



Vallejo Flood and Wastewater District
Stormwater Rate Study

COST OF SERVICE AND RATE RECOMMENDATIONS

FINAL | June 8, 2021

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Abbreviations

AC	acre
Carollo	Carollo Engineers, Inc.
CCTV	closed-circuit television
District or VFWD	Vallejo Flood and Wastewater District
ERBU	Equivalent Residential Billing Units
ft	feet
FY	fiscal year
KSF	thousand square feet
MRP	Municipal Regional Permit
PS	pump station
R&R	repair and replacement
SFR	single family residential
sq. ft	square feet
Study	Stormwater Rate Study and Financial Plan

Chapter 1

INTRODUCTION

1.1 Background and Purpose

Vallejo Flood and Wastewater District (District or VFWD) retained Carollo Engineers, Inc. (Carollo) in 2020 to perform a Stormwater Rate Study and Financial Plan (Study), which included the following tasks:

- Develop a financial forecast for the next five years and determine revenue requirements from the District's Storm Drainage Charge.
- Allocate the operating and capital expenses to each customer class.
- Calculate an updated Storm Drainage Charge for residential and non-residential customers for each of the next five years.

This report documents the analysis and recommendations of the Study performed by Carollo and summarizes the methodologies used in and the findings from each of those tasks.

1.1.1 Vallejo Flood and Wastewater District

The District manages stormwater drainage and conveyance for the City of Vallejo, California, as well as any unincorporated portions of Solano County, California located within the city limits. VFWD maintains over 250 miles of storm drainage pipes and over 10,000 catch basins and other stormwater structures.

The District also maintains a public outreach and engagement program to communicate with residents and businesses about how to reduce their stormwater impact, addressing both the volume of stormwater runoff and the loading of pollutants in stormwater runoff.

1.1.2 Current Rate Structure and Past Rate Study

The District's last rate study was completed in 2013 (2013 Study). The 2013 Study performed a cost-of-service based allocation of costs between runoff and pollutant loadings categories, and then allocated these costs to each customer class in accordance to parcel use characteristics.

Significant changes were made to the District's rate structure at that time, creating new classifications for non-residential parcels. Prior to the 2013 Study, all parcels were charged a flat \$1.97 per month. The 2013 Study considered typical runoff and pollutant loadings from different land uses and incorporated these factors into the rate structure. The current rate structure is summarized in Table 1.1.

Table 1.1 Current Stormwater Rate Structure for FY 2020

Class	Units	FY 2020 Rate
Single Family Dwelling Standard ⁽¹⁾	Per Dwelling Per Month	\$1.97
Single Family Dwelling Large ⁽²⁾	Per Lot Per Month	\$3.06
High Density Residential	Per Dwelling Per Month	\$1.06
Non-Residential Group I	Per KSF ⁽³⁾ per Year	\$0.79
Non-Residential Group II	Per KSF per Year	\$4.66
Non-Residential Group III	Per KSF per Year	\$10.25
Non-Residential Group IV, Part 1 ⁽⁴⁾	Per Impervious KSF per Year	\$3.84
Non-Residential Group IV, Part 2	Per KSF per Year	\$1.53

Notes:

(1) Applies to parcels less than 0.24 acres.

(2) Applies to parcels 0.24 acres or larger.

(3) KSF = thousand square feet.

(4) Group IV rate applied on a case-by-case basis. Part 1 applies only to impervious area, while Part 2 applies to the entire parcel area.

1.1.3 Purpose and Scope of this Study

The District initiated this Study to achieve the following goals:

- Update the Stormwater Drainage Charge to support the latest five-year financial plan and to fully fund capital and operational expenses.
- Allocate costs based on an updated calculation of land uses in the District's service area.

1.2 Approach and Organization of this Report

This report follows an industry standard approach for developing cost-of-service based rate studies for stormwater, using a step-by-step approach as outlined below.

1.2.1 Revenue Requirements

The Revenue Requirements analysis determines the total amount of funding that must be generated by the rates. This amount is set based on several financial tests, typically including:

- Cash Flow: do revenues exceed expenditures?
- Reserves: do end-of-year reserve fund balances meet policies set by the Board of Directors and industry best practices? If not, does the District have a funding plan in place to cover shortfalls and meet both operating and capital needs?
- Debt Coverage: do revenues meet all obligations outlined in debt service covenants and other agreements?

The existing revenues are tested against these three tests. If any of the three tests fail, additional revenues are added to the total revenue requirement.

1.2.2 Cost of Service

The Cost of Service process bridges the revenue requirements with the rates and charges paid by each customer. Because each customer has unique demands upon the District's stormwater infrastructure, with some land use classes generating more or less runoff and pollutant loadings than average, the revenue requirements must be allocated to each customer class in accordance with how the costs are incurred.

For instance, customer classes that typically generate a larger volume of runoff will be allocated a larger share of costs related to maintenance and repair of drainage pipes and other infrastructure because those assets are designed, maintained, and repaired and replaced to handle drainage from these higher runoff parcels.

1.2.3 Rate Design

The Rate Design process takes the costs allocated in the Cost of Service step and calculates the unit rate for each rate class by dividing the allocated costs by the total units of service, defined as Equivalent Residential Billing Units (ERBU). A more detailed explanation of the ERBU process is provided in subsequent sections.

In addition to calculating the cost per ERBU, the Rate Design process takes the test year Cost of Service basis and applies it to future years of the rate planning horizon.

Chapter 2

REVENUE REQUIREMENTS

The Revenue Requirements outlines the total amount of revenue that is recommended to be generated through rates for the time horizon of the Study. This process compiles baseline operating and non-operating expenses, deducts offsetting revenues, and calculates the total revenues required through rates to cover these expenses. This process is repeated for each of the next five years based on several assumptions outlined in this section.

This section first outlines the three financial targets used to test total revenues. It then projects expenses and offsetting revenues for the next five years, including multiple funding scenarios that have been developed by the District. Then, the Revenue Requirement for each scenario is calculated based on the three financial targets.

2.1 Financial Targets

2.1.1 Reserve Policies

The District currently maintains two reserve funds in its unrestricted reserves for stormwater quality. Once the target balances for these funds have been met, additional reserves are available for other funding needs, such as rate-funded capital. This balance either above or below the reserve fund targets is referred to as “net fund equity.” Positive net fund equity indicates that revenues are sufficient to meet reserve targets, while negative net fund equity indicates that additional revenues are needed.

2.1.1.1 Cash Flow Reserve

The District maintains a Cash Flow reserve equal to 50 percent of operating expenses.

2.1.1.2 Operating Reserve

The District maintains an Operating reserve equal to 50 percent of operating expenses.

2.1.1.3 Additional Reserves

Because VFWD is a combined wastewater and stormwater agency, additional reserves can be borrowed from the wastewater enterprise to cover years when the stormwater enterprise does not fully meet its reserve policy. Furthermore, the stormwater enterprise maintains a restricted reserve that is used for capacity charge revenue collected from new connections. Based on California state law, the District is able to borrow from these restricted reserves given certain stipulations.¹

2.1.2 Cash Flow

The cash flow test provides the most immediate and straightforward test of financial performance: do revenues exceed expenses? This offers a quick glance at the long-term viability of the funding plan.

¹ State of California Government Code Section 66013 (d)(5). Accessed 16 February 2021.
https://leginfo.ca.gov/faces/codes_displaySection.xhtml?sectionNum=66013.&lawCode=GOV

In the District's case, the cash flow test serves as a diagnostic but is not used for rate modeling purposes. Carollo and the District determined that maintaining positive reserves is the top priority and will be the primary driver of revenue increases. As a result, negative cash flows do not dictate rate increases in the financial modeling for the District.

However, the results of the cash flow test will still be shown in the Revenue Requirements analysis as an additional piece of information. Negative cash flow can be supported by excess reserves for a single year or even several years, but long-term, positive cash flow should be pursued. It provides credit rating agencies a strong signal of the District's financial health and could result in a higher credit rating for potential future bond issuances. Furthermore, it provides cushion to deal with emergency repairs and unanticipated capital expenses. Therefore, this Study looked closely at cash flow and placed significant weight on its forecast but did not use it as a primary driver of rate increases.

2.1.3 Debt Coverage

The District does not currently have any debt service for stormwater, nor is any planned for the next five years. Therefore, the debt coverage test was not applied to the District's revenue.

2.2 Projected Expenses

The District's expenses can be broken into two categories. Operating expenses cover salaries, routine asset cleaning and maintenance, supplies and services, legal and administrative costs, and other operations and maintenance expenses. Capital expenses cover repair and replacement (R&R), installation, or upgrade of system assets.

2.2.1 Projection Assumptions

The expense forecast began with the District's fiscal year (FY) 2021 budgeted figures for supplies, salaries, and benefits. Supplies were escalated by approximately 3 percent to reflect inflation. Salaries & benefits were escalated by a higher rate to account for increased cost inflation, with 5 percent annual average escalation over the next five years.

Other expenses that were added are not consistent over the next five years and were thus included on a case-by-case annual basis.

2.2.2 Expense Planning Scenarios

The District provided three different forecasts of operating and capital expenses for the Study.

- Scenario 1 assumes a baseline expense forecast assumes a status quo level of operating and capital expenses for the next five years, escalated at inflation. This scenario carries forward the current level of system R&R, cleaning and maintenance, and other contracts for services over the next five years. This scenario is unlikely to be feasible in the near-term, given the investment needs for the system. Staff anticipates that scenario 1 would fall short of requirements of the Bay Area-wide Municipal Regional Permit (MRP) for stormwater discharges, and that a cease and desist would be issued to the District should it opt to defer certain projects. This scenario is primarily provided as a starting point for rate planning.
- Scenario 2 includes additional operating and capital expenses that have been identified by staff as necessary for optimal system performance and operations over the next five years. Some of these additional expenses are based on needs that have been identified over the last several years, while others relate to anticipated needs that are likely to take place in the near-term. Scenario 2 is intended to meet many of the investments needed to comply with the MRP.

- Scenario 3 is curtailed to align projected expenses with the approximate amount of projected revenues over the next five years if no rate increases are implemented. This scenario takes the baseline and additional expenses and only includes what can be fully funded in each year by the current level of rates. Like scenario 1, scenario 3 is unlikely to meet the needs of the MRP.

2.2.3 Projected Operating Expenses

2.2.3.1 Scenario 1

The District currently has five primary categories of baseline operating expenses:

- Salary and benefits.
- Materials, supplies, and services.
- Closed-circuit television (CCTV) contracts for large diameter mains.
- Asset management.
- Repayment of intrafund loans.

The forecasted Scenario 1 operating expenses are outlined in Table 2.1.

Table 2.1 Scenario 1 Operating Expense Forecast

Expense Category	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Salary & Benefits	\$2,086	\$2,209	\$2,330	\$2,421	\$2,516	\$2,602	\$2,690
Materials, Supplies & Services	\$1,016	\$1,046	\$1,078	\$1,110	\$1,143	\$1,178	\$1,213
CCTV 24"+ mains	\$-	\$-	\$175	\$180	\$186	\$191	\$197
Asset Management	\$23	\$-	\$-	\$-	\$-	\$-	\$-
Intrafund Loan Repayment	\$-	\$2,700	\$467	\$467	\$467	\$467	\$467
Total	\$3,125	\$5,956	\$4,049	\$4,178	\$4,312	\$4,438	\$4,567

Notes:

(1) All values are in thousand dollars.

2.2.3.2 Scenario 2

District staff identified several operating expenses that would be expanded to improve the District’s services under Scenario 2. The majority of these expenses relate to more regular maintenance and cleaning of trash capture devices.

Table 2.2 Scenario 2 Operating Expense Forecast

Expense Category	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Salary & Benefits	\$2,086	\$2,209	\$2,330	\$2,421	\$2,516	\$2,602	\$2,690
Materials, Supplies & Services	\$1,016	\$1,046	\$1,078	\$1,110	\$1,143	\$1,178	\$1,213
CCTV 24"+ mains	\$-	\$-	\$175	\$180	\$186	\$191	\$197
Asset Management	\$23	\$-	\$-	\$-	\$-	\$-	\$-
Intrafund Loan Repayment	\$-	\$2,700	\$467	\$467	\$467	\$467	\$467
Legal Fees	\$-	\$30	\$31	\$32	\$33	\$34	\$35
Maintenance for Large Trash Capture Devices	\$-	\$35	\$53	\$55	\$56	\$58	\$60
Maintenance for Small Trash Capture Devices	\$-	\$-	\$124	\$127	\$131	\$135	\$139
Maintenance for "Protect Lake" devices	\$-	\$-	\$22	\$22	\$23	\$24	\$24
Total	\$3,125	\$6,021	\$4,278	\$4,414	\$4,555	\$4,688	\$4,825

Notes:

(1) All values are in thousand dollars.

2.2.3.3 Scenario 3

District staff also developed an expense forecast that would reduce or defer certain expenses based on the current level of revenues.

Table 2.3 Scenario 3 Operating Expense Forecast

Expense Category	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Salary & Benefits	\$2,086	\$2,209	\$2,330	\$2,421	\$2,516	\$2,602	\$2,690
S&B - Reallocation	\$-	\$(826)	\$(871)	\$(905)	\$(941)	\$(973)	\$(1,006)
Materials, Supplies & Services	\$1,016	\$1,046	\$1,078	\$1,110	\$1,143	\$1,178	\$1,213
CCTV 24"+ mains	\$-	\$-	\$-	\$-	\$-	\$-	\$-
Asset Management	\$-	\$-	\$-	\$-	\$-	\$-	\$-
Intrafund Loan Repayment	\$-	\$2,700	\$467	\$467	\$467	\$467	\$467
Legal Fees	\$-	\$-	\$-	\$-	\$-	\$-	\$-
Maintenance for Large Trash Capture Devices	\$-	\$-	\$-	\$36	\$56	\$58	\$60
Maintenance for Small Trash Capture Devices	\$-	\$-	\$145	\$150	\$154	\$159	\$163
Maintenance for "Protect Lake" devices	\$-	\$-	\$-	\$-	\$-	\$-	\$-
Total	\$3,102	\$5,130	\$3,003	\$3,093	\$3,186	\$3,274	\$3,364

Notes:

(1) All values are in thousand dollars.

2.2.4 Projected Capital Expenses

2.2.4.1 Scenario 1

The projected Scenario 1 capital expenses are outlined in Table 2.4. Like the operating expenses, additional capital expenses have been projected and are outlined in a later section of this report.

Table 2.4 Scenario 1 Capital Expense Forecast

Expense Category	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Trash Capture - Current	\$3,563	\$-	\$-	\$-	\$-	\$-	\$-
Channel Clearing - Austin Creek Reach 3	\$-	\$552	\$552	\$-	\$-	\$-	\$-
Channel Clearing - Austin Creek Reach 4	\$-	\$-	\$85	\$-	\$200	\$200	\$250
Channel Clearing - Other	\$-	\$-	\$-	\$-	\$-	\$-	\$-
Pump Station Evaluation	\$-	\$-	\$115	\$115	\$-	\$125	\$125
Pump Station Rehabilitation	\$-	\$-	\$-	\$-	\$1,194	\$1,194	\$-
Vehicle Replacements (leases)	\$25	\$25	\$25	\$25	\$25	\$25	\$25
Specialty Vehicle Replacements (alloc)	\$65	\$-	\$40	\$-	\$-	\$-	\$-
Backhoe Replacement	\$-	\$-	\$27	\$-	\$-	\$-	\$-
ERP - alloc to SW Fund	\$-	\$25	\$-	\$-	\$-	\$-	\$-
Large (high flow capacity) Capture Devices	\$-	\$-	\$-	\$-	\$-	\$-	\$-
Small (inlet-based) Capture Devices	\$-	\$-	\$-	\$-	\$-	\$-	\$-
"Protect Lakes" Capture Devices	\$-	\$-	\$-	\$-	\$-	\$-	\$-
CMP Replacement Project	\$-	\$-	\$-	\$-	\$-	\$-	\$-
Total	\$3,653	\$602	\$844	\$140	\$1,419	\$1,544	\$400

2.2.4.2 Scenario 2

Table 2.5 Scenario 2 Capital Expense Forecast

Expense Category	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Trash Capture - Current	\$3,563	\$-	\$-	\$-	\$-	\$-	\$-
Channel Clearing - Austin Creek Reach 3	\$-	\$552	\$552	\$-	\$-	\$-	\$-
Channel Clearing - Austin Creek Reach 4	\$-	\$-	\$85	\$-	\$200	\$200	\$250
Channel Clearing - Other	\$-	\$-	\$-	\$-	\$-	\$-	\$-
Pump Station Evaluation	\$-	\$-	\$115	\$115	\$-	\$125	\$125
Pump Station Rehabilitation	\$-	\$-	\$-	\$-	\$1,194	\$1,194	\$-
Vehicle Replacements (leases)	\$25	\$25	\$25	\$25	\$25	\$25	\$25
Specialty Vehicle Replacements (alloc)	\$65	\$-	\$40	\$-	\$-	\$-	\$-
Backhoe Replacement	\$-	\$-	\$27	\$-	\$-	\$-	\$-
ERP - alloc to SW Fund	\$-	\$25	\$-	\$-	\$-	\$-	\$-
Large (high flow capacity) Capture Devices	\$-	\$1,840	\$-	\$-	\$-	\$-	\$-
Small (inlet-based) Capture Devices	\$-	\$-	\$465	\$-	\$-	\$-	\$-
"Protect Lakes" Capture Devices	\$-	\$-	\$233	\$-	\$-	\$-	\$-
CMP Replacement Project	\$-	\$-	\$450	\$464	\$479	\$495	\$510
Other CIP	\$-	\$-	\$-	\$-	\$-	\$-	\$-
Total	\$3,653	\$2,442	\$1,992	\$604	\$1,898	\$2,039	\$910

Notes:

(1) All values are in thousand dollars.

2.2.4.3 Scenario 3

Table 2.6 Scenario 3 Capital Expense Forecast

Expense Category	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Trash Capture - Current	\$-	\$-	\$-	\$-	\$-	\$-	\$-
Channel Clearing - Austin Creek Reach 3	\$-	\$552	\$552	\$-	\$-	\$-	\$-
Channel Clearing - Austin Creek Reach 4	\$442	\$-	\$85	\$200	\$200	\$250	\$-
Channel Clearing - Other	\$-	\$-	\$-	\$-	\$-	\$-	\$-
Pump Station Evaluation	\$-	\$-	\$-	\$-	\$-	\$-	\$-
Pump Station Rehabilitation	\$-	\$-	\$50	\$50	\$50	\$50	\$-
Vehicle Replacements (leases)	\$-	\$90	\$25	\$92	\$25	\$25	\$25
Specialty Vehicle Replacements (alloc)	\$-	\$-	\$-	\$-	\$-	\$-	\$-
Backhoe Replacement	\$-	\$-	\$-	\$-	\$-	\$-	\$-
ERP - alloc to SW Fund	\$-	\$23	\$25	\$-	\$-	\$-	\$-
Large (high flow capacity) Capture Devices	\$-	\$-	\$-	\$1,840	\$-	\$-	\$-
Small (inlet-based) Capture Devices	\$-	\$-	\$698	\$-	\$-	\$-	\$-
"Protect Lakes" Capture Devices	\$-	\$-	\$-	\$-	\$-	\$-	\$-
CMP Replacement Project	\$-	\$-	\$-	\$464	\$-	\$492	\$-
Other CIP	\$-	\$-	\$-	\$-	\$-	\$-	\$-
Total	\$442	\$665	\$1,435	\$2,645	\$275	\$817	\$25

Notes:

(1) All values are in thousand dollars.

2.3 Projected Revenues before Adjustments

Table 2.7 Additional Capital Expense Forecast

Expense Category	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Baseline SD User Fees	\$2,377	\$2,377	\$2,377	\$2,378	\$2,378	\$2,379	\$2,380
Other Operating Revenue	\$-	\$2	\$2	\$2	\$2	\$2	\$2
Property Taxes	\$1,173	\$1,181	\$1,048	\$1,103	\$1,160	\$1,182	\$1,205
Interest	\$59	\$28	\$14	\$0	\$3	\$11	\$9
Loan Proceeds	\$3,563	\$-	\$-	\$-	\$-	\$-	\$-
Grants/Gov Contributions	\$-	\$2,700	\$-	\$-	\$-	\$-	\$-
Total	\$7,172	\$6,288	\$3,441	\$3,482	\$3,543	\$3,574	\$3,594

Notes:

(1) All values are in thousand dollars.

2.4 Scenario Comparison and Recommended Revenue Adjustments

Carollo and District staff developed four different funding options for consideration by the District's Board of Trustees. The four scenarios are as follows:

- Funding Option 1 covers the baseline operating and capital expenses outlined in Scenario 1 above. Rate increases have been modeled to meet reserve targets but not to achieve positive cash flow.
- Funding Option 2A covers the baseline and additional operating outlined in Scenario 2 above, with a focus on achieving positive reserves in the near-term with rate increases upfront in FY 2023 and inflationary increases in following years.
- Funding Option 2B also covers the expenses in Scenario 2, but does so over the course of three years, smoothing the rate increase out. This approach relies on some funds from the Wastewater enterprise to cover shortfalls.
- Funding Option 2C presents a middle-of-the-road option between Options 2A and 2B. While the FY 2023 increase is not as significant as Option 2A, it is greater than the increase in Option 2B, and greater in FY 2024 as well.
- Funding Option 3 is the status quo scenario, with no rate increases for the next five years. Expenses in Scenario 3 have been curtailed and deferred to reflect this.

2.4.1 Revenue Modeling Approach

In each of the four scenarios, revenue increases are shown for each of the next five years. There are two important notes regarding these percentages. First, these percentages only represent the percentage increase in total rate revenue and may not be the same as the actual percent by which rates will increase. This is because in the Cost of Service analysis that follows, costs and units of service may result in shifts in how those rates are determined for each customer. As a result, the actual rate increase may be higher or lower than the revenue increase depending on the Cost of Service.

2.4.2 Modeled Revenue Adjustments

Table 2.8 Comparison of Rate Modeling Options

Funding Option	Expense Scenario	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Option 1	Scenario 1 (Baseline)	0%	3%	3%	76%	7%	3%
Option 2A	Scenario 2 (Optimal)	0%	103%	3%	3%	3%	3%
Option 2B	Scenario 2 (Optimal)	0%	40%	40%	20%	3%	3%
Option 2C	Scenario 2 (Optimal)	0%	60%	12%	12%	12%	3%
Option 3	Scenario 3 (No Add'l. Revenue)	0%	0%	0%	0%	0%	0%

2.4.2.1 Funding Option 1

Funding Option 1 only includes the baseline operating and capital expenses. No rate increases are needed until FY 2025 and 2026, when rate increases of 91 and 7 percent, respectively, are projected to achieve positive reserves that meet both reserve targets.

It is often prudent to increase rates by inflation on an annual basis to keep pace with cost escalation and other drivers. If the District elected to increase rates by 3 percent in FY 2023 and 2024, the rate increase needed in FY 2025 could be reduced to approximately 76 percent, while holding FY 2026 at 7 percent. FY 2027 and beyond are projected to meet financial needs at an inflationary (3 percent) level of rate increases.

The cash flow forecast is shown in Table 2.9 and the reserve forecast is shown in Table 2.10.

Table 2.9 Funding Option 1 Cash Flow Forecast

Expense Category	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Baseline Rate Revenue	\$2,377	\$2,377	\$2,377	\$2,378	\$2,378	\$2,379	\$2,380
% Rate Increase	-	0%	3%	3%	76%	7%	3%
Additional Revenues	\$-	\$-	\$71	\$151	\$2,076	\$2,393	\$2,542
Other Revenues	\$4,795	\$3,911	\$1,073	\$1,121	\$1,182	\$1,191	\$1,241
Total Revenues	\$7,172	\$6,288	\$3,522	\$3,650	\$5,637	\$5,963	\$6,162
Total Expenses	\$6,778	\$6,557	\$4,893	\$4,318	\$5,731	\$5,982	\$4,967
Net Income / (Deficit)	\$394	\$(269)	\$(1,371)	\$(668)	\$(94)	\$(19)	\$1,195
Revenue Requirements	\$2,377	\$2,377	\$2,449	\$2,529	\$4,455	\$4,772	\$4,921

Notes:

(1) All values are in thousand dollars.

Table 2.10 Funding Option 1 Reserve Forecast

Expense Category	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Beginning Balance	\$5,233	\$5,049	\$4,777	\$3,406	\$2,738	\$2,644	\$2,625
Cash Flow	\$374	\$(272)	\$(1,371)	\$(668)	\$(94)	\$(19)	\$1,195
Ending Reserve Balance	\$5,607	\$4,777	\$3,406	\$2,738	\$2,644	\$2,625	\$3,820
Cash Flow Reserve	\$1,563	\$1,628	\$1,791	\$1,856	\$1,923	\$1,985	\$2,050
Operating Reserve	\$469	\$488	\$537	\$557	\$577	\$596	\$615
Net Fund Equity	\$3,576	\$2,661	\$1,078	\$326	\$144	\$44	\$1,156

Notes:

(1) All values are in thousand dollars.

2.4.2.2 Funding Option 2A

This study looked at two different ways of increasing rates to cover expenses in Scenario 2. Funding Option 2A uses a one-time revenue increase of 103 percent in FY 2023, followed by 3 percent annual revenue increases. This revenue program is projected to achieve positive net fund equity in all of the next five years. This revenue program is projected to achieve positive cash flow in one of the next five years.

If additional revenues are available from the wastewater enterprise, the revenue increase in FY 2023 could be reduced, however revenues should ultimately be increased to avoid long-term funding issues and to repay the wastewater fund.

The cash flow forecast is shown in Table 2.11 and the reserve forecast is shown in Table 2.12.

Table 2.11 Funding Option 2A Cash Flow Forecast

Expense Category	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Baseline Rate Revenue	\$2,377	\$2,377	\$2,377	\$2,378	\$2,378	\$2,379	\$2,380
% Rate Increase	-	0%	103%	3%	3%	3%	3%
Additional Revenues	\$-	\$-	\$2,449	\$2,598	\$2,750	\$2,909	\$3,075
Other Revenues	\$4,776	\$3,908	\$1,064	\$1,105	\$1,188	\$1,217	\$1,252
Total Revenues	\$7,152	\$6,285	\$5,890	\$6,080	\$6,316	\$6,505	\$6,706
Total Expenses	\$6,778	\$8,462	\$6,270	\$5,018	\$6,453	\$6,727	\$5,735
Net Income / (Deficit)	\$374	\$(2,177)	\$(380)	\$1,062	\$(137)	\$(222)	\$971
Revenue Requirements	\$2,377	\$2,377	\$4,826	\$4,976	\$5,128	\$5,288	\$5,455

Notes:

(1) All values are in thousand dollars.

Table 2.12 Funding Option 2A Reserve Forecast

Expense Category	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Beginning Balance	\$5,233	\$5,049	\$2,872	\$2,492	\$3,554	\$3,416	\$3,194
Cash Flow	\$374	\$(2,177)	\$(380)	\$1,062	\$(137)	\$(222)	\$971
Ending Reserve Balance	\$5,607	\$2,872	\$2,492	\$3,554	\$3,416	\$3,194	\$4,166
Cash Flow Reserve	\$1,563	\$1,660	\$1,906	\$1,973	\$2,044	\$2,111	\$2,179
Operating Reserve	\$469	\$498	\$572	\$592	\$613	\$633	\$654
Net Fund Equity	\$3,576	\$714	\$15	\$988	\$759	\$451	\$1,333

Notes:

(1) All values are in thousand dollars.

2.4.2.3 Funding Option 2B

Funding Option 2B takes a “smoothed” approach to meeting the needs outlined in Scenario 2. Revenue increases of 40, 40, and 20 percent in FY 2023, FY 2024, and FY 2025, respectively, are projected to achieve positive reserves in each of the next five years. Positive net fund equity would only be achieved in FY 2022. However, reserve balances are projected to continue increasing beyond FY 2026, indicating that net fund equity is not far out of reach. Inflationary rate increases are recommended in FY 2026 and beyond.

The cash flow forecast is shown in Table 2.13 and the reserve forecast is shown in Table 2.14.

Table 2.13 Funding Option 2B Cash Flow Forecast

Expense Category	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Baseline Rate Revenue	\$2,377	\$2,377	\$2,377	\$2,378	\$2,378	\$2,379	\$2,380
% Rate Increase	-	0%	40%	40%	20%	3%	3%
Additional Revenues	\$-	\$-	\$951	\$2,286	\$3,224	\$3,395	\$3,573
Other Revenues	\$4,776	\$3,908	\$1,064	\$1,105	\$1,165	\$1,195	\$1,238
Total Revenues	\$7,152	\$6,285	\$4,392	\$5,769	\$6,767	\$6,969	\$7,191
Total Expenses	\$6,778	\$8,462	\$6,270	\$5,018	\$6,453	\$6,727	\$5,735
Net Income / (Deficit)	\$374	\$(2,177)	\$(1,878)	\$750	\$314	\$243	\$1,456
Revenue Requirements	\$2,377	\$2,377	\$3,328	\$4,664	\$5,602	\$5,774	\$5,953

Notes:

(1) All values are in thousand dollars.

Table 2.14 Funding Option 2B Reserve Forecast

Expense Category	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Beginning Balance	\$5,233	\$5,049	\$2,872	\$994	\$1,745	\$2,059	\$2,301
Cash Flow	\$374	\$(2,177)	\$(1,878)	\$750	\$314	\$243	\$1,456
Ending Reserve Balance	\$5,607	\$2,872	\$994	\$1,745	\$2,059	\$2,301	\$3,757
Cash Flow Reserve	\$1,563	\$1,660	\$1,906	\$1,973	\$2,044	\$2,111	\$2,179
Operating Reserve	\$469	\$498	\$572	\$592	\$613	\$633	\$654
Net Fund Equity	\$3,576	\$714	\$(1,483)	\$(821)	\$(599)	\$(442)	\$925

Notes:

(1) All values are in thousand dollars.

2.4.2.4 Funding Option 2C

Funding Option 2C takes a middle-of-the road approach to meeting the needs outlined in Scenario 2. The FY 2023 increase is not as significant as Option 2A but are higher than Option 2B. As a result, the FY 2024 through 2027 increases need to exceed inflation, unlike Option 2A, but are significantly lower than Option 2B in FY 2024 and 2025.

Option 2C uses a one-time revenue increases of 60 in FY 2023, followed by 12 percent in FY 2024 through FY 2026. Inflationary (3 percent) increases could begin in FY 2027. Positive net fund equity would only be achieved in FY 2022. However, reserve balances are projected to increase beyond FY 2026, indicating that net fund equity is not far out of reach.

The cash flow forecast is shown in Table 2.15 and the reserve forecast is shown in Table 2.16.

Table 2.15 Funding Option 2C Cash Flow Forecast

Expense Category	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Baseline Rate Revenue	\$2,377	\$2,377	\$2,377	\$2,378	\$2,378	\$2,379	\$2,380
% Rate Increase	-	0%	60%	12%	12%	12%	3%
Additional Revenues	\$-	\$-	\$1,426	\$1,888	\$2,407	\$2,988	\$3,153
Other Revenues	\$4,776	\$3,908	\$1,064	\$1,105	\$1,172	\$1,192	\$1,215
Total Revenues	\$7,152	\$6,285	\$4,867	\$5,370	\$5,957	\$6,559	\$6,747
Total Expenses	\$6,778	\$8,462	\$6,270	\$5,018	\$6,453	\$6,727	\$5,735
Net Income / (Deficit)	\$374	\$(2,177)	\$(1,402)	\$351	\$(496)	\$(168)	\$1,012
Revenue Requirements	\$2,377	\$2,377	\$3,804	\$4,265	\$4,785	\$5,367	\$5,532

Notes:

(1) All values are in thousand dollars.

Table 2.16 Funding Option 2C Reserve Forecast

Expense Category	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Beginning Balance	\$5,233	\$5,049	\$2,872	\$1,470	\$1,821	\$1,325	\$1,157
Cash Flow	\$374	\$(2,177)	\$(1,402)	\$351	\$(496)	\$(168)	\$1,012
Ending Reserve Balance	\$5,607	\$2,872	\$1,470	\$1,821	\$1,325	\$1,157	\$2,170
Cash Flow Reserve	\$1,563	\$1,660	\$1,906	\$1,973	\$2,044	\$2,111	\$2,179
Operating Reserve	\$469	\$498	\$572	\$592	\$613	\$633	\$654
Net Fund Equity	\$3,576	\$714	\$(1,008)	\$(744)	\$(1,332)	\$(1,586)	\$(663)

Notes:

(1) All values are in thousand dollars.

2.4.2.5 Funding Option 3

Funding Option 3 assumes no additional revenue will be generated during the next five years other than additional rates paid by new system users. While this forecast includes all operating and capital expenses, including both the baseline expenses and additional identified expenses, it also removes any expenses that would result in negative fund equity. This revenue program is projected to achieve positive net fund equity in three of the next five years and positive cash flow in three of the next five years.

The cash flow forecast is shown in Table 2.17 and the reserve forecast is shown in Table 2.18.

Table 2.17 Funding Option 3 Cash Flow Forecast

Expense Category	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Baseline Rate Revenue	\$2,377	\$2,377	\$2,377	\$2,378	\$2,378	\$2,379	\$2,380
% Rate Increase	-	0%	0%	0%	0%	0%	0%
Additional Revenues	\$-	\$-	\$-	\$-	\$-	\$-	\$-
Other Revenues	\$4,776	\$3,908	\$1,077	\$1,126	\$1,177	\$1,203	\$1,223
Total Revenues	\$7,152	\$6,285	\$3,454	\$3,504	\$3,555	\$3,582	\$3,603
Total Expenses	\$3,544	\$5,795	\$4,583	\$5,923	\$3,671	\$4,307	\$3,612
Deferred Expenses	\$3,608	\$490	\$(1,129)	\$(2,419)	\$(116)	\$(725)	\$(9)
Net Income / (Deficit)	\$2,377	\$2,377	\$2,377	\$2,378	\$2,378	\$2,379	\$2,380
Revenue Requirements	\$2,377	\$2,377	\$2,377	\$2,378	\$2,378	\$2,379	\$2,380

Notes:

(1) All values are in thousand dollars.

Table 2.18 Funding Option 3 Reserve Forecast

Expense Category	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Beginning Balance	\$5,233	\$5,049	\$5,559	\$4,430	\$2,011	\$1,895	\$5,233
Cash Flow	\$3,628	\$509	\$(1,128)	\$(2,419)	\$(116)	\$(725)	\$3,608
Ending Reserve Balance	\$8,861	\$5,559	\$4,430	\$2,011	\$1,895	\$1,170	\$8,841
Cash Flow Reserve	\$1,551	\$1,215	\$1,341	\$1,406	\$1,464	\$1,512	\$1,551
Operating Reserve	\$465	\$364	\$402	\$422	\$439	\$453	\$465
Net Fund Equity	\$6,845	\$3,979	\$2,687	\$184	\$(8)	\$(795)	\$6,825

Notes:

(1) All values are in thousand dollars.

Chapter 3

COST OF SERVICE ANALYSIS

The Cost of Service analysis takes the revenue requirements outlined in the prior section and allocates them first to distinct functions and then to customer classes based on estimated usage of the District's system. This approach is based on the proportionality requirements outlined by California's Proposition 218. The goal is to provide a method of allocating costs that is fair and equitable and establishes a clear nexus between the stormwater discharge generated by different customers and the fees and charges they are assessed.

This section takes a linear approach to determining these allocations. First, a parcel analysis estimates the total land area by class. With this land area determined, the analysis estimates total runoff and pollutant loadings received by the District. This also creates an allocation of units of service—volume of runoff and pollutant loadings—for each customer class.

Following this calculation of units of service, operating and capital costs are allocated based on how much each cost center is focused on addressing stormwater runoff volumes, pollutant loadings, or a share of both.

Finally, with costs allocated to runoff and pollutant categories and units of service determined for each, the unit cost is calculated based on ERBU.

3.1 Runoff and Pollutant Loadings

3.1.1 Parcel Classifications

The District provided its billing data for FY 2020 to use in the parcel analysis. The parcel data followed the District's current rate structure, with the following rate classifications:

- Single family residential (SFR) standard size lots.
- SFR large lots.
- High density residential.
- Non-residential light runoff loads (Group I).
- Non-residential medium runoff loads (Group II).
- Non-residential heavy runoff loads (Group III).

SFR lots are divided into two different categories based on parcel size, with groupings for lots below and above 0.24 acres in area.

This analysis identified approximately 38,900 individual parcels, covering approximately 593 million square feet.

A summary of the results of this data analysis are shown in Table 3.1, with more detailed breakdown of the individual customer classes in Appendix A.

Table 3.1 Parcel Summary

Discharge Classification	Parcels	Acres	KSF	Dwelling Units
Single Family Standard	27,418	3,904	170,125	27,415
Single Family Large	3,258	1,189	51,806	3,167
High Density Residential	5,651	761	33,175	15,132
Group I	242	3,403	148,917	-
Group II	725	2,587	113,115	-
Group III	1,627	1,829	75,992	-
Total	38,922	13,673	593,131	45,715

3.1.2 Estimated Equivalent Residential Billing Units

Each land use type is associated with an estimated runoff volume and pollutant loadings based on typical land use characteristics. These characteristics can be expressed by runoff and pollutant coefficients. These coefficients are then multiplied by the total land area for each class to provide a weighted land area that reflects the amount of demand placed on the District’s system.

The 2013 Study included a detailed analysis of the different runoff and loading characteristics of each land use type and provided an ERBU basis. ERBU provides a common benchmark for the varied land use classes, with one ERBU intended to represent the level of system usage and demand from an SFR parcel. This means that there will be exactly one ERBU for every SFR parcel in the District’s service area.

The 2013 Study provided conversion factors to calculate the number of ERBU for each acre of land from a given land use type. These conversion factors were calculated based on the runoff and loading characteristics of each land use type and are intended to capture the approximate demand from each acre of that land use type. No changes to runoff loadings on a per acre basis were assumed in this analysis. The conversion of the current acres to ERBU is shown Table 3.2.

The percent share of ERBU is used as an allocation measure for the Revenue Requirements. For instance, Group II has 29 percent of all ERBU, and is therefore allocated 29 percent of the Revenue Requirements each year in this rate analysis.

Table 3.2 ERBU Calculation

Discharge Classification	ERBU per Acre	Acres	ERBU	Share
Single Family Standard	7.0	3,904	27,415	26.8%
Single Family Large	4.1	1,189	4,875	4.8%
High Density Residential	11.2	761	8,518	8.3%
Group I	1.4	3,403	4,764	4.7%
Group II	8.6	2,587	22,252	21.7%
Group III	18.9	1,829	34,561	33.8%
Total		13,673	102,386	

3.2 Allocation of Costs to Land Use Classes

With the ERBU for each land use type calculated, the Revenue Requirements can be distributed to each class based on the total share of runoff and pollutants generated by each land use type, as approximated by ERBU. The ERBU shares from Table 3.2 are multiplied by the percentages from Revenue Requirements for each of the next five years for the four funding options outlined in Chapter 2. The resulting allocations are shown in Table 3.3.

Table 3.3 Allocation of Costs to Land Use Types – Option 1

Land Use Type	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Single Family Standard	\$636	\$656	\$677	\$1,193	\$1,278	\$1,318
Single Family Large	\$113	\$117	\$120	\$212	\$227	\$234
High Density Residential	\$198	\$204	\$210	\$371	\$397	\$409
Group I	\$111	\$114	\$118	\$207	\$222	\$229
Group II	\$517	\$532	\$550	\$968	\$1,037	\$1,070
Group III	\$802	\$827	\$854	\$1,504	\$1,611	\$1,661
Total	\$2,377	\$2,449	\$2,529	\$4,455	\$4,772	\$4,921

Table 3.4 Allocation of Costs to Land Use Types – Option 2A

Land Use Type	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Single Family Standard	\$636	\$1,292	\$1,332	\$1,373	\$1,416	\$1,461
Single Family Large	\$113	\$230	\$237	\$244	\$252	\$260
High Density Residential	\$198	\$401	\$414	\$427	\$440	\$454
Group I	\$111	\$225	\$232	\$239	\$246	\$254
Group II	\$517	\$1,049	\$1,081	\$1,115	\$1,149	\$1,186
Group III	\$802	\$1,629	\$1,680	\$1,731	\$1,785	\$1,841
Total	\$2,377	\$4,826	\$4,976	\$5,128	\$5,288	\$5,455

Table 3.5 Allocation of Costs to Land Use Types – Option 2B

Land Use Type	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Single Family Standard	\$636	\$891	\$1,249	\$1,500	\$1,546	\$1,594
Single Family Large	\$113	\$158	\$222	\$267	\$275	\$283
High Density Residential	\$198	\$277	\$388	\$466	\$480	\$495
Group I	\$111	\$155	\$217	\$261	\$269	\$277
Group II	\$517	\$723	\$1,014	\$1,218	\$1,255	\$1,294
Group III	\$802	\$1,123	\$1,574	\$1,891	\$1,949	\$2,009
Total	\$2,377	\$3,328	\$4,664	\$5,602	\$5,774	\$5,953

Table 3.6 Allocation of Costs to Land Use Types – Option 2C

Land Use Type	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Single Family Standard	\$636	\$1,018	\$1,142	\$1,281	\$1,437	\$1,481
Single Family Large	\$113	\$181	\$203	\$228	\$256	\$263
High Density Residential	\$198	\$316	\$355	\$398	\$446	\$460
Group I	\$111	\$177	\$198	\$223	\$250	\$257
Group II	\$517	\$827	\$927	\$1,040	\$1,166	\$1,202
Group III	\$802	\$1,284	\$1,440	\$1,615	\$1,812	\$1,868
Total	\$2,377	\$3,804	\$4,265	\$4,785	\$5,367	\$5,532

Table 3.7 Allocation of Costs to Land Use Types – Option 3

Land Use Type	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Single Family Standard	\$636	\$637	\$637	\$637	\$637	\$637
Single Family Large	\$113	\$113	\$113	\$113	\$113	\$113
High Density Residential	\$198	\$198	\$198	\$198	\$198	\$198
Group I	\$111	\$111	\$111	\$111	\$111	\$111
Group II	\$517	\$517	\$517	\$517	\$517	\$517
Group III	\$802	\$802	\$803	\$803	\$803	\$803
Total	\$2,377	\$2,377	\$2,378	\$2,378	\$2,379	\$2,380

Chapter 4

RATE DESIGN

Following the allocation of costs in the Cost of Service analysis, the Rate Design effectively becomes a division problem for each year, where the rate is equal to the allocated costs divided by the units of service divided by the billing period.

4.1 Billable Units of Service

Table 4.1 shows the units of service for each billing class. Residential customers are charged per dwelling unit, while non-residential customers are assessed via thousand square feet. The projections shown are based on assumed new development within the system over the next five years.

Table 4.1 Billable Units of Service Forecast

Class	Units of Service	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Single Family Standard	Dwelling Units	27,415	27,419	27,424	27,431	27,438	27,445
Single Family Large	Dwelling Units	3,167	3,168	3,168	3,169	3,170	3,171
High Density Residential	Dwelling Units	15,132	15,134	15,137	15,141	15,145	15,149
Group I	Thousand Sq. Ft.	148,917	148,937	148,968	149,002	149,041	149,080
Group II	Thousand Sq. Ft.	113,115	113,130	113,153	113,179	113,209	113,238
Group III	Thousand Sq. Ft.	75,992	76,002	76,018	76,036	76,055	76,075

4.2 Rate Calculation

4.2.1 Monthly Rates

Table 4.2 shows the monthly rate projected for the next five years based on the allocated costs from Table 3.3, Table 3.4, Table 3.5, and Table 3.7, divided by the units of service from Table 4.1. Table 4.3 shows these rates on an annualized basis.

4.2.2 Monthly Rates

Table 4.2 Monthly Stormwater Rates – Option 1

Class	Units of Service	FY 2021 (Current)	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Single Family Standard	Dwelling Units	\$1.97	\$1.97	\$2.00	\$2.06	\$3.63	\$3.89	\$4.01
Single Family Large	Dwelling Units	\$3.06	\$3.06	\$3.07	\$3.17	\$5.58	\$5.98	\$6.16
High Density Residential	Dwelling Units	\$1.04	\$1.04	\$1.13	\$1.16	\$2.04	\$2.19	\$2.26
Group I	Thousand Sq. Ft.	\$0.07	\$0.07	\$0.06	\$0.07	\$0.12	\$0.12	\$0.13
Group II	Thousand Sq. Ft.	\$0.39	\$0.39	\$0.39	\$0.41	\$0.71	\$0.76	\$0.79
Group III	Thousand Sq. Ft.	\$0.85	\$0.85	\$0.91	\$0.94	\$1.65	\$1.77	\$1.82

Table 4.3 Monthly Stormwater Rates – Option 2A

Class	Units of Service	FY 2021 (Current)	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Single Family Standard	Dwelling Units	\$1.97	\$1.97	\$3.93	\$4.05	\$4.18	\$4.31	\$4.44
Single Family Large	Dwelling Units	\$3.06	\$3.06	\$6.05	\$6.24	\$6.43	\$6.62	\$6.83
High Density Residential	Dwelling Units	\$1.04	\$1.04	\$2.22	\$2.28	\$2.35	\$2.43	\$2.50
Group I	Thousand Sq. Ft.	\$0.07	\$0.07	\$0.13	\$0.13	\$0.13	\$0.14	\$0.14
Group II	Thousand Sq. Ft.	\$0.39	\$0.39	\$0.77	\$0.80	\$0.82	\$0.85	\$0.87
Group III	Thousand Sq. Ft.	\$0.85	\$0.85	\$1.79	\$1.84	\$1.90	\$1.96	\$2.02

Table 4.4 Monthly Stormwater Rates – Option 2B

Class	Units of Service	FY 2021 (Current)	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Single Family Standard	Dwelling Units	\$1.97	\$1.97	\$2.71	\$3.80	\$4.56	\$4.70	\$4.84
Single Family Large	Dwelling Units	\$3.06	\$3.06	\$4.17	\$5.85	\$7.02	\$7.23	\$7.45
High Density Residential	Dwelling Units	\$1.04	\$1.04	\$1.53	\$2.14	\$2.57	\$2.65	\$2.73
Group I	Thousand Sq. Ft.	\$0.07	\$0.07	\$0.09	\$0.12	\$0.15	\$0.15	\$0.16
Group II	Thousand Sq. Ft.	\$0.39	\$0.39	\$0.53	\$0.75	\$0.90	\$0.92	\$0.95
Group III	Thousand Sq. Ft.	\$0.85	\$0.85	\$1.23	\$1.73	\$2.07	\$2.14	\$2.20

Table 4.5 Monthly Stormwater Rates – Option 2C

Class	Units of Service	FY 2021 (Current)	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Single Family Standard	Dwelling Units	\$1.97	\$1.97	\$3.10	\$3.48	\$3.90	\$4.37	\$4.50
Single Family Large	Dwelling Units	\$3.06	\$3.06	\$4.77	\$5.35	\$6.00	\$6.72	\$6.93
High Density Residential	Dwelling Units	\$1.04	\$1.04	\$1.75	\$1.96	\$2.20	\$2.46	\$2.54
Group I	Thousand Sq. Ft.	\$0.07	\$0.07	\$0.10	\$0.11	\$0.13	\$0.14	\$0.14
Group II	Thousand Sq. Ft.	\$0.39	\$0.39	\$0.61	\$0.68	\$0.77	\$0.86	\$0.89
Group III	Thousand Sq. Ft.	\$0.85	\$0.85	\$1.41	\$1.58	\$1.77	\$1.99	\$2.05

Table 4.6 Monthly Stormwater Rates – Option 3

Class	Units of Service	FY 2021 (Current)	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Single Family Standard	Dwelling Units	\$1.97	\$1.97	\$1.97	\$1.97	\$1.97	\$1.97	\$1.97
Single Family Large	Dwelling Units	\$3.06	\$3.06	\$3.06	\$3.06	\$3.06	\$3.06	\$3.06
High Density Residential	Dwelling Units	\$1.04	\$1.04	\$1.04	\$1.04	\$1.04	\$1.04	\$1.04
Group I	Thousand Sq. Ft.	\$0.07	\$0.07	\$0.07	\$0.07	\$0.07	\$0.07	\$0.07
Group II	Thousand Sq. Ft.	\$0.39	\$0.39	\$0.39	\$0.39	\$0.39	\$0.39	\$0.39
Group III	Thousand Sq. Ft.	\$0.85	\$0.85	\$0.85	\$0.85	\$0.85	\$0.85	\$0.85

4.2.3 Annual Rates

Table 4.7 Annual Stormwater Rates – Option 1

Class	Units of Service	FY 2021 (Current)	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Single Family Standard	Dwelling Units	\$23.64	\$23.64	\$24.00	\$24.72	\$43.56	\$46.68	\$48.12
Single Family Large	Dwelling Units	\$36.72	\$36.72	\$36.84	\$38.04	\$66.96	\$71.76	\$73.92
High Density Residential	Dwelling Units	\$12.48	\$12.48	\$13.56	\$13.92	\$24.48	\$26.28	\$27.12
Group I	Thousand Sq. Ft.	\$0.79	\$0.79	\$0.77	\$0.79	\$1.40	\$1.49	\$1.54
Group II	Thousand Sq. Ft.	\$4.66	\$4.66	\$4.71	\$4.86	\$8.56	\$9.17	\$9.45
Group III	Thousand Sq. Ft.	\$10.25	\$10.25	\$10.88	\$11.23	\$19.78	\$21.18	\$21.84

Table 4.8 Annual Stormwater Rates – Option 2A

Class	Units of Service	FY 2021 (Current)	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Single Family Standard	Dwelling Units	\$23.64	\$23.64	\$47.16	\$48.60	\$50.16	\$51.72	\$53.28
Single Family Large	Dwelling Units	\$36.72	\$36.72	\$72.60	\$74.88	\$77.16	\$79.44	\$81.96
High Density Residential	Dwelling Units	\$12.48	\$12.48	\$26.64	\$27.36	\$28.20	\$29.16	\$30.00
Group I	Thousand Sq. Ft.	\$0.79	\$0.79	\$1.51	\$1.56	\$1.61	\$1.66	\$1.71
Group II	Thousand Sq. Ft.	\$4.66	\$4.66	\$9.28	\$9.56	\$9.85	\$10.16	\$10.47
Group III	Thousand Sq. Ft.	\$10.25	\$10.25	\$21.44	\$22.10	\$22.77	\$23.47	\$24.21

Table 4.9 Annual Stormwater Rates – Option 2B

Class	Units of Service	FY 2021 (Current)	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Single Family Standard	Dwelling Units	\$23.64	\$23.64	\$32.52	\$45.60	\$54.72	\$56.40	\$58.08
Single Family Large	Dwelling Units	\$36.72	\$36.72	\$50.04	\$70.20	\$84.24	\$86.76	\$89.40
High Density Residential	Dwelling Units	\$12.48	\$12.48	\$18.36	\$25.68	\$30.84	\$31.80	\$32.76
Group I	Thousand Sq. Ft.	\$0.79	\$0.79	\$1.04	\$1.46	\$1.75	\$1.81	\$1.86
Group II	Thousand Sq. Ft.	\$4.66	\$4.66	\$6.40	\$8.96	\$10.76	\$11.09	\$11.43
Group III	Thousand Sq. Ft.	\$10.25	\$10.25	\$14.79	\$20.72	\$24.88	\$25.63	\$26.42

Table 4.10 Annual Stormwater Rates – Option 2C

Class	Units of Service	FY 2021 (Current)	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Single Family Standard	Dwelling Units	\$23.64	\$23.64	\$37.20	\$41.76	\$46.80	\$52.44	\$54.00
Single Family Large	Dwelling Units	\$36.72	\$36.72	\$57.24	\$64.20	\$72.00	\$80.64	\$83.16
High Density Residential	Dwelling Units	\$12.48	\$12.48	\$21.00	\$23.52	\$26.40	\$29.52	\$30.48
Group I	Thousand Sq. Ft.	\$0.79	\$0.79	\$1.19	\$1.34	\$1.50	\$1.68	\$1.73
Group II	Thousand Sq. Ft.	\$4.66	\$4.66	\$7.31	\$8.20	\$9.19	\$10.31	\$10.62
Group III	Thousand Sq. Ft.	\$10.25	\$10.25	\$16.90	\$18.94	\$21.25	\$23.82	\$24.55

Table 4.11 Annual Stormwater Rates – Option 3

Class	Units of Service	FY 2021 (Current)	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Single Family Standard	Dwelling Units	\$23.64	\$23.64	\$23.64	\$23.64	\$23.64	\$23.64	\$23.64
Single Family Large	Dwelling Units	\$36.72	\$36.72	\$36.72	\$36.72	\$36.72	\$36.72	\$36.72
High Density Residential	Dwelling Units	\$12.48	\$12.48	\$12.48	\$12.48	\$12.48	\$12.48	\$12.48
Group I	Thousand Sq. Ft.	\$0.79	\$0.79	\$0.79	\$0.79	\$0.79	\$0.79	\$0.79
Group II	Thousand Sq. Ft.	\$4.66	\$4.66	\$4.66	\$4.66	\$4.66	\$4.66	\$4.66
Group III	Thousand Sq. Ft.	\$10.25	\$10.25	\$10.25	\$10.25	\$10.25	\$10.25	\$10.25

Appendix A

PARCEL ANALYSIS

Table A.1 Residential Parcel Analysis

Classification	Description	No. of Parcels	Acres	Sq. Ft.	Dwelling Units
Single Family Standard	Lots Up To 0.24 Acres (10,450 Sq. Ft.)	27,416	3,904	170,103,252	27,523
Single Family Large	Lots Over 0.24 Acres (50 By 209 Ft)	3,258	1,189	51,799,145	3,278
High Density Residential	Single Family Condominiums	2,849	97	4,265,871	2,873
High Density Residential	Improved Multiple Residential	2,787	543	23,654,660	10,599
High Density Residential	Mobile Home Park	-	-	-	-
High Density Residential	Mobile Home Park	15	121	5,250,119	1,392
Total		36,325	5,853	255,073,047	45,665

Table A.2 Group I Parcel Analysis

Description	No. of Parcels	Acres	Sq. Ft.
Farms, Crops	1	2	65,340
Agricultural Miscellaneous	12	1,102	48,676,989
Governmental, Public	93	1,481	64,493,707
(Blank)	13	509	22,166,087
Vacant Residential	117	207	9,035,546
Vacant Commercial	2	1	36,155
Vacant Industrial	1	4	164,656
Vacant Miscellaneous	2	98	4,258,861
School	1	0	739
Total	242	3,403	148,898,080

Table A.3 Group I Parcel Analysis

Description	No. of Parcels	Acres	Sq. Ft.
(no data)	13	509	22,166,087
Agricultural Miscellaneous	12	1,102	48,676,989
Farms, Crops	1	2	65,340
Governmental, Public	93	1,481	64,493,707
School	1	0	739
Vacant Commercial	2	1	36,155
Vacant Industrial	1	4	164,656
Vacant Miscellaneous	2	98	4,258,861
Vacant Residential	117	207	9,035,546
Total	242	3,403	148,898,080

Table A.4 Group II Parcel Analysis

Description	No. of Parcels	Acres	Sq. Ft.
(no data)	167	151	6,598,099
Cemeteries, Mortuaries	12	82	3,590,328
Commercial Miscellaneous	4	341	14,863,543
Governmental, Public	270	1,498	65,378,982
Religious	133	148	6,595,685
School	27	178	7,771,758
Shopping Center	1	1	43,560
Vacant Commercial	74	154	6,765,616
Vacant Industrial	32	12	592,694
Vacant Miscellaneous	5	21	899,949
Total	725	2,587	113,100,214

Table A.5 Group III Parcel Analysis

Description	No. of Parcels	Acres	Sq. Ft.
(no data)	119	64	2,909,076
Auto Sales, Services	59	38	5,431,222
Cemeteries, Mortuaries	1	1	21,819
Clubs, Fraternal Organizations	15	17	726,284
Commercial Miscellaneous	575	395	17,681,008
Financial Building	3	2	82,933
Governmental, Public	109	132	5,831,123
Heavy Industrial	1	20	867,715
Hospitals, Convalescent, Homes	11	53	2,322,680
Hotel/Motel	26	34	1,490,040
Industrial Miscellaneous	119	586	16,705,932
Light Industrial	7	16	703,084
Office Building	107	44	2,014,529
Restaurant, Bar, Food Service	32	17	784,715
Service Station, Gas Station	58	24	1,067,180
Shopping Center	35	148	6,459,958
Stores, Retail Outlet	112	98	4,330,749
Theaters	6	1	59,979
Vacant Commercial	129	55	2,693,169
Vacant Industrial	76	30	1,413,225
Vacant Waste Land/Marshes	1	1	60,112
Warehouse, Storage	26	53	2,325,838
Total	1,627	1,828	75,982,371