

**AGENDA**

**ENGINEERING COMMITTEE MEETING  
LEUCADIA WASTEWATER DISTRICT**  
Wednesday, October 5, 2016 – 8:30 a.m.  
1960 La Costa Avenue, Carlsbad, CA 92009

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1. **Call to Order**
2. **Roll Call**
3. **Public Comment**
4. **New Business**
  - A. Receive and file the Sewer System Management Plan (SSMP) Fiscal Year 2016 Audit conducted by Dexter Wilson Engineering, Inc. (Pages 2 - 11 )
5. **Information Items**
  - A. Batiquitos Pump Station Photo Voltaic Panel Installation. (verbal)
6. **Director's Comments**
7. **General Manager's Comments**
8. **Adjournment**

## MEMORANDUM

Ref: 17-5176

**DATE:** September 29, 2016  
**TO:** Engineering Committee  
**FROM:** Paul J. Bushee, General Manager   
**SUBJECT:** Sewer System Management Plan (SSMP) Fiscal Year 2016 Audit

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### RECOMMENDATION:

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

1. Receive and file the SSMP Fiscal Year 2016 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.

In prior years, Dexter Wilson Engineering (DWE) worked closely with staff to develop the initial SSMP and complete the 2014 SSMP Update and Fiscal Years 2010 to 2015 SSMP Audits. Due to their thorough knowledge of the plan, staff requested that DWE conduct the Fiscal Year 2016 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.

Natalie Frascchetti, of DWE, will present an overview of the audit at the meeting.

jms:PJB

Attachment

**LEUCADIA WASTEWATER DISTRICT  
SEWER SYSTEM MANAGEMENT PLAN  
FISCAL YEAR 2016 AUDIT**

September 28, 2016



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

Job No. 103-015/6

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September 28, 2016

103-015/6

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  
2016 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 (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.

The purpose of this letter-report is to present the Fiscal Year 2016 (FY16) Audit (the second audit of the 2014 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:

- 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 (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 SSMP. Minor changes were made to the SSMP to more accurately reflect the District's procedures. However, we do not find any changes in District organization, practices, or regulations which would necessitate a re-adoption of the SSMP prior to the scheduled June 10, 2019 revision per the required five 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 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 FY16 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 Authority).** No appreciable changes have occurred to the District's Goals, Organization, or Legal Authority since the 2014 SSMP.

There was one field services employee hired in FY16.

Additionally, a new administrative position was created. The updated Organizational Chart can be found in Attachment H.

**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.

Exhibit C-2 tracks the general progress of CCTV inspections in the District. Per the District's 2014 SSMP, the District strives to CCTV their entire system every three to four years. In review of Exhibit C-2, there are areas within the District that have not been CCTV inspected in the last five years. The District is in the process of confirming that it has in fact been 5 years or more since the lines were CCTV inspected as some of these areas may be displaying incorrectly (due to incorrect or lack of date information, new sewers yet to be CCTV inspected, etc.). Upon detailed review, if the District believes that it has been 5 years since CCTV inspection, those line segments will be CCTV inspected as soon as

possible. Nevertheless, in review of the FY16 CCTV inspections (108 miles), the District is on track to meet its SSMP goal of CCTV inspecting all 200 miles in a three to four year timeframe.

In FY16, the District began introducing foam treatments in pipelines and manholes (for the treatment of roots). The results have been favorable and the District is considering incorporating foam treatment into the regular schedule of preventative maintenance activities.

The District's Asset Management Plan was revised in January 2013. Progress throughout FY16 with respect to this plan (and other asset planning efforts) is summarized in the Attachment I letter-report.

The FY16 and FY17 SOP training schedules can be found in Attachment D and all updated SOPs are included on a CD in Attachment E.

In FY17, the District will incorporate storm drain system information from the cities of Carlsbad and Encinitas into their geographic information system (GIS).

**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 FY16 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).** 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 Feb. 2014 and hydrocleaned every six months. Any defects discovered during the CCTV inspections are incorporated into the District's Repair Priority List.

As part of the 2013 Asset Management Plan process, the District identified the need to reduce inflow and infiltration along the Scott's Valley pipeline. Three stretches of pipeline were rehabilitated by cured-in-place pipe (CIPP) lining and three manholes were repaired by cured-in-place manhole (CIPM) lining in FY16 to complete the Scott's Valley improvements. Additionally, six manholes upstream were epoxy lined to further reduce infiltration.

Inflow domes are present in 2,160 of the District's 5,103 manholes to aid in reducing inflow.

Flow analyses of the District were conducted as part of the District's 2008 and 2013 Asset Management Plans. 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.

The District's monthly flow comparison between FY15 and FY16 can be found in Attachment G.

**Section IX (Monitoring, Measurement, and Program Modifications).** The District's Spill Summary through June 30, 2016 can be found in Attachment F. Three spills occurred in FY16; all were from private laterals. Additionally, spill review checklists for each event are on file at the District office. Figure 1 identifies the location of each spill in a public line or manhole over the last five years.

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

**Section XI (Communication Program).** The District has made the 2014 SSMP and subsequent audits 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.





### **Recommended SSMP Edits**

Several edits are recommended to the SSMP. These edits are documented in the SSMP Change Log (New Appendix B of the SSMP). The edits consist of updating the SSMP appendices, revision to the District Organizational Chart, and a minor revision to the Corrective Action discussion in Section IV of the SSMP. Attachment H to this letter-report provides the specific edits to the SSMP. Additionally, the edits are documented in the SSMP change log (Appendix B of the SSMP). The revisions to the SSMP are not significant enough to warrant re-adoption of the District's SSMP prior to the scheduled June 10, 2019 revision.

### **Summary of Recommendations**

The following section summarizes recommended items as a result of the FY16 Audit:

- 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.
- The District should ensure that the wet well at the La Costa Pump Station is assessed as part of the pump station assessment scheduled for FY19.
- Implement plan to clean/CCTV La Costa Golf Course and La Costa Avenue sewers to maintain three year cleaning/CCTV cycle (See Attachment C, locations 7 and 9).

### **Next Steps**

This FY16 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 by June 10, 2019. Please be sure to post this FY16 Audit on the District's website and include a hardcopy in the District's 2014 SSMP counter copy.

Paul Bushee  
September 28, 2016

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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.



Natalie J. Frascchetti, P.E.

NJF:SH:pjs