

# 2022 Sewer System Management Plan AUDIT REPORT



*Prepared by:*  
**City of Pomona**  
**Water Resources Department**

**Period Covered: Calendar Years 2020 and 2021**  
**WDID # 4SSO10418**

**WRD 2020 Audit Team**

<b>Name</b>	<b>Position</b>
Julie Carver	Environmental Compliance Supervisor
Romell Eutsey	Wastewater System Supervisor
Nichole Horton	Principal Water Engineer
Jorge Anaya	Senior Water Resources Engineer

**Certified by: Legal Responsible Official (LRO)**

"I certify under penalty of perjury under the laws of the State of California that the electronically submitted information was prepared under my direction or supervision. Based on my inquiry of the person(s) directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is true, accurate, and complete, and complies with the Statewide Sanitary Sewer Systems General Order. I am aware that there are significant penalties for submitting false information."



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Chris Diggs, Water Resources Director

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## Abbreviations/Acronyms

BMP – Best Management Practices  
Cal OES – California Office of Emergency Services  
CCTV – Closed-Circuit Television  
CDPH – California Department of Public Health  
CFR – Code of Federal Regulations  
CIP – Capital Improvements Plan  
CIWQS – California Integrated Water Quality System Project  
CMMS – Computerized Maintenance Management System  
CSM – Collection System Maintenance  
CWA – Clean Water Act  
CWEA – California Water Environment Association  
DS – CIWQS Data Submitter  
DWG – from Drawing  
FOG – Fats, Oils and Grease  
FSE – Food Service Establishment  
GIS – Geographic Information System  
GPS – Global Positioning System  
HVAC – Heating, Ventilation, and Air Conditioning  
I/I – Inflow and Infiltration  
KPI – Key Performance Indicators  
LACP – Lateral Assessment Certification Program  
LACSD - Los Angeles County Sanitation District  
LRO – Legally Responsible Official  
MACP – Manhole Assessment Certification Program  
MMPM – Monitoring, Measurement, and Program Modifications  
MRP – Monitoring and Reporting Program for WDR  
MS4 – Municipal Separate Storm Sewer System  
NASSCO – National Associations of Sewer Service Companies  
NPDES – National Pollutant Discharge Elimination System  
O&M – Operations and Maintenance  
OES – Office of Emergency Services  
OERP – Overflow Emergency Response Plan  
PACP – Pipeline Assessment Certification Program  
PDF – Portable Document Format  
PM – Preventive Maintenance  
R&R – Repair and Replace  
RWQCB – Regional Water Quality Control Board  
SECAP – System Evaluation and Capacity Assurance Plan  
SOP – Standard Operating Procedure  
SSMP – Sewer System Management Plan  
SSO – Sanitary Sewer Overflow  
SSOERP – Sanitary Sewer Overflow Emergency Response Plan  
SWRCB – State Water Resources Control Board  
URGP – Unified Response Guidance Plan  
WDID – Waste Discharge Identification Number  
WDR – Wastewater Discharge Requirements  
WRD – Water Resources Department

## Introduction

On May 2, 2006, the State Water Regional Control Board (SWRCB) adopted [Order No. 2006-0003 \(Order\)](#), Statewide General Waste Discharge Requirements (WDR) for Sanitary Sewer Systems. This Order requires that the owner of wastewater collection system, with more than a mile of pipeline, have in place a Sewer System Management Program (SSMP) to comply with the terms of this Order. The Order requires systems to reduce the number and severity of Sanitary Sewer Overflows (SSOs), to audit the program every two years, and revise the SSMP every five years. On February 20, 2008, the State Water Board Executive Director adopted [Order No. 2008-0002-EXEC](#), a revised Monitoring and Reporting Program (MRP) for the WDR to rectify early notification deficiencies and ensure that first responders are notified in a timely manner of SSOs discharged into waters of the state. On September 9, 2013, the State Water Board Executive Director adopted [Order No. 2013-0058-EXEC](#), which amends the MRP [Order No. 2006-0003](#), by adding a third sanitary spill category, Category 3 SSO, sampling requirements within 48 hours, and technical report within 45 days (for Category 1 SSO in which 50,000 gallons or greater are spilled to surface waters), and new record keeping requirements. Therefore, the definitions for the three spill categories are now as follows:

- CATEGORY 1** Discharges of untreated or partially treated wastewater of any volume resulting from an enrollee's sanitary sewer system failure or flow condition that:
- Reach surface water and/or reach a drainage channel tributary to surface water; or
  - Reach a Municipal Separate Storm Sewer System (MS4) and are not fully captured and returned to the sanitary sewer system or not otherwise captured and disposed of properly. Any volume of wastewater not recovered from the MS4 is considered to have reached surface water unless the storm drain system discharges to a dedicated storm water or groundwater infiltration basin (e.g., infiltration pit, percolation pond).
- CATEGORY 2** Discharges of untreated or partially treated wastewater of 1,000 gallons or greater resulting from an enrollee's sanitary sewer system failure or flow condition that do not reach surface water, a drainage channel, or an MS4 unless the entire SSO discharged to the storm drain system is fully recovered and disposed of properly.
- CATEGORY 3** All other discharges of untreated or partially treated wastewater resulting from an enrollee's sanitary sewer system failure or flow condition.

A principal element of the Order is the requirement that the collection agencies adopt and maintain a management plan for the system, referred to as a Sewer System Management Plan or SSMP.

On October 20, 2008, the City of Pomona City Council adopted the original WRD SSMP to comply with the California State Water Resources Control Board (SWRCB) Order.

The Order establishes the following goals:



- The SSMP must document the organization's legal authority to achieve the goals of the SSMP as demonstrated through city ordinances, agreements, and other legally binding instruments.
- The SSMP must identify the city's organization and staff responsible for implementing and maintaining the SSMP.
- The SSMP is to provide a plan and schedule to properly manage, operate, and maintain all parts of the city's wastewater conveyance system.

Additionally, the Order requires city staff to perform periodic internal audits of the SSMP, focusing on evaluating the effectiveness of the SSMP and staffs' compliance with its requirements, as shown in Section D.13(x) of the Order. The internal audits must be performed at least every two years with the audit report kept on file at the city. Due date for this audit is October 31, 2022. The 2022 Audit Team reviewed the last SSMP Audit dated September 2020.

The SSMP must be updated every five years, must contain any significant program changes, and be re-certified by the city's City Council. To complete the re-certification process, City staff must enter the information on the Online SSO Database. The re-certification of the SSMP was completed on October 2018. The next quinquennial review is due on October 31, 2023.

In general, the State's audit requirements of the SSMP are extremely complex with many overlapping topics. As described below, there are 11 major categories in the SSMP and over three dozen subcategories. Additionally, a comprehensive audit program includes evaluation elements such as document control, training, objectives, data management, audit procedures, and results approach outcomes.

This is the fifth internal audit of the SSMP, covering the period between January 1, 2020 through December 31, 2021. After reviewing and sharing the contents of the audit report, staff will create a list of proposed remedies, if deficiencies were found to exist, file the report, and begin working to correct the deficiencies, if any.

The audit team was comprised of the following personnel:

**Table 1: City 2022 Audit Team**

<b>Name</b>	<b>Position</b>
Julie Carver	Environmental Compliance Supervisor
Romell Eutsey	Wastewater System Supervisor
Nichole Horton	Principal Water Engineer
Jorge Anaya	Senior Water Resources Engineer

Interviews Conducted:

**Table 2: Interviews Conducted**

<b>Department</b>	<b>Name</b>	<b>Title</b>
Water Resources	Romell Eutsey	Wastewater Systems Supervisor
Water Resources	Mike Moody	Acting Wastewater Collection System Crew Chief



Documents Audited or Reviewed:

**Table 3: Documents Audited or Reviewed**

No.	Document
1	Sewer System Management Plan Updated October 2018
2	2020 SSMP Biennial Audit Report
3	Contact List in Case of Emergency SSO
4	California Integrated Water Quality System Project (CIWQS) Online SSO Reports
5	City Sewer Ordinances
6	Sanitary Sewer Overflow Emergency Response Plan (SSOERP)
7	Operations and Maintenance Program
8	Sewer Standard Design Guide
9	FOG Control Program

## Summary

This biennial audit of the City's SSMP consists of evaluating all 11 elements and all appendices required by the WDR (refer to Table 4 below).

**Table 4: SSMP Elements**

Element	WDR Reference Section	Heading
1	D.13.i	Goals
2	D.13.ii	Organization
3	D.13.iii	Legal Authority
4	D.13.iv	Operation and Maintenance Program
5	D.13.v	Design and Performance Provisions
6	D.13.vi	Overflow Emergency Response Plan
7	D.13.vii	Fats, oils, grease (FOG) Control Plan
8	D.13.viii	System Evaluation and Capacity Assurance Plan
9	D.13.ix	Monitoring, Measurement, and Program Modifications
10	D.13.x	SSMP Program Audits
11	D.13.xi	Communication Program

Each element was assessed, and given a sufficiency ranking and recommendations as deemed appropriate.

The format for audit reporting is as follows:

- Order Section/Subsection
- Sufficiency Ranking
  - A – Well Above Average
  - B – Above Average
  - C – Average
  - D – Below Average
  - F – Not in Compliance
- Findings
- Reference Information
- Recommendations

Below summarizes each element ranking, findings, and recommendations.

**Table 5: Summarized Sufficiency Rankings, Findings, & Recommendations per Element**

Element	Sufficiency Ranking	Findings	Recommendations
1: Goals	A	Achieved goals.	<ol style="list-style-type: none"> <li>1. Re-evaluate goals and revise as necessary.</li> <li>2. Tie goals to key performance indicators (KPIs)/metrics in Element 9.</li> </ol>
2: Organization	B	<ol style="list-style-type: none"> <li>1. Organization charts were updated as staff changed.</li> <li>2. Used the Change Log</li> </ol>	<ol style="list-style-type: none"> <li>1. Continue to update organization charts including dates of updates.</li> <li>2. Continue to maintain change log for all plans and SSMP.</li> </ol>
3: Legal Authority	C	<ol style="list-style-type: none"> <li>1. Ordinance was reviewed and revisions are needed when new Permit is issued.</li> <li>2. Still no FOG ordinance update</li> <li>3. FOG inspections have been conducted with compliance.</li> </ol>	<ol style="list-style-type: none"> <li>1. Update FOG ordinance when new permit issuance.</li> <li>2. Remove Appendix B.</li> <li>3. Update Appendix F</li> <li>4. Add table of specific references to ordinance section.</li> </ol>
4: Operation and Maintenance Program	B	<ol style="list-style-type: none"> <li>1. The O&amp;M Program was updated in 2018.</li> <li>2. No description of use of storm drain maps to assist in field.</li> </ol>	<ol style="list-style-type: none"> <li>1. Update the O&amp;M.</li> <li>2. Update staffing contact info.</li> <li>3. Use link to website for Appendix C</li> </ol>
5: Design and Performance Provisions	C	<ol style="list-style-type: none"> <li>1. WRD staff published revised standards in 2017 and is currently conducting a comprehensive review of the standards.</li> <li>2. The City is currently implementing the use of live and mobile GIS data collection to enhance inspections.</li> <li>3. City considers non-standard the construction of systems such as lift stations, force mains, inverted siphons, treatment facilities, etc. and or flow measurement devices. Not part of design standards and require city's review and approval prior to design.</li> </ol>	<ol style="list-style-type: none"> <li>1. Finish the draft SOP for CCTV and other SOPs</li> <li>2. Consider development of general provisions, design and performance guidelines for the installation of non-standard items.</li> <li>3. Compile an approved products list to support current WRD standards for the proper construction and repair of wastewater facilities.</li> <li>4. Develop wastewater design checklists to promote standardization and consistency.</li> <li>5. Publish design and construction standards/specifications on City's website.</li> </ol>



6: Overflow Emergency Response Plan	C	<ol style="list-style-type: none"> <li>SSOs are tracked in CIWQ</li> <li>Operations staff have been provided web enabled GIS tools.</li> </ol>	<ol style="list-style-type: none"> <li>Update the SSSOERP for the 2023 update.</li> <li></li> </ol>
7: Fats, Oil, Grease (FOG) Control Plan	D	<ol style="list-style-type: none"> <li>Ordinance not been updated.</li> <li>FOG inspections have been conducted since 2020.</li> </ol>	<ol style="list-style-type: none"> <li>Get Ordinance approved if needed with the new permit issuance.</li> <li>Continue FOG inspection program and educate FSE.</li> </ol>
8: System Evaluation and Capacity Assurance Plan	C	<ol style="list-style-type: none"> <li>The City's Wastewater Master Plan was updated in 2019. This included analyses of the wastewater system's hydraulic capacity, forecasted development/re-development population growth, hydraulic model calibration and forecasted capital improvements. Implemented smart level monitoring and tracking for continuous data acquisition and advanced notification of changes in the collection system.</li> <li>The 2019 Wastewater Master Plan utilized the latest design and performance criteria. Included implementation of current design policies and city code regulations. Staff is conducting a comprehensive review of the design criteria, included in the standard specifications for water resources infrastructure construction, to enforce specific criteria in the planning, design and construction of city wastewater collection infrastructure.</li> <li>The City has adopted a CIP program that addresses the existing condition of sewer pipelines, equipment, hardware, and software on an annual basis. One of the goals is to review pipeline conditions and recommend replacement/rehabilitation based on age, capacity, location, access, risk and</li> </ol>	<ol style="list-style-type: none"> <li>Continue to develop a comprehensive sewer CCTV program by including the implementation of remote cloud storage and live mobile GIS data collection.</li> <li>Gather field observations via GIS mobile applications to make informed decisions regarding the rehabilitation and maintenance of the wastewater collection system.</li> <li>Continue to perform smart level monitoring and alarm notifications.</li> <li>Activate flow monitoring and rain data collection for the analysis of I&amp;I during specific storm events. Implement manhole rain covers through the installation of watertight inserts (i.e., manhole pans).</li> </ol>

		other factors. Adoption of the CIP is based on the 2019 wastewater master plan analysis and continue CCTV data collection.	
9: Monitoring, Measurement, and Program Modifications	B	<ol style="list-style-type: none"> <li>1. City has lower spill rates and volume of spills compared to the state and region</li> <li>2. Improved inspection and cleaning</li> <li>3. Ongoing training</li> </ol>	<ol style="list-style-type: none"> <li>1. Track cause of spills for historical data to help identify types i.e. construction debris, human, FOG, etc.</li> <li>2. Ensure update to CIWQS data matches City data to date (pipe lengths, force main lengths, etc.).</li> <li>3. Continue training and look into additional certs.</li> </ol>
10: SSMP Program Audits	B	Internal audits conducted as required and most recent posted to web page.	<ol style="list-style-type: none"> <li>1. Update table of contents on next update of SSMP.</li> <li>2. Change format of SSMP to eliminate chapters and use elements for ease.</li> <li>3. Update internal audit as completed and post to website once signed by LRO and presented to Council.</li> </ol>
11: Communication Program	B	<ol style="list-style-type: none"> <li>1. Change log was created in 2018.</li> <li>2. SSMP and past audits on website.</li> <li>3. No discussion with city council on the development, implementation, and performance of the SSMP.</li> <li>4. Website has link to SSOERP but it is the outdated plan.</li> </ol>	<ol style="list-style-type: none"> <li>1. Provide additional information on the website about the program.</li> <li>2. Use social media to provide information to the community.</li> <li>3. Provide additional outreach material on website and at events.</li> </ol>

Table 5 findings and recommendations from the 2020 and 2022 SSMP will be used to update the 2023 SSMP Revision. Those items that will not be completed within this revision will be tracked in the SSMP Deficiency Log, which will be included as an SSMP appendix. This log will track the deficiency, person responsible, corrective action, and expected completion date.

## SSMP Implementation Effectiveness

*Program effectiveness was evaluated based on the following three criteria:*

1. *City's Element Sufficiency Rankings*
2. *Meeting our last City Council certified SSMP (October 2018) goals.*
3. *Attaining State of California overall goals*

### Element Sufficiency Rankings

An overall sufficiency ranking was determined by assigning a number to each ranking (i.e. A = 4, B = 3, C = 2, D = 1, & F = 0). These scores were then summed and divided by the 11 elements (refer to Table 6 below).

**Table 6: Overall Sufficiency Ranking**

Element	Ranking	Score
1. Goals	A	4
2. Organization	B	3
3. Legal Authority	C	2
4. Operation & Maintenance Program	B	3
5. Design & Performance Provisions	C	2
6. Overflow Emergency Response Program	C	2
7. Fats, Oil & Grease (FOG) Control Program	D	1
8. System Evaluation and Capacity Assurance Program	C	2
9. Monitoring, Measurements, and Program Modifications	B	3
10. SSMP Program Audits	B	3
11. Communication Program	B	3
<b>Overall Score</b>	<b>C</b>	<b>28/11 = 2.55</b>

Table 6 shows that the city attained an overall sufficiency ranking of average (C) for the program's effectiveness.

Table 7 below lists the scoring range for sufficiency ranking.

**Table 7: Scoring Range**

Scoring Range	Ranking
3.60 – 4.00	A – Well Above Average
2.60 – 3.59	B – Above Average
1.60 – 2.59	C – Average
0.60 – 1.59	D – Below Average
0.00 – 0.59	F – Not in Compliance

### Meeting City's Goals

Attaining the October 2018 SSMP goals were also measured by assigning the same sufficiency ranking and scoring above (refer to Table 8 below).



**Table 8: Overall Goal Score**

City's Goals	Ranking	Score
1. To reduce the number of SSOs	A	4
2. To mitigate and minimize the impact of SSOs	A	4
3. To inspect and assess the collection system using CCTV as needed	A	4
4. To develop CIP of present and future funding sources to achieve these goals.	B	3
5. Meet all regulation notifications and reporting requirements	A	4
<b>Overall</b>	<b>A</b>	<b>19/5 = 3.8</b>

Overall, the city's goal attainment is substantially above average (A).

#### Attaining California State's Goals

The State's overall goals are to reduce the number of SSOs, mitigate them when they occur, and for agencies to continually improve their program.

The State's first and second goal matched the City's first two goals and therefore scored the same. Continual improvement was determined based on the following three criteria:

1. Sufficiency ranking comparison with last audit
2. Handling of recommendations from last audit
3. Other factors for consideration

Table 9 below summarizes the city's overall assessment in meeting the State's goals.

**Table 9: Overall State Goal Score**

State's Goals	Ranking	Score
1. To reduce the number of SSOs	A	4
2. To mitigate and minimize the impact of SSOs	A	4
3. Continual Improvement	B	3
<b>Overall Score:</b>	<b>A</b>	<b>11/3=3.6</b>

The city overall achieved an Above Average (A) with regard to the State's goals.

#### Element Sufficiency Rankings Comparison

Table 10 compares each element's sufficiency ranking from the last audit in 2020. This shows the program improved in some of the categories with improvement still needed in others.

**Table 10: 2020 vs. 2021**

Element	2020 Ranking	2022 Ranking
1. Goals	B	A
2. Organization	C	B

3. Legal Authority	C	C
4. Operation and Maintenance Program	B	B
5. Design and Performance Provisions	C	C
6. Overflow Emergency Response Plan	C	C
7. Fats, Oils, Grease Control Program	D	D
8. System Evaluation and Capacity Assurance Plan	C	C
9. Monitoring, Measurement, and Program Modifications	C	B
10. SSMP Program Audits	B	B
11. Communication Program	B	B
<b>Overall Score:</b>	<b>C</b>	<b>C</b>

### **Overall Effectiveness Evaluation**

The city's SSMP program effectiveness is evaluated as above average (B). This ranking reflects a little improvement 2020 Biannual Audit Report.

**Table 11: Overall Effectiveness Evaluation**

<b>Overall Effectiveness Evaluation</b>	<b>Ranking</b>	<b>Score</b>
1. Element Sufficiency Rankings	C	2.55
2. Meeting Agency's Goals	A	3.8
3. Attaining California State Goals	A	3.6
<b>Overall Score:</b>	<b>B</b>	<b>9.95/3=3.32</b>

## 1. Audit of Goals - Order D.13.i

*The goal of the SSMP is to provide a plan and schedule to properly manage, operate, and maintain all parts of the sanitary sewer system. This will help reduce and prevent SSOs, as well as mitigate any SSOs that do occur.*

Sufficiency: **Well Above Average (A)**

Findings: The City has established a list of goals in its SSMP. The goals established comply with the requirements of the SWRCB Order. The eight goals established with the 2018 version of the City's SSMP are the following:

1. To reduce the number of SSOs , mitigate and minimize the impact of SSOs
2. An effective FOG Control Program
3. Proper management, operation, and maintenance of all parts of the system
4. To develop a list of present and future funding sources to achieve these goals
5. Meet all regulation notifications and reporting requirements

The City succeeded in attaining most of their current goals, detailed below.

1. To reduce the number of SSOs (Score = 4)
  - There were eight (8) SSOs since the last audit, explain why if any SSOs (refer to Element 9).
2. To mitigate and minimize the impact of SSOs through a FOG Control Program (Score = 4)
  - Recovered volume spill was below the region and state in all categories (refer to Element 9).
  - Process, procedures, and training enhancements have been put in place to improve mitigating SSOs should they occur (refer to Element 4 (O&M) and Element 6 (OERP)).
3. To inspect and assess the collection system using CCTV as needed (Score = 3)
  - Routine inspection continues (refer to Element 4: O&M)
  - Recommend formalizing plan to assess non-urgent pipe and manhole (MH) degradations (refer to Element 8: SECAP).
4. To develop CIP of present and future funding sources to achieve these goals (Score =3)
  - CIP is planned to conduct new conditions assessment on the sewer systems (refer to Element 8: System Evaluation and Capacity Assurance Plan (SECAP)
  - Recommend formalizing plan to assess non-urgent pipe and MH degradations (refer to Element 8: SECAP) and determine adding to short- and long-term CIPs.
5. Meet all regulation notifications and reporting requirements (Score = 4)
  - The City meets all requirements.

Overall, the City's goal attainment is scored at a three (3), which equates to substantial compliance (refer to Table 8 in the program effectiveness evaluation section above).



References:

- 2018 SSMP Revision
- 2020 Audit

Recommendations:

1. The audit team assessed the eight goals and recommends re-evaluating if new goals are needed to continue to further improve our SSMP in meeting the overall goals of reducing SSO events and their health and environmental impacts should they occur.
2. Tie goals to key performance indicators (KPIs)/metrics in Element 9.

## 2. Audit of Organization - Order D.13.ii

*Review the SSMP to determine if it complies with the Order in the following manner:*

- (a) The name of the responsible or authorized representative as described in Section J of this Order.*
- (b) The names and telephone numbers for management, administrative, and maintenance positions responsible for implementing specific measures in the SSMP program. The SSMP must identify lines of authority through an organization chart or similar document with a narrative explanation; and*
- (c) The chain of communication for reporting SSOs, from receipt of a complaint or other information, including the person responsible for reporting SSOs to the State and Regional Water Board and other agencies if applicable (such as County Health Officer, County Environmental Health Agency, Regional Water Board, and/or State Office of Emergency Services (OES)).*

Sufficiency:    Score (3) Above Average (B)

### Findings:

1. The organization charts were updated and logged.
2. Staff used the change log when changes occur annually.
3. Improved tracking on organizational chart.

### References:

- City's SSMP
- O & M Program
- SSOERP

### Recommendations:

1. Continue to update organization charts and all associated plans including date of updates as they occur.
2. Maintain a change log for all programs.

### 3. Audit of Legal Authority - Order D.13.iii

*Review the SSMP to determine if it complies with the Order to:*

- (a) Prevent illicit discharges into its sanitary sewer system (examples may include inflow/infiltration (I/I), stormwater, chemical dumping, unauthorized debris and cut roots, etc.);*
- (b) Require that sewers and connections be properly designed and constructed;*
- (c) Ensure access for maintenance, inspection, or repairs for portions of the infrastructure owned or maintained by the Public Agency;*
- (d) Limit the discharge of fats, oils, and grease and other debris that may cause blockages, and*
- (e) Enforce any violation of its sewer ordinances.*

Sufficiency: **Average (C)**

#### Findings:

1. Ordinance was reviewed in 2018, and revisions are recommended.
2. To date FOG ordinance has not been adopted by City Council. Was supposed to be updated in 2018.

#### Reference:

- 2018 SSMP
- City Sewer Disposal, Article V ordinance

#### Recommendation:

1. Obtain City Council adoption of the proposed FOG ordinance when new permit is adopted
2. Remove Appendix B.
3. Remove hard copy of ordinance from appendices to reduce file size and provide hyperlink to website.
4. Update section 4.4.6 of SSMP.
5. Appendix F needs updated, plan changed.
6. Add table of specific references to ordinance section.



#### 4. Audit of Operation and Maintenance Program - Order D.13.iv

Review the SSMP to determine if it complies with the Order to:

- (a) *Maintain an up-to-date map of the sanitary sewer system, showing all gravity line segments and manholes, pumping facilities, pressure pipes and valves, and applicable stormwater conveyance facilities;*
- (b) *Describe routine preventive operation and maintenance activities by staff and contractors, including a system for scheduling regular maintenance and cleaning of the sanitary sewer system with more frequent cleaning and maintenance targeted at known problem areas. The Preventive Maintenance (PM) program should have a system to document scheduled and conducted activities, such as work orders;*
- (c) *Develop a rehabilitation and replacement plan to identify and prioritize system deficiencies and implement short- and long-term rehabilitation actions to address each deficiency. The program should include regular visual and TV inspections of manholes and sewer pipes, and a system for ranking the condition of sewer pipes and scheduling rehabilitation. Rehabilitation and replacement should focus on sewer pipes that are at risk of collapse or prone to more frequent blockages due to pipe defects. Finally, the rehabilitation and replacement plan should include a capital improvement plan that addresses proper management and protection of the infrastructure assets. The plan shall include a time schedule for implementing the short- and long-term plans plus a schedule for developing the funds needed for the capital improvement plan;*
- (d) *Provide training on a regular basis for staff in sanitary sewer system O&M, and require contractors to be appropriately trained; and*
- (e) *Provide equipment and replacement part inventories, including identification of critical replacement parts.*

Sufficiency: **Above Average (B)**

##### Findings:

1. The Operations and Maintenance Program was updated in 2018.
2. No description of staff using the storm drain maps for conveyance if an SSO occurs.
3. Did not find inventory list of equipment and parts.

##### References:

- Operations and Maintenance Program
- SSMP
- GIS

##### Recommendations:

1. Review O&M program
2. Update staffing and contact phone numbers.
3. Use the change log when making any changes from year to year.
4. Use link to website instead of the entire plan in Appendix C.

## 5. Audit of Design and Performance Provisions - Order D.13.v

*Review the SSMP to determine if it complies with the Order by:*

- (a) Design and construction standards and specifications for the installation of new sanitary sewer systems, pump stations and other appurtenances; and for the rehabilitation and repair of existing sanitary sewer systems; and*
- (b) Procedures and standards for inspecting and testing the installation of new sewers, pumps, and other appurtenances and for rehabilitation and repair projects.*

Sufficiency: **Average (C)**

### Findings:

1. WRD staff published revised standards on 2017. Currently, staff is conducting a comprehensive review of the Standard Specifications for Water Resources Infrastructure Construction (written & drawn standards) to enforce comprehensive City requirements for the planning, design, and construction of City wastewater infrastructure.
2. The City is currently implementing the use of live and mobile GIS data collection to enhance inspections.
3. City considers non-standard the construction of systems such as lift stations, force mains, inverted siphons, treatment facilities, energy dissipaters, regulating devices, and/or flow measurement devices. Hence, these are not part of the City's design standards and require City's review and approvals prior to design.

### Reference:

- GIS
- Sewer Design Policy
- Draft Standard Specifications for Water Resources Infrastructure Design and Construction
- Wastewater Construction Standard Drawings
- City Code

### Recommendations:

1. Finish up the draft SOP for CCTV and other SOPs
2. Consider development of general provisions, design and performance guidelines for the installation of non-standard items.
3. Continue review of Draft Standard Specifications for Water Resources Infrastructure Construction.
4. Compile an approved products list to support current WRD standards for the proper construction and repair of wastewater facilities; including the performance and compliance review of new/existing products against current industry standards.
5. Develop wastewater design checklists to promote standardization and consistency.
6. Publish design and construction standards/specifications on City's website.



## 6. Audit of Overflow Emergency Response Plan - Order D.13.vi

Review the SSMP to determine if it complies with the Order by having an overflow emergency response plan that includes:

- (a) Proper notification procedures so that the primary responders and regulatory agencies are informed of all SSOs in a timely manner;
- (b) A program to ensure an appropriate response to all overflows;
- (c) Procedures to ensure prompt notification to appropriate regulatory agencies and other potentially affected entities (e.g. health agencies, Regional Water Boards, water suppliers, etc.) of all SSOs that potentially affect public health or reach the waters of the State in accordance with the MRP. All SSOs shall be reported in accordance with this MRP, the California Water Code, other State Law, and other applicable Regional Water Board WDRs or National Pollutants Discharge Elimination System (NPDES) permit requirements. The SSMP should identify the officials who will receive immediate notification;
- (d) Procedures to ensure that appropriate staff and contractor personnel are aware of and follow the Emergency Response Plan and are appropriately trained;
- (e) Procedures to address emergency operations, such as traffic and crowd control and other necessary response activities; and
- (f) A program to ensure that all reasonable steps are taken to contain and prevent the discharge of untreated and partially treated wastewater to waters of the United States and to minimize or correct any adverse impact on the environment resulting from the SSOs, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the discharge.

Sufficiency: Average Score (C)

### Findings:

1. Record of SSOs are uploaded and archived within the State of California Weatherboards website.  
([https://www.waterboards.ca.gov/water\\_issues/programs/ssosso\\_map/ssosso\\_pub.shtml](https://www.waterboards.ca.gov/water_issues/programs/ssosso_map/ssosso_pub.shtml))
2. Staff now uses a GIS enabled web based application to identify and define extent of overflow amount. Documentation is kept electronically within a City server and within the City's GIS server.
3. Operations staff have been provided web enabled GIS tools to communicate real-time data updates from the field. Wastewater Crew Chief may access application data instantaneously.

### References:

- SSO Emergency Response Plan

### Recommendations:

1. Update the SSOERP for the 2023 update.



## 7. Audit of FOG (Fats, Oils, and Grease) Control Plan- Order D.13.vii

Review the SSMP to determine if it complies with the Order by having a FOG Control plan with the following:

- (a) *An implementation plan and schedule for a public education outreach program that promotes proper disposal of FOG;*
- (b) *A plan and schedule for the disposal of FOG generated within the sanitary sewer system service area. This may include a list of acceptable disposal facilities and/or additional facilities needed to adequately dispose of FOG generated within a sanitary sewer system service area;*
- (c) *The legal authority to prohibit discharges to the system and identify measures to prevent SSOs and blockages caused by FOG;*
- (d) *Requirements to install grease removal devices (such as traps or interceptors), design standards for the removal devices, maintenance requirements, best management practices (BMP) requirements, record keeping, and reporting requirements;*
- (e) *Authority to inspect grease producing facilities, enforcement authorities, and whether the Enrollee has sufficient staff to inspect and enforce the FOG ordinance;*
- (f) *An identification of sanitary sewer system sections subject to FOG blockages and establishment of a cleaning maintenance schedule for each section; and*
- (g) *Development and implementation of source control measures for all sources of FOG discharged to the sanitary sewer system for each section identified in (f) above.*

Sufficiency: **Below Average Score (D)**

Findings:

1. Public education information disseminated at events.
2. No list of disposal facilities
3. Provide the hot list

References:

- SSMP
- Draft FOG Control Program

Recommendation:

1. Get Council approval for the Ordinance before next audit, but planning early 2021.
2. Update or remove section 6.3

## 8. Audit of the System Evaluation and Capacity Assurance Plan- Order D.13.viii

Review the SSMP to determine if it complies with the Order by:

- (a) *Evaluation: Actions needed to evaluate those portions of the sanitary sewer system that are experiencing or contributing to an SSO discharge caused by hydraulic deficiency. The evaluation must provide estimates of peak flows (including flows from SSOs that escape from the system) associated with conditions similar to those causing overflow events, estimates of the capacity of key system components, hydraulic deficiencies (including components of the system with limiting capacity) and the major sources that contribute to the peak flows associated with overflow events;*
- (b) *Design Criteria: Where design criteria do not exist or are deficient, undertake the evaluation identified in (a) above to establish appropriate design criteria; and*
- (c) *Capacity Enhancement Measures: The steps needed to establish a short- and long-term CIP to address identified hydraulic deficiencies, including prioritization, alternatives analysis, and schedules. The CIP may include increases in pipe size, I/I reduction programs, increases and redundancy in pumping capacity, and storage facilities. The CIP shall include an implementation schedule and shall identify sources of funding.*
- (d) *Schedule: The Enrollee shall develop a schedule of completion dates for all portions of the capital improvement plan developed in (a)-(c) above. This schedule shall be reviewed and updated, consistent with the SSMP review and update requirements, as described in Section D. 14.*

Sufficiency: **Average (C)**

Findings:

1. The City's Wastewater Master Plan was updated in 2019. This included analyses of the wastewater system's hydraulic capacity, forecasted development/re-development, population growth, hydraulic model calibration and forecasted capital improvements. The City has recently implemented smart level monitoring and tracking for continuous data acquisition and advanced notification of changes in the collection system.
2. The 2019 Wastewater Master Plan utilized the latest design and performance criteria. This included the implementation of current design policies and City code regulations. Currently, staff is conducting a comprehensive review of the Design Criteria, included in the Standard Specifications for Water Resources Infrastructure Construction (written & drawn standards), to enforce specific criteria in the planning, design, and construction of City wastewater collection infrastructure.
3. The City has adopted a CIP program that addresses the existing condition of sewer pipelines, equipment, hardware and software on an annual basis. One of the goals is to review pipeline conditions and recommend replacement/rehabilitation based on age, capacity, location, access, risk, and other factors. Adoption of the CIP is based on the 2019 Wastewater Master Plan analyses and continual CCTV data collection. Ownership and maintenance of the four (4) wastewater lift stations serving the City has been transferred to the Los Angeles County Sanitation Districts (LACSD) and are monitored by LACSD's SCADA system.

References:

- 2019 Wastewater Master Plan
- GIS

- Wastewater Design and Construction Standards
- Draft Standard Specifications for Water Resources Infrastructure Construction
- City Code

Recommendations:

1. Continue to develop a comprehensive sewer CCTV program by including the implementation of remote cloud storage and live mobile GIS data collection.
2. Gather field observations via GIS mobile applications to make informed decisions regarding the rehabilitation and maintenance of the wastewater collection system.
3. Continue to perform smart level monitoring and alarm notifications.
4. Activate flow monitoring and rain data collection for the analysis of I & I during specific storm events. Implement manhole rain covers through the installation of water tight inserts (i.e. manhole pans).
5. Consider conducting new condition assessments on the system.
6. Consider conducting new capacity analysis on the system.



## 9. Audit of the Monitoring, Measurement, and Program Modification - Order D.13.ix.

Review the SSMP to determine if it complies with the Order by:

- (a) Maintain relevant information that can be used to establish and prioritize appropriate SSMP activities;
- (b) Monitor the implementation and, where appropriate, measure the effectiveness of each element of the SSMP;
- (c) Assess the success of the preventive maintenance program;
- (d) Update program elements, as appropriate, based on monitoring or performance evaluations; and
- (e) Identify and illustrate SSO trends, including frequency, location, and volume.

Sufficiency: Above Average (B)

Findings:

Analysis was performed using CIWQS data up to January 1, 2020 to December 31, 2021. Staff looked at the historical data spanning a period from 2008 to 2021.

Table 12 below summarizes the general MPPM findings over the last five years, and lists the associated tables, figures, and/or graphs.

**Table 12: MPPM Findings Summary**

Finding	Table / Graph
Fewer SSOs	Table 13/Graph 1
Lower Spill Rate Indices and Net Volume Spills Indices than State and Region	Table 14
Improved Inspection and Cleaning Production	Graph 2
Increased Training and Certification	Table 15
Repairs	Table 16

### City's Historical SSOs

Table 13 below lists all City's historical SSOs recorded in CIWQS.

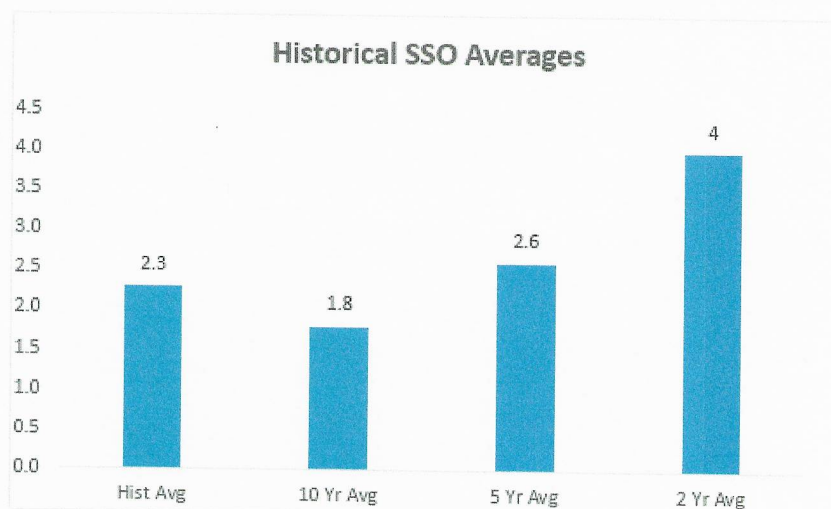
**Table 13: City's SSOs in CIWQS (up to 12/31/2021)**

No.	Date	Volume (gallons)	Cat	Failure Point
1	1/19/2008	1400	1	gravity mainline
2	1/22/2008	90	1	gravity mainline
3	4/3/2008	500	1	gravity mainline
4	8/9/2008	30	3	gravity mainline
5	8/26/2008	15	3	gravity mainline
6	1/3/2009	1500	1	gravity mainline
7	3/8/2009	200	3	gravity mainline
8	3/12/2009	600	3	gravity mainline
9	5/4/2009	40	3	gravity mainline
10	6/22/2009	500	3	gravity mainline
11	7/13/2009	800	3	gravity mainline
12	7/15/2009	400	3	gravity mainline
13	1/15/2010	120	3	gravity mainline
14	10/4/2010	200	3	gravity mainline
15	11/26/2012	240	3	gravity mainline
17	5/26/2014	900	3	gravity mainline
19	7/18/2015	5	3	manhole
20	7/15/2016	150	1	pump station
21	12/26/2016	7940	1	gravity mainline
22	1/1/2017	17640	1	gravity mainline
23	2/4/2017	940	1	gravity mainline
24	3/1/2017	800	3	gravity mainline
25	5/3/2018	48	3	gravity mainline
26	11/8/2018	2600	1	gravity mainline
28	6/6/2020	1300	1	gravity mainline
29	6/21/2020	21000	1	gravity mainline
30	6/21/2020	1900	1	Forced Main
31	10/22/2020	9000	1	gravity mainline
32	11/06/2020	13500	1	gravity mainline
33	11/27/2020	4930	1	gravity mainline
34	10/14/2021	1470	1	gravity mainline
35	12/1/2021	150	1	gravity mainline

## SSOs Per Year

Graph 1: Historical SSO Yearly Averages (up to 12/31/2021)

Year	SSO Per Year
2008	5
2009	7
2010	2
2011	0
2012	1
2013	0
2014	1
2015	1
2016	2
2017	3
2018	2
2019	0
2020	6
2021	2
Hist Total	32
10 Yr Total	18
5 Yr Total	13
2 Yr Total	8
Hist Avg	2.3
10 Yr Avg	1.8
5 Yr Avg	2.6
2 Yr Avg	4



Graph 1 above shows the average SSOs per year. The last five and two years have had an average of 2.6 and 4 spills, respectively.



## SSO Rate & Volume

Spill rate indices and net volume spilled (i.e. not recovered) data from CIWQS is shown in Table 14 below.

**Table 14: Two Year Spill Rate & Net Volume Spilled Indices Comparison (01/01/2020 to 12/31/2021)**

**Table 14. Two Year Spill Rate & Net Volume Spilled Indices Comparison (01/01/2020 to 12/31/2021)**

Spill Rate Indices (Spills/100ml/yr)									
	Category 1			Category 2			Category 3		
	Mainlines	Laterals	Not Specified	Mainlines	Laterals	Not Specified	Mainlines	Laterals	Not Specified
Pomona City CS	0.63	N/A	0.0	0.0	N/A	0.0	0	N/A	0.0
State Municipal (Public) Average	4.56	N/A	4.43	3.39	N/A	4.22	5.86	N/A	1.39
Region Municipal Average	1.89	N/A	2.82	0.83	N/A	0.84	3.61	N/A	0.43

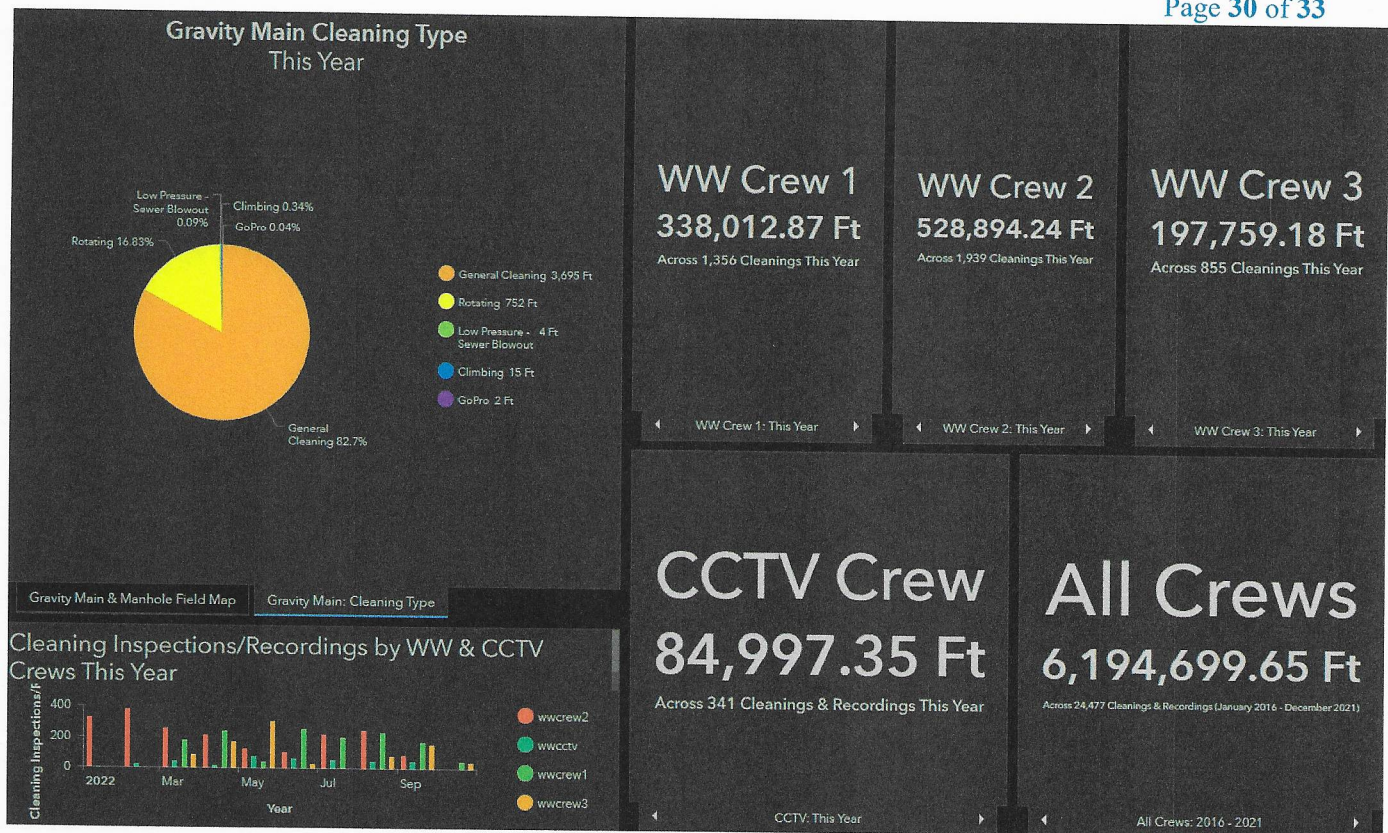
  

Net Volume Spills Indices (gallons/1000 Capita/yr)									
	Category 1			Category 2			Category 3		
	Mainlines	Laterals	Not Specified	Mainlines	Laterals	Not Specified	Mainlines	Laterals	Not Specified
Pomona City CS	2.97	N/A	0.0	0	N/A	0.0	0.000	N/A	0.0
State Municipal (Public) Average	1974.24	N/A	3719.77	992.18	N/A	3153.21	100.9	N/A	7.49
Region Municipal Average	186.43	N/A	66.98	215.14	N/A	10.95	19.9	N/A	0.19

Table 14 above shows that the City's SSO spill rate and net volume spilled indices are below both the state and region municipal average in all categories.

## Inspection & Cleaning Production

**Graph 2: Inspection and Cleaning Footage (all available information up to 12/31/2021)**



## Training

California Water Environmental Association (CWEA) Collection System Maintenance (CSM) certifications have remained steady the last two years. There has been a turnover in staff, but the City currently has four field staff, one crew chief, and one Operations Manager with certs ranging from Grade 1 to Grade 3.

**Table 15:** Attained CWEA CSM Certifications

Certification	2020	2021
Collection System Maintenance	9	8

In addition to completing all required safety training, the following training was conducted since the last audit:

- Monthly safety training
- Weekly tailgate meetings
- NASSCO PACP



## Repairs

Table 16 below lists the system projects and costs.

**Table 16: System Repairs**

Project #	Project Title	Description	Status	Cost of Project	Begin Construction	End Construction
586-2565-86023	Sewer Force Mains - Pumping Plants 1, 2, and 3 Design	Force mains realignment.	In Design	\$323,524	2015 (PP4 is complete, 1, 2, 3 are in design)	Tentatively FY2024-25
428-2590-86025	Sewer Main Replacements - Design	CCTV warranted red flag projects.	Completing Plans	\$600,000	2017	Tentatively FY2024-25
538-2590-86026	Sewer Pipeline Condition Assessment	Condition Assessment	Ongoing	\$500,000	No Construction – CCTV inspections 2013 to Present	No Construction
586-2565-86022	Sewer Pipeline Replacement - Citywide (Ph. IV)	CCTV Priority 3 main replacement.	Ongoing	\$4,572,389	2017	Tentatively FY2025-26

### References:

- GIS Data
- Citywide CCTV inspection data
- Archived SSO Data
- CIWQS Database

### Findings:

1. City staff participation in National Association of Sewer Service Companies (NASSCO) pipeline, manhole, and lateral assessment certification program (PACP, LACP, and MACP).

### Recommendations:

2. Continue to monitor and evaluate annually.
3. Track the cause of spills to help identify what caused an SSO, such as construction debris, FOG, human, debris, or others.
4. Continue staff training on O&M Plans, calculating spill volumes, and conduct SSO drills for staff.



## 10. Audit of the SSMP Program Audits - Order D.13.x.

*As part of the SSMP, the Agency shall conduct periodic internal audits, appropriate to the size of the system and the number of SSOs. At a minimum, these audits must occur every two years and a report must be prepared and kept on file. This audit shall focus on evaluating the effectiveness of the SSMP and Agency's compliance with the SSMP requirements identified in this subsection (D.13), including identification of any deficiencies in the SSMP and steps to correct them.*

Sufficiency: **Above Average Score (B)**

Findings: Table 17 below show the SSMP audit history.

**Table 17: WRD SSMP Audit History**

Date	Note
October 2008	Initial Plan
October 2013	Update to Initial 2008 Plan
October 2015	Biennial Audit
October 2017	Biennial Audit
October 2018	Update to the 2018 Plan
October 2020	Next Required Audit
October 2022	Biennial Audit
October 2023	Next Full Update

As shown in Table 17 above, the city has complied with the audit requirements. Neither the size of the system nor the number of SSOs, as determined by the overall lowering SSOs yearly average (refer to Element 9 – Graph 1 and Table 14), dictated more frequent internal audits. The original Board adoption date was October 20, 2008; which is used as the anniversary date for the biannual audits.

The last update, October 2018, can be found on the City's website ([www.pomonaca.gov](http://www.pomonaca.gov)). All required historical audits are maintained on the City's server.

Refer to entire audit for evaluation of SSMP effectiveness, compliance, deficiencies, and corrective actions.

### References:

- Current and previous audits

### Recommendations:

1. When the SSMP is updated in 2023, include a table of contents for easier searching of pages.
2. Change the formatting in the update in 2023 to match Elements, not chapters. This would be an easier flow to follow.

## 11. Audit of the Communication Program - Order D.13.xi.

*The Agency shall communicate, on a regular basis with the public on the development, implementation, and performance of its SSMP. The communication system shall provide the public the opportunity to provide input to the Agency as the program is developed and implemented.*

*The Enrollee shall also create a plan of communication with systems that are tributary and/or satellite to the Enrollee's sanitary sewer system.*

Sufficiency: Above Average Score (B)

### Findings:

1. A change log was created in 2018 for the SSMP and kept updated.
2. The SSMP and audits are on the city website for public viewing.
3. No discussion with city council on the development, implementation and performance of the SSMP

### References:

- 2018 SSMP
- City website

### Recommendations:

1. Provide additional information on website of the program
2. Update Website for easier access to department pages.
3. Use social media to provide information to the community.
4. Present periodic updates through the City Manager update memo.
5. Provide additional outreach material on the website.

\* \* \*