

AGENDA

**ENGINEERING COMMITTEE MEETING
LEUCADIA WASTEWATER DISTRICT**
Tuesday, November 3, 2015 – 8:30 a.m.
1960 La Costa Avenue, Carlsbad, CA 92009

- 1. Call to Order**
- 2. Roll Call**
- 3. Public Comment**
- 4. New Business**
 - A. Receive and file the Sanitary Sewer Management Plan (SSMP) Fiscal Year 2015 Audit conducted by Dexter Wilson Engineering, Inc. (Pages 2 - 9)
 - B. Discuss the feasibility of operating a recycled water tanker truck to refill Vector trucks during hydro-cleaning operations. (Page 10)
- 5. Information Items**
 - A. Saxony Pump Station Rehabilitation Project update. (verbal)
 - B. Scott's Valley Pipeline Rehabilitation Project update. (verbal)
- 6. Directors' Comments**
- 7. General Manager's Comments**
- 8. Adjournment**

MEMORANDUM

Ref: 16-4757

DATE: October 29, 2015
TO: Engineering Committee
FROM: Paul J. Bushee, General Manager 
SUBJECT: Sanitary Sewer Management Plan (SSMP) Fiscal Year 2015 Audit

RECOMMENDATION:

Staff requests that the Engineering Committee recommend that the Board of Directors:

1. Receive and file the Sanitary Sewer Management Plan (SSMP) Fiscal Year 2015 Audit conducted by Dexter Wilson Engineering, Inc.
2. Discuss and take other action as appropriate.

DISCUSSION:

The Statewide Sanitary Sewer Systems Waste Discharge Requirements (WDR), adopted in May 2006, imposed several regulations on all California agencies that operate Sewage Collection Systems. The District has complied with all prescribed provisions, including having a written SSMP that was adopted by the District's Board of Directors in June 2009. Per the State Waste Discharge Requirements for Sanitary Sewer Systems (Order No. 2006-003-DWQ), the SSMP must be updated every five years and requires each agency to audit their SSMP every two years. However, the District has taken a pro-active approach and conducts its SSMP Audit annually to ensure its programs and activities remain effective in reducing Sanitary Sewer Overflows (SSO's).

Dexter Wilson Engineering (DWE) worked closely with staff to develop the SSMP and previously completed the annual audits for Fiscal Years 2010 to 2013 and the 2014 SSMP update. Due to their thorough knowledge of the plan, staff requested that DWE conduct the Fiscal Year 2015 SSMP Audit.

The audit, using a standard checklist and a comprehensive review of District operations, concluded that the District's activities, programs, and efforts meet or exceed the requirements of its SSMP. Additionally, changes in District organization, practices, or regulations were not significant enough to require a revision of the SSMP prior to June 2019, the required WDR five year SSMP review cycle.

The letter report of the SSMP Audit is attached for your review. A copy of the complete report, including enclosures, is available upon request.

Steven Henderson, of DWE, will present an overview of the audit at the meeting.

jms:PJB

Attachment

**LEUCADIA WASTEWATER DISTRICT
SEWER SYSTEM MANAGEMENT PLAN
FISCAL YEAR 2015 AUDIT**

October 29, 2015



**Prepared by:
Dexter Wilson Engineering, Inc.
2234 Faraday Avenue
Carlsbad, CA 92008**

Job No. 103-015/4

DEXTER WILSON ENGINEERING, INC.

DEXTER S. WILSON, P.E.
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October 29, 2015

103-015/4

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
2015 Audit

The Leucadia Wastewater District's Sewer System Management Plan (SSMP) was adopted by the District Board and certified by the General Manager in June 2014. The purpose of the SSMP is to memorialize and publicly present in a central document the programs and activities utilized by the Leucadia Wastewater District to effectively manage its wastewater collection system. The SSMP requires audits of the SSMP at least every two years. The District has decided to conduct annual audits. This year's audit is the first audit of the 2014 SSMP.

The purpose of this letter-report is to fulfill the District's SSMP requirements. This 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:

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

In completing the Section IX SSMP Evaluation Checklist, we find that, in general, the District's activities, programs, and efforts meet or exceed the requirements of the SSMP. Moreover, we do not find any changes in District organization, practices, or regulations which would necessitate a revision to the SSMP prior to the scheduled June 2019 revision per the required five year cycle. The Evaluation Checklist can be found in Attachment A. 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 SSOs. These audits must occur, at a minimum, of every two 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 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 FY15 can be found in Attachment B.

Audit Discussion

The following paragraphs highlight notable elements of the 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). No notable changes have occurred to the District's goals, organization, or legal authority since the 2014 SSSMP.

There were two field services employees hired in FY15.

Section IV (Preventative Maintenance Program). The majority of the District's gravity sewers can be hydrocleaned in normal preventative maintenance activities. Those that cannot be hydrocleaned during normal preventative maintenance activities include several gravity segments, located in remote easements, which are visually inspected due to accessibility constraints of the hydrocleaning equipment. Additionally, several gravity sewer segments, located in Rancho Santa Fe Road, La Costa Avenue, and Alga Road, require significant traffic control. Once traffic control plans have been submitted and approved by the Cities of Carlsbad and Encinitas, cleaning and inspection shall be completed shortly thereafter in FY16 by District staff.

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 CCTV inspection and those areas which have additional needs or requirements in order to hydroclean or CCTV, such as the need for traffic control. Exhibit C-2 tracks the progress of CCTV inspections in the District.

The District's Asset Management Plan was revised in January 2013. Progress throughout FY15 with respect to this plan (and other asset planning efforts) is summarized in the Attachment D letter-report.

The FY15 and FY16 SOP training schedules can be found in Attachment E and all updated SOPs are included on a CD in Attachment F.

Section VI (Overflow Emergency Response Plan). No revisions were made to the OERP other than minor updates to employee contact information and frequently called numbers.

Section VII (FOG Control Program). None of the FY14 or FY15 SSOs were attributable to FOG, continuing the District's SSMP determination that a formal FOG control program is not required at this time.

Section VIII (System Evaluation and Capacity Assurance). In FY13, the District completed CCTV inspection of the Alga Hills area as part of its District-wide systematic efforts. As a direct result, three gravity lines at the Abedul Street and Persa Street intersection were CIPP lined to address structural repair, inflow and infiltration and scaling issues. The District's 2013 AMP recommended addressing this area following lining/replacement of the old Leucadia area of the District which suffers from chronic root issues. Portions of the Old Leucadia area have been lined or repaired and the District will continue to address this area as part of its Gravity Pipeline Repair program efforts.

As part of the 2013 AMP process, the District identified the need to reduce inflow and infiltration along the Scott's Valley pipeline. The improvements will include lining three pipe sections and six manholes. Preliminary planning efforts to CIPP line this pipeline began in FY14 with construction to be completed in FY16.

Inflow domes are present in 1,960 of the District's 5,103 manholes to aid in reducing inflow.

Flow analyses of the District were conducted as part of the 2008 AMMP and the 2013 AMP. Both 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.

Section IX (Monitoring, Measurement, and Program Modifications).

- The District's Spill Summary through May 31, 2015 can be found in Attachment G. Additionally, spill review checklists for each event are on file at the District office.

The District's monthly flow comparison between FY14 and FY15 can be found in Attachment H.

Minor changes were made to the Evaluation Checklist itself (Attachment A).

General Comments on SSOs in the District. The District's spill summary through May 31, 2015 can be found in Attachment G. In FY15, there were nine (9) SSO events throughout the District; six were from private facilities and three from District facilities. Eight of these were Category 3 spills and one was classified as Category 1 meaning the spill either:

- A. Resulted in a discharge to a drainage channel and/or surface water; or
- B. Discharged to a storm drainpipe that was not fully captured and returned to the sanitary sewer system.

The Category 1 SSO was in a public manhole and was caused by roots in the bottom of the manhole through a joint.

Section XI (Communication Program). The District has made the FY13 SSMP Audit and 2014 SSMP available on its website. Additionally, a formal presentation is provided to the Engineering Committee and Board of Directors and is this part of those agendas and meeting packets.

Summary of Recommendations

The following section summarizes recommended items as a result of the FY15 Audit.

- Cleaning and CCTV of large diameter pipelines in the District is time consuming primarily due to traffic constraints. The District has identified eleven of these areas. Most have been completed to date and it is recommended that the remainder be completed in FY16. In general, it is recommended that these line segments are cleaned and CCTV inspected at a minimum of once every 3 years.
- The District should consider revising the sewer sub-basin map that is included in the monthly Board packet to reflect the areas that have been de-annexed.
- A potentially more efficient means of inspecting manholes in easements would be to include them under the "Easement Inspection" maintenance category.
- Regarding the Lanikai and Occidental lines, the District should continue with Carlsbad to implement a planned hydro-clean and CCTV inspection every 5 years.
- An inspection is recommended of the 1963 cast iron force main section, approximately 10 feet, at the La Costa Pump Station.

Next Steps

This FY15 SSMP Audit should be retained for inclusion in the next SSMP recertification by the General Manager and adoption by the District Board scheduled to occur in June 2019.

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.




Dexter S. Wilson, P.E.

DSW:SH:ps

MEMORANDUM

Ref: 16-4758

DATE: October 29, 2015
TO: Engineering Committee
FROM: Paul J. Bushee, General Manager 
SUBJECT: Feasibility of Operating a Recycled Water Tanker Truck

RECOMMENDATION:

1. Discuss and provide direction as appropriate.

BACKGROUND:

This is a follow-up discussion from the October 2015 Engineering Committee (EC) meeting regarding the use of recycled water during hydro-cleaning operations. During the October discussion of recycled water fill stations, Chairperson Juliussen requested that staff evaluate the feasibility of using a tanker truck filled with recycled water to replenish the District's Vactor trucks during hydro-cleaning operations. Staff has completed their evaluation and will present their findings to the EC for discussion.

jms:PJB