

SECTION X—SSMP PROGRAM AUDITS

Requirement¹

- a. Perform an internal audit every year and prepare a report;
- b. The audit shall focus on the effectiveness of the SSMP and the City's compliance with SSMP requirements including identifying SSMP deficiencies and corrective steps.

Supporting Documents

A summary of the work related to this section and the supporting official documents are shown in Table X.1.

A copy of each document follows the table.

¹ Regional Board Development Guide (July 2005), Page 22, #10.

TABLE X.1—SUMMARY OF SSMP PROGRAM AUDITS

Item Required	Supporting Documents
a. Perform a bi-annual internal audit	<p><u>SSMP Audit Program</u>. January 2019. Memorandum from the City of Benicia Management Analyst.</p> <p><u>Sewer System Management Plan Bi-Annual Audit Report</u>. Conducted bi-annually. Prepared by EOA, Inc. and City of Benicia.</p>
b. Demonstrate effectiveness and compliance with SSMP requirements	<p><u>SSMP Audit Program</u>. January 2019. Memorandum from the City of Benicia Management Analyst.</p>

SSMP Audit Program

Sewer System Management Plan Bi-Annual Audit Report



Public Works Department
MEMORANDUM

Date: April 30, 2014
To: File
From: Carrie Wenslawski, Management Analyst
Re: **SSMP Audit Program**

Internal audits to identify the progress of the implementation of the SSMP and evaluate its effectiveness (including any corrective measures needed) are required on a periodic basis. Audits shall be conducted bi-annually (covering the previous two calendar years) with a copy of the audit included in Section X of the SSMP and made available to regulators upon request.

The City's plan is to conduct the internal audit in conjunction with a bi-annual review (and, as necessary, update) of the SSMP. In addition to identifying and correcting deficiencies (or specifying the schedule for such correction), the audit will review effectiveness of implementing the SSMP elements using the performance measures listed in SSMP Section IX and Table 1 of the audit form. As indicated in Section IX, performance measures are expected to yield meaningful results only when viewed over a number of years (i.e. long-term trends) and may show significant variability on a year-to-year basis.

The first audit (2008) focused primarily on the completeness of the SSMP to date. Subsequent audits have focused on SSMP implementation and evaluation of SSMP effectiveness as indicated above.

Sewer System Management Plan Annual Audit Report

Adapted from format developed by BACWA

Name of agency	<i>City of Benicia</i>
CIWQS CS Name	<i>Benicia City CS</i>
WDID	<i>2SSO10095</i>
Date of audit	<i>March 13, 2020. Follow-up actions to be completed by Oct 2020.</i>
Reporting Period	<i>Calendar years 2018-2019</i>
Audit Team	<i>Ray Goebel, P.E. (EOA, Inc.) Drake Valentine (Public Works Maintenance Superintendent) Carrie Wenslawski (Public Works Management Analyst) Mark Bautista (Water Quality Supervisor) Jeff Gregory (WWTP Superintendent)</i>
System Overview	
Miles of gravity sewer mains	<i>148*</i>
Miles of force mains	<i>5</i>
Total miles of all sewer lines	<i>153</i>
Number of pump stations	<i>23</i>
Miles of private sewer mains, excl. laterals	<i>0</i>
Miles of private sewer laterals	<i>~80</i>
Population served	<i>~28,000</i>
Current average monthly single family residential sewer rate	<i>\$82.87 (FY 2018/19) \$88.67 (FY 2019/20), based on 12 ccf of water used</i>

*Previously listed as 145 miles. Revised in 2020 to 148 based on more accurate information.

This audit includes information regarding the status and implementation of the SSMP as for calendar years 2018 and 2019. Annual SSO statistics through calendar year 2019 are presented in Table 1, with selected statistics also shown graphically in Figure 1. Audit team comments for particular sections (or subsections) are indicated in italics. All revisions identified will be completed by October 1, 2020.

Note: The Order of headings below is based on Statewide Order 2006-003-DWQ.

I. GOALS

1. Are the goals stated in the SSMP still appropriate and accurate? YES / NO
(check one)
2. If you answered NO to question 1, describe content and schedule for updates, or provide additional comments for YES response.

II. ORGANIZATION

REFERENCE MATERIAL

- **Organization chart**
- **Phone list**

3. Is the SSMP up-to-date with agency organization and staffing contact information?

YES / NO

4. If you answered NO to question 3, describe content and schedule for updates, or provide additional comments for YES response.

Organization and contact information is in SSMP Section II and also on p. A-1, Side B of the Overflow Emergency Response Plan (Section VI). The City’s SSMP web site has a organization chart and contact numbers for Public Works Maintenance and Wastewater Operations Divisions.

III.LEGAL AUTHORITY

REFERENCE MATERIAL

- **Ordinances**
- **Enforcement actions**

5. Does the SSMP contain up-to-date information about your agency’s legal authority?

YES / NO

6. Does your agency have sufficient legal authority to control sewer use and maintenance?

YES / NO

7. If you answered NO to questions 5 or 6, describe content and schedule for necessary changes, or provide additional comments for YES response.

SSMP Section II has a summary table of legal authorities and relevant excerpts from the Benicia Municipal Code. The excerpted sections were updated after the previous audit to ensure that all reference were current.

The City’s legal authority for control of FOG is consistent with the City’s current FOG control program.

IV. OPERATION AND MAINTENANCE PROGRAM (formerly MEASURES AND ACTIVITIES)

a. COLLECTION SYSTEM MAPS

REFERENCE MATERIAL

- **Summary of information included in mapping system**

8. Does the SSMP contain up-to-date information about your agency’s maps?

YES / NO

9. Are your agency’s collection system maps complete, up-to-date, and sufficiently detailed?

YES / NO

10. If you answered NO to questions 8 or 9, describe content and schedule for necessary changes, or provide additional comments for YES response.

The utility map system was originally based on CAD drawings. Utility maps were updated in 2008, with revised pages bound into the map books in 2010.). The City has transition to a Geographic Information System (GIS)-based map system, which is hosted and maintained by an outside contractor (ID Modelling), and which is linked to the City’s Sedaru mobile computerized maintenance management system (CMMS). Necessary map corrections and

updates are tracked on the sewer division's master hard copy (legend map), and forwarded to the contractor periodically for updating the GIS files. The City plans to eventually host the GIS system internally and make all changes in-house.

b. PRIORITIZED OPERATION AND MAINTENANCE

REFERENCE MATERIAL

- **Cleaning schedules**
- **List or map of hotspots**
- **Work orders**
- **Service call data**
- **Customer feedback**

11. Does the SSMP contain up-to-date information about your agency's preventive maintenance activities? **YES** / NO

12. Considering the information in Tables 1 – 3, are your agency's preventive maintenance activities sufficient and effective in reducing and preventing SSOs and blockages? **YES** / NO

13. If you answered NO to questions 11 or 12, describe content and schedule for necessary improvements or provide additional comments for YES.

In 2017, the City completed a 3-year cycle of "top-down" cleaning. A new cycle is in progress. Collection staff now use iPads in the field, replacing hard copy forms for documentation of field activities in some cases. Some of the activity tracking forms (Excel spreadsheets) that are included in SSMP are being replaced with equivalent reports generated from the CMMS.

Overall, the number and volume of SSOs is trending downward, as indicated in Table 1 and Figure 1. However, significant year-to-year variability can still be expected. Roots continued to be responsible for the greatest percentage of SSOs in 2018/2019.

c. REHABILITATION AND REPLACEMENT PLAN, INSPECTIONS AND CONDITION ASSESSMENT

REFERENCE MATERIAL

- **Inspection reports**
- **Infiltration and Inflow (I/I) monitoring studies and reports**
- **Pipe and manhole condition data**

14. Does the SSMP contain up-to-date information about your agency's inspections and condition assessment? **YES** / NO

15. Are your agency's scheduled inspections and condition assessment system effective in locating, identifying, and addressing deficiencies? **YES** / NO

16. If you answered NO to questions 14 or 15, describe content and schedule for necessary changes, or provide additional comments for YES.

The results of earlier condition assessment studies are incorporated into the Capital Improvements budgets that are part of the SSMP. The City also uses

information from inspections conducted during maintenance activities to identify problems/deficiencies. See Table IV.1.c, November 2018 Public Works Memorandum “O&M Maintenance Procedures – Infrastructure Continuous Improvement (Rehabilitation and Replacement)”

The maintenance crew has a small “push camera” that is used for troubleshooting during maintenance activities. In addition, The City purchased a CCTV truck in 2016 (the City formerly used an outside contractor for CCTV work). CCTV video is managed using the IT Pipes software and stored on City server. The software includes PACP ratings. 30,000 ft. of video inspections were completed in 2017. Under terms of a Settlement Agreement with Northern California River Watch, defective sewers located within 200-ft of surface waters were given a higher priority for repair and replacement.

The City will purchase a new Vector truck in 2020.

d. TRAINING

REFERENCE MATERIAL

➤ **Employee training records**

17. Does the SSMP contain up-to-date information about your agency’s training expectations and programs? **YES**/ NO
18. Do supervisors believe that their staff is sufficiently trained? **YES**/ NO
19. Are staff satisfied with the training opportunities and support offered to them? **YES**/ NO
20. If you answered NO to questions 17, 18, or 19, describe content and schedule for necessary improvements, or provide additional comments for YES response.

Training is an ongoing activity as documented in the SSMP. Training of collection crew, supervisors, and stand-by personnel for SSO volume estimation was completed in May 2014. WWTP laboratory staff provided formal training for SSO response sample collection in 2014, and an informal refresher was done in 2015. The City plans to repeat SSO volume estimation train within the next several years. Currently, all field crew who are involved in SSO volume estimation have been through a training program

The City also puts a major emphasis on safety training and has developed a Safety Program with assistance of an outside contractor (Du-All Safety).

Finally, the City emphasizes the importance of CWEA certification, and the number of certifications among the Public Works Maintenance crew has increased.

e. CONTINGENCY EQUIPMENT AND REPLACEMENT INVENTORIES

REFERENCE MATERIAL

- ##### ➤ **Funds spent on equipment and materials**
- ##### ➤ **Equipment and parts inventory**

- 21. Does the SSMP contain up-to-date information about equipment and replacement inventories? YES / NO
- 22. Are contingency equipment and replacement parts sufficient to respond to emergencies and properly conduct regular maintenance? YES / NO
- 23. you answered NO to questions 21 or 22, describe content and schedule for necessary arrangements, or provide additional comments for YES response

The spare parts inventory was updated in early 2019.

f. RESOURCES AND BUDGET

REFERENCE MATERIAL

- **Current Capital Improvement Plan (CIP)**
- **Current operating budget**

Note: the following questions regarding resources and budget do not correspond directly to a requirement in the Statewide Order 2006-003-DWQ, but are relevant to this element.

- 24. Does the SSMP contain up-to-date information about your agency's resources and budget? YES / NO
- 25. Are your agency's resources and budget sufficient to support effective sewer system management? YES / NO
- 26. Do your agency's planning efforts support long-term goals? YES / NO
- 27. If you answered NO to questions 24, 25, or 26, describe content and schedule for necessary changes, or provide additional comments for YES response.

Sewer rate increases were adopted in September 2016 for the five-year period Fiscal Year 2016-17 through 2020-21 to promote a fiscally healthy and sustainable future for the utility. The new rate structure includes both a fixed sewer service charge (i.e. sewer maintenance) and a new volumetric charge based on water consumption (i.e. sewer consumption charge). On April 17, 2018 City Council approved a sewer rate revision for Fiscal Year 2018-19 from 9% to 0% as a result of a revised Capital Improvement Program. The table below shows the revised sewer rates as of April 17, 2018, which remain accurate as of March 2020. Also shown below is a summary of current 5-yr Wastewater CIP budgets (adopted May 28, 2019). A brief description of individual collection system projects scheduled for FY 2019/20 and 220/21 listed is included as Attachment A to this audit. The Bayshore Road project addresses a structural deficiency that was the cause of an SSO in 2019. The other 2019 SSO attributed to structural failure (3600 Park Rd) was addressed through permanent repairs (removal and blind flanging) of an abandoned asset.

Bi-Monthly Sewer Rates	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21
	16%	12%	9% - 0%	7%	5%
Bi-Monthly Fixed Service Charge					
Residential ¹ (Per Billing Unit)	\$86.90	\$97.34	\$97.34	\$104.15	\$109.36
Bi-Monthly Fixed Service Charge					
Commercial & Industrial - Low Use (Per account)	\$129.28	\$144.80	\$144.80	\$154.94	\$162.68
Commercial & Industrial - Medium Use (Per account)	\$268.36	\$300.56	\$300.56	\$321.60	\$337.68
Commercial & Industrial - High Use (Per account)	\$806.40	\$903.16	\$903.16	\$966.38	\$1,014.70
Municipal (per EDU)	\$256.80	\$287.66	\$287.66	\$307.80	\$323.19
Volumetric Charge (\$/HCF)					
Residential (Applied to <u>Capped Monthly</u> Water Use)	\$2.54	\$2.85	\$2.85	\$3.05	\$3.20
Commercial & Industrial - Low Use (Applied to <u>Monthly</u> Water Use)	\$4.05	\$4.54	\$4.54	\$4.86	\$5.10
Commercial & Industrial - Medium Use (Applied to <u>Monthly</u> Water Use)	\$4.49	\$5.03	\$5.03	\$5.38	\$5.65
Commercial & Industrial - High Use (Applied to <u>Monthly</u> Water Use)	\$8.40	\$9.40	\$9.40	\$10.06	\$10.56
Municipal (Applied to <u>Monthly</u> Water Use)	\$4.77	\$5.34	\$5.34	\$5.71	\$6.00

1. Includes Single-Family, Multi-Family and Mobile Homes; Customers are assessed on the basis of their number of EDU's.

g. OUTREACH TO PLUMBERS AND BUILDING CONTRACTORS

REFERENCE MATERIAL

- **Fliers/mailings**
- **Mailing lists**

Note: Statewide Order 2006-003-DWQ does not include this requirement.

28. Does the SSMP contain up-to-date information about your agency's outreach to plumbers and building contractors? YES NO

29. Has your agency conducted or participated in any outreach activities to plumbers and building contractors? YES NO

30. If you answered NO to questions 28 or 29, describe content and schedule for future activities, or provide additional comments for YES response.

Information regarding the City's outreach activities, including the October 2009 mailing to plumbers and sewer contractors are in SSMP Section IV. The City's Building Division has copies of the outreach brochure in the Division's waiting room. The brochure is also on the bidder notification section of the City's web site at <https://www.ci.benicia.ca.us/bids>.

DPW staff have verified with the Building Division that it conducts inspections when a customer does a full or partial replacement of a private sewer lateral, if a building permit has been issued. However, it does not inspect when a customer hires a licensed plumber to do other work on a private lateral. The Public Works Maintenance Supervisor has met personally with management of a major local plumbing firm to clarify issues related to ownership and maintenance of sewer laterals.

V. DESIGN AND CONSTRUCTION STANDARDS

REFERENCE MATERIAL

- **Design and construction standards**
- **Ordinances**

31. Does the SSMP contain up-to-date information about your agency's design and construction standards? YES / NO
32. Are design and construction standards, as well as standards for inspection and testing of new and rehabilitated facilities sufficiently comprehensive and up-to-date? YES / NO
33. If you answered NO to questions 31 or 32, describe content and schedule for necessary revisions, or provide additional comments for YES response.

The SSMP's Section V has a copy of the City's Engineering Design Standards and Standard Plans that apply to collection system components in Public Works projects. These standards are current, but are under review by the Public Works Engineering Division for updating. Section 13.60 of the City's Ordinance Code requires that "The building sewer and lateral sewer shall be tested in accordance with city standard specifications"

The next SSMP revision should clarify that while the property owner owns a building's upper and lower lateral lines to the main sewer, it is the City's policy that if the property owner installs a right-of-way cleanout and a new lateral using approved materials and with a building permit, the City will assume responsibility for maintaining the lower lateral.

VI. OVERFLOW EMERGENCY RESPONSE PLAN

REFERENCE MATERIAL

- **Data submitted to CIWQS**
- **Service call data**

34. Does the SSMP contain an up-to-date version of your agency's Overflow Emergency Response Plan? YES / NO
35. Considering the information in Table 1, is the Overflow Emergency Response Plan effective in handling SSOs? YES / NO
36. If you answered NO to questions 34 or 35, describe content and schedule for necessary revisions and implementation, or provide additional comments for YES response.

Section VI's "Overflow Emergency Response Plan", prepared by DKF Solutions Group, is reviewed and updated periodically. A copy of this Plan is included in the SSMP and is carried in collection system vehicles. The current version is dated January 2015. The City does not necessarily use all of the documentation forms that are contained in the EORP. For SSOs, Public Works Superintendent (LRO) is typically on-site and takes notes during SSO response. These notes are the basis for the CIWQS reports.

For the 2014 SSMP update, the "Spill and Bypass Reporting" document in Section VI was deleted and replaced with a new document "SSO Regulatory Notification, Reporting and Record Keeping" The latter reflects the SWRCB's 2013 revisions the Statewide Order's MRP. Also added to Section VI was the "SSO Monitoring Plan", detailing SSO monitoring requirements for SSOs where >50,000 gallons reaches surface waters. The Monitoring Plan is also used by the City for discretionary monitoring for smaller spills.

Table 1. Annual SSO Statistics

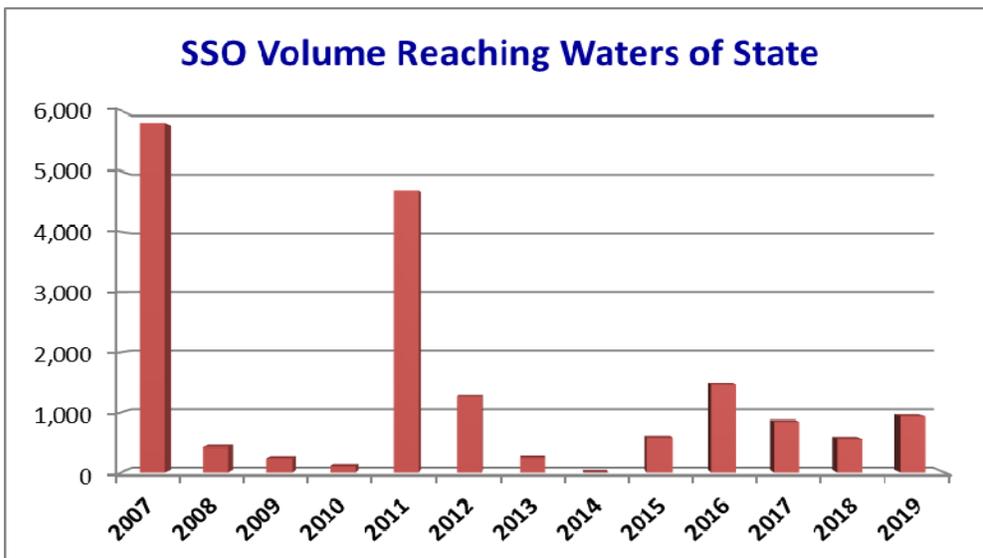
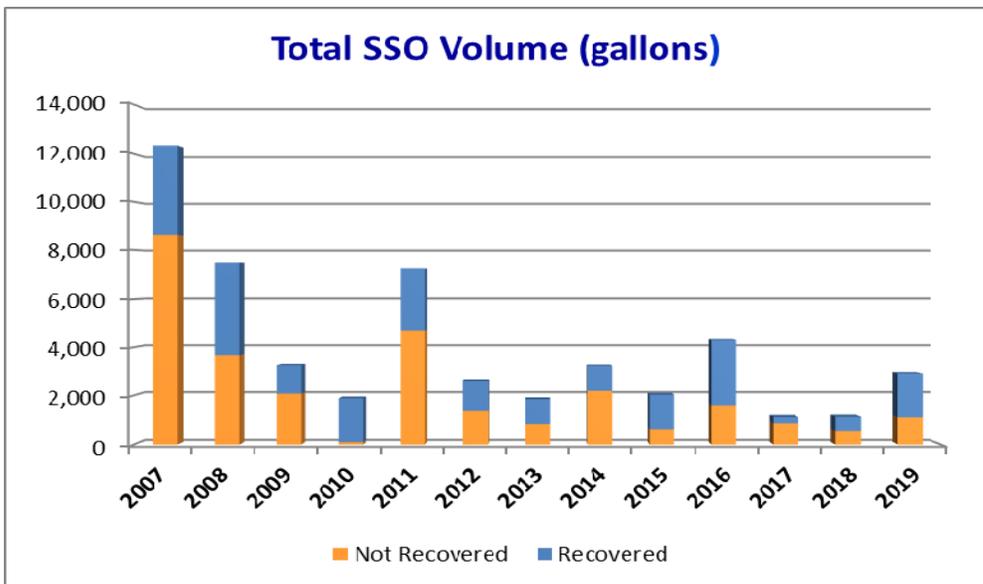
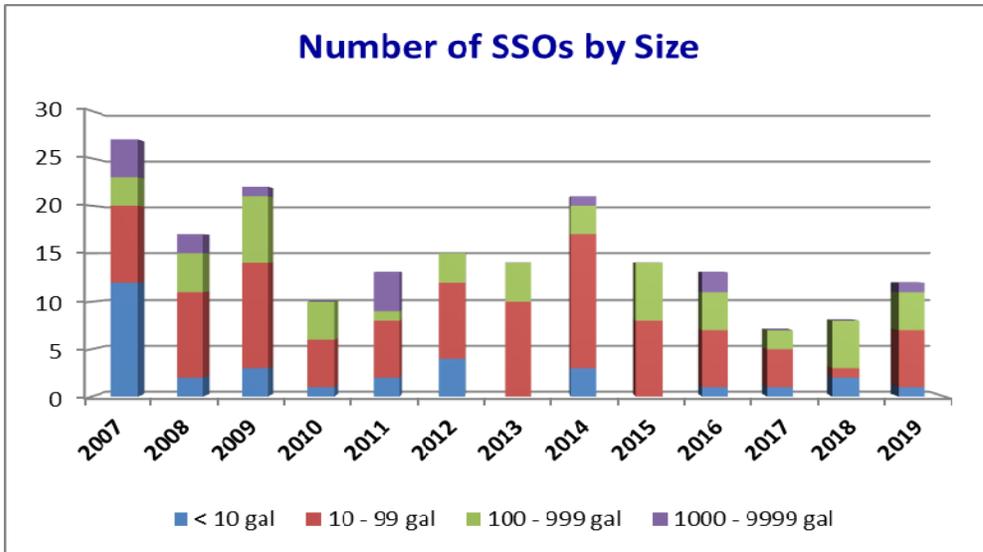
Indicator	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number of SSOs (total)	27	17	22	10	13	15	14	21	15	13	7	8	12
Wet season SSOs ¹	*	3	6	4	10	8	9	9	9	9	5	5	7
Dry season SSOs ¹	*	14	16	6	3	7	5	12	6	4	2	3	5
Number of SSOs (by cond.at time of SSO)													
Wet Conditions				0	0	0	0	0	1	3	2	1	1
Dry Conditions				10	13	15	14	21	14	10	5	7	11
Number of SSOs (by volume range)													
< 10 gal	12	2	3	1	2	4	0	3	0	1	1	2	1
10 – 99 gal	8	9	11	5	6	8	10	14	8	6	4	1	6
100 – 999 gal	3	4	7	4	1	3	4	3	6	4	2	5	4
1000 – 9999 gal	4	2	1	0	4	0	0	1	0	2	0	0	1
≥10,000 gal	0	0	0	0	0	0	0	0	0	0	0	0	0
Total SSO Volume (A)	12,326	7,486	3,264	1,873	7,251	2,625	1,838	3,241	2,029	4,299	1,121	1,130	2,930
Volume reaching waters of the State (B)	5,800	425	240	101	4,675 ⁴	1,275	251	0	576	1,463	850	557	937
Volume not contained but not reaching waters of the State (A-B-C)	2,806	3,255	0	0	2	100	589	2193	48	127	18	0	175
Volume recovered (C)	3,720	3,806	1,189	1,772	2,574	1,250	998	1,048	1,405	2,707	253	573	1,818
Net volume (total minus recovered) (A-C)	8,606	3,680	2,078	101	4,677	1,375	840	2193	624	1592	868	557	1,112
Number of SSOs per 100 miles of sewer/year ²	18.0	11.3	14.7	6.67	8.67	10	9.33	14.0	10	11.5	4.7	5.3	8.0
Volume of SSOs per 100 miles of sewer/year ²	8,217	4,991	2,178	1,249	4,834	1,750	1,225	2,161	1,353	2,866	747	753	1,953
Total Volume conveyed to the plant (mil gal)	865	830	806	837	920	841	738	799	692	739	878	719	820
Total volume SSO / Total volume conveyed, gallons / million gallons	14.2	9.0	4.0	2.4	7.88	3.1	2.5	4.1	2.9.3	5.8	1.3	1.6	3.6
Number of SSO (by cause)													
Blockages													
Roots	8	7	6	4	7	3	4	6	7	8	2	6	3
Grease	5	3	2	2		2	2	4		1	1		3
Debris - General	4	4	5		4	7	4	3	2				1
Debris - Construction (added 2014)								2					
Debris - Rags (added 2014)								1	5	1		1	2
Debris from Laterals				2									
Other (added 2014)								1 ⁵			1	1 ⁵	1
Multiple causes		1											
Infrastructure failure	3	1	9	1	1	2	2	4	1	3	3		2
Inflow & Infiltration					1 ⁴								
Electrical Power Failure													
Flow Capacity Deficiency													
Natural Disaster													
Bypass													

Indicator	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Cause Unknown	7	1		1	1	1	2						
Average Emergency Response Time, minutes ³													
Business Hours	*	*	*	*		11.8	8.5	25	13.3	11.2	5.8	10.1	N/A
Non-business hours	*	*	*	*		21.3	25	30.8	20	28.3	30	10.5	45
Number of locations with multiple SSOs	*	0	1	0	0	0	1	0	1	0	0	0	0
Maintenance Activities													
Footage Cleaned (linear feet) ⁶			107,767	103,633	87,314	97,949	107,491	116,147	113,625	109,430	115,088	99,171	99,171
Top-down Cleaning (linear feet) ⁶										111,028	55,809	70,893	0
Targeted Cleaning – added 2018 (linear feet) ⁶												7,648	12,772
Televised Inspection (number through 2017, linear feet 2018-2019)	*	*	43	45	42	47	56	62	51	54	159	45,686	40,030
Manholes Repaired (number)			4	2	3	3	2	1	9	18	1	0	0

Notes for Table 1:

1. Wet season defined as Nov-April, dry season May-Oct. **This seasonal categorization does not necessarily reflect weather or flow conditions at the time of the SSO.**
 2. 2007 statistics revised in Sept version 2009 to reflect corrected total miles of sewer lines (150 mi)
 3. From time SSO call received by PW Maintenance Division
 4. Of this total, 2200 gallons is attributed to an SSO that was caused by a potable water main brake that resulted in potable water entering a sewer manhole, exceeding the capacity of the sewer line. In CIWQS, the cause of this SSO is identified a I&I (inflow). The estimate for spill volume that reached waters of the state included both sewage and potable water.
 5. SSO caused by Collection System maintenance activity.
 6. Footage cleaned refers to biannual and quarterly maintenance cleanings of specific problem areas. Top-down cleaning refers to cleaning of the entire system done in conjunction with CCTV.
- * Raw data is available on field log sheets but cannot easily be compiled for this summary. Summary data for these metrics will be more accessible in the future upon implementation of a computerized maintenance management system.

Figure 1. SSO Statistics



VII. FATS, OILS, AND GREASE (FOG) CONTROL PLAN

REFERENCE MATERIAL

- List or map of FOG sources in service area
- List or map of hotspots
- Cleaning schedules
- Restaurant inspection reports or summaries
- Data submitted to CIWQS
- Service call data

Table 2. FOG Control Statistics

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number of SSOs caused or partially influenced by FOG	5	3	2	2	0	2	2	4	0	1	1	0	3
Number of FOG inspections completed	N/A	5	16 ¹	28	12	37	42	89	42	12	55 ²	36	21

¹ Includes 12 restaurant inspections and 16 oil/water separator inspection.

² Includes re-inspections

37. Does the SSMP contain up-to-date information about your agency's FOG control program?

YES NO

38. Considering the information in Table 2, is the current FOG program effective in documenting and controlling FOG sources?

YES NO

Of the three FOG-related SSO that occurred in 2019, two occurred in residential areas, while the third occurred in an area of known FOG sources. The latter is being addressed through increased cleaning as described below. None of these SSOs reached surface water.

The SSMP's description of the FOG Program will be revised in 2020 to align with the City's current FOG control strategy. That strategy will put a greater emphasis on maintenance activities actions that are more likely to have a direct bearing on reducing the number of FOG-related SSOs. This includes increased use of CCTV in known areas of FOG accumulation and increased frequency of targeted cleanings in those areas, primarily the B St area where FOG is most likely to accumulate because of the low slope of that sewer main. These City maintains a list of targeted cleaning areas and periodically evaluates the cleaning frequencies for those areas based on observed conditions. FOG inspections of the 14 large interceptors and the various smaller grease control devices throughout the City will continue.

CAPACITY MANAGEMENT

REFERENCE MATERIAL

- Capacity assessment reports
- CIP
- SSO data

Table 3. SSOs Caused by Hydraulic Limitations

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number of SSOs caused by capacity limitations	0												

39. Does the SSMP contain up-to-date information about your agency's capacity assessment? **YES / NO**

40. Has your agency completed a capacity assessment and identified and addressed any hydraulic deficiencies in the system? **YES NO**

41. If you answered NO to questions 40 or 41, describe content and schedule for necessary activities, or provide additional comments for YES response.

The SSMP includes two documents related to capacity assessment:

- 1) *July 2011 Master Plan Executive Summary (Section VIII)*
- 2) *September 2000 I/I Improvements Project Master Plan Executive Summary (Section VII)*

All potential hydraulic deficiencies have not yet been addressed through capital projects, but have been identified and prioritized in the July 2011 Wastewater System Master Plan for inclusion in future capital projects. Several of the projects in the 2011 Master Plan related to expected increases in flow from development in the Benicia Industrial Park that has not occurred. Others have been incorporated into the new 5-yr CIP budget. Referring to Table 3, it is evident that hydraulic deficiencies are not a significant contributor to SSOs, largely due to capacity-related improvements implemented prior to 2007.

Of the CIP projects listed in Attachment A, the East Channel Road Sewerline Improvement Project and the Lift Station Upgrades Project are capacity-related projects.

The City is currently in the process of updating the Wastewater Master Plan, scheduled for completion in September 2020. This update may result in a re-assessment of identified capacity deficiencies and re-prioritization of CIP projects.

VIII. MONITORING, MEASUREMENT, AND PROGRAM MODIFICATIONS

42. Does the SSMP contain up-to-date information about your agency's data collection and organization? YES / NO

43. Is your agency's data collection and organization sufficient to evaluate the effectiveness of your SSMP? YES / NO

If you answered NO to questions 43 or 44, describe content and schedule for necessary improvements, or provide additional comments for YES response.

The SSMP includes examples of forms used to document field activities, and the Maintenance Superintendent's monthly report. It also includes a table of SSMP performance indicators that are tracked to assess the effectiveness of SSMP over the years (see Table 1 and Figure 1 of this audit). Field data collection is now done on I-pads, with data then transferred to spreadsheets. The CMMS remains a work in progress and mapped assets are being utilized. However, the City believes the current methods do provide the information needed to evaluate SSMP effectiveness.

IX. SSMP AUDITS

44. Will the SSMP Audit be conducted a minimum of every two years and included in the SSMP? YES / NO

X. COMMUNICATION PROGRAM

REFERENCE MATERIAL

- **Mailings and mailing lists**
- **Website**
- **Other communication records such as newspaper ads, site postings, or other outreach**
- **Customer feedback**

45. Does the SSMP contain up-to-date information about your agency's public outreach activities? YES / NO

46. Does the SSMP contain up-to-date information about your agency's communications with satellite and tributary agencies? YES / NO

47. Has your agency effectively communicated with the public and other agencies about the SSMP, and addressed feedback? YES / NO

48. If you answered NO to questions 47, 48, and/or 49, describe content and schedule for necessary improvements, or provide additional comments for YES response.

The Communication Program was certified in August 2009 in accordance with the Statewide Order schedule. As part of its public education and outreach activities, "Sustainability" brochures were mailed in January/February 2010.

One component of the Communication Plan is the posting of the entire SSMP and related documents on the City's web site, along with information for contacting City staff. The web site can be accessed by typing "Benicia SSMP" in any search engine. Updating of the SSMP hard copy and of the web site with changes identified in this audit will be completed by August 1, 2020. This audit will be included in the updated SSMP.

The 2014 revision of the SSMP was re-certified by the City Council on September 1, 2015. A copy of the Council resolution is included in the SSMP.

Information on SSOs, including an interactive reports and an SSO incident map are available on the State Water Board's web site at: https://www.waterboards.ca.gov/water_issues/programs/ciwqs/publicreports.html#sso For generating an Interactive SSO Report, it is only necessary to enter the Sanitary Sewer System name (Benicia City CS), the Sanitary Sewer System Agency Name (Benicia City) or the WDID number (2SSO10095) in order to identify the City of Benicia.

The Communication Program is a relatively modest effort that reflects what City staff can realistically achieve in the area of public outreach and education (and the frequency of these activities), given available resources and priorities.

Attachment A: Summary of FY 2019/20 and 2020/21 Collection System CIP Projects

Attachment A: Wastewater 19/20-23/24 CIP Detail

Project Name	Project No.	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	TOTAL
Water Reuse Project	WWO-010	\$0	\$0	\$0	\$0	\$33,100,000	\$33,100,000
Sewer Master Plan Update	WWO-013	\$275,000	\$0	\$0	\$0	\$0	\$275,000
Cathodic Protection Improvements	WWO-014	\$100,000	\$440,000	\$0	\$0	\$0	\$540,000
Digester Cleaning	WWO-018	\$0	\$200,000	\$0	\$0	\$0	\$200,000
Modify Belt Filter Press	WWO-021	\$0	\$0	\$100,000	\$0	\$0	\$100,000
Overhaul Natural Gas Genset	WWO-025	\$0	\$0	\$0	\$100,000	\$0	\$100,000
E. 7th St. Sewerline Replacement	WWO-032	\$276,000	\$0	\$0	\$0	\$0	\$276,000
Boiler Replacement	WWO-046	\$0	\$0	\$540,000	\$0	\$0	\$540,000
Bayshore Road Gravity Main Rehabilitation	WWO-052	\$911,000	\$0	\$0	\$0	\$0	\$911,000
Chemical Tank Replacement at WWTP	WWO-058	\$0	\$0	\$100,000	\$0	\$0	\$100,000
Influent Pumps Rehabilitation	WWO-060	\$0	\$0	\$100,000	\$520,000	\$0	\$620,000
Bayshore Road Force main Sanitary Sewer Crossovers	WWO-061	\$560,000	\$0	\$0	\$0	\$0	\$560,000
East Channel Road Sewerline Improvement Project	WWO-063	\$230,000	\$3,490,000	\$0	\$0	\$0	\$3,720,000
Recoat Concrete Channels	WWO-076	\$487,000	\$0	\$0	\$0	\$0	\$487,000
West H Pipeline Replacement	WWO-080	\$283,000	\$0	\$0	\$0	\$0	\$283,000
El Bonito Way Force Main Replacement	WWO-081	\$60,000	\$0	\$0	\$0	\$0	\$60,000
Sewer Line Replacement Program	WWO-082	\$200,000	\$650,000	\$650,000	\$650,000	\$650,000	\$2,800,000
Lift Station Upgrades	WWO-090	\$0	\$90,000	\$504,000	\$0	\$0	\$594,000
Gas Box	WWO-091	\$0	\$0	\$125,000	\$700,000	\$0	\$825,000
Solids Bld Platforms (Belt Press & Cyclones)	WWO-092	\$211,000	\$0	\$0	\$0	\$0	\$211,000
Digester Gas Line above ground.	WWO-093	\$0	\$40,000	\$280,000	\$0	\$0	\$320,000
Rake Shaftless Screw	WWO-095	\$0	\$0	\$75,000	\$0	\$0	\$75,000
Total		\$3,593,000	\$4,910,000	\$2,474,000	\$1,970,000	\$33,750,000	\$46,697,000