

2020 SSMP AUDIT

WDID: 2SSO10217

**Accepted by the District Board on:
August 12, 2020**

**West Valley Sanitation District
Sewer System Management Plan (SSMP)
2020 SSMP Audit**

SSMP Audit Certification

I hereby certify, as the Legally Responsible Official and as Director of Engineering and Operations for West Valley Sanitation District, that the following SSMP Audit was performed in compliance with State Water Resources Control Board Order No. 2006-0003-DWQ, Statewide General WDR for Sanitary Sewer Systems, Provision D.13(x).



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Director of Engineering and Operations
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7/29/20

Date

**West Valley Sanitation District
Sewer System Management Plan (SSMP)
2020 SSMP Audit**

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**West Valley Sanitation District
Sewer System Management Plan (SSMP)
2020 SSMP Audit**

Executive Summary

The 2020 SSMP Audit (SSMP Audit) is a biennial internal audit of the District's Sewer System Management Plan (SSMP). Its focus is to validate the SSMP's compliance with mandated requirements, evaluate the SSMP's effectiveness, identify elements that require updating, and recommend changes that promote continuous improvement and enhances the effectiveness and efficiency of District operations. The SSMP provides a detailed description of how the District maintains, operates, and manages its sanitary sewer system, and establishes a roadmap to achieve exceptional performance levels as embodied in the District's Vision Statement:

*“To be an industry leader
in the greater San Francisco Bay Area by providing our
customers with high-quality and value added services”*

Background

The development and implementation of the SSMP is a requirement of the State Water Resources Control Board Order No. 2006-0003-DWQ, Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (WDR). The purpose of the SSMP is to document how the District manages, operates, and maintains its sewer collection system to help reduce and prevent sanitary sewer overflows (SSOs) and mitigate impacts of SSO events. An SSMP Audit is required at least once every two years and is one of the eleven elements in the SSMP described in Section D.13 of the WDR. The SSMP Audit provides an opportunity for the District to ensure that it is compliant with the WDR, the description of the District's operations is accurate and current, and to gauge the SSMP's overall effectiveness through the achievement of key performance indicators.

Summary

As part of the District's 2020 Strategic Plan Action Item B.4.2., the Strategic Plan Team (Team) performed the 2020 SSMP Audit. This Team consisted of the District Manager and Engineer, Director of Engineering and Operations, Senior Civil Engineer – Engineering, Senior Civil Engineer – Administration and Information Services, and the Operations Supervisor.

After reviewing each SSMP Element the Team was able to confirm that the District's SSMP is compliant with requirements of the WDR and identified those areas that require updating. The Team evaluated the SSMP's effectiveness by examining the District's success in achieving its performance goals and concluded that the District has demonstrated a high level of competency and performance in managing and operating its sewer collection system. The basis for determining the District's competency and performance is through the evaluation of key performance indicators or measurements. These performance indicators include:

1. SSO spill rate and volume indices, and historical trending
 - A spill rate indices of ≤ 3.0 spills/100 miles is indicative of a high performing collection system. In 2019 the District attained sewer main and sewer lateral spill indices of 1.69 and 0 spills/100 Miles for its sewer mains and sewer laterals, respectively.
 - Over the last fifteen years, the District's historical 5-year running averages for SSO spill rate and SSO volume indices have shown a continuous downward trend.
2. Operations Department performance goals
 - Nearly all FY2019-20 Operations Performance Goals were met or exceeded resulting in an overall completion of 89.4%.
3. Performance Monitoring and Measurement Parameters
 - A review of each of the eleven elements of the District's SSMP indicates that the performance monitoring and measurement are in place to ensure that the SSMP remains relevant, current, and effective.
4. CIP projects and studies
 - A significant number of CIP projects and studies are currently active and in various stages of design and or pre-construction. In FY2019-20 approximately \$7.8 million was expended towards CIP Projects (including Joint Trunk Sewer Projects). The current 5-Year CIP shows over \$33.9 million of CIP projects.

As indicated by the achievement of the key performance indicators, the District SSMP has proven to be an effective tool in guiding our operations and providing the opportunity to enhance operations through incorporation of innovative methods and technologies.

**West Valley Sanitation District
Sewer System Management Plan (SSMP)**

2020 SSMP Audit

REGULATORY REQUIREMENT

State Water Resources Control Board Order No. 2006-0003-DWQ established the Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (WDR) and the requirement for the Enrollee (District) to develop and implement a system-specific Sewer System Management Plan (SSMP). WDR Section D.13 describes the mandatory eleven (11) elements required in the SSMP and specifies that updates are required every five (5) years from the original adoption date of the SSMP. The requirement to perform an SSMP Program Audit (SSMP Audit) is identified in WDR Section D.13(x) and is an internal audit that is required at least every two (2) years.

WDR Section D.14 requires that the SSMP and subsequent re-certifications must be certified by the Enrollee to be in compliance with WDR requirements and must be presented to the Enrollee’s governing board for approval. The SSMP Audit also requires certification per WDR Section J.1.(i). The Director of Engineering and Operations, as a SWRCB registered Legally Responsible Official for the District, certifies District’s SSMPs and SSMP Audits.

PURPOSE

The SSMP provides a detailed description of how the District maintains, operates, and manages its sanitary sewer system with the goal of satisfying the District’s Mission and achieving the District Vision. The District Mission Statement is:

*“To protect public health and the environment
for the communities it serves
through the safe, reliable, and cost-effective collection
and conveyance of wastewater for treatment
at the San José-Santa Clara Regional Wastewater Facility”*

Through continuous improvement of operations, the District strives to achieve exceptional performance levels as embodied in the District’s Vision Statement:

*“To be an industry leader
in the greater San Francisco Bay Area by providing our
customers with high-quality and value added services”*

The purpose of the SSMP Audit is to verify the District’s SSMP compliance with WDR requirements, evaluate its effectiveness, identify areas requiring updating, and recommend changes to promote continuous improvement and enhancement of District operations. Since the initial adoption of the District SSMP in 2008, SSMP Audits have helped to identify necessary administrative and programmatic updates and initiated improvements in both operations and engineering programs. As part of the District’s 2020 Strategic Plan Action Item B.4.2., the Strategic Plan Team (Team) performed the 2020 SSMP Audit. This Team consisted of the District Manager and Engineer, Director of Engineering and Operations, Senior Civil Engineer – Engineering, Senior Civil Engineer – Administration and Information Services, and the Operations Supervisor.

SSMP AUDIT HISTORY

Prior to calendar year 2012 the SSMP Audit was submitted annually along with the District’s Annual SSO Report to the San Francisco Bay Regional Water Quality Control Board (SFRWQCB). Per SFRWQCB’s letter, dated October 3, 2012, the requirement to submit an SSO Report and SSMP Audit annually was discontinued. Since 2014, the District has submitted an SSMP Audit every two years as required. Additionally, the District continues to produce the Annual SSO Report as one of the District’s obligations described in the Settlement Agreement with Northern California River Watch (NCRW), currently known as California River Watch.

The 2018 SSMP Audit and current SSMP were adopted by the District Board on May 9, 2018 and August 8, 2018, respectively. The next five-year SSMP re-certification, scheduled for August 2023, will incorporate recommended improvements and updates noted in this SSMP Audit and those from the 2022 SSMP Audit. The following is a tabulation of the District’s SSMP Audit history showing District compliance with SFRWQCB and SWRCB regulations.

PERIOD	SSMP	SSMP AUDIT	REMARKS
2008	08/08/08	03/06/09	SSMP/Audit submitted w/2008 annual report
2009	-----	03/12/10	Audit submitted w/ 2009 annual report
2010	-----	02/28/11	Audit submitted w/ 2010 annual report
2011	-----	03/15/12	Audit submitted w/ 2011 annual report
2012	-----	-----	Annual audit/report not req’d SFBRWQCB
2012-2013	08/07/13	05/14/14	SSMP re-certified and adopted/2014 Audit
2014-2015	04/08/15	05/11/16	SSMP re-certified and adopted/2016 Audit
2016-2017	08/08/18	05/09/18	SSMP re-certified and adopted/2018 Audit
2018-2019	-----	(08/12/20)	2020 Audit to be submitted for Acceptance

(x/x/20) indicates anticipated acceptance date by the District Board

SYSTEM OVERVIEW

The District owns and maintains a gravity sewer wastewater collection system serving the cities of Campbell, Monte Sereno, a portion of Saratoga, Town of Los Gatos, and intervening unincorporated portions of the County of Santa Clara. In total there are approximately 46,700 connections serving a population of roughly 109,000 people. The wastewater collection system is comprised of 415 miles of sewer main and 200 miles of sewer lateral (lower lateral) located within the public right-of-way. The table below shows the size and age characteristics of the District's sewer collection system. The sewer system is comprised primarily of small diameter pipe, where nearly 90% of system pipe are 8" and smaller and have an average age of 49 years. The District also operates and maintains three small duplex pump stations in the foothills serving small isolated subdivisions. In FY2018-2019 WVSD's collection system transported an average daily flow of approximately 9.75 million gallons of wastewater, or a total 3.6 billion gallons to the San José-Santa Clara Regional Wastewater Facility (RWF) for treatment, disposal, and reuse. As with other tributary agencies, the District contributes its allotted share of RWF's CIP and O&M costs.

System Size and Age Characteristics

PIPE DIAMETER (inches)	COUNT	LENGTH (LF)	% OF SYSTEM	AVG AGE (yrs)
3	2	1,054	0.05%	6.50
4	41	5,851	0.27%	41.34
6	6,518	1,488,412	67.79%	50.69
8	1,754	416,204	18.96%	40.47
10	348	80,895	3.68%	50.73
12	322	79,066	3.60%	51.11
14	11	2,714	0.12%	58.45
15	212	52,425	2.39%	58.08
16	15	5,278	0.24%	63.07
18	105	26,968	1.23%	46.16
20	2	415	0.02%	54.00
21	22	5,592	0.25%	50.50
24	32	11,620	0.53%	55.25
27	33	11,296	0.51%	57.36
30	8	3,104	0.14%	45.75
33	2	446	0.02%	52.00
36	1	561	0.03%	52.00
39	9	3,751	0.17%	52.00
Avg/Sum		2,195,652	100%	49

SSMP EFFECTIVENESS

An effective SSMP should result in a highly effective and efficient operation and superior achievement of key performance indicators (performance measurements). The SSMP Audit Team evaluated the SSMP's effectiveness by examining key performance indicators used by the District including: SSO Spill Rate and Volume Rate Indices, Historical SSO Spill Rate and Volume Trends, Operations Department Performance Goals, and District CIP Projects and Studies.

SSO Spill Rate and Volume Indices

The District segregates reporting data for its sewer main and sewer lateral SSOs, which facilitates the comparison with other collection systems statistics provided in the SWRCB CIWQS database. One of the primary indicators of collection system performance and SSMP effectiveness for the District is the achievement of low SSO spill rate and spill volume indices and its relative standing with other collection system agencies throughout California and in the San Francisco Bay Region (Region 2).

A common benchmark for performance by wastewater collection agencies has been the spill rate indices, or total number of mainline SSOs per 100 miles of sewer main. A long standing and accepted indicator of a high performing collection system is achieving a total mainline spill rate of ≤ 3.0 SSOs per 100 miles. Since sewer lateral SSOs happen with much greater frequency than those from sewer mains, a sewer lateral spill indices of ≤ 3.0 SSOs per 100 miles is much harder to achieve and considered very high performing. The SWRCB CIWQS Database includes sewer main and sewer lateral spill indices (by SSO Category), and sewer main and sewer lateral SSO volume indices (gallons/1000 capita). Tabulated below are District, Region, and State SSO indices for calendar years 2018 and 2019.

In calendar year 2018 the District achieved a sewer main and sewer lateral spill rate indices of 1.93 and 0.50, respectively. While in calendar year 2019 the District achieved a sewer main and sewer lateral spill rate indices of 1.69 and 0.00, respectively. Both years exceed the "high performing" indices rate of ≤ 3.0 SSOs per 100 miles. Similarly, the spill volume indices in 2018 and 2019 indicates a similar high level of performance. In terms of the breakdown of SSO in spill categories and volume, the District rates are well below those averages shown for state and regional numbers.

2018 CIWQS Collection System Spill Summary

<u>Main Indices</u>	<u>District</u>	<u>State</u>	<u>Region</u>
Category 1	0.48	3.90	5.21
Category 2	0.24	2.05	2.27
Category 3	1.21	6.83	9.20
Total No. (SSO/100 mi)	1.93	12.78	16.68
Total Vol. (Gal/1000 capita)	8.06	1,514	1,251

<u>Lateral Indices</u>	<u>District</u>	<u>State</u>	<u>Region</u>
Category 1	0.00	44.28	0.97
Category 2	0.00	1.25	1.84
Category 3	0.50	15.06	18.36
Total No. (SSO/100 mi)	0.50	60.59	21.17
Total Vol. (Gal/1000 capita)	0.18	37	72

2019 CIWQS Collection System Spill Summary

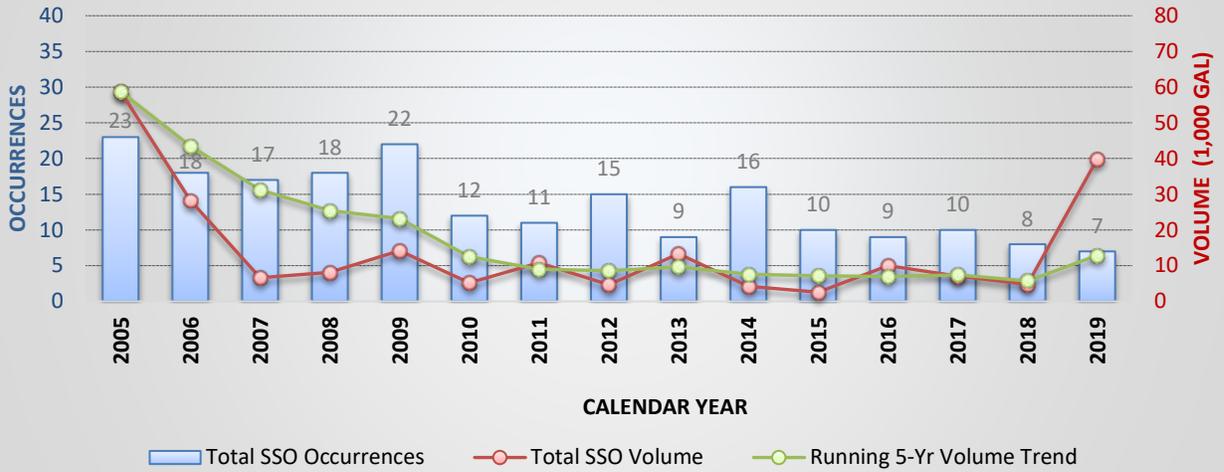
<u>Main Indices</u>	<u>District</u>	<u>State</u>	<u>Region</u>
Category 1	0.48	5.15	6.58
Category 2	0.48	3.23	2.58
Category 3	0.72	4.89	6.19
Total No. (SSO/100 mi)	1.69	13.27	15.35
Total Vol. (Gal/1000 capita)	321	8,594	4,502

<u>Lateral Indices</u>	<u>District</u>	<u>State</u>	<u>Region</u>
Category 1	0.00	4.05	0.91
Category 2	0.00	0.38	0.00
Category 3	0.00	26.40	16.80
Total No. (SSO/100 mi)	0.00	30.83	17.71
Total Vol. (Gal/1000 capita)	0	643	4

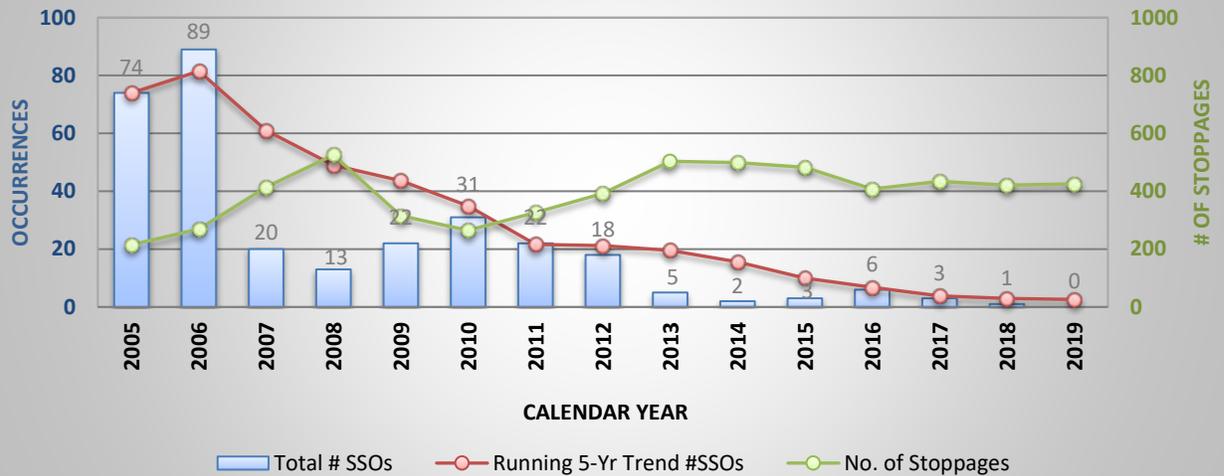
SSO Spill Rate and Volume Trends

A striking example of the District's consistent achievement, and a significant key performance indicator for continuous improvement, is the historical trending of SSO spill and volume records. By examining fifteen years of SSO records (2005 to 2019), a declining trend in spill occurrence, volume, and spill indices demonstrates that the District's continuous improvement effort reflects high SSMP effectiveness and exceptional collection system performance. The District has adopted the use of five-year running averages in examining its historical trending in SSO spill occurrences, volumes, and SSO Indices in order to smooth out periodic anomalies that could skew results. As shown in the graphs below, the fifteen-year history reveals the general downward trend for all SSO categories for both sewer main and sewer laterals.

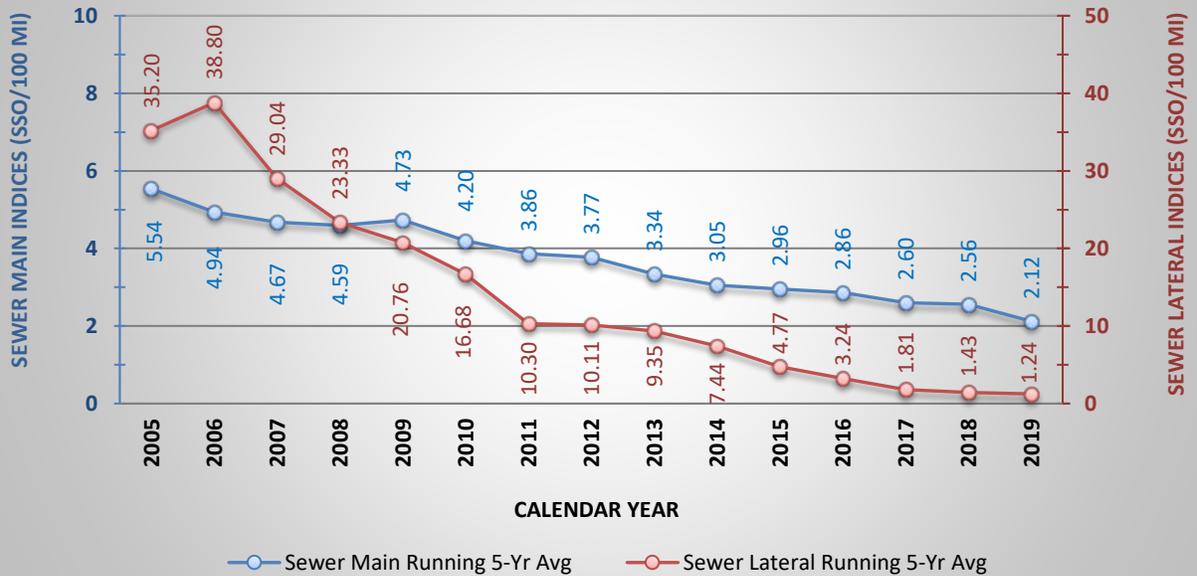
Sewer Main SSO History (2005 - 2019)



Sewer Lateral SSO History (2005 - 2019)



Historical SSO Indices (2005 - 2019)



Operations Department Performance Goals

Annual Operations Department performance goals are established prior to each fiscal year to address three performance areas: Operational Efficiency, Operational Effectiveness, and Safety. These “stretch” goals emphasize and encourage high operational achievement in maintenance and condition assessment activities, while also placing a high priority on the safety of District staff. The primary performance goals and FY2018-19 and FY2019-20 achievement results are:

<u>Maintenance Activity</u>	<u>Goal</u>	<u>Achievement</u>	
		<u>FY2018-19</u>	<u>FY2019-20</u>
Sewer Main Cleaning (all methods)	1,700,000 lf	1,440,000 lf	2,050,000 lf
Sewer Main CCTV	315,000 lf	225,000 lf	257,000 lf
Lateral Cleaning	1,500 ea	1,430 ea	2,040 ea
Lateral CCTV	1,000 ea	650 ea	650 ea
Response Time (Business Hours)	30 min	24 min	22 min
Response Time (After Business Hours)	60 min	33 min	33 min
Preventable (Cat 1/Cat 2/Cat 3) SSO	0 / 0 / 0	0 / 0 / 2	0 / 1 / 0
Loss Time/Restricted Duty Accidents	0 / 0	1 / 0	0 / 2

During these two fiscal year periods, the Operations staff performed extremely well and was able to achieve a majority of these goals. Approximately 89.4% of the Maintenance Activity Goals were achieved in FY2019-20. It is important to note that the Operations

staff, which consists of ten field staff and two office staff, also perform other maintenance functions besides those directly related to cleaning and condition assessment of the collection system. Other maintenance functions include fleet maintenance, pump station maintenance, and mechanical maintenance.

CIP Projects and Studies

The following summarizes the District's Capital Improvement Program (CIP) projects and studies. It illustrates the District's ongoing commitment to maintain and improve its collection system and ability to complete projects identified in the District's 5-year CIP. In FY2018-19 and FY 2019-20, approximately \$5.6 million and \$7.8 million was expended on CIP projects (including Joint Trunk Sewer Projects) and studies, respectively. The most notable projects and studies completed during the last two fiscal years or are currently ongoing include:

1. Multi-Year Sewer Repair/Replacement Contracts – A multi-year (up to 5 years) service contract that expedites point (spot) repairs of sewer main and laterals on an as-needed emergency or scheduled basis. The multi-year contract has expended \$1.5 million and \$1.9 million in FY2018-19 and FY 2019-20, respectively. The current contract expires in June 2022.
2. Los Gatos Creek (Vasona Park) Project – This project involves the lining of approximately 6,100 lineal feet of 15 to 27-inch diameter asbestos cement and reinforced concrete pipe that were found to have moderate to severe corrosion and was rated in the Risk Model as being Medium to High Risk. This project was completed in August 2018.
3. University Avenue ACP (Blossom Hill Rd to Highway 85) – This project involves the lining of approximately 9,100 lineal feet of 15 to 18-inch diameter asbestos cement and vitrified clay pipe that were found to have moderate to severe corrosion and was rated in the Risk Model as being Medium to High Risk. This project was completed in July 2019.
4. Winchester Blvd Trunk Sewer Rehabilitation - This project is currently in the design stage and involves the rehabilitation of over 7,000 lineal feet of 21 to 30-inch diameter asbestos cement and reinforced concrete pipe that were found to have moderate to severe corrosion and was rated in the Risk Model as being Medium to High Risk. The project design is expected to be complete in the summer of 2020. The estimated budget for this project is \$2.9 million.
5. Quito Basin 3 & 4 (Wildcat Creek) – This project is currently in the design stage and involves the rehabilitation of approximately 9,000 lineal feet of 6 to 10-inch diameter, primarily vitrified clay pipe. Although there is some level of defects and corrosion, there is a need to increase its hydraulic capacity and increase pipe size range to 8 to 15-inch diameter. This was rated in the Risk Model as being Medium

to High Risk. The project design is expected to be complete in the spring of 2021. The estimated budget for this project is \$3.0 million.

6. Infiltration and Inflow Reduction Program – The District initiated its Inflow and Infiltration Reduction Program in 2015. This Program has identified and isolated specific areas of high I&I within the collection system. On-going annual wet weather flow monitoring of 7 to 15 locations per wet weather season helps to further identify areas of high I&I. Additional smoke testing is scheduled for summer of 2020.
7. Santa Rosa Easement Sewer – This study involves the evaluation of easement sewer lines in an area identified as having unstable soils, also known as the “hillside zone”. In addition to being inaccessible to maintenance staff, these easement sewer lines have shown signs of deformation. The study is evaluating viable options to prevent future damage to the collection system. The results of this study will lead into a CIP project within the next two years.
8. San Tomas Expressway Trunk Sewer Rehabilitation - This project is currently in the design stage and involves the rehabilitation of over 4,500 lineal feet of 24 to 33-inch diameter asbestos cement and reinforced concrete pipe that were found to have moderate to severe corrosion and was rated in the Risk Model as being Medium to High Risk. The project design is expected to be complete in the spring of 2021. The estimated budget for this project is \$2.5 million.
9. Update 5-Year and 10-Year CIP – The update of the 5-Year and 10-Year CIP was developed in June 2018 following completion of the new Hydraulic Model and updated Risk Prioritization Study, which are both critical elements in the evaluation and prioritization of CIP projects.
10. District Strategic Plan - The initial five year 2013 District Strategic Plan was updated in 2018. The new 2018 Strategic Plan will be effective through FY2022-23. It re-established the District’s Mission, Vision, Values, and Goals from the original Strategic Plan and updated the Objectives.

SSMP COMPLIANCE

Element IX of the District SSMP addresses the compliance process of monitoring, measurement, and initiating program modifications to ensure that the SSMP continues to be compliant, accurate, and effective. Each Element in the SSMP and associated performance measurements, as provided in the Table IX-1 in the District’s SSMP Element IX, are reviewed to track the effectiveness of the SSMP Elements and whether changes to the SSMP are required. Utilization of the SSMP Audit Checklist helps guide this review process and documentation of any proposed changes are included in the Narrative for Recommended Updates and Revisions.

Element Monitoring and Measurement

This is a review of each District SSMP Element. Recommended changes are indicated in bold italic print and are summarized in the Narrative for Recommended Updates and Revisions located at the end of this document.

Element I - Mission, Goals, and Objectives

a) District Vision, Mission, Values, and Goals

- Although the general goal of an SSMP is to “facilitate proper funding and management of sanitary sewer systems”, the District’s Mission, Vision, Values, and Goals encompass this and in considerably more detail as described in the District’s current five-year Strategic Plan. The District Vision, Mission, Values, and Goals are central drivers for the District’s purpose and direction. Strategic Plan Goal B – Sewer System Management is specific and to the point as stated: “Ensure uninterrupted collection and conveyance of wastewater through effective and efficient operation, maintenance, and management of the District’s wastewater collection system”. This Goal is further defined by four Objectives:
 - i. Objective B.1- Optimize accuracy, scope, and security of data records utilized for all District functions.
 - ii. Objective B.2- Ensure the sustained function and longevity of the District’s infrastructure.
 - iii. Objective B.3 - Optimize District-wide proficiency by providing adequate physical resources and ongoing development of highly competent personnel.
 - iv. Objective B.4 - Identify and implement strategies to improve Operational efficiency and effectiveness.
- Successful achievement of the District’s SSMP is demonstrated through the District’s accomplishments, in terms of accomplishment of daily activities, completion of Strategic Plan Action Items, satisfying requirements of the WDR and maintaining a high level of achievement in SSMP Effectiveness.

b) District Objectives and Action Items

- Management and supervisory staff develop Action Items that reflect the highest priority activities. The District Board approves these Strategic Plan Action Items prior to the beginning of each fiscal year. In FY18-19 and FY19-20, 100% and 80% completion of all Action Items were achieved, respectively. Note that in FY19-20, impacts of COVID-19 Pandemic disrupted the ability to make greater progress.
- The annual adoption of Action Items by the Board shown in Appendix A.3 requires regular updating. ***It is recommended that Appendix A.3 be updated to show those Action Items adopted for FY2020-21.***

- The Goals and Objectives remain focused towards continuous improvement with an emphasis on gaining efficiency and effectiveness, staff development and training, fiscal health, improving data and information management, and long range planning.
- Previously described key performance indicators used to gauge SSMP Effectiveness are the performance goals for the operation of the collection system.

Element II – Organization

a) Staffing Levels

- The District has consistently maintained staffing levels, ranging between 27 to 29 total employees. A District Organizational Chart is provided in the SSMP to show the District’s hierarchy, but requires occasional updating to reflect staffing changes. ***It is recommended that Appendix A.4 – Organization Chart be updated to reflect current staffing.*** An annual review of current and future workload is performed by management to evaluate whether changes in staffing is warranted. Consultants, part time staff, or summer interns supplement department staff for specific tasks as necessary.
- In FY 2018-19 the District’s workforce was restored to full staffing levels through the addition of a Senior Civil Engineer – Information Services and a Maintenance Worker Trainee.

b) Board of Directors

- The membership on the Board of Directors may change from one calendar year to the next depending on their respective term of office and or appointment by their municipality. Annual changes in Chair and Co-chair responsibilities also occur. The Board of Directors chart requires updating with each SSMP Audit or SSMP recertification. ***It is recommended that Appendix A.1 – Board of Directors be updated to reflect current membership.***

Element III – Legal Authority

a) District Ordinance

- The District Ordinance, in particular Chapters 6, 7, 13, and 14, provides legal authority to the District for the proper management of its operation. These Chapters are included in the SSMP and briefly discussed. The District Ordinance receives routine reviews, and updates as necessary, to further clarify and or strengthen the District’s authority.
- The District utilizes the assistance of its District Counsel (Meyers Nave) to perform legal reviews and recommendations for updates to the District Ordinance.
- The following District Ordinances have been updated over the past two years:

- i. May 8, 2018, Amending Chapters 1, 4, and 10 (Ordinance 148) – Establishment of new Sewer Service and Use Charges and Hillside Zone Sewer Rate.
 - ii. April 10, 2019, Revisions to Chapters 1-4, 6, 7, and 9-14 (Ordinance 149) – Changes resulting from a comprehensive review of the entire Ordinance.
 - iii. June 12, 2019, Amendment to Chapter 2 (Ordinance 150) – Revision to Section 2.030 Compensation of Board Members.
 - iv. August 14, 2019, Amendment to Ordinance 150 (Ordinance 151) – Amend Ordinance 150 to reflect previous Board Member compensation reduction action.
 - v. February 12, 2020, Amendments to Chapters 1, 4, and 10 and repealing Chapter 8 (Ordinance 152) – Revisions to reflect the full withdrawal from the stormwater program (West Valley Clean Water Program).
 - vi. June 10, 2020, Amending Chapter 7 (Ordinance 153) - Revisions to Chapter 7 to strengthen requirements of the Fats, Oils, and Grease Program.
- The updated District Ordinances should be reflected in the SSMP. ***It is recommended that the updated District Ordinances be included in the next SSMP re-certification.***
 - The private ownership and maintenance responsibilities for laterals connected to easement mains requires discussion. ***It is recommended that this discussion be included in the next SSMP re-certification.***

Element IV - Operation and Maintenance Program

a) Resource and Budget Allocation

- The Operation and Maintenance (O&M) budget is adjusted on an annual basis to reflect anticipated needs for the following fiscal year. The O&M budget constitutes nearly 25% of the entire District budget (not including costs associated with the Regional Water Facility). ***It is recommended that Appendix B.1 – Operating Budget be updated to reflect the current FY20-21 budget.***
- The District has consistently provided adequate resources and budget for O&M. The O&M budget continues to experience gradual increases that reflect typical cost inflation associated with utilities, equipment, materials, and services.

b) Collection System Mapping

- All main line and manhole structure locations and their respective asset information are current and accurately mapped. Mapping and asset information updates occur weekly through the use of an automated script.
- Due to incomplete lateral information provided on the original “paper” sewer maps of the District, a significant effort has been made to develop accurate mapping. Laterals and their associated property line cleanout

locations (where installed) were systematically identified through Global Positioning System (GPS) surveys as part of the Lateral Maintenance Program which began in mid-2009. To date, approximately 31,200 of the 33,000 (94.5%) District laterals are mapped with reasonably high degree of accuracy.

- The District has been utilizing a Computerized Maintenance Management System (CMMS) and Geographic Information System (GIS) since 2003, although field access to electronic mapping and work orders became available in 2012 when field integration software and field laptops were introduced to the Operations staff. Currently, the CMMS system has web based capabilities and the use of field integration software is no longer used. In addition, field tablets are used instead of laptops.
- Valuable information is accessible in the field including: system asset information, property addresses, property information, aerial map information, and real time GPS location of field laptops (visible on GIS maps).
- Inconsistencies in mapping and asset information can be readily updated using electronically field generated redline markups and notations. Engineering regularly reviews these recommended mapping or asset change and makes the necessary updates.
- Storm Drain Maps, which are critical for anticipating flow direction and interception points for SSOs entering the storm system, are available on the GIS Mapping layer (along with waterway names and locations). Storm system map updating is performed by comparing current maps obtained from member cities.

c) Preventive Maintenance

- The District's sewer mains, sewer laterals (lower laterals), and pump stations are on an established preventive maintenance program. Assignment of cleaning frequencies for each pipe asset is adjusted as needed to reflect findings during cleaning operations, observations during CCTV inspections, and or stoppage/SSO events. Pump station testing and inspections are performed weekly with physical pump inspections taking place on an annual basis.
- To validate the effectiveness of the District's preventive maintenance program, as discussed in the beginning of this Audit under SSMP Effectiveness, the District's goal for achieving a SSO Spill Rate for mains and laterals of less than 3.0 SSOs/100 miles is considerably lower than state and regional averages. Fifteen years of historical data (2005 to 2019) of SSO occurrences, volumes, and indices indicates the District is achieving its goal of being below the 3.0 indices and maintaining a continuing downward trend in both SSO rate and volume.
- Sewer Main Maintenance
 - i. The baseline cleaning for mainlines is a 24 month frequency (Geozone cleaning) which was originally developed in 2003. There are 24 Geozones created in the District Service Area and

each Geozone is assigned for cleaning approximately each month. This cleaning protocol has served the District well by promoting efficient travel and use of resources by focusing effort in a specific geographic area.

- ii. After nearly two decades of Geozone cleaning, there is opportunity to increase efficiency by examining the possibility of taking a portion of 24 month frequency lines to a 36 month cleaning frequency. This effort is currently a FY20-21 Strategic Plan Action Item with an expected completion by June 30, 2021. ***It is recommended that the discussion of this cleaning frequency transition be discussed in the 2022 SSMP Audit.***
 - iii. In addition to Geozone cleaning, higher frequencies are specified for special lines (siphons, grease and root problem lines, etc). Longer frequencies (36 and 48 month) are used for newly rehabilitated HDPE lines and major trunk lines.
 - iv. The District has implemented the use of ADS Echo level transmitters in select siphon locations to utilize machine learning software to predict when cleaning is necessary. This innovation can possibly save unnecessary effort in performing a fixed 2-month cleaning frequency. ***It is recommended that the discussion of ADS Echo level transmitters and the resulting improvements in siphon cleaning be included in the next SSMP re-certification.***
 - v. The current cleaning production goal for sewer mains is 1.7 million feet annually. In FY 20-21 there were 2,050,000 lf of mainline cleaned.
- Sewer Lateral Maintenance
 - i. The Lateral Maintenance Program was implemented in 2009 to locate property line cleanouts and map laterals. Approximately one-third of laterals have cleanouts which are necessary to perform lateral maintenance. Lateral cleaning frequencies of 6, 18, 36, 60, 120, 180, and 300 months were starting to be manually assigned depending on selected conditions.
 - ii. The manual assignment of cleaning frequencies was a very slow process that would have taken years to complete. To accelerate this process an automated algorithm routine was programmed into the CMMS to take selected parameters (stoppage and overflow history, pipe repair or replacement, etc.) and automatically assign new cleaning frequencies. As these parameters change, a new frequency is assigned. ***It is recommended that the current use of an automatic algorithm to set lateral cleaning frequencies be described in the next SSMP re-certification.***
 - iii. The current cleaning goal for sewer laterals is 1,500 laterals annually. In FY20-21 there were 2,040 laterals cleaned.
 - Pump Station failures are very infrequent and are limited to temporary power loss events, loss of communication linkages, or float failures.

Since these pump stations have been designed to retain from 2 to 3 days of wastewater flow, there has never been any SSO event as a result of these temporary failures. The pump station is monitored by a communication service (Mission Communication) that provides alerts of unusual operating conditions or pump station failures. In FY20-21 additional wet well level monitoring using level transducers are planned. This will provide real time level information and monitoring compared to basic pump on/off information using float heights.

- The District's service call procedures after normal work hours rely on the use of the County Communication call center. The District's goal for responding to service calls during and after working hours is 30 minutes and 60 minutes, respectively. In FY19-20, these response times were 22 and 33 minutes, respectively.

d) Rehabilitation and Replacement

- The key to evaluating the District's collection system is having accurate and current condition assessment of pipe and structures using closed circuit television (CCTV). Both the Risk Analysis and the Sewer Repair Contract utilize the findings from the CCTV inspection program.
- Prior to 2012, the actual CCTV frequency was well over 15 years and the CCTV goal at that time was 200,000 lf/year. Currently the goal is 315,000 lf/year.
- The District has committed itself to increasing CCTV production for over a decade and had goals of achieving an eight-year CCTV frequency. In line with this goal, the District made this commitment in its August 2012 agreement with Northern California River Watch.
- The District has instituted some procedural and functional changes to the CCTV inspection program, resulting in increased production. Most recent effort included the purchase and utilization of a digital scanning CCTV van. As staffing levels allow, both the digital scanning and analog CCTV vans have been used concurrently. Additionally, in FY 2019-20 and FY2020-21, the District issued a contract with a CCTV firm to perform 260,000 lf of inspection.
- As of the end of 2019, 73% of the system is within the 8-year inspection frequency. Based on most recent production levels and contracted inspections, this eight-year frequency will be fully met by the August 2022 agreement deadline.
- The average age of the District collection system is approximately 49 years old, with the oldest age of pipe being over 100 years. Although age is not the single determining factor for rehabilitation or replacement, it is one of the parameters considered when evaluating the overall viability of the system. The two top criteria for assigning risk is pipe material and hydraulic deficiency.
- There are two major components of the District's Capital Improvement Program (CIP); Sewer Rehabilitation and the Sewer Repair/Replacement Programs. The Sewer Rehabilitation Program encompasses larger

rehabilitation projects typically involving rehabilitation of 2 to 3 miles of connecting sewer mains and associated sewer laterals. The Sewer Repair/Rehabilitation Program involves point repairs or replacement of entire pipe segments throughout the service area.

- In the FY2019-20 Budget, the five-year CIP projections show a forecasted budget of \$20.5 million for Sewer Rehabilitation Projects and \$6.8 million for the Sewer Repair/Replacement Project. ***It is recommended that the CIP Project List in Appendix B.9 be expanded to show the Joint Sewer Rehabilitation Projects and that each 5-Year CIP Project have a brief scope description.***
- The District uses a Risk Analysis Model to help develop projects for the Sewer Rehabilitation Program and create the District's 5 and 10 Year CIP. The most current risk assessment analysis was completed in May 2018 by HDR Engineering. This should be discussed in greater detail in this section and also included as an Appendix in the SSMP. ***It is recommended that the HDR Risk Assessment Framework, dated May 9, 2018 be incorporated into the Appendix in the next SSMP re-certification.***
- The overall system condition in terms of risk appears to be very good. The risk profile used by the District varies slightly from that shown in the HDR Analysis in order to highlight the highest risk lines. The risk profile is expressed as system percentages:

i. Lowest Risk	68%
ii. Low Risk	21%
iii. Medium Risk	8%
iv. Highest Risk	3%
- The Sewer Repair/Replacement Program heavily relies on the findings from the District's CCTV inspection program. As serious defects are found in a pipe segment, the pipe condition is evaluated along with its maintenance history to determine repair priorities. The highest priority pipe repairs are addressed first through the multiple year pipe repair/replacement program which is currently budgeted at \$1.8 million annually.
- Although the execution of the Sewer Repair/Replacement Program has been fully successful, the District has experienced some minor delay in the execution of the Sewer Rehabilitation Program. Most recently this delay is the result of impacts of the COVID-19 Pandemic, additionally, changes in design scope and environmental review has been a significant factor.
- The District continues to utilize the support from engineering consultants to assist during both the design and construction phases of the project.
- As previously shown, there are a number of CIP projects in various stages of progress that are in study, design or construction phase.

e) Staff Training and Certification

- Safety and equipment training through a combination of online and live training events and is documented by Target Solutions training services.
 - The District is gradually implementing a new method of training referred to as Competency Based Training (CBT). This method of training is a more rigorous training method that requires the worker to demonstrate competency by verbally answering questions and demonstrating their knowledge of equipment and operational processes during the assessment phase.
 - The District require new maintenance workers to pass Kenneth Kerri O&M of Wastewater Collection Systems (Vol 1 and 2) coursework to provide the basic understanding of collection system maintenance.
 - The District requires CWEA Collection System Maintenance Certifications for each position in the Maintenance Series and encourages the maintenance staff to obtain certification levels above those required.
 - ***It is recommended that Appendix B.10 – CWEA and NASSCO Certifications be updated to reflect current certifications.***
- f) Maintenance and Contingency Equipment
- In addition to keeping an adequate number of newer model maintenance equipment available for use for routine maintenance, contingency equipment such as bypass pumps and generators are in standby and ready for use in emergencies.
 - A Vehicle Replacement Reserve Plan ensures that an adequate reserve funding is available for scheduled replacement of the District fleet. Age, mileage, and condition parameters are considerations in deciding when replacement is appropriate.
 - The District does not currently perform construction work with its own staff, but it is capable of replacing manhole rings and covers and other minor work. The District utilizes a private contractor to make emergency pipeline repairs through the District's Multi-year Pipeline Repair/Replacement Project. An on-call contract with a large construction contractor is ready for immediate response for larger and more complex repairs.

Element V - Design & Construction Standards

a) Design Standards

- The District's Sanitary Sewer System Design Standards (Design Standards), approved August 8, 2007, is the District's current design standard. These Design Standards have been in use for over a decade. Although adequate, updates are required to ensure conformance with current engineering standards and practices. Initiated in 2019, a review of these Design Standards will continue through 2021. The update of Design Standards and Standard Details is a proposed task for FY2020-21 Strategic Plan Action Item B.2.4.

- Contracts with multiple engineering design consultants provide expertise in specific discipline areas that can supplement the Design Standards.

b) Construction Standards

- The District's Standard Specifications for Sanitary Sewerage Project, approved October 10, 2007 is the District's current construction standard. It contains all necessary bidding and front-end documents for construction documents, as well as some general construction standards. These general construction standards refer to Standards Specifications for Public Works Construction, commonly referred to as the "Greenbook".
- The District's construction specifications have evolved over the years and will require updating to reflect new contract requirements. These standards are anticipated to become a FY2021-22 Strategic Plan Action Item.

c) Inspection and Testing

- The District maintains its own construction inspection staff for most construction contracts.
- Consultants provide specific or highly technical inspection services to supplement District staff in their inspection and construction management responsibilities.
- Testing laboratories are typically used for soil, concrete, or coating inspection and testing to ensure conformance to specification standards.

Element VI - Overflow Emergency Response Plan

a) Notification

- The District's Overflow Emergency Response Plan (OERP) was last updated in 2015 and contains the new SSO notification requirements and SSO categories designated by the SWRCB. In July 2020, an updated OERP was completed and is currently being implemented.
- Another OERP update will likely be necessary upon the adoption of the new WDR by SWRCB in 2022.
- Contact information for OES and regulatory agencies are shown in the OERP for proper notification of SSOs and their notification criteria.
- A Water Quality Monitoring Plan for SSOs $\geq 50,000$ gallons and Emergency Pump Station Response Plans have been developed.

b) Response

- Maintenance staff has met the goal of responding within 30 minutes from receipt of a service call during working hours, and 60 minutes from receipt of a service call during after work hours. The average response time for FY2019-20 is approximately 22 minutes and 33 minutes for during and after work hours, respectively.

- The OERP clearly describes the response procedures for SSOs and sewer backup events. All forms needed to respond to SSOs and sewer backups are organized and readily available in each service truck.
- Maintenance staff receives training on the OERP, SSO volume estimation techniques, creek water sampling and testing.
- A new OERP Workbook is currently being finalized and will soon be implemented. Although it contains all of the same information as the one being used, it is more efficiently organized and contains more step by step instruction to provide flawless documentation in the same order as CIWQS reporting. Once fully implemented, the new OERP Workbook should replace the one currently in Appendix C.1. ***It is recommended that Appendix C.1 be updated with the new OERP by the end of 2020.***

c) Reporting

- The OERP reflects the new SSO Categories and updated reporting requirements. CIWQS Reporting procedures are clearly identified.
- The District has maintained proper SSO documentation, but formalized procedures need to be developed to ensure the consistency in the process of documenting SSOs and maintaining SSO file packages.
- ***FY2020-21 Strategic Plan Action Item B.1.1 addresses the SSO documentation process and its review and modifications where necessary to incorporate best documentation practices.***
- There is one Data Submitter and two Legally Responsible Officials. If the Data Submitter is unavailable, an LRO submits the draft report and certifies it.

Element VII - Fats, Oils, and Grease Control Program

a) Food Service Establishment (FSE) Inventory

- To ensure that the District's database has captured all FSE's within the District's boundary, effort is currently being made to analyze the County of Santa Clara Department of Environmental Health records. This same effort will help validate the grease control device (GCD) information currently in the District database.
- The use of a biannual online survey assists in capturing changes to FSE information.

b) FOG Maintenance and Data Collection /Analysis

- The District continues to monitor areas of high grease accumulation in our sewer system through visual observations during maintenance activities or if determined to be a factor in a SSO.
- The areas of heaviest grease accumulation tend to be located in downtown restaurant districts. A special 3-month cleaning frequency is typically required to maintain these lines.

- c) FSE Facility Compliance Program
- The current COVID-19 Pandemic has had a detrimental effect upon the FSE community and has severely hampered the District's ability to perform its normal FOG Compliance Program. Shelter-in-place orders, required safety measures, reduced FSE staffing, partial closures, full closures (temporary and permanent), etc. have all contributed to this disruption.
 - The FOG Compliance Program is priority based and addresses those FSE's that have a history of non-compliance and areas of heavy FOG accumulation. New FSE's are also included in this priority in order to establish a relationship and introduce them to the requirements of the Program.
 - The District routinely discusses best management practices (BMP) of grease control with the FSE's with a focus on the proper maintenance of the grease control device.
 - FSE inspections are performed by focus (priority) area. The downtown restaurants in these priority areas account for approximately 170 FSEs.
- d) Public / FSE Outreach
- Bi-annual FSE surveys have been implemented to help update FSE information and to remind FSE's of their responsibilities through distribution of BMP information. ***It is recommended that the response to the survey be documented to gauge its effectiveness.***
 - Due to the high grease accumulation in sewer lines in isolated residential areas, the District is evaluating the most effective way to disseminate FOG educational material for non-FSE sources.
- e) Legal and Enforcement Authorities
- Additional enforcement methods recently added to the District Ordinance increase the District's ability to achieve FSE compliance.
 - Provisions to the District Ordinance were added to address temporary or permanent abandonment of out-of-service GCDs by non-FSE tenants and or owners.

Element VIII - Capacity Management

- a) Capacity Assessment and Evaluation
- The 2018 Hydraulic Model model covers approximately 25% of the entire collection system, while the previous Model, performed in 2009, covered only 13%.
 - The Hydraulic Model characterizes hydraulic deficiencies by the degree to which the section of the system can carry the Peak Wet Weather Flow (PWWF) under design storm conditions. The design storm conditions are

based on the County of Santa Clara drainage manual using a 10-year, 24-hour design storm.

- Deficiency levels are characterized as Minimal, Moderate, and Significant, which is associated with the degree of surcharge levels at PWWF. The results show that there are approximately 34 hydraulically deficient reaches of various lengths within the collection system amounting to approximately 3.0% of our total system. However, only 1.9% are classified as significant. These deficient reaches are in turn divided into four levels of priority.
- The results of this hydraulic study have been imported into the District's Risk Model for use as one of the failure parameters.
- In 2019 there were 3 SSOs resulting from a hydraulic capacity deficiency. In these cases, an extremely unusually wet period combined with a high intensity storm, resulted in an excessive amount of I & I and caused these SSOs. These sections will be evaluated in the upcoming phases of the I & I Reduction Program.

b) Capacity Assurance Plan

- The results of the Risk Prioritization Model provides valuable information in the development of the 5-year and 10-year CIP. The Risk Model uses a Risk Matrix based on certain Consequence of Failure (CoF) and Likelihood of Failure (LoF) Parameters to calculate a Risk Score for each line segment.
- Hydraulic capacity is a major LoF Parameter that has a significant impact on the Risk Score. Another significant LoF parameter is pipe material type., with ACP (asbestos cement pipe) or vitrified clay pipe (VCP older than 70 years or terracotta), being the most severe.
- Review and continuous improvement of the Hydraulic and Risk Prioritization Models is performed to obtain the most accurate results.
- To ensure that the collection system flawlessly continues to serve the communities in the District, a significant amount of resource is invested in CIP projects and studies.

Element IX – Monitoring, Measurement, and Program Modifications

a) Monitoring and Measurement

- Monitoring and validation of SSMP Elements is performed periodically to assure they are accurate, current, appropriate and meaningful.
- During the course of the fiscal year data is tabulated and reviewed to measure the success of each Element.
- Overall measurement criteria are tabulated at the end of a fiscal year and is summarized under SSMP Effectiveness at the beginning of the SSMP Audit. Improvements to the measurement criteria within each SSMP Element is an on-going process.

b) Program Modifications

- The SSMP Audit Checklist located at the end of the SSMP Audit is used in conjunction with this Element.
 - The relatively simple updates involving administrative updates (organization charts, contact information, etc.) are made soon after completion of the SSMP Audit. Other updates may sometimes be delayed until the next SSMP reauthorization.
- c) Documenting SSMP Changes
- Documentation of District SSMP changes are included in Appendix F.2 – SSMP Development and Revision History. ***It is recommended that a more detailed change log be used to document specific changes to Elements rather than a general history of change.***

Element X – SSMP Program Audits

a) SSMP Audit

- The District has been performing its biennial SSMP audits on a timely basis and presented to the District Board for their review and approval.
- The most current SSMP Audit is available on the District website and is also transmitted to California River Watch.
- District successes and challenges are cited throughout the SSMP Audit. Recommended changes to the SSMP and District Operations are summarized at the end of the SSMP Audit in the Narrative for Recommended Updates and Revisions.
- With each successive SSMP Audit, the District's SSMP has incrementally improved. This improvement is reflected by the District's sustained level of performance.
- Certification of the SSMP Audit and SSMP is a requirement in the WDR. The District's LRO (Director of Engineering and Operations) provides these Certifications.

Element XI – Communication Program

a) Stakeholder and Public Outreach

- The District utilizes a number of methods to communicate to stakeholders and the public about the SSMP, SSMP Audit, FOG Program, etc.
- The primary mode of communication is through the District's website. Secondary mode of communication is through mailings to rate payers for special notifications (rate increase mailings, FSE mailing, Hillside Zone, etc.). Informational pieces have been included to address a wide set of issues including problems with wipes, FOG, property owner responsibilities, and general District information.

- The proposed acceptance of SSMP Audits and adoption of the SSMPs are posted on the Board Agenda and available for review by the public. The most current version of the SSMP Audit and SSMP are available for review on the District website.
- Communication of FOG related information to Food Service Establishments is accomplished through correspondence or in person while performing field inspections.
- The District also promotes outreach through messaging on all of the District maintenance fleet, displaying our website address and broadcasting our 24/7 services for sewer related problems.
- FOG related paraphernalia and wastewater collection informational pamphlets are available at the District service counter.
- The District receives approximately 600 service calls annually. This direct interaction is a perfect opportunity to perform outreach and possibly feedback. ***It is recommended that a package of outreach material and customer survey form be assembled for easy distribution to the public during the service call.***
- Measurement of the outreach efforts is needed to verify the level of success achieved by our efforts. ***It is recommended that we begin tabulating data to document outreach success (website hits, number of flyers distributed, number of outreach packages distributed during service calls, how many customer service responses returned and level of service rating from these responses.***

b) Communications

- Most supervisory and management staff involved in this SSMP Audit and future updates to the SSMP will be capable of communicating information about the SSMP.
- Although the primary spokesperson for the District is the District Manager and Engineer, with training, other supervisory and management staff also are capable of serving as a District spokesperson. ***It is recommended that training be provided to staff to understand how to interact with the public and news reporters under emergency situations.***

SSMP AUDIT CHECKLIST

Each of the eleven SSMP Elements and their associated requirement(s) are represented in the checklist below. Either a **YES** or **NO** is provided for each question. If a **YES** is indicated, then the requirement is considered to be both compliant and current. If a **NO** is indicated, then an update/change is needed and a comment is made under remarks section. Further explanation is provided and a timeline to complete those changes will be described in the “Narrative for Recommended Updates and Revisions” section following this checklist.

		YES	NO	REMARKS
ELEMENT I – MISSION, GOALS AND OBJECTIVES				
A.	Are the District’s Mission, Vision, Values, Goals, and Objectives stated in the SSMP still appropriate and accurate?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
B.	Does the stated Goal in the Strategic Plan concerning Sewer System Management provide a comprehensive goal for the effective and efficient management and operation of the District’s collection system?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
ELEMENT II -- ORGANIZATION				
A.	Is the District’s Organizational Chart current?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Board of Director’s List (Appx A.1) & Organization Chart (Appx A.4) requires updating.
B.	Is the chain of communication for SSO response and reporting current?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Due to changes in personnel, the chain of communication requires updating.
C.	Is the contact information for key District personnel current?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Due to changes in key personnel, the contact information (Appx A.5) requires updating.
ELEMENT III – LEGAL AUTHORITY				
Does the SSMP contain excerpts from the current West Valley Sanitation District’s Ordinance Code documenting the District’s legal authority to:				Recent updates and additions to the District Ordinances have been made and need to be included.
A.	Prevent illicit discharges?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
B.	Require proper design and construction of sewers and connections?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

C.	Ensure access for maintenance, inspection, or repairs for portions of the lateral owned or maintained by the District?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D.	Limit discharges of fats, oil and grease?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E.	Enforce any violation of its sewer ordinances?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
ELEMENT IV – OPERATIONS AND MAINTENANCE				
Mapping				
A.	Does the SSMP reference the current process and procedures for maintaining the District’s wastewater collection system maps?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
B.	Are the District’s wastewater collection system maps complete, current, and sufficiently detailed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Resources and Budget				
C.	Does the District allocate sufficient funds for the effective operation, maintenance and repair of the wastewater collection system and is the current budget structure documented in the SSMP?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Funding for the District’s Operation and Maintenance activities along with CIP funding is addressed and is sufficient. The current FY2020-21 budget should be included.
Preventive Maintenance				
D.	Does the SSMP describe current preventive maintenance activities and the system for prioritizing the cleaning of sewer lines?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	The preventive maintenance activities described is generally current, but changes have been implemented to increase pipe inspection (CCTV), revise sewer main cleaning frequencies, and Lateral Maintenance cleaning.
E.	Based upon information in the Annual SSO Report, are the District’s preventive maintenance activities sufficient and effective in minimizing SSOs and blockages?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Rehabilitation and Replacement				
F.	Is there an ongoing condition assessment program sufficient to develop a capital improvement plan addressing the proper management and protection of infrastructure assets? Are the current components of this program documented in the SSMP?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
G.	Is there an established cleaning methodology used to address regular and high maintenance lines for both main and laterals?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

H	Is there a five year CIP showing a list of projects anticipated in the future? Is there a CIP for years beyond five years? Are these current?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
I	Is there a program to establish priorities for projects in the five year CIP and beyond?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
J	Is there a method for addressing emergency or high priority repairs for individual pipe(s) that are not a part of the CIP?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
K	Is there an established training on SSO protocol that is provided to contractors working on the District's collection system?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Maintenance Equipment				
L	Does the SSMP list the major equipment currently used in the operation and maintenance of the collection system and document the procedures of inventory management?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
M	Are contingency equipment and replacement parts sufficient to respond to emergencies and properly conduct regular maintenance	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Training and Certification				
N.	Is adequate training being provided to staff to maintain a knowledgeable and safe workforce?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
O	Are maintenance personnel properly certified by CWEA to perform their work and is this documented in the SSMP?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
ELEMENT V – DESIGN AND CONSTRUCTION STANDARDS				
A.	Does the SSMP contain current design and construction standards for the installation of new sanitary sewer systems, pump stations and other appurtenances and for the rehabilitation and repair of existing sanitary sewer systems?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
B.	Does the SSMP document current procedures and standards for inspecting and testing the installation of new sewers, pumps, and other appurtenances and the rehabilitation and repair of existing sewer lines?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
ELEMENT VI – OVERFLOW EMERGENCY RESPONSE PLAN				

A.	Is the District's SSO and Backup Response Plan, that establishes procedures for emergency response, notification, and reporting, effective and current?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	A new OERP Workbook (July 2020) has been developed and will be included in the next SSMP update.
B.	Has the District staff been properly trained on the procedures of the Sanitary Sewer Overflow and Backup Response Plan?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
C.	Based on recent experience, does the Sanitary Sewer Overflow and Backup Response Plan provide effective guidance in handling SSOs and safeguarding public health and the environment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
ELEMENT VII – FATS, OILS, AND GREASE (FOG) CONTROL PROGRAM				
A.	Does the Fats, Oils, and Grease (FOG) Control Program include efforts to educate the public on the proper handling and disposal of FOG?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
B.	Does the District's FOG Control Program identify sections of the collection system subject to FOG blockages, establish a cleaning schedule and address source control measures to minimize these blockages?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
C.	Are requirements for grease removal devices, best management practices (BMP), record keeping and reporting established in the District's FOG Control Program?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D.	Does the District have sufficient legal authority to implement and enforce the FOG Control Program?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E.	Is the current FOG program effective in minimizing blockages of sewer lines resulting from discharges of FOG to the system?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
ELEMENT VIII – CAPACITY MANAGEMENT				
A.	Has the District evaluated the hydraulic deficiencies in the system, established sufficient design criteria and recommend both short and long term capacity enhancement and improvement projects?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
B.	Does the District's Capital Improvement Program (CIP) establish a schedule of approximate completion dates for both short and long-term improvements and is the schedule reviewed and updated to reflect current budgetary capabilities and activity accomplishment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

ELEMENT IX – MONITORING, MEASUREMENT, AND PROGRAM MODIFICATIONS				
A.	Are the performance parameters shown for each of the SSMP elements adequate for monitoring the effectiveness of each SSMP element?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
B.	Are the methods for measuring each of the performance parameters sufficient to properly evaluate the success of each SSMP element?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
C.	Does the description of the process for modifying the SSMP continue to be valid?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D.	Is there a record showing the revision history of the SSMP, including the items revised, the date the revision was made, and identifying the person that made the revision?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Although a record of revision history is maintained, it has been determined that a more detailed revision history would be beneficial.
ELEMENT X – SSMP AUDITS				REMARKS
A.	Was this SSMP Audit performed every two years and kept on file per SWRCB 2006-0003-DWQ.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
B.	Will this SSMP Audit be made public through the District's website?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
C.	Has the SSMP Audit in its current form provide for its thorough review and continues to promote continuous improvement?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
ELEMENT XI – COMMUNICATION PROGRAM				
A.	Is the contact person listed for communication of the SSMP current?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
B.	Does the District's website contain the most current SSMP?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
C.	Do the District's stakeholders have the most current SSMP?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D.	Does the SSMP document current outreach efforts?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

NARRATIVE FOR RECOMMENDED UPDATES AND REVISIONS

*For each NO answer shown in the SSMP Audit Checklist or specific items noted in the body of this SSMP Audit, a description of the proposed revision and timeline for completion is provided in this narrative (shown in **boldface**). Narratives may also be provided for those items that may currently be compliant, but deserve some discussion. Reference the SSMP Audit and the District's SSMP regarding the specific element in question.*

Element I – Mission, Goals, and Objectives

- A. The District Board approves Strategic Plan Objectives and Action Items prior to the beginning of each fiscal year. The annual adoption of Objectives and Action Items by the Board shown in Appendix A.3 requires regular updating. ***It is recommended that Appendix A.3 be updated to show the FY2020-21 Strategic Plan Objectives and Action Items by the end of 2020.***

Element II – Organization

- A. The Board of Director's List and District's Organizational Chart (Appendix A.1 and A.4) requires updating. ***It is recommended that Appendix A.4 – Organization Chart and Appendix A.1 – Board of Directors be updated by the end of 2020.***

Element III – Legal Authority

- A. Various changes and additions to the District Ordinance have been made since the last SSMP Audit. ***These updated Ordinances are to be included by the next SSMP update.***
- B. The discussion of private ownership of sewer laterals when connected to easement sewer mains is absent. ***Provide this discussion by the next SSMP update.***

Element IV – Operations and Maintenance

- A. The funding for O&M changes each fiscal year with the new budget. ***It is recommended to include the FY2020-21 Budget by the end of 2020.***
- B. If proven successful, the transition of a portion of the 24-month Geozone main line cleaning to a 36-month zone cleaning should be discussed in the next SSMP Audit and the next SSMP update.
- C. The use of the automated algorithm to set lateral maintenance cleaning frequencies should further described. ***This should be included in the next SSMP update.***

- D. The 5-Year and 10-Year CIP Project List in Appendix B.9 provides a list of projects by name, project size, and estimated cost. To provide a more complete understanding, it should include the District's Joint Projects with San Jose and a brief scope description and status. ***It is recommended that the CIP Project List in Appendix B.9 be expanded to show the Joint Sewer Rehabilitation Projects and a brief scope and status description.***
- E. The most current risk assessment analysis was completed in May 2018 by HDR Engineering. This should be described in greater detail and included as an Appendix in the SSMP. ***It is recommended that the HDR Risk Assessment Framework, dated May 9, 2018 be incorporated into the Appendix in the next SSMP re-certification.***
- F. The CWEA Certification List (Appendix B.10) requires updating due to recent advancements made by staff in Collection System Maintenance Certifications and changes in personnel. ***It is recommended that Appendix B.10 be updated by the end of 2020.***

Element V – Design & Construction Standards

- A. The completion of the District's Sanitary Sewer System Design Standards update as part of the FY2020-21 Strategic Plan Action Item B.2.4 will be discussed in further detail in the next SSMP Audit.
- B. The need to update the District Specifications for Sanitary Sewerage Projects should be the next priority after update of the Design Standards.

Element VI – Overflow Emergency Response Plan

- A. Once fully implemented, the new OERP Workbook should replace the one currently in Appendix C.1. ***It is recommended that Appendix C.1 be updated with the new OERP by the end of 2020.***
- B. The effort to provide an improved process for SSO documentation through FY2020-21 Strategic Plan Action Item B.1.1 will be discussed in further detail in the next SSMP Audit.

Element VII – Fats, Oils, and Grease Control Program

- A. As part of the bi-annual FSE survey public outreach effort, it is important to determine its effectiveness. ***It is recommended that the response to the survey be documented to gage its effectiveness.***

Element VIII – Capacity Management

- A. The February 14 & 15, 2019 SSOs caused by excessive I & I was due to extended wet weather (causing high ground water) and an unusually strong storm event. The District has/is addressing this through more intensive I & I study and investigation, enlarging the SOP for pre-winter placement of manhole weir boards, and upsizing of a flow restrictive pipe segment from 6-inch to 10-inches.

- B. Although most CIP Projects focus on the replacement of pipe materials that are highly susceptible to failure (ACP), some of the joint projects specifically address hydraulically deficient pipe identified in the Hydraulic Model.

Element IX – Monitoring, Measurement, and Program Modifications

- A. The documentation of District SSMP 2020 changes (Appendix F.2 - SSMP Development and Revision History) currently employed may be adequate to document the revision history, but not in sufficient detail to show specific changes made to it. ***It is recommended that Appendix F.2 be updated and or additional Change Log be incorporated starting with the 2023 SSMP***

Element X – SSMP Audits

- A. The next scheduled SSMP Audit is expected in August 2022, with the next SSMP re-certification expected in August 2023. Depending on the adoption of anticipated updates to the WDR, this may require an earlier SSMP re-certification date which may occur prior to the 2022 SSMP Audit.

Element XI – Communication Program

- A. To increase the public outreach effort, customer surveys can be handed out following service calls. This service call packet could include District information, customer responsibility and informational brochures, and a customer survey.
- B. Measurement of the outreach efforts is needed to verify the level of success achieved by our efforts. ***It is recommended that we begin documenting outreach success (website hits, number of flyers distributed, number of outreach packages distributed during service calls, how many customer service responses returned and level of service rating from these responses.***
- C. Although the primary spokesperson for the District is the District Manager and Engineer, with training, other supervisory and management staff also are capable of serving as a District spokesperson. ***It is recommended that training be provided to staff to understand how to interact with the public and news reporters under emergency situations.***