

CITY COUNCIL COMMITTEE

INFRASTRUCTURE & FRANCHISE

Laura Hoffmeister, Chair
Dan Helix, Committee Member

5:30 p.m.
Monday, March 9, 2015

Building A, Garden Conference Room
1950 Parkside Drive, Concord

AGENDA

ROLL CALL

PUBLIC COMMENT PERIOD

- 1. CONSIDERATION** – of Sanitary Sewer Rate Adjustments. Report by Robert Ovadia, City Engineer.
- 2. ADJOURNMENT**

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**REPORT TO COUNCIL COMMITTEE ON
INFRASTRUCTURE & FRANCHISE****TO THE HONORABLE COMMITTEE MEMBERS:**

DATE: March 9, 2015

SUBJECT: CONSIDERATION OF SANITARY SEWER RATE ADJUSTMENTS**Report in Brief**

The City of Concord's Sanitary Sewer Enterprise Fund experienced revenue shortfalls beginning in Fiscal Year 2013-14. These shortfalls are the result of increasing costs imposed by the Central Contra Costa Sanitary District (CCCSD) and on-going and increasing costs to address a backlog of capital maintenance and replacement of aged infrastructure associated with the sewer system. To assist in addressing the shortfalls, the City Council, in June 2013, adopted Resolution 13-4 increasing the minimum annual sewer service charges from \$324 to \$363 for FY 2013-14 and to \$402 for FY 2014-15. Additionally, several capital improvement projects to repair the system were deferred.

To address the continuing costs associated with operating and maintaining the City's sewer infrastructure and the increasing costs charged by CCCSD for transport and treatment of the City's flows, the City Council approved the commissioning of a Sewer Rate Study in the FY 2014-15 Capital Improvement Program. The draft Sewer Rate Study (Rate Study) is complete and is attached for consideration by the Committee (Attachment 1). The Rate Study identifies the need to increase revenues to address three priority needs:

- Fund increasing operating costs, primarily from CCCSD
- Fund needed capital improvements and maintenance needs of the sewer system
- Maintain healthy operating and capital reserves for fiscal sustainability

To meet these critical needs, the Rate Study identifies the level of needed sewer rate increases over time, and makes recommendations regarding increased investment in the repair and replacement of the aging collection system and establishment of cash reserves to assure the health of the sewer enterprise fund.

Staff recommends that the Infrastructure and Franchise Committee (Committee) review the attached report and the recommended rate changes and provide direction to staff.

Background

The City of Concord Sanitary Sewer Enterprise (Enterprise) pays a proportional share of the maintenance, operation and capital costs of the CCCSD treatment plant based on flow volumes. The Enterprise pays CCCSD approximately 30%-32% of both the treatment plant operations and certain capital improvements as the Enterprise share, based on actual expenditures. For FY13-14, these costs

were \$11,625,864 and \$3,820,858 respectively. Additionally, the Enterprise paid \$640,815.88 for Household Hazardous Waste Collection Services for FY13-14. Though these costs are anticipated to increase annually, the increases are unpredictable and at the discretion of CCCSD.

The balance of the treatment and capital costs are borne by CCCSD's direct rate payers. CCCSD last raised their basic residential rate by \$34 to \$439 in June 2014. It is important to note that the CCCSD fee is collected in addition to the ad valorem tax collected on each property in their service area, which is assessed based on property values. CCCSD's website estimates this at an average of \$73 per parcel. This increases the value (cost) of the total annual CCCSD residential assessment to \$512.

CCCSD is currently completing a rate study which will be used to justify increased rates to cover the maintenance, operation and capital improvement costs throughout their system as well as at the treatment plant. The City will be responsible to pay its share of these increased costs directly, regardless of the annual sewer charges passed on to the remainder of the CCCSD direct rate payers. There was a meeting on their rate study held on March 5, 2015; staff will report out on the results of the CCCSD rate setting meeting at the March 9th I&F meeting.

The FY13-14 Sanitary Sewer Enterprise budget 10-year fund projections (Attachment 2) forecasts a balance of only \$51,448 in FY16-17 and \$57,423 in FY19-20. A positive balance was only achieved by including the recommended 10% Operations/Maintenance Reserve (Reserve) as part of the fund balance. Without calculating in the Reserve, the fund was projected to have a negative balance of -\$2,660,552 in FY16-17 and -\$3,586,577 in FY19-20. In addition, it was also necessary to defer needed capital projects to achieve positive fund balance projections. It was anticipated at that time that additional rate increases beyond those forecasted in the 10-year plan would be needed to address deferred maintenance needs and to maintain a healthy contingency and capital reserve balance.

At its October 14, 2014, meeting, the City Council approved a contract with Municipal & Financial Services Group (MFSG), of Owings Mills, Maryland, to conduct a rate study and outline rate options for consideration by the Council prior to adoption of the FY15-16 budget. MFSG is a well-regarded consulting firm with extensive experience in preparation of utility system analysis and financial modeling. West Yost Associates was included as a subconsultant on the team to provide engineering support services for the study.

Discussion

The MFSG team has reviewed the Enterprise sewer system, connections and customer base as well as the current financial statements, planned capital projects and funding needs. Based on this information, MFSG developed a rate setting model for the Enterprise. The model includes a 10-year forecast (consistent with the City's budgeting process), that considers anticipated CCCSD costs, Enterprise operation and maintenance costs, planned capital projects and desired reserve levels to project revenue needs and recommend the associated user rates. The Rate Study also considered the current agreement with the City of Clayton regarding sewer service (transport and system maintenance).

MFSG used the aggregated FY 2015 revenue requirements to calculate the percentage of revenues that should be collected from each customer class. These percentages can be applied to any fiscal year in order to determine the equity of rates. FY 2015 costs were used because they were the most recent and

accurate cost numbers available to MFSG. FY 2014 revenues were then used to analyze the allocation because FY 2014 revenues are the most recent and accurate available to MFSG. The Rate Study provided the following breakdown regarding cost of service for each customer class:

Table 1
Enterprise Cost of Service

	Actual Revenue FY 2014	Actual %	Calculated Revenue FY 2014	Calculated %	Difference %
Concord Residential	\$16,711,070	76.99%	\$18,565,943	85.54%	8.55%
Concord Commercial	\$3,005,601	13.85%	\$1,359,201	6.26%	-7.59%
Clayton Residential	\$1,468,331	6.77%	\$1,631,368	7.52%	0.75%
Clayton Commercial	\$79,702	0.37%	\$35,562	0.16%	-0.20%
Unincorporated County	\$27,951	0.13%	\$31,085	0.14%	0.01%
Concord Direct Bill	\$411,915	1.90%	\$81,411	0.38%	-1.52%
TOTAL	\$21,704,570	100.0%	\$21,704,570	100.0%	0.00%

Table 2
Enterprise Cost of Service Revenue vs. Actual Revenue

	Calculated % of Revenue	Calculated Revenue Allocation	Actual 2014 Service Fee Revenue	Revenue Difference	Revenue Difference as a %
Concord Residential	85.54%	\$18,565,943	\$16,711,070	(\$1,854,873)	(-11.1%)
Concord Commercial	6.26%	\$1,359,201	\$3,005,601	\$1,646,400	54.8%
Clayton Residential	7.52%	\$1,631,368	\$1,468,331	(\$163,037)	(-11.1%)
Clayton Commercial	0.16%	\$35,562	\$79,702	\$44,140	55.4%
Unincorporated County	0.14%	\$31,085	\$27,951	(\$3,134)	(-11.2%)
Concord Direct Bill	0.38%	\$81,411	\$411,915	\$330,504	80.2%
TOTAL	100.0%	\$21,704,570	\$21,704,570	\$0.00	

As shown in Table 1 above, in FY 2014, the total revenue from annual sewer rates was \$21,704,570. Total revenues including connection fees, interest, and debt repayment was \$22,397,738. The CCCSD bill for the service period was \$16,087,538, which represents approximately 72% of Enterprise total revenue. In FY 2015, as provided in the FY 2015 budget, the anticipated CCCSD service bill is projected to be \$18,911,210 or approximately 77% of total Enterprise revenue.

The Enterprise’s 2015 annual residential sewer rate of \$402 is in the bottom 30% of surveyed sanitary sewer service providers (Attachment 3). The Rate Study shows that of the \$402 currently charged for residential sewer service, approximately \$306 (76%) is attributed to payment of the CCCSD service bill with the remaining \$96 (24%) available to cover operations, maintenance and capital needs.

The Rate Study concluded that the current sewer rates will not produce sufficient revenue to fund the revenue requirements of the Enterprise for FY 2015 or any of the subsequent fiscal years. To cover FY 2015 operations, the Enterprise service fee should have been \$428, as shown in Table 3 below. The

current sewer rates are too low to cover expenses in future years, as shown in Table 4 over the next five year period (2016-2020), and the Enterprise’s dwindling cash balances will be exhausted by FY 2016.

Table 3
Concord vs. CCCSD Cost Recovery

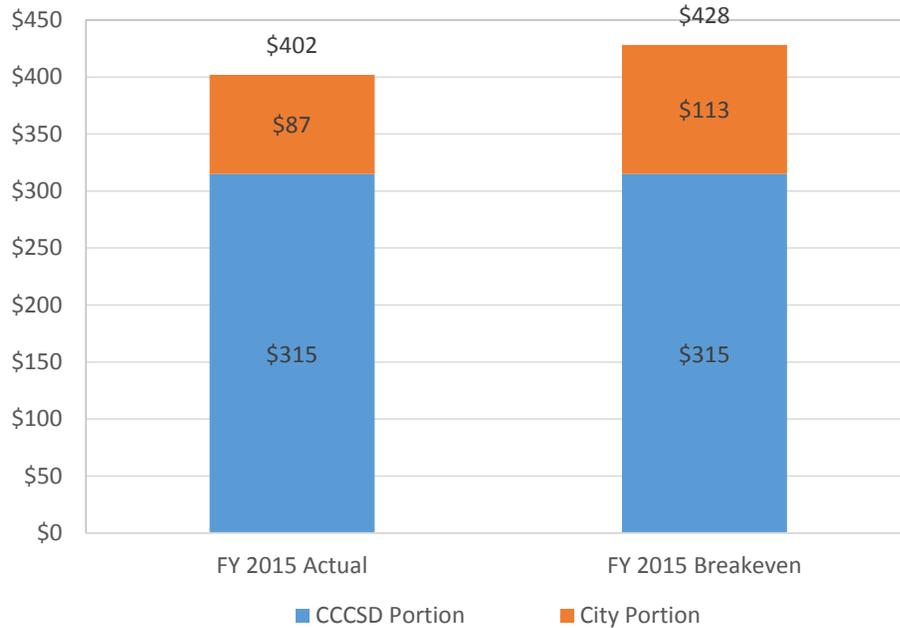
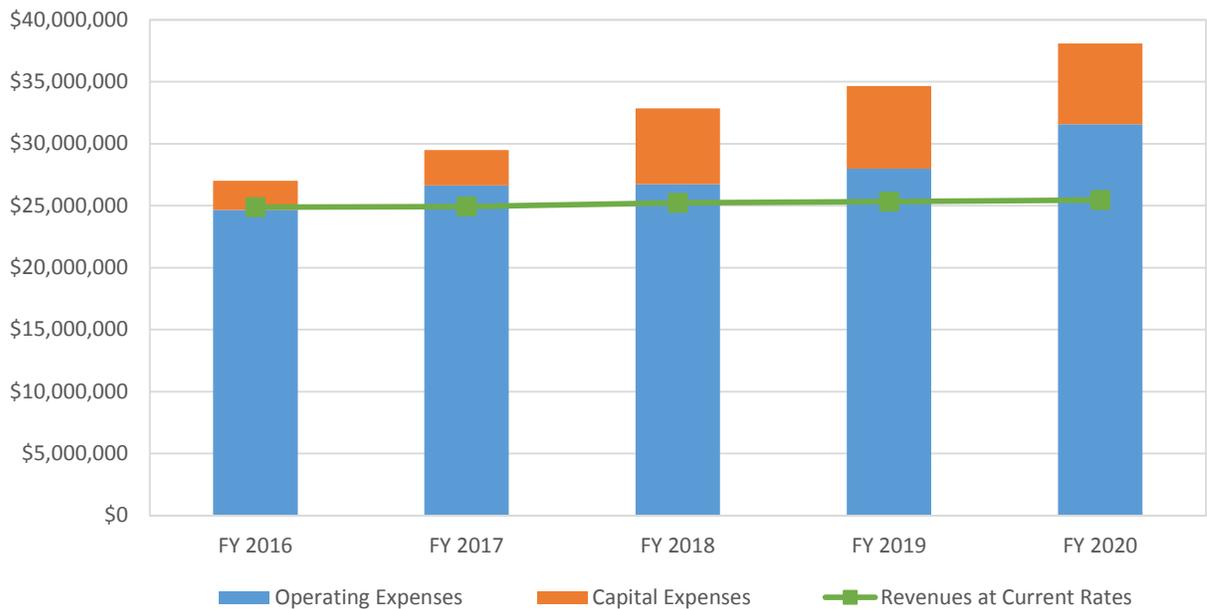


Table 4
Sewer Revenue Requirement vs. Projected Revenues with Existing Rates



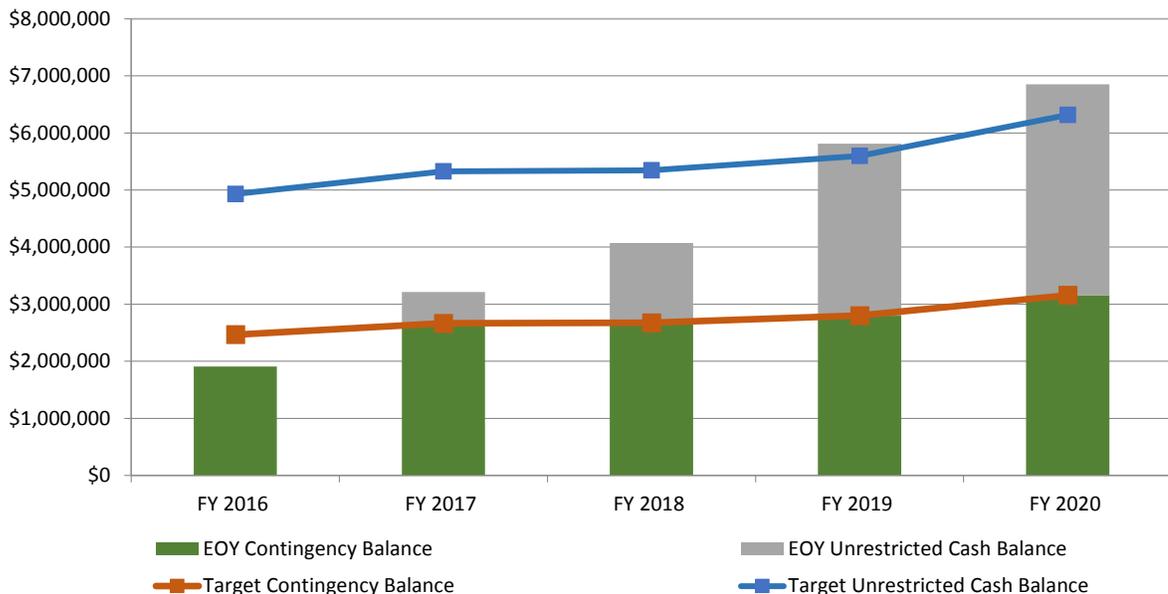
The Rate Study analysis has assessed the level of revenues needed to fund the Sewer Enterprise System at a stable and sustainable level over the 10 year budget period, using industry best practices as a guide. The analysis includes assumptions regarding the escalating cost of operations (including the annual CCCSD costs), the need for on-going capital improvement and maintenance programs to repair an aging system, and the need to rebuild contingency reserves.

The Study recommends that the Enterprise implement a “best practice” sewer main replacement budget to allow for replacement of approximately 1% of the system each year, so that the entire system would be replaced over a hundred year period. The Study conclusions noted that the Enterprise is currently not providing sufficient spending on line repair and replacement in its current CIP.

In addition, the rate model includes a stable End of Year (EOY) contingency reserve balance of 10% of annual O&M expenses (at an absolute minimum), and an unrestricted cash balance of 10% to serve as working capital that can be made available for future capital expenses. This combined 20% reserve program will buffer the need for future abrupt rate increases necessitated by increased capital spending in future years. To achieve these targets, sewer fees would need to be raised.

It is generally preferable to rate-payers to phase in rate increases over several years, rather than experience steep increases all at one time. Since the identified Enterprise funding needs cannot realistically be remedied immediately, it is recommended that needed rate increases be phased in over the next 4 years. The first two years of increases rates (FY15-16 and FY16-17) would fund a 10% contingency reserve target, and an additional 10% unrestricted cash balance would be built over the following two years, as depicted in Table 4 below. This would result in a combined reserve of 20% of the annual O & M expenses kept in a cash balance. This can be compared to the City of Concord reserve goal which is 30% of the annual budget (although the City accepted a lower reserve amount during the recession of 15%).

Table 5
End of Year Cash Balances under Financial Plan



To meet these objectives, the proposed rate increases over the next 10 years would be as shown in table 6:

Table 6
Proposed 10 Year Base Rate Increases

	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Increase to Residential Fee	\$50	\$50	\$45	\$45	\$45	\$20	\$20	\$20	\$20	\$20
Resulting Residential Fee	\$452	\$502	\$547	\$592	\$637	\$657	\$677	\$697	\$717	\$737

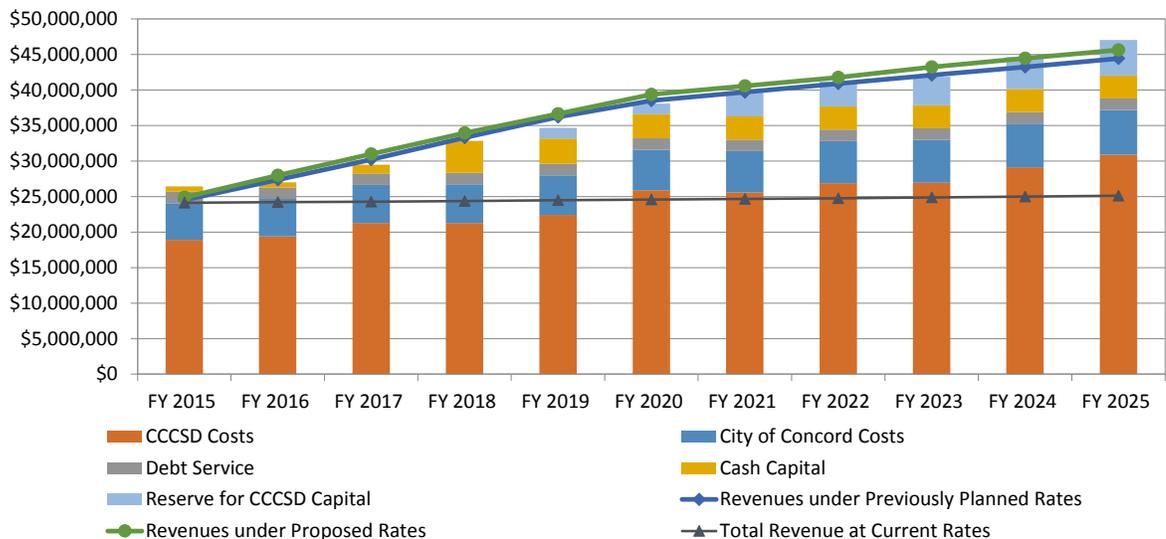
Table 7
Projected 10 Year Base Rate Increases in the Adopted FY 2015 Budget

	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Increase to Residential Fee	\$50	\$50	\$50	\$50	\$40	\$20	\$20	\$20	\$20
Resulting Residential Fee	\$452	\$502	\$552	\$602	\$642	\$662	\$682	\$702	\$722

As can be seen in Tables 6 and 7, the recommended rate increases in the attached study are identical to those projected in the Enterprise’s adopted FY 2015 in the first two years. The projected rates are similar in subsequent years.

The long term revenue requirements and projected cash balances show that the early rate increases over the next several years are necessary to properly fund the Enterprise over the long term. Any delay or reduction in the proposed increases within the first five years of the planning period will have significant negative long-term impacts on the financial health of the sewer enterprise system and would necessitate even larger rate increases in the future.

Table 8
Projected Revenue Requirements and Revenues (10 Years)



Other Policy Considerations. The Rate Study raises a number of additional policy questions that should be addressed at a future time that would have impacts on the Enterprise expenses and resulting revenue needs. These topics include the Enterprise sewer lateral policy, alternative sewer rate structure options, and the level of investment in the repair and replacement of the collection system, among others. Staff will provide more information on these topics in the future for discussion by the Committee and City Council. However, the Study does not recommend that substantial changes in the rate structure occur until the reserve balance issues are addressed.

Proposition 218 Requirements

Under Proposition 218 law, the City could establish the sewer rates for the next five years. The City's most current practice is to establish the rate for two-years. The consultants have recommended a five year time frame. The Committee should discuss this topic when it meets.

If the City enacts the increases as proposed, the Sewer Enterprise Fund would fund needed daily maintenance to the system and provide, over time, the needed operational and capital reserves, required to better maintain the aging system and to be in conformance with industry practice regarding fund reserve levels. As these reserves are built and the higher revenue levels maintained, the Enterprise will have the ability to fund the greatly needed capital projects that have been delayed due to lack of funding.

The sewer rate increase process must comply with the requirements of Proposition 218, and to meet the required timelines the process must begin as soon as possible.

Proposition 218 requires all property owners of record subject to a potential increase in the annual sewer service charge be notified by mail. The sewer service charge increase is not subject to a balloting process, but comes under the traditional assessment district proceedings, which allow for a majority protest process. Notices of a proposed sewer rate increase must be mailed to all users of the sewer system in April 2015. This includes property owners in Concord, Clayton, and a portion of Contra Costa County. The notices will advise of a City Council public hearing date in June 2015 to discuss the Sewer Enterprise rate increases, and also the method of written protest that must be received by the City Clerk prior to the close of the public hearing.

Public Contact

City staff held discussions regarding this topic and the Rate Study with the Clayton City Manager and staff, the Infrastructure and Franchise Committee Agenda was posted. Further public conversation will occur when the Proposition 218 notices are mailed.

Recommendation for Action

Staff recommends that the Infrastructure and Franchise Committee review the proposed benefits and impacts to the City's Sanitary Sewer Enterprise Fund and direct staff to bring forward to the City Council for approval of two or four-year rate increase.


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Attachment 1 – Draft Sewer Rate Study dated March, 2015

Attachment 2 – FY13-14 Sewer Enterprise Budget 10-year Fund Projection

Attachment 3 – Annual Residential Sewer Bill Comparison (FY2015 Rates) – 24 Jurisdictions



CITY OF CONCORD
Sewer Rate Study

Draft Report

March 2015



Municipal & Financial
Services Group

In association with





Municipal & Financial Services Group

March 2015

Robert Ovadia, P.E.
City Engineer, Community & Economic Development
City of Concord
1950 Parkside Drive
Concord, CA 94519

Dear Mr. Ovadia,

The Municipal & Financial Service Group and West Yost Associates are pleased to submit to the City of Concord this draft Sewer Rate Study Report. The document represents the results of our analysis of the cost of providing sewer service to the City's customers and our recommendations for how the City should recover these costs. The study should provide a clear path forward for the City to ensure the financial health and stability of its sewer enterprise fund.

It has been our distinct pleasure to work with you and the City's staff. The City staff's assistance was essential in the completion of the study and their timely and professional involvement should be acknowledged. Thank you for the opportunity to work with Concord on this important study.

Very truly yours,

A handwritten signature in black ink that reads "Edward J. Donahue III". The signature is written in a cursive style with a horizontal line underneath the name.

Edward J. Donahue III
President
The Municipal & Financial Services Group

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DRAFT

I. EXECUTIVE SUMMARY

1. Findings

- Current sewer rates will not produce sufficient revenue to fund the revenue requirements for FY 2015 or any of the subsequent fiscal years.
- Based on projected revenues with existing rates, current sewer rates will produce cash revenues less than the cash expenses in FY 2015 with subsequent shortfalls continuing over the planning period, exhausting all of Concord's cash reserves by FY 2016.
- The City does not have a formal policy regarding the level of unrestricted cash that should be maintained in the sewer fund.
- The City does not provide for sufficient spending on line repair and replacement in its current 10 year CIP.
- Residential customers within the City of Concord are being subsidized by Commercial customers.
- The existing rate structure does not appropriately charge customers in the City of Clayton. Residential customers in the City of Clayton are being subsidized by commercial customers in the City of Clayton and the City of Concord.

2. Conclusions

- The City must adjust (increase) annual sewer revenues to maintain the solvency and long-term financial health of the sewer fund.
- In order to implement best practices, the City should adopt a cash reserve minimum balance policy in order to assure the health of the sewer fund.
- The City must increase its investment in the repair and replacement of its collection system.

3. Recommendations

- Adopt the recommended five-year rates as shown below in Exhibit 1:

Exhibit 1. Recommended Rates

	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
<u>Dollar Increase in Residential Rate</u>	<u>\$50</u>	<u>\$50</u>	<u>\$45</u>	<u>\$45</u>	<u>\$45</u>
RESIDENTIAL OWNERS					
1. Minimum annual rate for any premises	\$452	\$502	\$547	\$592	\$637
2. Each single-family dwelling unit	\$452	\$502	\$547	\$592	\$637
3. Each dwelling unit in a multiple dwelling	\$452	\$502	\$547	\$592	\$637
4. Mobile Home Park	\$452	\$502	\$547	\$592	\$637
COMMERCIAL OWNERS					
1. Minimum annual rate for any premises	\$452	\$502	\$547	\$592	\$637
2. Bowling Alleys (per HCF)	\$3.99	\$4.43	\$4.83	\$5.23	\$5.63
3. Car Washes (per HCF)	\$3.99	\$4.43	\$4.83	\$5.23	\$5.63
4. Health Studios and Gymnasiums	\$3.99	\$4.43	\$4.83	\$5.23	\$5.63
5. Hospitals - Convalescent (per HCF)	\$3.99	\$4.43	\$4.83	\$5.23	\$5.63
6. Multiple Lodging Structures (per HCF)	\$3.99	\$4.43	\$4.83	\$5.23	\$5.63
7. Laundromats and Laundries (per HCF)	\$3.99	\$4.43	\$4.83	\$5.23	\$5.63
8. Restaurants (per HCF)	\$7.95	\$8.83	\$9.62	\$10.41	\$11.20
Restaurants w/ pretreatment (per HCF)	\$4.52	\$5.02	\$5.47	\$5.92	\$6.37
9. Bakeries Determined Individually					
10. All others (per HCF)	\$4.52	\$5.02	\$5.47	\$5.92	\$6.37
INSTITUTIONAL OWNERS					
1. Minimum annual rate for any premises	\$452	\$502	\$547	\$592	\$637
2. As defined in Section 110-31 (per HCF)	\$4.52	\$5.02	\$5.47	\$5.92	\$6.37
INDUSTRIAL OWNERS					
1. Minimum annual rate for any premises	\$452	\$502	\$547	\$592	\$637
2. Flow (per million gallons)	\$3,507	\$3,895	\$4,244	\$4,593	\$4,942
3. Biochemical Oxygen Demand (B.O.D.) (per thousand pounds)	\$824	\$915	\$997	\$1,079	\$1,161
4. Suspended Solid (S.S.) (per thousand pounds)	\$702	\$779	\$849	\$919	\$989

- Increase the City’s 10 year CIP with additional line replacement spending as outlined below in Exhibit 2:

Exhibit 2. Recommended Additional Line Replacement

<i>(in millions)</i>	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Increase in Line Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$1.00	\$1.00	\$1.00	\$1.00	\$1.00

- Adopt a minimum cash balance target comprised of two parts as shown below in Exhibit 3:
 - A Contingency Reserve equal to 10% of annual operating expenses (including CCCSD expenses).
 - An Unrestricted Cash Reserve equal to an additional 10% of operating expenses (including CCCSD expenses).

Exhibit 3. Recommended Unrestricted Cash Balance Targets

	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
EOY Contingency Cash Balance Target	\$2,465,000	\$2,663,400	\$2,673,200	\$2,799,500	\$3,157,400
EOY Unrestricted Cash Balance Target	\$2,465,000	\$2,663,400	\$2,673,200	\$2,799,500	\$3,157,400
EOY Total Cash Balance Target	\$4,930,000	\$5,326,800	\$5,346,400	\$5,599,000	\$6,314,800

II. BASIS FOR THE STUDY

1. Background¹

The City of Concord is located approximately 30 miles east of San Francisco. The City covers 30.55 square miles, and with an estimated 2012 population of 124,711 residents, it is the largest city in Contra Costa County.

The service area as of 2015 included 51,197 service accounts – 45,989 dwelling units in Concord, 4,041 dwelling units in Clayton, 1,090 commercial accounts and 77 County dwelling units. The City provides collection system maintenance services to the City of Clayton's collection system lines and a few lines in the unincorporated areas of Contra Costa County that discharge to the Concord system through an agreement between the parties dated December 18, 1991.

The City of Concord operates and maintains a wastewater collection and conveyance system serving both Concord and Clayton, and portions of unincorporated Contra Costa County. Concord's wastewater collection system conveys wastewater to the Central Contra Costa Sanitary District's (CCCSD) wastewater treatment plant. Sanitary sewer charges are assessed annually by the City and placed on property tax bills.

More than eighty percent of sewage discharged in the maintenance service area previously flowed by gravity to Concord's Sewage Pump Station, which was located adjacent to Waterworld. The sewage from that station was then pumped under the Walnut Creek Flood Control Channel and under Galaxy Way to the Central Contra Costa Sanitary District 78-inch diameter A-Line located on the east side of I-680. That station was decommissioned in 2009 and since that time all sewage from the service area flows by gravity to the CCCSD treatment plant from the old pump station site. Two additional gravity feed connections to the A-Line account for the remaining wastewater flow from Concord to the CCCSD treatment plant located in Martinez, California. One of these gravity-flow connections is located just north of Marsh Drive and services the North Concord area, and the other one is located just south of Concord Avenue and services the triangular area bounded by Concord Avenue, Walnut Creek Flood Control Channel, and I-680

Concord's wastewater collection system includes approximately 389 miles of 6-inch to 54-inch diameter collector and trunk sewer mains (a trunk main is defined as any main larger than 10-inches in diameter), approximately 119.7 miles of sewer laterals that Concord is responsible for maintaining (that portion of the lateral from the property line cleanout to the sewer main), 8,140 manholes, and more than 39,000 service connections as of June 2014. These numbers include the collection system in Clayton, as well as the location where Concord owns a trunk main and maintains the smaller Clayton owned collector lines. Approximately 50% of the collection system is comprised of 6-inch diameter pipes, and the majority of those lines are vitrified clay (VCP) with cement mortar joints. Current maintenance service area standards require all new sewer mains to be at least 8 inches in diameter.

¹ Parts adapted from the City's 2014 Sewer System Management Plan

The City contracted with MFSG and West Yost Associates to perform an analysis regarding the current and future health of the sewer fund. MFSG was tasked with providing recommendations for future rate increases (if needed) as well as an analysis of the cost allocation between the City's various customers (Residential vs. Commercial, Concord vs. Clayton). This document outlines the results of these analyses.

2. MFSG and West Yost Firm Backgrounds

2a. MFSG Firm Background

The Municipal and Financial Services Group (MFSG) is a specialized management consulting practice that was established in 1976 and was for many years part of the management consulting department of national or regional CPA firms or engineering firms. For over 20 years, MFSG has remained focused on assisting our clients with meeting the financial and management needs of public sector infrastructure (especially in environmentally related areas such as water, wastewater, stormwater and solid waste utilities). As a result, MFSG has gained a national reputation as a leader in the area of municipal cost of service analysis and pricing of water and wastewater services. MFSG is a key player in helping to shape the industry with members of our firm authoring and co-authoring many industry standard books regarding utility rate setting, finance and accounting. MFSG provides financial and management consulting expertise to local governments throughout the United States and brings a wealth of industry knowledge and expertise to all of our client engagements.



Specialized services we offer to our clients include:

- **Cost of Service/Rate Studies**
- **Operational Reviews/Management Audits**
- **Comparative Analyses/Benchmarking**
- **Financial Feasibility Studies**
- **Infrastructure Management/GASB 34**
- **System Development Charges/Capacity Fee Studies**
- **Conservation Studies**

In summary, we are well versed in virtually every management and financial aspect of municipal water and wastewater services.

2b. West Yost Associates Firm Background

West Yost Associates (West Yost) is a consulting engineering firm headquartered in Davis, California, with six offices in Northern California and Oregon. West Yost was formed in 1990 to provide a higher level of client service around a focused area of technical expertise. West Yost's focus is exclusively water, wastewater, and stormwater projects, and we provide a broad depth

of experience in planning, design, construction management, and program management services. Our client base is comprised of cities, counties, local and regional districts and agencies, state and federal agencies and private clients.

Offices and Professional Resources

West Yost has seven offices located throughout Northern California and Oregon, including Davis, Roseville, Pleasanton, Walnut Creek, Santa Rosa, and Fresno, California; and Eugene, Oregon and has approximately 95 staff members, including certified or registered professionals in civil and mechanical engineering, geology, and hydrogeology; land surveying; water and wastewater treatment plant operations; GIS; and specialty construction inspection and construction management.

Exclusive Focus

West Yost provides services exclusively in the areas of water, wastewater, and stormwater engineering; program management; and construction management. Our objective is to remain focused within these areas of primary firm strength.

3. Scope of Work

The scope of services set forth in the contract between The City and the Municipal and Financial Services Group consists of several related tasks:

- 1. Data Collection and Review:** MFSG submitted a data request to the City and was provided with financial documents as well as all agreements regarding the City's sewer system, as well as historical planning documents
- 2. Project Kickoff Meeting:** MFSG met with City staff to discuss the project in terms of methodologies, assumptions, schedule and desired deliverables.
- 3. Review Background / Governing Documents and Agreements:** MFSG and West Yost Associates reviewed the agreements provided by the City as well as any pertinent data related to the sewer system.
- 4. Review O&M Costs:** MFSG reviewed the O&M costs related to the City's sewer system, including those costs charged by CCCSD.
- 5. Review Capital Costs:** MFSG reviewed the Capital costs related to the City's sewer system, including those costs charged by CCCSD. This also included an analysis on the line replacement program within the City's CIP.
- 6. Review/Evaluate Adequacy of Reserves:** MFSG worked with City staff in order to determine an appropriate reserve policy for the sewer fund.

7. **Develop Revenue Requirement/Cost of Service:** MFSG aggregated the projected costs and miscellaneous revenues of the City's sewer system in order to determine the revenue needed to be collected from its customers.
8. **Demand/Usage Analysis:** MFSG and West Yost determined the current and future demand for sewer service within the City's service area.
9. **Adequacy of Current Rates:** MFSG projected the sewer system cash flow under the projected costs and projected customers and demand.
10. **Identify and Evaluate Rate/Fee Alternatives:** MFSG analyzed the cost allocation between Clayton and Concord, as well as Residential vs. Commercial customers.
11. **Public Education/Information/Communication:** MFSG is tasked to assist with public outreach regarding the recommendations contained in this report, including assistance with Proposition 218 notification requirements.
12. **Documentation/Reports:** MFSG has documented this study in the following narrative report.

The sewer rate study has been completed based on these tasks, which are documented in this report.

4. Guiding Principles

The following principles were used to guide the rate study and were developed with the assistance of the City's staff:

- The sewer system must be financially self-supporting. It is assumed that the cost of operating and maintaining the system must be supported by the sewer fees and charges collected from customers.
- The City should maintain adequate reserves to provide for contingencies and unplanned expenses and to ensure that funds are generated to allow for appropriate future system repair and replacement without the need to take on debt.
- Sewer rates and fees shall be kept as low as possible *over time*. It is possible to keep rates low for a period of time by not investing sufficiently in the maintenance of the system, but eventually the system will deteriorate and require substantial investments leading to the need for significant and immediate rate increases. The assumption that the City will continually reinvest in the sewer system to replace assets as they reach the end of their useful lives is built into the analysis and allows for timely and predictable rate increases.

Depending on availability, actual FY 2014 data or budgeted FY 2015 data was used as the base upon which forecasted figures were developed. All years within this report refer to the City's fiscal year (July 1 to June 30). While the study and associated financial model projects all

necessary data for a 10-year planning period (FY 2016 – 2025), this report provides data for the first five years in which rates have been calculated (FY 2016 – 2020).

5. Abbreviations Used in This Report

The following abbreviations are used in this report (in alphabetical order):

- BOD – Biochemical Oxygen Demand
- CCCSO – Central Costa County Sanitary District
- CIP – Capital Improvement Plan
- FY – Fiscal Year (July 1 to June 30)
- HCF – Hundred Cubic Feet (748 Gallons)
- HHW – Household Hazardous Waste
- I&I – Inflow and Infiltration
- MHI – Median Household Income
- MOU – Memorandum of Understanding
- O&M – Operations and Maintenance
- TSS – Total Suspended Solids
- WEF – Water Environment Federation
- WWTP – Wastewater Treatment Plant

III. REVENUE REQUIREMENTS

This section of the report outlines the historical and future costs of operating and maintaining the City's sewer system, which constitute the sewer system revenue requirements. Our approach includes a detailed review of each of the costs incurred by the City to ensure that the true cost of providing sewer service is developed. The cost analysis can be broken into three main categories of costs: operating and maintenance costs, existing debt service and capital improvements. The following section of the report describes each of the categories of expenses incurred by the City as it provides sewer service. The costs are all based on official documents and data provided by the City.

1. Operating and Maintenance Expenses

The day-to-day operating and maintenance (O&M) expenses associated with sewer operations can be split between costs incurred by the City of Concord and the treatment charges imposed by Central Costa County Sanitary District (CCCSD). This section will detail the current and projected costs associated with both the City and CCCSD.

1a. City of Concord Costs

In order to operate and maintain the sewer system, the City budgets certain expenditures each year including salaries, benefits, materials and repair costs. The City projects these costs over a ten year period. MFSG has reviewed these projections and determined that they are reasonable based upon historical cost increases and predictable future escalation of costs. Exhibit 4 shows the projected operating costs incurred by the City of Concord to operate its sewer system.

Exhibit 4. City of Concord Operating Expenditures²

	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
Maintenance and Operations	4,982,031	5,088,938	5,197,546	5,307,831	5,419,770
Sanitary Sewer Repairs	269,475	269,475	269,475	269,475	269,475
Total	\$5,251,506	\$5,358,413	\$5,467,021	\$5,577,306	\$5,689,245
<i>% Increase</i>		2.0%	2.0%	2.0%	2.0%

The City has made an effort to control its own operational costs related to the sewer system. The increase that the city is experiencing in operating cost is mostly due to the costs allocated to the City by CCCSD. The next section explains these costs in detail.

1b. CCCSD Cost Sharing³

In 1977, Concord and CCCSD entered into an agreement (CCCSD Agreement) which allowed Concord to direct all flows from their collection system (including wastewater from Clayton and

² City of Concord 2015 Budget 10 year projection

³ Background and analysis provided by West Yost

unincorporated areas which connected to Concord's collection system) to CCCSD's Wastewater Treatment Plant (WWTP). Prior to the CCCSD Agreement, Concord operated its own WWTP, which was in need of costly upgrades. Instead of WWTP upgrades, Concord constructed conveyance facilities to transport their wastewater to CCCSD's WWTP, under the direction of Region 2 of the Regional Water Quality Control Board. Concord agreed to share the cost of treatment "in direct proportion to the benefit received" (CCCSD Agreement).

Under the CCCSD Agreement, Concord continues to have responsibility for the operations and maintenance of its collection system, and is solely responsible for the costs associated with conveying wastewater to the points of connection to CCCSD's collection system. CCCSD is responsible for maintaining flow meters at each of the three connection points to the CCCSD collection system, as agreed in the third amendment to the CCCSD Agreement (1985 Amendment to CCCSD Agreement).

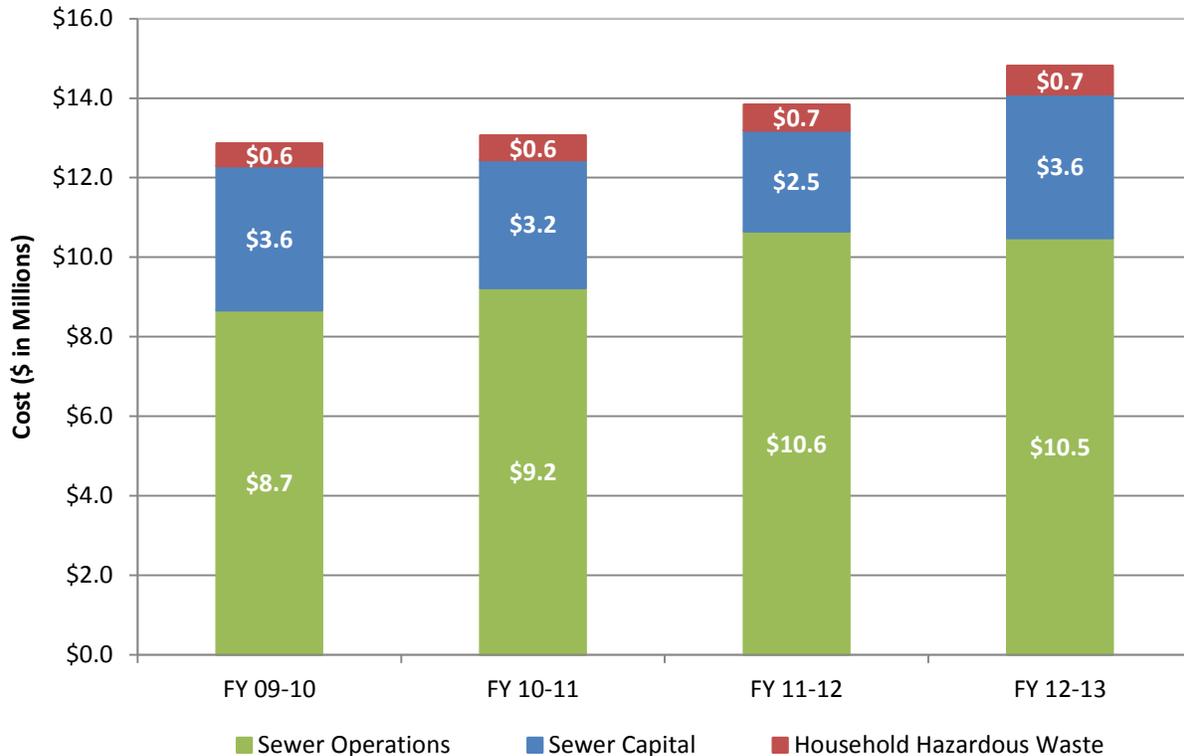
CCCSD's Capital costs associated with treatment are shared on a volumetric basis (1985 Amendment to CCCSD Agreement). Capital costs shared by Concord include amounts paid by CCCSD for planning and construction, including engineering, financial, and legal consultant fees; CCCSD salaries and other related costs; research pilot testing programs; and other costs which were incurred for the new facilities to be commonly used. On or before July 1 of each year, CCCSD is to submit an estimate of the capital needs for the coming fiscal year to Concord. Within 90 days after the end of each fiscal year, the estimate is reconciled with actual expenditures and Concord is billed or credited with the difference.

In general, CCCSD's operations and maintenance (O&M) charges for treatment are shared on a volumetric basis unless sewage from Concord exceeds a parameter range previously established. In this case, a strength multiplier would be applied to calculate the share of O&M costs. This strength multiplier was never adopted, so all costs appear to be shared on a volumetric basis regardless of the strength (1998 Cost Sharing Analysis). Concord is billed annually for O&M costs based on their share of costs for commonly used facilities. CCCSD administers a pretreatment/source control program within Concord's maintenance service area, and costs are directly invoiced to the permitted industries associated with the source control activities. All source control costs which do not directly relate to a specific industry are shared by Concord and CCCSD. These expenses are included as an itemized cost on the O&M statement, and are shared based on the same percentage of flow factor.

CCCSD also charges the City for its participation in the Household Hazardous Waste program. This program allows residents to drop off hazardous substances (e.g., paint, pesticides, batteries, motor oil). These items are disposed of properly to ensure that the products do not threaten human health or the environment when discarded. All residents in the Cities of Concord and Clayton are eligible to drop off hazardous waste free of charge.

Exhibit 5 shows Concord’s proportional share of CCCSD costs from Fiscal Year 2010 to FY 2013.

Exhibit 5. Concord’s Historical Share of CCCSD Costs



While the costs to Concord are estimated by CCCSD and provided to Concord for budgetary purposes, actual expenses have shown some variability over the last four years. CCCSD’s operating costs increased by nearly 21 percent between FY 2010 and FY 2013, which caused an increase of more than 15 percent in CCCSD’s total charges to Concord during that time period.

Treatment Plant Operations

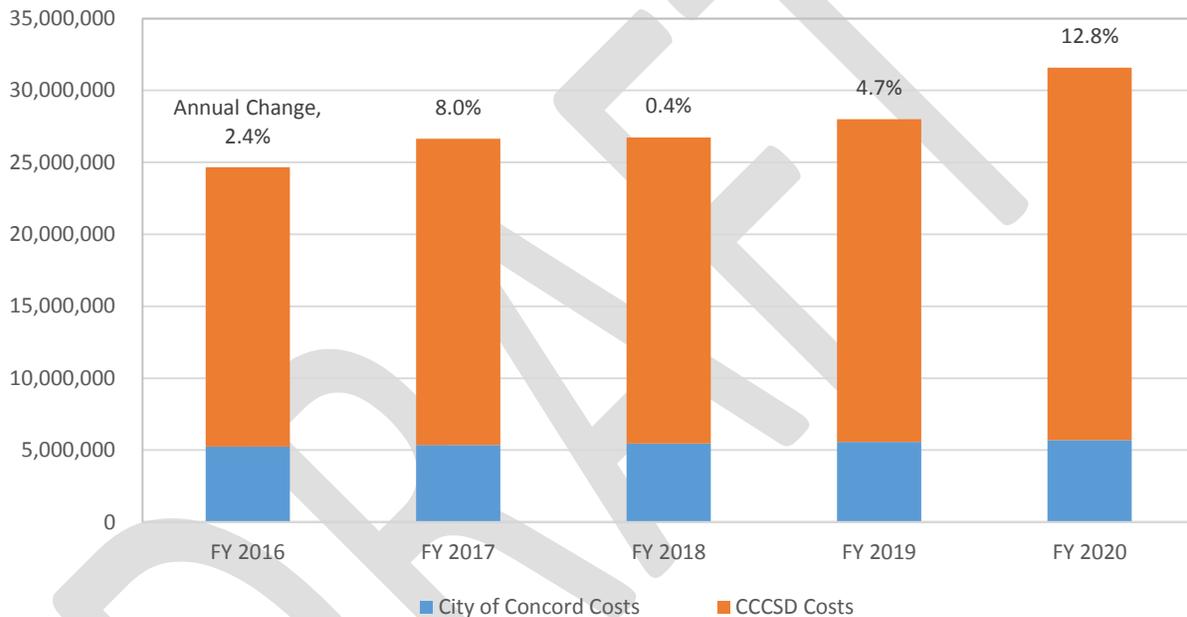
The major budget item related to the City’s sewer operations is the payment made to CCCSD for the treatment of the City’s sewage. CCCSD charges the City based on measured flow, and the City must recover these costs within its rates. The treatment plant operation charge accounts for 56% of the net revenue requirement (revenue that must be raised by rates) of the City. The projected treatment charges over the next five fiscal years are shown below.

Exhibit 6. CCCSD Treatment Plant Operation Cost Projection⁴

	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
Treatment Plant Operations	\$14,548,893	\$14,829,225	\$16,018,774	\$16,311,620	\$16,719,762	\$17,181,670
% Increase		1.9%	8.0%	1.8%	2.5%	2.8%

The sum of the above stated expenditures constitute the annual O&M expenses that are incurred by the City of Concord in order to provide sewer service to its customers. Exhibit 7 shows the projected increases in O&M expenses over the next five fiscal years.

Exhibit 7. Projected Sewer O&M Expenses



It can be seen in Exhibit 9 that the City’s share of operational costs increases only slightly over the projection period. The main increase in operating costs is a result of CCCSD’s increased capital spending and treatment charges assessed by CCCSD.

Capital Projects Reimbursement

As a part of CCCSD’s agreement with the City of Concord, the City must pay a proportion of CCCSD’s capital costs related to the CCCSD’s treatment plant. CCCSD allocates these costs based on the estimated flow of its customers. The City of Concord is currently allocated approximately 30% of these costs. MFSG has projected the total Capital Projects Reimbursement cost over the planning period, shown below.

⁴ City of Concord 2015 Budget 10 year projection

Exhibit 8. CCCSD Capital Reimbursement Expenditures⁵

	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
Capital Cost Reimbursement	\$3,840,974	\$4,505,973	\$4,180,189	\$4,901,737	\$7,889,891
<i>% Increase</i>		17.3%	-7.2%	17.3%	61.0%

CCCSD's capital costs fluctuate from year to year. In FY 2020, CCCSD has major capital improvements planned that will have a major impact on Concord's rate payers. CCCSD's capital costs account for about 15% of the City's sewer expenses – this means that for every 10% increase in CCCSD's capital reimbursement allocation, the City's costs increase 1.5%. In FY 2020, the increase in CCCSD capital reimbursement would account for a 9% increase in costs. MFSG's rate plan phases in rate adjustments to account for these dramatic increases and help mitigate the need for large, one time increases in rates.

Household Hazardous Waste Program⁶

Concord has historically been charged between \$600,000 and \$700,000 per year for participation in the CCCSD household hazardous waste (HHW) program. This program allows residents to drop off hazardous substances (e.g., paint, pesticides, batteries, motor oil). These items are disposed of properly to ensure that the products do not threaten human health or the environment when discarded. All residents in the Cities of Concord and Clayton are eligible to drop off hazardous waste free of charge.

The charges for this facility were not called out specifically in any agreement or memorandum of understanding between Concord and CCCSD. Regardless, Concord appears to be sharing equally in the cost based on population. Concord and Clayton make up approximately 28 percent of the eligible population, and shared approximately 28 percent of the costs to run the program in fiscal year 2012/2013.

Costs to run the facility include building costs, personnel costs, and disposal costs. Based on CCCSD operating costs for 2006 - 2013, the facility costs range from \$0.80 to \$1.37 per pound of HHW. The costs are in line with the survey responses for disposal costs reported by other hazardous waste collection facilities (CalRecycle, 2013). Disposal costs per pound vary significantly from an average of \$0.11 per pound for motor oil to \$62.58 for reactive and explosive products. The median cost of disposal is \$1.03 per pound for all combined products.

Costs of running a smaller facility in Concord were estimated to assess whether Concord could run a similar facility for the residents in its maintenance service area to reduce costs. It was assumed that program participation would be similar to CCCSD at 6.3 percent of the population. Additionally, the average amount of HHW disposed of per car was assumed to be 80 pounds, which was the maximum amount reported by CCCSD for 2006 - 2013. At an assumed operating cost of \$1.37 per pound, the annual cost to run a facility for the 135,856 residents in Concord and

⁵ City of Concord 2015 Budget 10 year projection

⁶ Analysis provided by West Yost Associates

Clayton is estimated to be \$940,000. Concord appears to be sharing fairly in the costs of the HHW facility, and it does not appear that cost savings could be achieved by running its own facility. Therefore, it is recommended that Concord continue participation in the CCCSD HHW program.

MFSG has projected the future costs of the HHW program, shown below.

Exhibit 9. HHW Projected Expenditures⁷

	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
HHW Expenses	\$728,164	\$750,008	\$772,509	\$795,684	\$812,555
% Increase		3.0%	3.0%	3.0%	2.1%

The HHW costs are allocated evenly among the City’s sewer customers.

2. Capital Costs

The annualized capital costs related to providing sewer service are generally comprised of existing debt service and any anticipated capital projects, which may be funded from cash (either reserves on hand or cash derived from operations) or funded via the issuance of debt (typically bonds, loans or similar financial instruments).

2a. Existing Debt

On occasion, the City uses debt to fund capital projects to mitigate the immediate financial burden on customers and the City’s available fund balance by spreading the costs of projects over several years, sometimes even decades. As of FY 2015, the City will pay debt on two separate Certificates of Participation (COP) debt issues with payments totaling about \$1.6 million annually.

2007 Certificates of Participation: On October 18, 2007, the City of Concord Joint Powers Financing Authority issued Certificates of Participation (COPs) in the principal amount of \$12,820,000, bearing interest rates ranging from 3.75% to 4.5%. Proceeds from the COPs were used to fund installation of pipelines from the Concord pump station to the intersection of Meridian Park Boulevard and Galaxy Way. Principal is payable annually on February 1 and interest is payable semi-annually on February 1 and August 1 through 2032. As of June 30, 2014, the principal balance was \$10,300,000. In FY 2014-15, the amount to be paid by the Sewer Enterprise Fund to service the debt on the 2007 COPs was \$848,543.

2012 Certificates of Participation: On September 18, 2012, the City issued Wastewater Revenue Refunding bonds, Series 2012 in the original principal amount of \$10,080,000 at interest rates that range from 1.50% to 4.00% to provide for a refunding of the City’s outstanding 2004 Certificates of Participation Wastewater System Improvement Bonds. Principal payments are due annually on February 1, with interest payments payable semi-annually on August 1 and

⁷ City of Concord 2015 Budget 10 year projection

February 1 through February 1, 2029. As of June 30, 2014, the principal balance outstanding was \$9,115,000. In FY 2014-15, the amount to be paid by the Sewer Enterprise Fund to service the debt on the 2012 COPs was \$761,521.

The total outstanding principal balance related to these COP's as of June 30, 2014 was \$19,415,000. The table below shows the existing debt payments for FY 2016 through FY 2020.

Exhibit 10. Existing Total Debt Service Payments⁸

	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
2012 COP	761,521	764,265	761,863	766,517	765,175	763,039
2007 COP	848,543	847,787	847,472	851,601	849,984	851,648
Total Debt Payment	\$1,610,064	\$1,612,052	\$1,609,335	\$1,618,118	\$1,615,159	1,614,687

It is typical for debt payments to remain relatively flat on a year to year basis. These debt payments are maintained through the ten year projection period analyzed by MFSG.

2b. Planned Capital Improvements

As a part of the proper maintenance and rehabilitation of the City's collection system, the City plans certain capital projects over the course of the next five years, called a Capital Improvement Plan (CIP). As a part of this study, MFSG staff worked with the City and West Yost to develop an aggressive yet realistic CIP that takes into account both internal determinations of the system's health and external regulatory demands on the system.

The CIP can be funded by various sources of income including annual revenues (cash funding), future debt proceeds, or reserve funds on hand. Below is Exhibit 11, showing a summary of the City's CIP for fiscal years 2016 through 2020.

Exhibit 11. Concord's Planned CIP, FY 2015 through FY 2019

	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
Citywide Sewer Condition Assessment Study	100,000	100,000	100,000	-	-
Sewer Capital Facility Replacement	500,000	500,000	1,000,000	1,500,000	1,500,000
Citywide Sewer Lateral Replacement Program	150,000	150,000	150,000	150,000	150,000
Cowell Road BART Area Sanitary Sewer Upgrade	-	-	250,000	1,650,000	-
Downtown Sanitary Sewer Upgrade - Phase III	-	-	-	250,000	1,750,000
Downtown Sanitary Sewer Upgrade - Phase IIb	-	500,000	3,000,000	-	-
Total CIP Spending	\$750,000	\$1,250,000	\$4,500,000	\$3,550,000	\$3,400,000

⁸ City of Concord 2015 Budget 10 year projection

One of the major financial planning assumptions that is reflected in the financial model is that the City would not take on any additional debt to fund this CIP. The City is projected to cash fund about \$0.75 to \$4.5 million each year from FY 2016 to FY 2020. This assumption is adjustable within the City’s rate model, and in general the issuance of debt delays the need for rate increases, but due to interest and inflation factors, in the long term the cost to repay debt is larger than cash funding of projects. MFSG is recommending that the City cash fund 100% of its CIP.

2c. Reserve for Future CCCSD Capital

The City of Concord, in an effort to anticipate future increases in the capital reimbursement paid to CCCSD, has planned for certain additional expenses to provide for increases in the City’s share of CCCSD capital expenses. These costs are entirely prospective, and in order to conservatively predict what rates need to be, MFSG included them in the revenue requirements. These projected costs are outlined in the following exhibit.

Exhibit 12. CCCSD Reserve Contributions

	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
Reserve for Future CCCSD Capital	\$ -	\$ -	\$ -	\$1,500,000	\$1,500,000

MFSG believes the above stated allocations are conservative and appropriate. The City should re-evaluate CCCSD’s capital allocations each year, and adjust these projections based on the actual anticipated costs.

3. Revenue Requirement

The total annual cost of operating the sewer system (the gross revenue requirements) includes the total of operating and maintenance costs, current and future capital costs. The sum of these costs, less the amount of miscellaneous revenues, is the amount that needs to be recovered from user fees (referred to as the net revenue requirement). Miscellaneous revenues include interest income, loan repayment to the sewer fund, and sewer connection fees.

An advance from the Sewer Enterprise Fund to the General Fund was made during FY2009-10 to fund the retirement of \$8.2 million of the 1995 Lease Revenue Bonds associated with the Concord Pavilion. The advance bears interest at the Local Agency Investment Fund (LAIF) rate plus 0.5% to be paid on a quarterly basis. As a result of this nonrecurring long-term advance, the City is no longer obligated to pay 8.24% interest on the retired bonds. The General Fund began to repay these advances annually in FY2014-15, with a final payment expected in FY2030, and will pay approximately \$1.9 million in interest over the life of the repayment. In FY 2014, the interest that was paid to the Sewer Enterprise Fund on this advance was \$286,896 out of total interest paid of \$422,000 annually.

The following exhibit shows the revenue requirement, miscellaneous revenues and the net revenue requirement from sewer user rates for the five years of the planning period (FY 2016 to FY 2020).

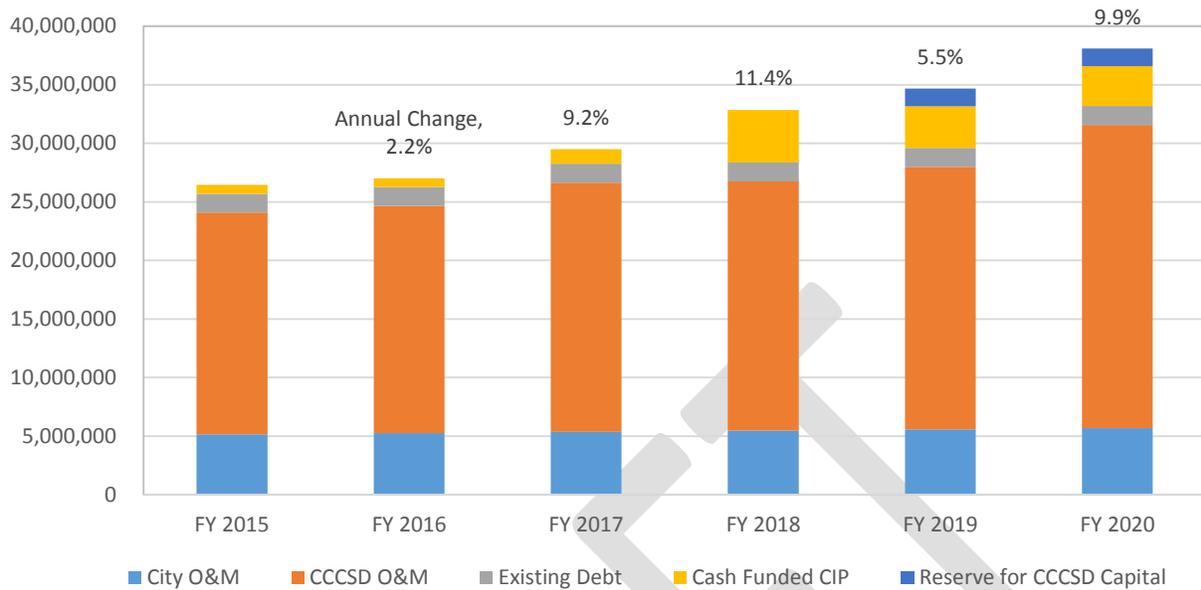
Exhibit 13. Sewer Revenue Requirements

	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
Operating Costs					
Total Operating Expenses	24,649,869	26,633,168	26,731,339	27,994,489	31,573,361
Total Operating Expenses	\$24,649,869	\$26,633,168	\$26,731,339	\$27,994,489	\$31,573,361
Capital Costs					
Existing Debt Service Expense	1,612,052	1,609,335	1,618,118	1,615,159	1,614,687
Cash Funded Capital Projects	750,000	1,250,000	4,500,000	3,550,000	3,400,000
Reserve Funded Capital	-	-	-	-	-
Projected Debt Service Expense	-	-	-	-	-
Reserve for CCCSD Capital	-	-	-	1,500,000	1,500,000
Total Capital Expenses	\$2,362,052	\$2,859,335	\$6,118,118	\$6,665,159	\$6,514,687
Total Revenue Requirement	\$27,011,921	\$29,492,503	\$32,849,457	\$34,659,648	\$38,088,048
Less Miscellaneous Revenues	(\$663,292)	(\$660,428)	(\$862,290)	(\$858,358)	(\$881,311)
Net Revenue Requirement	\$26,348,629	\$28,832,075	\$31,987,167	\$33,801,290	\$37,206,737

The City's sewer revenue needs grow significantly in the next five fiscal years. The revenue needed in FY 2020 is 41% higher than in FY 2016. Current revenues will not be able to support this increase in costs.

Exhibit 14 graphically shows the components of the total revenue requirement and their projected growth over the planning period.

Exhibit 14. Projected Sewer Total Revenue Requirements



The projected total costs of providing sewer service to the City’s customers will rise from about \$26 million to over \$37 million within the next five fiscal years. These cost increases will have a major impact on the rate payers within the City’s service area. It should be noted that the primary reason for these increases are the costs allocated from CCCSD.

The next section of this report discusses the City’s customer base.

IV. SEWER CUSTOMERS AND USAGE

This section provides a summary of the current and projected sewer customer accounts and usage.

1. Current Sewer Customers

In FY 2015, the City's sewer customer base included 39,647 accounts, which includes 51,197 residential dwelling units. The current customer counts are shown in Exhibit 15.

Exhibit 15. Current Sewer Customers

	FY 2015
Residential	
City of Concord Dwelling Units	45,989
City of Clayton Dwelling Units	4,041
Commercial (Accounts)	
1. Minimum rate for any premises	12
2. Bowling Alleys	1
3. Car Washes	10
4. Health Studios and Gymnasiums	3
5. Hospitals - Convalescent	6
6. Multiple Lodging Structures	10
7. Laundromats and Laundries	5
8. Restaurants	31
9. Bakeries	2
10. All others	1,010
County Residential Dwelling Units and Non-Residential Accounts	77
Total Accounts and Dwelling Units	51,197

In an effort to conservatively project future usage, MFSG and City staff included very minimal annual increase in the number of dwelling units and the amount of flow over the five year projection period. We recommend that the City annually update the sewer model with actual customer data in an effort to improve future projections.

2. Commercial Sewer Usage

The City uses the winter average water consumption of each commercial account to determine the year round sewer usage for each account. This assumes that water usage in warmer months above and beyond the winter usage is not contributed to the sewer system.

The total estimated flow from the City's commercial customers for FY 2015 is approximately 774,364 HCF (Hundred Cubic Feet, or 748 gallons). MFSG is projecting no increase in flow from commercial customers in order to conservatively project revenues from commercial customers. The median commercial customer will be billed for about 530 HCF in FY 2015, based on water usage data.

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V. FINANCIAL PLAN AND PROPOSED RATES

1. Recommendations Influencing the Financial Plan

MFSG developed several recommendations that have a major influence on the financial plan developed for the City's sewer fund. This section will detail these recommendations and the methodology used to develop them.

Industry best practices include the recommendation that utilities maintain a minimum cash reserve. The target for this cash reserve can vary, but the industry standard is that a utility maintain a minimum of 25% of O&M expenses in a cash reserve. MFSG is comfortable recommending less than 25% (i.e., 20%) of O&M expenses for the City of Concord because of the City's very efficient method of revenue collection, i.e. property tax bills. The City has very stable revenue collections because revenues are not dependent on monthly variations in sewer flow.

1a. Contingency and Unrestricted Cash Balance Targets

As a part of the sewer rate analysis, MFSG developed minimum cash balance requirements that the City should maintain in the sewer fund. MFSG has developed rates that phase in the accumulation of unrestricted cash to meet these targets. The targets are as follows:

- 1.) **Contingency Balance** – MFSG has developed a rate model that requires the City to maintain, **at an absolute minimum**, 10% of annual O&M expenses in a cash reserve, referred to as the "Contingency Reserve". The purpose of this reserve is serve as an available cash balance used to absorb temporary financial shocks. It is recommended that the City never draw down on the 10% contingency balance unless it is an absolute emergency and the City plans to replenish the contingency balance within one fiscal year. This reserve also serves as a metric that rating agencies use to determine the bond rating of the City:

"The negative outlook reflects our view that if unrestricted cash remains near \$0 during the next two years as debt service and debt levels increase, we will likely lower the rating." - Moody's rating of Glendale, CA. - **AA/Negative**

- 2.) **Unrestricted Balance** – MFSG also recommends an **additional 10%** of O&M expenses be kept in a cash reserve that will serve as working capital that can be made available for future capital expenses. The industry standard for an unrestricted reserve is 25% of annual O&M expenses. This reserve will mitigate future rate increases necessitated by increased capital spending in future years. The unrestricted balance can also be drawn upon in the event of emergency repair needs and/or in order to smooth out the impact of future rate increases.

This additional unrestricted reserve will show that the City is planning on maintaining flexibility in capital spending (not dependent on rate increases), which is another metric used by rating agencies when determining a utility's rating:

“Although the board may draw down unrestricted cash and investments from 458 days of operational expenses, one of the board's financial principles is to maintain unrestricted cash equal to at least 120 days' expenditures.” - Standard and Poor's rating of Daphne, AL. - **AA-/Stable**

With the adoption of the two above stated reserves, the City will increase the financial health and stability of the sewer fund.

2. 2015 Rates

Exhibit 16 shows the current rates charged by the City of Concord for sewer service.

Exhibit 16. FY 2015 Rates

	FY 2015 Rate
RESIDENTIAL OWNERS	
1. Minimum annual bill for any premises	\$402
2. Each single-family dwelling unit	\$402
3. Each dwelling unit in a multiple dwelling structure	\$402
4. Mobile Home Park	\$402
COMMERCIAL OWNERS	
1. Minimum annual bill for any premises	\$402
2. Bowling Alleys (per HCF)	\$3.55
3. Car Washes (per HCF)	\$3.55
4. Health Studios and Gymnasiums (per HCF)	\$3.55
5. Hospitals - Convalescent (per HCF)	\$3.55
6. Multiple Lodging Structures (per HCF)	\$3.55
7. Laundromats and Laundries (per HCF)	\$3.55
8. Restaurants (per HCF)	\$7.07
Restaurants with pretreatment facilities (per HCF)	\$4.02
9. Bakeries Determined Individually	N/A
10. All others (per HCF)	\$4.02
INSTITUTIONAL OWNERS	
1. Minimum annual bill for any premises	\$402
2. As defined in Section 110-31 (per HCF)	\$4.02
INDUSTRIAL OWNERS	
1. Minimum annual bill for any premises	\$402
2. Flow (per million gallons)	\$3,119
3. Biochemical Oxygen Demand (BOD) (per thousand pounds)	\$733
4. Suspended Solid (SS) (per thousand pounds)	\$624

The City currently charges all residential customers the same annual fee of \$402. Commercial customers are billed based on actual winter water consumption which is extrapolated out to determine annual usage. Winter average is used by many utilities across the country as a determination of the amount of water usage that actually makes it to the sewer system year round, regardless of seasonal fluctuations of water use. That is, in the winter it is assumed that 100% of water usage ends up as sewage, whereas in the summertime there is outdoor water usage that will not need to be treated by the WWTP. By billing commercial customers based on winter water consumption the City is not billing in excess of what actually contributes flow to their collection system.

Commercial customers are billed an HCF rate based on their classification (as shown in Exhibit 16). For each commercial account, the winter water usage is determined and then annualized to determine the annual bill. For example, if a restaurant with pretreatment facilities uses 30 HCF

of water on average in the winter, it's annual bill would be 30 HCF x 12 months x \$4.02 per HCF = \$1,447.20.

As stated previously, the majority of the rate revenue collected goes to pay for CCCSD's allocated treatment and capital charges.

2b. Concord City vs. CCCSD Revenues under Current Rates

Under the current FY 2015 rates, the City will produce a deficit of about \$1.5 million dollars in FY 2105. As part of this study, MFSG was tasked with determining what portion of the current FY 2015 bill for a residential customer goes to pay for CCCSD treatment and capital charges and what portion is collected by the City. It is assumed that 100% of CCCSD's charges must be paid by the City and that any revenue shortfalls will be borne by the City's sewer fund. Exhibit 17 shows the current allocation and what the allocation would be if the City could recover 100% of its costs.

Exhibit 17. Concord vs. CCCSD Cost Recovery

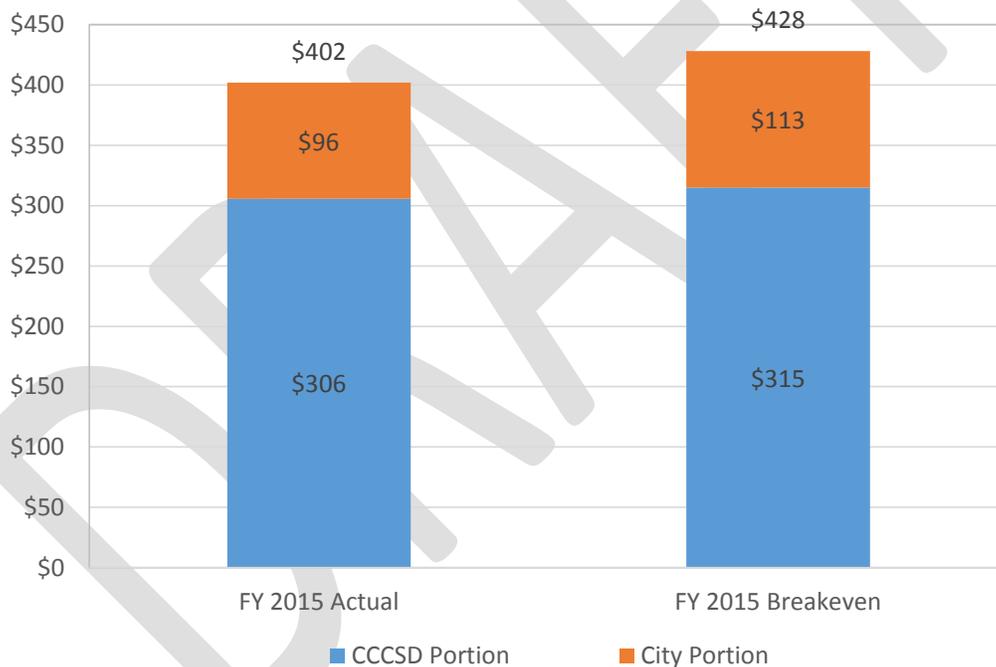


Exhibit 17 shows that in FY 2015, \$306 of the total \$402 fee per residential customer went to pay costs associated with CCCSD. The city collected the remaining \$96 per account, but could not cover all of its costs with that revenue. If the City were to actually collect what it needed in FY 2015, it would collect \$428 per residential customer, and increase of \$26 (about 6.5%). This would allow the city to break even on a cash flow basis in FY 2015. However, it should be noted that the City limited capital spending in FY 2015, so the true breakeven rate would surpass \$428. The \$428 rate does not include true capital needs or any contribution to reserves.

MFSG’s rate plan would increase not only the total amount of revenue generated, but would increase the City’s share of revenue in order to cover all of the City’s sewer expenses, with rate increases phased in over time.

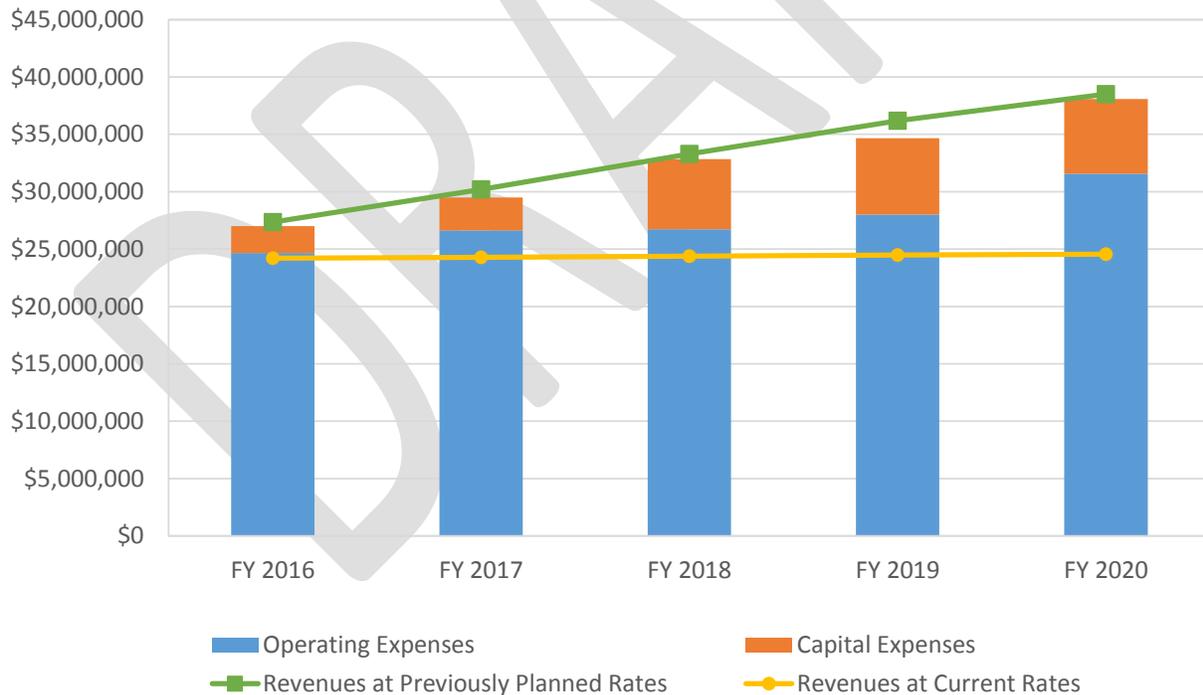
3. Projected Revenues and Financial Results with Previously Planned FY 2015 Budget Rates

The adequacy of revenues from previously planned rates outlined in the FY 2014-15 budget was evaluated in order to determine those projected rate increases would be sufficient to recover the net revenue requirement. Exhibit 18 compares the total sewer annual revenue requirement to projected sewer revenues with previously projected rates in the City’s FY 2015 budget. These rates were projected in the budget but were not adopted.

Exhibit 18. FY 2015 Budget Planned Rate Increases

	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
Increase to Annual Residential Fee	\$50.00	\$50.00	\$50.00	\$50.00	\$40.00
Resulting Residential Fee	\$452	\$502	\$552	\$602	\$642

Exhibit 19. Sewer Revenue Requirement vs. Projected Revenues with Previously Planned Rates



It is clear that the City’s current rates (\$402 base residential rate) will not generate enough revenue to cover the future expenses projected by MFSG and West Yost. In fact, the City is only able to fund its operating expenditures (including CCCSD costs) with current annual revenues. It is MFSG’s recommendation that within the next two fiscal years, the City generate enough

revenue to fund (at a minimum) the 10% contingency reserve target, and within four years the city fully fund an additional 10% unrestricted cash reserve.

4. Proposed Rate Increases and Financial Results

MFSG’s financial model can show the impact of various rate increases and whether or not the increases will result in a healthy sewer fund balance. Based on MFSG’s model, MFSG has determined the rate increases necessary to maintain the recommended sewer fund balances. Exhibit 20 outlines MFSG’s recommended increases to the annual residential sewer fee.

Exhibit 20. Proposed Rate Increases

	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
Increase to Annual Residential Fee	\$50.00	\$50.00	\$45.00	\$45.00	\$45.00
Resulting Residential Fee	\$452	\$502	\$547	\$592	\$637

All other rates and fees are recommended to increase at the same percentage rate as residential rates, based on the above plan.

5. Rate Projections

Based on the rate increases stated above, MFSG recommends that the next five fiscal years of rates be established as shown in Exhibit 21. If the City adopts the recommended rates and projected annual expenses and revenues are reasonably in line with estimates, the City will not have to readdress this subject for five years. If expenses or revenues vary significantly from projections, then the City can modify the approved rates, at that time, to reflect changed circumstances.

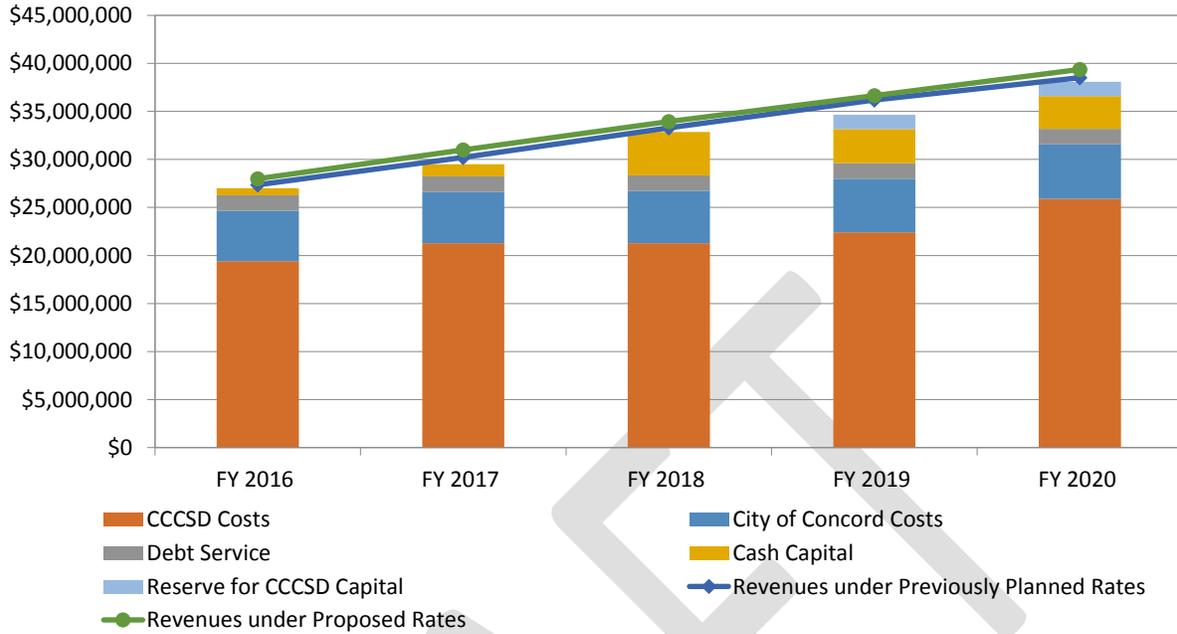
Exhibit 21. Proposed Annual Rates

	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
RESIDENTIAL OWNERS					
1. Minimum rate for any premises	\$452	\$502	\$547	\$592	\$637
2. Each single-family dwelling unit	\$452	\$502	\$547	\$592	\$637
3. Each dwelling unit in a multiple dwelling	\$452	\$502	\$547	\$592	\$637
4. Mobile Home Park	\$452	\$502	\$547	\$592	\$637
COMMERCIAL OWNERS					
1. Minimum rate for any premises	\$452	\$502	\$547	\$592	\$637
2. Bowling Alleys (per HCF)	\$3.99	\$4.43	\$4.83	\$5.23	\$5.63
3. Car Washes (per HCF)	\$3.99	\$4.43	\$4.83	\$5.23	\$5.63
4. Health Studios and Gymnasiums	\$3.99	\$4.43	\$4.83	\$5.23	\$5.63
5. Hospitals - Convalescent (per HCF)	\$3.99	\$4.43	\$4.83	\$5.23	\$5.63
6. Multiple Lodging Structures (per HCF)	\$3.99	\$4.43	\$4.83	\$5.23	\$5.63
7. Laundromats and Laundries (per HCF)	\$3.99	\$4.43	\$4.83	\$5.23	\$5.63
8. Restaurants (per HCF)	\$7.95	\$8.83	\$9.62	\$10.41	\$11.20
Restaurants w/ pretreatment (per HCF)	\$4.52	\$5.02	\$5.47	\$5.92	\$6.37
9. Bakeries Determined Individually					
10. All others (per HCF)	\$4.52	\$5.02	\$5.47	\$5.92	\$6.37
INSTITUTIONAL OWNERS					
1. Minimum rate for any premises	\$452	\$502	\$547	\$592	\$637
2. As defined in Section 110-31 (per HCF)	\$4.52	\$5.02	\$5.47	\$5.92	\$6.37
INDUSTRIAL OWNERS					
1. Minimum rate for any premises	\$452	\$502	\$547	\$592	\$637
2. Flow (per million gallons)	\$3,507	\$3,895	\$4,244	\$4,593	\$4,942
3. Biochemical Oxygen Demand (BOD) (per thousand pounds)	\$824	\$915	\$997	\$1,079	\$1,161
4. Suspended Solid (SS) (per thousand pounds)	\$702	\$779	\$849	\$919	\$989

6. Revenue Impacts of Recommended Rates

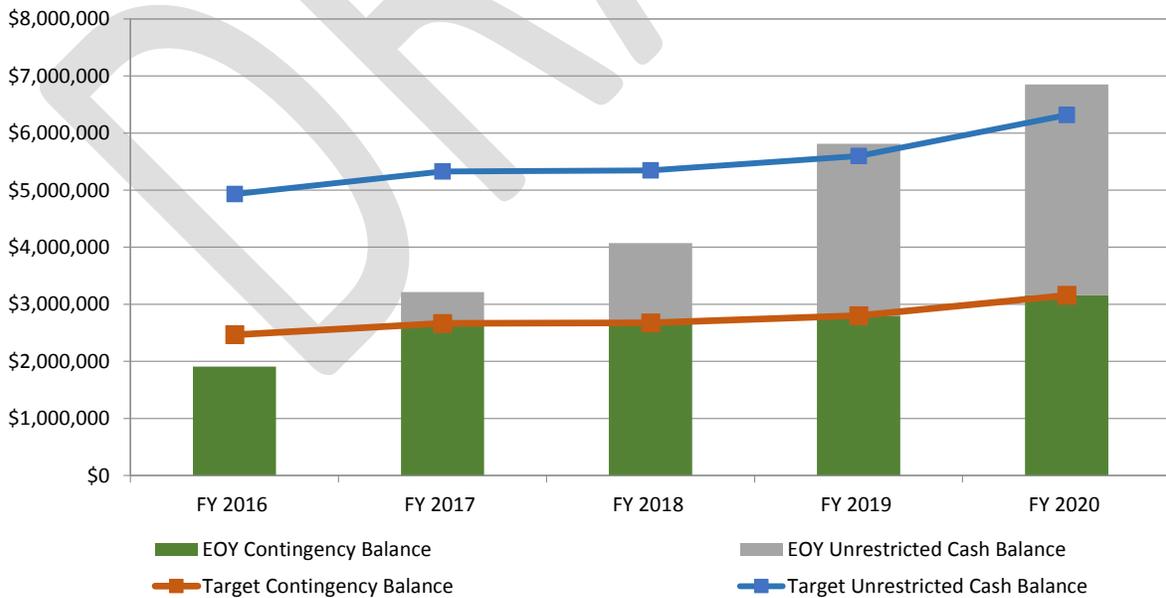
The operating results under the proposed rates are shown in the following Exhibit.

Exhibit 22. Operating Results under Financial Plan



Under the financial plan, the City will generate sufficient revenue to fund current operations (including planned capital) and replenish its unrestricted cash reserve. Exhibit 23 shows the projected cash balances under MFSG’s rate plan.

Exhibit 23. End of Year Cash Balances under Financial Plan



MFSG strongly recommends that the City accrue at least the 10% contingency as soon as possible. A two year phase in is the most aggressive plan MFSG would recommend to avoid extreme rate increases in any given year. Then, MFSG recommends an additional two years of increases would allow the City to meet the additional 10% unrestricted cash reserve. This short term rate plan would put the sewer fund in a strong financial position within the five year planning period. Smaller increases in the short term would negatively affect the long term projections within MFSG's rate model.

The long term (10 year) projection for the sewer fund is discussed in detail in Section V of this report.

7. Pass-through Rate Structure

Because the treatment, capital and HHW charges allocated to the City by CCCSD are not within the control of the City, California law allows for the City to adopt rates that are split into two fees: One to cover the City's expenses and one to cover the expenses driven by CCCSD allocations. The advantage of this rate structure is that any increase in CCCSD costs can be adopted as a pass-through increase, not subject to Proposition 218 notice. The City would only need to issue a Proposition 218 notice only for rate increases as a result of increases in the City's sewer expenses. Currently, MFSG is not recommending the adoption of the pass-through rate structure. MFSG recommends a more thorough legal analysis with the possibility to implement this rate structure in FY 2017. The breakdown of the projected residential fee under this approach is shown in Exhibit 24.

Exhibit 24. Pass-through Rate Structure

	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
Residential Fee	\$402	\$452	\$502	\$547	\$592	\$642
CCCSD Portion	\$306	\$325	\$362	\$362	\$383	\$433
City Portion	\$96	\$127	\$140	\$185	\$209	\$209

The above rates are calculated by simply dividing the CCCSD costs allocated to residential customers into the number of residential dwelling units. In some years the increase can be attributed to CCCSD cost increases, and in some years the increase can be attributed to City costs (mostly increases in cash capital spending). Most notably, from FY 2017 to FY 2018, the rate increase can be attributed to additional capital spending within the City. From FY 2019 to FY 2020, the increase can be attributed to CCCSD costs only.

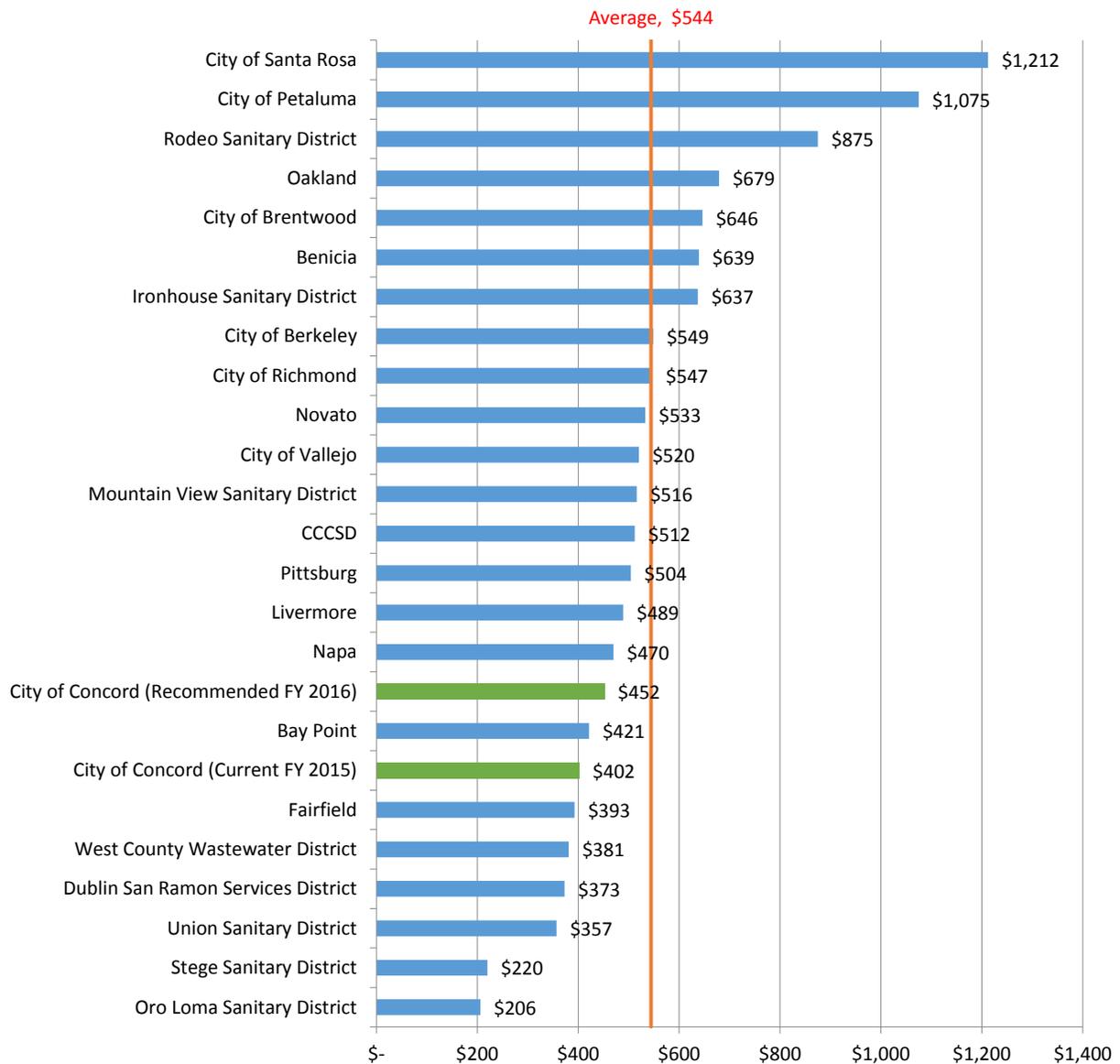
8. Residential and Commercial Bill Comparisons

It is important to demonstrate the impact of MFSG's recommended rates on residential and commercial customers, especially as it relates to nearby utilities. This section of the report will discuss the annual bill of a City of Concord customer and how it compares to comparable local sewer utilities.

8a. Residential Bill Comparison

To demonstrate the impact of the recommended rates, this section provides a summary of a bill comparison of the current FY 2015 rates and the proposed rates for FY 2016 to surrounding communities in the region. The bills are calculated for residential customers (annual fee per account). The most current rates (FY 2015) were used in the comparison, but the bills may not reflect unknown rate increases within the comparison utilities causing bills for the City to appear higher. It should be noted that the CCCSD bill includes the ad valorem tax.

Exhibit 25. Annual Residential Bill Comparison (FY 2015 Rates)



This exhibit demonstrates that among the utilities in the residential comparison, the current customer bill and bill based on recommended rates for FY 2016 are in the lower range, below the average of those utilities surveyed and substantially below that of CCCSD.

8b. Commercial Bill Comparisons

Another sample bill that is useful to discuss is the bill of a commercial customer, specifically a restaurant. The City of Concord has about 1,100 commercial accounts. The following chart shows the annual bill that a restaurant would pay within each utility's service area. It should be noted that the CCCSD bill includes the ad valorem tax.

Exhibit 26. FY 2015 Annual Commercial Bill Comparison (Restaurant, 2000 sq. ft., 50 Seats)

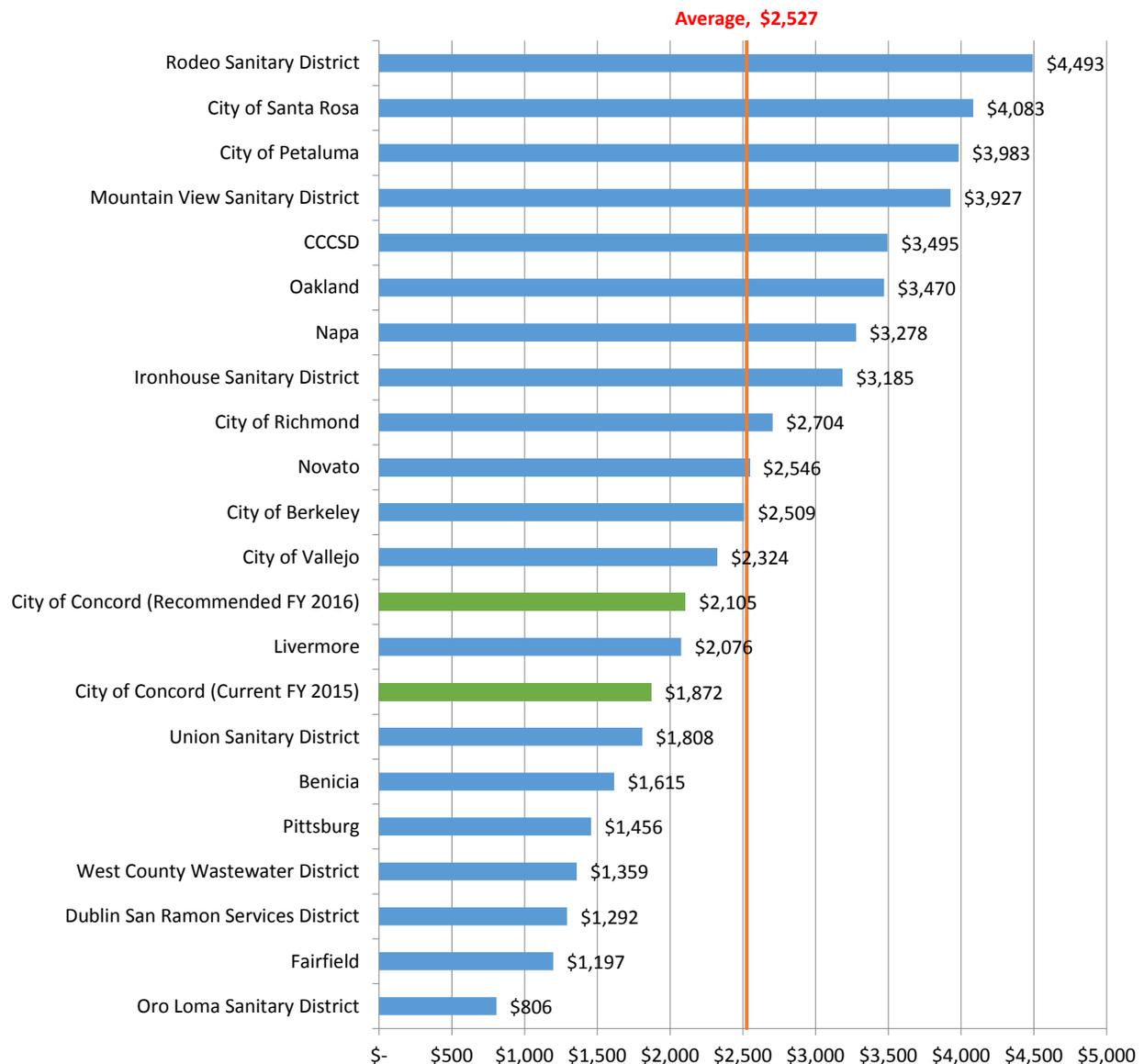


Exhibit 25 shows that under MFSG’s FY 2016 rate plan, the City’s sewer charge for a full service restaurant remains below the average of the surrounding utilities and substantially below that of CCCSD.

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VI. LONG TERM IMPACTS AND RECOMMENDATIONS

This section will show longer term projections regarding the sewer fund's health and stability, as well as recommendations for increased expenditures on sewer line replacements.

As a part of the sewer rate study MFSG developed ten year projections of the expenses and revenues relating to the City's sewer system. It is important to project expenses and revenues for an extended period of time in order to see the impact of early rate increases (or the absence thereof) on future cash flows.

1. Recommended Increases in Line Replacement

MFSG and West Yost completed a high level analysis of the City's collection system in order to determine the amount of line replacement spending the City should be building into its long term CIP.

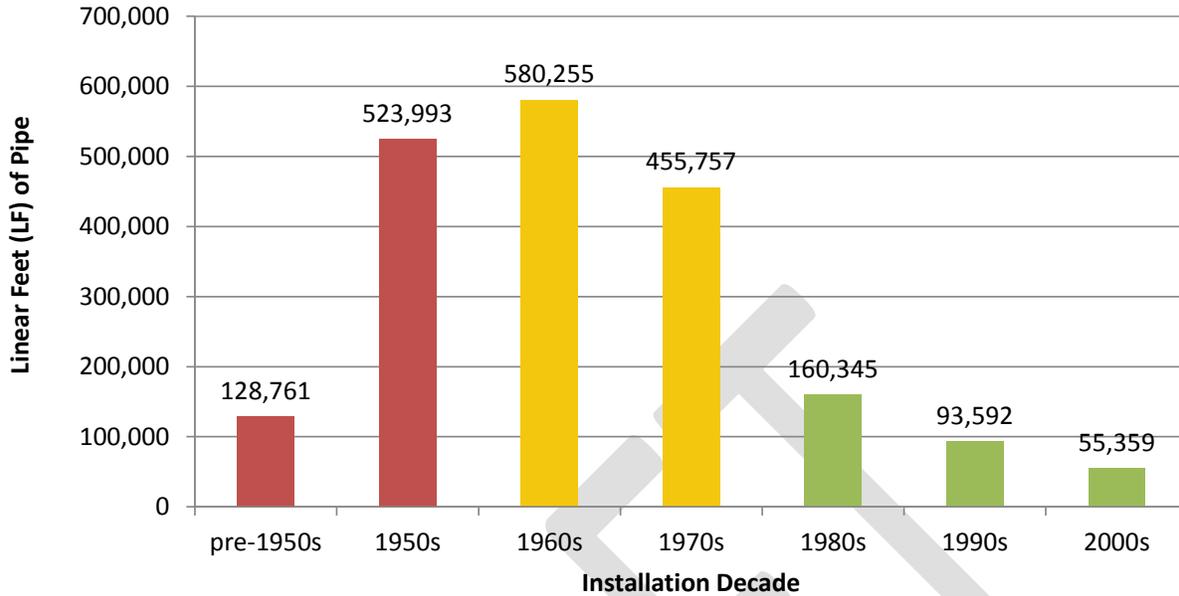
1a. Line Age Analysis

West Yost Associates performed an analysis to determine the approximate age of the City's sewer collection system. Exhibit 27 shows the results of this analysis.

Exhibit 27. City of Concord Sewer Collection Line Age Summary

Installation Year	Length (LF)	Length (mi)	Percent of System
pre-1950s	128,761	24.4	6%
1950s	523,993	99.2	26%
1960s	580,255	109.9	29%
1970s	455,757	86.3	23%
1980s	160,345	30.4	8%
1990s	93,592	17.7	5%
2000s	55,359	10.5	3%
Total	1,998,063	378.4	100%

Exhibit 28. City of Concord Sewer Collection Line Age Chart



The City owns and maintains about 380 miles of sewer mains, with the average age of pipe being about 50 to 60 years old. MFSG used an estimate of a 75 year useful life to determine when lines should be replaced and an assumed replacement cost of \$225 per linear foot. MFSG estimates that in addition to the City’s planned CIP projects, beginning in FY 2021 the City augment its line replacement by \$1.0 million per year. MFSG believes this would be slightly aggressive in the short term (in that the City may not have the ability to award and manage this magnitude of line replacement), and has determined that an additional \$1 million in line replacement per year beginning in FY 2021 would allow the City to reasonably replace an appropriate amount of mains per year while allowing time for the City to increase its procurement capacity, if necessary.

MFSG recommends waiting until 2021 for two reasons. First, the rate impact discussed previously in this report does not include any additional capital spending on the part of the City, and augmenting the City’s CIP before 2021 would result in even greater rate impact. Second, the City’s CIP includes sufficient spending within the first five years. MFSG recommends maintaining this level of spending in the out years, which necessitates the inclusion of an additional \$1.0 million per year. This addition would bring the City’s current line replacement CIP up to \$3.25 million per year, as shown in Exhibit 29.

Exhibit 29. Recommended Additional Line Replacement

<i>(in millions)</i>	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Currently Planned CIP	\$0.75	\$1.25	\$4.50	\$3.55	\$3.40	\$2.25	\$2.25	\$2.25	\$2.25	\$2.25
Increases in Line replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$1.00	\$1.00	\$1.00	\$1.00	\$1.00
Recommended CIP	\$0.75	\$1.25	\$4.50	\$3.55	\$3.40	\$3.25	\$3.25	\$3.25	\$3.25	\$3.25

2. Long Term Recommended Rate Plan and Projections

MFSG’s five year rate plan presented previously would allow the City to reach a sustainable path forward for the sewer fund. Based on these projections, MFSG is recommending lower increases in projection years 6 through 10 (FY 2021 through FY 2025). These increases are shown below.

Exhibit 30. Proposed Rate Increases (10 Years)

	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Increase to Residential Fee	\$50	\$50	\$45	\$45	\$45	\$20	\$20	\$20	\$20	\$20
Resulting Residential Fee	\$452	\$502	\$547	\$592	\$637	\$657	\$677	\$697	\$717	\$737

If the City adopts the recommended rates increases, sufficient funds should be available to provide the recommended cash reserves and capital replacement. As shown in Exhibit 30, MFSG’s rate plan does not forecast increases greater than \$20 after the initial five year projection. Exhibit 31 and Exhibit 32 show the long term operating results and cash balance projections based on the above rate increases.

Exhibit 31. Projected Revenue Requirements and Revenues (10 Years)

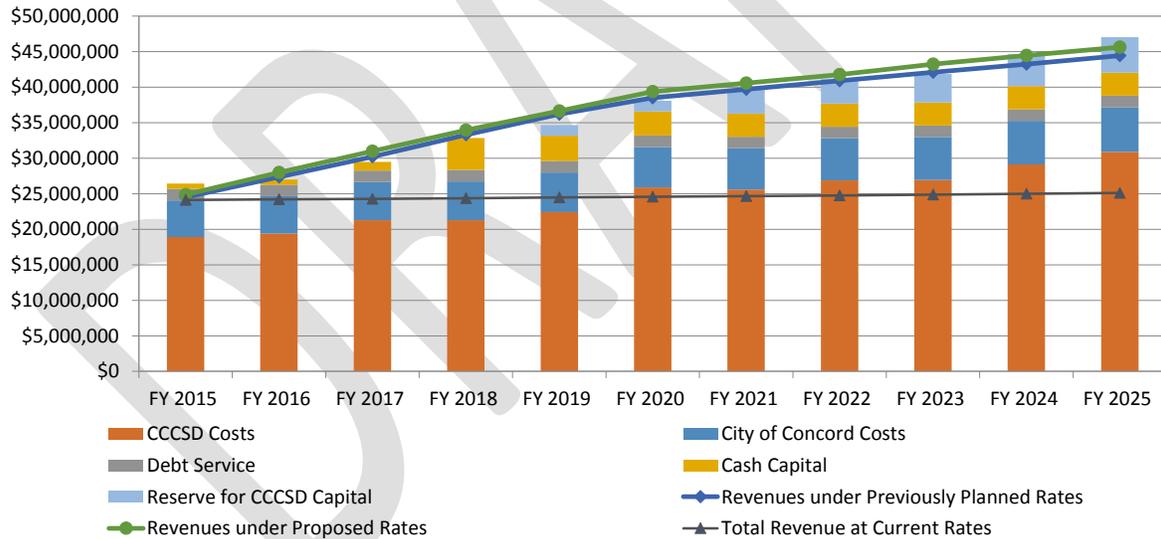
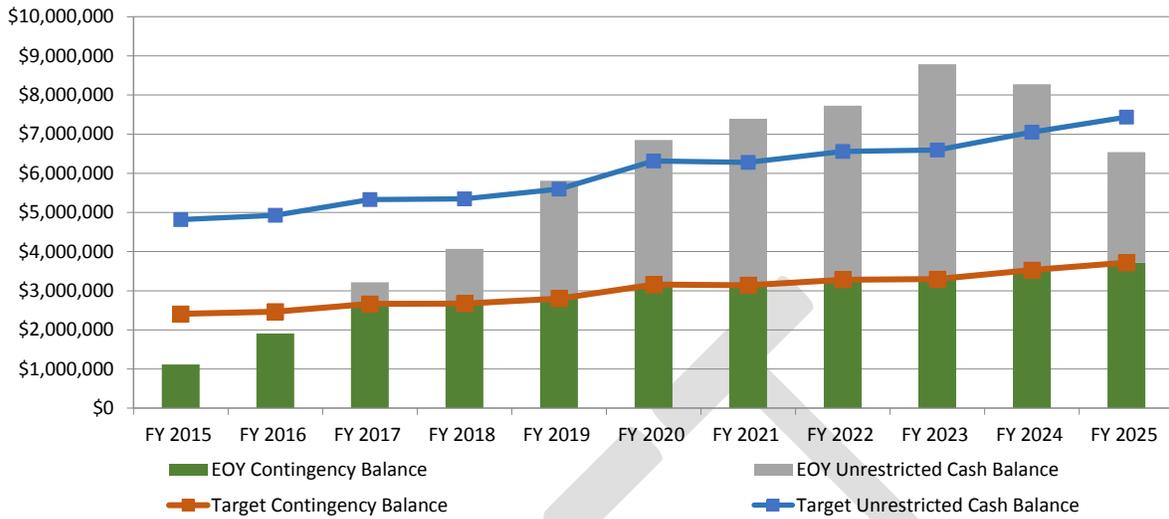


Exhibit 32. Projected Cash Balances (10 Years)



The long term cash flow shows that the early rate increases are necessary to support the sewer fund due to the large increase projected in out years. Any decrease in planned rate increases within the first five years of the planning period would have an extremely negative long-term effect on the financial health of the sewer system and would necessitate much larger future rate increases than shown above.

3. Alternative Scenarios

MFSG’s financial model is dynamic and is able to present instantly the results of various scenarios involving additional CIP funding, debt issuance, and rate increases. Below are two scenarios that show the necessity of MFSG’s recommended rate plan.

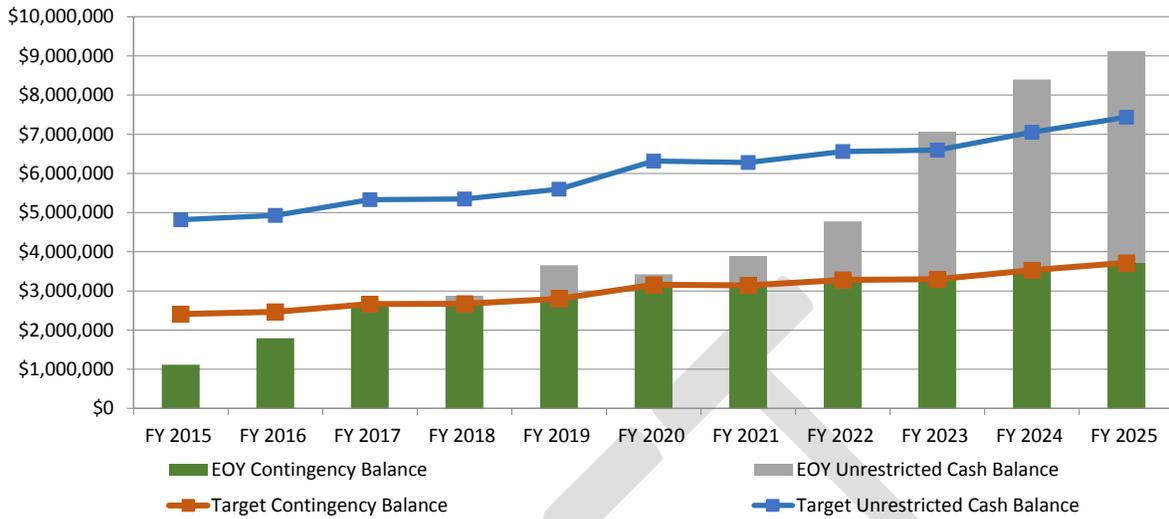
3a. Long Term Projections with Decrease in Recommended Rate Increase

MFSG ran a scenario in which the recommended five year rate plan is decreased by \$5 to \$10 per year within the five year plan, with larger increases in later projection years. It can be seen from the following Exhibits 33 and 34 that even this small change delays the sewer fund’s cash balance increase to above the 10% target balance to FY 2018, and the fund never reaches the 20% target before FY 2023.

Exhibit 33. Scenario 1 Proposed Rate Increases (10 Years)

	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Increase to Residential Fee	\$45	\$45	\$40	\$40	\$40	\$40	\$30	\$30	\$30	\$30
Resulting Residential Fee	\$447	\$492	\$532	\$572	\$612	\$652	\$682	\$712	\$742	\$772

Exhibit 34. Scenario 1 Projected Cash Balances (10 Years)



MFSG does not recommend decreased adjustments in rates in Scenario 1 due to the fact that it will be severely delay the City’s ability to maintain a healthy reserve balance under that scenario.

3b. Long Term Projections with Debt Issuance and Lower Rate Increases

MFSG projected the level of additional debt the sewer fund could issue in order to reduce rate increases while maintaining a similar cash flow to the recommended increases (which assume no additional debt). Exhibit 35 shows the annual debt issues that MFSG projected under this scenario.

Exhibit 35. Scenario 2 Proposed Debt Issuances (10 Years)

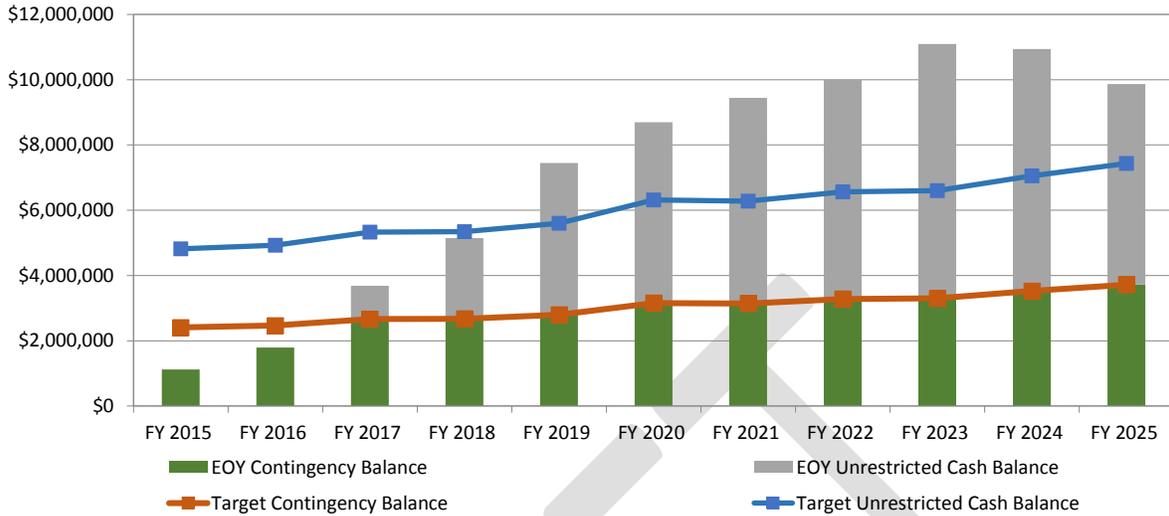
(in millions)	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
New Sewer Debt	\$ -	\$1.00	\$1.00	\$1.00	\$1.00	\$0.75	\$0.50	\$ -	\$ -	\$ -

By issuing debt instead of cash funding capital projects, the City would be able to delay certain rate increases. Exhibits 36 and 37 show the impact of this scenario.

Exhibit 36. Scenario 2 Proposed Rate Increases (10 Years)

	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Increase to Residential Fee	\$45	\$45	\$45	\$45	\$40	\$25	\$25	\$25	\$25	\$25
Resulting Residential Fee	\$447	\$492	\$537	\$582	\$622	\$647	\$672	\$697	\$722	\$747

Exhibit 37. Scenario 2 Projected Cash Balances (10 Years)



With the issuance of a total of \$5.25 million of debt between FY 2017 and FY 2022, the City would be able to reduce immediate rate increases by \$5 per year for fiscal years 2016, 2017, and 2020. However, in order to account for the new debt payments, out year (i.e., years subsequent to the five-year plan) increases are an additional \$5 per year for fiscal years 2021 through 2025. This plan would allow for a more modest phase in to a healthy sewer system; however MFSG does not recommend taking on additional debt due to the minimal impact it would have on rate increases.

VII. COST VS. REVENUE ALLOCATIONS

1. City of Clayton⁹

This section includes a summary and evaluation of the current agreement between Concord and Clayton, as well as a discussion of the alternative options.

1a. Summary of Agreement

Concord entered into an Agreement for Sewer Service (Clayton Agreement) with Clayton in 1966 to provide sewer service and maintenance to all portions of the sewer system within Clayton. Clayton is responsible for construction and connection of sewer mains and laterals, which connect Clayton's system to Concord's system. All mains, laterals, and related easements in Clayton, except for the trunk line that serves Concord, are owned by Clayton.

All connection charges and sewer service charges are billed directly by Concord, and all users in Clayton are billed at the same rate as users in Concord, per the Clayton Agreement. The Clayton Agreement was amended in 1991 to include provisions for source control enforcement (controlling the amount of toxic pollutants entering the sewer) against users in Clayton, among other miscellaneous updates to the outdated 1966 agreement.

In 1998, both Cities entered into a Memorandum of Understanding (MOU) providing that City of Clayton-owned facilities would no longer be assessed sewer service charges. Additionally the MOU defined "maintenance" as set forth in the 1991 Agreement to include construction of improvements to existing service facilities required for reasons other than new development.

1b. Evaluation of Agreement

Rates are paid equally by all Concord and Clayton users. Per Concord's rate structure, all residential units pay the same rate, regardless of size. This methodology differs from other rate structure models that may have a tiered residential rate structure in which multi-family homes pay less than single family homes due to the lower wastewater generation rates typical to smaller homes. While each rate structure has its own benefits, a flat-rate structure (such as Concord's) causes multi-family residential users to pay more per volume of wastewater generated than single family residential users. Clayton has a higher median household income (MHI) of \$127,159 compared to Concord's MHI at \$65,798. In addition, the Clayton has a larger percentage of single family homes than Concord.

While the provisions for Clayton to terminate the agreement are clearly defined in the Clayton Agreement, Concord has no means to exit the agreement. While it is not expected that Concord will terminate the Agreement, any future amendments should include equitable provisions for termination by all parties.

⁹ Analysis provided by West Yost Associates

1c. Alternative Options

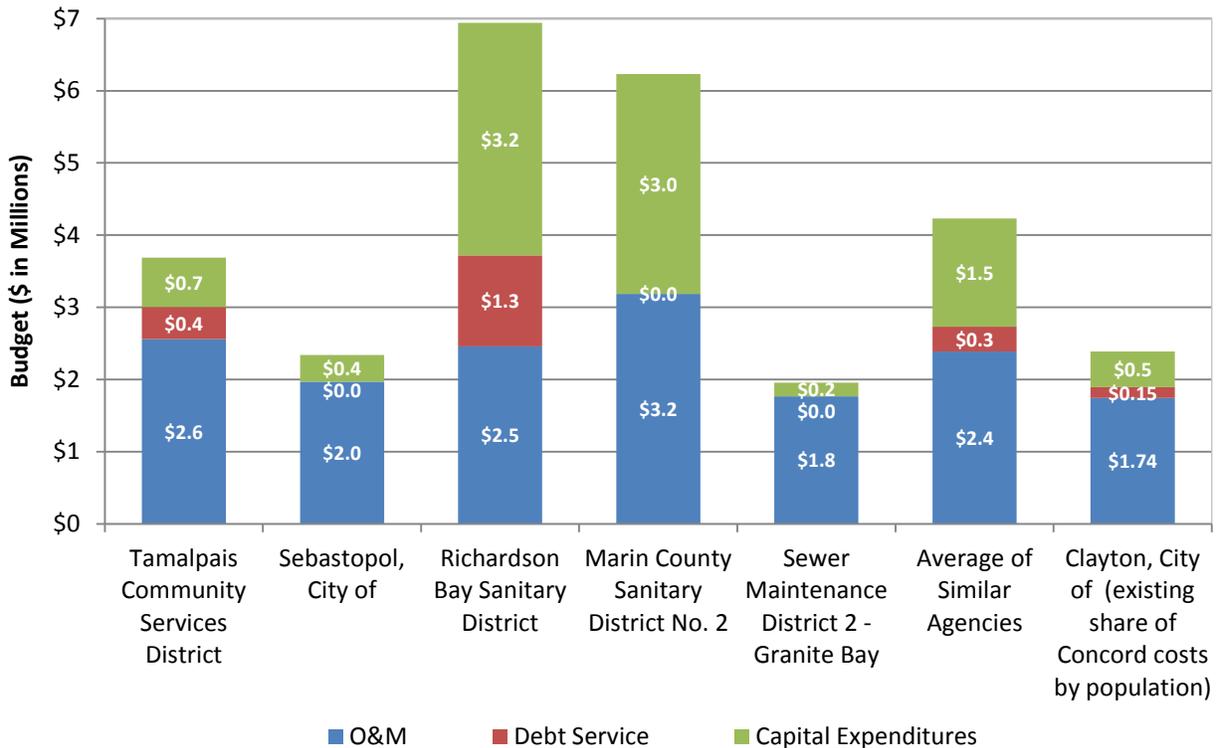
This section describes two alternatives to the current agreement between Concord and Clayton.

Alternative 1: Clayton Operates and Maintains Its Own System

An alternative to the current agreement between Concord and Clayton would be for Clayton to operate and maintain its own sewer system. Exhibit 36 shows the overall budgets for eight systems that are comparable to Clayton. These systems were selected based on their geographic location, service population size, and agency responsibility for the collection system only with wastewater treatment provided by a regional WWTP. With unique needs for each system, the rates can vary considerably. The average costs for these systems (see Exhibit 36) were used to approximate the costs for Clayton to operate its own system. It is assumed that if Clayton were to operate its own system, it would be able to negotiate with CCCSD an agreement similar to that which Concord currently has, whereby Clayton would be responsible for a flow-proportional share of capital and O&M costs.

Additionally, Clayton would either need to connect its collection system directly to the CCCSD collection system or negotiate a “wheeling” agreement, which is a term used for an agreement that would define the price Clayton would pay Concord for allowing Clayton’s wastewater to pass through the Concord collection system. This alternative is expected to cost Clayton users more than the current agreement with Concord.

Exhibit 38. FY 2013 Municipal Wastewater Budgets for Systems Comparable to Clayton¹⁰



Alternative 2: Flow and Improvement Re-Allocation of Rates

- CCCSD costs allocated by average water use, rather than number of accounts
- Current percent of remaining cost of CIP and sewer line maintenance divided between Concord and Clayton divided by number of users or number of lines.

MFSG is not recommending a proposal to adjust Clayton’s rates separately in FY 2016. This change would require a more detailed analysis of cost allocation and a robust public outreach campaign that would not be possible before the deadline to adjust FY 2016 rates.

2. Residential vs. Commercial

In order to determine if there are any cost inequities between residential and commercial customers within the City’s service area, MFSG performed an industry standard sewer cost of service analysis. The costs of providing sewer service are typically allocated to customers based on three factors: contributed flow, allocation for Inflow and Infiltration (I&I), and strength.

¹⁰ Source: State Water Resources Control Board. 2013. *Fiscal Year 2012-2013 Wastewater User Charge Survey Report* (422 survey responses from a total of 759 public agencies)

The 'strength' of sewage is defined as the levels of biological oxygen demand (BOD) and total suspended solids (TSS) contained within sewage. BOD is the amount of oxygen required for biochemical oxidation of the sample and is proportional to the amount of organic matter in the sample. Total Suspended Solids (TSS) is defined as the dry-weight of particles trapped by a filter of a specified pore size.

MFSG made several conservative assumptions regarding this analysis:

- When contributed flow is unknown, flow is proportional to customer base. That is, the percentage of customers in one class is equal to the percentage of flow those customers contribute to the system.
- Commercial customers are allocated flow based on winter average.
- BOD strength for residential customers is equal to 70 mg/L
- TSS strength for residential customers is equal to 130 mg/L
- Commercial strength is twice that of residential strength (140 mg/L for BOD, 260 mg/L for TSS)
- Administrative, Treatment, Collection and Capital cost are allocated using industry standard percentages based on WEF Manual 27.

MFSG used the aggregated FY 2015 revenue requirements to calculate the percentage of revenues that should be collected from each customer class. These percentages can be applied to any fiscal year in order to determine the equity of rates. FY 2015 costs were used because they were the most recent and accurate cost numbers available to MFSG. FY 2014 revenues were then used to analyze the allocation because FY 2014 revenues are the most recent and accurate available to MFSG. Exhibit 39 displays the results of this cost of service analysis and how FY 2014 revenues compare to the calculated percentages.

Exhibit 39. Cost of Service Results

	Actual Revenue FY 2014	Actual %	Calculated Revenue FY 2014	Calculated %	Difference %
Concord Residential	\$16,711,070	76.99%	\$18,565,943	85.54%	8.55%
Concord Commercial	\$3,005,601	13.85%	\$1,359,201	6.26%	-7.59%
Clayton Residential	\$1,468,331	6.77%	\$1,631,368	7.52%	0.75%
Clayton Commercial	\$79,702	0.37%	\$35,562	0.16%	-0.20%
Unincorporated County	\$27,951	0.13%	\$31,085	0.14%	0.01%
Concord Direct Bill	\$411,915	1.90%	\$81,411	0.38%	-1.52%
TOTAL	\$21,704,570	100.0%	\$21,704,570	100.0%	0.00%

MFSG's analysis shows that Commercial customers within the City of Concord are being charged in excess of their cost of service by 7.59%. Residential City of Concord customers are being under charged by 8.55%. It can also be seen that City of Clayton Residential customers are being under charged by 0.75% and City of Clayton commercial customers are being slightly over charged, by about 0.20%.

All of the percentages mentioned in the above paragraph are percentages of total revenue. For example, if the City were to adopt a rate structure purely based on this industry standard cost of service analysis, City of Concord Residential customers would pay an additional 8.55% of total revenue, equal to about \$1.85 million dollars. City of Concord commercial customers would then be pay 7.59% of total revenue less – about \$1.65 million. If all the revenue shifts are taken into account, total revenue remains the same.

Exhibit 40. Cost of Service Revenue vs. Actual Revenue

	Calculated % of Revenue	Calculated Revenue Allocation	Actual 2014 Service Fee Revenue	Revenue Difference	Revenue Difference as a %
Concord Residential	85.54%	\$18,565,943	\$16,711,070	(\$1,854,873)	(-11.1%)
Concord Commercial	6.26%	\$1,359,201	\$3,005,601	\$1,646,400	54.8%
Clayton Residential	7.52%	\$1,631,368	\$1,468,331	(\$163,037)	(-11.1%)
Clayton Commercial	0.16%	\$35,562	\$79,702	\$44,140	55.4%
Unincorporated County	0.14%	\$31,085	\$27,951	(\$3,134)	(-11.2%)
Concord Direct Bill	0.38%	\$81,411	\$411,915	\$330,504	80.2%
TOTAL	100.0%	\$21,704,570	\$21,704,570	\$0.00	

Exhibit 40 shows the actual revenue generated in FY 2014 compared to the calculated revenue allocation based on MFSG’s cost of service analysis. The last column shows how much more or less each customer class is being charged compared to the cost of service allocation. For example, Concord Residential customers were charged 11.1% less than their allocation. Concord Commercial customers paid 54.8% more than their allocation. Currently, MFSG is not recommending changes to the City’s rate structure based on the cost of service analysis.

VIII. FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

1. Findings

- Current sewer rates will not produce sufficient revenue to fund the revenue requirements for FY 2015 or any of the subsequent fiscal years.
- Based on projected revenues with existing rates, current sewer rates will produce cash revenues less than the cash expenses in FY 2015 with subsequent shortfalls continuing over the planning period, exhausting all of Concord's cash reserves by FY 2016.
- The City does not have a formal policy regarding the level of unrestricted cash that should be maintained in the sewer fund.
- The City does not provide for sufficient spending on line repair and replacement in its current 10 year CIP.
- Residential customers within the City of Concord are being subsidized by Commercial customers.
-
- The existing rate structure does not appropriately charge customers in the City of Clayton. Residential customers in the City of Clayton are being subsidized by commercial customers in the City of Clayton and the City of Concord.

2. Conclusions

- The City must adjust (increase) annual sewer revenues to maintain the solvency and long-term financial health of the sewer fund.
- The City should adopt a cash reserve minimum balance policy in order to assure the health of the sewer fund.
- The City must increase its investment in the repair and replacement of its collection system.

3. Recommendations

- Adopt the recommended five-year rates as shown below in Exhibit 41:

Exhibit 41. Recommended Rates

	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
<u>Dollar Increase in Residential Rate</u>	<u>\$50</u>	<u>\$50</u>	<u>\$45</u>	<u>\$45</u>	<u>\$45</u>
RESIDENTIAL OWNERS					
1. Minimum annual rate for any premises	\$452	\$502	\$547	\$592	\$637
2. Each single-family dwelling unit	\$452	\$502	\$547	\$592	\$637
3. Each dwelling unit in a multiple dwelling	\$452	\$502	\$547	\$592	\$637
4. Mobile Home Park	\$452	\$502	\$547	\$592	\$637
COMMERCIAL OWNERS					
1. Minimum annual rate for any premises	\$452	\$502	\$547	\$592	\$637
2. Bowling Alleys (per HCF)	\$3.99	\$4.43	\$4.83	\$5.23	\$5.63
3. Car Washes (per HCF)	\$3.99	\$4.43	\$4.83	\$5.23	\$5.63
4. Health Studios and Gymnasiums	\$3.99	\$4.43	\$4.83	\$5.23	\$5.63
5. Hospitals - Convalescent (per HCF)	\$3.99	\$4.43	\$4.83	\$5.23	\$5.63
6. Multiple Lodging Structures (per HCF)	\$3.99	\$4.43	\$4.83	\$5.23	\$5.63
7. Laundromats and Laundries (per HCF)	\$3.99	\$4.43	\$4.83	\$5.23	\$5.63
8. Restaurants (per HCF)	\$7.95	\$8.83	\$9.62	\$10.41	\$11.20
Restaurants w/ pretreatment (per HCF)	\$4.52	\$5.02	\$5.47	\$5.92	\$6.37
9. Bakeries Determined Individually					
10. All others (per HCF)	\$4.52	\$5.02	\$5.47	\$5.92	\$6.37
INSTITUTIONAL OWNERS					
1. Minimum annual rate for any premises	\$452	\$502	\$547	\$592	\$637
2. As defined in Section 110-31 (per HCF)	\$4.52	\$5.02	\$5.47	\$5.92	\$6.37
INDUSTRIAL OWNERS					
1. Minimum annual rate for any premises	\$452	\$502	\$547	\$592	\$637
2. Flow (per million gallons)	\$3,507	\$3,895	\$4,244	\$4,593	\$4,942
3. Biochemical Oxygen Demand (BOD) (per thousand pounds)	\$824	\$915	\$997	\$1,079	\$1,161
4. Suspended Solid (SS) (per thousand pounds)	\$702	\$779	\$849	\$919	\$989

- Increase the City's 10 year CIP with additional line replacement spending as outlined below in Exhibit 42:

Exhibit 42. Recommended Additional Line Replacement

<i>(in millions)</i>	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Increase in Line Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$1.00	\$1.00	\$1.00	\$1.00	\$1.00

- Adopt a minimum cash balance target comprised of two parts as shown below in Exhibit 43:
 - A Contingency Reserve equal to 10% of annual operating expenses (including CCCSD expenses).
 - An Unrestricted Cash Reserve equal to an additional 10% of operating expenses (including CCCSD expenses).

Exhibit 43. Recommended Unrestricted Cash Balance Targets

	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
EOY Contingency Cash Balance Target	\$2,465,000	\$2,663,400	\$2,673,200	\$2,799,500	\$3,157,400
EOY Unrestricted Cash Balance Target	\$2,465,000	\$2,663,400	\$2,673,200	\$2,799,500	\$3,157,400
EOY Total Cash Balance Target	\$4,930,000	\$5,326,800	\$5,346,400	\$5,599,000	\$6,314,800

**Sewer Enterprise
Ten Year Projection
for the Year Ending June 30, 2014**

	Adopted Fee Inc. \$39 2013-14	Adopted Fee Inc. \$39 2014-15	Estimated Fee Inc. \$39 2015-16	Estimated Fee Inc. \$39 2016-17	Estimated Fee Inc. \$42 2017-18	Estimated Fee Inc. \$42 2018-19	Estimated Fee Inc. \$44 2019-20	Estimated Fee Inc. \$44 2020-21	Estimated Fee Inc. \$44 2021-22	Estimated Fee Inc. \$44 2022-23
Fund Balance 7/01	\$ 4,753,984	\$ 2,468,502	\$ 1,916,869	\$ 1,678,270	\$ 51,448	\$ 1,357,462	\$ 3,537,398	\$ 57,423	\$ 2,567,120	\$ 3,160,487
Revenues										
Sewer Service Fees	\$ 21,498,943	\$ 23,708,293	\$ 25,917,643	\$ 28,126,993	\$ 30,506,293	\$ 32,885,593	\$ 35,378,193	\$ 37,870,793	\$ 40,363,393	\$ 42,855,993
Sewer Connection Fees	435,000	455,000	600,000	600,000	800,000	824,000	849,000	874,000	900,000	927,000
Interest	238,228	225,775	202,454	149,311	148,174	259,094	261,187	213,204	378,640	522,234
Loan Repayment	-	79,131	81,109	83,137	85,215	87,345	89,529	91,767	94,061	96,413
Total Revenues	\$ 22,172,171	\$ 24,468,199	\$ 26,801,206	\$ 28,959,441	\$ 31,539,682	\$ 34,056,032	\$ 36,577,909	\$ 39,049,764	\$ 41,736,094	\$ 44,401,640
Operating Expenditures										
City of Concord Costs:										
Maintenance & Operations	\$ 4,810,996	\$ 4,957,265	\$ 5,059,339	\$ 5,205,747	\$ 5,339,311	\$ 5,476,904	\$ 5,617,876	\$ 5,764,965	\$ 5,915,391	\$ 6,069,926
Sanitary Sewer Repairs	269,475	277,372	302,289	302,289	380,413	385,087	397,000	408,910	421,177	433,812
Subtotal City of Concord Costs	5,080,471	5,234,637	5,361,628	5,508,036	5,719,724	5,861,991	6,014,876	6,173,875	6,336,568	6,503,738
City of Concord Debt Service										
Rehab Bond Payment-Priority 1 Refunding	761,082	761,521	764,265	761,863	766,517	765,175	763,039	766,708	770,083	766,638
Bond Payment-Gravity Connection In Lieu of Pumping To CCCSD	848,704	848,543	847,787	847,472	851,601	849,984	851,648	852,517	852,592	851,347
Subtotal City of Concord Debt Service	1,609,786	1,610,064	1,612,052	1,609,335	1,618,118	1,615,159	1,614,687	1,619,225	1,622,675	1,617,985
CCCSD Costs:										
CCCSD- Household Hazardous Waste	670,231	690,338	711,048	732,380	607,496	625,721	644,493	663,828	683,743	704,255
CCCSD Capital Projects 30% Reimbursement	3,638,813	3,563,946	3,054,566	5,466,855	4,528,638	5,396,295	12,081,720	10,957,352	12,068,382	12,430,000
CCCSD - Treatment Plant Operations	12,393,352	13,170,847	15,300,511	15,719,657	16,109,692	17,526,930	18,092,108	16,655,787	19,951,359	20,550,000
Subtotal CCCSD Costs	16,702,396	17,425,131	19,066,125	21,918,892	21,245,826	23,548,946	30,818,321	28,276,967	32,703,484	33,684,255
Total Operating Expenditures	\$ 23,392,653	\$ 24,269,832	\$ 26,039,805	\$ 29,036,263	\$ 28,583,668	\$ 31,026,096	\$ 38,447,884	\$ 36,070,067	\$ 40,662,727	\$ 41,805,978
Net Income(Loss)	\$ (1,220,482)	\$ 198,367	\$ 761,401	\$ (76,822)	\$ 2,956,014	\$ 3,029,936	\$ (1,869,975)	\$ 2,979,697	\$ 1,073,367	\$ 2,595,662
Capital Projects:										
City Projects	\$ 1,065,000	\$ 750,000	\$ 1,000,000	\$ 1,550,000	\$ 1,650,000	\$ 850,000	\$ 1,610,000	\$ 470,000	\$ 480,000	\$ 490,000
Total Capital Projects	\$ 1,065,000	\$ 750,000	\$ 1,000,000	\$ 1,550,000	\$ 1,650,000	\$ 850,000	\$ 1,610,000	\$ 470,000	\$ 480,000	\$ 490,000
Other Financing Sources (Uses)										
Transfers In	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Transfers Out	-	-	-	-	-	-	-	-	-	-
Total Other Financing Sources (Uses)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Fund Balance - 6/30 with Contingency	\$ 2,468,502	\$ 1,916,869	\$ 1,678,270	\$ 51,448	\$ 1,357,462	\$ 3,537,398	\$ 57,423	\$ 2,567,120	\$ 3,160,487	\$ 5,266,149
Less: 10% Operations/Maintenance Contingency Reserve	2,151,000	2,238,000	2,413,000	2,712,000	2,659,000	2,903,000	3,644,000	3,404,000	3,862,000	3,975,000
Fund Balance - 6/30 without Contingency	\$ 317,502	\$ (321,131)	\$ (734,730)	\$ (2,660,552)	\$ (1,301,538)	\$ 634,398	\$ (3,586,577)	\$ (836,880)	\$ (701,513)	\$ 1,291,149

Annual Residential Bill Comparison (FY 2015 Rates)

