20, the District's portable flow meters (Echo meters) were relocated to strategic gravity sewer locations which are difficult to clean and CCTV inspect. In addition to monitoring capacity, the meters have assisted in determining whether the frequency of the resource intensive cleaning and CCTV activities of these locations can be extended. These locations are also being further evaluated in terms of inflow and infiltration.

In FY21, a mutual maintenance services and equipment agreement between the District and Olivenhain Municipal Water District (OMWD) was prepared. The agreement enables the District to have access to OMWD's hydraulic valve turning equipment services. These services will be utilized to exercise three large valves every six months at the major District pump stations. In return, the District will provide services to clean two of OMWD's pump station wet wells.

The District's Asset Management Plan (AMP) was revised in April 2023. Progress throughout FY24 with respect to the AMP (and other asset planning efforts) is summarized in the Attachment I letter-report at the end of the audit. The District's revised AMP is summarized as well in Attachment I.

The FY24 SOP training schedule can be found in Attachment D and all updated SOPs are included on a CD in Attachment E.

Section VI (Spill Emergency Response Plan). An overall update to the District's Spill Emergency Response Plan (SERP), previously titled Overflow Emergency Response Plan (OERP), was completed in FY23. The OERP had been reviewed and revised (as needed) on

an annual basis since the original SSMP adoption in 2009 by the District. Per the new Statewide WDR update, the OERP was required to be updated and implemented as the SERP per the Order's guidance.

Section VII (Sewer Pipe Blockage Control Program). There have been no public spills attributable to fats, oils, grease (FOG), rags, and debris sewer pipe blockage since FY11. The District continues to require BMP agreements for all new FSEs as well as further continuing its outreach via newsletters, door hangers, inspections, etc. Additionally, the District is training field staff and conducting inspection of grease interceptors/traps in shopping plazas that show significant corrosion of manholes (30 inspections completed in FY24). District FSE inspections have included notification of sufficient grease cleaning as well as ensuring that certified grease haulers are being utilized by the FSEs.

Section VIII (System Evaluation and Capacity Assurance). The District continues to monitor (and address as necessary) the presence of scale in the Alga Hills area. The area was most recently CCTV inspected in FY22 and is hydrocleaned as deemed necessary. Any defects discovered during the CCTV inspections are incorporated into the District's Repair Priority List.

Inflow domes have been installed in 2,816 of the District's 5,103 manholes to aid in reducing inflow. The District will continue to repair/replace inflow domes as it becomes necessary.

Smoke testing was performed in the Leucadia area in FY24. A majority of the defects were found along private laterals and cleanouts. Subsequently, the District ensured necessary repairs were completed to the private lateral and cleanout defects which reduces the amount of inflow in the District's sewer system.

Flow analyses of the District were conducted as part of the District's 2008, 2013, 2018, and 2023 AMPs. All four documents concluded that estimates of average and peak ultimate flows are within the design values of the District and less than the flows utilized in the District's detailed capacity analyses conducted as part of the 1999 Wastewater Master Plan. There are no capacity-driven replacement projects currently identified for the District. For reference, the current buildout flows for the District are projected to be 4.7 mgd in comparison to the 1999 Master Plan where buildout flows were projected at 6.5 mgd.

The District's monthly flow comparison for FY23 and FY24 can be found in Attachment F. In comparison to FY23, average daily flows have slightly decreased in FY24.

Other FY24 system evaluation activities included the continuance of converting the Inframap data transfer to a cloud-based system.

Section IX (Monitoring, Measurement, and Program Modifications). The District's Spill Summary from the most recent SSMP update in 2018 through June 30, 2024 can be found in Attachment G. No public spills occurred in FY24.

Spill review checklists for each spill event are on file at the District office. Figure 1 identifies the location of each spill in a public line or manhole since the most recent SSMP update. There was one private lateral spill in FY24 totaling 126 gallons which was all captured and vacuumed up. The District does not own, operate, or maintain laterals that connect into its collection system. The District responds to and assists with the clean-up of private lateral spills as a courtesy to residents. Spill occurrence, volume, and lateral reimbursement continues to decline which demonstrates the District's successful preventative maintenance programs.

Section XI (Communication Program). The District has made the 2019 SSMP and subsequent audits available on its website. The District also actively posts to Facebook to communicate generally with the public. Examples of Facebook posts by the District in FY24 included reminders about the problems that wipes and grease cause in the sewer system, tips on how customers can better maintain their private sewer plumbing, keeping easements clear, and information on District activities such as smoke testing, routine maintenance work/traffic control, etc. Additionally, SSMP updates and SSMP Audits are formally presented to the Engineering Committee and Board of Directors.

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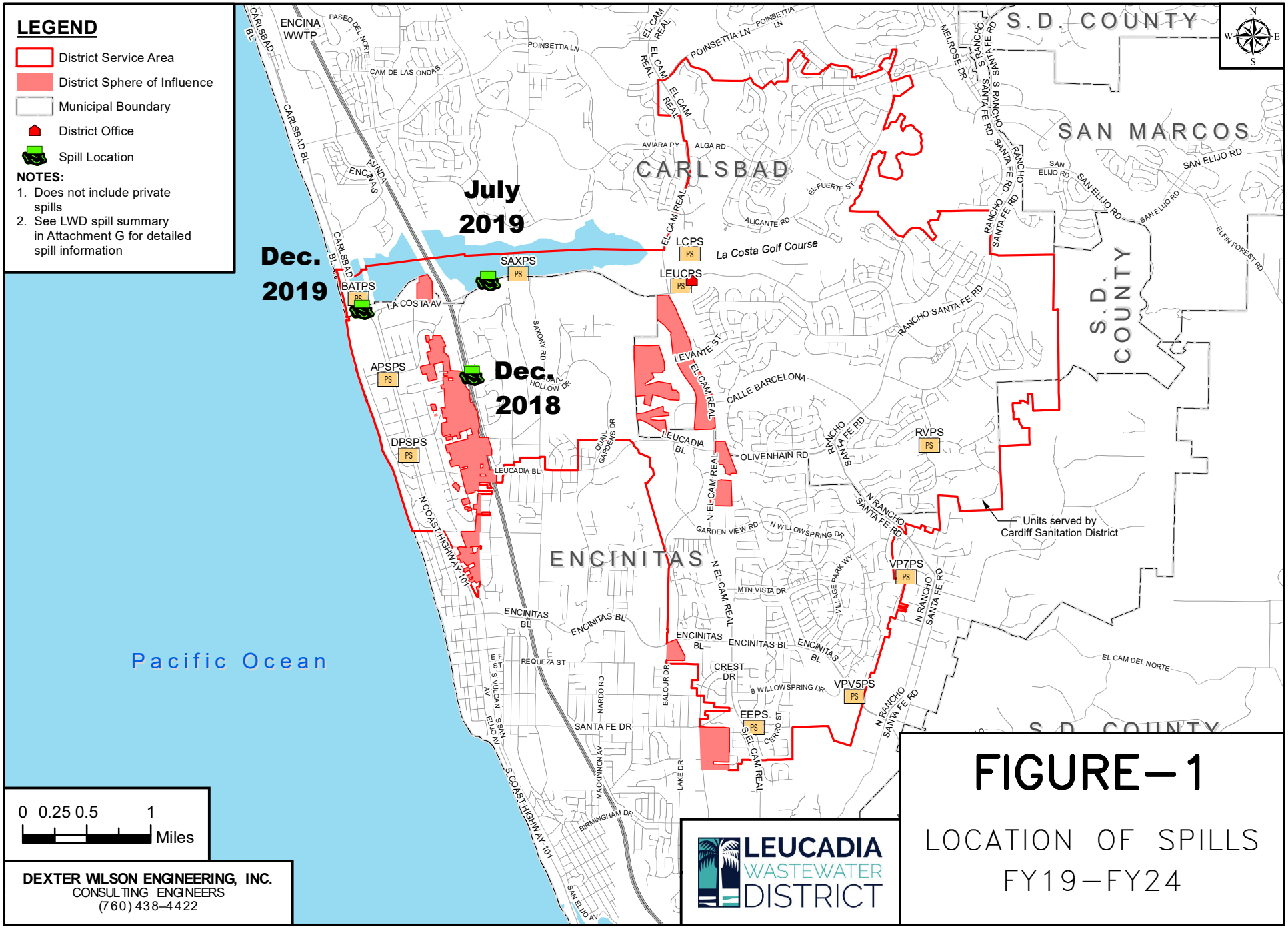

Recommended SSMP Edits

Attachment H to this audit document is a place holder for specific edits to the 2019 SSMP; there are no edits/changes recommended to the SSMP based on the FY24 Audit. The revisions stemming from the SERP update are included for reference. Future edits, if necessary, will be documented in the SSMP change log (Appendix B of the SSMP and Attachment H of subsequent audits). Future edits/revisions to the SSMP will be evaluated to determine whether or not they are significant enough to warrant re-adoption of the District's SSMP prior to the scheduled August 2, 2025 revision.

Summary of Recommendations

The following section summarizes recommended items as a result of the FY24 Audit:

- Ensure that La Costa Golf Course and La Costa Avenue, Alga Road, and Rancho Santa Fe Road sewers, which all require additional measures (e.g. traffic control, easements, etc.), maintain cleaning/CCTV cycles (See Attachment C). The Rancho Santa Fe Road and Alga Road/El Camino Real gravity sewers are recommended to be scheduled for CCTV inspection next.
- Ensure that the planned O&M activities (e.g. hydroclean and CCTV inspect every 5 years) for the Lanikai and Occidental sewer lines are on track (see AMPI memorandum Attachment A). The Occidental sewer line was hydrocleaned by Carlsbad in FY22. The Lanikai sewer line was hydrocleaned by the District in FY23.
- Complete all applicable scheduled SOP trainings in FY24/FY25 (see Attachment D for reference).
- Ensure that revised SERP is implemented and integrated into District training.
- Re-adoption of the District's SSMP is required by August 2, 2025 per the WDR. We recommend kickoff of this process during the 2nd quarter of 2025.

Next Steps

This SSMP FY24 Audit should be received and filed by the District Board as well as retained for inclusion in the current District's 2019 SSMP. Please be sure to post this FY24 Audit on the District's website and include a hardcopy in the District's 2019 SSMP counter copy. We appreciate the opportunity to have worked with the District on this project. Should you have any questions please do not hesitate to contact us.

Dexter Wilson Engineering, Inc.

Steven Henderson, P.E.

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Attachment(s)

This audit was conducted in collaboration with, and the audit recommendations have been reviewed by the Field Services Department.

Marvin Gonzalez
Field Services Superintendent

LIST OF ATTACHMENTS

A – SSMP Evaluation Checklist

B – SSMP Audit Checklist

C – District Preventative Maintenance Statistics

D – SOP Training Schedule

E – Field Services SOPs

F – District Flow Comparison FY22 to FY24

G – LWD Spill Summary through June 30, 2024

H – SSMP Revisions

I – Letter-Report to LWD General Manager Regarding AMP Implementation

ATTACHMENT A

SSMP EVALUATION CHECKLIST

Leucadia Wastewater District SSMP FY24 Audit Checklist			
Section	**Requirement**	**SSMP Current**	**SSMP Implemented**
I - Goals	Reduce, prevent, and mitigate spills	X	X
II - Organization	Designate Legal Responsible Oversight	X	X
	Organizational Chart	X	X
	Contact info for SSMP implementation	X	X
III - Legal Authority	Prevent illicit discharges	X	X
	Require proper design and construction	X	X
	Ensure access to facilities	X	X
	Limit FOG	X	X
	Enforce violations	X	X
IV - O&M Program	Up to date mapping	X	X
	Describe routine PM program	X	X
	Rehabilitation and replacement plan	X	X
	Proper training	X	X
	Equipment and replacement part inventories	X	X
V - Design and Performance Provisions	Design and construction standards for new facilities	X	X
	Design and construction standards for rehab and replacement facilities	X	X
	Procedures and standards for inspection and testing of new facilities	X	X
	Procedures and standards for inspection and testing of rehab facilities	X	X
VI - Spill Emergency Response Plan	Notification procedures	X	X
	Response plan	X	X
	Appropriate training	X	X
	Procedures for emergency operations	X	X
	Program to contain and prevent spills from reaching waters	X	X
VII - Sewer Pipe Blockage Control Program	Determine if applicable	X	X
VIII - System Capacity Assurance	Capacity evaluation up to date	X	X
	Design criteria in place	X	X
	Capacity enhancement measures	X	X
	Schedule	X	X
IX - MMM	Maintain relevant info	X	X
	Monitor implementation	X	X
	Assess success of PM program	X	X
	Update program elements	X	X
	Identify and illustrate spill trends	X	X
X - SSMP Audits	Conduct annual audit	X	X
	Prepare audit report	X	X
	Record changes made/corrective action taken	X	X
XI - Communication Program	Communicate regarding preparation	X	X
	Communicate regarding performance	X	X
	Communicate with surrounding agencies	X	X

ATTACHMENT B

SSMP AUDIT CHECKLIST

Leucadia Wastewater District SSMP Evaluation Checklist for FY2024						
Date Evaluation Completed: August 21, 2024 - October 23, 2024 *Last Date Checklist Revised: October 4, 2024*						
Monitoring, Measurement, and Modification Question	**Yes**	**No**	**Update Needed in SSMP? ***	**Date**	**Staff Inter-viewed**	**Actions and Notes**
Sections I, II, III (District Goals, Organization, Legal						
1. Has there been an appreciable change in the Strategic Plan?		✓		8/21/24	DTS	
2. Was the current organizational chart included in the annual financial plan?	✓			8/21/24	FSS	
3. Were the District goals addressed in the annual Fiscal Year Tactics & Action Plan?	✓			8/21/24	FSS	
4. Has the District's Legal Authority been reviewed considering new regulations?	✓			8/21/24	DTS	A general WDR revision was put into effect in June 2023. The District's Legal Authority complies with current regulations.
5. If appropriate for three year review cycle, has the District's Standard Spec been reviewed for necessary changes?	✓			9/29/23	DE	Standard Spec was updated in April 2022.
6. Was the staff size and organizational chain of command sufficient for implementation of the preventative maintenance programs and spill response?	✓			8/21/24	FSS & DE	
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?		✓		8/21/24	FSS & DE	There were no spills in FY24.
8. In review of the spill causes and environmental impacts (if any), was the sufficient legal authority for the District to respond and take action as necessary?	✓			8/21/24	FSS & DE	There were no spills in FY24.

Leucadia Wastewater District SSMP Evaluation Checklist for FY2024

Date Evaluation Completed: August 21, 2024 - October 23, 2024

Last Date Checklist Revised: October 4, 2024

Monitoring, Measurement, and Modification Question	Yes	No	Update Needed in SSMP? *	Date	Staff Inter-viewed	Actions and Notes
Section IV (Preventative Maintenance Program)						
1. Have all new construction or rehabilitation projects been entered into the GIS database?	✓			8/21/24	FSS	
2. Have the new pipelines, manholes, and updates from the field been included in CMMS?	✓			8/21/24	FSS	
3. Were all scheduled preventative maintenance activities in the CMMS completed as scheduled? If not, determine cause and if additional staff is necessary to complete required schedule.						
a. Hydrocleaning	✓			8/21/24	FSS	Was on target.
b. CCTV Video Inspection	✓			8/21/24	FSS	Was on target.
c. Release Valve Exercising	✓			8/21/24	FSS	Exercised every 6 months.
d. Isolation Valve Exercising	✓			8/21/24	FSS	Exercised every 3 months.
e. Pump Station Inspection	✓			8/21/24	FSS	Inspected every month.
f. Smoke Testing	✓			10/4/24	FSS	Was performed on approximately 13,500 linear feet in FY24. A total of 30 defects were identified. A majority of the defects were found along private laterals and cleanouts.
g. Foam Root Control	✓			10/4/24	FSS	Was performed on 25 line segments in FY 24 amounting to 5,620 LF.
h. Lateral Reimbursement Program	✓			10/4/24	FSP	Processed and approved 17 Lateral Reimbursement Applications in FY24 for a total of $46k of $100k budgeted.
4a. Are pipeline CCTV inspections on-track for complete system inspection every 3 years?	✓			10/4/24	FSS	CCTV inspection statistics the past 3 years show the District is meeting its 3 year goal of 200 total inspected miles. In FY25, the District will need to prioritize the gravity line segments highlighted in Exhibit C-2 to remain on track for the 3-year inspection interval.
4b. Are the "special" areas as identified in Attachment C on track to be CCTV inspected every 3 years?		✓		10/4/24	FSS	Primarily yes, locations 1, 9, and 10 are scheduled for inspection in FY25.

Leucadia Wastewater District SSMP Evaluation Checklist for FY2024						
Date Evaluation Completed: August 21, 2024 - October 23, 2024 *Last Date Checklist Revised: October 4, 2024*						
Monitoring, Measurement, and Modification Question	**Yes**	**No**	**Update Needed in SSMP? ***	**Date**	**Staff Inter-viewed**	**Actions and Notes**
5. Is the pipeline and manhole Rehab Priority List up-to-date and being addressed?	✓			8/21/24	DE & FSP	
6. Have the annual Cathodic inspections been completed and recommendations implemented?	✓			10/4/24	DTS	Annual inspection was completed in March 2024.
7. Has the Pump Station Condition Assessment been completed and projects scheduled?	✓			10/4/24	DTS	IEC performed the pump station inspection in March 2020. Projects have been scheduled as appropriate. Next assessment is scheduled for FY25.
8. Have the following standard operating procedures been reviewed and up-to-date?	✓			10/4/24	FSS	
a. SOP – Collection System Maintenance						
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 Satellite Pump Stations						
i. SOP – District Pipeline Location and Markout						
j. SOP – Traffic Control Procedures						
k. SOP – Emergency Procedures for						
l. SOP – Emergency By-pass Pumping for Batiquitos Pump Station						
9. Has the appropriate ongoing training for these SOPs been conducted and recorded?	✓			10/4/24	FSS	SOP training information was provided by District and via Tactics and Actions Plan.
Section V (Design and Performance Provisions)						
1. Has the LWD Standard Spec been sufficient to address design and construction needs?	✓			8/21/24	DE	
2. Has the LWD Standard Spec been sufficient to address inspection and testing needs?	✓			8/21/24	DE	

Leucadia Wastewater District SSMP Evaluation Checklist for FY2024						
Date Evaluation Completed: August 21, 2024 - October 23, 2024 *Last Date Checklist Revised: October 4, 2024*						
Monitoring, Measurement, and Modification Question	**Yes**	**No**	**Update Needed in SSMP? ***	**Date**	**Staff Inter-viewed**	**Actions and Notes**
Section VI (Spill Emergency Response Plan)						
1. Have the following standard operating procedures and the attachments been reviewed and up-to-date?	✓			10/4/24	FSS & FSP	The revised SOP book was reviewed and amended as needed by the D.E. with the changes from FY24. The SERP was revised and updated per the new WDR (previously titled "Overflow Emergency Response Plan" OERP).
a. SOP – Spill Emergency Response Plan						
b. SOP – Pump Station Alarm Response						
c. SOP – Posting and Sampling						
d. SOP – SCADA Alarms and Alpha						
e. SOP – Standby Duty Operator (On Call)						
f. SOP – Reporting Spills						
2. Has the appropriate ongoing training for these SOPs been conducted?	✓			8/21/24	FSS	
3. Have the newly hired employees been provided with these procedures and trained on these procedures, as appropriate?	✓			10/4/24	FSS	One new field services employees was hired in FY24.
4. Has the LRO certified No Spill for each month (when applicable)?	✓			8/21/24	FSS	
5. Has the Collection System Questionnaire been updated in CIWQS?	✓			8/21/24	FSS	Going forward this has been revised to "Annual Report" per new WDR.
Section VII (Sewer Pipe Blockage Control Program)						
1. Were permits processed for new food establishments in the District?	✓			8/21/24	DE	
a. If so, is there a BMP agreement on file?	✓			8/21/24	DE	
2. In review of the spill causes for the year, have any been attributable to FOG?		✓		8/21/24	FSS	
3. In review of the spill causes for the past 24 months have there been three FOG-related spills? This would trigger the District to conduct a comprehensive formal evaluation of implementing a formal FOG Control Program.		✓		8/21/24	FSS	
4. Were FOG outreach and prevention activities (newsletters, door hangers, inspections, samples) performed?	✓			8/21/24	FSS	30 FOG inspections were performed in FY24.
Section VIII (System Evaluation & Capacity Assurance						
1. Did the monthly board meeting agenda packets include the appropriate flow summary?	✓			8/21/24	FSS	
2. Have evaluations continued with respect to the inflow and infiltration?	✓			8/21/24	FSS	Smoke testing was performed in FY24.

Leucadia Wastewater District SSMP Evaluation Checklist for FY2024						
Date Evaluation Completed: August 21, 2024 - October 23, 2024 *Last Date Checklist Revised: October 4, 2024*						
Monitoring, Measurement, and Modification Question	**Yes**	**No**	**Update Needed in SSMP? ***	**Date**	**Staff Inter-viewed**	**Actions and Notes**
Section IX (Monitoring, Measurement, & Program Modifications)						
1. Has the checklist evaluation been completed for the fiscal year?	✓			8/21/24	DE	
2. Are there changes that need to be made to the Spill Review Checklist?		✓		8/21/24	FSS	Was updated as part of overall SERP revision in May 2023.
3. Are there changes that need to be made to the evaluation checklist?		✓		8/21/24	DE	
a. If yes, are the changes substantial enough such that the SSMP needs to be revised? SSMP revisions will typically occur on a 6-year basis. The following is a list of items which would trigger a revision of the SSMP prior to the standard 6-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.	N/A			8/21/24	DE	
i. A substantial change in organization such that the chain of command for spill response or reporting are altered.	N/A			8/21/24	DE	
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.	N/A			8/21/24	DE	
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.	✓			8/21/24	DE	Was updated as part of overall SERP revision in May 2023.
iv. Review spill causes deems a formal FOG Control Program must be implemented.	N/A			8/21/24	DE & FSS	Although FOG has not been the cause of any spill experienced by the District, manhole inspections near FSEs have resulted in the implementation of FOG inspection of grease interceptors
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.	N/A			8/21/24	DE	

Leucadia Wastewater District SSMP Evaluation Checklist for FY2024						
Date Evaluation Completed: August 21, 2024 - October 23, 2024						
Last Date Checklist Revised: October 4, 2024						
Monitoring, Measurement, and Modification Question	**Yes**	**No**	**Update Needed in SSMP? ***	**Date**	**Staff Inter-viewed**	**Actions and Notes**
4. Were there any Notice and Order letters issued by the District?	✓			8/21/24	FSP	Letters were issued as a result of smoke testing conducted in FY24.
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?		✓		8/21/24	FSP	No changes necessary. The wastewater ordinance was last updated in FY21 with improved enforcement language. The improvements allow for the collection of fines through property tax collection in addition to direct payment to the District.
Section X Evaluation (SSMP Program Audits)						
1. Has the SSMP Program Audit been completed for the fiscal year?	✓			tbd	DE	
2. Are there changes that need to be made to the Audit checklist?		✓		tbd	DE	
Section XI Evaluation (Communication Program)						
1. Is the SSMP section of the District website up-to-date? And has the SSMP status been relayed to the public?	✓			8/21/24	FSS	
2. Has the District continued to attend meetings with Encina Wastewater Authority, the City of Carlsbad, and the City of Encinitas as appropriate?	✓			8/21/24	DE	
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?		✓		8/21/24	FSS	There were no spills in FY24.
*** 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 6-year re-adoption schedule						
2. describe the update needed						

NA- Not Applicable
DE - District Engineer
GM - General Manager
GC - General Counsel
RDD - Reviewed District Documents
DTS - Director of Technical Services
FSS - Field Services Superintendent or Supervisor
FSP - Field Services Specialist

ATTACHMENT C

DISTRICT PREVENTATIVE MAINTENANCE STATISTICS

FY-24

Production Chart

	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Totals
CCTV Inspections (YTD 76 Miles)	**6.88**	**10.34**	**6.37**	**2.50**	**7.62**	**5.58**	**7.80**	**8.07**	**7.39**	**7.28**	**4.15**	**1.99**	**76.0**
Hydro Cleaning (YTD 181 Miles)	**16.49**	**19.90**	**12.65**	**12.43**	**21.62**	**11.44**	**13.64**	**14.86**	**15.72**	**13.05**	**6.73**	**22.49**	**181.0**
FOG Inspections (YTD 30)	2	2	1	3	3	0	6	2	3	3	2	3	**30.0**
Easements	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Service Calls	4	4	4	3	6	3	3		6	3	6	7	**49.00**
Inflow Domes (YTD 23-24	**2455**	**2455**	**2455**	**2688**	**2689**	**2689**	**2687**	**2730**	**2810**	**2810**	**2811**	**2816**	
Added inflow domes in year	**361**												

Hydro cleaning & CCTV Statistics

	Hydro Cleaning	SMA's	Total Hydroclean	Total Hydr	CCTV	Total CCTV		Easements	al Easeme	ervice Calls
	Footage (LF)	Footage (LF)	Footage (LF)	Footage (	Footage (LF)	Footage (miles)		Footage (LF	otage (mile	Total Calls
July	41,857	45,205	87,062	16.49	36,315	6.88		-	0.00	4
August	104,809	255	105,064	19.90	54,581	10.34		-	0.00	4
September	66,626	191	66,817	12.65	33,650	6.37		-	0.00	4
October	20,088	45,548	65,636	12.43	13,202	2.50		-	0.00	5
November	113,782	363	114,145	21.62	40,228	7.62		-	0.00	6
December	60,394	-	60,394	11.44	29,463	5.58			0.00	3
January	27,944	44,065	72,009	13.64	41,160	7.80			0.00	3
February	76,405	2,047	78,452	14.86	42,595	8.07			0.00	6
March	82,607	396	83,003	15.72	39,035	7.39			0.00	6
April	24,347	44,556	68,903	13.05	38,450	7.28			0.00	3
May	33,128	2,397	35,525	6.73	21,924	4.15			0.00	6
June	118,624	127	118,751	22.49	10,492	1.99			0.00	
								to go		
Totals Per Year	770,611	185,150	955,761	**181.02**	401,095	**75.96**		**(1.02)**		**50**
Totals Per Month	64,217.58	15,429.17	79,646.75	15.08	33,424.58	6.33		**(0.96)**		

LEGEND

- Leucadia Wastewater District Boundary

Existing Facilities

- Lift Station
- Manhole

Existing Pipelines

- Gravity Sewer
- Force Main
- Hydroclean-Linked to Existing Pipelines

0 1,750 3,500 7,000 Feet

CCTV INSPECTIONS WITH ADDITIONAL REQUIREMENTS

Location #	Location	Additional Requirements Needed	Status	Clean/CCTV Frequency	FY Due Date
1	RSF Road - Camino De Los Coches to Avenida Aragon	Traffic Control	CCTV'd in FY22	3	FY25
2	RSF Road - Calle Acevo to Avenida Aragon	Traffic Control	CCTV'd in FY21	5	FY26
3	La Costa Ave - Piraeus St to Saxony PS	Traffic Control	CCTV'd in FY21	5	FY26
4	ECR - Enci Blvd to Leucadia Blvd	Night Work	CCTV'd in FY22	5	FY27
5	ECR - Leucadia Blvd to Levante (Green Valley)	Easement hydro-cleaning	CCTV'd in FY22	5	FY27
6	ECR - Levante to 300' north of La Costa Ave	Traffic Control	CCTV'd in FY22	5	FY27
7A	La Costa Golf Course (North Portion)	Coordination w/ golf course	CCTV'd in FY23	3	FY26
7B	La Costa Golf Course (East Portion)	Coordination w/ golf course	CCTV'd in FY24	3	FY27
9	Alga Road and El Camino Real	Traffic Control	CCTV'd in FY22	3	FY25
10	La Costa Ave	Traffic Control	CCTV'd in FY22	3	FY25
11	RSF Road - Paseo Lupino to La Costa Avenue	Traffic Control	CCTV'd in FY22	3	FY25
12	Scotts Valley Easement	Night Work	CCTV'd in FY21	5	FY26
13	Influent Gravity Line to Batiquitos PS	Night Work	CCTV'd in FY23	5	FY28

Last revised 10-23-2024

CARLSBAD BL
AVNDA ENCINAS
EL CAMINO REAL
POINSETTIA LN
MELROSE DR
RANCHO SANTA FE RD
SAN ELIJO RD
LA COSTA AV
CALLE BARCELONA
OLIVENHAIN RD
LEUCADIA BL
N EL CAMINO REAL
S EL CAMINO REAL
ENCINITAS BL
SANTA FE DR
I-5
HIGHWAY 101

LEUCADIA WASTEWATER DISTRICT

EXHIBIT C–1

GRAVITY SEWER
PREVENTATIVE MAINTENANCE
ACTIVITIES

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

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CCTV INSPECTIONS WITH ADDITIONAL REQUIREMENTS

Location #	Location	Additional Requirements Needed	Status	Clean/CCTV Frequency	FY Due Date
1	RSF Road - Camino De Los Coches to Avenida Aragon	Traffic Control	CCTV'd in FY22	3	FY25
2	RSF Road - Calle Acevo to Avenida Aragon	Traffic Control	CCTV'd in FY21	5	FY26
3	La Costa Ave - Piraeus St to Saxony PS	Traffic Control	CCTV'd in FY21	5	FY26
4	ECR - Enci Blvd to Leucadia Blvd	Night Work	CCTV'd in FY22	5	FY27
5	ECR - Leucadia Blvd to Levante (Green Valley)	Easement hydro-cleaning	CCTV'd in FY22	5	FY27
6	ECR - Levante to 300' north of La Costa Ave	Traffic Control	CCTV'd in FY22	5	FY27
7A	La Costa Golf Course (North Portion)	Coordination w/ golf course	CCTV'd in FY23	3	FY26
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11	RSF Road - Paseo Lupino to La Costa Avenue	Traffic Control	CCTV'd in FY22	3	FY25
12	Scotts Valley Easement	Night Work	CCTV'd in FY21	5	FY26
13	Influent Gravity Line to Batiquitos PS	Night Work	CCTV'd in FY23	5	FY28

Last revised 10-23-2024

LEGEND

CCTV Gravity Sewer Inspection by Date

3 Years Since CCTV

Leucadia Wastewater District Boundary

LEUCADIA WASTEWATER DISTRICT

PACIFIC OCEAN

CARLSBAD BL
POINSETTIA
CAM DE LAS ONDAS
POINSETTIA
POINSETTIA
AVIARA
POINSETTIA LN
MELROSE DR
ALGA
MELROSE DR
ELHERTH
SAN ELIJO RD
SAN ELIJO RD
ELFIN FOREST
ALICANTE
LA COSTA AV
RANCHO SANTA FE RD
CAM JUNIPERO
CALLE BARCELONA
EL CAMINO REAL
OLIVENHAIN RD
LEUCADIA BL
N EL CAM REAL
WILLOWSPRING
RANCHO SANTA FE RD
MTN VISTA
VILLAGE PARK
ENCINITAS BL
EL CAM DEL NORTE
EL MIRLO
LEUCADIA
SAXONY
REQUEZA
VULCAN
S COAST HIGHWAY 101
NARDO
BALOUR
SANTA FE DR
S EL CAM REAL
CERRO
MACKINNON
LAKE
BIRMINGHAM DR
N COAST HIGHWAY 101
5

0 1,750 3,500 7,000 Feet

EXHIBIT C–2

GRAVITY SEWER
CCTV COMPLETIONS
AS OF SEPTEMBER 2024

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

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ATTACHMENT D

SOP TRAINING SCHEDULE

Leucadia Wastewater District

Standard Operating Procedures Training Schedule FY-24

	Date Completed:
1. Collection System Maintenance Duties	Dec. 2023
2. Video Inspection Duties	Dec. 2023
3. Easement Inspection Duties	Feb. 2024
4. Bypass Pumping Avocado & Diana Response Plan	Aug. 2023
5. Standby Duty Operator (On Call) Duties	Feb. 2024
6. Pump Station Operator Duties	Feb. 2024
7. Pump Station Odor Control	Feb. 2024
8. Switching Force main Lines	Feb. 2024
9. District Pipeline Location and Mark Out	Jun. 2021
10. Pump Station Alarm Response	Jul. 2024
11. SCADA Alarms	Jul. 2024
12. Overflow Emergency Response Plan	Jul. 2024
13. Reporting SSO's	Jul. 2024
14. Posting and Sampling Waters Impacted by an SSO	Jan. 2023
15. Traffic Control Procedures	Mar. 2024
16. Emergency Procedures for Air Release Valves	Nov. 2020
17. Rating and Repair of Manholes and Mainlines	Jun. 2019
18. Emergency Bypass Pumping for Batiquitos Pump Station	Aug. 2024
19. Chemical Delivery	Jun. 2019
20. Lock Out / Tag out	Jun. 2023

Additional Training:

21. Flagger Safety (Every 2 years)	Mar. 2024
22. Gafner Water Reclamation Plant SWPP	Oct. 2023
23. Confined Space Training	Mar. 2024
24. Active Shooter Class	Nov. 2023

ATTACHMENT E

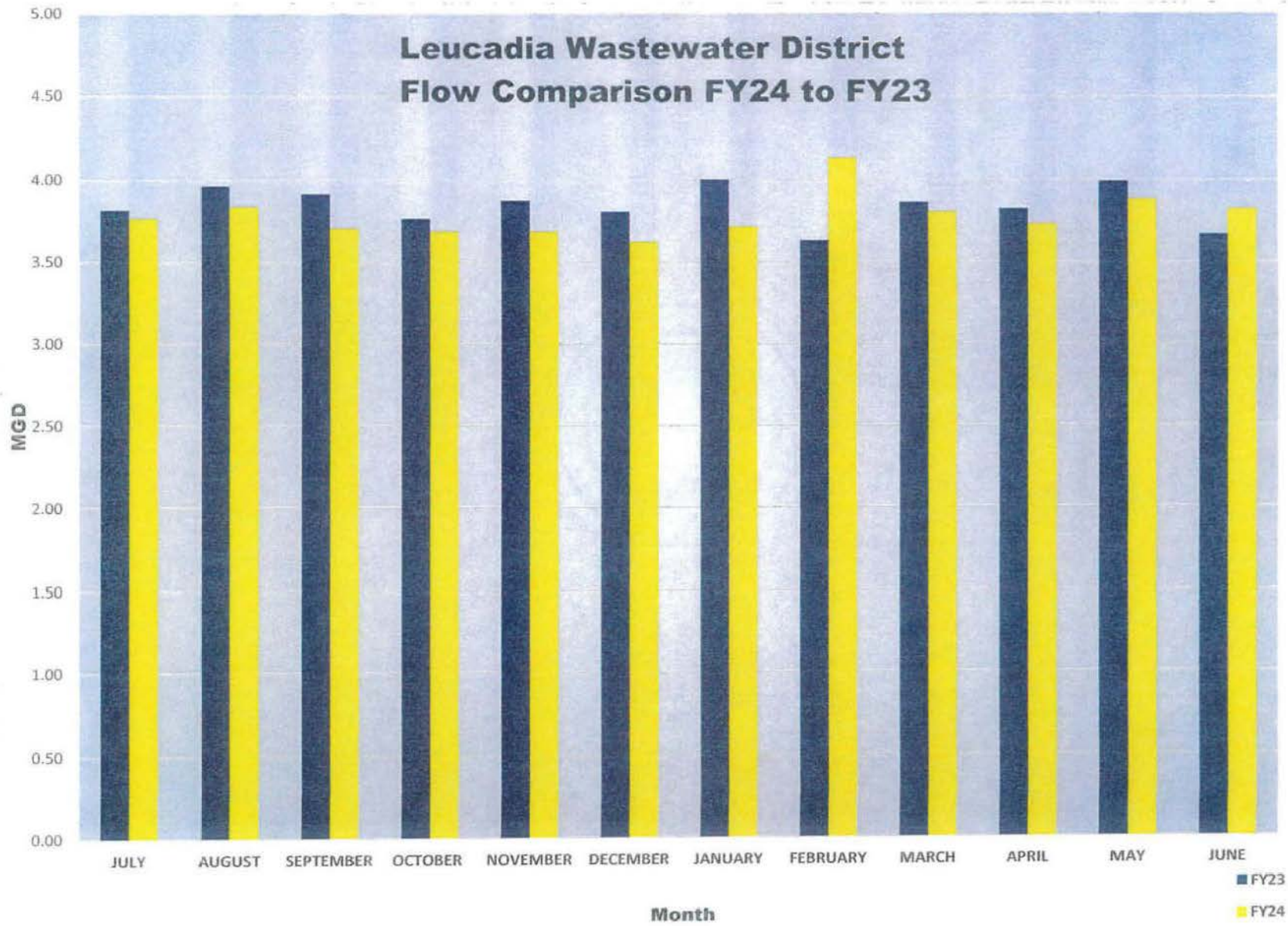
FIELD SERVICES SOPs

List of SOPs Available on CD:

1. Collection System Maintenance Duties
2. Video Inspection Duties
3. Easement Inspection Duties
4. Standby Duty Operator
5. Pump Station Operator Duties
6. Pump Station Odor Control
7. Switching Force Mains
8. Pump Station Alarm Response
9. SCADA Alarms
10. Spill Emergency Response Plan
11. Reporting Spills
12. Posting and Sampling Waters Impacted by a Spill
13. Bypass Pumping for Avocado and Diana PS
14. District Pipeline Location and Markout
15. Traffic Control Procedures
16. Emergency Procedures for Air Release Valves
17. Emergency By-Pass Pumping for Batiquitos Pump Station
18. Rating and Repair of Manholes and Mainlines
19. Chemical Delivery
20. Lock Out / Tag out

ATTACHMENT F

DISTRICT FLOW COMPARISON FY23 TO FY24


Leucadia Wastewater District
Flow Comparison FY24 to FY23
MGD
5.00
4.50
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER
DECEMBER
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
Month
FY23
FY24

ATTACHMENT G

LWD SPILL SUMMARY THROUGH JUNE 30, 2024

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

date	time agency notified	volume in gallons	duration in minutes	location of spill	City in California	type of structure	destination of spill	beach posted	cause of spill	steps taken to mitigate effects of spill	OES #	Lat	Long	CIWQS #
12/4/2018	13:27	50	1	Piraeus Street	Encinitas	manhole #040290	captured all / storm drain / washed down	no	inspector allowed contractor to install plug	LWD washed down the street with Vactor and vacuumed out storm drain	CAT 3	33.07583	117.29493	NA
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	33.08764	117.27728	NA
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	33.0514	117.1725	NA
11/28/2019	13:07	5000	133	2017 N Coast Hwy (101)	Carlsbad	Pump Station	Batiquitos Lagoon/ Ponto Beach	no	Forcemain valve broken/ failed to open	LWD had contractor replace forcemain valve	19-7617	33.08106	117.30775	863224

FY 2018-2019
FY 2019-2020
FY 2020-2021
FY 2021-2022
FY 2022-2023
FY 2023-2024

ATTACHMENT H

SSMP REVISIONS

(TO BE ADDED AS NECESSARY)

Table of Contents

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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.

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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. The overall General Order for Sanitary Sewer Systems was updated and became effective June 5, 2023.

This 2019 SSMP is the 5-year update to the 2014 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.

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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 and 2014 SSMP and guided the District in the development of this 2019 version. The annual audit exceeds the WDR requirement of biennial audits and reflects the District's commitment to a proactive approach toward preventing spills.

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Section VI – Spill Emergency Response Plan

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Background and Regulatory Requirements

The Statewide WDRs governing sanitary sewers specify the development and implementation of an 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.

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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 sanitary sewer 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.

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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 SERP. The plan also identifies procedures to address emergency operations, such as traffic and crowd control, while adhering to District safety procedures.

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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 six 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.

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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

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ATTACHMENT I

LETTER-REPORT TO LWD GENERAL MANAGER
REGARDING AMP IMPLEMENTATION

DEXTER WILSON ENGINEERING, INC.

WATER • WASTEWATER • RECYCLED WATER

CONSULTING ENGINEERS

LEUCADIA WASTEWATER DISTRICT
FISCAL YEAR 2024
ASSET MANAGEMENT PLAN
IMPLEMENTATION & CAPITAL PROJECTS

October 24, 2024

2234 FARADAY AVENUE • CARLSBAD, CA • (760) 438-4422

LEUCADIA WASTEWATER DISTRICT
FISCAL YEAR 2024
ASSET MANAGEMENT PLAN
IMPLEMENTATION & CAPITAL PROJECTS

October 24, 2024

10-24-2024

Prepared by:
Dexter Wilson Engineering, Inc.
2244 Faraday Avenue
Carlsbad, CA 92008
760-438-4422

Job No. 103-019/8

DEXTER WILSON ENGINEERING, INC.

DEXTER S. WILSON, P.E.
ANDREW M. OVEN, P.E.
NATALIE J. FRASCHETTI, P.E.
STEVEN J. HENDERSON, P.E.
FERNANDO FREGOSO, P.E.
KATHLEEN H. NOEL, P.E.
WILLIAM W. TODD, P.E.

October 24, 2024

103-019/8

Leucadia Wastewater District
1960 La Costa Avenue
Carlsbad, CA 92009

Attention: Paul Bushee, General Manager

Subject: Leucadia Wastewater District Fiscal Year 2024 Asset Management Plan Implementation and Capital Projects

The purpose of this letter-report is to summarize the Leucadia Wastewater District's (District) Asset Management Plan Implementation activities and capital projects. The compilation of these efforts summarizes the District's management of its sanitary sewer system assets for the Fiscal Year 2024 (FY24).

This document will assist in the District's FY24 Sewer System Management Plan (SSMP) Audit.

BACKGROUND

With no substantial changes to the service area and an estimation that the District is presently at 90 percent of buildout, the focus of the District's 2023 Asset Management Plan (AMP) remained on the repair, rehabilitation, and replacement of existing assets as compared to anticipation of growth-related projects.

The AMP provided recommended inspection schedules for each asset class as well as general recommendations for asset management plan implementation (AMPI).

AMP IMPLEMENTATION ACTIVITIES

The following section discusses the AMPI Activities which took place over FY24.

April 2023 Asset Management Plan Recommendations

The AMP was updated in April 2023. The following section seeks to track the status of each operation and maintenance recommendation provided in the April 2023 AMP. The order presented below generally follows the order in which the recommendation occurred within the AMP. This table will serve as a reference point into the future as a means of AMPI tracking until the AMP is updated once again in the 2028 timeframe.

Summary of LWD 2024 AMP Implementation Activities (Revised June 30, 2024)	
April 2023 Asset Management Plan Recommendations	
Recommendation	**FY24 Status**
Identify and track locations of lined manholes and inflow domes.	Inflow dome locations are being tracked in SSMP Audit document (Appendix C).
Continue submetering in areas of known or suspected inflow and infiltration.	Temporary echo meters relocated as needed and smoke testing was performed in 2023 and 2024.
Maintain a current GIS layer of the Repair Priority List.	The District has elected not to complete this item at this time.
Populate "Yes/No" column in Repair Priority List to indicate whether the line has previously been repaired and add reference to prior project/work order as appropriate.	The details of repair(s) can be elaborated in the comments column.

Summary of LWD 2024 AMP Implementation Activities (Revised June 30, 2024)	
April 2023 Asset Management Plan Recommendations	
Recommendation	**FY24 Status**
Track Repair Priority List Completions, Miscellaneous Line Repairs, and Capital Improvement Projects in GIS/Inframap.	Incorporating miscellaneous line repairs. Manholes are now inputted into GIS.
When lining a pipeline in an area with chronic root issues, the lateral joints should be addressed, via either a top hat, T-liner, or other means.	Is still being considered on a case by case basis.
When possible, spot repairs of pipelines should be addressed by lining the entire pipe segment, particularly on pipes greater than 40 years in age.	Waterworks is tasked to evaluate whether a segment requires spot repair prior to lining the segment. If only a spot repair is necessary then the segment is not CIPP lined to reduce cost. One spot repair was completed in FY22 which did not include a CIPP liner. Spot repairs will continue at select locations going forward.
Aggregate manhole linings into a stand-alone project to take advantage of economies of scale.	The FY24 Gravity Pipeline Project was changed to a Manhole Rehabilitation project based on this recommendation.
Gravity pipeline projects in the 5-Year CIP include: a. Gravity Pipeline Rehabilitation Project b. Annual Gravity Pipeline and Manhole Rehabilitation Projects c. Miscellaneous Line Repair (Pipelines and Manholes) d. Headquarters Buildings e. SCADA Upgrades f. Lateral Replacement/Backflow Preventer Program	a. Continued and was completed in FY24. b. Continued in FY24. c. Miscellaneous line repairs continued in FY24 (7 line segments). d. Carpet replacement on the first floor was completed in FY23. e. SCADA upgrades completed in FY23 f. District approved 17 lateral grant applications that totaled $46,300.

Summary of LWD 2024 AMP Implementation Activities (Revised June 30, 2024)	
April 2023 Asset Management Plan Recommendations	
Recommendation	**FY24 Status**
Projects in the 20-Year CIP include: Annual Gravity Pipeline and Manhole Rehabilitation Projects	Continued in FY24.
Evaluate pump size at each station based on actual flow generation rates and anticipated peak buildout flows when pump replacement dictates.	Will occur as design project approaches for pump station. Completed for Leucadia PS, Encinitas Estates PS, Village Park No. 7, and Rancho Verder. Diana PS is under design currently.
Further evaluate bypassing the Batiquitos Pump Station (for a portion of the District's flow) by pumping directly from the Leucadia Pump Station into one of the Batiquitos force mains.	Not intending to pursue at this time.
Beyond FY24, stagger future pump station inspection efforts based on the previous inspection, age of the asset, needs identified by the District, and the projected date of project implementation.	IEC performed Pump Station inspections/evaluations based on this stagger approach in FY20. Next assessment scheduled for FY25.
Consider the preparation of a detailed checklist of component inspections for each station. The basis for this would be prior inspection reports with additions by staff as appropriate.	A pre-inspection input list has been previously prepared by Field Services.
Consider the maintenance of a pump station component tracking database. This would be used to track improvements and associated costs to better project future spending. This would combine the efforts already occurring as part of the SSMP audit process as well as the financial tracking done for capital asset depreciation.	This is an ongoing task included in Attachment C.
Continue efforts to reduce inflow and infiltration via inflow dome installation in manholes, smoke testing, and lining projects with lateral top hats.	Continued in FY24.
The following replacement-based capital improvement projects are recommended or are planned by the District and are included in the District's 5-Year CIP: a. Batiquitos Emergency/Overflow Basin Inspection b. Batiquitos Pump Station Upgrade Project (includes the Emergency Basin Lining and Pump Installation) c. Diana Pump Station Upgrade Project	a. Inspection occurred in FY23. b. Emergency basin lining epoxy coating design started in FY24 and construction is anticipated in FY25. c. Easement procurement finalized in FY24.

Summary of LWD 2024 AMP Implementation Activities (Revised June 30, 2024)	
April 2023 Asset Management Plan Recommendations	
Recommendation	**FY24 Status**
d. Rancho Verde Pump Station Improvement Project e. Village Park 7 Pump Station Rehabilitation Project f. Pump Station Condition Assessment g. Annual Cathodic Protection Assessment	d. Notice to proceed was issued to contractor in FY24. e. Construction was completed in FY24. f. Assessment scheduled for FY25. g. Continued in FY24.
Destructive Testing of Metallic Force Mains L1 and B3. Internal Inspection of L1 or B3.	Destructive Testing: L1 scheduled for FY25. B3 scheduled for FY 27. Condition Inspection: L1 scheduled for FY26. B3 scheduled for FY29.
The following replacement-based capital improvement projects are recommended or are planned by the District and are included in the District's 5-Year CIP. a. L1 Destructive Testing b. L1 Internal Condition Inspection c. B3 Destructive Testing	a. Scheduled for FY25. b. Scheduled for FY26. c. Scheduled for FY27.
Update composite figures for each force main based on record drawings of recent improvements.	These continue to be updated as force main improvements occur.
Include $15,000 in annual long-term capital expenses related to cathodic protection repairs and improvements.	Complete.

FY24 Capital Improvements

The following table summarizes the capital projects which were implemented by the District in FY24.

Summary of LWD AMP Implementation Activities (Revised June 30, 2024)	
Capital Improvements	
Project	**FY24 Status**
North SD County Regional Recycled Water Project	The District continued to participate in the regional project to increase recycled water use. A lobbying contract was executed with BlueWater Strategies (formerly The Furman Group) to lobby for the Title XVI and WRDA funds.
Gravity Pipeline Rehabilitation	District to rehabilitate deficient segments of ACP and VCP gravity pipelines. The District has implemented its Repair Priority List procedure via the FY24 project to perform its gravity pipeline rehabilitation/replacement program.
Rancho Verde Pump Station Rehabilitation	Project design and easement acquisition is complete. The Notice to Proceed was issued to the contractor in May 2024. Construction of the project is ongoing.
Batiquitos Pump Station Emergency Basin	In FY23, the District performed a condition assessment of the emergency basin which included visual evaluations and collecting concrete cores from within the structure. An epoxy liner will be installed within the emergency basin to reduce the concrete exposure to hydrogen sulfide. Construction is ongoing.
Poinsettia Station Gravity Line	The project was completed in February 2020. Soft costs associated with the project have not been finalized yet with SANDAG.
Encinitas Estates Pump Station Replacement	Construction was completed.
Diana Pump Station Upgrade	The 2018 AMP recommended that an upgrade of the pump station be completed to include pump control upgrade, replacement of the main breaker and pump replacement. Currently, the pump station does not have an emergency generator for operation during a loss of power. The installation of an emergency generator will be accommodated around the acquisition of an easement across the street. In April 2024, the HOA approved the easement sale. As a result, the District started final design in May 2024. Construction is anticipated in FY25.
Village Park No. 7 Pump Station Replacement	Construction was completed in FY23.

Leucadia and Batiquitos Pump Station Force Main Work

The evaluation of the Leucadia and Batiquitos Pump Station force mains has been ongoing since 2009 with Dexter Wilson Engineering, Inc.'s development of a formal evaluation plan. A historical summary of previous force main activities in shown in Attachment D. A summary of the past fiscal year and planned future activities is discussed on the next page.

As of FY13, the District has been conducting cathodic protection surveys of the four force mains on an annual basis as recommended and performed by RFYeager. Cathodic Protection improvements with respect to these force mains as described in IEC's May 2011 technical memo are included within Attachment D.

The Batiquitos force main discharge section (B3) was pro-actively replaced in FY20 due to suspected internal corrosion stemming from exposure to air when the flow transitions from pressurized to gravity.

Plans have been developed to address the replacement of certain portions of the Secondary Effluent Force Main (B1). A Coalition and WIIN federal grant was awarded in August 2021 to the North San Diego Water Reuse Coalition via the Water Infrastructure Improvements for the Nation Act for this project. The Coalition received a second WIIN Award in August 2022. Additionally, in June 2022 the Coalition was awarded a San Diego Integrated Regional Water Management (IRWM) Program Prop 1 Round 2 grant. However, while waiting for the grant appropriations the B1 had two failures in November 2022. Therefore, the B1 section was replaced and realigned under an emergency basis. Construction was completed in March 2024.

The 2023 Asset Management Plan included a recommendation to perform a condition assessment on section of the L1 Force Main ductile iron pipe. The condition of the pipeline and protective wrapping surrounding the pipeline is planned to be assessed in FY25.

MISCELLANEOUS COLLECTION SYSTEM IMPROVEMENTS

The list of collection system improvements (outside of CIP projects) performed in FY24 are provided in Attachment B in this letter-report.

PUMP STATION IMPROVEMENTS

Pump station improvements at all District pump stations are tracked in Attachment C in this letter-report.

CAPITAL ACQUISITIONS

The purpose of this section is to summarize the District's FY24 capital acquisitions as related to operation and maintenance.

FY24 Capital Acquisitions

- Replacement of CCTV Equipment
- New Critical inventory (Domes/Rings/Couplings)
- Vactor Nozzle Kit
- Submersible Chopper Pump
- New Dell Servers and Workstations
- Surface Pro Tablets (CMMS)
- Rehabilitated Pump and Motor at Batiquitos Pump Station
- Replaced 4 VFDs at Batiquitos Pump Station
- Traffic Control Truck

We recommend this letter-report be filed with all of the District's AMPI documents and referred to as the AMPI activities continue. We appreciate the opportunity to have worked with you on the District's ongoing asset management planning. Please contact us with any questions.

Dexter Wilson Engineering, Inc.

Steven Henderson, P.E.

NF:SH:ah

Attachment(s)

A – Lanikai and Occidental O&M Tracking

B – Miscellaneous Sewer Line and Manhole Repairs

C – Pump Station Tracking

D – Force Main Tracking

ATTACHMENT A

LANIKAI AND OCCIDENTAL O&M TRACKING

LANIKAI GRAVITY SEWER ASSET TRACKING (District is Lead Agency)		
Date	**Activity Type**	**Description**
Dec-10	O&M	Hydroclean and CCTV Inspection by Affordable Pipeline Services. Resulted in recommendation to CIPP line eastern portion from Franciscan Rd to Occidental Line.
		Design Complete
		Contract Issued
		Construction Begins
		Abandoned due to B2 break
FY13		CIPP Project still on hold due to B2 break
		Metallic manhole rings and cover were replaced with composite rings and covers
FY14/15		The portion from Franciscan to the Occidental manhole was lined as part of the B2 Replacement (approx. 385 ft).
2015	O&M	Hydrocleaned and CCTV Inspected
FY17	O&M	Hydrocleaned in Fall of 2016
FY20	Repair	Poinsettia Station Project - Included casing extension under existing railroad, new steel casing in parallel with the existing 24-inch SDR 26 PVC pipeline
FY23	*O&M*	Hydrocleaned and CCTV Inspected Spring 2023

Items in Italics are Planned

Updated: September 2024

OCCIDENTAL SEWER ASSET TRACKING (Carlsbad is Lead Agency)		
Date	**Activity Type**	**Description**
Dec-10	O&M	Hydroclean and CCTV Inspection (as possible) by Affordable Pipeline Services and confined space entry MH inspection by V&A. Resulted in rehab recommendations. Also, V&A recommended 5 year inspection.
Nov-11	Repair	Carlsbad bid and subsequent award to Charles King Company.
Dec-12	Repair	7 of the 8 manholes were rehabilitated by the Charles King Company. Section CIPP lined.
	Repair	8th manhole (at Lanikai) to be rehabilitated when Lanikai Lining Project resumes
FY14	Repair	The junction manhole was lined by Carlsbad
FY17	O&M	Hydrocleaned in Fall of 2016 by Carlsbad
FY21	O&M	CCTV Inspected in Spring of 2021 by Carlsbad
FY22	O&M	Hydrocleaned in FY22 by Carlsbad

Items in Italics are Planned

Updated: September 2024

ATTACHMENT B

MISCELLANEOUS SEWER LINE AND MANHOLE REPAIRS

Date Found	Line Segment / Manhole	Location	Segment Footage	Defect(s)	Pipe Type	Repair Type	Repair Priority	Depth (in feet)	Pipe Size (inches)	Install Date	Age	Previous Repairs (YES/NO)	Estimated Cost to Repair	Comments
10/5/2021	10-16140_10-0214	Camino Abierto	60	Broken stub cap - c/o at street level	PVC	CIPP sock	3	12	8	2010	13			Repaired by Easy Flow on 5/8/24.
2/25/2020	04-1810_04-1800	Gascony Road	70	Broken stub cap - c/o at street level	VCP	CIPP sock	3	13	8	1969	54			Repaired by Easy Flow on 5/8/24.
1/5/2021	08-9240_08-9230	Woodside Lane	100	Broken stub cap - c/o at street level	PVC	CIPP sock	3	8	8	1979	44			Repaired by Easy Flow on 5/8/24.
7/15/2020	06-1460_06-1450	Rodney Avenue	100	Broken stub cap - c/o at street level	VCP	CIPP sock	3	8	8	1972	51			Repaired by Easy Flow on 5/8/24.
2/4/2020	04-2430_04-2420	Passiflora Street	175	Broken stub cap - c/o at street level	VCP	CIPP sock	3	4	8	1973	50			Repaired by Easy Flow on 5/8/24.
12/24/2018	10-8030_10-8026	Cuesta Place	137	Broken stub cap - c/o at street level	PVC	CIPP sock	3	6	8	1977	46			Repaired by Easy Flow on 5/8/24.
9/2/2021	10-1950_10-1945	Solano Street	126	Broken stub cap - c/o at street level	PVC	CIPP sock	3	10	8	1977	46			Repaired by Easy Flow on 5/8/24.

ATTACHMENT C

PUMP STATION TRACKING

Summary of LWWD Pump Station Improvements and Recommendations (revised June 30, 2024)

Pump Station	Improvement Category	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024 *and FY 2025*
Batiquitos	Controls	None	None	None	None	None
	Electrical			None	None	None
	Mechanical	Vaugn Conditioning Pump		Design completed for submersible pump in emergency basin	Full inspection in FY23, an epoxy liner will be installed within the emergency basin in FY24.	The construction for the emergency basin concrete restoration and epoxy liner install is ongoing. *Full pump station condition assessment to be completed.*
	Structural	None		Design completed for relining of emergency basin		
	Regulations			None		None
Leucadia	Controls	Leucadia Pump Station Rehabilitation Project	Continuation of Leucadia Pump Station Rehabilitation Project	Leucadia Pump Station Rehabilitation Project completed July 30, 2021.	None	None
	Electrical					
	Mechanical					
	Structural					
	Regulations					
La Costa	Controls	None	None	None	None	*Full pump station condition assessment to be completed including possible relocation.*
	Electrical					
	Mechanical					
	Structural					
	Regulations					
Saxony	Controls	None	None	None	None	None
	Electrical					
	Mechanical					
	Structural					
	Regulations					
Avocado	Controls	Pump Deragger Controller	PLC replacement	None	None	*Condition assessment to be completed.*
	Electrical	None	None			None
	Mechanical		None			
	Structural		None			
	Regulations		None			
Diana	Controls	Pump Deragger Controller	PLC replacement	PLC replacement	None	In April 2024, the HOA approved the easement sale. As a result, the District started final design in May 2024. *Construction is anticipated in FY25.*
	Electrical	None	Replacement of main breaker and addition of emergency generator	Replacement of main breaker and addition of emergency generator	Continued effort to obtain emergency generator easement.	
	Mechanical		Pump replacement	Pump replacement	None	
	Structural		Replace concrete in vaults to properly drain water	Replace concrete in vaults to properly drain water	None	
	Regulations		None	None	None	
Encinitas Estates	Controls	None	Design completed and existing lift station to be replaced with a submersible pump station	Smith and Loveless packaged pump station to be replaced with a submersible pump station.	Pump station replacement project completed in January 2022	None
	Electrical					
	Mechanical					
	Structural					
	Regulations					
Village Park 5	Controls	None	None	None	None	*Condition assessment to be completed.*
	Electrical					
	Mechanical					None
	Structural					
	Regulations					
Village Park 7	Controls	*None*	None	Smith and Loveless packaged pump station to be replaced with a submersible pump station.	Pump station replacement project completed construction.	None
	Electrical					
	Mechanical					
	Structural					
	Regulations					
Rancho Verde	Controls	*None*	PLC replacement	None	Project design in progress. Working with the Ranch at Carlsbad HOA for expansion of the pump station easement to complete design.	Project design and easement acquisition is complete. The Notice to Proceed was issued to the contractor in May 2024. *Construction of the project is ongoing.*
	Electrical		None			
	Mechanical		None			
	Structural		None			
	Regulations		None			

Planned Improvements are in italics. PS Inspection does not include force mains (FMs on separate inspection schedule).

ATTACHMENT D

FORCE MAIN TRACKING

Summary of LWWD Force Main Improvements and Recommendations (revised June 30, 2024)

Force Main	Improvement Summary													
	FY11	**FY12**	**FY13**	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**	**FY19**	**FY20**	**FY21**	**FY22**	**FY23**	**FY24**
L1	None	A contract was executed with RFYeager for the design of the force main cathodic protection project. The project was bid in August 2012 and completed on February 12, 2013.	Cathodic test stations were relocated.	The L1 Force Main was sampled and evaluated for internal and external corrosion. The field survey data for L1 was indicative of a DIP without cathodic protection.	Design activities on L1 began to replace only the section west of Interstate 5 not including the railroad bridge. L1 will return to standby status with L2 being primary.	The design of the replacement for the western segment of L1 was completed.	Work commenced on the L1 western portion on March 3, 2017 and was completed on August 8, 2017 . during construction of the western section of L1, a leak was found in the above-grade railroad bridge. A change order was issued to CIPP line the railroad bridge section and construction is nearing completion.	Closeout of the L1 western section replacement and repair projects completed the near-term CIP projects related to the Leucadia and Batiquitos Pump Station force mains.	None	Air-Vac valves were repaired.	Replacement of depleted sacrificial anode.	None	None	Destructive testing scheduled *for FY25*. The condition of the pipeline and protective wrapping surrounding the pipeline will be assessed.
L2	None		Cathodic test stations were repaired and/or replaced.	None	L2 due to its construction of high quality PVC and excellent current condition, was not slated for any repairs or replacement	None	None	None	None	Air-Vac valves were repaired.	Replacement of depleted sacrificial anode.	None	None	None
B1 (Failsafe)	The following tasks were completed regarding these force mains as a result of the 2009 plan, subsequent evaluations, and the May 2010 break in B2 near the bridge crossing. - In early 2011, the IEC "Batiquitos Force Main Repair Project" replaced, in place, approximately 1,100 feet each of B1(failsafe), B2, and B3 from the Batiquitos Pump Station to the San Marcos Creek Bridge and approximately 400 feet each of B1, B2, and B3 from the northern end of the San Marcos Creek Bridge to the north. B1 was replaced with 14-inch PVC. B2 and B3, both 24-inch ductile iron pipe, were replaced with 24-inch DR18 C905 PVC. - Sections of B2, B3, and the Fail Safe line (B1) were inspected. - The estimated remaining useful life of B2 is 12 years and B3 is 14 years. - The cathodic protection improvements identified in RF Yeager's May 2010 report were recommended to be implemented. Ultrasonic testing was recommended to be conducted in the future.		None	Design of the B1 and B2 replacement was completed.	The District began design and construction of the replacement of B1 (failsafe). This was understood to be a unique opportunity for the replacement due to the fact that B1 can be placed in the same trench as B2, significantly reducing construction costs compared to replacing B1 as a separate project.	None	None	None	None	None	Grant approval for replacement of portions of B1.	None	A Coalition and WIIN federal grant was awarded in August 2021 to the North San Diego Water Reuse Coalition via the Water Infrastructure Improvements for the Nation Act for this project. The Coalition received a second WIIN Award in August 2022. Additionally, in June 2022 the Coalition was awarded a San Diego Integrated Regional Water Management (IRWM) Program Prop 1 Round 2 grant. However, while waiting for the grant appropriations the B1 had two failures in November 2022. Therefore, the B1 section was replaced and realigned under an emergency basis. Construction was completed in March 2023.	None
B2			Cathodic test stations were repaired and/or replaced. The discharge end of B2 failed when it was connected to the B1 (failsafe) to bypass the Lanikai Gravity Sewer.		The B2 Force Main Replacement Project commenced on October 20, 2014 and included the CIPP lining of the Lanikai Line. The project was completed on November 3, 2015.	None	None	None	None	None	None	None		None
B3			Cathodic test stations were repaired and/or replaced.	None	None	None	None	None	None	Discharge section was replaced.	None	None		None

Planned Improvements are in italics.

CATHODIC PROTECTION IMPROVEMENTS (*status*)			
Year	**Phase**	**Activity**	**Estimated Cost**
2011	1	Ultrasonic Testing of L1 to establish baseline corrosion (*pending results of FY13 coupon testing*)	$27,000
		Locate and/or repair missing and damaged test stations on L1, L2, B2, and B3 (*complete FY13*)	$16,500
		L2 supplemental cathodic protection (*complete*)	$30,000
		B2 cathodic protection (*complete*)	$40,000
		B3 cathodic protection (*complete*)	$40,000
		TOTAL	$153,500
2015	2	Ultrasonic Testing of L1, B2, and B3 *(complete)*	$90,000
2015	3	Replacement of B2 (8,463 ft) *(complete)*	$2,700,000
2017	3	Replacement of L1 West Section *(complete)*	$1,700,000
2020	4	Replacement of B3 Discharge Section *(complete)*	$535,500
2027	4	Destructive Testing of B3	$300,000
2029	4	Condition Inspection of B3	$500,000
2034	4	Replacement/Rehab of B3	$4,700,000
Ongoing (post Ph. 1)		Annual Cathodic Protection Surveys (to begin after Phase 1 is complete)	$5,000 per year