

RESOLUTION NO. 2023-11-03

**RESOLUTION OF
THE BOARD OF DIRECTORS OF THE
HAVANA WATER AND SANITATION DISTRICT**

A RESOLUTION REGARDING THE DISTRICT'S SCHEDULE OF FEES AND CHARGES

At a regular meeting of the Board of Directors (the "Board") of the Havana Water and Sanitation District (the "District"), Arapahoe County, Colorado, held at 5:00 P.M. on Wednesday, November 15, 2023, at CliftonLarsonAllen LLP, 8390 East Crescent Parkway, Suite 300, Greenwood Village, Colorado: via video conference at https://teams.microsoft.com/l/meetup-join/19%3ameeting_ZmQ2YjAyN2ItN2JiZS00ODZjLTk2NDMtYTJmNmNkNTk3ODg4%40thread.v2/0?context=%7b%22Tid%22%3a%224aaa468e-93ba-4ee3-ab9f-6a247aa3ade0%22%2c%22Oid%22%3a%22d42bab28-fbd8-4e65-a395-965cf9ef152f%22%7d and via telephone conference at Dial-In: 1-720-547-5281, Conference ID: 630 394 930#, in which the public was invited to participate and at which a quorum was present, the following resolution was adopted:

WHEREAS, the District was organized and exists pursuant to the provisions of Sections 32-1-101, *et seq.*, C.R.S.; and

WHEREAS, pursuant to Section 32-1-1001(1)(j), C.R.S., the Board has the power to fix and from time to time increase or decrease fees, rates, tolls, penalties, or charges for services, programs, or facilities furnished by the District; and

WHEREAS, the District provides and furnishes sanitary sewer services and facilities within its boundaries; and

WHEREAS, in February 2021, the District engaged Raftelis Financial Consultants, Inc. ("Raftelis") to perform a comprehensive review and evaluation of the District's existing rates by customer-type, Single-Family Residential Equivalency (SFRE) assessment schedule, and financial plan and to make recommendations to the District regarding changes to its customer classifications, SFRE assessment schedule, and rates in order to equitably allocate the current and future expenses of the District in providing the sanitary sewer services among its customers; and

WHEREAS, Raftelis performed such a review and evaluation and produced the report attached hereto as **Exhibit A** and incorporated herein by this reference which, among other things, makes recommendations to the Board (the "Report"); and

WHEREAS, based on the recommendations in the Report the Board determined that it is in the best interests of the District, its ratepayers, and the public, that the Board adopt a revised rate and SFRE assessment schedule on November 16, 2022 (the "2023 Fee Resolution"); and

WHEREAS, based on the recommendations in the Report the Board has determined that it is in the best interests of the District, its ratepayers, and the public, for the Board to further revise the rate and SFRE assessment schedule for 2024; and

WHEREAS, pursuant to Section 32-1-1001(2)(a), C.R.S., the governing body of any special district furnishing domestic water or sanitary sewer services directly to residents and property owners within or outside the special district's boundaries may only fix or increase fees, rates, tolls, penalties, or charges for such services after consideration of the action at a public meeting held at least thirty (30) days after providing notice as specified in Section 32-1-1001(2)(a), C.R.S.; and

WHEREAS, in accordance with Section 32-1-1001(2)(a)(IV), C.R.S., such notice was posted on a publicly accessible section of the Special District Association of Colorado's website on September 29, 2023, which is at least thirty (30) days before the public meeting at which this Resolution was considered; and

WHEREAS, the Board considered fixing or increasing fees, rates, tolls, penalties, or charges for domestic water or sanitary sewer services at its public meeting held on November 15, 2023; and

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE HAVANA WATER AND SANITATION DISTRICT AS FOLLOWS:

Section 1. Adoption by the Board. The Board hereby adopts the Schedule of Fees and Charges attached hereto as **Exhibit B** and incorporated herein by this reference (the "2024 Rates").

Section 2. Interest and Penalties Imposed for Nonpayment. The District may impose such penalties for non-compliance herewith as may be permitted by law.

Section 3. Status as Lien/Foreclosure. Pursuant to Section 32-1-1001(l)(j)(I), C.R.S., the District's fees do and shall, until paid, constitute a perpetual lien against the property served and may be foreclosed in the same manner as provided by the laws of the State of Colorado for the foreclosure of mechanics' liens.

Section 4. Actions to Effectuate Resolution. The District's accountants and legal counsel are authorized and directed to take all actions necessary and appropriate to effectuate this Resolution and the imposition of any or all of the fees contemplated hereunder. All actions not inconsistent with the provisions of this Resolution heretofore taken by the members of the Board, the District's accountant, the District's legal counsel, and the officers, agents, and employees of the District and directed toward effectuating the purposes stated herein are hereby ratified, approved, and confirmed.

Section 5. Repealer. All prior acts, orders, or resolutions, or parts thereof, including the 2023 Fee Resolution, adopted by the District in conflict with this Resolution are hereby repealed, except that this repealer shall not be construed to revive any act, order, or resolution, or part thereof, heretofore repealed.

Section 6. Severability. If any section, paragraph, clause, or provision of this Resolution shall be adjudged to be invalid or unenforceable, the invalidity or unenforceability of

such section, paragraph, clause, or provision shall not affect any of the remaining sections, paragraphs, clauses, or provisions of this Resolution, it being the intention that the various parts hereof are severable.

Section 7. Effective Date of Resolution. This Resolution and the 2024 Rates shall be effective as of January 1, 2024, notwithstanding the date of adoption by the Board.

[The remainder of this page is intentionally left blank.]

Whereupon, a motion was made and seconded, and upon a majority vote this Resolution was approved by the Board.

ADOPTED AND APPROVED THIS 15th DAY OF NOVEMBER 2023.

**HAVANA WATER AND SANITATION
DISTRICT**

DocuSigned by:

Bernard Gehris

Bernard F. Gehris, President

ATTEST:

DocuSigned by:

David Mohrhaus

D88A71AEAAAB47B...

David A. Mohrhaus, Secretary

EXHIBIT A
REPORT

Havana Water & Sanitation District

2022 Single Family Residential Equivalent, Financial Plan, and Rate Review Study

Final Report December 2022



December 5, 2022

Lisa Johnson
District Manager
Havana Water & Sanitation District
8390 E. Crescent Parkway
Suite 300
Greenwood Village, CO 80111

Subject: 2022 Single Family Residential Equivalent, Financial Plan and Rate Review Study Report

Dear Ms. Johnson,

Raftelis Financial Consultants, Inc. (Raftelis) is pleased to provide this 2022 Single Family Residential Equivalent, Financial Plan, and Rate Review Study Report (Report) for the Havana Water & Sanitation District (District).

The major objectives of the Report include the following:

- » Develop Enterprise Fund financial plan for the 10-year period of 2021 through 2030 (Study Period).
- » Incorporate District provided General Fund financial plan over the same 10-Year Study Period.
- » Evaluate the District Single Family Residential Equivalent (SFRE) assessment schedules and policies and propose changes as appropriate.
- » Evaluate sewer rate revenue adjustments for the Study Period necessary to fund annual Enterprise Fund revenue requirements and exceed cash reserve requirements.
- » Propose District 2023 rates by customer type to equitably recover 2023 test-year revenue requirements.

The Report summarizes the key findings and recommendations related to the development of the District's SFRE, financial plan, and rate review.

It has been a pleasure working with you and we thank you and your team and the District for the support provided during the course of this study.

Sincerely,

A handwritten signature in blue ink, appearing to read 'AR', written over a light blue horizontal line.

Andrew Rheem
Senior Manager

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1. Executive Summary

Havana Water & Sanitation District (District) retained Raftelis Financial Consultants Inc. (Raftelis) in 2021 to complete a multi-year financial plan review, to evaluate the District's existing Single Family Residential Equivalency (SFRE) assessment schedule and review and make recommendations regarding District rates for sewer services.

The scope of service includes the following:

- » Develop Enterprise Fund financial plan for the 10-year period of 2021 through 2030 (Study Period).
- » Incorporate District provided General Fund financial plan over the same 10-Year Study Period.
- » Evaluate the District SFRE assessment schedules and policies and propose changes as appropriate.
- » Evaluate sewer rate revenue adjustments for the Study Period necessary to fund annual Enterprise Fund revenue requirements and exceed recommended cash reserve requirements.
- » Propose District 2023 rates by customer type to equitably recover 2023 test-year revenue requirements.

The Combined District Fund, General Fund, and Enterprise Fund multi-year sewer financial plan, supporting worksheets, revenue projections and assumptions are detailed in Appendix A. The Combined District Fund is comprised of the separate General Fund and Enterprise Fund. The District sewer rate revenue requirements represent the cost of providing service and include allocated Operations and Maintenance (O&M) expenses, annual debt service, transfers to the General Fund, and other cash inflows and outflows of the Enterprise Fund. The General Fund incorporates the tax-based funding sources and includes all other District O&M expenses, capital expenditures, and transfer to the Enterprise Fund.

The General Fund financial plan evaluates the adequacy of tax-based revenues and accumulated cash reserves to fund allocated O&M expenses and capital expenditures and maintain the following cash reserves:

- » Operating reserve of 60 days (17%) of General Fund O&M expenses (proposed).
- » Capital reserve equal to the average annual capital expense of \$0.5 million phased-in by 2028 (proposed).
- » TABOR-required emergency reserve equal to 3% of annual revenue (existing).

The Enterprise Fund financial plan evaluates the adequacy of system revenues adjusted for customer and demand-related growth to fund annual treatment-related O&M expenses, existing and future annual debt service, and transfers to the General Fund, and to exceed proposed financial performance thresholds. The proposed thresholds for rate setting include:

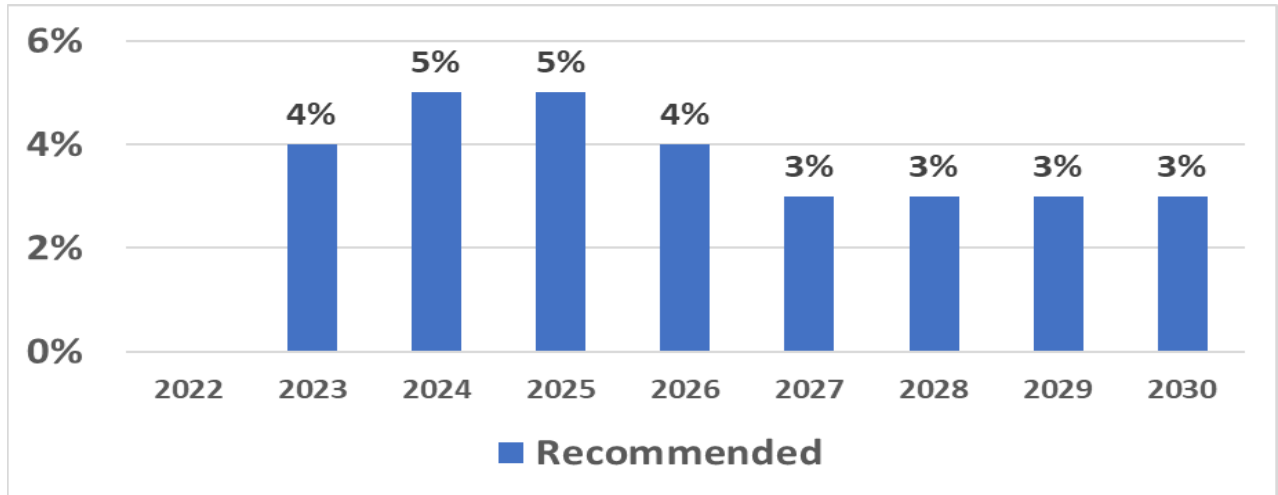
- » Operating reserve of 90 days (25%) of Metro Water Reclamation (Metro) O&M expenses (proposed).
- » Exceeding Debt Service Coverage (DSC) ratio of at least 1.50 times annual debt service (proposed)¹.

¹ Calculated excluding transfers from the General Fund.

The Combined District Fund, which is the total of the District Enterprise and General Funds and the recommended cash reserves, incorporates the sum of the separately established Enterprise Fund and General Fund cash reserves. The Combined District Fund cash reserve target is projected to range from approximately \$600,000 in 2023 increasing to \$960,000 by 2030.

Figure 1 summarizes proposed rate revenue increases during the Study Period that are necessary to fund annual expenditures and meet financial performance criteria.

Figure 1: Projected Annual Sewer Rate Revenue Increases



Rate revenue increases are anticipated to be effective January 1st of each year. Figure 2 summarizes projected annual residential customer sewer bills for a typical customer. Note that the proposed rate for 2023 reflects recommended SFREs and the results of the 2023 test-year cost allocation review and recommendation and 2024 through 2030 are projected rates.

Figure 2: Projected Annual Residential Sewer Bill (1 SFRE)



End-of-year cash balance and reserve target for the Enterprise Fund is summarized in Figure 3, while Figure 4 shows the same information for the General Fund. The cash reserve targets for both the Enterprise Fund and the General Fund are exceeded throughout the Study Period.

Figure 3: Projected Enterprise Fund End-of-Year Cash Balances and Reserve Targets

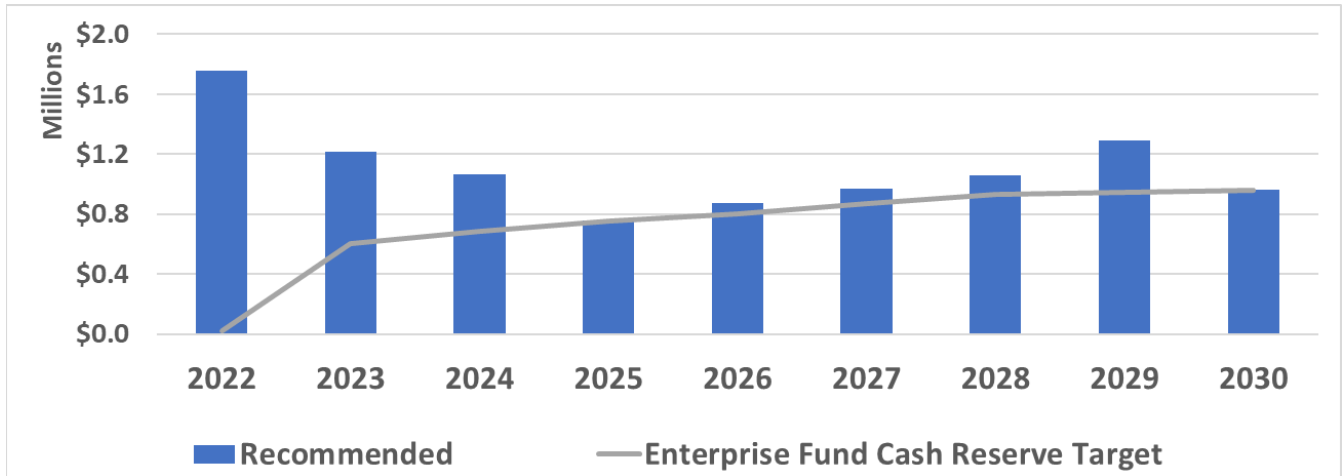


Figure 4: Projected General Fund End-of-Year Cash Balances and Reserve Targets

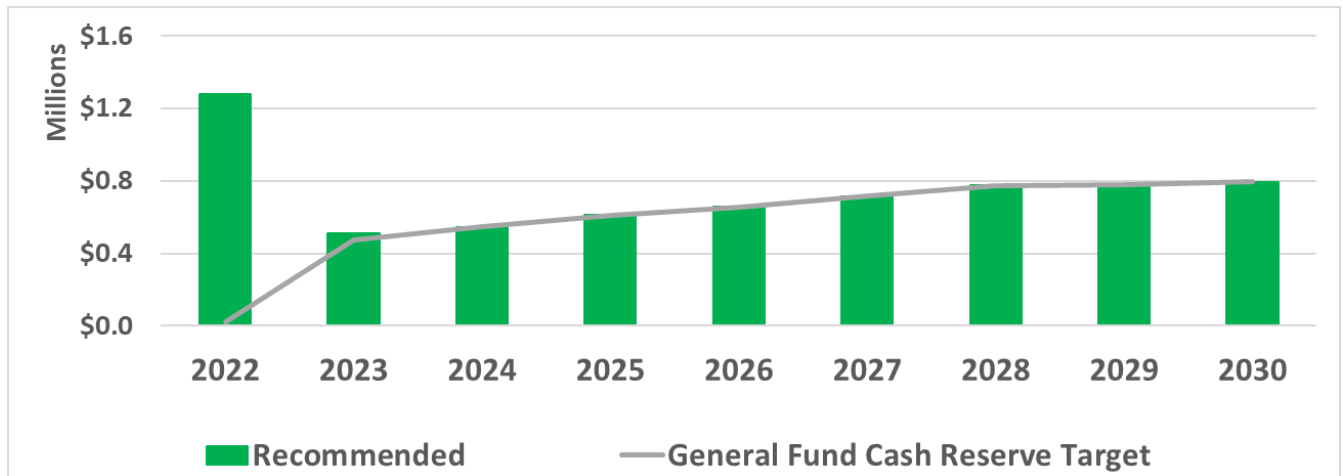


Figure 5 shows the end-of-fiscal year cash balance and reserves for the Combined Fund. The cash reserve targets are exceeded throughout the Study Period.

Figure 5: Projected Combined Fund End-of-Year Cash Balances and Reserve Targets

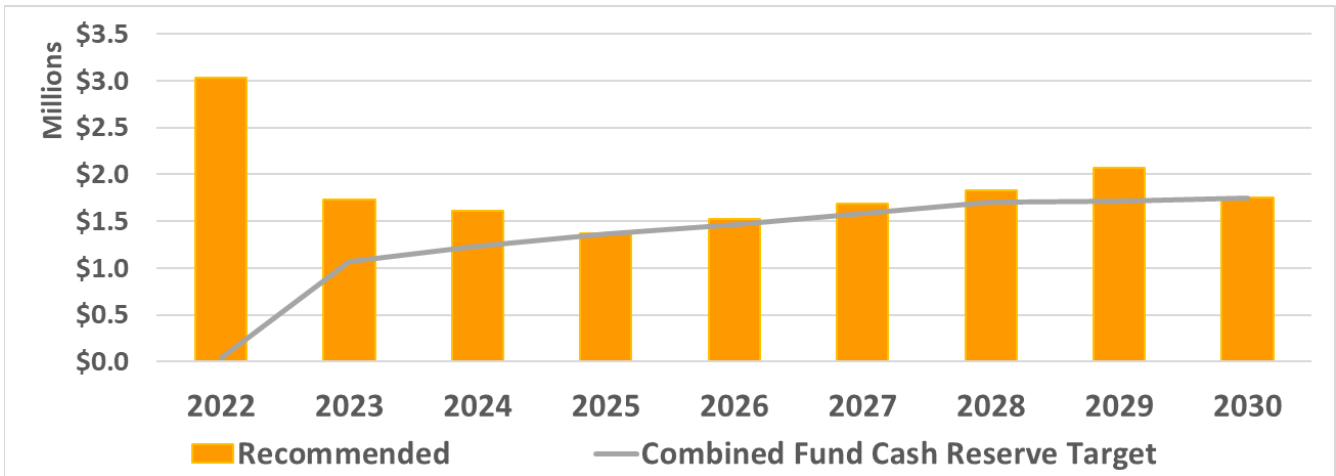
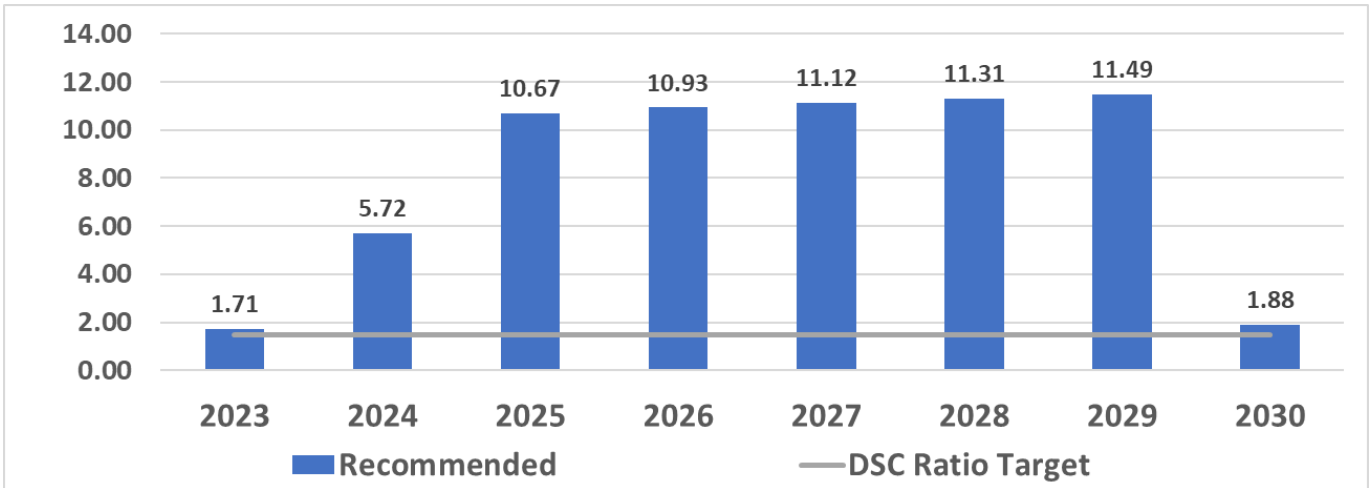


Figure 6 shows the annual DSC ratio for 2023 through 2030. After the existing debt service is retired in 2024, the DSC ratio increases until debt service for a projected 2029 debt issue starts in 2030.

Figure 6: Projected Enterprise Fund DSC Ratio



The District served 2,711 SFREs as of January 2022 comprised of residential and commercial customers receiving sewer services. Table 1 summarizes the current and proposed SFREs for each customer classification resulting in an increase of 112 SFREs or approximately 4%.

Table 1: Current and Proposed SFREs

Description	Current SFREs	Proposed SFREs
Residential (1)	2,476.0	2,476.0
Multi-Family	152.4	185.8
Commercial (2)	49.0	121.0
School	<u>33.5</u>	<u>40.0</u>
Total	2,710.9	2,822.8

(1) Includes duplex properties.

(2) Includes all commercial customers except for Schools.

The SFRE functions as the method to proportionally recover District costs from individual users with different size water meters and varying volume and strength of effluent discharges. Raftelis proposes the following SFRE assessment approach to be implemented by the District in conjunction with proposed rates and effective January 1, 2023.

- One SFRE for each single-family residential (SFR) detached customer connection.
- Commercial, multi-family residential (MFR), and all other non-SFR detached customer SFREs based on the Metro Water Recovery (Metro) SFREs which vary by water meter size².

Metro provides sewer treatment and disposal services to the District. Metro updates customer rates annually and informs the District of the upcoming budgeted cost using a rolling 3-year process to budget and true-up costs allocated to each connector. Some commercial customer types will have a higher level of Biological Oxygen Demand (BOD), Total Suspended Solids (TSS), and/or Total Kjeldahl Nitrogen (TKN) with wastewater discharges, which cost more to treat than the wastewater of a residential or other customer discharging “domestic” strength effluent. Raftelis developed a cost allocation approach that allocates District expenses 100% to flow-based equivalent SFREs and allocates the Metro cost to flow, strength, and customer based SFREs.

² User(s) which are an exception to the above classifications or have multiple customer classifications being served by a single sewer service connection shall be equitably assessed based on flow and strength-based discharges. Raftelis evaluated an alternative assessing MFR SFREs per dwelling unit and was directed by the Board in a November 2022 meeting to apply the Metro SFREs by meter size to all non-SFR customers.

Table 2 summarizes the 2023 test-year cost of service, proposed flow-based SFREs, and proposed annual rate per SFRE by customer class³.

Table 2: 2023 Cost of Service and Proposed Rates by Customer Type

Description	Test-Year 2023 Cost of Service	Proposed SFREs	Proposed 2023 Rate
Residential (1)	\$730,271	2,476.0	\$295.00
Multi-Family	54,800	185.80	295.00
Commercial (2)	35,688	121.0	295.00
School	<u>12,988</u>	<u>40.0</u>	325.00
Total	\$833,747	2,822.8	

(1) Includes duplex properties.

(2) Includes all commercial customers except for Schools.

Raftelis proposes \$295 annually per SFRE to be assessed to Residential, Multi-Family, and Commercial customer classifications with domestic strength wastewater discharges and effective January 1, 2023. Higher rates are proposed for the current commercial customer classification (Schools) for the proportion of the annual revenue requirements associated with Metro strength-based categories. If the District gets other commercial connections with higher than domestic strength discharges, additional customer classifications may be established by the District following the same methodology and approach. Raftelis proposes consolidation of some customer classifications as follows:

- » Domestic Strength: Residential, Multi-Family, Church, Retail, Pools, and Other customer classes.
- » Above Domestic Strength anticipated for Schools.

The proposed SFRE and rate changes in 2023 combine to generate the 2023 revenue requirement of approximately \$834,000. Individual end user bill impacts will vary based on the changes to the SFREs and/or rates. Table 3 summarizes the revenue and percent change by customer class.

Table 3: Current and Proposed 2023 Rate Revenues Compared

Description	Current Rate Revenue	Proposed Rate Revenue	Change - \$	Change - %
Residential (1)	\$703,184	\$730,420	\$27,236	4%
Multi-Family	43,282	54,811	11,529	27%
Commercial (2)	13,916	35,695	21,779	157%
School	<u>9,514</u>	<u>13,000</u>	<u>3,486</u>	37%
Total	\$769,896	\$833,926	\$64,030	8%

(1) Includes duplex properties.

(2) Includes all commercial customers except for Schools.

³ Proposed rates are rounded to the nearest dollar resulting in a difference of \$179 between the 2023 test-year cost of service and the projected 2023 sewer fee revenues.

2. Introduction and Overview

2.1. Study Overview

The District retained Raftelis in 2021 to complete a multi-year financial plan review and to evaluate the District's existing SFRE assessment schedule and review and make recommendations regarding District rates for sewer services.

The scope of service includes the following:

- » Develop Enterprise Fund financial plan for the 10-year period of 2021 through 2030 (Study Period).
- » Incorporate District provided General Fund financial plan over the same 10-Year Study Period.
- » Evaluate the District SFRE assessment schedules and policies and propose changes as appropriate.
- » Evaluate sewer rate revenue adjustments for the Study Period necessary to fund annual Enterprise Fund revenue requirements and exceed recommended cash reserve requirements.
- » Propose District 2023 rates by customer type to equitably recover 2023 test-year revenue requirements.

Audited 2020 and 2021 results, 2022 estimated results, and 2023 draft budgeted Enterprise Fund and General Fund financial results were provided by the CliftonLarsonAllen, LLP (CLA) as the District Manager and accountant. CLA also prepared General Fund forecasts of property tax revenues as well as assisted Raftelis in the review of the Enterprise Fund and General Fund financial results, including transfers between funds as incorporated into the financial planning model results. Projected 2024 through 2030 includes 2023 budgeted financial information adjusted for inflation and anticipated cost adjustments, miscellaneous non-rate revenue and contract customer-based revenues, and capital maintenance and capital improvement projects.

The Combined District Fund, General Fund, and Enterprise Fund multi-year sewer financial plans, supporting worksheets, revenue projections and assumptions are detailed in Appendix A. Appendix B details the 2023 test-year cost allocations and proposed rates by customer type.

2.2. District Overview

The District owns and maintains a sewer conveyance system consisting of a network of sewer collection system pipelines, utility access holes, and lift stations. Wastewater effluent is conveyed to Metro at the metered locations for treatment and disposal per the terms of the service agreement between the District and Metro. Metro provides similar services to municipalities and member agencies throughout the Denver Metro Region. The District sewer effluent is metered by Metro with various strength characteristics sampled and the District is assessed annual charges based on:

- » Flow or volume of water conveyed.
- » BOD strength in milligrams per liter (mg/l) and an amount per pound.
- » TSS strength in mg / l and an amount per pound.
- » TKN, a measure used for nitrogen and ammonia, strength in mg / l and an amount per pound.

- » Customer costs based on the number of customer equivalents and the assigned Metro fixed cost per customer equivalent.

The District assesses annual rates per SFRE with varying rates by customer type or classification. Table 4 summarizes the current SFREs, rates, and annual revenue for District customers by current rate group.

Table 4: Current Customer Classes, Rates, and Annual Revenues

Description	Current SFREs	2022 Rate	2022 Annual Revenue
Residential (1)	2,476.0	\$284.00	\$703,184
Multi-Family	152.4	284.00	43,282
Commercial (2)	49.0	284.00	13,916
School	<u>33.5</u>	<u>284.00</u>	<u>9,514</u>
Total	2,710.9		\$769,896

(1) Includes duplex properties.

(2) Includes all commercial customers except for Schools.

2.3. Reliance on Provided Data

During this project the District, CLA, and the District engineer (Kennedy/Jenks Consultants, Inc.) provided Raftelis with a variety of technical information from capital improvement program, operational to estimated and budgeted financial reports, customer billing data and revenue data. Raftelis assessed the information for errors and reasonableness but did not independently assess or test for the accuracy of such data, historic or projected. We have relied on this data in the formulation of our findings and subsequent recommendations, as well as in the preparation of this Report.

As is often the case, there will be differences between actual and projected data. Some of the assumptions used in this Report will not be realized and unanticipated events and circumstances may occur. Therefore, there are likely to be differences between the data or results projected in this Report and actual results achieved; these differences may be material. As such, we take no responsibility for the accuracy of data or projections provided by or prepared on behalf of the District, nor do we have any responsibility for updating this Report for events occurring after the date of this Report.

3. SFREs, Metro, and Cost Allocation

Raftelis worked with the District and District representatives to develop recommendations to formalize and standardize District SFREs and propose District rates over the Study Period. This section of the Report summarizes the approaches utilized underlying proposed 2023 customer rates discussed in Section 5. The District should periodically review customer classifications, rate differentials, and evaluate annually the need to adjust customer rates to ensure sufficient revenue.

3.1. Current and Projected SFREs

The District was organized in 1969 and has determined SFREs for customer classifications and individual customers over time and the documentation of the rationale for some SFRE determinations cannot be located. As a result, the District retained Raftelis to review the existing SFRE assignments by customer type and propose changes as may be appropriate. Raftelis also completed a multi-year financial planning, cost allocation, and rate review over the 10-year Study Period.

The District provides only sewer services and does not meter or estimate volume contributions of individual customers with the SFRE functioning as the method to proportionally recover District costs from individual users with different water meter sizes and varying volume of effluent discharged. Many sewer utilities use metered water data as part of the cost allocation and cost recovery process, but as the District does not have regular access to individual customer water use data, therefore the SFRE is used as the proxy for flow contributions.

Table 5: Current and Proposed SFREs

Description	Current SFREs	Proposed SFREs
Residential (1)	2,476.0	2,476.0
Multi-Family	152.4	185.8
Commercial (2)	49.0	121.0
School	<u>33.5</u>	<u>40.0</u>
Total	2,710.9	2,822.8

(1) Includes duplex properties.

(2) Includes all commercial customers except for Schools.

Table 5 summarizes the current and proposed SFREs by customer grouping and current rate classification resulting in an increase of 145 SFREs or approximately 5%.

Raftelis proposes the following SFRE assessment approach to be implemented by the District in conjunction with proposed rates and effective January 1, 2023.

- One SFRE for each SFR detached customer connection.

- Commercial, multi-family residential (MFR), and all other non-SFR detached customer SFREs based on the Metro flow and meter equivalents which vary by water meter size⁴.

Table 6 provides the Metro SFRE by water meter size applied to the District's commercial customer classifications⁵. Metro may adjust commercial SFREs by water meter size and the District should review this ratio for changes in the future as part of rate change evaluations.

Table 6: Metro Commercial SFRE Ratio by Water Meter Size

Description	SFREs
¾-inch or less	2.0
1-inch	4.8
1 ½-inch	11.0
2-inch	20.0
3-inch	43.0
4-inch	86.0

While some growth and/or redevelopment is possible, we are conservatively projecting no District growth during the Study Period as residential areas are mostly built out.

3.2. Historical Metro Water Recovery Costs

Metro updates customer rates annually and informs the District of the upcoming budgeted cost. Metro provides services to multiple special connectors of varying sizes throughout the Denver Metro area using a rolling 3-year process to budget and true-up costs allocated to each connector. The 3-year process incorporates:

- » Actual costs, volumes, strengths, and customer results of the most recently completed calendar year.
- » Estimated costs, volumes, strengths, and customer results of the current calendar year.
- » Budgeted costs and projected volumes, strengths, and customers results for the subsequent year.

Annually costs allocated to the District are adjusted based on the outcome of the 3-year process. As part of this process:

- » Actual costs allocated to the District are adjusted against the estimated costs allocated in the previous year.
- » Estimated costs allocated to the District are adjusted against the allocated budgeted costs in the previous year.
- » The amounts owed or credited are combined with the budgeted costs providing the annual costs to be recovered from the District in the next year.

⁴ User(s) which are an exception to the above classifications or have multiple customer classifications being served by a single sewer service connection shall be equitably assessed based on flow and strength-based discharges. Raftelis evaluated an alternative assessing MFR SFREs per dwelling unit and was directed by the Board in a November 2022 meeting to apply the Metro SFREs by meter size to all non-SFR customers.

⁵ *Metro Water Recovery Rules and Regulation Governing the Operation, Use, and Services of the System*, Metro Water Recovery, December 31, 2021, Section 7.5.1 on page 7-3. Meter sizes 6-inch and larger uses a formula applied to each end user as detailed in the section 7.5.1.

The District remits the balance quarterly to the Metro in addition to System Development Fee revenues assessed on behalf of Metro to new and/or increased development within the District.

Table 7 summarizes the resulting annual historical costs of wastewater treatment services provided to the District net of adjustments as part of the 3-year process.

Table 7: Historical Metro Water Recovery Costs

Description	2020	2021	2022	Weighted Average
Flow	\$192,673	\$178,495	\$168,481	37%
BOD	93,679	100,404	107,738	20%
TSS	120,330	124,902	137,557	26%
TKN	50,104	48,745	49,810	10%
Customer Equivalents	<u>40,817</u>	<u>33,328</u>	<u>34,376</u>	<u>7%</u>
Total	\$497,603	\$485,874	\$497,962	100%

Table 8 summarizes the changes that have occurred in both the volume and strength of the District's wastewater discharged to Metro Water Recovery from 2020 through 2022. District flows and strengths of BOD, TSS, and TKN have fluctuated over the historical 5-year period. Actual 2020 and estimated 2021 results showed modest increases in flow for the primarily residential District as compared to 2018 and 2019 presumably demonstrating changes based on COVID-19 impacted commuting, travel, and tourism patterns. As outlined below there is a notable increase in tons of BOD and more modest increases in flows, TSS, and TKN starting in 2020.

Table 8: Historical Metro Water Discharge MG/Tons

Description	2018	2019	2020	2021	2022
Flow (MG)	193	190	194	194	195
BOD (Tons)	155	149	170	170	178
TSS (Tons)	139	147	150	150	154
TKN (Tons)	41	41	44	49	45
Customer Equivalents (SFREs)	1.54	1.54	1.54	1.54	1.54

3.3. Metro Water Recovery Strength Assumptions

Metro uses various assumptions about the BOD, TSS, and TKN by user type. The profile of wastewater discharged by some commercial customer types will have a higher level of BOD, TSS, and/or TKN which means the treatment of that wastewater will be more intensive and costlier than the wastewater of a residential customer discharging "domestic" strength effluent.

Table 9 outlines strength assumptions by customer type Metro uses⁶. These strength assumptions were used in the allocation of 2023 test-year costs as discussed later in this section and detailed in Appendix B

⁶ *Metro Water Recovery Rules and Regulation Governing the Operation, Use, and Services of the System*, Metro Water Recovery, December 31, 2021, Section 4.4.1, Table 4-1 on page 4-7.

supporting proposed 2023 rates differentials applied to Metro related costs for some commercial customer types.

Table 9: BOD, TSS, and TKN Strength by Customer Type

Description	BOD (mg/l)	TSS (mg / l)	TKN (mg/l)
Residential	255	260	40
Multi-Family	255	260	40
Retail	255	260	40
Church	255	260	40
Pool	255	260	40
School	340	340	51

3.4. Cost Allocation for Test-Year

The District's costs are comprised of those directly managed by the District and Metro-related costs which follows the process previously described. The District's costs and facilities are sized based on the volume or flow of wastewater effluent as well as fixed and variable costs associated with operating the District. Metro costs include volume, strength, and customer-based cost categories. Table 10 summarizes the District expense types and the approach to developing SFREs for each expense category.

Table 10: Cost Allocation by District Expense Type

Description	Flow-Based SFREs Only	Flow- and Strength-Based SFREs
Metro O&M		X
Transfers to General Fund Capital	X	
Debt Service	X	
Other Inflows and Outflows	X	
Increase / Decrease in Reserves	X	

Raftelis developed a cost allocation approach that allocates District expenses 100% to flow based equivalent SFREs and allocates the Metro cost to flow, strength, and customer based SFREs. Some commercial customer classifications are anticipated to have higher than domestic strengths for BOD, TSS, and/or TKN. A higher ratio is applied to the flow based SFREs for identified commercial customer classifications. The flow and customer based SFREs are the SFREs used for customer billing including proposed changes discussed within Section 3.1. The strength-based SFREs apply a ratio of the expected BOD, TSS, and TKN to the assumed residential or domestic strengths increasing the flow-based SFRE for the respective strength category.

Table 11 summarizes the ratio used for each customer class to develop strength based SFREs used to allocate Metro costs.

Table 11: Metro Expense Strength-Based SFRE Multipliers

Description	Flow	BOD	TSS	TKN
Residential	1.00	1.00	1.00	1.00
Multi-Family	1.00	1.00	1.00	1.00
Retail	1.00	1.00	1.00	1.00
Church	1.00	1.00	1.00	1.00
Pool	1.00	1.00	1.00	1.00
School	1.00	1.30	1.30	1.30

Section 5 summarizes the 2023 test-year costs allocated using the proposed methodology supporting the proposed 2023 rates. Appendix B provides additional detailed information supporting the cost allocation and resulting 2023 rates.

4. Multi-Year Financial Plans

The Combined District Fund is comprised of separate General Fund and Enterprise Fund. The multi-year Combined Fund and separate General Fund and Enterprise Fund financial plans, supporting worksheets, revenue projections and assumptions are detailed in Appendix A. The District sewer rate revenue requirements represent the cost of providing service and include allocated O&M expenses, annual debt service, transfers to the General Fund, and other cash inflows and outflows of the Enterprise Fund. The General Fund incorporates the tax-based funding sources and includes all other District O&M expenses, capital expenditures, and transfer to the Enterprise Fund.

The General Fund financial plan evaluates the adequacy of tax-based revenues and accumulated cash reserves to fund allocated O&M expenses and capital expenditures and maintain the following cash reserves:

- » Operating reserve of 60 days (17%) of General Fund O&M expenses (proposed).
- » Capital reserve equal to the average annual capital expense of \$0.5 million phased-in by 2028 (proposed).
- » TABOR-required emergency reserve equal to 3% of annual expenses (existing).

The Enterprise Fund financial plan evaluates the adequacy of system revenues adjusted for customer and demand-related growth to fund annual treatment-related O&M expenses, existing and future annual debt service, and transfers to the General Fund for capital, and to exceed proposed financial performance thresholds. The proposed thresholds for rate setting include:

- » Operating reserve of 90 days (25%) of Metro O&M expenses.
- » Exceeding a DSC ratio of at least 1.50 times annual debt service.

The District's outstanding debt requires a DSC of 1.20 times annual debt service. Raftelis recommends the more conservative DSC ratio target minimum of 1.50 times annual debt service for rate setting purposes for rate setting purposes⁷. Metro O&M expenses may fluctuate due to volume and strength contributions and as the District establishes fixed annual revenues irrespective of volumes or strengths, it's prudent to include additional conservatism for unanticipated Metro cost increases.

The Enterprise Fund operating reserve is proposed to provide working capital as revenues are assessed annually and expenses fluctuate throughout the year. Additionally, since the annual Metro charges fluctuate based on District and other Metro special customer volumes and contributions applied to actual Metro costs additional operating reserves provide conservatism for unanticipated Metro cost increases.

Lastly, Raftelis recommends a General Fund capital reserve target of \$500,000 or the average annual total capital expenditures phased-in over a 2023 through 2028 period. The Combined District Fund cash reserves will total the separately calculated Enterprise Fund Operating Reserve and the General Fund Capital Reserve and TABOR-required Emergency Reserve. The Combined Fund District cash reserves are projected to range from approximately \$600,000 in 2023 increasing to \$960,000 by 2030.

⁷ Calculated excluding transfers from the General Fund.

While rate revenue increases are currently proposed for only 2023, adjustments may be necessary depending on annual increases in Metro charges, future capital requirements and/or capital maintenance expenditures, system growth, inflation, and regulatory requirements. At a minimum, annual reviews as part of the budget process should be used to periodically assess the condition of the District Funds to determine the necessity of future rate revenue adjustments. If annual user fee revenues are not adequate to fund annual expenditures and exceed financial performance requirements, the following four variables are used to balance the financial plan:

- » Draw down accumulated reserves to fund annual expenditures until funds are depleted.
- » Issue debt to fund a portion of annual capital improvements.
- » Increase tax-based revenues.
- » Increase sewer service fees.
- » Defer and/or delay annual capital improvements.

4.1. District Expenses

The District incurs O&M and capital expenses allocated to the General Fund and Enterprise Fund. The expenses are discussed in general with additional detail regarding the allocated expenses to the General Fund and Enterprise Fund in Section 4.4 and 4.5.

4.1.1. OPERATIONS AND MAINTENANCE

The budgeted 2023 expenses were used and allocated between the General Fund and Enterprise Funds based on the type of O&M expenses. Table 12 summarizes the inflation assumptions by expense type in 2024 through 2030.

Table 12: Inflation Assumptions by Expense Type

Expense Type	Description	2024	2025	2026 through 2030
1	General & Administrative	5.0%	5.0%	5.0%
2	Miscellaneous Expenses	3.0%	3.0%	3.0%
3	Engineering	5.0%	5.0%	5.0%
4	Billing Expense	2.5%	2.5%	2.5%
5	Utilities	3.0%	3.0%	3.0%
6	Repair / Maintenance	4.0%	4.0%	3.0%
7	Sewage Treatment (Metro)	5.0%	4.0%	4.0%
8	Other Charges / Services	2.0%	2.0%	2.0%
9	Constant (No Increase)	0.0%	0.0%	0.0%

4.2. Capital Improvement Projects and Capital Funding

The District Engineer prepared a multi-year capital improvement project listing and project estimate including some allowance for contingencies and inflation.

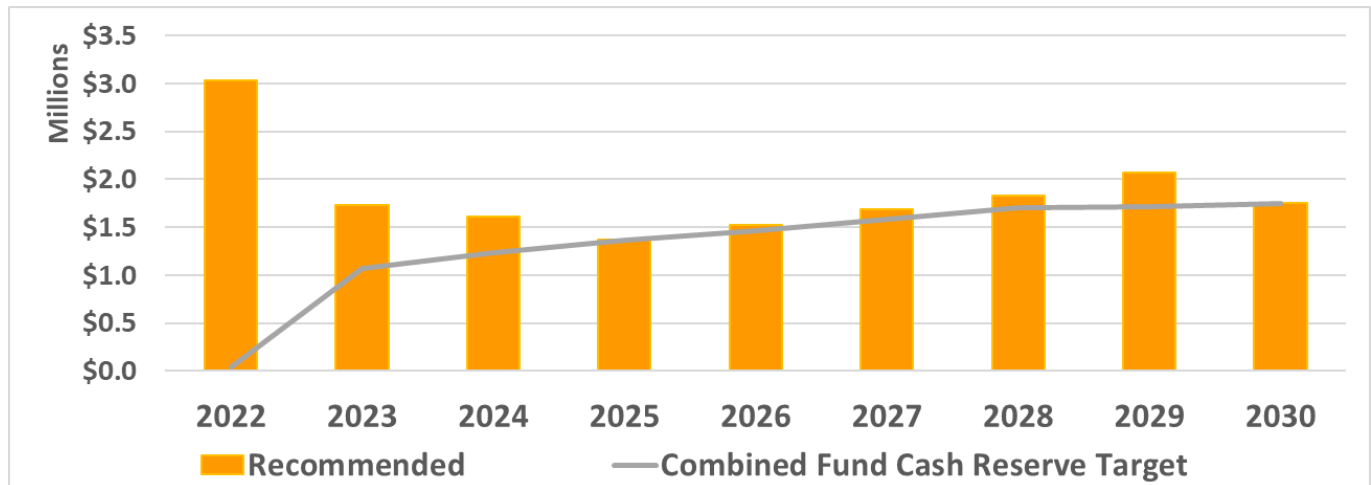
The total 2021 through 2030 totals \$8.07 million and is comprised of the following projects:

- » Main Line Rehabilitation of \$2.00 million in 2022 through 2030.
- » Belleview Outfall Rehabilitation of \$0.55 in 2022.
- » Wet well improvements of \$0.33 million in 2023.
- » Pump control updates of \$0.50 million in 2024.
- » Force main improvements of \$2.50 million in 2029.
- » Various individual projects over the Study Period totaling \$2.19 million.

4.3. Combined Fund Financial Plan Results

Figure 7 shows the end-of-fiscal year cash balance and reserves for the Combined Fund. The cash reserve targets are exceeded throughout the Study Period.

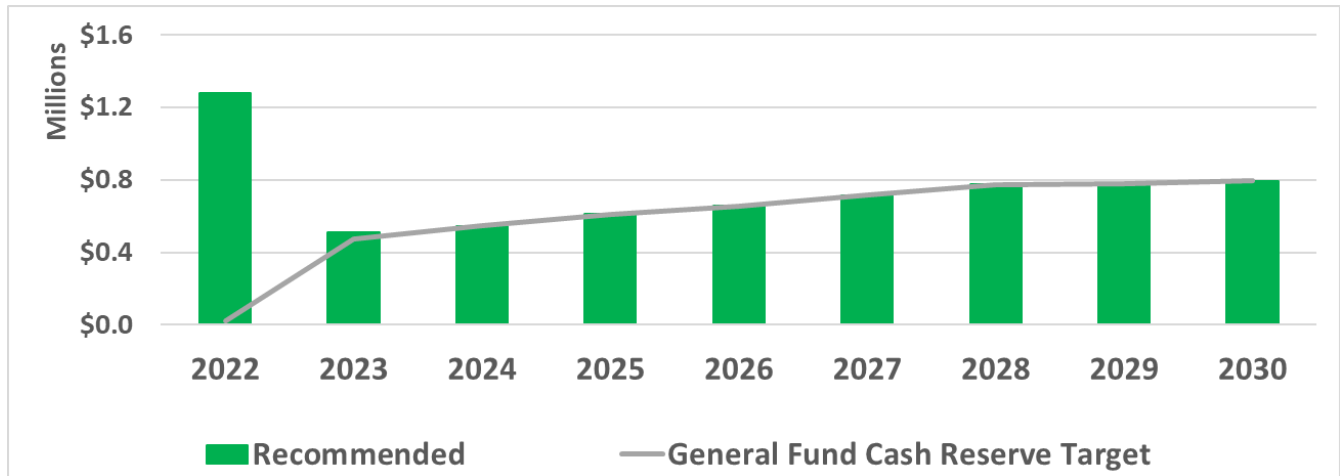
Figure 7: Projected Combined Fund End-of-Year Cash Balances and Reserve Targets



4.4. General Fund Financial Plan Results

Raftelis incorporated the CLA tax-based revenue forecasts over the Study Period and 2023 budgeted General Fund expenses to forecast Study Period results through 2030. Tax-based revenues increase due to anticipated increased in underlying assessed valuations. Appendix A details the General Fund financial plan and projected annual results over the Study Period which are the same under each rate scenario. Total General Fund are summarized on page A-3.

Figure 8 shows the end-of-fiscal year cash balance and reserves for the General Fund. The cash reserve targets are exceeded throughout the Study Period.

Figure 8: Projected General Fund End-of-Year Cash Balances and Reserve Targets

General Fund cash balance of approximately \$2.08 million were available as of January 1, 2022. The cash balance reflects cash and cash equivalents less current General Fund liabilities also as of January 1, 2022. Reducing this amount for the 2020 TABOR 3% Emergency Reserve of \$23,300 results in the unrestricted cash at the start of the Study Period of \$2.06 million.

Raftelis proposes two additional General Fund end-of-year cash reserves. The first is an operating reserve equal to 60-days (17%) of allocated General Fund O&M expenses. The second is an additional \$500,000 capital reserve equal to the average annual capital projects. This reserve is phased-in over 6-year period from 2023 through 2028 with \$250,000 established in 2023 and \$50,000 increases annually until \$500,000 is met in 2028.

4.4.1. REVENUES

Tax-based revenues were projected by CLA for the period of 2022 through 2030 with audited 2020 and 2021 revenues also incorporated. Tax-based revenues are comprised of property taxes and specific ownership taxes incorporating anticipated increases in assessed valuations subject to TABOR limitations.

Property tax revenues are projected to range from \$0.69 million in 2022 increasing to \$0.75 million in 2030. Specific ownership tax revenues are projected to range from \$42,900 in 2022 increasing to \$44,700 in 2030. Lease income revenues are projected to range from \$21,100 in 2022 increasing to \$24,600 in 2030. Interest income is also projected based on start of year General Fund cash balances and an interest earnings rate of 1.0% annually as summarized on page A-3.

4.4.2. OPERATIONS AND MAINTENANCE

Pages A-5 through A-7 summarize projected General Fund and Enterprise Fund O&M expenditures over the Study Period including audited 2020 and 2021 actual results, 2022 estimated results, and 2023 budgeted O&M. Projected 2024 through 2030 O&M expenditures are based on the District's draft 2023 budgeted amounts adjusted for inflation. General Fund O&M ranges from \$0.53 million in 2022 to \$0.80 million by 2030.

4.4.3. CAPITAL IMPROVEMENT PROJECTS

Capital projects were identified and discussed in Section 4.2 where 100% of the funding is allocated to the General Fund. Total annual General Fund capital expenditures ranges from a low of \$0.35 million in 2026 and 2027 to a high of \$2.70 million in 2029 averaging \$0.88 million of the 9-year period of 2022 through 2030.

4.4.4. TRANSFER FROM THE ENTERPRISE FUND

While the Enterprise Fund is not allocated direct funding of annual capital projects, transfers are projected to be necessary in 2023 through 2030 so that the General Fund may fund all allocated expenses and exceed proposed minimum cash reserves. The transfers from the Enterprise Fund in 2024 through 2030 total \$3.62 million ranging from a low of approximately \$266,000 in 2026 to a high of \$822,00 in 2025. Additional amounts equal to external debt or loan proceeds projected in 2024 and 2029 are also transferred from the Enterprise Fund.

4.4.5. TRANSFER TO THE ENTERPRISE FUND

The General Fund provides a transfer to the Enterprise Fund equal to 9.0% of General Fund tax-based revenues. The amount is \$79,000 in 2023 and increases to just over \$97,000 by 2030 based on tax-based revenue projections in each year.

4.5. Enterprise Fund Financial Plan

Appendix A details the Enterprise Fund financial plan and projected annual results over the Study Period under the proposed 2023 rates. Rate revenue increases are anticipated to be effective January 1st of each year. Figure 9 summarizes projected annual residential customer bills for 1 SFRE.

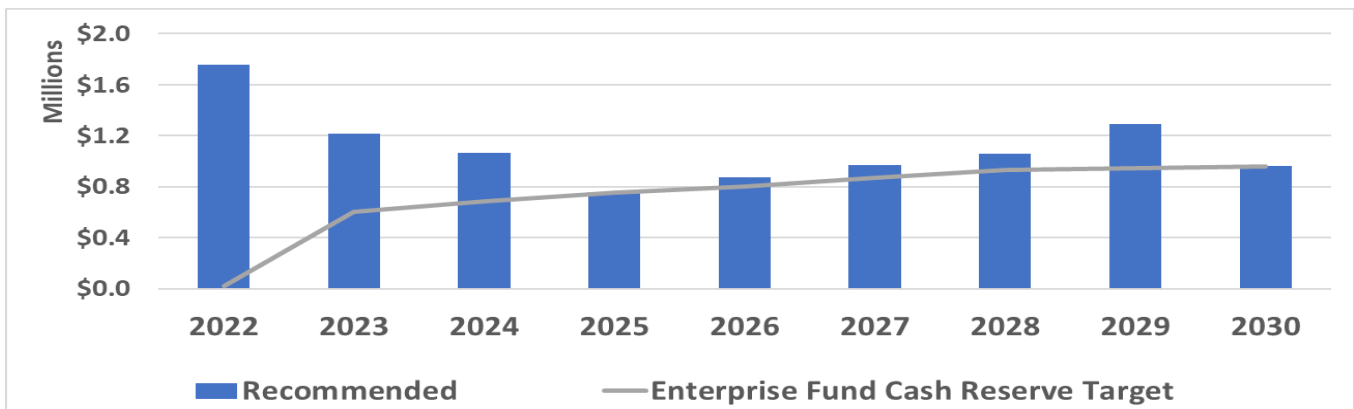
Figure 9: Projected Annual Residential Sewer Bill (1 SFRE)



All Enterprise Fund revenues and expenditures are summarized on page A-4 with key results summarized on page A-1.

Figure 10 shows the end-of-year cash balance and reserve target for the Enterprise Fund. The cash reserve target for the Enterprise Fund is exceeded throughout the Study Period.

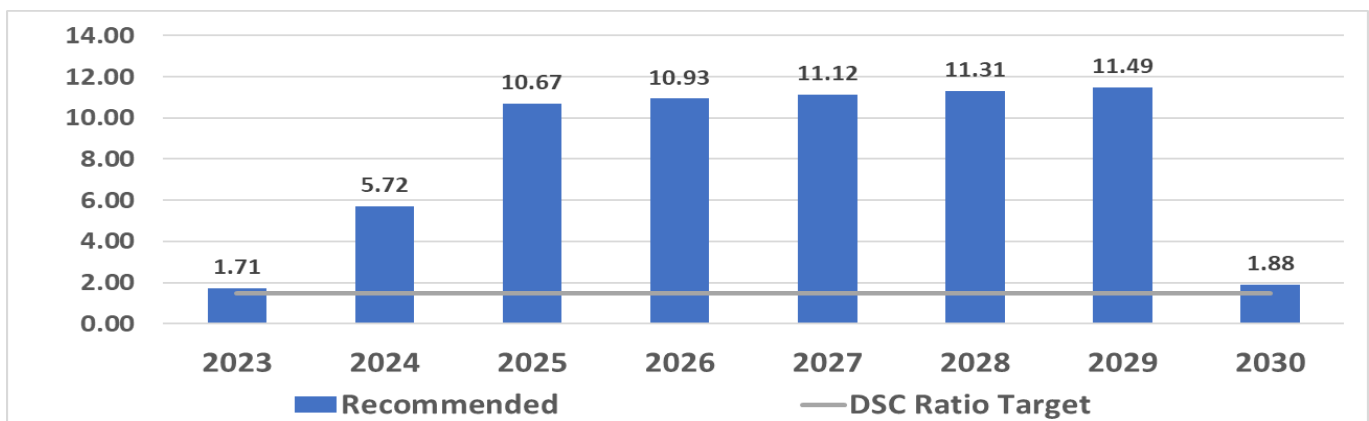
Figure 10: Projected Enterprise Fund End-of-Year Cash Balances and Reserve Targets



A total estimated Enterprise Fund balance of approximately \$0.46 million was available as of January 1, 2022. The 2023 start of year cash balance is projected to be \$0.47 million. Reducing this amount for the proposed cash reserve minimum of \$0.13 million leaves a balance of \$0.34 million as unrestricted cash reserves at the start of 2023.

Figure 11 shows the annual DSC ratio for 2023 through 2030. After the existing debt service is retired in 2024, the DSC ratio increases until the projected 2029 debt issue debt service starts in 2030.

Figure 11: Projected Enterprise Fund DSC Ratio



4.5.1. REVENUES

Sewer user fee revenues in 2023 were projected by Raftelis incorporating current SFREs and rates per SFRE by customer group or classification. 2023 sewer user charge revenues also incorporate proposed SFREs and proposed 2023 rates under the single-year rate scenario. Pages A-10 summarizes the projected annual sewer user charge revenues while pages A-11 provides additional detail by customer class for each year of the Study Period. Sewer user charge revenue is projected to range from \$0.76 million in 2022 to \$1.08 million in

2030 anticipating the adoption of the proposed SFREs as well as rates by customer group effective in 2023 through 2030.

The Enterprise Fund also includes miscellaneous non-rate revenues for other income and from the contract customer Castlewood. Pages A-15 and A-16 detail the line-item forecasts of these over the Study Period.

The Enterprise Fund has an additional revenue stream from interest earnings projected based on the start of year cash balance and an interest earnings rate of 1.0% as listed on page A-4 and A-14.

4.5.2. OPERATIONS AND MAINTENANCE

Pages A-5 through A-7 details projected Enterprise Fund O&M expenditures over the Study Period including audited 2020 and 2021 actual results, 2022 estimated results, and 2023 draft budgeted O&M. Projected 2024 through 2030 Metro O&M expenditures are based on the District's 2023 draft budgeted amounts adjusted for projected annual Metro rate increases. Total annual Metro O&M ranges from \$0.54 million in 2022 increasing to \$0.67 million by 2030. Metro O&M charges for sewer treatment are the largest single line-item comprising approximately 45% of the annual 2023 through 2030 O&M.

The Metro O&M charges reflect a rolling 3-year average that is updated annually for the subsequent budget year and provided to the District in August. The annual amount for next year's budget includes:

- » Actual costs and flows for year 1. In 2022, year 1 was 2020.
- » Estimated costs and flows for year 2. In 2022, year 2 was 2021.
- » Budgeted costs and flows for year 3. In 2022, year 3 was 2022.

The 2022 Metro amounts include increases for 2020 and 2021 reflecting COVID-19 impacted volumes and strength discharges from the District. The 2023 Metro expense reflects that District draft budgeted expense following Metro's 3-year rolling average adjusted for Metro's 2023 rate increase. Metro rates are projected to increase 5.0% in 2024 and 4.0% in 2025 through 2030.

4.5.3. DEBT SERVICE

The District has one debt service obligation outstanding. The District has been pre-paying principal and as a result the debt issue will be retired early with the final payment projected in 2024.

Raftelis has planned for new debt obligations through the State Revolving Fund (SRF) loan program in 2024 of \$0.50 million and in 2029 of \$2.5 million for capital improvements. This amount is transferred from the Enterprise Fund to the General Fund as the debt is projected and assumed to be issued as a revenue-backed debt obligation without the full faith and credit of the District's taxing authority with annual debt service to be repaid by annual rate revenues.

Raftelis is projecting annual debt service payments based on the respective total loan amount, a 20-year repayment term, and interest rates which are projected to increase through 2026. The 2024 debt issue anticipates a 4.00% interest rate while the 2029 debt issue anticipates a 5.00% interest rate. Debt service is anticipated to be due in the year following the year of issuance. Issuance expenses of 1.50% of the amount

for capital are also anticipated in addition to the amount for capital expenditures as part of the total issued debt. A debt service reserve is not anticipated to be required as part of this issue.

Existing annual debt service, including \$50,000 prepaid principal, is \$317,537 in 2022 decreasing to \$216,430 in 2023 with a final payment of \$67,702 in 2024. Projected new debt as previously discussed results in a 2025 annual debt service of \$38,263 increasing \$200,606 in 2030 to just under \$239,000 annually following the second debt issuance projected in 2029.

4.5.4. TRANSFER TO THE GENERAL FUND

As previously discussed, transfers to the General Fund are projected to be necessary in 2024 through 2030 so that the General Fund may fund all allocated expenses and exceed proposed minimum cash reserves. The transfers in 2024 through 2030 total \$3.62million ranging from a low of approximately \$266,000 in 2029 to a high of \$822,00 in 2025. Additional amounts equal to external debt or loan proceeds projected in 2024 and 2029 are also transferred from the Enterprise Fund.

4.5.5. TRANSFER FROM THE GENERAL FUND

The General Fund provides a transfer to the Enterprise Fund equal to 9.0% of General Fund tax-based revenues. The amount is approximately \$79,000 in 2023 and increases to just over \$97,000 by 2030.

5. 2023 Rates and Revenue Impacts

Raftelis applied the proposed SFREs and cost allocation methodologies described in Section 3 to test-year 2023 District revenue requirements in developing proposed 2023 rates. This section of the Report summarizes the resulting amounts, proposed 2023 rates, and summary of expected customer bill impacts by customer type. Additional details are included in Appendix B.

5.1. 2023 Cost of Service and Rates

Table 12 summarizes the allocated test-year 2023 costs by cost type and cost category and resulting unit cost per SFRE by cost category. The SFRE units of service for each cost category are based on both flow-based and strength-based SFREs as discussed in Section 3 and detailed in Appendix B.

One SFRE across all cost categories is equal to one SFR customer connection.

Table 13: Test Year 2023 Unit Cost of Service

Line	Description	Flow	BOD	TSS	TKN	Customer	Total
1	Metro O&M	\$185,760	\$100,411	\$130,534	\$50,205	\$35,144	\$502,053
2	Transfer to the General Fund	0					0
3	Debt Service	216,438					216,438
4	Other Inflows and Outflows	(116,845)					(116,845)
5	Increase / Decrease in Reserves	<u>232,086</u>					<u>232,096</u>
6	Total	\$517,449	\$100,411	\$130,534	\$50,205	\$35,144	\$833,742
7	SFREs By Cost Category	<u>2,822.8</u>	<u>2,834.8</u>	<u>2,834.8</u>	<u>2,834.8</u>	<u>2,822.8</u>	
8	Unit Cost (\$ / SFRE)	\$183.31	\$35.42	\$46.05	\$17.71	\$12.45	

The unit cost of service was applied to units of service by customer class. The proposed 2023 rates were set using the test-year 2023 customer class costs divided by the flow-based SFREs as this is how the rates will be assessed.

Table 14 summarizes the 2023 test-year cost of service, proposed flow-based SFREs, and proposed annual rate per SFRE by customer class⁸.

⁸ Proposed rates are rounded to the nearest dollar resulting in a difference of \$179 between the 2023 test-year cost of service and the projected 2023 sewer fee revenues.

Table 14: 2023 Cost of Service and Proposed Rates by Customer Type

Description	Test-Year 2023 Cost of Service	Proposed SFREs	Proposed Rate
Residential (1)	\$730,271	2,476.0	\$295.00
Multi-Family	54,080	185.8	295.00
Commercial (2)	35,688	121.0	295.00
School	<u>12,988</u>	<u>40.0</u>	325.00
Total	833,747	2,822.8	

(1) Includes duplex properties.

(2) Includes all commercial customers except for Schools.

Raftelis proposes \$295 per year per SFRE to be assessed to Residential, Multi-Family, and commercial customer classifications with domestic strength wastewater discharges and effective January 1, 2023.

Higher rates are proposed for the current commercial customer classification (Schools) for the proportion of the annual revenue requirements associated with Metro strength-based categories. As the District gets other commercial connection with higher than domestic strength discharges, additional customer classifications may be established by the District following the same methodology and approach. Raftelis proposes consolidation of some customer classifications as follows:

- » Domestic Strength: Residential, Multi-Family, Church, Retail, Pools, and Other customer classes.
- » Above Domestic Strength for Schools.

The proposed SFRE and rate changes in 2023 combine to generate the 2023 revenue requirement of approximately \$834,000. Individual end user bill impacts will vary based on the changes to the SFREs and/or rates. Table 15 summarizes the revenue and percent change by customer class.

Table 15: Current and Proposed 2023 Rate Revenues Compared

Description	Current Rate Revenue	Proposed Rate Revenue	Change - \$	Change - %
Residential (1)	\$703,184	\$730,420	\$27,236	4%
Multi-Family	43,282	54,811	11,529	27%
Commercial (2)	13,916	35,695	21,779	157%
School	<u>9,514</u>	<u>13,000</u>	<u>3,486</u>	37%
Total	\$769,896	\$833,926	\$64,030	8%

(1) Includes duplex properties.

(2) Includes all commercial customers except for Schools.

APPENDIX A:
**District Study Period Financial
Plans**

**Havana Water and Sanitation District
Wastewater Utility
Cash Flow and Rate Design Summary
Final Report**

Fiscal Period Ending December 31

Line No	Description	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
1	Enterprise Fund										
2	Months Increase is Effective in First Year	12	12	12	12	12	12	12	12	12	12
3	Annualized Sewer Rate Revenue Increase	0.0%	0.0%	4.0%	5.0%	5.0%	4.0%	3.0%	3.0%	3.0%	3.0%
4	Cumulative Increase	0.0%	0.0%	4.0%	9.2%	14.7%	19.2%	22.8%	26.5%	30.3%	34.2%
5	State Revolving Fund Loans	0	0	0	500,000	0	0	0	0	2,500,000	0
6	Enterprise Fund Ending Balance	\$453,017	\$475,479	\$707,576	\$520,241	\$150,574	\$215,793	\$255,161	\$284,494	\$513,879	\$171,913
7	<i>Metro Reserve Target - 25% Annual Costs</i>	0	0	131,789	137,061	142,543	148,245	154,175	160,342	166,755	166,755
8	Total Target	0	0	131,789	137,061	142,543	148,245	154,175	160,342	166,755	166,755
9	Enterprise Fund End-of-Year Cash Balance After Target	\$453,017	\$475,479	\$575,787	\$383,180	\$8,031	\$67,549	\$100,986	\$124,153	\$347,124	\$5,158
10	Annual Debt Service Coverage (Ent. Fund Only)	1.29	0.96	1.71	5.72	10.67	10.93	11.12	11.31	11.49	1.88
11	General Fund										
12	Transfer to Enterprise Fund	\$71,000	\$71,000	\$79,000	\$78,789	\$82,728	\$86,037	\$88,618	\$91,277	\$94,015	\$96,836
13	Transfer From Enterprise Fund (Additional Transfer)	0	0	0	585,495	822,491	400,637	436,518	456,376	266,093	648,645
14	Transfer From Enterprise Fund (Debt Proceeds for Capital)	0	0	0	500,000	0	0	0	0	2,500,000	0
15	<i>Annual CIP</i>	154,117	975,000	785,000	1,070,000	765,000	350,000	350,000	360,000	2,700,000	560,000
16	Ending General Fund Cash Balance	\$2,070,910	\$1,278,209	\$511,830	\$546,127	\$610,097	\$655,671	\$713,986	\$772,930	\$777,090	\$792,780
17	<i>Capital Reserve Target</i>	0	0	250,000	300,000	350,000	400,000	450,000	500,000	500,000	500,000
18	<i>Operating Reserve Target</i>	0	0	198,800	206,700	213,900	221,200	228,800	236,700	244,900	249,000
19	<i>TABOR Reserve</i>	21,900	23,300	22,400	39,427	46,197	34,471	35,186	36,230	32,190	43,780
20	Total General Fund Cash Reserve Target	21,900	23,300	471,200	546,127	610,097	655,671	713,986	772,930	777,090	792,780
21	General Fund Cash Balance After Target	\$2,049,010	\$1,254,909	\$40,630	\$0	\$0	\$0	\$0	\$0	\$0	\$0
22	Combined Enterprise Fund and General Fund										
23	Combined Fund End-of-Year Cash Balance	\$2,523,927	\$1,753,688	\$1,219,406	\$1,066,368	\$760,671	\$871,465	\$969,147	\$1,057,424	\$1,290,969	\$964,693
24	Combined Fund Cash Reserve Targets										
25	Operating Reserve (Gen. Fund)	0	0	198,800	206,700	213,900	221,200	228,800	236,700	244,900	249,000
26	Metro Reserve (Ent. Fund)	0	0	131,789	137,061	142,543	148,245	154,175	160,342	166,755	166,755
27	Capital Reserve (Gen. Fund)	0	0	250,000	300,000	350,000	400,000	450,000	500,000	500,000	500,000
28	TABOR Reserve (Gen. Fund)	21,900	23,300	22,400	39,427	46,197	34,471	35,186	36,230	32,190	43,780
29	Total Combined Fund Cash Reserve Target	21,900	23,300	602,989	683,188	752,640	803,916	868,161	933,272	943,845	959,535
30	Total Combined Fund End-of-Year Cash Balance After Target	\$2,502,027	\$1,730,388	\$616,417	\$383,180	\$8,031	\$67,549	\$100,986	\$124,153	\$347,124	\$5,158

(1) Limited to sewer rate revenue adjustment and excludes the 4.0% increase in revenue due to the change in SFREs.

Havana Water and Sanitation District
Wastewater Utility Cash Flow Analysis
Combined Wastewater Fund
Final Report

Line No.	Description	Fiscal Period Ending December 31										
		2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
		\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Sources of Funds												
1	Revenue from Existing Wastewater Fees	763,951	761,220	763,949	801,675	801,675	801,675	801,675	801,675	801,675	801,675	801,675
2	Add'l Sewer Fee Revenue from Rate Increases	0	0	0	32,067	73,754	117,526	154,294	182,973	212,512	242,938	274,276
3	Total Sewer Fee Revenue	763,951	761,220	763,949	833,742	875,429	919,201	955,969	984,648	1,014,187	1,044,613	1,075,951
4	Property taxes	621,252	659,082	694,184	663,017	687,461	704,075	717,705	717,705	731,607	731,607	745,787
5	Specific ownership tax	44,388	45,424	44,200	39,781	41,248	42,245	43,062	43,062	43,896	43,896	44,747
6	Lease Income	21,123	21,123	21,123	22,923	23,152	23,384	23,618	23,854	24,093	24,334	24,577
7	Other revenue	18,000	0	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500
8	Reimbursed Expenditures - Castlewood W&SD	25,844	25,844	25,844	26,845	28,187	29,596	30,780	31,703	32,654	33,634	34,643
9	Interest Income	18,887	1,683	27,000	29,000	18,291	15,996	7,607	8,715	9,691	10,574	12,910
10	Net Debt/Loan Proceeds	0	0	0	0	500,000	0	0	0	0	2,500,000	0
11	Total Sources	1,513,445	1,514,376	1,579,800	1,618,808	2,177,268	1,737,996	1,782,241	1,813,187	1,859,629	4,392,158	1,942,115
Revenue Requirements												
12	Operation and Maintenance Expense	532,520	444,851	539,470	502,053	527,156	548,242	570,172	592,979	616,698	641,366	667,021
13	General and Administrative O&M Expenses	450,039	526,079	539,900	649,600	665,448	692,188	713,012	734,262	756,391	778,984	802,501
Debt Service												
14	Existing	317,779	315,906	317,537	216,438	67,702	0	0	0	0	0	0
15	Proposed - SRF Loans	0	0	0	0	0	38,263	38,263	38,263	38,263	38,263	238,869
16	Total Debt Service	317,779	315,906	317,537	216,438	67,702	38,263	38,263	38,263	38,263	38,263	238,869
Capital												
17	Capital Improvement Program	23,432	154,117	975,000	785,000	1,070,000	765,000	350,000	350,000	360,000	2,700,000	560,000
18	Total Revenue Requirements	1,323,770	1,440,953	2,371,907	2,153,091	2,330,306	2,043,693	1,671,447	1,715,504	1,771,352	4,158,613	2,268,391
19	Annual Surplus (Deficiency)	189,675	73,423	(792,107)	(534,283)	(153,038)	(305,697)	110,794	97,683	88,277	233,545	(326,276)
20	Beginning Balance (1)	2,262,427	2,450,504	2,545,795	1,753,688	1,219,406	1,066,368	760,671	871,465	969,147	1,057,424	1,290,969
21	Ending Balance	2,452,102	2,523,927	1,753,688	1,219,406	1,066,368	760,671	871,465	969,147	1,057,424	1,290,969	964,693
Target Reserves (2)												
22	Target Operating Reserves	0	0	0	131,789	137,061	142,543	148,245	154,175	160,342	166,755	166,755
23	Target Capital Reserves	21,500	21,900	23,300	471,200	546,127	610,097	655,671	713,986	772,930	777,090	792,780
24	Total Target Reserves	21,500	21,900	23,300	602,989	683,188	752,640	803,916	868,161	933,272	943,845	959,535
25	Ending Balance After Reserve Target	\$2,430,602	\$2,502,027	\$1,730,388	\$616,417	\$383,180	\$8,031	\$67,549	\$100,986	\$124,153	\$347,124	\$5,158
26	Annualized Wastewater Service Revenue Increase		0.0%	0.0%	3.9%	5.1%	5.2%	4.0%	2.9%	2.9%	3.1%	3.0%
27	Cumulative Revenue Increase		0.0%	0.0%	3.9%	9.2%	14.8%	19.4%	22.9%	26.4%	30.3%	34.2%

(1) 2020, 2021, and 2022 Beginning Balances show current assets less current liabilities excluding Property Tax Receivable, Prepaid Sewer Service Fees, and Accrued Interest Payable. Differences between ending and beginning balances for these years do not materially affect results.

(2) Target includes TABOR Emergency Reserve and proposed Capital, Operating, and Metro cash reserves calculated annually.

Havana Water and Sanitation District
Wastewater Utility
Enterprise Fund Cash Flow Analysis
Final Report

Line No.	Description	Fiscal Period Ending December 31									
		2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
		\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Sources of Funds											
	Service Charge Revenue										
1	Sewer Service Fees	763,951	761,220	763,949	801,675	801,675	801,675	801,675	801,675	801,675	801,675
2	Additional Sewer Fee Revenue from Rate Increases	0	0	0	32,067	73,754	117,526	154,294	182,973	212,512	242,938
3	Total Sewer Fee Revenue	763,951	761,220	763,949	833,742	875,429	919,201	955,969	984,648	1,014,187	1,044,613
4	Reimbursed Expenditures - Castlewood W&SD	25,844	25,844	25,844	26,845	28,187	29,596	30,780	31,703	32,654	33,634
5	Interest Income	3,477	133	7,000	11,000	10,614	7,804	1,506	2,158	2,552	2,845
6	Net Debt/Loan Proceeds	0	0	0	0	500,000	0	0	0	0	2,500,000
7	Transfer From General Fund	72,000	71,000	71,000	79,000	78,789	82,728	86,037	88,618	91,277	94,015
8	Total Source of Funds	865,272	858,197	867,793	950,587	1,493,019	1,039,328	1,074,292	1,107,127	1,140,670	3,675,107
Uses of Funds											
9	Total Operations and Maintenance (Sewer Treatment)	532,520	444,851	539,470	502,053	527,156	548,242	570,172	592,979	616,698	641,366
10	Capital Improvement Projects	0	0	0	0	0	0	0	0	0	0
11	Transfer To General Fund	0	0	0	0	1,085,495	822,491	400,637	436,518	456,376	2,766,093
Debt Service											
12	Existing	317,779	315,906	317,537	216,438	67,702	0	0	0	0	0
13	Proposed - SRF Loans	0	0	0	0	0	38,263	38,263	38,263	38,263	38,263
14	Total Debt Service	317,779	315,906	317,537	216,438	67,702	38,263	38,263	38,263	38,263	38,263
15	Total Uses	850,299	760,757	857,007	718,491	1,680,353	1,408,996	1,009,072	1,067,760	1,111,337	3,445,722
16	Annual Surplus (Deficiency)	14,973	97,440	10,786	232,096	(187,335)	(369,667)	65,220	39,368	29,333	229,385
17	Beginning Balance (1)	337,202	355,577	464,693	475,479	707,576	520,241	150,574	215,793	255,161	284,494
18	Ending Balance	352,175	453,017	475,479	707,576	520,241	150,574	215,793	255,161	284,494	513,879
19	Target Enterprise Fund Cash Reserves (2)	0	0	0	131,789	137,061	142,543	148,245	154,175	160,342	166,755
20	Ending Balance After Reserve Target	\$352,175	\$453,017	\$475,479	\$575,787	\$383,180	\$8,031	\$67,549	\$100,986	\$124,153	\$347,124
21	Calculated DSC Ratio (Ent. Fund Only)		1.29	0.96	1.71	5.72	10.67	10.93	11.12	11.31	11.49
22	Targeted DSC Ratio		1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
23	Residential - Annual Charge per SFRE	284.00	284.00	284.00	295.00	310.00	326.00	339.00	349.00	359.00	370.00
24	Annual Wastewater Service Revenue Increase		0.0%	0.0%	3.9%	5.1%	5.2%	4.0%	2.9%	2.9%	3.1%
25	Cumulative Revenue Increase		0.0%	0.0%	3.9%	9.2%	14.8%	19.4%	22.9%	26.4%	30.3%

(1) 2020, 2021, and 2022 Beginning Balances show current assets less current liabilities excluding Prepaid Sewer Service Fees and Accrued Interest Payable. Differences between ending and beginning balances for these years do not materially affect results.

(2) Target includes proposed Metro cash reserve calculated annually based on 90-days of annual Metro expenses.

Havana Water and Sanitation District
Wastewater Utility
General Fund Cash Flow Analysis
Final Report

Line No.	Description	Fiscal Period Ending December 31										
		2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
		\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Sources of Funds												
1	Property taxes	\$621,252	\$659,082	\$694,184	\$663,017	\$687,461	\$704,075	\$717,705	\$717,705	\$731,607	\$731,607	\$745,787
2	Specific ownership tax	44,388	45,424	44,200	39,781	41,248	42,245	43,062	43,062	43,896	43,896	44,747
3	Interest Income	15,410	1,550	20,000	18,000	7,677	8,192	6,101	6,557	7,140	7,729	7,771
4	Lease Income	21,123	21,123	21,123	22,923	23,152	23,384	23,618	23,854	24,093	24,334	24,577
5	Other revenue	18,000	0	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500
6	Transfer from Enterprise Fund	0	0	0	0	585,495	822,491	400,637	436,518	456,376	266,093	648,645
7	Transfer from Enterprise Fund - Debt/Loan Proceeds	0	0	0	0	500,000	0	0	0	0	2,500,000	0
8	Total Sources	720,173	727,179	783,007	747,221	1,848,534	1,603,886	1,194,623	1,231,195	1,266,611	3,577,159	1,475,027
Uses of Funds												
9	Transfer to Enterprise Fund	72,000	71,000	71,000	79,000	78,789	82,728	86,037	88,618	91,277	94,015	96,836
10	General and Administrative O&M Expenses	450,039	526,079	539,900	649,600	665,448	692,188	713,012	734,262	756,391	778,984	802,501
11	Proposed Capital Projects	23,432	154,117	975,000	785,000	1,070,000	765,000	350,000	350,000	360,000	2,700,000	560,000
12	Total Uses	545,471	751,196	1,585,900	1,513,600	1,814,237	1,539,916	1,149,049	1,172,880	1,207,668	3,572,999	1,459,337
13	Annual Surplus (Deficiency)	174,702	(24,017)	(802,893)	(766,379)	34,297	63,970	45,574	58,315	58,944	4,160	15,690
14	Beginning Balance (1)	1,925,225	2,094,927	2,081,102	1,278,209	511,830	546,127	610,097	655,671	713,986	772,930	777,090
15	Ending Balance	2,099,927	2,070,910	1,278,209	511,830	546,127	610,097	655,671	713,986	772,930	777,090	792,780
16	Target General Fund Cash Reserve (2)	21,500	21,900	23,300	471,200	546,127	610,097	655,671	713,986	772,930	777,090	792,780
17	Ending Balance After Reserve Target	\$2,078,427	\$2,049,010	\$1,254,909	\$40,630	\$0	\$0	\$0	\$0	\$0	\$0	\$0

(1) 2020, 2021, and 2022 Beginning Balances show current assets less current liabilities excluding Property Tax Receivable. Differences between ending and beginning balances for these years do not materially affect results.

(2) Target includes TABOR Emergency Reserve and proposed General Fund Capital and Operating (60-days of O&M) cash reserves calculated annually.

Havana Water and Sanitation District
Wastewater Utility
Historical & Projected Wastewater Operation and Maintenance Expense

Line No.	Fund Description	Category	Infl	Description	Actual	Actual	Estimated	Budget	Annual Cost Escalation Rates						
					2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
					\$	\$	\$	\$	%	%	%	%	%	%	%
1	General Fund	General and administrative	8	Accounting	19,949	20,950	23,050	25,500	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
2	General Fund	General and administrative	1	Audit	6,600	6,600	6,900	8,000	5.0%	5.0%	3.0%	3.0%	3.0%	3.0%	3.0%
3	General Fund	General and administrative	6	County Treasurer's Fee	9,324	9,894	10,413	10,413	2.0%	0.0%	2.0%	0.0%	2.0%	0.0%	2.0%
4	General Fund	General and administrative	4	Customer Billing	24,557	27,192	29,500	32,500	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
5	General Fund	General and administrative	1	Directors' fees	2,900	3,200	2,900	3,000	5.0%	5.0%	3.0%	3.0%	3.0%	3.0%	3.0%
6	General Fund	General and administrative	1	District Management	44,258	39,657	46,640	51,500	5.0%	5.0%	3.0%	3.0%	3.0%	3.0%	3.0%
7	General Fund	General and administrative	1	Dues and Membership	960	932	689	1,050	5.0%	5.0%	3.0%	3.0%	3.0%	3.0%	3.0%
8	General Fund	General and administrative	1	Election	1,228	0	6,650	15,000	5.0%	5.0%	3.0%	3.0%	3.0%	3.0%	3.0%
9	General Fund	General and administrative	3	Engineering	64,000	72,344	65,000	95,000	5.0%	5.0%	3.0%	3.0%	3.0%	3.0%	3.0%
10	General Fund	General and administrative	11	Insurance and bonds	19,116	19,735	26,899	29,600	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
11	General Fund	General and administrative	2	Landscape maintenance	1,075	2,150	3,000	6,000	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
12	General Fund	General and administrative	1	Legal	43,662	29,567	40,000	44,000	5.0%	5.0%	3.0%	3.0%	3.0%	3.0%	3.0%
13	General Fund	General and administrative	2	Miscellaneous/Contingency	6,005	6,519	23,859	17,637	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
14	General Fund	General and administrative	1	Website	0	264	2,200	2,200	5.0%	5.0%	3.0%	3.0%	3.0%	3.0%	3.0%
15	General Fund	General and administrative	4	Postage/printing	3,968	7,626	10,000	10,000	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
16	General Fund	General and administrative	10	Repairs and maintenance	152,001	142,142	155,000	216,000	4.0%	4.0%	3.0%	3.0%	3.0%	3.0%	3.0%
17	General Fund	General and administrative	9	Solid waste disposal study	724	7,759	5,000	0	-100.0%	-100.0%	-100.0%	-100.0%	-100.0%	-100.0%	-100.0%
18	General Fund	General and administrative	1	Storage Rent	3,613	3,123	4,300	4,600	5.0%	5.0%	3.0%	3.0%	3.0%	3.0%	3.0%
19	General Fund	General and administrative	9	Rate Study	0	19,767	10,000	0	-100.0%	-100.0%	-100.0%	-100.0%	-100.0%	-100.0%	-100.0%
20	General Fund	General and administrative	5	Utilities	46,099	55,017	68,000	68,000	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
21	General Fund	General and administrative	9	Service Plan Amendment	0	40,581	0	0	5.0%	5.0%	3.0%	3.0%	3.0%	3.0%	3.0%
22	Enterprise Fund	Operations and maintenance	7	Sewer treatment	532,520	444,325	539,470	502,053	5.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
23		Total			982,559	959,344	1,079,470	1,142,053							

Havana Water and Sanitation District
Wastewater Utility
Annual O&M Cost Adjustment Inputs

Line No.	Category	Account	Description	Actual	Actual	Estimated	Budget	Annual Cost Adjustments (Inflated)							
				2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	
				\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	
1	General Fund	General and administrative	8	Accounting											
2	General Fund	General and administrative	1	Audit											
3	General Fund	General and administrative	6	County Treasurer's Fee											
4	General Fund	General and administrative	4	Customer Billing											
5	General Fund	General and administrative	1	Directors' fees											
6	General Fund	General and administrative	1	District Management											
7	General Fund	General and administrative	1	Dues and Membership											
8	General Fund	General and administrative	1	Election											
9	General Fund	General and administrative	3	Engineering											
10	General Fund	General and administrative	11	Insurance and bonds											
11	General Fund	General and administrative	2	Landscape maintenance											
12	General Fund	General and administrative	1	Legal											
13	General Fund	General and administrative	2	Miscellaneous/Contingency											
14	General Fund	General and administrative	1	Website											
15	General Fund	General and administrative	4	Postage/printing											
16	General Fund	General and administrative	10	Repairs and maintenance											
17	General Fund	General and administrative	9	Solid waste disposal study											
18	General Fund	General and administrative	1	Storage Rent											
19	General Fund	General and administrative	9	Rate Study											
20	General Fund	General and administrative	5	Utilities											
21	General Fund	General and administrative	9	Service Plan Amendment											
22	Enterprise Fund	Operations and maintenance	7	Sewer treatment											
23	Total				0	0	0	0	0	0	0	0	0	0	0

Havana Water and Sanitation District
Wastewater Utility
Budget & Projected Operation and Maintenance Expense

Line No.	Fund Description	Category	Infl	Description	Actual	Actual	Estimated	Budget	Projected						
					2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
					\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
1	General Fund	General and administrative	8	Accounting	19,949	20,950	23,050	25,500	26,010	26,530	27,061	27,602	28,154	28,717	29,291
2	General Fund	General and administrative	1	Audit	6,600	6,600	6,900	8,000	8,400	8,820	9,085	9,358	9,639	9,928	10,226
3	General Fund	General and administrative	6	County Treasurer's Fee	9,324	9,894	10,413	10,413	10,621	10,621	10,833	10,833	11,050	11,050	11,271
4	General Fund	General and administrative	4	Customer Billing	24,557	27,192	29,500	32,500	33,313	34,146	35,000	35,875	36,772	37,691	38,633
5	General Fund	General and administrative	1	Directors' fees	2,900	3,200	2,900	3,000	3,150	3,308	3,407	3,509	3,614	3,722	3,834
6	General Fund	General and administrative	1	District Management	44,258	39,657	46,640	51,500	54,075	56,779	58,482	60,236	62,043	63,904	65,821
7	General Fund	General and administrative	1	Dues and Membership	960	932	689	1,050	1,103	1,158	1,193	1,229	1,266	1,304	1,343
8	General Fund	General and administrative	1	Election	1,228	0	6,650	15,000	15,750	16,538	17,034	17,545	18,071	18,613	19,171
9	General Fund	General and administrative	3	Engineering	64,000	72,344	65,000	95,000	99,750	104,738	107,880	111,116	114,449	117,882	121,418
10	General Fund	General and administrative	11	Insurance and bonds	19,116	19,735	26,899	29,600	31,080	32,634	34,266	35,979	37,778	39,667	41,650
11	General Fund	General and administrative	2	Landscape maintenance	1,075	2,150	3,000	6,000	6,180	6,365	6,556	6,753	6,956	7,165	7,380
12	General Fund	General and administrative	1	Legal	43,662	29,567	40,000	44,000	46,200	48,510	49,965	51,464	53,008	54,598	56,236
13	General Fund	General and administrative	2	Miscellaneous/Contingency	6,005	6,519	23,859	17,637	18,166	18,711	19,272	19,850	20,446	21,059	21,691
14	General Fund	General and administrative	1	Website	0	264	2,200	2,200	2,310	2,426	2,499	2,574	2,651	2,731	2,813
15	General Fund	General and administrative	4	Postage/printing	3,968	7,626	10,000	10,000	10,250	10,506	10,769	11,038	11,314	11,597	11,887
16	General Fund	General and administrative	10	Repairs and maintenance	152,001	142,142	155,000	216,000	224,640	233,626	240,635	247,854	255,290	262,949	270,837
17	General Fund	General and administrative	9	Solid waste disposal study	724	7,759	5,000	0	0	0	0	0	0	0	0
18	General Fund	General and administrative	1	Storage Rent	3,613	4,200	4,200	4,200	4,410	4,631	4,770	4,913	5,060	5,212	5,368
19	General Fund	General and administrative	9	Rate Study	0	19,767	10,000	10,000	0	0	0	0	0	0	0
20	General Fund	General and administrative	5	Utilities	46,099	65,000	68,000	68,000	70,040	72,141	74,305	76,534	78,830	81,195	83,631
21	General Fund	General and administrative	9	Service Plan Amendment	0	40,581	0	0	0	0	0	0	0	0	0
22	Enterprise Fund	Operations and maintenance	7	Sewer treatment	532,520	444,325	539,470	502,053	527,156	548,242	570,172	592,979	616,698	641,366	667,021
23	Total	Total			982,559	970,404	1,079,370	1,151,653	1,192,604	1,240,430	1,283,184	1,327,241	1,373,089	1,420,350	1,469,522

Havana Water and Sanitation District
Wastewater Utility
Wastewater Capital Improvement Plan (Inflated)

Line No.	Title	Function Code	Included Inflation (Y/N)	Debt Funded	Actual	Budgeted		Projected					2021 - 2030		
					2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Total
					\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	
1	Air Valve Replacement	LS2-1	Y	0%	0	0	0	0	0	0	0	0	0	0	0
2	Odor Control Improvements	LS2-2	Y	0%	0	0	0	100,000	0	0	0	0	0	0	100,000
3	Wet Well Rehabilitation	LS1-3	Y	0%	0	0	325,000	0	0	0	0	0	0	0	325,000
4	Pump Control Upgrade	LS1-4	Y	100%	0	0	0	150,000	0	0	0	0	0	0	150,000
5	Water Service Addition	LS1-5	Y	0%	0	0	0	150,000	0	0	0	0	0	0	150,000
6	Emergency Generator Replacement	LS1-6	Y	0%	0	0	0	0	150,000	0	0	0	0	0	150,000
7	Fence Replacement and Site Improvements	LS1-7	Y	0%	0	0	0	0	40,000	0	0	0	0	0	40,000
8	Macerator Replacement	LS1-8	Y	0%	0	0	0	0	0	0	0	110,000	0	0	110,000
9	Pump Replacement	LS1-9	Y	0%	0	0	0	0	0	0	0	0	0	250,000	250,000
10	Pump Control Upgrade	LS2-1	Y	100%	0	0	0	350,000	0	0	0	0	0	0	350,000
11	Lift Station #2 Force Main Condition Assessment	LS2-2	Y	0%	0	50,000	0	0	0	0	0	0	0	0	50,000
12	Wet Well Rehabilitation	LS2-3	Y	0%	0	0	0	0	0	300,000	0	0	0	0	300,000
13	Odor Control Improvements	LS2-4	Y	0%	0	0	0	0	0	75,000	0	0	0	0	75,000
14	Pump Replacement	LS2-5	Y	0%	0	0	0	0	0	0	150,000	0	0	0	150,000
15	Emergency Generator Replacement	LS2-6	Y	0%	0	0	0	0	0	0	0	150,000	0	0	150,000
16	Fence Replacement and Site Improvements	LS2-7	Y	0%	0	0	0	0	0	0	0	0	50,000	0	50,000
17	Force Main Replacement	LS2-8	Y	100%	0	0	0	0	0	0	0	0	0	2,500,000	2,500,000
18	Macerator Replacement	LS2-9	Y	0%	0	0	0	0	0	0	0	0	0	110,000	110,000
19	Wet Well Rehabilitation	LS3-1	Y	0%	0	0	0	0	0	0	0	0	0	0	0
20	Pump Control Upgrade	LS3-2	Y	0%	0	0	0	0	0	0	0	0	0	0	0
21	Lift Station #2 Electrical Instrumentation Condition Assessment	LS3-3	Y	0%	0	30,000	0	0	0	0	0	0	0	0	30,000
22	Fence Replacement and Site Improvements	LS3-4	Y	0%	0	0	0	0	0	0	0	0	0	0	0
23	2021 Belleview Outfall Rehabilitation (carry over to 2022)	CS-2	Y	0%	0	550,000	0	0	0	0	0	0	0	0	550,000
24	2022 Pipe Rehabilitation	CS-3	Y	0%	0	250,000	0	0	0	0	0	0	0	0	250,000
25	2023 Pipe Rehabilitation	CS-4	Y	0%	0	0	250,000	0	0	0	0	0	0	0	250,000
26	2024 Pipe Rehabilitation	CS-5	Y	0%	0	0	0	300,000	0	0	0	0	0	0	300,000
27	2025 - 2031 Pipe Rehabilitation	CS-6 - XX	Y	0%	0	0	0	0	200,000	200,000	200,000	200,000	200,000	200,000	1,200,000
28	Emergency Response Plan Update	G-1	Y	0%	0	0	0	0	0	0	0	0	0	0	0
29	Master Plan Update	G-2	Y	0%	0	0	0	20,000	0	0	0	0	0	0	20,000
30	Emergency Pump Replacement	G-3	Y	0%	0	0	0	0	0	0	0	0	0	0	0
31	Engineering-Capital (1)	0	Y	0%	68,365	95,000	210,000	0	0	0	0	0	0	0	373,365
32	Major Repairs/Capital Improvements	0	Y	0%	85,752	0	0	0	0	0	0	0	0	0	85,752
33	Total CIP - Inflated				154,117	975,000	785,000	1,070,000	765,000	350,000	350,000	360,000	2,700,000	560,000	8,069,117

(1) Individual projects incorporate projected design engineering capital expenses in 2024 through 2030.

Havana Water and Sanitation District
Wastewater Utility
Proposed Debt - State Revolving Fund Loans
Final Report

Line No.	Description	Fiscal Period Ending December 31									
		2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
		\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
1	Amount of Issue	0	0	0	500,000	0	0	0	0	2,500,000	0
2	Interest During Construction	0	0	0	20,000	0	0	0	0	0	0
3	Equal Annual Debt Service	0	0	0	38,263	0	0	0	0	200,606	0
4	Bond Issuance Expense	0	0	0	7,500	0	0	0	0	37,500	0
5	Debt Service Reserve	0	0	0	0	0	0	0	0	0	0
Proposed Bond Debt Service Schedule											
6	2021	0	0	0	0	0	0	0	0	0	0
7	2022		0	0	0	0	0	0	0	0	0
8	2023			0	0	0	0	0	0	0	0
9	2024				0	38,263	38,263	38,263	38,263	38,263	38,263
10	2025					0	0	0	0	0	0
11	2026						0	0	0	0	0
12	2027							0	0	0	0
13	2028								0	0	0
14	2029									0	200,606
15	2030										0
16	Total	0	0	0	0	38,263	38,263	38,263	38,263	38,263	238,869

Havana Water and Sanitation District
Wastewater Utility
Annual User Charge Revenue - 2022 Charges Adjusted for Growth

Line No	Customer Class	Charge per SFRE	Projected Revenue Under 2022 SFRE and Rates								Test Year 2023	
		2022	2022	2023	2024	2025	2026	2027	2028	2029		2030
1	Residential	\$284.00	\$703,184	\$703,184	\$703,184	\$703,184	\$703,184	\$703,184	\$703,184	\$703,184	\$703,184	\$703,184
2	Multi-Family Residential	\$284.00	43,282	52,767	52,767	52,767	52,767	52,767	52,767	52,767	52,767	52,767
3	Commercial	\$284.00	12,496	29,877	29,877	29,877	29,877	29,877	29,877	29,877	29,877	29,877
4	Church	\$284.00	284	1,363	1,363	1,363	1,363	1,363	1,363	1,363	1,363	1,363
5	Pool	\$284.00	1,136	3,124	3,124	3,124	3,124	3,124	3,124	3,124	3,124	3,124
6	School	\$284.00	9,514	11,360	11,360	11,360	11,360	11,360	11,360	11,360	11,360	11,360
7	Total		\$769,896	\$801,675	\$801,675	\$801,675	\$801,675	\$801,675	\$801,675	\$801,675	\$801,675	\$801,675

Havana Water and Sanitation District
Wastewater Utility
Projected SFREs

Line No	Customer Class										Test Year
		2022	2023	2024	2025	2026	2027	2028	2029	2030	2023
1	Residential	2,476.0	2,476.0	2,476.0	2,476.0	2,476.0	2,476.0	2,476.0	2,476.0	2,476.0	2,476.0
2	Multi-Family Residential	152.4	185.8	185.8	185.8	185.8	185.8	185.8	185.8	185.8	185.8
3	Commercial	44.0	105.2	105.2	105.2	105.2	105.2	105.2	105.2	105.2	105.2
4	Church	1.0	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
5	Pool	4.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
6	School	33.5	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
7	Total	2,710.9	2,822.8	2,822.8	2,822.8	2,822.8	2,822.8	2,822.8	2,822.8	2,822.8	2,822.8

Havana Water and Sanitation District
Wastewater Utility
Projected SFRE Growth by Year

Line No	Customer Class	2022	2023	2024	2025	2026	2027	2028	2029	2030
1	Residential	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2	Multi-Family Residential	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
3	Commercial	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
4	Church	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
5	Pool	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
6	School	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
7	Office	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
8	Restaurant	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
9	Hotel / Motel	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Havana Water and Sanitation District
Wastewater Utility
Interest Calculation
Final Report

Line No.	Description	Fiscal Period Ending December 31										
		2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
		\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
1	Interest Income											
2	General Fund	15,410	1,556	18,000	19,000	7,677	8,192	6,101	6,557	7,140	7,729	7,771
3	Operating Fund	3,477	133	7,000	11,000	10,614	7,804	1,506	2,158	2,552	2,845	5,139
4	Total	18,887	1,689	25,000	30,000	18,291	15,996	7,607	8,715	9,691	10,574	12,910

Havana Water and Sanitation District
Wastewater Utility
Wastewater Miscellaneous Revenue

Line No.	Description	Inflation Coding	Actual	Actual	Estimated	Budget	Annual Cost Escalation Rates						
			2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
			\$	\$	\$	\$	%	%	%	%	%	%	%
Other Miscellaneous Revenue													
1	Interest income - General Fund	MR	15,410	1,556	18,000	19,000	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2	Other revenue	MR	13,000	0	3,500	3,500	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
3	Lease income	LR	21,123	21,123	21,123	22,923	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
4	Water tap fees	MR	0	0	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
5	Reimbursed Expenditures - Castlewood W&SD	CC	25,844	25,844	25,844	26,845	5.0%	5.0%	4.0%	3.0%	3.0%	3.0%	3.0%
6	Sewer tap fees	MR	0	0	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
7	Development Review fees	MR	5,000	0	0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
8	Interest income - Enterprise Fund	MR	3,477	133	7,000	11,000	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
9	Total Wastewater Miscellaneous Revenue		83,854	48,656	75,467	72,268	0	0	0	0	0	0	0

Table B-4
Havana Water and Sanitation District
Wastewater Utility
Wastewater Miscellaneous Revenue Forecast

Line No.	Title	Actual	Actual	Estimated	Budget	Projected						
		2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
		\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Other Miscellaneous Revenue												
1	Interest income - General Fund	15,410	1,556	18,000	19,000	30,000	18,291	15,996	7,607	8,715	9,691	10,574
2	Other revenue	13,000	0	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500
3	Lease income	21,123	21,123	21,123	22,923	23,152	23,384	23,618	23,854	24,093	24,334	24,577
4	Reimbursed Expenditures - Castlewood W&SD	25,844	25,844	25,844	26,845	28,187	29,596	30,780	31,703	32,654	33,634	34,643
5	Development Review fees	5,000	0	0	0	0	0	0	0	0	0	0
6	Interest income - Enterprise Fund	3,477	133	7,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000
7	Total Wastewater Miscellaneous Revenue	83,854	48,656	75,467	83,268	95,839	85,771	84,894	77,664	79,962	82,159	84,294

**Havana Water and Sanitation District
Wastewater Utility
Existing Debt**

Line No.	Description	Outstanding Debt			
1	Original Issuance Amount	1,761,300			
2	Date of Issuance	10/2/2017			
3	Interest Rate	1.96%			
Fiscal Year Ending		Note Principal -			Outstanding
Dec. 31		Interest	Principal	Prepayment	Principal
4	FY 2020	\$21,379	\$246,400	\$50,000	\$884,700
5	FY 2021	14,706	251,200	50,000	583,500
6	FY 2022	11,437	256,100	50,000	277,400
7	FY 2023	5,438	211,000	-	66,400
8	FY 2024	1,302	66,400	-	0
9	FY 2025				0
10	FY 2026				0
11	Total	\$54,262	\$1,031,100	\$150,000	

Havana Water and Sanitation District
Wastewater Utility

Financial Metric Targets

Budget Year	2020
Base Year	2021
Test-Year	2023

Description	Target Measure	Units	Target										
			2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Target Fund Balances													
Operating Fund (Days of O&M)	60	Days General Fund O&M (excl. depreciation)				198,800	206,700	213,900	221,200	228,800	236,700	244,900	249,000
Capital Reserve	500,000	Target phased-in over 6-year period				250,000	300,000	350,000	400,000	450,000	500,000	500,000	500,000
Metro Reserve	25%	25% of annual Metro costs				131,789	137,061	142,543	148,245	154,175	160,342	166,755	166,755
Emergency Reserve Fund	3%	Of General Fund's Fiscal Year Spending	21,500	21,900	23,300	22,400	39,427	46,197	34,471	35,186	36,230	32,190	43,780
Target DSC	1.50	Total											

Havana Water and Sanitation District
Wastewater Utility
Annual Escalation Assumptions

Ref #	Description	Fiscal Period Ending December 31									
		2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Operating Expenses:											
1	General and administrative				5.0%	5.0%	3.0%	3.0%	3.0%	3.0%	3.0%
2	Miscellaneous				3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
3	Engineering				5.0%	5.0%	3.0%	3.0%	3.0%	3.0%	3.0%
4	Billing Expense				2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
5	Utilities				3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
6	Property Taxes				2.0%	0.0%	2.0%	0.0%	2.0%	0.0%	2.0%
7	Sewage Treatment				5.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
8	Other Charges / Services				2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
9	Non Recurring				-100.0%	-100.0%	-100.0%	-100.0%	-100.0%	-100.0%	-100.0%
10	Repair & Maintenance				4.0%	4.0%	3.0%	3.0%	3.0%	3.0%	3.0%
11	Insurance				5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Capital Expenses:											
	Annual CIP Inflation Factor		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Revenues											
MR	Miscellaneous Revenue				0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
WF	Wastewater Fees				1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
LR	Lease Revenue				1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
IN	Interest Earnings Rate				1.5%	1.5%	1.0%	1.0%	1.0%	1.0%	1.0%
CC	Castlewood - Service Agreement				5.0%	5.0%	4.0%	3.0%	3.0%	3.0%	3.0%
PT	Property Taxes				2.0%	0.0%	2.0%	0.0%	2.0%	0.0%	2.0%
ST	Specific Ownership Taxes				2.0%	0.0%	2.0%	0.0%	2.0%	0.0%	2.0%
RR	Rate Revenue	0.0%	0.0%	4.0%	5.0%	5.0%	4.0%	3.0%	3.0%	3.0%	3.0%

Havana Water and Sanitation District
Wastewater Utility
Debt Issuance Terms Assumptions - Future Debt

Line No.	Description	Issuance Terms								
		2022	2023	2024	2025	2026	2027	2028	2029	2030
State Revolving Fund Loan										
1	Month DS Payments Begin	input 1-12	12	12	12	12	12	12	12	12
2	Repayment Delay	- years	1.0	1.0	1.0	1.0	0	0	0	0
3	Interest Rate	-%	3.00%	3.50%	4.00%	4.50%	5.00%	5.00%	5.00%	5.00%
4	Payment Period	- years (10 +)	20	20	20	20	20	20	20	20
5	Issuance Expense (a)	-%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%
6	Debt Service Reserve (b)	-%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Havana Water and Sanitation District
Wastewater Utility
End-of-Year / Beginning Year Balances (1)

Line No.	Description	December 31, 2019	December 31, 2020	December 31, 2021
1	Enterprise Fund Beginning Balances	\$337,202	\$355,577	\$464,693
2	General Fund Beginning Balances	1,925,225	2,094,927	2,081,102
3	Total	\$2,262,427	\$2,450,504	\$2,545,795

(1) Excludes Property Tax Receivable, Prepare Sewer Service Fees, and Accrued Interest Payable.

APPENDIX B:
**Test-Year 2023 Cost of Service
and Rates**

Havana Water and Sanitation District
Wastewater Utility
Current and Proposed 2023 SFREs, Charges, and Revenues Compared

Line	2022			2023			2023					
	No	Customer Class	Rate Code	Current SFREs	Annual Charge	Annual Revenue	Proposed SFREs	Annual Charge	Annual Revenue	Annual Revenue Change - \$	Annual Revenue Change - %	Annual Charge
1	Residential	1	2,476.00	\$284.00	703,184	2,476.00	\$295.00	730,420	27,236	4%	\$11.00	4%
2	Multi-Family Residential	2	152.40	284.00	43,282	185.80	295.00	54,811	11,529	27%	11.00	4%
3	Commercial	4	44.00	284.00	12,496	105.20	295.00	31,034	18,538	148%	11.00	4%
4	Church	5	1.00	284.00	284	4.80	295.00	1,416	1,132	399%	11.00	4%
5	Pool	6	4.00	284.00	1,136	11.00	295.00	3,245	2,109	186%	11.00	4%
6	School	7	33.50	284.00	9,514	40.00	325.00	13,000	3,486	37%	41.00	14%
7	Total		<u>2,710.9</u>		<u>\$769,896</u>	<u>2,822.8</u>		<u>\$833,926</u>	<u>\$64,030</u>	8%		8%

Havana Water and Sanitation District
Wastewater Utility
Proposed 2023 and 2024 SFREs, Charges, and Revenues Compared

Line	2023			2024			2024		Annual Revenue Change - \$	Annual Revenue Change - %	Annual Charge	Annual Charge
	No	Customer Class	Rate Code	Current SFREs	Annual Charge	Annual Revenue	Proposed SFREs	Annual Charge				
1	Residential	1	2,476.00	\$295.00	730,420	2,476.00	\$310.00	767,560	37,140	5%	\$15.00	5%
2	Multi-Family Residential	2	185.80	295.00	54,811	185.80	310.00	57,598	2,787	5%	15.00	5%
3	Commercial	4	105.20	295.00	31,034	105.20	310.00	32,612	1,578	5%	15.00	5%
4	Church	5	4.80	295.00	1,416	4.80	310.00	1,488	72	5%	15.00	5%
5	Pool	6	11.00	295.00	3,245	11.00	310.00	3,410	165	5%	15.00	5%
6	School	7	40.00	325.00	13,000	40.00	341.00	13,640	640	5%	16.00	5%
7	Total		<u>2,822.8</u>		<u>\$833,926</u>	<u>2,822.8</u>		<u>\$876,308</u>	<u>\$42,382</u>	5%		5%

Havana Water and Sanitation District
Wastewater Utility
Proposed 2024 and 2025 SFREs, Charges, and Revenues Compared

Line	2024			2025			2025					
	No	Customer Class	Rate Code	Current SFREs	Annual Charge	Annual Revenue	Proposed SFREs	Annual Charge	Annual Revenue	Annual Revenue Change - \$	Annual Revenue Change - %	Annual Charge
1	Residential	1	2,476.00	\$310.00	767,560	2,476.00	\$326.00	807,176	39,616	5%	\$16.00	5%
2	Multi-Family Residential	2	185.80	310.00	57,598	185.80	326.00	60,571	2,973	5%	16.00	5%
3	Commercial	4	105.20	310.00	32,612	105.20	326.00	34,295	1,683	5%	16.00	5%
4	Church	5	4.80	310.00	1,488	4.80	326.00	1,565	77	5%	16.00	5%
5	Pool	6	11.00	310.00	3,410	11.00	326.00	3,586	176	5%	16.00	5%
6	School	7	40.00	341.00	13,640	40.00	358.00	14,320	680	5%	17.00	5%
7	Total		<u>2,822.8</u>		<u>\$876,308</u>	<u>2,822.8</u>		<u>\$921,513</u>	<u>\$45,205</u>	5%		5%

Havana Water and Sanitation District
Wastewater Utility
Proposed Annual Charge by Customer Class
Test-Year 2023

Line No.	Customer Class	Cost of Service	Proposed SFREs	Proposed 2023 Charges (1)
1	Residential	\$730,271	2,476.00	\$ 295.00
2	Multi-Family Residential	54,800	185.80	295.00
3	Commercial	31,028	105.20	295.00
4	Church	1,416	4.80	295.00
5	Pool	3,244	11.00	295.00
6	School	12,988	40.00	325.00
7	Total	<u>\$833,747</u>	<u>2,822.80</u>	

(1) Rounded to the nearest dollar.

Havana Water and Sanitation District
Wastewater Utility
Class Cost of Service
Test Year 2023

Line No	Customer Class	Flow	BOD	TSS	TKN	Customer	Total
1	SFREs by Cost Category						
2	Residential	2,476.00	2,476.00	2,476.00	2,476.00	2,476.00	
3	Multi-Family Residential	185.80	185.80	185.80	185.80	185.80	
4	Commercial	105.20	105.20	105.20	105.20	105.20	
5	Church	4.80	4.80	4.80	4.80	4.80	
6	Pool	11.00	11.00	11.00	11.00	11.00	
7	School	40.00	52.00	52.00	52.00	40.00	
8	Total	2,822.80	2,834.80	2,834.80	2,834.80	2,822.80	
9	Unit Cost	\$183.31	\$35.42	\$46.05	\$17.71	\$12.45	
10	Residential	\$453,876	\$87,700	\$114,020	\$43,850	\$30,826	\$730,271
11	Multi-Family Residential	34,059	6,581	8,556	3,291	2,313	54,800
12	Commercial	19,284	3,726	4,844	1,863	1,310	31,028
13	Church	880	170	221	85	60	1,416
14	Pool	2,016	390	507	195	137	3,244
15	School	7,332	1,842	2,395	921	498	12,988
16	Total	\$517,447	\$100,409	\$130,543	\$50,204	\$35,144	\$833,747

Havana Water and Sanitation District
Wastewater Utility
Unit Cost of Service
2023 Test-Year

Line No.	Description	Flow	BOD	TSS	TKN	Customer	Total
1	Metro Treatment O&M	\$185,760	\$100,411	\$130,534	\$50,205	\$35,144	\$502,053
2	Transfer to Gen Fund for Capital	0	0	0	0	0	0
3	Total Annual Debt Service	216,438	0	0	0	0	216,438
4	Other Inflows / Outflows	(116,845)	0	0	0	0	(116,845)
5	Increase / Decrease in Cash	232,096	0	0	0	0	232,096
6	Subtotal	\$517,449	\$100,411	\$130,534	\$50,205	\$35,144	\$833,742
7	Units of Service	2,822.80	2,834.80	2,834.80	2,834.80	2,822.80	
8	Unit Cost	\$183.31	\$35.42	\$46.05	\$17.71	\$12.45	

Havana Water and Sanitation District
Wastewater Utility
SFREs by Service Unit
2023 Test Year

Line No	Customer Class	Flow	BOD	TSS	TKN	Customer
1	Residential	1.00	255	260	40	1.00
2	Multi-Family Residential	1.00	255	260	40	1.00
3	Commercial	1.00	255	260	40	1.00
4	Church	1.00	255	260	40	1.00
5	Pool	1.00	255	260	40	1.00
6	School	1.00	340	340	51	1.00
7	Ratio of Cost Category to Residential					
8	Residential	1.00	1.00	1.00	1.00	1.00
9	Multi-Family Residential	1.00	1.00	1.00	1.00	1.00
10	Commercial	1.00	1.00	1.00	1.00	1.00
11	Church	1.00	1.00	1.00	1.00	1.00
12	Pool	1.00	1.00	1.00	1.00	1.00
13	School	1.00	1.30	1.30	1.30	1.00
14	SFREs by Cost Category					
15	Residential	2,476.00	2,476.00	2,476.00	2,476.00	2,476.00
16	Multi-Family Residential	185.80	185.80	185.80	185.80	185.80
17	Commercial	105.20	105.20	105.20	105.20	105.20
18	Church	4.80	4.80	4.80	4.80	4.80
19	Pool	11.00	11.00	11.00	11.00	11.00
20	School	40.00	52.00	52.00	52.00	40.00
21	Total	2,822.80	2,834.80	2,834.80	2,834.80	2,822.80

Havana Water and Sanitation District
Wastewater Utility
O&M Allocation
2023 Test-Year

Line No.	Description	Funding	Test-Year 2023	Allocation					Allocated Enterprise Fund Test-Year O&M						
				Flow	BOD	TSS	TKN	Customer	Total	Flow	BOD	TSS	TKN	Customer	Total
1	Accounting	GenFund	\$25,500	100%	0%	0%	0%	0%	100%	\$25,500	\$0	\$0	\$0	\$0	\$25,500
2	Audit	GenFund	8,000	100%	0%	0%	0%	0%	100%	8,000	0	0	0	0	8,000
3	County Treasurer's Fee	GenFund	10,413	100%	0%	0%	0%	0%	100%	10,413	0	0	0	0	10,413
4	Customer Billing	GenFund	32,500	100%	0%	0%	0%	0%	100%	32,500	0	0	0	0	32,500
5	Directors' fees	GenFund	3,000	100%	0%	0%	0%	0%	100%	3,000	0	0	0	0	3,000
7	Dues and Membership	GenFund	1,050	100%	0%	0%	0%	0%	100%	1,050	0	0	0	0	1,050
8	Election	GenFund	15,000	100%	0%	0%	0%	0%	100%	15,000	0	0	0	0	15,000
9	Engineering	GenFund	95,000	100%	0%	0%	0%	0%	100%	95,000	0	0	0	0	95,000
10	Insurance and bonds	GenFund	29,600	100%	0%	0%	0%	0%	100%	29,600	0	0	0	0	29,600
11	Landscape maintenance	GenFund	6,000	100%	0%	0%	0%	0%	100%	6,000	0	0	0	0	6,000
12	Legal	GenFund	44,000	100%	0%	0%	0%	0%	100%	44,000	0	0	0	0	44,000
13	Miscellaneous/Contingency	GenFund	17,637	100%	0%	0%	0%	0%	100%	17,637	0	0	0	0	17,637
14	Website	GenFund	2,200	100%	0%	0%	0%	0%	100%	2,200	0	0	0	0	2,200
15	Postage/printing	GenFund	10,000	100%	0%	0%	0%	0%	100%	10,000	0	0	0	0	10,000
16	Repairs and maintenance	GenFund	216,000	100%	0%	0%	0%	0%	100%	216,000	0	0	0	0	216,000
17	Solid waste disposal study	GenFund	0	100%	0%	0%	0%	0%	100%	0	0	0	0	0	0
18	Storage Rent	GenFund	4,200	100%	0%	0%	0%	0%	100%	4,200	0	0	0	0	4,200
19	Rate Study	GenFund	10,000	100%	0%	0%	0%	0%	100%	10,000	0	0	0	0	10,000
20	Utilities	GenFund	68,000	100%	0%	0%	0%	0%	100%	68,000	0	0	0	0	68,000
21	Service Plan Amendment	GenFund	0	100%	0%	0%	0%	0%	100%	0	0	0	0	0	0
22	Sewer treatment	EntFund	502,053	37%	20%	26%	10%	7%	100%	185,760	100,411	130,534	50,205	35,144	502,053
23	Total		<u>\$1,151,653</u>							<u>\$835,360</u>	<u>\$100,411</u>	<u>\$130,534</u>	<u>\$50,205</u>	<u>\$35,144</u>	<u>\$1,151,653</u>
24	General Fund	GenFund	649,600							649,600	0	0	0	0	649,600
25	Enterprise Fund	EntFund	502,053							185,760	100,411	130,534	50,205	35,144	502,053
26	Total		<u>\$1,151,653</u>							<u>\$835,360</u>	<u>\$100,411</u>	<u>\$130,534</u>	<u>\$50,205</u>	<u>\$35,144</u>	<u>\$1,151,653</u>

**Havana Water and Sanitation District
Wastewater Utility
Historical Metro Wastewater Treatment Costs
2023 Test-Year**

Line No.	Year	Flow	BOD	TSS	TKN	Customer	Total
1	2020	\$192,673	\$93,679	\$120,330	\$50,104	\$40,817	\$497,603
2	2021	178,495	100,404	124,902	48,745	33,328	485,874
3	2022	168,481	107,738	137,557	49,810	34,376	497,962
4	Total	\$539,649	\$301,821	\$382,789	\$148,659	\$108,521	\$1,481,439
5	2020	38.7%	18.8%	24.2%	10.1%	8.2%	100.0%
6	2021	36.7%	20.7%	25.7%	10.0%	6.9%	100.0%
7	2022	33.8%	21.6%	27.6%	10.0%	6.9%	100.0%
8	Weighted Avg. (1)	37.0%	20.0%	26.0%	10.0%	7.0%	100.0%

(1) Rounded to the nearest percent.

Havana Water and Sanitation District
Wastewater Utility
Metro Non-Single Family Residential Schedule by Water Meter Size
Metro Non-SFR Ratio by Meter Size (1)

Line No	Water Meter Size (2)	Metro SFREs
1	3/4-inch	2.00
2	1-Inch	4.80
3	1 1/2-inch	11.00
4	2-inch	20.00
5	3-inch	43.00
6	4-inch	86.00

(1) Per Metro Rules and Regulations Section 7.5.1.

(2) 6-inch and greater are calculated individually following a formula incorporating flows and strengths anticipated from each connection.

EXHIBIT B

SCHEDULE OF 2024 FEES AND CHARGES

Exhibit B
Havana Water & Sanitation District
SCHEDULE OF FEES AND CHARGES
Effective January 1, 2024

SEWER TAP FEE SCHEDULE

RESIDENTIAL

Tap Size	HAVANA WATER & SANITATION DISTRICT*			METRO WATER RECOVERY**		TOTAL TAP FEE
	SFE Equivalent	Water Assessment Fee	Sewer Tap Fee	SFE Equivalent	Fee	
3/4"	1	\$ 462.88	\$ 1,454.75	1.00	\$ 5,520.00	\$ 7,437.63

COMMERCIAL

Tap Size	HAVANA WATER & SANITATION DISTRICT*			METRO WATER RECOVERY**		TOTAL TAP FEE
	SFE Equivalent	Water Assessment Fee	Sewer Tap Fee	SFE Equivalent	Fee	
3/4"	1	\$ 462.88	\$ 1,454.75	2.00	\$ 11,040.00	\$ 12,957.63
1"	2	\$ 925.75	\$ 2,909.50	4.80	\$ 26,496.00	\$ 30,351.25
1.5"	4	\$ 1,851.50	\$ 5,819.00	11.00	\$ 60,720.00	\$ 68,390.50
2"	8	\$ 3,703.00	\$ 11,638.00	20.00	\$ 110,400.00	\$ 125,741.00
3"	18	\$ 8,331.75	\$ 26,185.50	43.00	\$ 237,360.00	\$ 271,877.25
4"	36	\$ 16,663.50	\$ 52,371.00	86.00	\$ 474,720.00	\$ 543,754.50

MULTI-FAMILY

Tap Size	HAVANA WATER & SANITATION DISTRICT*			METRO WATER RECOVERY**		TOTAL TAP FEE
	SFE Equivalent	Water Assessment Fee	Sewer Tap Fee	SFE Equivalent	Fee	
3/4"	# of units	\$ 462.88	TBD	2.00	\$ 10,240.00	TBD

*Fees may change at any time. Please call the district office prior to making payment

**Metro Water Recovery fees increase each calendar year

ANNUAL SEWER SERVICE FEE
The sewer service fee is billed semi-annually

Residential	\$310 per SFE
Multi-Family	\$310 per SFE
Commercial	\$310 per SFE
Church	\$310 per SFE
Pool	\$310 per SFE
School	\$341 per SFE

DEVELOPMENT REVIEW FEE	
The Development Review Fee is charged in increments of \$5,000.00 in accordance with the District's Rules and Regulations	

PENALTIES FOR VIOLATIONS OF RULES AND REGULATIONS	
Violations of the District's Rules and Regulations***	\$75.00 (first offense) \$200.00 (second offense) \$500.00 (third & subsequent offenses)
***In addition to all other penalties and remedies available to the District, any person violating the District's Rules and Regulations shall be liable to the District for any expense, loss, or damage to the District and its facilities, including enforcement and attorney's fees, occasioned by reason of such violation. ***Each day a violation continues shall be considered a separate violation	

Miscellaneous Fees	
Return Check Fee	\$20.00
Late Fee (charged in accordance with the District's Rules and Regulations)	\$15.00

1. The Penalties for Violations and Late Fee are effective November 18, 2020