

Sunnyslope County Water District

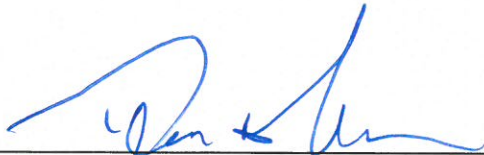
Sewer System Management Plan (SSMP)

2020

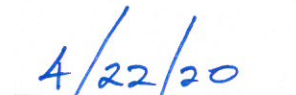


Legally Responsible Official Certification

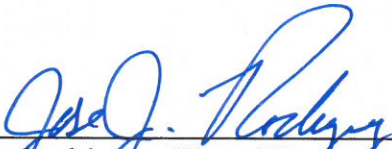
I certify under penalty of law that this Sewer System Management Plan and all referenced attachments herein incorporated were prepared under Sunnyslope County Water District direction or supervision. Qualified personnel have properly gathered and evaluated the all information submitted. Based on inquiries of the persons who manage the sewer system and are directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. This document was presented to the Sunnyslope County Water District Board of Directors and approved on April 21st, 2020.



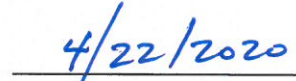
Drew A. Lander, General Manager
Legally Responsible Official



Date



Jose Rodriguez, Water/Wastewater Superintendent
Legally Responsible Official



Date

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Definitions and Abbreviations

BMP – Best Management Practices

CCTV – Closed Circuit Television

CIP – Capital Improvement Plan

CMMS – Computerized Maintenance Management System

FOG – Fats, Oils, and Greases

GIS – Geographic Information System

I&I – Infiltration and Inflow

NPDES – National Pollutant Discharge Elimination System

OERP – Overflow Emergency Response Plan

OES – Office of Emergency Services

PVC – Polyvinyl Chloride Plastic

PPE – Personal Protection Equipment

RWQCB – Regional Water Quality Control Board

SCADA – Supervisory Control and Data Acquisition

SOP – Standard Operating Procedures

SSCWD – Sunnyslope County Water District

SSMP – Sanitary Sewer Management Plan

SSO – Sanitary Sewer Overflow

SWRCB – California State Water Resources Control Board

VCP – Vitrified Clay Pipe

WDR – Waste Discharge Requirement

WWTP – Wastewater Treatment Plant

Introduction

The California State Water Resources control Board (SWRCB) approved order No. 2006-003, Statewide General Waste Discharge Requirements (WDR) for Wastewater Collection Agencies, in May 2006. This regulation requires that Sunnyslope County Water District (SSCWD) along with all other wastewater agencies develop, maintain, and implement a Sewer System Management Plan (SSMP) and submit specified monitoring and reporting of these measures to the SWRCB. The SSCWD Board of Directors approved the first SSMP on September 13, 2007. There have been regular reviews and updates of the plan to ensure that it remains up to date so as to incorporate and reflect any changes to the 11 key elements addressed in the SSMP.

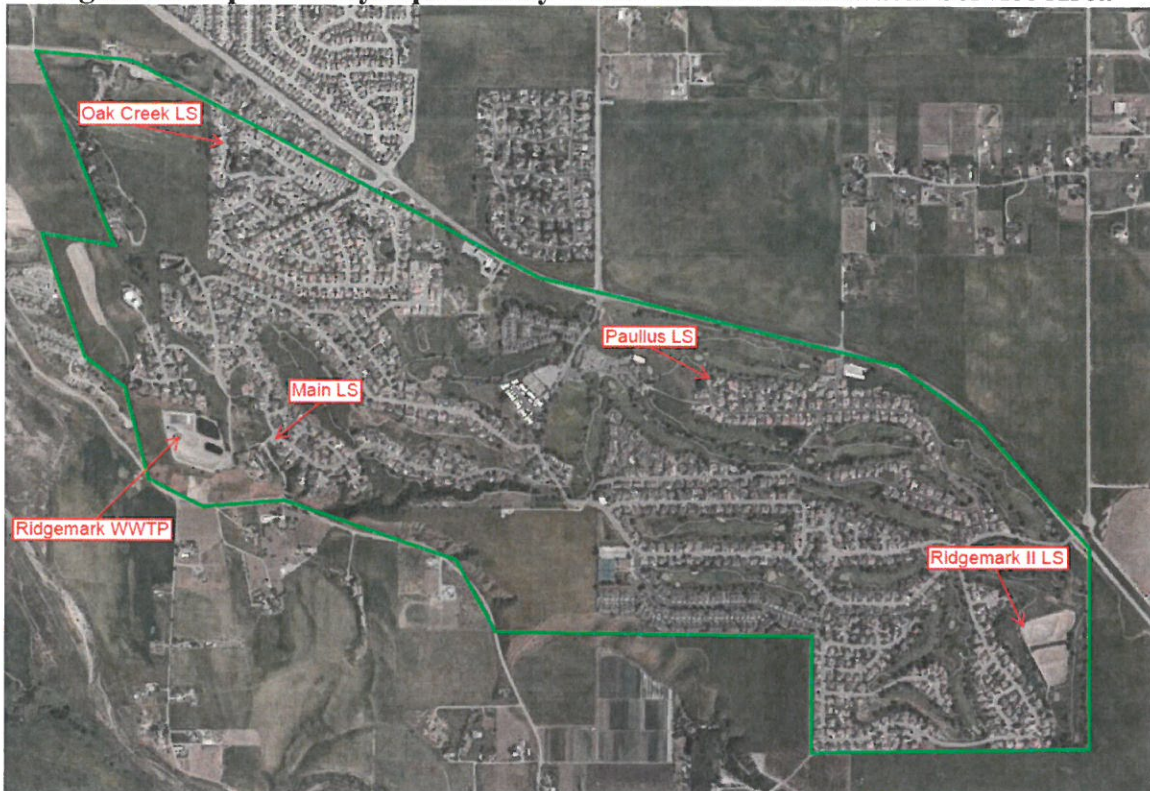
The District has successfully operated its sewer collection system and continually strives to improve the reliability, affordability, and safety of sewer service for its customers. This document provides a summary of the core policies, processes, and practices which have enabled SSCWD accomplish this. For more detailed information regarding specific items, bracketed and italicized references to other specific District documents are provided at the end of various sections which further address those subjects.

[State Water Resources Control Board – Waste Discharge Requirements]

System Overview & Description

Sunnyslope County Water District was incorporated on December 14th, 1954 to provide drinking water and fire protection water services to then unincorporated portions of San Benito County east of Hollister. With the construction of the Ridgemark country club in the 1970's, SSCWD agreed to provide sanitary sewer service for the development and some neighboring properties as shown in the map below.

Figure 1. Map of Sunnyslope County Water District Wastewater Service Area



This sewer service area has developed such that SSCWD currently provides sewer service to approximately 4,000 people through about 1,240 residential homes in a 1.4 square mile area. This entire area is in the unincorporated portion of San Benito County, just southeast of Hollister. SSCWD also provides drinking water and fire protection water to all its wastewater customers along with about 5,000 other homes which receive sewer service from the City of Hollister.

The Sunnyslope sewer system is composed of approximately 20 miles of sewer mains, 315 manholes, 4 sewer lift stations, and the sequential batch reactor Ridgemark Wastewater Treatment Plant (WWTP). Approximately 10% of the gravity sewer mains are made of 6" or 8" vitrified clay pipe (VCP) installed in the early to mid-1970s. The remaining 90% is predominantly 8" polyvinyl chloride (PVC) plastic pipe from the 1980s through 1990s. Average wastewater flow to the Ridgemark WWTP is about 150,000

gallons per day (GPD) with maximum daily flows of up to 195,000 GPD. However this is well within the Ridgemark WWTP a treatment capacity of 350,000 GPD.

Due to the relatively young age of the sewer system and the high quality materials it was constructed from along with SSCWD's proactive maintenance and cleaning practices, there have been very few Sanitary Sewer Overflows (SSO), sewer main breaks, or other issues. Additionally infiltration and inflow (I&I) during storm events does not cause a noticeable increase in flow, attesting to the good condition of the sewer collection system.

All four SSCWD sewer lift stations are equipped with the District's Supervisory Control and Data Acquisition (SCADA) system allowing for operators to remotely monitor and control the status of these stations. Alarms programmed into the SCADA are active 24/7 and will alert operators of issues at key set points. Each station also has primary and backup submersible pumps in the wet wells to ensure that they can continue operation even if one pump is damaged. Two lift stations have permanent onsite backup power generators. The other two lift stations have adequate wet well storage to give staff sufficient time to respond and connect the District's portable generators to the lift stations.

Section I. Goals

The primary goal of the SSMP is primarily to protect the health and safety of the public by preventing SSO occurrences and properly mitigating any SSO to a safe level. To realize this, SSCWD intends to meet the following goals:

A. Regulations

In order to comply with all state and federal regulations and requirements including NPDES and WDR, SSCWD will continue to maintain zero occurrences of SSOs over the next five year period.

B. Best Management Practices (BMP)

Always employ BMPs in the planning, management, operation, and maintenance activities for the sewer collection system as shown through detailed SOPs, well documented decision-making, and accurate record keeping in the CMMS.

C. Employee Training

Provide effective and continuing employee training to ensure that all operations staff are competent and knowledgeable in the collection system maintenance and operation. This could include employee cross-training, obtaining of AWWA and CWEA certifications, attendance at industry conferences and events, or other opportunities.

D. CCTV Investigation

Initiate a Closed Circuit Television (CCTV) investigation program by 2021 which will have videoed the full collections system by 2024 to better evaluate the internal condition of the sewer main. The information from this investigation will be used to inform future CIPs.

E. CIP Projects

Create a detailed Capital Improvement Plan (CIP) by 2022 to identify and address collection system deficiencies or opportunities to better maintain and improve system performance. SSCWD shall coordinate with potential developments to implement various CIP projects jointly to minimize cost and disruption to the sewer collection system.

F. Capacity

Continue to maintain sufficient capacity in the collection system to convey maximum anticipated peak wastewater flows effectively to the Ridgemark WWTP and assure that additional development within the sewer collection system does not exceed that capacity. Also SSCWD intends to continue monitoring I&I to insure that it does not exceed 20% of normal daily flows.

G. Safety

Maintain a record of zero work related injuries for the next 5 years through regular safety training, enforcement of safety protocols, identifying potential hazards, and addressing safety concerns in a timely manner to minimize risk of injury.

Section II. Organization

Sunnyslope County Water District has been organized to provide clear management direction and to minimize confusion or miscommunication, especially during emergencies. Management structure includes a chain of authority to effectively delegate responsibilities and assures a chain of accountability for work performance.

A. Board of Directors

SSCWD is governed by a five member Board of Directors directly elected by the constituents living within the District boundary in general elections. The Board provides general policy direction to the District and serves as the final governing authority.

B. General Manager

The General Manager (GM) has ultimate responsibility for all SSCWD operations and activities. The GM answers to the Board of Directors for administrative, managerial, and operational compliance and reporting in regards to external and internal regulations and policies. When appropriately licensed the GM also serves as the District Engineer.

C. Associate Engineer

The Associate Engineer is responsible for the planning, design, and inspection of new and existing facilities within the sewer collection system as well as managing the CIP to improve the system functionality and prevent SSOs or other emergencies. The Associate Engineer may act as the District Engineer when appropriately licensed and the responsibility has been delegated by the GM.

D. Water/Wastewater Superintendent

The Water/Wastewater Superintendent is responsible for managing all field staff for all daily and emergency operation of the sewer collection system including recordkeeping and reporting as regulations require.

E. Operations/Maintenance Crew Chief

The Crew Chief is responsible for the daily management of the computerized maintenance management system (CMMS), assignment of work orders, and the employee safety and training programs.

F. Water/Wastewater Utility Maintenance

The Water/Wastewater Utility Maintenance staff are responsible for the daily maintenance and operational activities as assigned. They are generally the first responders to any sewer system issues and conduct the onsite work to resolve such issues. They also provide on-call service for 24/7 emergency response and monitor the sewer system via the District's SCADA.

[Organization Chart]

[Emergency Response Plan District Personnel]

[Job Descriptions of Pertinent Positions]

G. Communication Chain and Duties

The following list identifies the proper order of who is to be notified of an SSO.

1. **SSCWD District Office**.....(831) 637-4670
 - Receives initial notification from the public and begins internal notifications
2. **On-Call Maintenance Staff**.....(831) 801-5817
 - Receives initial notification outside business hours
 - Immediately responds to the SSO site to evaluate situation
 - Communicates to supervisor the situation & assistance or equipment needed
 - Starts addressing the SSO to resolve it and mitigate as directed
3. **General Manager**.....(831) 917-6696
 - Responsible for properly reporting to other agencies the occurrence of an SSO
 - Requests assistance from other agencies via mutual aid agreements if needed
 - Spokesperson to local news media and decides on extent of public notification
 - Ensures that proper written reporting is submitted to RWQCB on time
4. **Water/Wastewater Superintendent**.....(831) 524-0382
 - Responsible for calling upon and coordinating emergency response crew
 - Determines method to resolve SSO and mitigate all effects of it
 - Gathers needed information and field reports for written reporting to RWQCB
5. **Crew Chief**.....(408) 396-2320
 - Manages the on-site response activities to an SSO event
 - Determines what safety precautions & measures are necessary for staff
 - Considers public safety such as traffic control & minimizing public exposure
6. **San Benito County Communications**.....(831) 636-1400
 - Disseminates information to key County Departments like Sherriff and OES
 - Provides aid in notifying public and mass emergency communication
7. **San Benito County Health Department**.....(831) 637-5367
 - Advises on methods to minimize public exposure
 - Inspects all mitigation measures to ensure everything is sanitary
8. **California Fish & Game**.....(408) 649-2870
 - Must be contacted immediately if spill reaches a State Water Body
 - Evaluates the environmental damage and advises on mitigation
 - Inspects mitigation measures to ensure protection of environment
9. **Office of Emergency Services**.....(800) 852-7550
 - Must be notified within 2 hours if spill reaches surface water or drainage
 - Determines extent of damage to water body and containment options
 - Institutes temporary public safety measures such as closing access to water
10. **Regional Water Quality Control Board**.....(805) 549-3147
 - Must be notified within 24 hours of SSO
 - Regulatory authority over District
 - Advises on response strategy and implementation
 - Receives, reviews, and files the final written report
 - Determines whether fines or other enforcement measures are issued
11. **Board President**.....(831) 261-4451
 - Evaluates response actions taken and performance by General Manager
 - Considers expenditures and may call Special Board Meetings to address them

Section III. Legal Authority

District Code Title 4, provides SSCWD the legal authority to enforce the following rights and requirements to ensure public health and safety concerning the sewer collection system.

A. Prevent Illicit Discharges

Any discharge into the SSCWD sewer collection system that does not comply with all requirements of the District Code Title 4 is considered an illicit discharge and is subject to all legal enforcement measures as described in Code 4.40.

B. Public and Private Sewage Disposal

District Code 4.10 dictates that any property requiring sewer disposal within the District connect to the public sewer system unless specific exemptions detailed in Code 4.15 apply to permit a private sewage disposal system. This is intended to prevent unsanitary disposal of sewage which could be harmful to human and environmental health.

C. Proper Design and Construction

District Code 4.20 requires that all sewer facilities and connections be properly designed, constructed, tested, and inspected according to District standards. Additionally it ensures SSCWD has full access to all facilities for maintenance, repair, and replacement.

D. Limit Types of Discharges

District Code 4.25 prohibits various types of discharge to the sewer system including storm water drainage, garbage, debris, fat oil and grease (FOG), hazardous chemicals, new self-regenerating water softener brine, and other illicit discharges. This is to prevent blockages within the sewer collection system and disruption to the sewer treatment process at the Ridgemark WWTP.

E. Enforcement

District Code 4.40 provides the means and methods through which SSCWD may enforce these regulations. Avenues available for such enforcement include inspection, notice of violation, sewer disconnection, water discontinuance, fines, and assessment of civil and criminal proceedings.

[Sunnyslope County Water District Code]

Section IV. SSSMP Implementation and Maintenance Program

Sunnyslope County Water District staff engage in daily operation and maintenance of the sewer collection system in order to ensure the good performance and condition of the facilities. By incorporating these maintenance strategies into the regular operational procedures, staff effectively minimize the likelihood of SSOs and other emergencies by resolving issues before they cause larger problems.

A. Standard Operating Procedures (SOPs)

Staff shall develop and follow comprehensive and clear SOPs to describe all details of each operational procedure. This guarantees consistent methods are used between various maintenance personnel and is especially key when training new staff. Consistency is vital so that all equipment and facilities are evaluated according to the same standard and receive the same level of care.

B. Sewer System Maps

The Associate Engineer maintains accurate and updated mapping of the sewer collection system including all gravity and force main sewer lines, manholes, lift stations, and other facilities. This map data is stored in the geographic information system (GIS) along with the age, material, elevation, slope, and other pertinent information for each asset. Annual updates to these maps shall be distributed to replace any outdated sheets and ensure that all maps are current.

[Sewer System Maps]

C. Record & Evaluate Information

The District records and evaluates relevant information to identify trends and evaluate the collection system performance. This information is then used to give insight on potential issues and the measures taken to prevent them. Implementation of the CMMS program will significantly aid in the collection and filing of this data so that it is easily accessible and utilized.

D. Preventative Maintenance

Staff are proactive in conducting routine preventative maintenance of the collection system facilities and equipment to ensure their reliability and consistent performance. This includes daily monitoring of lift stations, regular clearing lift stations of debris, and scheduled sewer pipe cleaning and flushing. Specific cleaning is done in target areas of historic concern and issues. The Crew Chief assigns the various maintenance activities from an Excel-based CMMS program which schedules and creates work orders. Once these work orders are completed, the Crew Chief updates the program and assesses if further maintenance work is required. SSCWD intends to transition from the Excel-based CMMS to using the NexGen Asset Management program in the coming years. This is a much more robust CMMS system which will more easily analyze maintenance activities. Such analysis will enable SSCWD it become even more proactive in preventative maintenance by studying various trends, costs, and lifecycles of the system assets.

E. Capital Improvement Plan

The District is developing a CIP for the sewer collection system which identifies the structural deficiencies within the system and proposes long term solutions to resolve those problems. Often, these solutions involve the rehabilitation or replacement of existing facilities at risk of failure. However it may also include new projects which may resolve longstanding maintenance matters that cause recurring problems. The CIP is informed by historical information and condition assessments of the facilities.

[Sewer System CIP]

F. Training

The District is committed to providing regular training and continuing education to all of its staff. This may include on-the-job cross-training between various employees, group training sessions, or more formalized training classes. Staff are encouraged to pursue specialized training and SSCWD has adopted personnel policies to accommodate and reimburse many training and certificate opportunities. Certain compensation step advancements are conditioned on obtaining specific certificates or licenses to further motivate employees. To demonstrate this emphasis on employee training, SSCWD budgets appropriately for professional development.

G. Equipment Inventory

SSCWD maintains a robust inventory of parts and equipment necessary for emergencies and repairs. This includes identification of critical specialty parts which must always have a spare replacement in the District's possession for immediate repair. Such inventory provides assurance that the sewer collection system remains operational even in the event of unexpected equipment failure. Staff routinely evaluate and update the inventory to ensure the system's resiliency.

Section V. Design and Performance Provisions

Sunnyslope County Water District requires all new, rehabilitated, and replacement sewer facilities to conform to the District's adopted design details and specifications. These design requirements provide assurance that the collections system is properly constructed and is consistent in the application and installation of facilities. District design details are regularly reviewed and updated.

A. Sewer Standard Details and Specifications

SSCWD keeps sewer standard details and specifications which must be adhered to in the design and construction of all additions or alterations to the sewer collection system. These standards are regularly reviewed to ensure that they remain updated and utilize reliable and state of the art technology. Maintenance staff are also encouraged to provide feedback and recommendations for improvements upon the standard designs.

[Sewer Standard Construction Details and Specifications]

B. Development Plan Review, Approval, Inspection, & Acceptance

All proposals for new developments that are to obtain sewer service from SSCWD must submit Improvement Plans for the District's review and comments. In reviewing these plans, SSCWD staff consider conformance to District standards, long term system maintenance, capacity, future growth, access, and several other factors. Once all District comments have been satisfactorily addressed, the General Manager signs approval of the Improvement Plans. A standard agreement for facilities and service between the developer and the District with Board approval. During construction, SSCWD staff inspect and test the installation of the sewer system to ensure that the standards are properly followed. Upon completion of the sewer system construction, the District accepts ownership of it from the developer and assumes responsibility at that point for all operation and maintenance activities for that addition to the sewer system.

C. Sewer Lateral Repair Permits

Sewer laterals extending from the sewer main in the street to the private home are owned and maintained by the property owner, and they are responsible for any repairs or replacements needed. However, SSCWD requires that a permit be obtained from the District for any repairs or replacements of the lateral prior to any work. District staff shall inspect the sewer lateral and its repairs prior to burial to insure proper installation and workmanship. SSCWD will work closely with the San Benito County Building Department to coordinate the sewer lateral permits alongside any other county permits the homeowner is required to obtain.

Section VI. Overflow Emergency Response Plan (OERP)

The OERP is intended to protect public and environmental health and safety in the event of a sanitary sewer overflow (SSO) and to mitigate any danger posed by a SSO as quickly and safely as possible.

A. Initial Notification

SSCWD personnel are generally first notified of a SSO by phone. During business hours (8am-5pm Mon-Fri) office staff answering the phone will take down all pertinent information from the caller including the address and location, time, SSO severity, and other key information. They will immediately dispatch maintenance staff to respond. Outside of business hours, the public can indicate there is an emergency (SSO) happening through the District's answering machine, which then transfers them to the 24/7 on-call maintenance staff cell phone. The on-call employee will take the relevant information and immediately respond to the situation. All the sewer lift stations also have high level alarms which through SCADA will automatically call out to the maintenance staff cell phone when triggered. This provides some advanced notice before a lift station overflows.

B. Primary Response

A copy of the OERP is in the Emergency Response Plan and Operations & Maintenance Procedures Binders which are located in each service vehicle and various District facilities. The OERP lays out the procedures for notification and response to a SSO though step by step instructions. The 24/7 on-site response time is always to be one hour or less from the time of the first notification call. All anticipated equipment necessary to address the SSO is to be retrieved so SSO containment, mitigation, and clean-up can start immediately. The OERP also indicates the regulatory agencies that must be contacted and timelines for that contact. Once on site, staff follow the OERP guidelines for effectively and safely containing the spill, resolving the blockage or other issue causing the SSO, and mitigating the site. Maintenance staff annually review the OERP so that they are prepared to effectively respond and follow its guidelines.

[Overflow Emergency Response Plan]

C. Written Reporting

The on-site staff responsible for the SSO containment, cleanup, and mitigation must prepare a written field report using the Field Spill Report Form within 24 hours of the spill. This report should include all pertinent information including the time, location, estimated volume of the spill, names of responders, measures taken to contain and resolve the spill, and mitigation measures enacted. Additional reporting shall be conducted and submitted to the proper regulatory agencies as required.

[Field Spill Report Form]

D. Investigation

All SSO incidents shall be thoroughly investigated to determine the cause for the spill. Corrective action based upon the results of this investigation shall be taken to prevent

future spills. Such actions may include increased sewer cleaning in the location, FOG enforcement action, CIP projects to rehabilitate sewer mains, or other actions.

E. Evaluate Overall Response

After all aspects of a SSO have been completed from initial response through the final investigation and reporting, staff conduct thorough evaluation of the overall response and all actions taken. Every step and decision of the event is critiqued to determine what was or was not effective. The goal is to learn from the real-world experiences and situations to improve future responses to similar emergencies by determining what strategies were or were not helpful and effective. Using this information, appropriate changes or revisions to the OERP shall be proposed and implemented to improve the response.

General categories for the critique include:

1. Initial notification and communication
2. Response time and preparedness
3. Initial determination of SSO scope and damage potential
4. Coordination and dispatching of emergency crew
5. Determination and gathering of parts & equipment
6. Containment and bypassing of SSO wastewater
7. Safety of public and employees (traffic, PPE, lights, unsanitary exposure, etc.)
8. Clearing of the plug or issue to restore normal flow
9. Site cleanup and restoration/mitigation
10. Notification of other agencies and following of Chain of Communication
11. Investigation of SSO cause and actions taken to address the determined cause
12. Writing and submitting of the required reports

Section VII. Fats, Oils, and Greases (FOG) Control Program

Fats, oils, and greases from cooking and food preparation that enter the sewer system can congeal and fall out of solution. As FOG is not water soluble, they can continue to build up on the inside of the sewer pipes and eventually cause blockages that contribute to SSOs. In an attempt to eliminate this issue from its sewer collection system, SSCWD has implemented the FOG Control Plan here summarized.

A. FOG Elimination at the Source

The most effective means of combatting FOG is preventing it from ever entering the sewer collection system. To accomplish this, the FOG Control Program includes the following key elements.

1. Identification of FOG Sources
2. Legal Enforcement Authority
3. FOG Removal Device Requirements/Specifications
4. Inspection & Monitoring
5. Record Keeping of Best Management Practices (BMPs)
6. Public Education & Outreach

[FOG Control Program]

B. FOG Hotspot Cleaning & Maintenance

While the main contribution of FOG to SSCWD's sewer system is from food service establishments, the accumulation of FOG from individual residences can also contribute to SSOs and must be addressed. Historical maintenance data has been used to identify various hotspot areas that need to be addressed more regularly. Below is the maintenance schedule for these areas.

Weekly Flushing

- 1) Joes Lane south to Donald Drive
- 2) Club House to Donna Lane
- 3) Cheri Court to Ridgemark Estates Wastewater Treatment Ponds II

Semi-monthly Flushing

- 1) Helen Court (every second week)

Monthly Hydro Cleaning

- 1) Club House to Donna Lane

Semi-annual Hydro Cleaning

- 1) Joes Lane south to Donald Drive
- 2) Helen Court
- 3) Club House to Donna Lane
- 4) Paullus Drive to Ridgemark Estates Wastewater Treatment Ponds II

Section VIII. System Evaluation and Capacity Assurance Plan

Sufficient sewer collection system capacity is key to preventing SSOs from occurring due to peak instantaneous flow conditions.

A. Data Collection

In 2012 SSCWD hired Wallace Group to compile GPS data on all the collection system facilities and compile the data into a GIS format. The data collected included the coordinate location, elevation, depth, and invert of all manholes along with the gravity sewer pipe material, size, and slope. All this information was made easily accessible for analysis of the sewer system capacity. New developments are required to provide AutoCAD files to the District to update GIS format.

B. Maximum Capacity Analysis

In 2020 SSCWD staff created an Excel spreadsheet with the information obtained from the Wallace Group study to calculate the design free flow maximum capacity for each section of sewer pipe in the collections system. The design capacity is determined as 75% full pipe flow using the Manning equation for open-channel flow. By establishing the design capacity as 75% full pipe flow, factor of safety is incorporated as a buffer for I&I and other factors such as FOG accumulation, root intrusion, and for preventing potential system damage caused by syphoning. This analysis has revealed areas within the existing sewer collection system of inadequate design capacity, although still within the full pipe flow capacity. These areas receive prioritized attention for cleaning and maintenance as well as consideration for upsizing through CIP or new development projects.

[Sewer Capacity Analysis]

C. New Developments

Whenever a new development is proposed to receive sewer service from SSCWD, an analysis is conducted to determine the downstream effects of the additional sewer flow. If that additional flow from the new development causes a section of gravity sewer main to be over design capacity for peak hour flow, that development must upsize that section prior to receiving sewer service.

D. Capital Improvement Plan

In areas where the flows main are over the gravity sewer design capacity at peak hour flow, SSCWD shall consider upsizing of those pipes as part of the CIP. These lines shall be evaluated to consider risk of failure, cost of replacement or upsizing, constructability, and other factors to prioritize the projects. SSCWD will also look for opportunities to incorporate such pipe upsizing projects into proposed development projects.

E. Flow Monitoring

SSCWD staff shall perform routine evaluation of sewer system flow conditions by analyzing pumping trends at the four lift stations. In this way, comparisons can be made between estimated peak hour flows and real observed flow rates experienced in the sewer mains. This information shall then be used to revise the sewer capacity evaluation.

Section IX. Monitoring, Measurement, and Program Modifications

The success of SSCWD's SSMP is continually monitored and evaluated through several methods and measurements. These serve to inform staff of the effectiveness of the various implementation strategies and provide valuable feedback for improvement.

A. Information Collection

SSCWD staff collect and record key data which is maintained in the Excel CMMS for easy access and analysis. This data includes regular maintenance activities like cleaning lines, unclogging lift station pumps, servicing motors, chemical dosages, power usage, lift station levels, and other relevant routine information. It also includes all non-routine data such as SSO events, system repairs, emergency call-outs, mitigation measures taken, overtime hours, and any other key data. SSCWD intends to transition from the Excel CMMS to the NexGen Asset Management CMMS program. NexGen is a much more robust CMMS system that will enhance the District's ability to better analyze trends, costs, equipment lifecycles, and other key aspects. Moreover, it can enable predictive planning of equipment repair and replacement for budgetary purposes.

B. Data Analysis

Reports summarizing all the collections system data are regularly created for the Water/Wastewater Superintendent, Associate Engineer, and General Manager to review. Noteworthy information is reported to the Board of Directors at monthly general board meetings. Staff use these reports to inform decisions regarding the effectiveness of current preventative maintenance and corrective measures taken as well as opportunities to improve upon them.

C. Adapt and Modify Practices

After evaluation of the data collected and analyzed, SSCWD staff consider whether any changes or modifications to the SSMP are necessary or useful to further the goal of eliminating SSO occurrences and improving the overall sewer collection system performance. Maintenance staff are always encouraged to suggest ideas for new and better practices and these ideas are seriously considered. Such new concepts or methods can be tested in pilot projects or trial periods and closely monitored to determine whether they should be implemented system wide and incorporated into the SSMP.

Section X. Sanitary Sewer Management Plan Audits

This SSMP is meant to be a living document which is regularly reviewed and updated as circumstances and situations around it change. As such, it is regularly reviewed and audited.

A. Annual Review

The SSMP undergoes yearly review by the General Manager, Water/Wastewater Superintendent, Associate Engineer, Crew Chief, and all Maintenance staff during the Operations and Emergency Response Training. This training generally takes place in January and is required for all relevant management and field staff.

B. Biennial Audit

A full internal audit of the SSMP is conducted by management staff at least once every two years evaluating the effectiveness of SSMP implementation measures. This audit shall focus on the previous two years, but also consider the long-term progress in achieving the SSMP goals.

C. Five Year Update and Approval

At least once every five years, a full update of the SSMP shall be conducted to incorporate all changes and modifications. This update shall then be taken before the Board of Directors for their approval.

Section XI. Communication Program

It is critical to the success of this SSMP that the information contained within it be clearly and effectively communicated to SSCWD employees, sewer customers, and the public.

A. Informing Employees

All management and field staff are required to review the SSMP during the annual Operations and Emergency Response Training. This training is also to be provided to new employees within 2 weeks of their start date. Through this review, SSCWD ensures that field staff understand the requirements, procedures, and practices of the SSMP so that they can be successfully implemented in the daily operation of the collection system. Additionally, the SSMP shall be periodically reviewed with office staff so that they too understand the SSMP goals and purpose. This is key as they are often the first contact with customers and must be prepared to provide them clear and accurate information.

B. Public Outreach

SSCWD is dedicated to providing its sewer customer and the general public with clear, accurate, and easily accessible information regarding the SSMP and the sewer collection system in general. Several public outreach strategies outlined below have been implemented to disseminate this information and to advise customers on how they can participate in safeguarding the sewer collection system.

1. Board Meetings

SSCWD Board Meetings are fully open to the public and agendas of each meeting are posted on the District's website. At these meetings, regular reports are given on the status and operations of the sewer collection system.

2. Website Links

The approved SSMP is posted through a link on the SSCWD website (sscwd.org) and can easily be located and read through. The website also houses board meeting minutes and other general information.

3. Bill Inserts

Monthly bills are delivered to all SSCWD customers which often include bill insert fliers informing customers of District news and programs.

4. Direct Customer Communication

The most effective means for informing customers of the elements of the SSMP is through direct face to face or phone conversation. Concerned customers often call the SSCWD office and the office staff can take advantage of this opportunity to answer their questions and give them accurate information. They can also make certain that the customer truly understands and appreciates the importance of controlling what they dispose of into the sewer system. Equally effective is the face to face interaction that customers may have with field staff as they conduct routine and emergency maintenance. Employees can take advantage of the customer's curiosity to educate them about the sewer system and ways the customer can help prevent SSOs.

SSMP Update Log

Original Approval September 13th, 2007

Audit Review & Update September 10th, 2009

Audit Review & Update March 2nd, 2012

Current Audit Review & Update April 21st, 2020

Sunnyslope County Water District Board Approved this Sewer System Management Plan at the Regular Board Meeting on April 21st, 2020.