STEGE SANITARY DISTRICT

Sewer System Management Plan (SSMP) Audit Report
March 2022

The purpose of the Sewer System Management Plan (SSMP) Audit is to evaluate the effectiveness of Stege Sanitary District's (District) SSMP and to identify whether updates are needed. This document is designed to meet the requirements of State Water Resources Control Board Order No. 2006-0003-DWQ as revised by Order No. WQ 2013-0058-EXEC. Documentation of SSMP audits are kept on file at the District Office, and an indication is made in the California Integrated Water Quality System (CIWQS) database that the audit is complete.

EVALUATION OF THE EFFECTIVENESS OF THE SSMP

At the beginning of each calendar year, an annual **Performance Report** (attached) is presented to the District Board of Directors which gives a good sense of how well the District is performing its mission "To protect public health and the environment for the communities we serve through planning and operation of a safe, efficient, and economical wastewater collection system." This report includes sections on Awards & Recognition, Sanitary Sewer Overflows (SSOs), Sanitary Sewer Maintenance, Condition Assessment & Rehabilitation, Service Call Response, Employee Retention/Longevity and Finances. This report is prepared by management for use by the District's Board of Directors to help evaluate the value and effectiveness of the service being delivered to the customers of the District.

ELEMENT I. GOALS	
1. Are the goals stated in the SSMP still appropriate and accurate?	***YES.*** *Updated USEPA Consent Decree minimum requirement for chemical root foam treatment.*
ELEMENT II. ORGANIZATION	
2. Is the SSMP up-to-date with the District organization and staffing contact information?	***YES.*** *Updated with email addresses and professional certifications.*
ELEMENT III. LEGAL AUTHORITY	
3. Does the SSMP reference up-to-date information about the District's legal authority?	***YES.*** *Updated with latest Ordinance Code.*
4. Does the District have sufficient legal authority to control sewer use and maintenance?	***YES.*** *No changes recommended.*
ELEMENT IV. OPERATIONS AND MAINTENANCE PROGRAM	

a. COLLECTION SYSTEM MAPS	
5. Does the SSMP reference up-to-date information about the District's maps?	***YES.*** *No changes recommended.*
6. Are the District's collection system maps complete, up-to-date, and sufficiently detailed?	***YES.*** *Collection system maps are regularly updated with current information as it becomes available.*
b. PREVENTIVE MAINTENANCE PROGRAM	
7. Does the SSMP contain up-to-date information about the District's preventive maintenance activities?	***YES.*** *No changes recommended.*
8. Are the District's preventive maintenance activities sufficient and effective in reducing and preventing SSOs and blockages?	***YES.*** *No changes recommended.*
c. REHABILITATION AND REPLACEMENT PLAN	
9. Does the SSMP contain up-to-date information about the rehabilitation and replacement program?	***YES.*** *Updated with latest District Sewer System Master Plan.*
10. Does the SSMP contain up-to-date information about Closed Circuit Television (CCTV) inspections?	***YES.*** *No changes recommended.*
11. Are scheduled inspections and the condition assessment system effective in identifying, prioritizing, and addressing deficiencies?	***YES.*** *No changes recommended.*
12. Does the Capital Improvement Plan (CIP) address prioritized projects for collection system assets?	***YES.*** *No changes recommended.*
d. TRAINING	
13. Does the SSMP contain up-to-date information about existing training programs?	***YES.*** *No changes recommended.*
14. Do supervisors believe that their staff is sufficiently trained?	***YES.***
15. Are staff satisfied with the training opportunities and support offered to them?	***YES.***
e. CONTINGENCY EQUIPMENT AND REPLACEMENT INVENTORIES	
16. Does the SSMP reference up-to-date information about equipment and replacement part inventories?	***YES.*** *No changes recommended.*

ELEMENT V. DESIGN AND PERFORMANCE PROVISIONS	
17. Does the SSMP contain up-to-date information about design and construction standards?	***YES.*** *No changes recommended.*
ELEMENT VI. OVERFLOW EMERGENCY RESPONSE PLAN (OERP)	
18. Does the SSMP contain an up-to-date version of SSO Response Plan?	***YES.*** *No changes recommended.*
19. Is the Response Plan effective in handling SSOs?	***YES.***
ELEMENT VII. FATS, OILS, AND GREASE (FOG) CONTROL PROGRAM	
20. Does the SSMP reference up-to-date information about the District's FOG control program?	***YES.*** *Updated with latest Annual FOG Report.*
21. Is the current FOG program effective in documenting and controlling FOG sources?	***YES.***
22. Are all public outreach materials for the FOG program current?	***YES.***
ELEMENT VIII. SYSTEM EVALUATION AND CAPACITY ASSURANCE PLAN	
23. Does the SSMP reference up-to-date information about the District's capacity assessment?	***YES.*** *Updated with latest Sewer System Master Plan.*
24. Has the District completed a capacity assessment and identified and addressed any hydraulic deficiencies in the system?	***YES.***
ELEMENT IX. MONITORING, MEASUREMENT, AND PROGRAM MODIFICATIONS	
25. Does the SSMP reference up-to-date information about the District's data collection and organization?	***YES.*** *No changes recommended.*
26. Is the District's data collection and organization sufficient to evaluate the effectiveness of the SSMP?	***YES.*** *Updated with most recent Performance Report.*
ELEMENT X. SSMP AUDITS	
27. Will this SSMP Audit be completed every two years starting in 2014?	***YES.***

ELEMENT XI. COMMUNICATION PROGRAM **28.** Is the District's website up-to-date, including information related to providing an opportunity for public input on the SSMP?	***YES.*** *Updated with latest Endeavor Newsletter and Webpage Sample.*

I certify under penalty of law that this document and its attachments were prepared either by me personally or under my direction or supervision in a manner designed to ensure that qualified and knowledgeable personnel properly gathered and presented the information contained therein. I further certify, based on my personal knowledge or on my inquiry of those individuals immediately responsible for obtaining the information, that to the best of my knowledge and belief the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing and willful submission of a materially false statement.

STEGE SANITARY DISTRICT

Rex Delizo
District Manager

STEGE SANITARY DISTRICT

Calendar Year 2021
Performance Report

JANUARY 2022

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STEGE SANITARY DISTRICT

Calendar Year 2021
Performance Report

The Stege Sanitary District Performance Report gives a good sense of how well the District is performing its mission *"to protect public health and the environment for the communities we serve through planning and operation of a safe, efficient, and economical wastewater collection system*." This report is prepared by the District Manager for use by the District's Board of Directors to help evaluate the value and effectiveness of the service being delivered to the customers of the District.

Awards & Recognition

California Sanitation Risk Management Authority (CSRMA) 2020/21 Workers' Compensation Excellence Award: The Stege Sanitary District has been awarded the California Sanitation Risk Management Authority (CSRMA) 2020/21 Workers' Compensation Excellence Award. This award recognizes Districts within the CSRMA Pooled Workers' Compensation Program that have successfully implemented soft tissue/ strain related injury prevention efforts such as a job hazard analysis to evaluate the top ten (10) tasks/equipment that have the highest risk of injury if operated/performed incorrectly. This is the third time the District has received this award.

District of Distinction: The Stege Sanitary District is currently accredited as a District of Distinction through the Special District Leadership Foundation (SDLF). The District of Distinction accreditation is one of the most prestigious local government awards in the state of California and clearly validates the District's commitment to good governance and to ethical and sound operating practices. The District has been accredited as a District of Distinction since 2009.

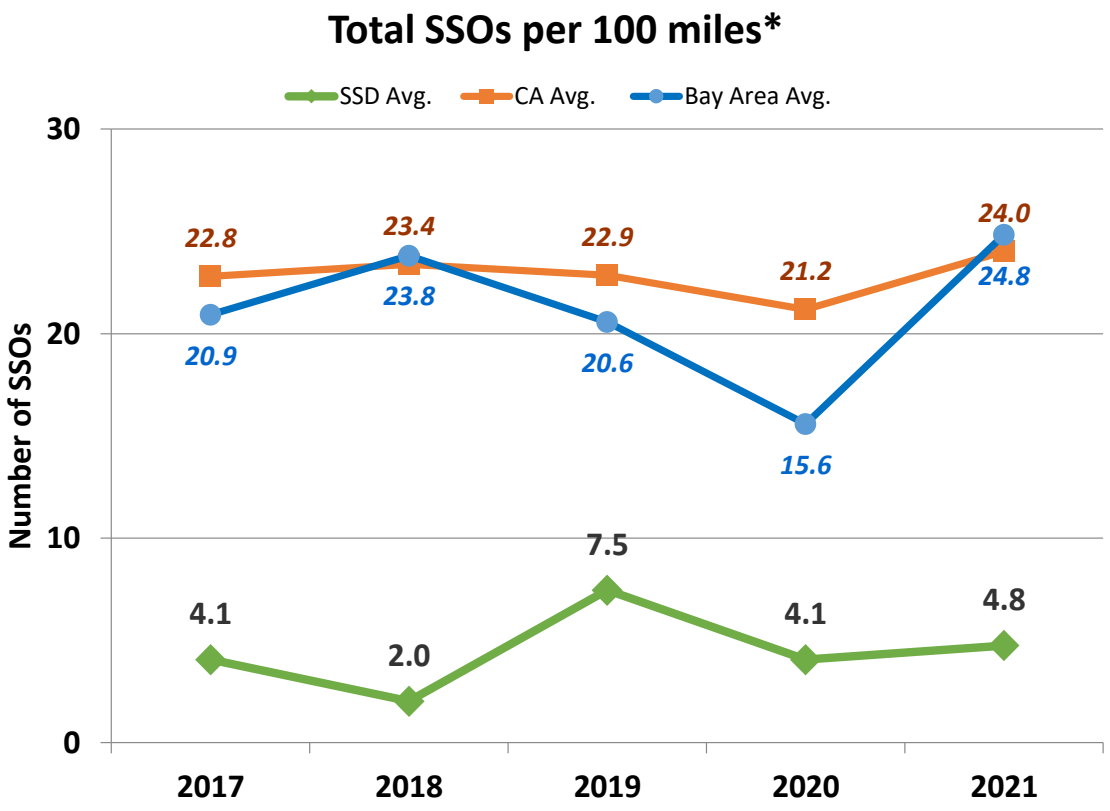
Transparency Certificate of Excellence: The Stege Sanitary District is a current holder of the SDLF District Transparency Certificate of Excellence. The certificate, covering three main subject areas including basic transparency, website access, and outreach activities, highlights the core components necessary to engage and make information available to the public. The certificate demonstrates the District's commitment to engaging the public and creating greater awareness of District activities. The District has been a holder of this certificate since 2013.

Recognition in Special District Governance: Director Alan C. Miller and District Manager, Rex Delizo, are both recipients of the SDLF Recognition in Special District Governance. This recognition demonstrates to constituents and colleagues the extent of their commitment and dedication to providing the best possible service to the communities they serve by acknowledging they have taken the time and made the effort to get core governance training and continuing education.

Sanitary Sewer Overflows (SSOs)

The District's ultimate goal is to maintain the sewer collection system so that there are no sanitary sewer overflows (SSOs). While the ultimate goal is to prevent all SSOs, the District would like to have the number of SSOs well below the industry average of the State and San Francisco Bay Area Region.

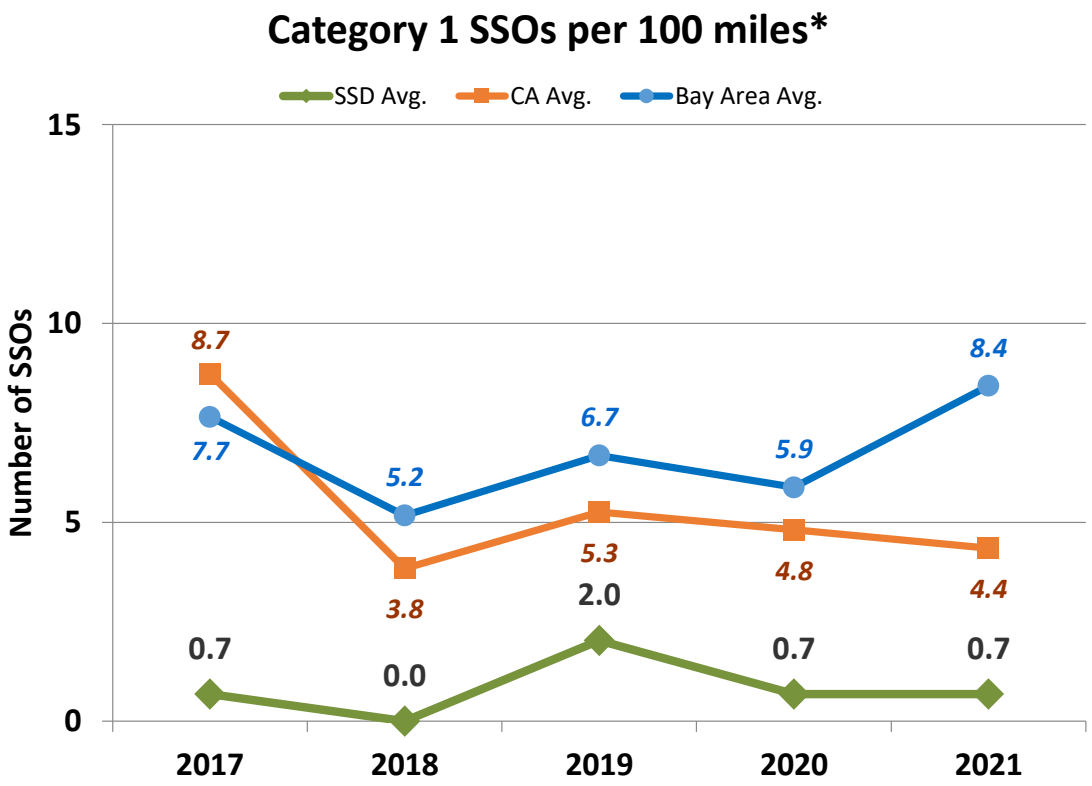
TABLE 1



**Per California Integrated Water Quality System (CIWQS) website on 1/2022*

Particularly important is preventing SSOs from reaching a creek, river or other body of water, or not fully recovering SSOs that reach a storm drain. All of these instances are considered "Category 1" SSOs by the State Water Resources Control Board (SWRCB). While the ultimate goal is to prevent all SSOs, the District would like to have the number of "Category 1" SSOs well below the industry average of the State and San Francisco Bay Area Region.

TABLE 2



**Per California Integrated Water Quality System (CIWQS) website on 1/2022*

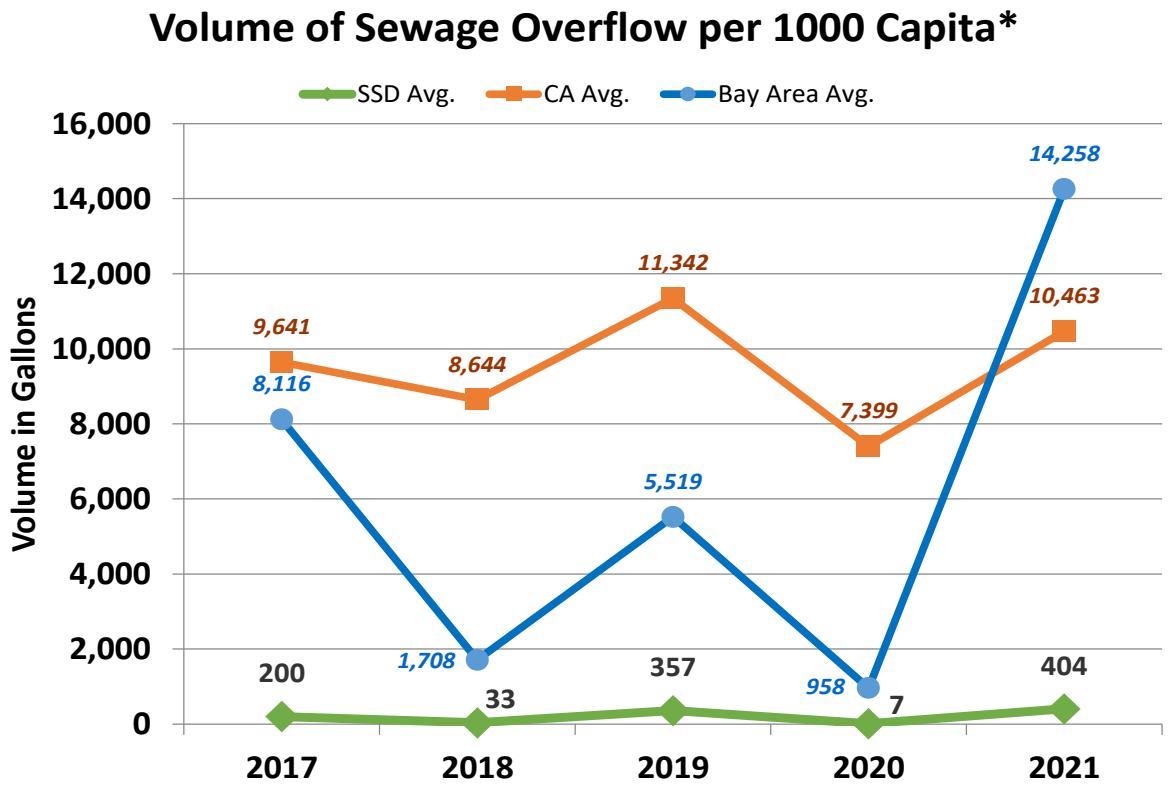
When an SSO occurs, the District's goal is to restore flow within the system, contain the spill, return it back to the system, and mitigate the effects of the overflow. The fundamental goal is to convey all of the collected sewage to the East Bay Municipal Utility District (EBMUD) Wastewater Treatment Plant.

TABLE 3

YEAR	VOLUME OF SEWAGE (GALS)	
	COLLECTED	SPILLED AND NOT RECOVERED
2021	1,046,100,000	14,109
2020	1,130,134,000	230
2019	1,668,940,000	12,463
2018	1,110,077,000	1,094
2017	1,444,115,000	6,524

While the ultimate goal is to prevent all SSOs, the District would like to have the volume of sewage spilled per 1000 capita well below the industry average of the State and San Francisco Bay Area Region.

TABLE 4

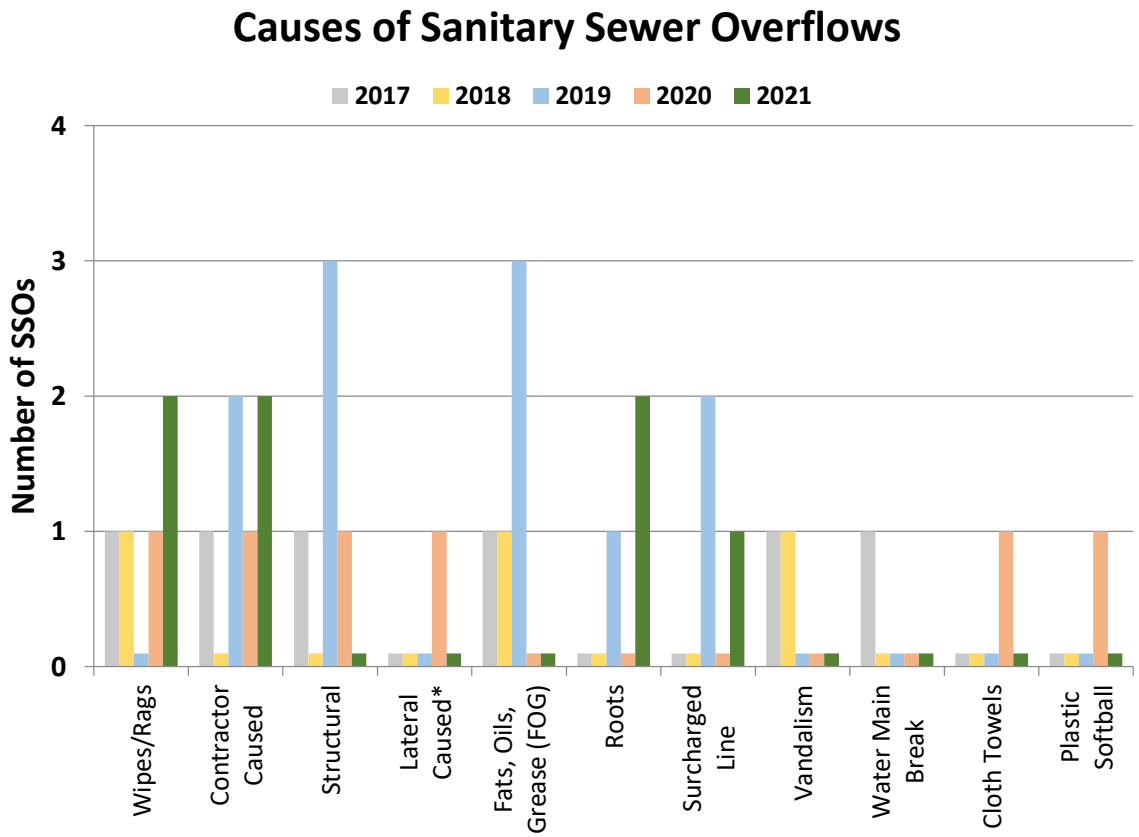


**Per California Integrated Water Quality System (CIWQS) website on 1/2021*

ASSESSMENT: As shown in Tables 1 and 2, the number of SSOs are similar to past years and continues to be well below the industry average for the State and San Francisco Bay Area Region. As shown in Tables 3 and 4, the volume of SSOs is the highest it's been over the last five years but continues to be far below both the volume of sewage successfully collected and transported and the industry average for the State and San Francisco Bay Area Region.

Staff assesses each SSO to determine the cause in order to take the necessary steps to prevent a reoccurrence. Different causes result in different responses including increasing maintenance frequency, adaptive cleaning, point repairs, line rehabilitation, increasing pipe size, and/or targeted public education, outreach and/or enforcement.

TABLE 5



**Lateral caused SSOs are caused by defective laterals and/or property owners pushing roots, wipes and/or other debris into the main sewer causing a stoppage.*

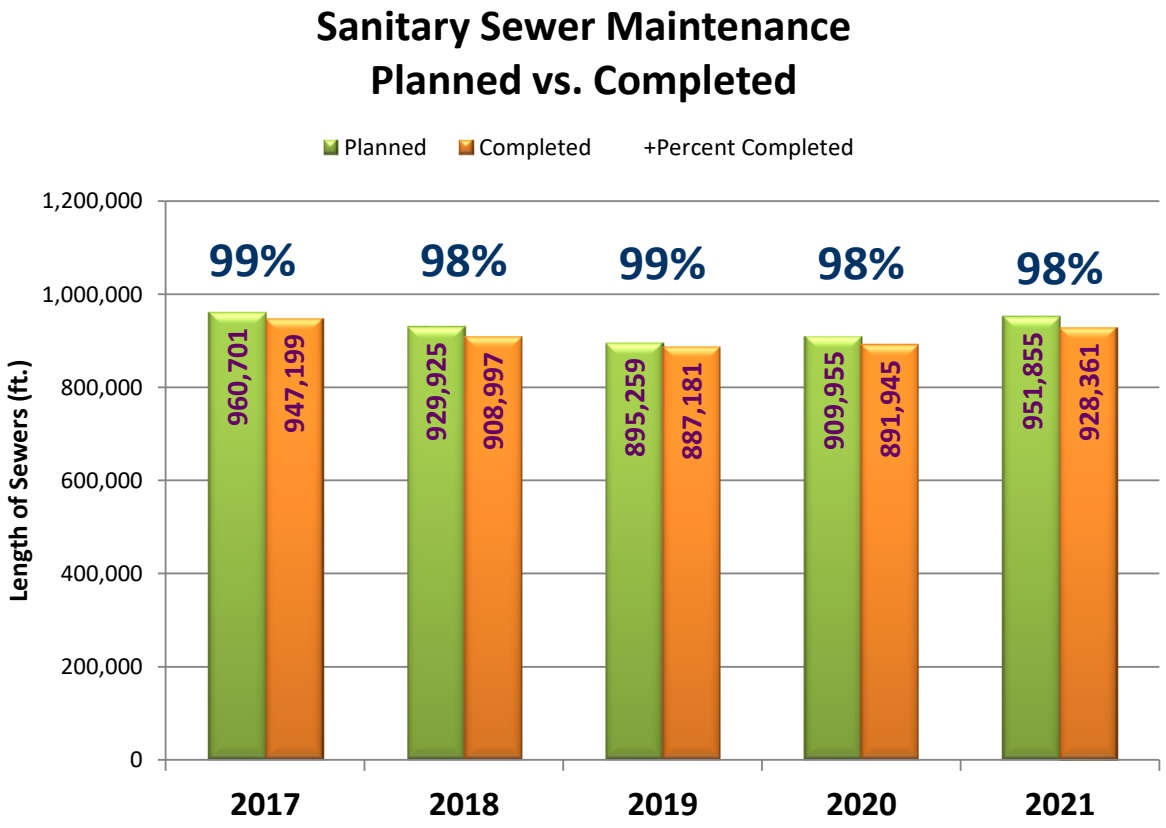
ASSESSMENT: Table 5 shows that in 2021 there were 7 SSOs due to a variety of different causes. For the SSOs due to excessive "flushable" wipes, targeted notices were mailed to educate all the residents upstream of each SSO that only human waste and toilet paper should be disposed in the sewer system. The main lines that experienced the SSOs due to roots were added to our chemical root control program to prevent a reoccurrence.

The contractor caused SSOs were due to a plumbing contractor damaging a neighboring house's lateral connection during a sewer lateral replacement and a utility company damaging a main sewer line during a utility repair. The "surcharged line" SSO was due to inflow and infiltration (I/I) from a powerful storm event on 10/24/2021 caused by a large atmospheric river and "bomb cyclone". District rain gauge data indicated that this was a 100-year storm event measured over a 24 hour period.

Sanitary Sewer Maintenance

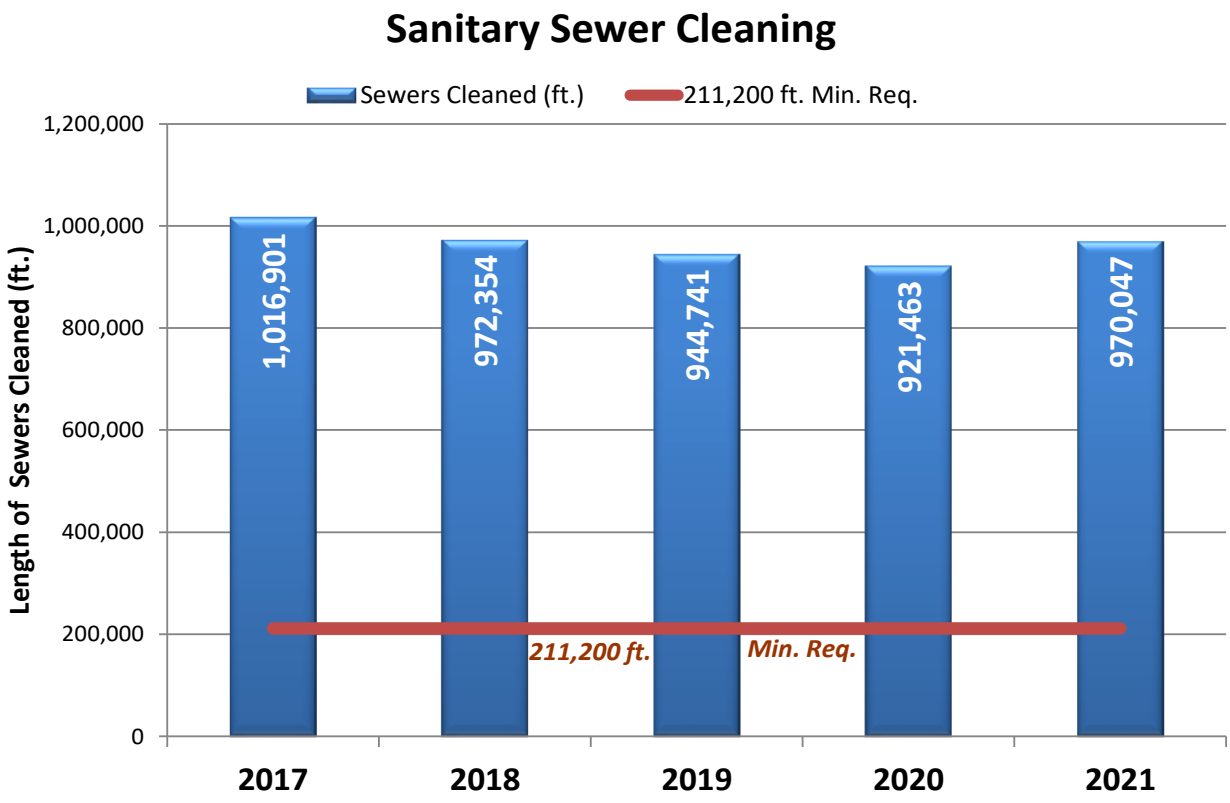
The District's goal is to maintain **100%** of the sewer mains scheduled over the course of a year through a combination of hydro-flushing, rodding, and/or closed-circuit television (CCTV) inspection. Note that the District uses a dynamic schedule to assign an appropriate maintenance frequency to each individual line. Revisions and modifications are made regularly as maintenance staff are continuously evaluating line conditions and updating frequencies as they clean and inspect lines.

TABLE 6



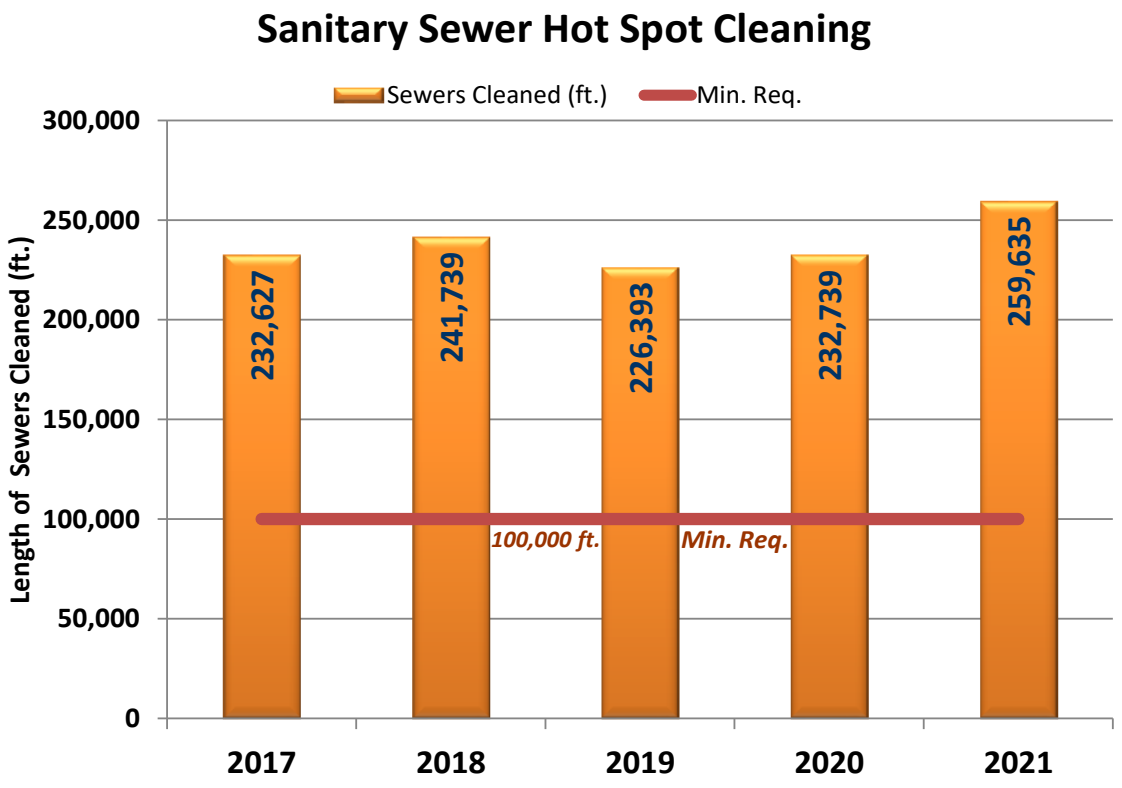
The minimum requirement, per the U.S. Environmental Protection Agency Consent Decree Case Nos. C 09-00186-RS and C 09-05684-RS (USEPA Consent Decree), is to clean a total of at least **211,200 feet** of sewer mains per year, planned or unplanned, including repeats.

TABLE 7



The minimum requirement, per the USEPA Consent Decree, for "hot spot" lines (six month or less interval), is to clean **100,000 feet** of sewer mains per year, planned or unplanned, including repeats.

TABLE 8

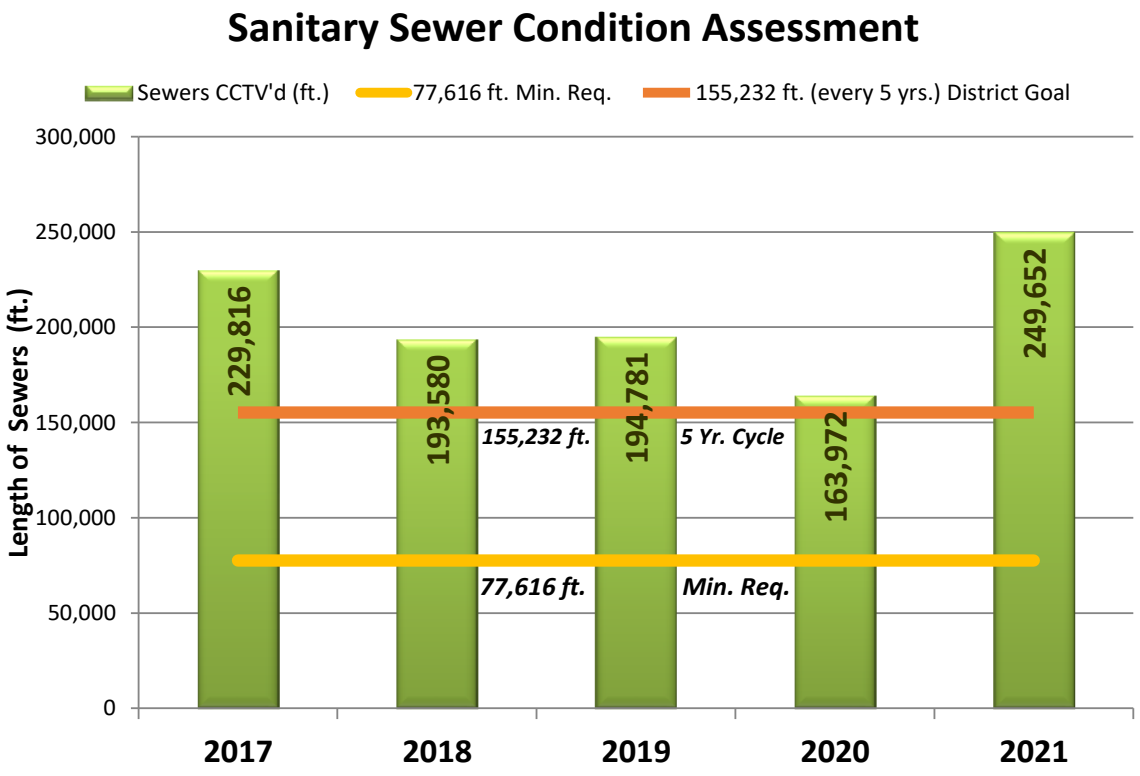


ASSESSMENT: As shown in Table 6, maintenance staff continue to routinely complete close to 100% of the scheduled maintenance work and, as shown in Table 7 and 8, continue to perform well above the USEPA required cleaning rate of at least 211,200 feet per year and hot spot cleaning of 100,000 feet per year. Recognize that our intent is not to maintain lines merely to fulfill the USEPA requirements, but to maintain the District sewer main lines as necessary and appropriate to fulfill our mission and prevent SSOs.

Sanitary Sewer Condition Assessment

The District's goal is to CCTV inspect every line in the District on a five year revolving schedule which is equivalent to at least **155,232 feet** per year. The minimum requirement, per the USEPA Consent Decree, is to CCTV inspect no less than 10 percent of the lines on a cumulative total of **77,616 feet** per year.

TABLE 9

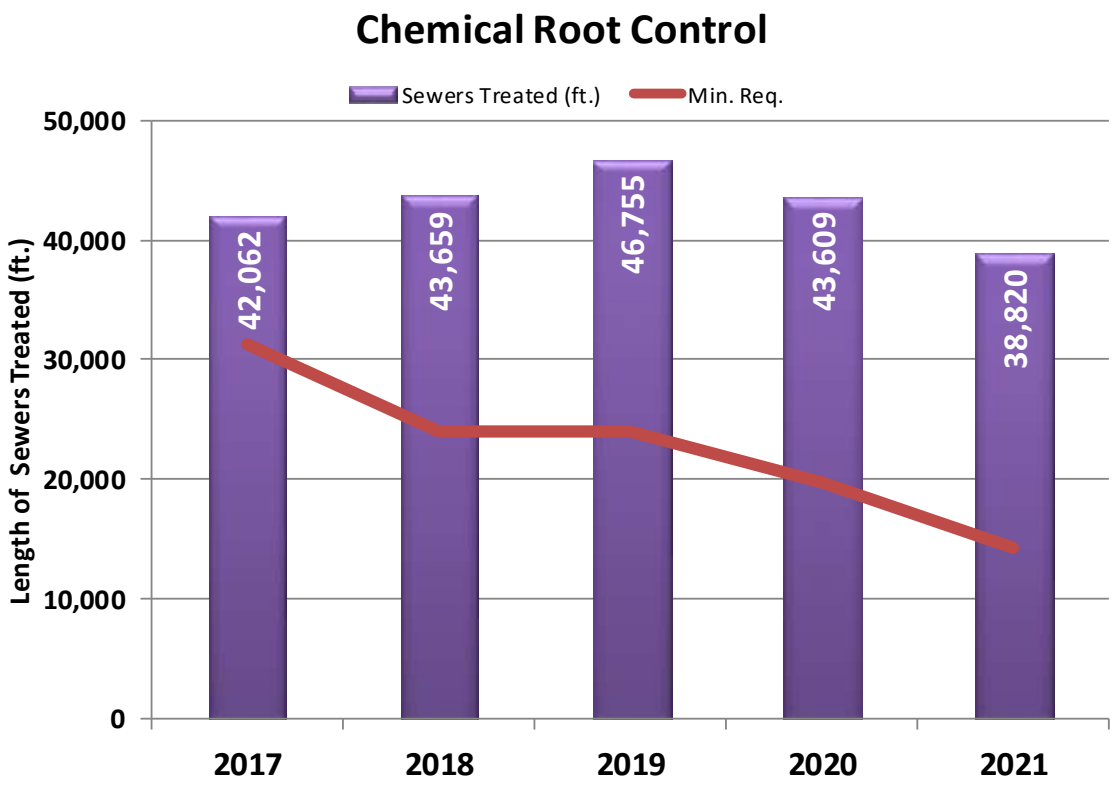


ASSESSMENT: Maintenance staff continue to complete CCTV inspection work above the 5 year revolving schedule rate and more than three times the USEPA required CCTV inspection rate of 77,616 feet per year. Again, our intent is not to CCTV inspect lines merely to fulfill the USEPA requirements, but as necessary and appropriate to fulfill our mission and prevent SSOs.

Chemical Root Control

The current minimum requirement, per the USEPA Consent Decree, is to chemically treat with foam to control excessive roots no less than **14,236 feet** of lines annually on a three year rolling average.

TABLE 10

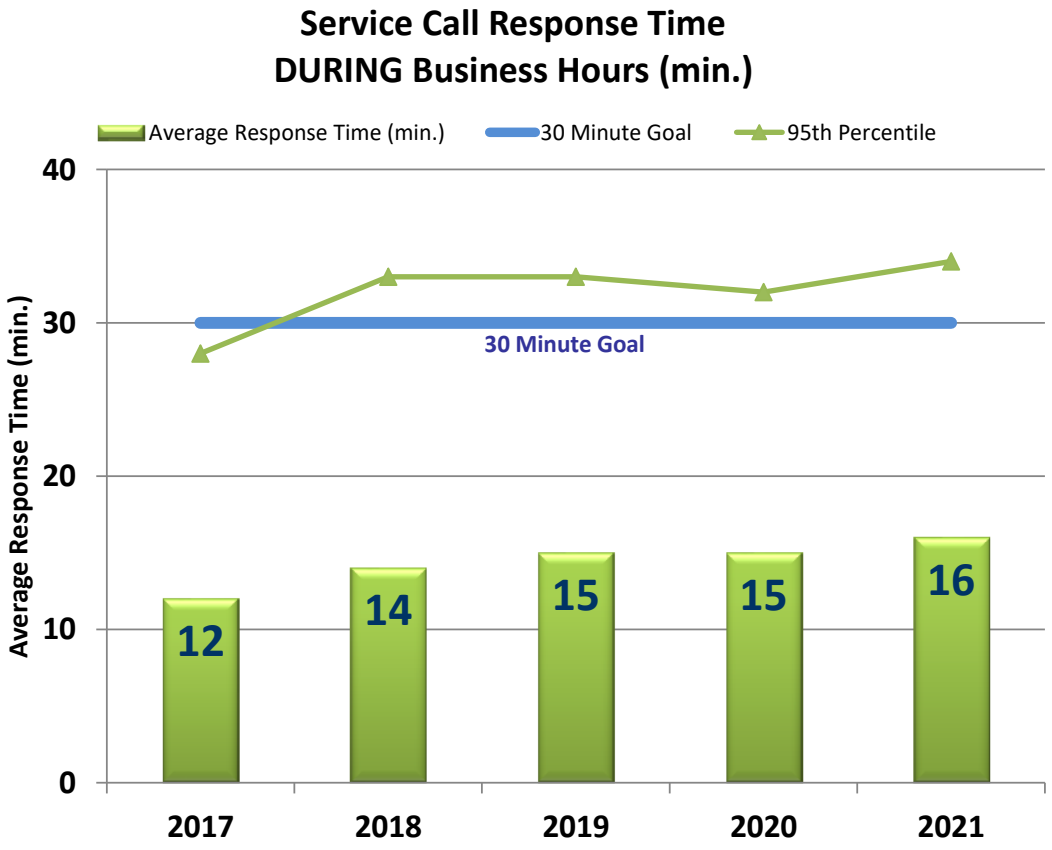


ASSESSMENT: The District continues to stay well above the USEPA required minimum feet per year. The minimum requirement will continue to be reduced each year, pending USEPA approval, as lines are rehabilitated or CCTV assessment indicates there are no longer excessive roots requiring treatment. A reduction is currently proposed to decrease the minimum requirement by another 8,177 feet for 2022 due to recently rehabilitated sewer mains no longer having excessive roots requiring treatment. Again, our intent is not to chemically treat with foam to control excessive roots merely to fulfill the USEPA requirements, but as necessary and appropriate to fulfill our mission and prevent SSOs.

Service Call Response

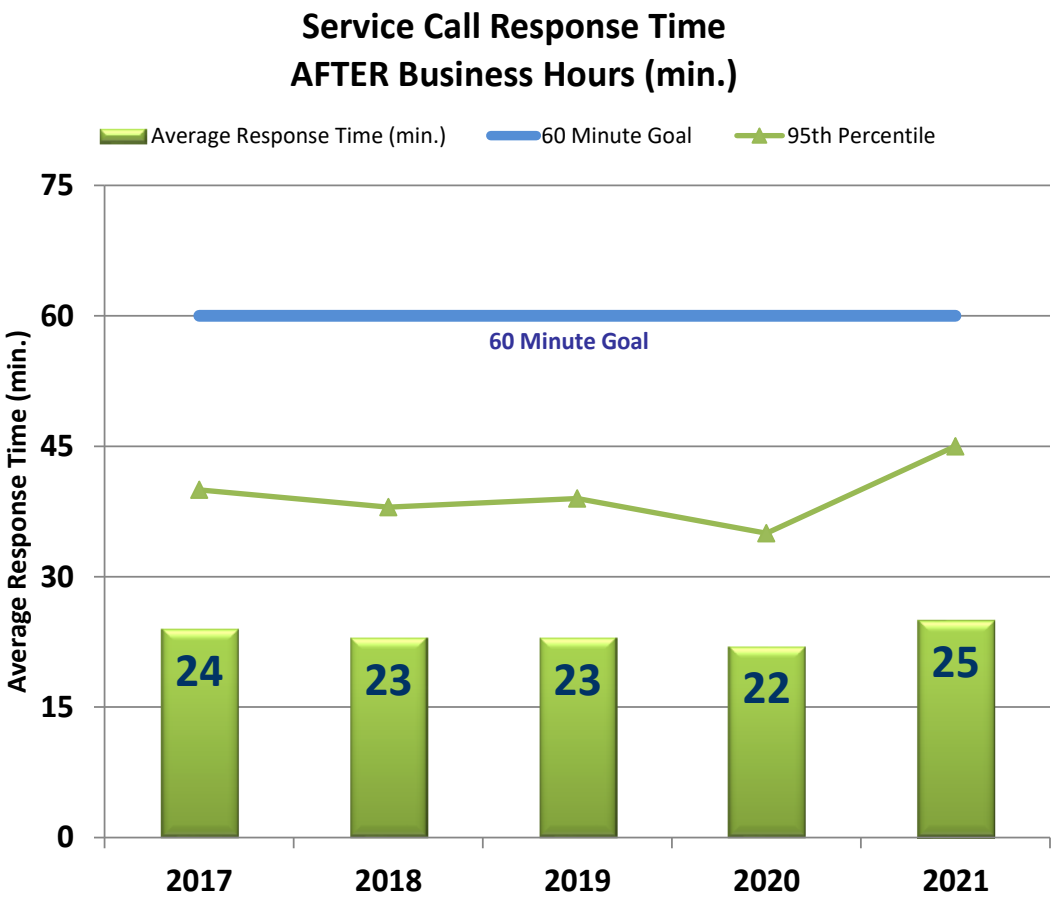
The District's goal is to respond to service calls quickly to prevent as much spillage as possible in the event of an SSO. The goal of the District is to respond to service calls during business hours within **30 minutes**.

TABLE 11



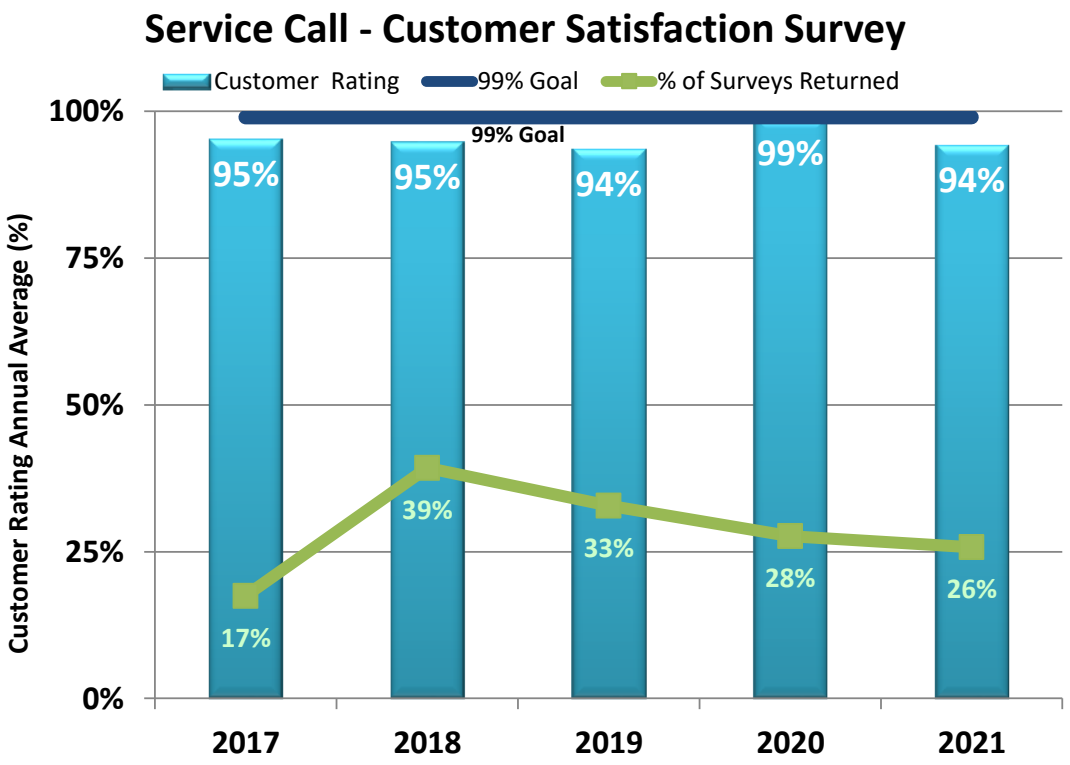
After business hours, the goal of the District is to respond to service calls within **60 minutes**.

TABLE 12



A customer satisfaction survey is sent after each service call for feedback on the quality of service received. The goal is for **99%** satisfaction.

TABLE 13



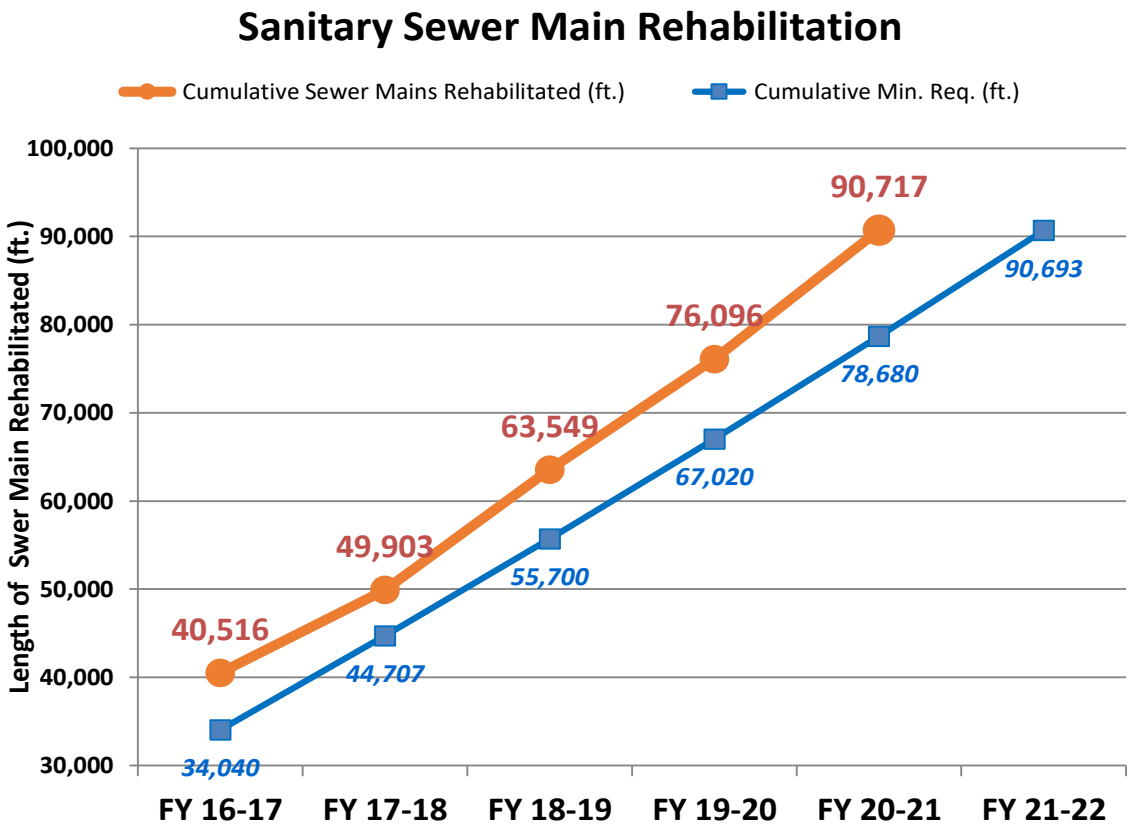
Surveys Sent	149	112	137	152	190
Surveys Returned	26	44	45	42	49

ASSESSMENT: As shown in Table 11 and 12, both average response times continue to be well below the 30 minute and 60 minute goals. The fast response time, in conjunction with staff making a concerted effort to be conscientious, courteous, and helpful, contributes to the consistently high customer satisfaction rating as shown in Table 13.

Sanitary Sewer Main Rehabilitation

The minimum requirement, per the USEPA Consent Decree, is to complete rehabilitation of 78,680 feet of sewer main by the end of FY 2020-21 and to continue at no less than the feet of sewer main stated in the Consent Decree Appendix based on a cumulative total (e.g., 34,040 feet by June 30, 2017; 44,707 feet by June 30, 2018; etc.) for the duration of the Consent Decree.

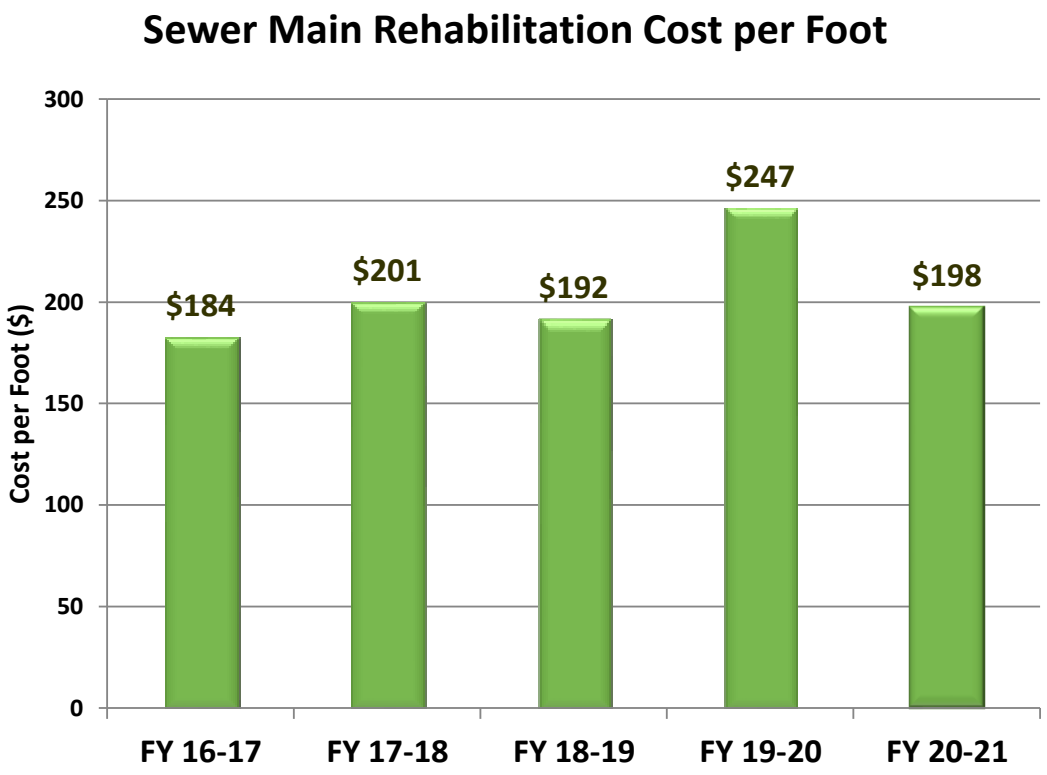
TABLE 14



ASSESSMENT: As shown in Table 14, the District's cumulative rehabilitation total of 90,717 feet at the end of FY 20-21 is 15% above the required cumulative rehabilitation total of 78,680 feet. The current total is already above the Consent Decree requirement for FY 21-22 with more than 11,000 feet of rehabilitation work scheduled and still to be completed.

The cost to complete the required rehabilitation of sewer main is subject to market conditions and other external factors. Staff continues to adjust projects to try to stay one step ahead of the market to keep construction costs as low as possible.

TABLE 15

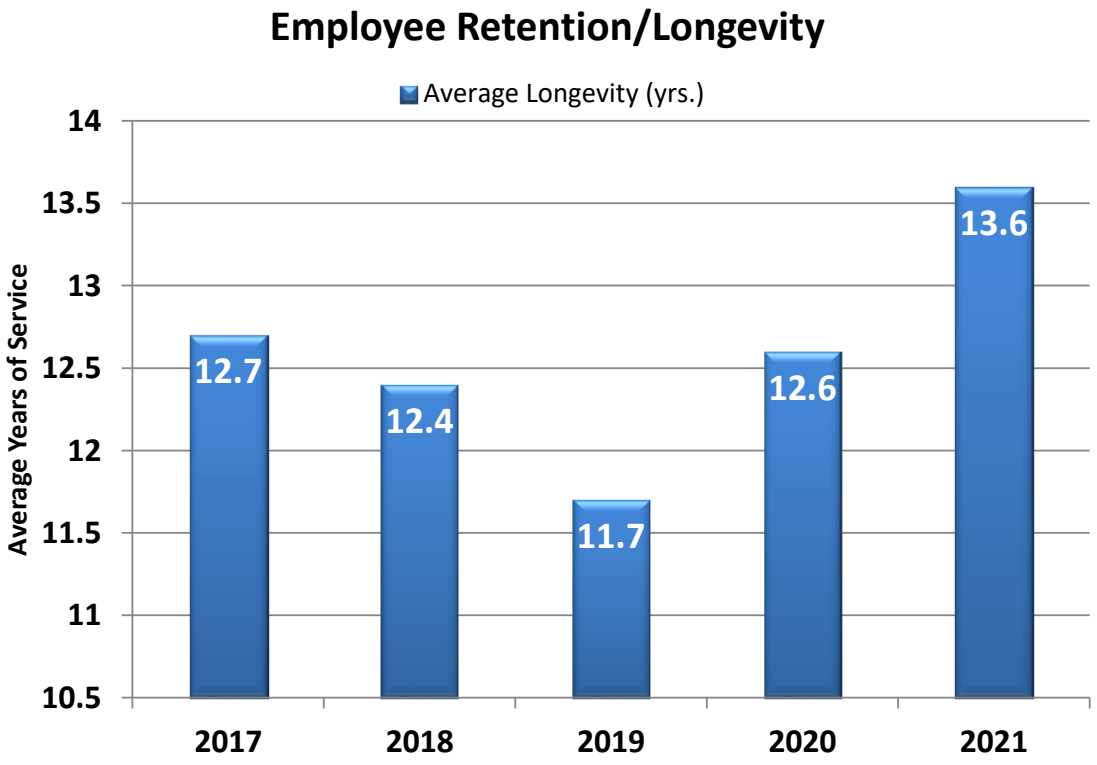


ASSESSMENT: The sewer main rehabilitation cost per foot decreased back down to $198 for FY 2020-21 after a short uptick last fiscal year due to sections of sewer work requiring open trench replacement instead of the less costly pipe bursting method due to necessary capacity upsizing and/or utility conflicts. Engineering staff will continue to try to stay ahead of the required cumulative rehabilitation total and manage upcoming projects accordingly to try to protect against the high construction cost increases that our neighboring agencies have been experiencing.

Employee Retention/Longevity

Once time and money have been invested to recruit and train good employees, it's in the District's best interest to retain and motivate them to continue to provide value to the District. Excessive employee turnover increases expenses, has a negative effect on employee morale, and would be a prime indicator that something is not right within the workplace.

TABLE 16

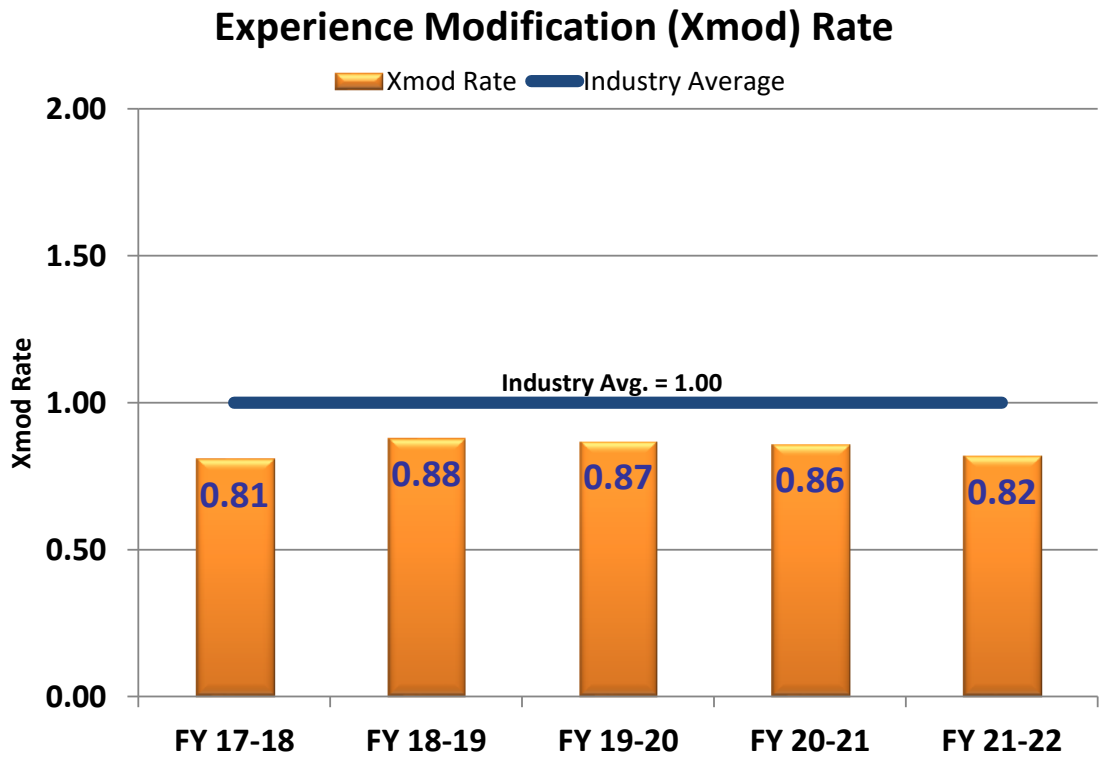


ASSESSMENT: Employee retention continues to remain high. For the last decade, the majority of turnover has been as a result of retirement. The District continues to value its employees and, in return, employees continue to be loyal to the District. Our highly trained, highly skilled workforce longevity helps to keep the District's institutional knowledge and history intact. The average years of service continues to remain well over a decade.

Experience Modification (Xmod) Rate

The Experience Modification (Xmod) rate is the factor resulting from the statistical comparison of a company's Workers' Compensation loss history to the loss history of an average company. The number is used by worker's compensation insurance providers to gauge both past cost of injuries and future chances of risk. An Xmod of **1.0** is exactly average. Numbers over 1.0 indicate that the District has more injuries and illness than the industry average, while numbers below 1.0 are better than the average.

TABLE 17

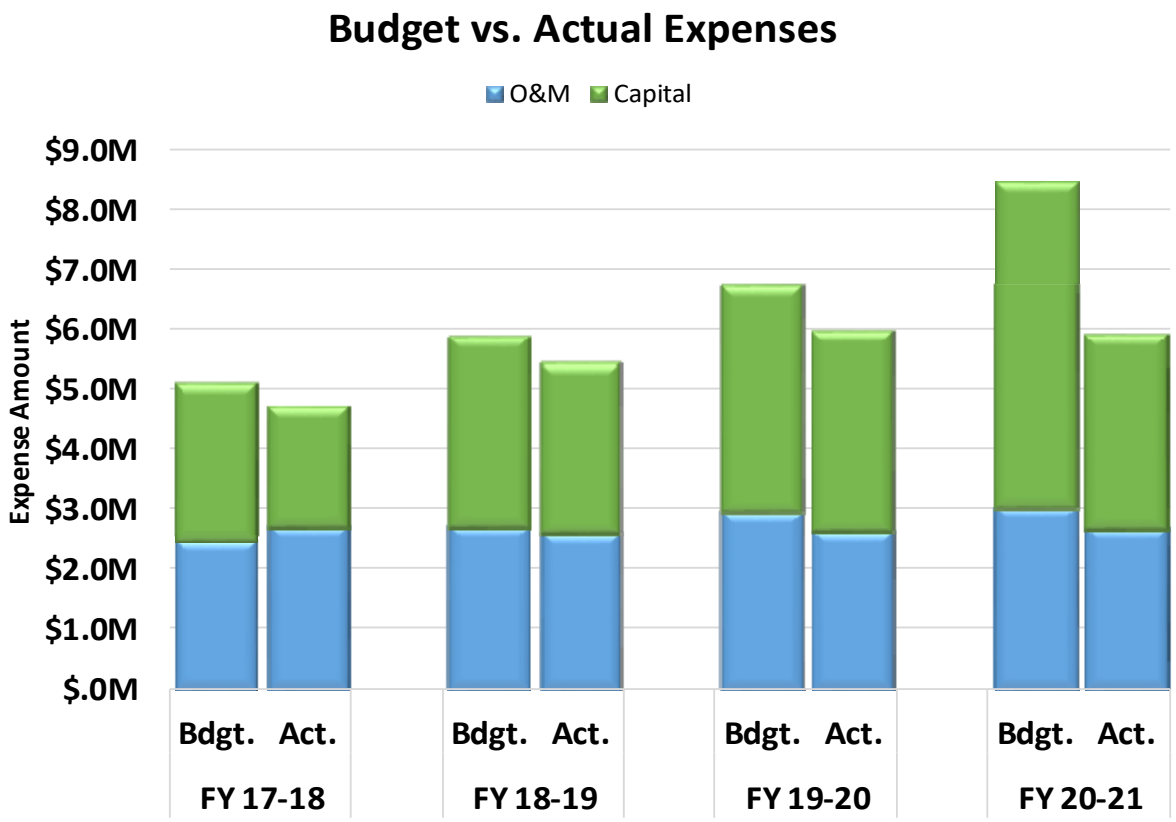


ASSESSMENT: The District continues to have a historically safe workplace and, until recently, had gone 20 years without a worker's compensation insurance incident. Because the District has a small staff, potential losses have significant impacts on the Ex-Mod rate. Even with the recent minor incident, the District's Xmod rate continues to perform better than the industry average and has decreased back down to pre-incident levels.

Finances

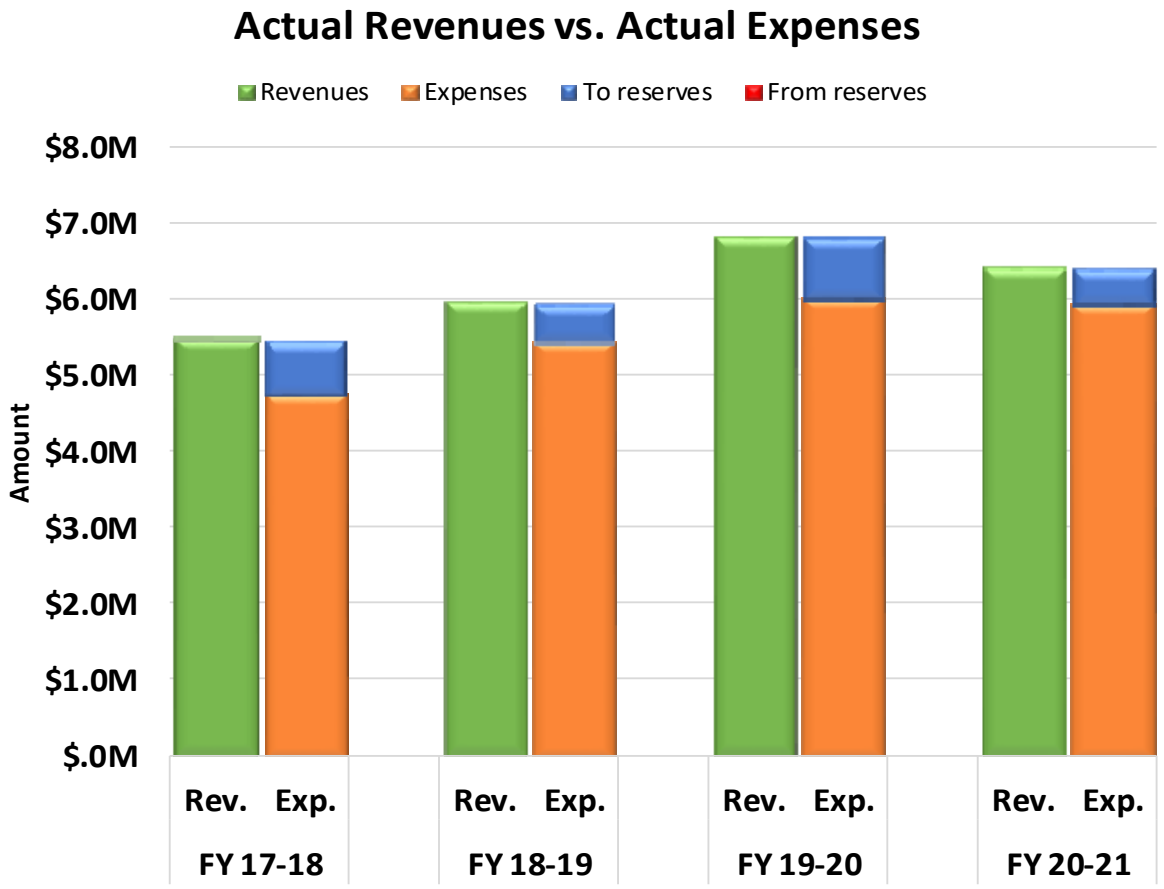
The annual budget represents a detailed analysis of how management forecasts the District's revenues and expenditures for the fiscal year. The goal is to execute the planned budget while keeping the financial operation within the forecasted amounts.

TABLE 18



An additional goal is to have a balanced budget, where revenues equal expenditures, so there is neither a significant deficit nor a significant surplus.

TABLE 19



The District maintains a Working Capital and Reserve Fund that consists of an Operating Working Capital, a Capital Improvement Working Capital, and a Capital Reserve.

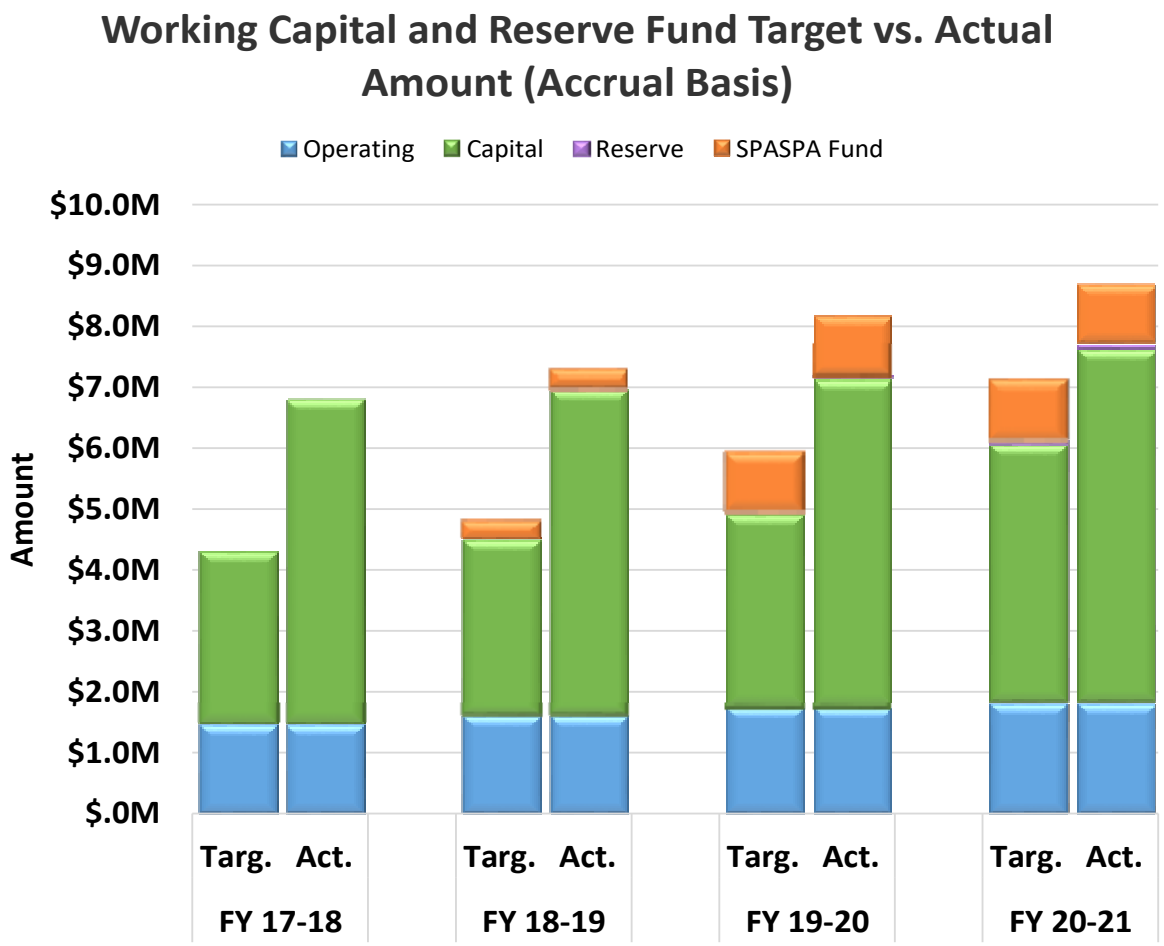
The target for the *Operating Working Capital* is equal to 60% of operating and maintenance costs. This level of funding is intended to adjust annually to equal the District's budgeted costs from May to December, reflecting the lag in the collection of sewer service charges from the County tax roll.

The target for the *Capital Improvement Working Capital* is equal to the 3-year average of the annual capital cost (i.e. average of the previous, current, and future year capital cost) plus the

annual debt service cost to ensure that the District has adequate funds available on an annual basis to conduct sewer pipeline replacements or in case of an emergency or natural disaster such as an earthquake. The *Capital Reserve*, or set-aside, of $45,000 per year is accumulated over time and used every five to ten years for major improvements such as Administration Building retrofits.

Beginning in 2018, a separate *San Pablo Avenue Specific Plan Area (SPASPA) Fund** began collecting impact fees for localized sewer capacity improvements needed to serve projected development along the San Pablo Avenue corridor. This impact fee is charged to developers for new development in the SPASPA.

TABLE 20



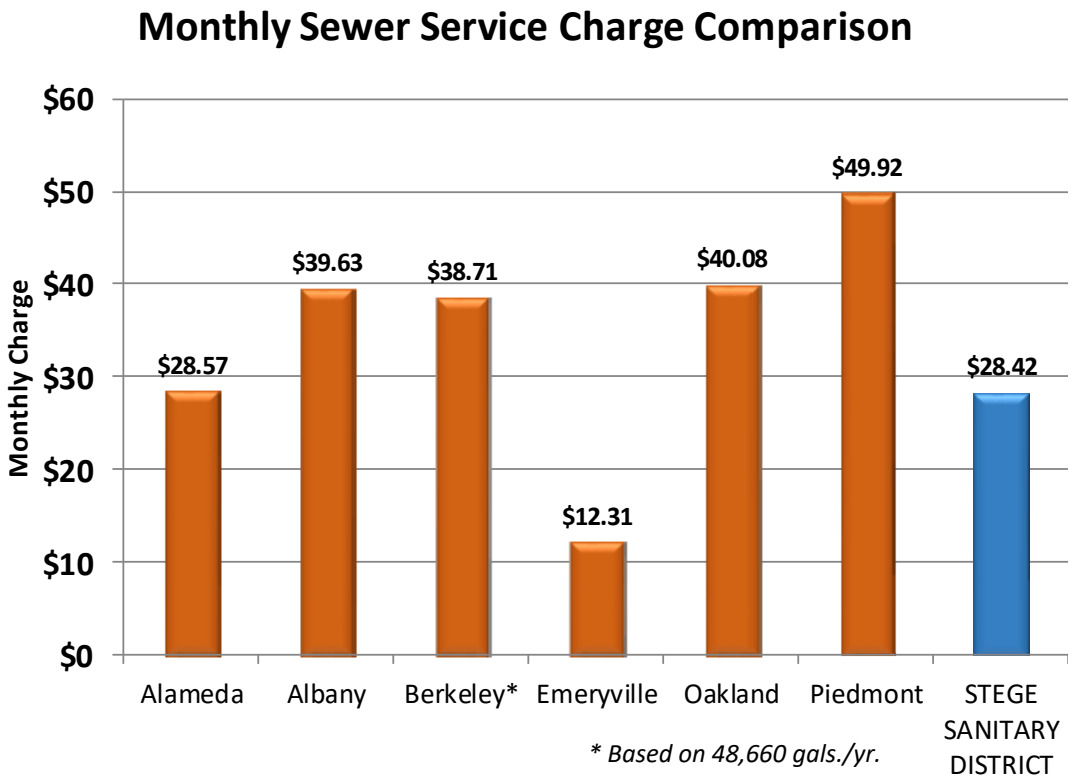
ASSESSMENT: For FY 2019-20, actual expenses were 30% less than the forecasted budget amount as shown in Table 18 and 8% less than actual revenues as shown in Table 19. This net gain was added to the fiscal year end amount increasing it to 125% of the Working Capital and Reserve Fund Target goal of $7.1 million, as shown in the Table 20. Although the District currently exceeds its fund targets, upcoming capital projects, retirement funding requirements, and 3% annual inflation will reduce the District's excess fund reserves over time.*

** Per Connection Charge and SPASPA Impact Fee Study by Lechowicz & Tseng Municipal Consultants, May 2019*

Sewer Service Charge

The District's Sewer Service Charge covers the cost of the operation, maintenance, and capital improvements to the sanitary sewer system. The goal is to provide a high level of service that is both cost effective and efficient while maintaining a sewer service charge among the most affordable of the East Bay agencies.

TABLE 21



ASSESSMENT: The District continues to be in a strong financial position moving forward into FY 2021-22. The District will continue with the financial plan outlined in the 2019 Sewer Rate Study to ensure long-term financial stability while minimizing rate impacts on customers and to keep the District's sewer service charge, as shown on Table 21, among the most affordable of the East Bay agencies.