Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

2021 SSMP AUDIT REPORT

Prepared by:
Inland Empire Utilities Agency

Period Covered: May 2, 2019 to May 2, 2021
Analyzed Data up to March 1, 2021

WDID #8SSO10580

Agency 2021 Audit Team

Name	Position	Organization
Teresa Velarde	Manager of Internal Audit	IEUA
Julio Im	Senior Associate Engineer Environmental Compliance	IEUA
Ken Monfore	Manager of Asset Management	IEUA
Lucia Diaz	Deputy Manager of Maintenance	IEUA
Dan Dyer	Collection System Supervisor	IEUA

Certified by: Legal Responsible Official (LRO)

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons 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."

Name	Position	Organization	Signature
Randy Lee	Executive Manager of Operations/AGM	IEUA	Randy Lee Digitally signed by Randy Lee Date: 2021.05.25 17:35:15 -07'00'

Date Approved: May 25, 2021

Table of Contents

List of Tables

List of Figures

List of Graphs

Abbreviations/Acronyms

BIS – Business Information Services
BMP – Best Management Practices
BSS – Brine Sewer System
Cal OES – California Office of Emergency Services
CAP – Contracts and Procurements
CBMWD – Chino Basin Municipal Water District
CCTV – Closed-Circuit Television
CCWRF – Carbon Canyon Water Recycling Facility
CDPH – California Department of Public Health
CFR – Code of Federal Regulations
CIP – Capital Improvement Plan
CIWQS – California Integrated Water Quality System Project
CMMS – Computerized Maintenance Management System
CSDLAC – County Sanitation Districts of Los Angeles County
CVWD – Cucamonga Valley Water District
CWEA – California Water Environment Association
DAMP – Drainage Area Management Plan
DMM – Deputy Manager of Maintenance
DS – CIWQS Data Submitter
DVD – Digital Versatile Disk
DWG – Drawing
EA – External Affairs
ENV – Environmental
EWL – Etiwanda Water Line
FOG – Fats, Oils, and Grease
GIS – Geographic Information System
GPS – Global Positioning System
HVAC – Heating, Ventilation, and Air Conditioning
I/I – Inflow and Infiltration
IEBL – Inland Empire Brine Line
IEUA – Inland Empire Utilities Agency
JCSD – Jurupa Community Services District
KPI – Key Performance Indicators
LRO – Legally Responsible Official
MA – Mutual Aid
MMPM – Monitoring, Measurement, and Program Modifications
MRP – Monitoring and Reporting Program for WDR
MS4 – Municipal Separate Storm Sewer System
MWH – Montgomery Watson Harza Inc.
NASSCO – National Association of Sewer Service Companies
NIMS – National Incident Management System
NPDES – National Pollutant Discharge Elimination System
NRWS – Non-Reclaimable Wastewater System
O&M – Operations and Maintenance
OCSD – Orange County Sanitation Districts
OES – Office of Emergency Services

OERP – Overflow Emergency Response Plan
PDF – Portable Document Format
PLSD – Private Lateral Sewer Discharge
PM – Preventive Maintenance
PSERP – Pump Station Emergency Response Plan
PT/SC – Pre-treatment / Source Control
R&R – Repair and Replace
RCA – Regional Contracting Agencies
RP – Recycling Plant
RSS – Regional Sewer System
RWRP – Regional Water Recycling Plant
RWQCB – Regional Water Quality Control Board
SAP – Systems, Applications, and Products software
SARI – Santa Ana Regional Interceptor
SARWQCB – Santa Ana Regional Water Quality Control Board
SAWPA – Santa Ana Watershed Project Authority
SECAP – System Evaluation and Capacity Assurance Plan
SIU – Significant Industrial Users
SOP – Standard Operating Procedure
SSMP – Sewer System Management Plan
SSO – Sanitary Sewer Overflow
SWRCB – State Water Resources Control Board
TIFF – Tagged Image File Format
TYCIP – Ten Year Capital Improvement Plan
URGP – Unified Response Guidance Plan
WDID – Waste Discharge Identification Number
WDR – Wastewater Discharge Requirements
WFMP – Wastewater Facilities Master Plan
WQMP – Water Quality Monitoring Plan

*** * ***

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 systems with more than a mile of pipeline have in place a Sewer System Management Program (SSMP) to comply with the terms of this Order, which is 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 of 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 a 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 stormwater 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 a 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.

The definition of Private Lateral Sewage Discharge (PLSD) and its reporting requirement has not been changed, i.e., PLSD discharges may be voluntarily reported.

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 April 15, 2009, the Inland Empire Utilities Agency (Agency) Board of Directors adopted the original Agency SSMP to comply with the 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 the Agency's ordinances, agreements, and other legally binding instruments.
- The SSMP must identify the Agency'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 Agency's wastewater conveyance system.

Additionally, the Order requires Agency staff to perform periodic internal audits of the SSMP, focusing on evaluating the effectiveness of the SSMP and staff 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 on file at the Agency. The due date for this audit is May 2, 2021. The 2021 Audit Team reviewed the last SSMP dated May 2, 2019.

The SSMP must be updated every five years, must contain any significant program changes, and be re-certified by the Agency's Board of Directors. To complete the re-certification process, Agency staff must enter the information on the Online SSO Database. The re-certification of the SSMP was completed on April 17, 2019. The next quinquennial review is due on April 17, 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. The Agency's SSMP and audit requirement does not cover Regional Contracting Agencies (RCA) (namely the cities of Chino, Chino Hills, Fontana, Montclair, Ontario, Rancho Cucamonga, and Upland) as they have their SSMPs and are responsible for the operation and maintenance of their wastewater conveyance system. However, the Agency communicates regularly with our RCAs regarding SSOs, discharges to the Agency's system, Overflow Emergency Response Plan (OERP), and other related topics.

This is the sixth internal audit of the SSMP, covering the period between May 2, 2019, and May 2, 2021. However, in order to complete the audit by May 2, 2021, California Integrated Water Quality System Project (CIWQS) data will be analyzed up to March 1, 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.

This audit team was comprised of the following personnel:

Name	Position	Organization
Teresa Velarde	Manager of Internal Audit	IEUA
Julio Im	Senior Associate Engineer Environmental Compliance	IEUA
Ken Monfore	Manager of Asset Management	IEUA
Lucia Diaz	Deputy Manager of Maintenance	IEUA
Dan Dyer	Collection System Supervisor	IEUA

Table 1: Agency 2021 Audit Team

Documents Audited or Reviewed:

No.	Document
1	Agency Sewer System Management Plan (April 27, 2019)
2	2019 SSMP Biannual Audit Report (May 2, 2019)
3	Contact List in Case of Emergency SSO (February 1, 2019)
4	California Integrated Water Quality System Project Online SSO Reports
5	Agency Ordinances 96, 97, 99, and 106
6	Overflow Emergency Response Plan
7	Pump Station Emergency Response Plans
8	Standard Operating Procedures (CCTV, GapVax, Traffic Control, and Opening-Closing Manhole Lids)
9	Wastewater Facilities Master Plan Update Report Vol 1 & 2 (June 2015)
10	Non-Reclaimable Wastewater System Capital Improvement Program Plan (PBS&J Report - Mar 2006)

Table 2: Documents Audited or Reviewed

Summary

This biannual audit of the Agency's SSMP consists of evaluating all 11 elements and appendices required by the WDR (refer to Table 3 below).

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 (OERP)
7	D.13.vii	Fats, Oils, Grease (FOG) Control Program
8	D.13.viii	System Evaluation and Capacity Assurance Plan (SECAP)
9	D.13.ix	Monitoring, Measurement, and Program Modifications
10	D.13.x	SSMP Program Audits
11	D.13.xi	Communication Program

Table 3: SSMP Elements

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

Table 4 below summarizes each element ranking, findings, and recommendations.

Element	Sufficiency Ranking	Findings	Recommendations
1. Goals	B	1. Did not meet the goal of less than one SSO per year average.	1. Develop a plan to help with early warning detection of SSOs.
		2. There are two goals here that can be cleaned up.	2. Reevaluate goals 1a and 1b; goals should be clear.
		3. Did not complete the CCTV inspections and capture in the GIS system.	3. CCTV inspections extended an additional year due to COVID-19 restrictions.
		4. "Track budget vs. actual expenditures" are not clear on how this is a goal related to mitigators.	4. Consider clarifying this goal to have more detail or specifics about what is to be captured.
		5. Conduct a condition assessment of both RSS and BSS systems. To identify what? For what purpose?	5. Consider adding additional information as to the purpose or importance.
		6. Communicate the causes and effects of SSOs with member agencies. How will this be communicated and tracked?	6. Consider adding how this is communicated. Is it during team meetings, through memos, etc.?
2. Organization	B	1. Difficult to keep track of organizational changes.	1. Should point to IEUA webpage for updates.
		2. Contact information needs to be updated.	2. Change contact information in the SSMP and monitor changes and updates.
3. Legal Authority	A	None	None
4. Operations and Maintenance Program	B	1. There are engineering and construction projects that need to be added.	1. Coordinate with Engineering to review and update new projects.
		2. IEUA Safety Training topics need to be updated with new topics for 2021.	2. Coordinate with Safety for new Safety Tailgate topics added for FY 2020-2021.
		3. Update IEUA Collection's equipment inventory list.	3. Reevaluate collections equipment inventory and update inventory list.
		4. SOPs are not in coordination with IEUA standards.	4. Need to utilize IEUA agency standards for SOPs.

		5. Manholes need to be capture at NASSCO level 2 standard.	5. Coordinate with the Collection and GIS staff to update the manhole inspection forms.
5. Design and Performance Provisions	A	None	None
6. Overflow Emergency Response Plan	B	1. WQMP has been completed by Environmental Compliance staff but has not been approved by Executive Management.	1. Follow up with Environmental Compliance staff to bring the document to Executive Management for approval.
7. FOG (fats, oils, grease) Control Program	A	1. Unless the Regional Contract is amended, IEUA should not take other cities' responsibilities.	1. There needs to be more communication with the member agencies regarding FOG and whether they have a FOG control program.
		2. There were grease issues at CCWRF and other places within the collections system. Recommend reevaluating if a grease program is necessary.	2. Source Control staff are handling all FOG-related issues.
8. System Evaluation and Capacity Assurance Plan	A	1. Condition assessment is old (2006). However, hydraulic analysis on Regional Sewer System (RSS) is current (2015). No capacity evaluation of Brine Sewer System (BSS).	1. Condition assessment project starting in 2021 to address 2006 assessment.
9. Monitoring, Measurement, and Program Modifications	A	1. Many improvements: reduced SSOs, higher production, enhanced training.	1. Collection staff have added 14 SmartCovers within the last audit period, with additional units forthcoming.
10. SSMP Program Audits	A	1. SSMP audits included staff outside of Collections and provided fresh perspectives.	1. Consider inviting outside agencies for the next audit.
11. Communication Program	B	1. Since IEUA's customers are limited to member agencies, communication to the general public seems limited.	1. Increase presence on the IEUA website. The website needs to be more user-friendly and easier to navigate to emergency numbers.

Table 4: Summarized Sufficiency Rankings, Findings, and Recommendations Per Element

The findings and recommendations from the 2021 audit report shown in Table 4 will be used to update the 2019 SSMP Revision. These items will be tracked in the SSMP Deficiency Log. 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. *Agency's Element Sufficiency Rankings*
2. *Meeting the SSMP Goals*
3. *Attaining California State's overall Goals*

Agency 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, and F = 0). These scores were then summed and dividend by the 11 elements (refer to Table 5 below).

Table 5 shows that we attained an overall sufficiency ranking of above average (B) for the program's effectiveness.

Element	Ranking	Score
1. Goals	B	3
2. Organization	B	3
3. Legal Authority	A	4
4. Operation and Maintenance Program	B	3
5. Design and Performance Provisions	A	4
6. Overflow Emergency Response Plan (OERP)	B	3
7. Fats, Oils, Grease (FOG) Control Program	A	4
8. System Evaluation and Capacity Assurance Plan (SECAP)	A	4
9. Monitoring, Measurement, and Program Modifications	A	4
10. SSMP Program Audits	A	4
11. Communication Program	B	3
Overall Score:	**B**	**39/11 = 3.55**

Table 5: Element Sufficiency Ranking

Table 6 below lists the scoring range for sufficiency ranking.

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

Table 6: Scoring Range

Meeting the SSMP Goals

The goals identified in the Agency's SSMP were reviewed and measured using the sufficiency ranking and scoring. (refer to Table 7 below).

Overall Agency SSMP Goals attainment is substantially Above Average (B).

Agency's SSMP Goals	Ranking	Score
1. Spill Frequency: a. Maintain the Agency's SSO low spill average of one or less per year. b. Be lower than the State or Region Municipal spill rate indices.	C	2
2. Spill Volume: a. Recover more than 80% of gallons spilled. b. Be lower than State or Region Municipal net volume spills indices	A	4
3. Preserve and improve the condition and performance of the wastewater collection system.	B	3
4. Maintain a highly trained staff.	A	4
5. Finish capturing closed-circuit television (CCTV) inspection data using the National Association of Sewer Service Companies (NASSCO) coding standards and placing in a geographic information system (GIS) of entire RSS and BSS systems.	B	3
6. Track budget versus actual expenditures.	A	4
7. Conduct a condition assessment of both RSS and BSS systems.	B	3
8. Communicate the causes and effects of SSOs with member agencies.	A	4
Overall Score:	**B**	**27/8 = 3.37**

Table 7: Overall Goal Score

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 goals matched the Agency's first two goals and are therefore scored the same. Continual improvement was determined based on the following three criteria:

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

Table 8 below summarizes the Agency's overall assessment in meeting the State's goals.

Agency overall achieved an Above Average (B) with regard to the State's goals.

State's Goals	Ranking	Score
1. To reduce the number of SSOs	B	3
2. To mitigate and minimize the impact of SSOs	A	4
3. Continual improvement	B	3
Overall Score:	B	**10/3 = 3.33**

Table 8: Overall State Goal Score

Agency Element Sufficiency Rankings Comparison

Table 9 compares each element's sufficiency ranking from the last audit in 2019. This shows the program improved in almost every category.

Element	2019 Ranking	2021 Ranking
1. Goals	B	B
2. Organization	D	B
3. Legal Authority	B	A
4. Operation and Maintenance Program	D	B
5. Design and Performance Provisions	C	A
6. Overflow Emergency Response Plan (OERP)	F	B
7. Fats, Oils, Grease (FOG) Control Program	A	A
8. System Evaluation and Capacity Assurance Plan (SECAP)	C	A
9. Monitoring, Measurement, and Program Modifications	B	A
10. SSMP Program Audits	A	A
11. Communication Program	C	B
Overall Score:	**C**	**B**

Table 9: 2019 vs. 2021 Comparison

Overall Effectiveness Evaluation

Table 10 below summarizes the overall effectiveness evaluation.

The Agency's SSMP program effectiveness is evaluated as Above Average (B). This ranking reflects an improvement from the 2019 Biannual Audit Report, which ranked the Agency's SSMP program effectiveness as Average (C).

Overall Effectiveness Evaluation	Ranking	Score
1. Element Sufficiency Rankings	B	3.55
2. Meeting Agency's Goals	B	3.37
3. Attaining California State Goals	B	3.33
Overall Score:	**B**	**10.25/3 = 3.42**

Table 20: Overall Effectiveness Evaluation

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: Above Average (B)

Findings: The Agency has established a list of goals in its SSMP. The goals established comply with the requirements of the SWRCB Order. The eight goals established in the 2019 revision of the Agency's SSMP are as follows:

1. Spill Frequency:
    a. Maintain the Agency's SSO low spill average of one or less per year.
    b. Be lower than the State or Region Municipal spill rate indices.
2. Spill Volume:
    a. Recover more than 80% of gallons spilled.
    b. Be lower than State or Region Municipal net volume spills indices.
3. Preserve and improve the condition and performance of the wastewater collection system.
4. Maintain a highly trained staff.
5. Finish capturing closed-circuit television (CCTV) inspection data using the National Association of Sewer Service Companies (NASSCO) coding standards and placing in a geographic information system (GIS) of entire RSS and BSS systems.
6. Track budget versus actual expenditures.
7. Conduct a condition assessment of both RSS and BSS systems.
8. Communicate the causes and effects of SSOs with member agencies.

The Agency succeeded in attaining most of its current goals, detailed below.

1. Spill Frequency: Maintain the Agency's SSO low spill average of one or less per year and be lower than the State or Region Municipal spill rate indices. (Score = 2)
    - There were five SSOs since the last audit, two of which were due to a faulty designed lift station overflow bypass. The other SSOs resulted from debris in the sewer line or operator error. Additionally, average SSOs per year are trending upward due to these spills (refer to Table 13).
    - The recorded spill rate was below the Region and State in Categories 1 and 3 but above the Region in Category 2 mainlines. (refer to Table 13)
      Since the last audit, the IEUA Collection's Team has installed 14 SmartCovers throughout the sewer collection system. These SmartCovers assist in early warning detection of conditions that could lead to an SSO.

2. Spill Volume: Recover more than 80% of gallons spilled and be lower than State or Region Municipal spill rate indices. (Score = 4)
    - The 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 and Element 6).

3. Preserve and improve the condition and performance of the wastewater collection system. (Score = 3)
    - Preventive Maintenance measures are documented with the formalization of the SSMP, which provides a plan to mitigate SSOs and their impact. Other mitigation measures were to create an OERP, PSERPs, and SOPs. These documents have been created since the last audit.
    - Maintaining an average inspection and cleaning rate of 5000 feet per week was not obtained due to COVID-19 restrictions.

4. Maintain a highly trained staff. (Score = 4)
    - The Agency regularly provides training for Collection's staff which is divided into two parts, Safety Training, and Technical Training. Safety training is provided in-house, while Technical training is provided both in-house and outside the Agency. This training is tracked by the Agency Safety Officer and the Collection System Supervisor.

5. Finish capturing closed-circuit television (CCTV) inspection data using the National Association of Sewer Service Companies (NASSCO) coding standards and placing in a geographic information system (GIS) of entire RSS and BSS systems. (Score = 3)
    - CCTV inspection data was not captured in the GIS system within the 5-year KPI cycle due to the suspension of inspections during COVID-19 restrictions.

6. Track budget versus actual expenditures (Score =4)
    - Budget tracking is done through the annual budget process. Additionally, the Agency continuously works to evaluate grant and loan funding for new and future programs.

7. Conduct a condition assessment of both RSS and BSS systems (Score = 3)
    - Evaluation study performed 2015 Water Faculties Master Plan (WFMP) on RSS system. Pre-Treatment and Source Control regulate the BSS system (refer to Element 8).
    - BSS and RSS condition assessment is in progress as of December 2020.

8. Communicate the causes and effects of SSOs with member agencies. (Score = 4)
    - Quarterly MA meetings are split up between semi-annual staff meetings and semi-annual manager/supervisor meetings. These meetings are used to discuss challenges, ideas, and lessons learned (e.g., SSOs, SSMPs, etc.).

Overall, the Agency's goal attainment is scored at 3.37, which equates to substantial compliance (refer to Table 7 in the Element Sufficiency Ranking evaluation section above).

References:

- 2019 SSMP

Recommendations:

1. The audit team assessed the eight goals and recommended reevaluating if new goals are needed to continue to further improve the Agency's SSMP in meeting the overall goals of reducing SSO events and their health and environmental impacts should they occur.
2. Consider clarifying track budget vs. actual budget as it relates to mitigators.
3. Consider clarifying the need for condition assessments of both the BSS and RSS systems.
4. Tie goals to key performance indicators (KPIs) and 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: Above Average (B)

Findings:
1. Outdated organization charts.
2. Contact information needs updating, IEUA contacts, and Mutual Aid partners contacts.

References:
- 2019 SSMP, Contact Information for Management, Administrative, and Maintenance Positions (Table 4).
- 2019 SSMP, Mutual Aid Quick Reference Sheet
- Agency's website, Contact Us page, Agency Phone List.

Recommendations:
1. Update organization charts, including the date of the chart.
2. Update all contact information.

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 lateral 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: Well Above Average (A)

Findings:
1. Ordinances were reviewed, and no revisions were recommended.
2. The Agency has in place pretreatment agreements with each of its RCAs, which require that significant industrial users (SIUs) be properly permitted and required to meet Federal, State, and local limits.

Reference:
- Inland Empire Brine Line (IEBL) Ordinance No. 106
- Regional Wastewater System Ordinance No. 97
- Non-Reclaimable Wastewater System (NRWS) Ordinance No. 99
- Pretreatment Agreements with member agencies
- Discharge Permit Tracking Database
- Easement Documents

Recommendation:
1. None

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 CIP;
(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. Engineering and Construction projects need to be updated.
2. Update Safety topics to reflect added items.
3. Update the list of critical equipment and mutual aid (MA) resources.
4. SOPs need to be reformatted to comply with IEUA standards or rename current documents to Guidelines.
5. Manhole inspection forms need to be updated to reflect NASSCO level 2 standards.

References:
- 2019 SSMP, GIS, and SAP
- Safety Officer's and Supervisor's Training Tracker
- MA Agreement
- SOPs (CCTV, Combo Truck, Traffic Control, Opening, and Closing Manhole)

Recommendations:
1. Review all Engineering projects related to the collection system and update the current list.
2. Contact Safety Officer to update safety tailgate topics added in the fiscal year 2020/2021.
3. Update critical equipment, parts, and MA resource lists.

4. Need to utilize IEUA standard for all Collections' SOPs and update accordingly.
5. Work with IEUA GIS and the Collections Team to update manhole inspection forms.

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: Well Above Average (A)

Findings:
1. All recommendations were addressed through the 2019 Audit and Revision process.

Reference:
- *Standard Specifications for Public Works Construction (GREENBOOK)*

Recommendations:
1. None

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: Above Average (B)

Findings:

1. The Water Quality Monitoring Plan (WQMP) was created by the Compliance department but not approved by the IEUA Executive Management.

References:

- SSO Unified Response Guidance Plan, Agency's SSMP
- Agency's OERP
- MA Agreement

Recommendations:

1. WQMP needs to be approved by the IEUA Executive Managers and included in the OERP.

7. Audit of FOG (Fats, Oils, and Grease) Control Program 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: Well Above Average (A)

Findings:

1. The Agency owns and operates the Regional Sewerage and Non-Reclaimable Wastewater Systems. These collection and conveyance systems are large-diameter pipelines that collect all wastewater flows originating from the member agencies' sewer systems. Each member agency has a well-developed FOG program tailored specifically to address their cities' needs, including permitting and inspection of commercial and industrial dischargers and enforcement, public education, and outreach programs. Therefore, the Agency has determined that a formalized FOG Control Program is not needed. The Agency's Pre-treatment/Source Control (PT/SC) also conducts routine inspections on NRW dischargers. Additionally, the Agency has Ordinances in place prohibiting excessive FOG discharges and has a cleaning and maintenance schedule for areas prone to FOG build-ups such as siphons and hotspot pipeline sections.

References:

- IEBL Ordinance No. 106
- Regional Ordinance No. 97
- NRWS and Etiwanda Water Line (EWL) Ordinance No. 99

Recommendation:

1. Continue routine cleaning and inspection of siphons and known high-risk areas prone to FOG build-up.

2. Improve communication with member agencies regarding FOG control.

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: Well Above Average (A)

Findings:

1. Two major studies were completed to address the sewer systems' hydraulic capacities and the condition assessments, which were the June 2015 Wastewater Facilities Master Plan (WFMP) and the March 2006 PBS&J report. The WFMP only evaluated the hydraulic capacity for the RSS. No further capacity study is required at this time for the RSS system; however, a condition assessment should be considered for the system. The PBS&J report is nearly 15 years old, and a capacity and condition assessment should be considered for the BSS system.
2. Agency's Engineering department operates H2O Sewer®, a hydraulic computer model from MWH, which can be operated to test the impacts of new discharges on the system, and evaluate average dry weather flow, peak dry, and peak wet weather flow. The hydraulic model is updated, as needed, to reflect changes in the collections system and is GIS-based for up-to-date mapping capability and color-coded results presentation. Both the RSS and the BSS have sufficient capacity per the model.
3. Specific scenarios can be considered, such as increases inflow to determine potential, future bottlenecks in the system and physical improvements needed prior to encountering those future flows. These capacity improvement projects also help address and prevent SSOs. Graph 1 and 2 in Element 9 summarize the SSOs that have occurred historically and their cause.
4. Engineering also operates Primavera® (in conjunction with MS Excel® and SAP®) to track its projects, financial costs, and the distribution of those costs across the duration of the project. Financial expenditures are categorized with priority (high, medium, and low) and

areas of improvement. Table 16 in Element 9 summarizes the repair projects undertaken during this audit period.

References:

- 2006 PBS & J Report
- 2015 WFMP

Recommendations:

1. Consider conducting new condition assessments on the RSS and the BSS systems.
2. Consider conducting a new capacity analysis for the BSS 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: Well Above Average (A)

Findings:

1. The analysis was performed using CIWQS data up to March 1, 2021. Some of the evaluations looked at all historical data (since May 1, 2006). Others focused on the last five years, and others used as much available Agency data as possible (refer to tables, graphs, and figure below).

Table 11 below summarizes the general MMPM findings over the last five years and lists the associated tables, figures, and graphs.

Finding	**Table / Figure / Graph**
Slight increase in SSOs	Table 12 / Graph 1
One Repeat Spill Location	Figure 1
Spill Rate Indices and Net Volume Spills Indices State and Region	Table 13
Construction, Debris, and Operator/Design Spill Causes	Graph 2
Improved in PM Siphon/Hotspot Completion Rate	Graph 3
Improved Inspection and Cleaning Production	Graph 4 / Table 14
Increased Training and Certification	Table 15

Table 11: MMPM Findings Summary

Agency Historical SSOs

Table 12 below lists all the Agency's historical SSOs recorded in CIWQS.

No.	Date	Sys	Location / City	Volume (gal)	Cat	Pipe Matl	Flow Type	Pipe Size (in)	Cause	Description
1	5/1/2006	RSS	Sierra & Slover Ave, Fontana	28,600	1	N/A	Gravity	N/A	Construction	Union Pacific Railroad Discharge Spill Start Date/Time: 05/01/2006 00:00 Spill End Date/Time: 11/28/2011 11:30
1	5/1/2006	RSS	Sierra & Slover Ave, Fontana	28,600	2	VCP	Gravity	8	Construction	Utility conduit bored into sewer line.
2	3/6/2007	RSS	Grove Ave & Eighth St, Rancho Cucamonga	75	2	VCP	Gravity	18	Human	IEUA contractor reported that a rock fell onto the pipe during a cave-in of an excavated construction area.
3	5/2/2007	BSS	Philadelphia St & Carlos Ave, Ontario	1,500	1	VCP	FM	8	Human	CSDLAC worker dropped glass sample bottle into monitoring manhole, plugging the line.
4	9/9/2007	BSS	Philadelphia St btwn RP-1 Access Rd & Vineyard Ontario	10,000	1	VCP	FM	8	Struvite	Blockage in 90° bend
5	11/7/2007	RSS	Chino Hills Pkwy & Monte Vista Ave, Chino Hills	47,869	1	VCP	Gravity	27	FOG	Siphon blockage w/ grease & grit
6	12/11/2007	RSS	Prado Park Interceptor - MH No. 2, Chino	500	2	VCP	Gravity	10	Roots	Root Intrusion
7	6/6/2009	RSS	Philadelphia Street & Town Square, Chino	2,000	1	N/A	Gravity	N/A	Debris	The pumps at the Montclair Lift Station were working on a reduced pumping capacity as a result of excess debris/rags.
8	7/15/2009	BSS	8th Street between Buffalo & Milliken Ave, Rancho Cucamonga	2,500	1	N/A	Pressurized	N/A	Other / Equipment	The overflow event has been attributed to a failed gasket in the manhole lid caused by high pressure in the line.
9	7/25/2011	RSS	San Bernardino Sewage Lift Station, Fontana	6,000	1	N/A	N/A	N/A	Other / Equipment	Pump station failure
10	4/3/2012	RSS	San Bernardino Sewage Lift Station, Fontana	80,646	1	N/A	FM	N/A	Other / Equipment	Equipment failure occurred on the primary and backup communication processors.
11	5/8/2012	BSS	Jurupa & Buena Vista Fontana	6	2	N/A	N/A	N/A	Other	Union Pacific Railroad Discharge
12	7/21/2013	BSS	Philadelphia St. East of Vineyard, Ontario	3	3	N/A	N/A	27	Other / Foaming	Foaming in the RP-1 Centrate discharge line at the gravity connection manhole.
13	8/31/2013	BSS	Philadelphia St East of Vineyard, Ontario	19	3	N/A	Gravity	27	Other / Foaming	Centrifuge dewatering activity during normal operation had produced excess foam that surcharged from the NRW sewer line manhole on Philadelphia St.
14	3/18/2015	RSS	Live Oak Ave South of Woodland Dr (34.046 N, -117.481 W) Fontana	10,000	2	VCP	Gravity	21	Construction	While driving 42 inch steel casing, the exisiting 21 inch gravity sewer line was compromised. It was determined that the elevation of the 21 inch sewer line was approximtely 1.5 feet lower than anticipated.
15	5/6/2015	BSS	Etiwanda Ave North of Santa Ana Ave (34.057 N, -117.524 W) Ontario	823	3	VCP	Gravity	8	Debris	Debris in Gravity Mainline
16	8/1/2016	RSS	Francis St & Miliken Ave, Ontario	3,000	2	VCP	Gravity	8	Debris	Debris found in IEUA's system immediately downstream of the connection point with the City of Ontario's system.
17	2/15/2018	BSS	Bon View Avenue & Francis Street, Ontario	139,500	2	ACP	FM	12	Construction	City of Ontario contractor's excavating equipment hit a Non-Reclaimable Waste System pipeline.
18	3/10/2019	RSS	Preserve Lift Station	66,526	2	VCP	Gravity	10	Operator / Design	Loss of power to VFD controlled pumps. Operators failed to reset pumps. MH CIW-005 lower than overflow bypass
19	4/11/2019	RSS	Preserve Lift Station	12,945	2	VCP	Gravity	10	Operator / Design	Operators miss determined actual wet well level due to amount of rag mat. Believe empty and faulty level. Did not start pumps. Also had not fixed MH CIW-005 yet.
20	5/17/2019	RSS	El Prado Golf Course	600	3	VCP	Gravity	10	Debris	The spill was determined to be caused by a record rainy season causing erosion and mud infiltration through four non-sealed manholes. This was exacerbated by California Institution for Women sewage flows recently being re-routed through Preserve Lift Station (brought on-line Aug 2018), which lowered flowrate that helped keep the lines clean.
21	11/25/2019	BSS	5th Street and Berlyn Ave	37,410	1	ACP	Pressurized	21	Operator / Design	Proper preparation and precautions were not taken prior to opening a flang of a pressurized line.
22	7/19/2020	RSS	Glen Mead Trunk Siphon	42000	2	VCP	Gravity	10 & 15	Debris / Rags/ FOG	The spill was determined to be caused by rags and grease buildup in the siphon which plugged both the 10" and 15" barrels of the line. Upon further investigation, staff has determined that the connection from the Chino Hills lateral was installed incorrectly creating a blockage/weir which slowed the flow down allowing the solids to settle, grease to build up, and rags to accumulate.

Table 12: Agency SSOs in CIWQS (up to 3/1/2021)

The Agency has had 22 spills (since recording started in CIWQS 2006), 14 in the last 10 years, seven in the last five years, and five in the last two years. There has been one Category 1, five Category 2, and one Category 3 spills in the last five years.

SSOs by Location

Historical spills are shown in Figure 1 below.

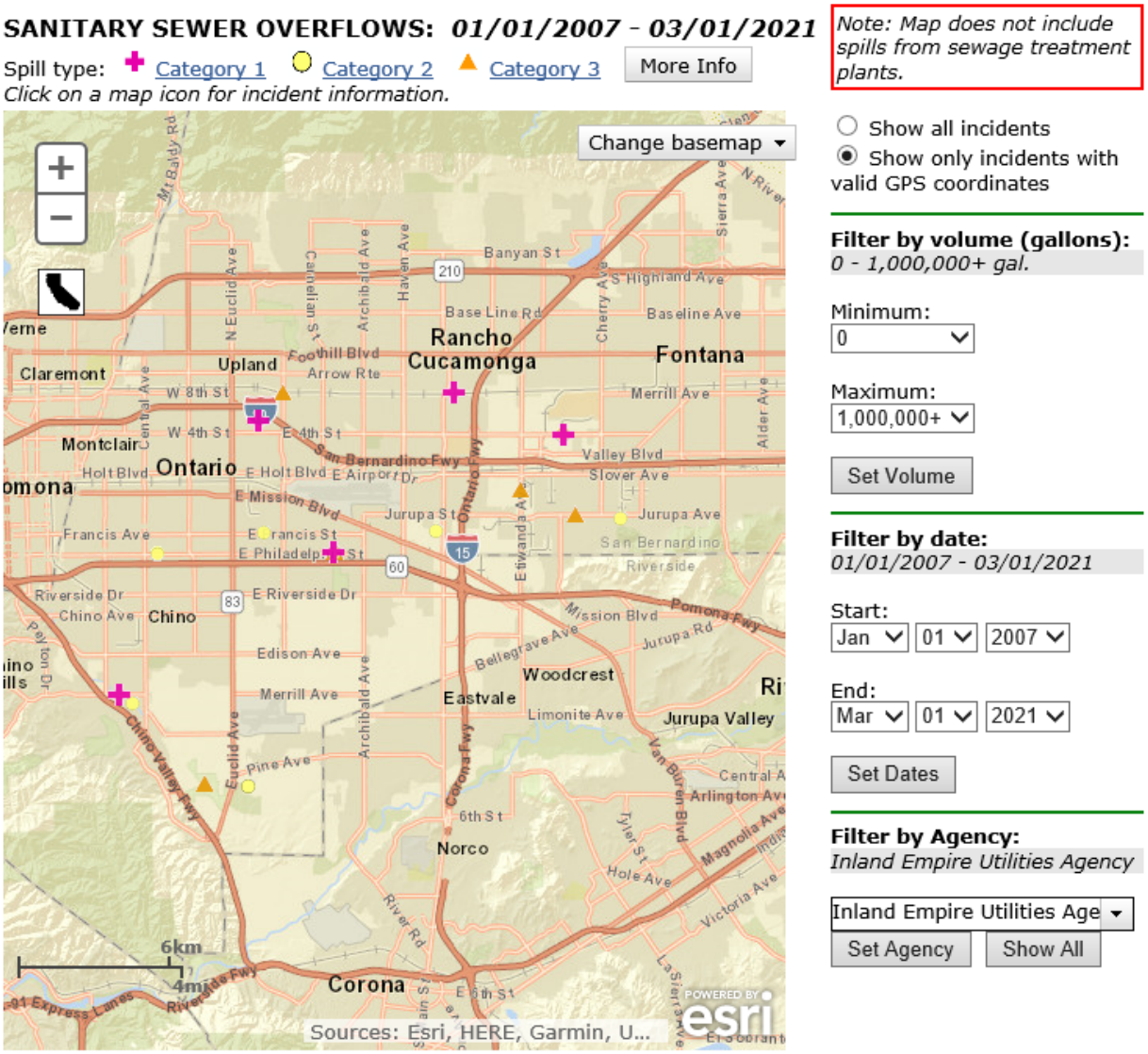


Figure 1: SSOs by Location (up to 3/1/2021)

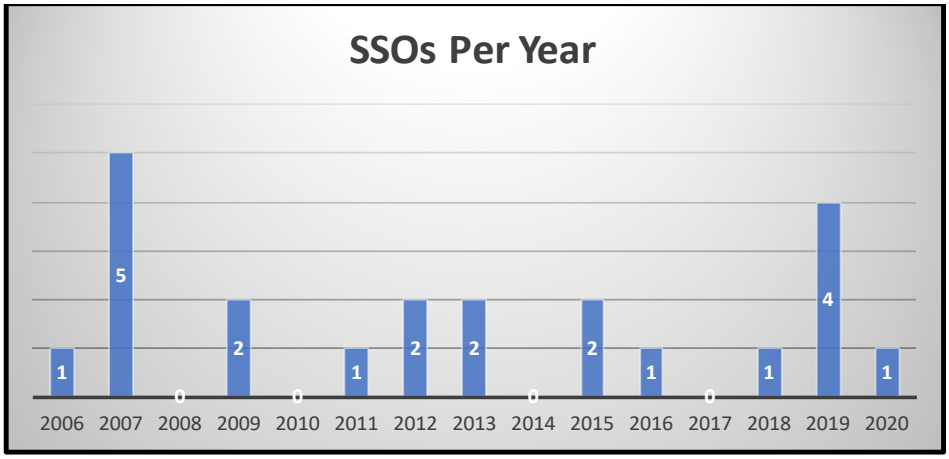
Figure 1 data is from CIWQS, which does not give the option to look earlier than 2007; therefore, the Agency's May 1, 2006 spill is missing from the map; however, it is in the CIWQS database. Additionally, three spill locations (refer to Table 12 above), at San Bernardino Lift Station (#9 and #10), outside the Regional Water Recycling Plant No. 1 (RP-1) (#12 and #13) and Preserve Lift Station (#18 and #19) had two spills each. Corrective actions were taken at all three locations after their respective spills.

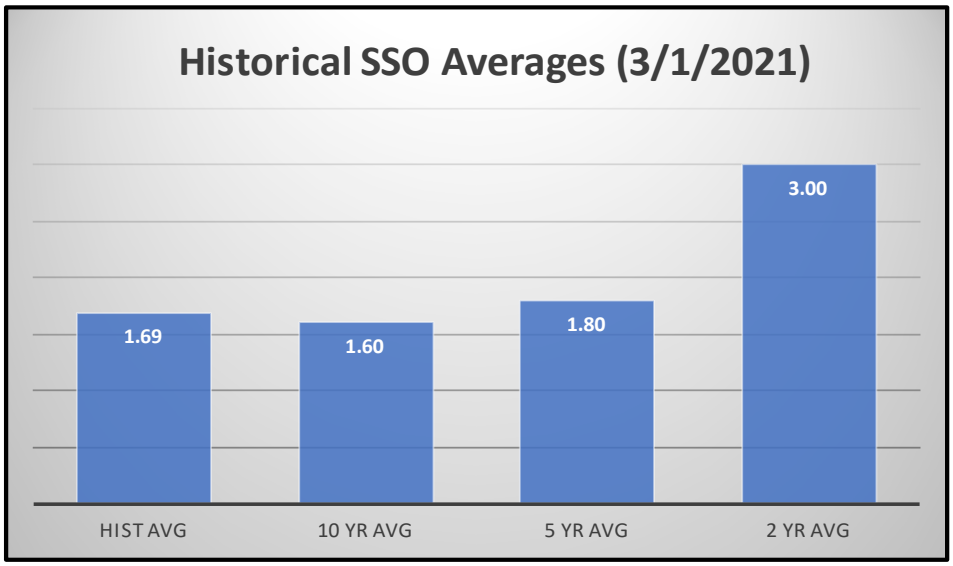
- The San Bernardino Lift Station had it's SCADA communication system upgraded to mitigate future communications problems.
- Operations at RP-1 changed their process to minimize foaming.
- The Preserve Lift Station has improved the pumping capacity, upgraded the level sensors and is in the process of upgrading the bypass system.

There has not been any SSO at these locations since the corrections were made.

SSOs Per Year

Year	As of 2020 #/yr)
2006	1
2007	5
2008	0
2009	2
2010	0
2011	1
2012	2
2013	2
2014	0
2015	2
2016	1
2017	0
2018	1
2019	4
2020	1
2021	0
Hist Total	22
10 yr Total	16
5 yr Total	9
2 yr Total	6
	2020
Hist Avg	1.69
10 yr Avg	1.60
5 yr Avg	1.80
2 yr Avg	3.00





Graph 1: Historical SSO Yearly Averages (up to 3/1/2021)

Graph 1 above shows the average SSOs per year have trended upward. The last five and two years have had an average of 1.80 and 3.00 spills per year.

SSO Rate & Volume

Spill rate indices and net volume spilled (i.e., not recovered) data was taken from CIWQS and is shown in Table 13 below.

Collection System Spill Summary

Operational Indices: Inland Empire Utilities Agency CS

Spill Rate Indice (spills/100mi/yr)									
	Category 1			Category 2			Category 3		
	Mainlines	Laterals	Not Specified	Mainlines	Laterals	Not Specified	Mainlines	Laterals	Not Specified
Inland Empire Utilities Agency CS	0.0	N/A	0.11	0.57	N/A	0.0	0.11	N/A	0.0
State Municipal (Public) Average	2.12	N/A	0.79	0.95	N/A	0.88	3.03	N/A	0.64
Region Municipal Average	1.11	N/A	0.14	0.4	N/A	1.56	0.51	N/A	0.64

Net Volume Spills Indice (gallons/1000 Capita/yr)									
	Category 1			Category 2			Category 3		
	Mainlines	Laterals	Not Specified	Mainlines	Laterals	Not Specified	Mainlines	Laterals	Not Specified
Inland Empire Utilities Agency CS	0.0	N/A	7.79	18.07	N/A	0.0	0.1	N/A	0.0
State Municipal (Public) Average	2214.98	N/A	25761.32	450.02	N/A	1818.24	24.77	N/A	31.8
Region Municipal Average	561.67	N/A	13.65	159.17	N/A	45.45	0.43	N/A	0.77

Table 13: Five Year Spill Rate & Net Volume Spilled Indices Comparison (3/1/2016 to 3/1/2021)

The Agency's SSO spill rate and net volume spilled indices are below the State and Region municipal average in all categories except for Category 2 mainlines above the regional average.

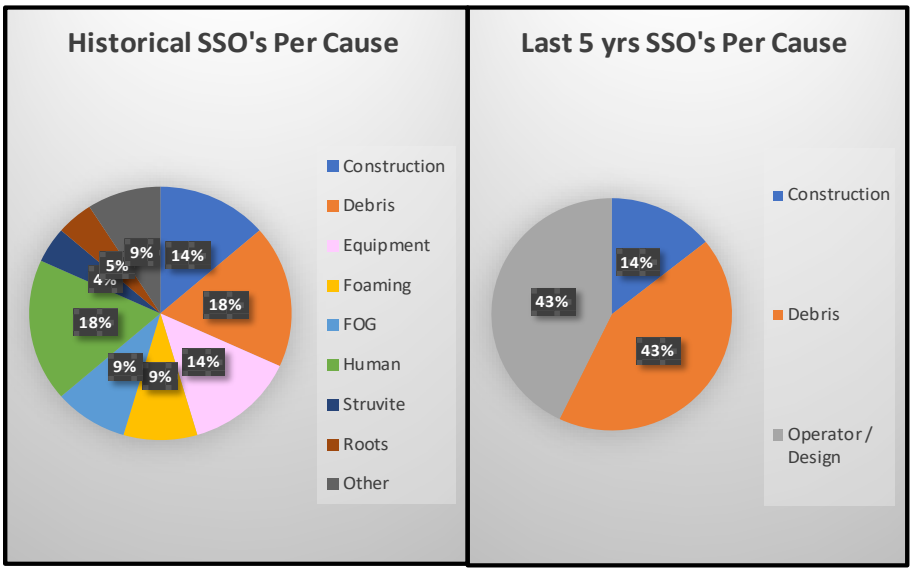
SSOs Per Cause

Historical

Cause	#
Construction	3
Debris	4
Equipment	3
Foaming	2
FOG	2
Human	4
Struvite	1
Roots	1
Other	2
Total	22

Last 5 years

Cause	#
Construction	1
Debris	3
Operator / Design	3
Total	7

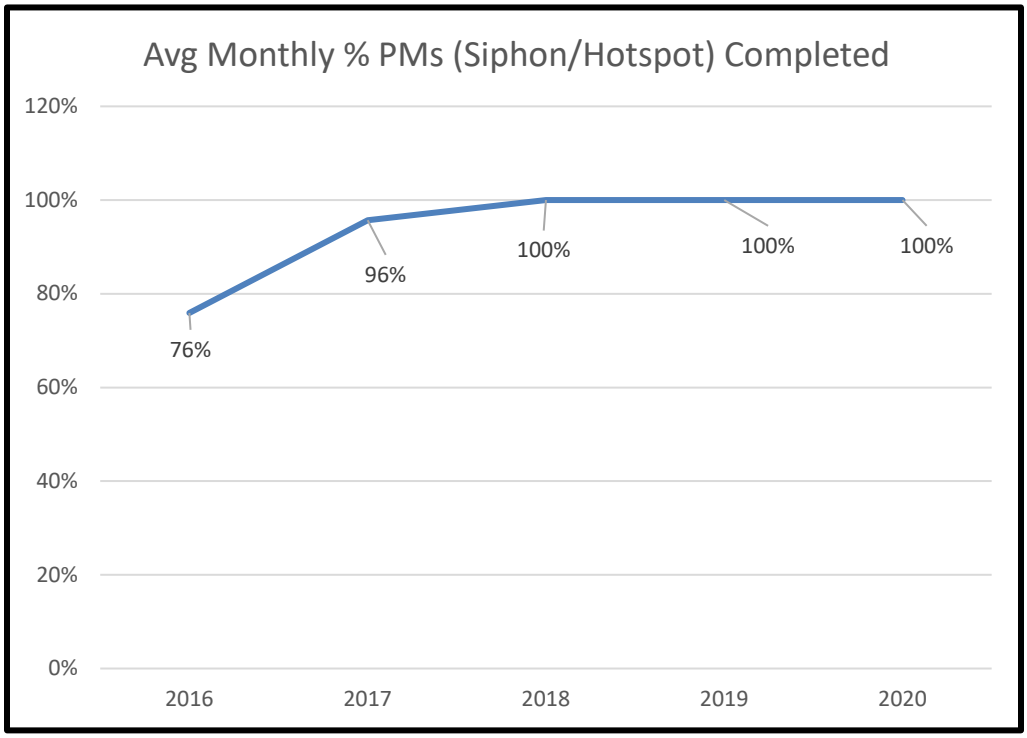


Graph 2: SSOs per cause (historical and last 5 years)

Graph 2 above shows that although various causes historically have resulted in SSOs, the last five years (six SSOs) were evenly split between operator/design and debris, with one due to construction activities.

Siphon/Hotspot Completion Rate

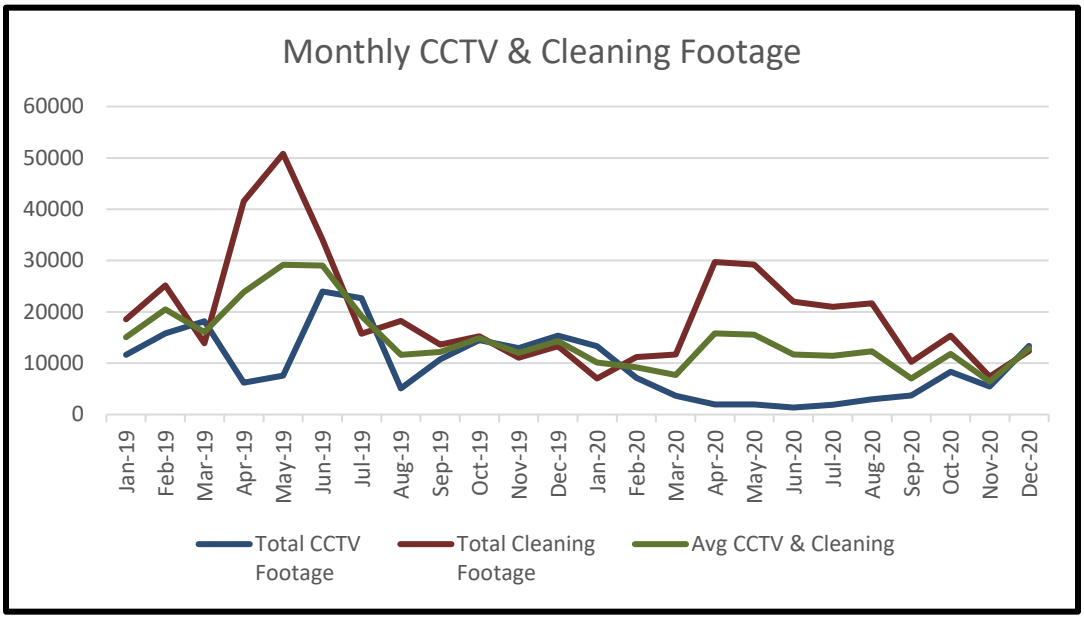
Graph 3 below shows the average monthly siphon/hotspot completion rate.



Graph 3: Average Monthly PM Completion Rate

As shown above, the PM completion rate has improved over the last five years, and 100% siphon/hotspot completion was realized in 2018 and continued in 2019 and 2020 as of March 1, 2021.

Inspection & Cleaning Production



Graph 4: Monthly Inspection and Cleaning Footage (all available information up to 1/1/2021)

Graph 4 above shows that the average monthly inspection and cleaning footage has gone down over the last two years due to the suspension of CCTV inspections during COVID-19. Table 14 below shows that the combined inspection and cleaning monthly average footage has decreased sixty-one percent from 2019 to 2020.

	Combined Inspection & Cleaning Monthly Average Footage
2019	18,159
2020	10,995

Decreased by 61%

Table 3: Combined Footage

Training

California Water Environmental Association (CWEA) Collection System Maintenance (CSM) certifications have changed slightly over the last two years. There are nine as of 2020, total eligible employees for certification (Deputy Manager of Maintenance (DMM), Supervisor, and seven field staff). (refer to Table 15 below).

Certification	2019	2020
CSM I	1	2
CSM II	2	1
CSM III	1	1
CSM IV	5	5

Table 45: Attained CWEA CSM Certifications

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

- SSMP Audit Training
- OERP
- Calculating Spill Volumes
- SSO Drills
- Researching and Doc SSO Start Times
- Impacted Surface Water Response Procedures
- SWRCB Employee Knowledge Expectations
- Employee Core Competency Evaluations of SSO
- CIWQS
- Collections SOP Training
- PSERP
- CWEA SARBS Collections Seminars
- Mutual Aid Meetings and Training Events
- Water Quality Sampling Plan

Repairs

Table 16 below lists the system projects and costs.

Project	Title	Construction Start Date	Project End Date	Cost to Date	Original Budget	No. of Manholes	Description
EN07011.00	NRW System Upgrades.	Jun 2006	Jun 2007	$1,051.20	$1,853.22		
EN07011.02	Regional & NRW Collection System Repairs	Sep 2007	Oct. 2009	$781,713	$780,930.53	13	Access manholes on the pressurized NRW Lines in Philadelphia St. and Bon View Ave.
EN07011.03	West Edison NRW Repairs (EN07813)	Oct 2008	Jul 2008	$1,279,062.31	$1,305,601.08	43	Repair of pressure manholes of the West Edison Pipeline between locations Pine and Santa Fe and N. Council Ave & 5th St
EN07011.05	NRW Asset Management Phase II	Oct. 2009	Oct. 2010	$610,770	$619,896.17	5	Manhole rehabs
EN07011.07	NRW Asset Management Phase II	Sep 2009	Aug 2010	$371,687	$373,218.82	18	Manhole rehabs
EN11034.00	NRW Collection System Repair Phase III	Oct 2013	Mar 2014	$677,788	$800,000	6	Includes buried manholes, rehab and demo
EN14037.00	Sewer Collection System Manhole Rehab	Aug 2014	Apr 2015	$372,265	$1,477,000	40	Cities of Ontario and Fontana
EN15037.00	NRW Manhole Upgrades	Oct. 2014	Dec. 2014	$38,318	$37,100	2	City of Ontario
EN15038.00	Project Folder does not exist	Oct. 2014	Dec. 2014	$64,520	$63,000	6	Cities of Ontario, Rancho Cucamonga
EN15045.00	Collection System Manhole Upgrades FY15-16	Sep 2016	June 2016	$598,497	$620,000	44	Located in cities on Ontario, Chino, Chino Hills, Fontana. Replace with cast Iron/ GMI
EN15046.00	Collection System Manhole Upgrades FY15-16	Sep 2015	Jun 2016	$363,762	$436,086	22	Includes rehab of the interior of 1 MH in the city of Ontario
EN17014.00	NRW Manhole Upgrades FY16-17	Nov. 2016	Aug 2017	$198,130	$350,000	11	Manhole rehabs
EN17015.00	Collection System Upgrades FY 16-17	Apr. 2017	Jan 2018	$323,192	$500,000	38	Manhole rehabs

EN18014.00	NRWS Manhole Updates 17/18 Phase II	Aug. 2017	Sep. 2017	$102,491	$200,000	9	Remove, dispose and replace nine manhole covers within the SBC Flood Control
EN18014.01	NRWS Manholes Upgrades 17-18 Phase II	Sep 2018	Feb 2019	$353,162.49	$17,939.98	9	Remove, dispose and replace nine manhole covers within the SBC Flood Control
EN18015.00	Collection System Upgrades FY 18/19	Sep 2018	Jan 2019	$121,430	$500,000	79	Located in Chino and Ontario
EN18057.00	NRW Manhole Cover Removal	Nov 2018	In Progress	$8,353	$170,000		Internal lid removal
EN19014.00	NRWS Manholes Upgrades	Aug 2019	May 2020	$200,000	$200,000	39	Design bid
EN19015.00	Collection System Upgrades	Feb. 2019	July 2020	$750,000	$500,000	79	Manholes pre-purchased. Located in Chino and Ontario
EN19027.00	NRW Pipeline Relining	July 2018	In Progress	$237,988.11	$2,395,00		Manhole rehabs and pipeline relining
EN19028.00	Manhole and Pipeline Condition Assessment	Aug 2019	In Progress	$115,957.50	$915,000		Collection system Assessment
EN20014.00	NRW Manhole Upgrades	June 2019	Aug 2020	$309,336.94	$310,000	23	Manhole rehabs
EN20015.00	RSS Manhole Upgrades	June 2019	Aug 2020	$529,998.56	$530,000	46	Manhole rehabs
EN21014.00	NRW Manhole Upgrades	July 2020	In Progress	$21,359.76	$180,000	22	Manhole rehabs
EN21015.00	RSS Manhole Upgrades	July 2020	In Progress	$26,195.66	$500,000	44	Manhole rehabs
EN22002.00	East End Flow Meter Replacement	March 2016	In Progress	$1,491,500.72	$3,600,000		Changing out the flow meter

Table 16: System Repairs

References:

- GIS Data
- Archived SSO Data
- CIWQS Database

Recommendations:

1. Continue monitoring and evaluate annually.
2. Brief Management annually and the Board of Directors after each audit.

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 the Enrollee'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: Well Above Average (A)

Findings:

1. As shown in Table 17 below, the Agency 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 13), dictated more frequent internal audits. The original Board adoption date was April 15, 2009, but the initial plan was set in place on May 2, 2009, which is used as the anniversary date for the biannual audits. However, the SSMP re-certification date has been kept as mid-April to match the Board convening dates.

The last audit, dated May 2, 2019, can be found on the Agency's website (www.ieua.org). All required historical audits (last five years) are maintained on the Agency's server.

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

Date	Note
May 2, 2009	Initial Plan
May 2, 2011	Biannual Audit
May 2, 2013	Biannual Audit
May 2, 2015	Biannual Audit
May 2, 2017	Biannual Audit
May 2, 2019	Biannual Audit
May 2, 2021	Biannual Audit

Table 17: IEUA SSMP Audit History

References:

- Current and previous audits

Recommendations:

1. Consider inviting outside agencies to help conduct the next audit.

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 Enrollees sanitary sewer system.

Sufficiency: Above Average (B)

Findings:

1. Communication to the public is limited and needs improvement.
2. Emergency sewer-related information is difficult to find on the website.

References:

- 2019 SSMP
- Agency's website

Recommendations:

1. Increased presence on the IEUA website for the public.
2. Make the website easier to navigate for emergency sewer-related information.

* * *