

AGENDA

**ENGINEERING COMMITTEE MEETING
LEUCADIA WASTEWATER DISTRICT
Tuesday, December 5, 2017 – 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 2017 Audit conducted by Dexter Wilson Engineering, Inc. (Pages 2 - 13)
5. **Information Items**
 - A. Update of the Poinsettia Station Gravity Pipeline Project. (verbal)
6. **Directors' Comments**
7. **General Manager's Comments**
8. **Adjournment**

MEMORANDUM

Ref: 18-6040

DATE: November 30, 2017
TO: Engineering Committee
FROM: Paul J. Bushee, General Manager 
SUBJECT: Sanitary Sewer Management Plan (SSMP) Fiscal Year 2017 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 2017 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 2016. Due to their thorough knowledge of the plan, staff requested that DWE conduct the Fiscal Year 2017 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 2017 AUDIT**

November 21, 2017

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



Job No. 103-015/7

DEXTER WILSON ENGINEERING, INC.

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.

November 21, 2017

103-015/7

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
2017 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 2017 (FY17) Audit (the third 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 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 FY17 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 were no new employees hired in FY17.

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 to four years. In review of Exhibit C-2, there are areas within the District which have not been CCTV inspected in the last 5 years. These areas will be CCTV inspected in FY18 and have been added to Exhibit C-1 as appropriate.

Paul Bushee
November 21, 2017

Outside of these isolated areas, 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 initial results were favorable and the District has incorporated foam treatment into the regular schedule of preventative maintenance activities. Twelve additional line segments utilized foam treatment for root control in FY17.

The District's Asset Management Plan (AMP) was revised in January 2013. Progress throughout FY17 with respect to this plan (and other asset planning efforts) is summarized in the Attachment I letter-report at the end of the audit. The District's AMP will be revised and updated in FY18.

The FY17 and FY18 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 incorporated storm drain system information from the cities of Carlsbad and Encinitas into their geographic information system (GIS) and InfraMap software.

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 FY17 SSOs were attributable to FOG, continuing the District's SSMP determination that a formal FOG control program is not warranted 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 this past fiscal year 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.

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. This will be further validated in the 2018 update of the AMP.

The District's monthly flow comparison between FY16 and FY17 can be found in Attachment F.

Section IX (Monitoring, Measurement, and Program Modifications). The District's Spill Summary through June 30, 2017 can be found in Attachment G. Eight spills occurred in FY17; seven were from private laterals and one was from a public manhole. The Category 3 spill from the public manhole was approximately 700 gallons in volume and was completely captured. Additionally, 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 eight years.

One change was made to the Evaluation Checklist (Attachment A). A question was added to verify the implementation of the District's lateral reimbursement program.

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 part of those agendas and meeting packets.

LEGEND

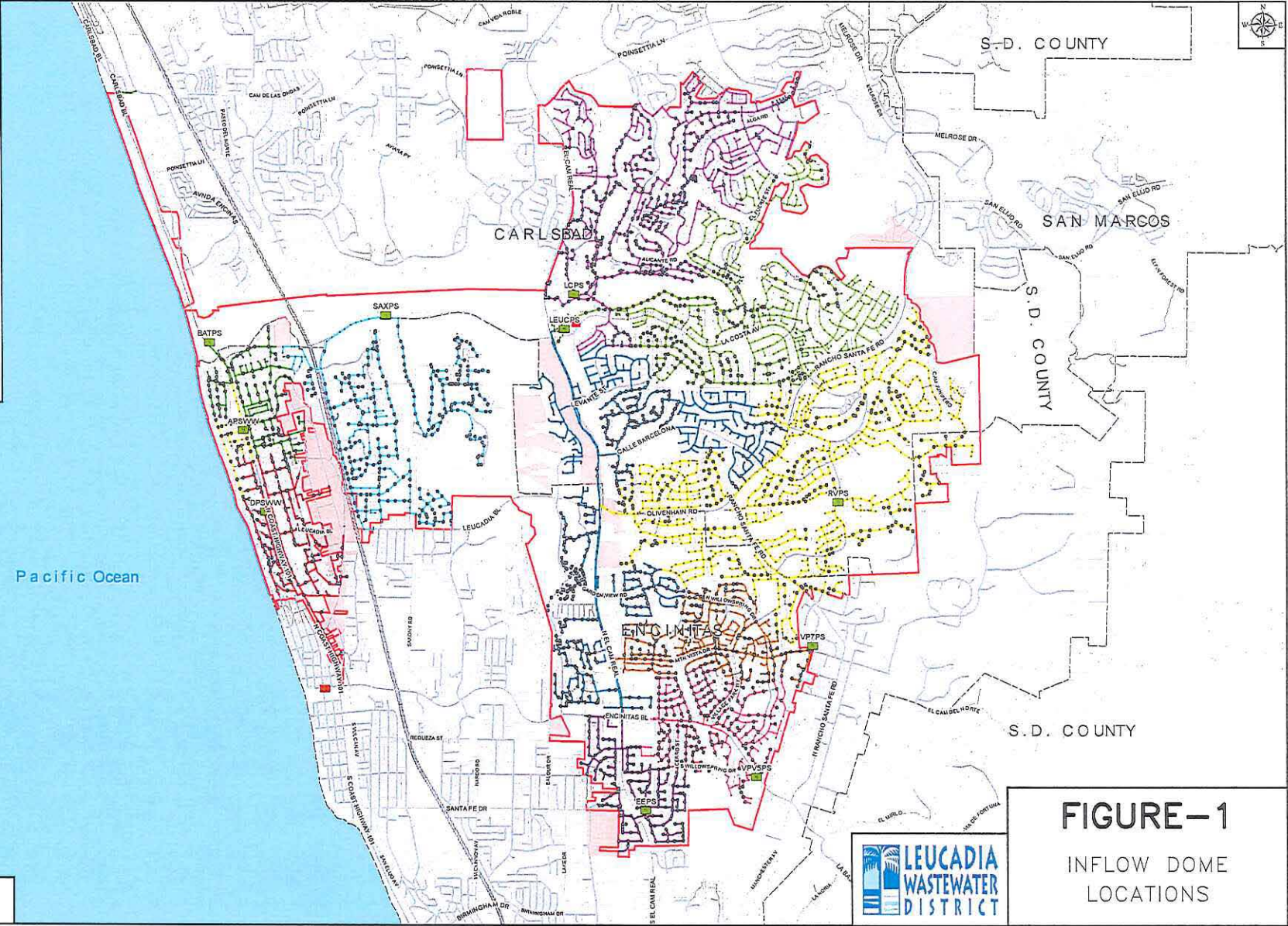
- Inflow Dome Location
- ▭ District Service Area
- ▭ District Sphere of Influence
- ▭ Municipal Boundary
- ▣ District Office

District Gravity Sewers

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

District Force Main

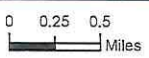
- Force Main



6

CITY OF ENCINITAS
MOONLIGHT
PUMP STATION

Pacific Ocean

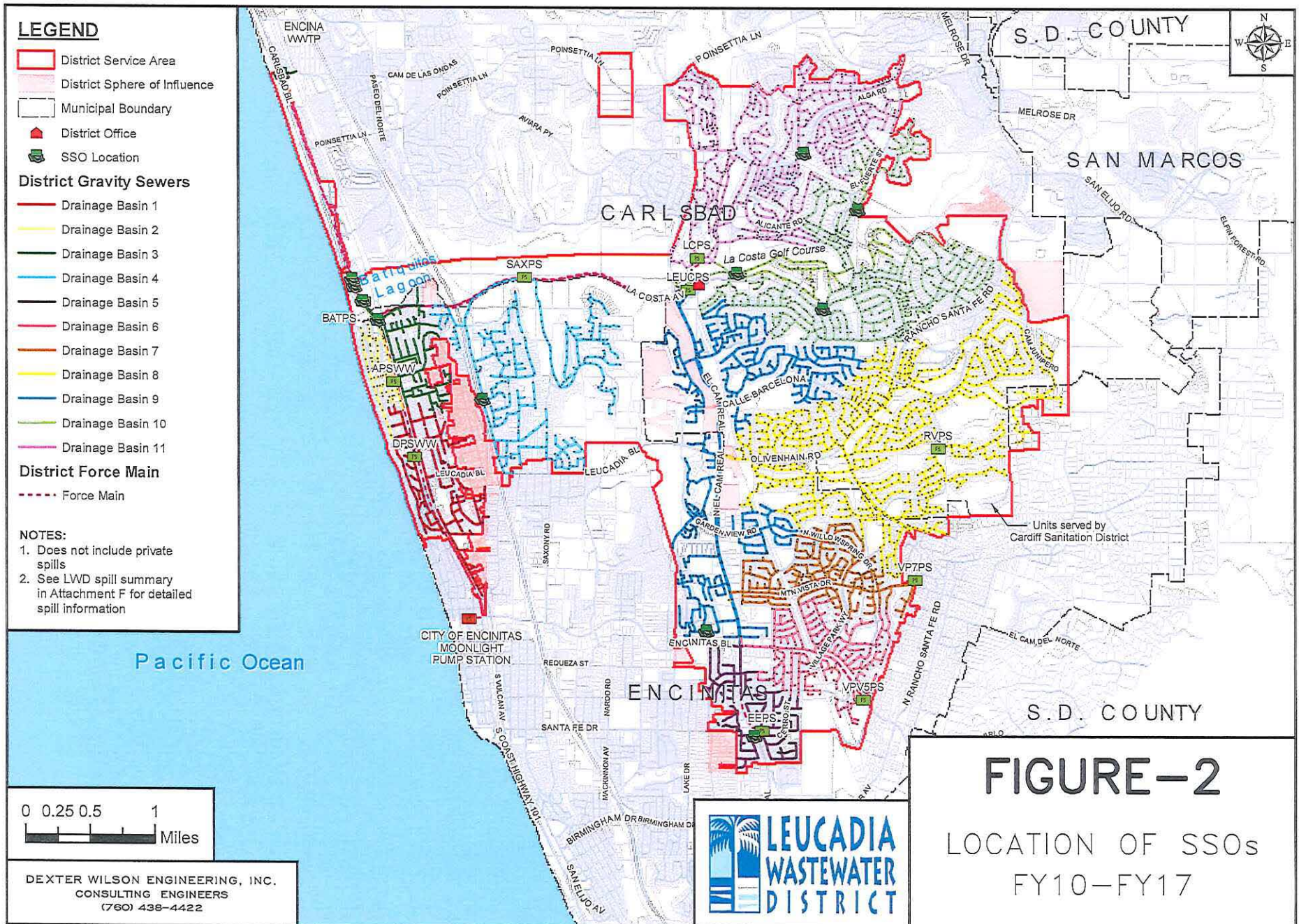


DEXTER WILSON ENGINEERING, INC.
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FIGURE-1
INFLOW DOME
LOCATIONS

C:\Users\jw\Documents\102507_1042_40.dwg
 EncinitasPlan_Water.mxd\102507_1042_40.dwg - L:\Projects\102507_1042_40.dwg



Recommended SSMP Edits

Two edits are recommended to the SSMP. These edits are documented in the SSMP Change Log (Appendix B of the SSMP). The edits consist of a more detailed description of the District's lateral reimbursement program in Section IV of the SSMP and a minor revision to the OERP. 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 FY17 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 El Camino Real, 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 three year cleaning/CCTV cycles (See Attachment C, locations 7B and 13).
- Ensure that the planned O&M activities (e.g. hydroclean and CCTV inspect every 5 years) for Lanikai and Occidental are on track (see AMPI memorandum Attachment A).
- Recommend to revise Standard Drawing S-31 to reflect the change in cleanout connections to manholes at ends of sewer mains.

Next Steps

This FY17 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 FY17 Audit on the District's website and include a hardcopy in the District's 2014 SSMP counter copy.

Paul Bushee
November 21, 2017

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:ps

Attachment(s)

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 FY16 to FY17

G – LWD Spill Summary through June 30, 2017

H – SSMP Revisions

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