

**AGENDA**

**ENGINEERING COMMITTEE MEETING  
LEUCADIA WASTEWATER DISTRICT**  
Wednesday, November 7, 2018 – 9:00 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 Sanitary Sewer Management Plan (SSMP) Fiscal Year 2018 Audit conducted by Dexter Wilson Engineering, Inc. (Pages 2 - 12)
5. **Information Items**
  - A. Update of the 2018 Gravity Pipeline Cured-In-Place Pipe (CIPP) Lining Rehabilitation Project (verbal)
6. **Directors' Comments**
7. **General Manager's Comments**
8. **Adjournment**

## MEMORANDUM

Ref: 19-6427

**DATE:** November 1, 2018  
**TO:** Engineering Committee  
**FROM:** Paul J. Bushee, General Manager   
**SUBJECT:** Sanitary Sewer Management Plan (SSMP) Fiscal Year 2018 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 2018 Audit conducted by Dexter Wilson Engineering, Inc.
2. Discuss and take other action as appropriate.

### DISCUSSION:

#### **Tactical Goal: Services / SSMP Audit**

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 Sewer System Management Plan (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 complete the 2014 SSMP Update. DWE also completed the annual audits for Fiscal Years 2010 to 2017. Due to their thorough knowledge of the plan, staff requested that DWE conduct the Fiscal Year 2018 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 2018 AUDIT**

October 30, 2018



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

Job No. 103-015/8

**DEXTER WILSON ENGINEERING, INC.**

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DEXTER S. WILSON, P.E.  
ANDREW M. OVEN, P.E.  
STEPHEN M. NIELSEN, P.E.  
NATALIE J. FRASCHETTI, P.E.  
STEVEN J. HENDERSON, P.E.

October 30, 2018

103-015/8

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  
2018 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 2018 (FY18) Audit (the fourth 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 and customer/community outreach. However, the changes do not 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, every two years and a report must be prepared and kept

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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 FY18 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. The statewide WDR which governs the SSMP is in the process of being revised. District staff have been active in this process toward reissuance of the WDR.

There was one new employee hired in FY18.

**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 2014 SSMP, the District strives to CCTV their entire system every three years. In review of Exhibit C-2, there are areas within the District which have not been CCTV inspected in the last 3 years. These areas shall be CCTV inspected in FY19.

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The District is on track to meet its SSMP goal of CCTV inspecting all 200 miles in a three year timeframe.

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. Eleven additional line segments utilized foam treatment for root control in FY18.

The District's Asset Management Plan (AMP) was revised in May 2018. Progress throughout FY18 with respect to the previous 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 FY18 and FY19 SOP training schedules can be found in Attachment D and all updated SOPs are included on a CD in Attachment E.

**Section VI (Overflow Emergency Response Plan).** A minor revision was made to the OERP. Field Services protocols were amended for SSOs that reach surface water.

**Section VII (FOG Control Program).** None of the FY18 SSOs were attributable to FOG, continuing the District's SSMP determination that a formal FOG control program is not warranted at this time. The District continues to require BMP agreements for all new food services establishments.

**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 FY17 and is hydrocleaned every six months. Any defects discovered during the CCTV inspections are incorporated into the District's Repair Priority List.

Inflow domes are present in 2,268 of the District's 5,103 manholes to aid in reducing inflow. Figure 1 shows the manhole locations where inflow domes have been installed throughout the District.

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Flow analyses of the District were conducted as part of the District's 2008, 2013, and 2018 AMPs. All three 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 flow were projected at 6.5 mgd.

The District's monthly flow comparison between FY17 and FY18 can be found in Attachment F.

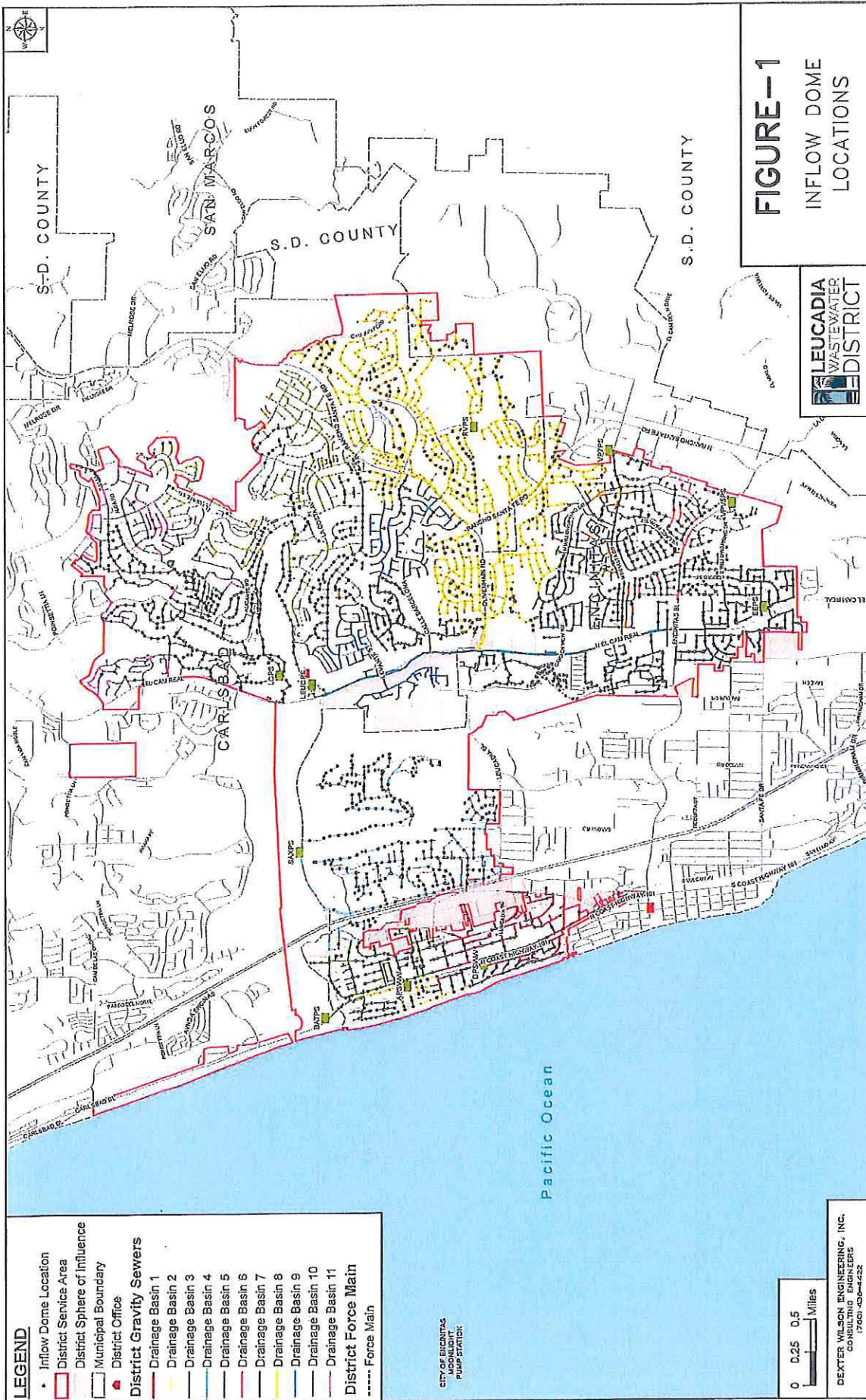
**Section IX (Monitoring, Measurement, and Program Modifications).** The District's Spill Summary through June 30, 2018 can be found in Attachment G. Four spills occurred in FY18; two were from private laterals, one was from a private grease interceptor, and one Category 2 spill from a blow off valve.

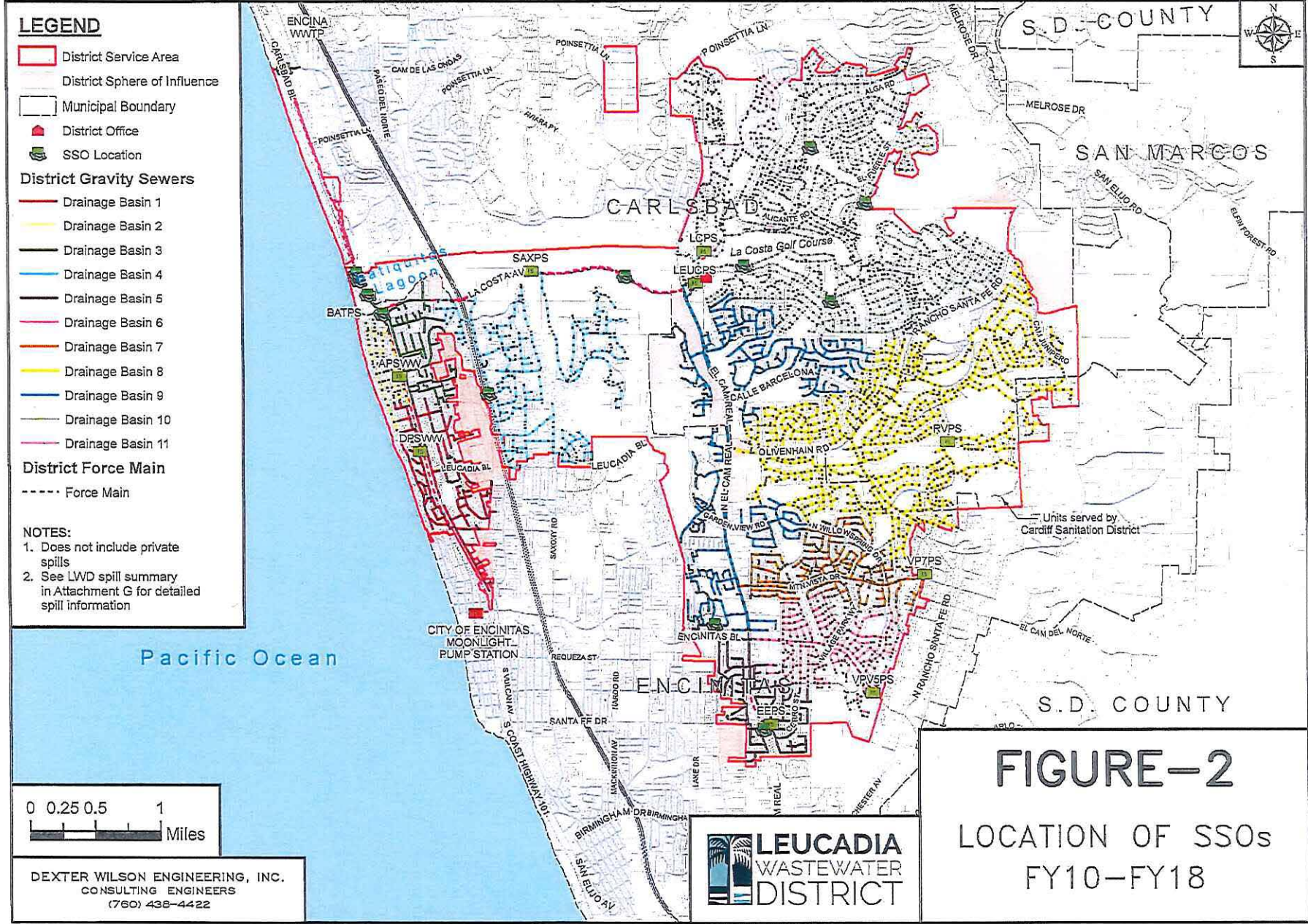
The cause of the Category 2 spill was a driver who veered off of La Costa Avenue and hit the blow off valve, damaging the protective housing and sheering off the valve. The blow off valve is on the Leucadia Pump Station force main which was not in operation at the time of the event. The 11,700 gallons that drained from the line was completely captured and returned to sewer.

Spill review checklists for each event are on file at the District office. Figure 2 identifies the location of each spill in a public line or manhole over the last nine years.

**Section XI (Communication Program).** The District has made the 2014 SSMP and subsequent audits available on its website. The District is also now actively posting to Facebook to communicate with the general public. Additionally, a formal presentation is provided to the Engineering Committee and Board of Directors and is part of those agendas and meeting packets.







### **Recommended SSMP Edits**

Two edits are recommended to the SSMP which will be documented in the SSMP Change Log (Appendix B of the SSMP). The edits consists of (1) an expansion of the District's public outreach actions including active posting to its Facebook page and (2) updating the SSMP Evaluation Checklist to better reflect District practices. 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 FY18 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.
- Ensure that those sewers which require additional measures (e.g. traffic control, easements, etc.), to maintain three year cleaning/CCTV cycles are scheduled for FY19 (See Exhibit C-1 for those locations requiring attention in FY19 to meet the three year target).
- Ensure that the planned O&M activities (e.g. hydroclean and CCTV inspect every 5 years) for the Occidental pipeline are on track (see AMPI memorandum Attachment A).
- Confirm that inflow domes are being tracked in IWater/CMMS; the reported count of inflow domes in the system for FY18 is the same as those reported in FY17.
- Complete all Scheduled SOP trainings in FY19 (see Attachment D).

Paul Bushee  
October 30, 2018

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Next Steps

This FY18 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 FY18 Audit on the District's website and include a hardcopy in the District's 2014 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.



Natalie J. Fraschetti, P.E.

NJF:SH:sg

Attachment(s)