Report on

Water and Wastewater

Rate Study



Report For:

Keyes Community

Services District

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th

 Street

Keyes, CA 95328

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Submitted By:

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November 2021

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November 2, 2021

Mr. Ernie Garza

District Manager

Keyes Community Services District

5601 7th Street

Keyes, CA 95328

Dear Mr. Garza:

I am pleased to present this Water and Wastewater Rate Study (Study) report for the Keyes Community Services District (District). This Study reviewed and analyzed the District’s water and wastewater revenue, operation and maintenance expense, and capital needs of the water and wastewater enterprises. Financial plans were developed to determine the need for any rate adjustments.

This study included a review and analysis of the water and wastewater revenue and revenue requirements, number of customers, volumes, and costs of service and evaluation of rate structures. The major objectives of the Study include the following.

* Generate positive levels of income in the Study period
* Maintain operating and capital reserves at or greater than target levels
* Maintain debt service coverage ratios at or greater than the minimum required
* Meet annual capital replacement spending from the water and wastewater rates and charges
* Design rates that are fair and equitable in the current regulatory environment

This report presents the findings and recommendations for the financial plans and rates for the District’s water and wastewater systems. Tables and figures throughout the report are provided to demonstrate the calculations.

It has been a pleasure to work with District staff during the performance of this study. If there are any questions, please contact me at (949) 760-9454.

 Very Truly Yours,

 TUCKFIELD & ASSOCIATES

 

 G. Clayton Tuckfield

 President/Project Consultant

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# Executive Summary

The Keyes Community Services District (District) retained Tuckfield & Associates to conduct a comprehensive Water and Wastewater Rate Study (Study). The major objective of the Study is to determine the water and wastewater rates for FY 2021-22 to FY 2025-26 (the “Study Period”) by projecting revenues and revenue requirements for each system and by analyses to determine the costs of providing service.

## Enterprise Financial Plans

Forward-looking financial plans were developed for the water and wastewater enterprises that projected revenue requirements (costs) of each system. The amount of revenue generated from the current rates for each system was determined for FY 2021-22 through FY 2025-26 and was found to be sufficient to maintain financially sustainable water and wastewater enterprises for the Study period. No revenue increases are necessary to maintain the financial health of each system. Table 11 and 22 provide the financial plans for the water and wastewater systems respectively.

## Proposed Water Rate Structure and Rates

No revenue increases are recommended for the water enterprise and the current uniform rate structure is recommended to be maintained for the District. The proposed water rate structure and rates are the same as the current rates and are provided in Table ES-1.

Table ES-1

Current and Proposed Water Fixed and Variable Charges

|  |  |
| --- | --- |
| Current | January 1, January 1, January 1, January 1, January 1,  |
| Rate |  2022 2023 2024 2025 2026 |

 Fixed Charge ($ per month)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| $34.97$27.97 | $34.97 | $34.97 | $34.97 | $34.97 | $34.97 |
| $27.97 | $27.97 | $27.97 | $27.97 | $27.97 |

Residential

Multifamily

Commercial

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 5/8" | $34.97 | $34.97 | $34.97 | $34.97 | $34.97 | $34.97 |
| 3/4"  | $34.97 | $34.97 | $34.97 | $34.97 | $34.97 | $34.97 |
| 1" | $58.27 | $58.27 | $58.27 | $58.27 | $58.27 | $58.27 |
| 1.5" | $116.55 | $116.55 | $116.55 | $116.55 | $116.55 | $116.55 |
| 2" | $186.49 | $186.49 | $186.49 | $186.49 | $186.49 | $186.49 |
| 3" | $349.64 | $349.64 | $349.64 | $349.64 | $349.64 | $349.64 |
| 4" | $582.74 | $582.74 | $582.74 | $582.74 | $582.74 | $582.74 |
| 6" | $1,398.58 | $1,398.58 | $1,398.58 | $1,398.58 | $1,398.58 | $1,398.58 |

Variable Charge ($ per HCF)

|  |
| --- |
| $1.73 |

 All Consumption$1.73 $1.73 $1.73 $1.73 $1.73

## Water Bill Impacts

There are no impacts to customer water bills because the proposed water rates are the same as the current water rates. Table ES-2 shows that there are no impacts to Single-family Residential (SFR) water bills from the water rates presented in Table ES-1.

Table ES-2

Comparison of Current Single-family Residential Monthly Water Bill with Bills Using Proposed Water Rates

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  | Current Bill |  |  | Proposed January 1, 2022 Bill |  |
|  |  | Service | Volume | Current | Service | Volume Proposed | Dollar | Percent |
| Description | Use (HCF) | Charge | Charge | Bill | Charge | Charge Bill | Difference | Change |
|  | 0 | $34.97 | $0.00 | $34.97 | $34.97 | $0.00 $34.97 $0.00 | 0.0% |
| Very Low | 5 | $34.97 | $8.65 | $43.62 | $34.97 | $8.65 $43.62 $0.00 | 0.0% |
| Low | 8 | $34.97 | $13.84 | $48.81 | $34.97 | $13.84 $48.81 $0.00 | 0.0% |
| Median | 10 | $34.97 | $17.30 | $52.27 | $34.97 | $17.30 $52.27 $0.00 | 0.0% |
| Average | 14 | $34.97 | $24.22 | $59.19 | $34.97 | $24.22 $59.19 $0.00 | 0.0% |
| High | 20 | $34.97 | $34.60 | $69.57 | $34.97 | $34.60 $69.57 $0.00 | 0.0% |
| Very High | 30 | $34.97 | $51.90 | $86.87 | $34.97 | $51.90 $86.87 $0.00 | 0.0% |
|  | 50 | $34.97 | $86.50 | $121.47 | $34.97 | $86.50 $121.47 $0.00 | 0.0% |

Chart ES-1 has been prepared to compare the District’s average SFR water bill with those of other local communities. The chart is prepared using the smallest meter size listed in a community’s rate schedule and at a consumption of 14 HCF. The chart indicates that a District SFR customer will experience a bill that is in the midrange of the communities listed.

Chart ES-1

Comparison of Single-family Residential Monthly Water Bills Using 14 HCF



Note: Above table uses water rates in effect October 2021. Keyes CSD bill is based on the rate structure and rates in Table ES-1. Communities other than KCSD are based on the smallest meter size listed in their rate schedule.

## Proposed Wastewater Rate Structure and Rates

No revenue increases are recommended for the wastewater enterprise and the current wastewater rate structure is recommended to be maintained by the District. Table ES-3 presents the current and proposed wastewater rates for the next five years.

Table ES-3

Current and Proposed Wastewater Fixed Charges

|  |  |
| --- | --- |
| Current | January 1, January 1, January 1, January 1, January 1,  |
| Rate |  2022 2023 2024 2025 2026 |

 Fixed Charge ($ per month)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Single-family | $64.23 | $64.23 | $64.23 | $64.23 | $64.23 | $64.23 |
| Multifamily | $51.39 | $51.39 | $51.39 | $51.39 | $51.39 | $51.39 |
| Commercial Low | $64.23 | $64.23 | $64.23 | $64.23 | $64.23 | $64.23 |
| Commercial Medium | $111.28 | $111.28 | $111.28 | $111.28 | $111.28 | $111.28 |
| Commercial High | $166.67 | $166.67 | $166.67 | $166.67 | $166.67 | $166.67 |
| Schools (Elem and Middle) | $1,816.67 | $1,816.67 | $1,816.67 | $1,816.67 | $1,816.67 | $1,816.67 |

## Wastewater Bill Impacts

There are no impacts to the customer wastewater bills because the proposed wastewater rates are the same the current rates. Table ES-4 shows that there are no impacts to SFR wastewater bills from the proposed wastewater rates from Table ES-3.

Table ES-4

Comparison of Current Monthly Wastewater Bills with Bills Using

Proposed Wastewater Rates

|  |  |
| --- | --- |
|  | Proposed January 1, 2022 Bill |
| Customer Class |  Current Monthly Bill  |  Proposed Monthly Bill  | Dollar Difference |  Percent Increase  |
| Single-family | $64.23 | $64.23 | $0.00 | 0.0% |
| Multifamily | $51.39 | $51.39 | $0.00 | 0.0% |
| Commercial Low | $64.23 | $64.23 | $0.00 | 0.0% |
| Commercial Medium | $111.28 | $111.28 | $0.00 | 0.0% |
| Commercial High | $166.67 | $166.67 | $0.00 | 0.0% |
| Schools (Elem and Middle) | $1,816.67 | $1,816.67 | $0.00 | 0.0% |

Chart ES-2 has been prepared to compare the District’s average SFR wastewater bill per month bill with those of other communities. The chart indicates that the District’s SFR wastewater bill is in the mid to upper range of the communities listed.

Chart ES-2

Comparison of Single-family Residential Monthly Wastewater Bills



Note: Above table uses wastewater rates in effect October 2021. Keyes Community Services District bill is based on the rate structure and rates in Table ES-3.

# Introduction

The Keyes Community Services District (District) retained Tuckfield & Associates to conduct a comprehensive Water and Wastewater Rate Study (Study) for its water and wastewater enterprise systems. This Study develops pro forma statements of revenues and revenue requirements for each enterprise and determines any revenue adjustments required to provide financially sustainable water and wastewater enterprises.

## Background

The Keyes Community Services District (District) provides water and wastewater service to about 1,375 customers in the central-south region of Stanislaus County, approximately 9 miles southeast of the City of Modesto along Highway 99. The customer base consists mostly of residential customers with a small number of commercial customers, and an elementary and middle school.

The District’s water is produced from wells located within the District and distributed through a pipeline network of various sizes. Wastewater is collected through the District’s collection system and is conveyed to the treatment facility owned by the City of Turlock (Turlock). The District has an agreement with Turlock that secures its rights to 50 percent of the capacity of the trunk conveyance pipeline in return for reimbursement for the District’s share of the construction cost. The District has also contracted for 0.597 mgd of capacity of the treatment plant owned by Turlock for treatment of the District’s wastewater

On November 6, 2006, the District was issued a Notice of Non-Compliance from the California Department of Public Health (CDPH). In 2018, the District completed construction of an Arsenic Treatment Facility that brought the District into compliance with CDPH.

In November of 2020, the District entered into a settlement agreement with certain defendants whereby the defendants will pay the District certain sums of money to settle allegations associated with Trichloropropane (TCP) contamination of District wells. The money received from the settlement will be used by the District towards water system capital improvement plan (CIP) projects associated with District wells and other water CIP projects necessary to address the District’s aging facilities.

## Objectives

The objectives of this Study are to (1) review the current and future financial status of each of the water and wastewater enterprises, (2) make any adjustments to the revenue being received to ensure that the financial obligations are being met now and in the future, including adequate reserves and debt service coverage, and (3) design water and wastewater rates that generate the required revenue while being fair and equitable for its customers.

## Scope of the Study

This Study includes the findings and recommendations of analyzing each of the water and wastewater system’s financial status and related CIP projects. Historical trends were analyzed from data supplied by the District showing the number of customers, volumes, revenue, and revenue requirements.

Revenue requirements of each enterprise includes operation and maintenance (O&M) expense, routine capital outlays, CIP funding, debt service, and additions to reserves. Changing conditions such as additional facilities, system growth, employee additions/reductions, and non-recurring maintenance expenditures are recognized. Inflation for ongoing expenditures is included to reflect cost escalation.

The financial plan and rates developed herein are based on funding of the CIP and estimates of O&M expenses provided by the District. Deviation from the financial plans, construction cost estimates and funding requirements, major operational changes, or other financial policy changes that were not foreseen, may result in the need for lower or higher revenue than anticipated. It is suggested that the District conduct an update to the rate study at least every three years for prudent rate planning.

# Assumptions

Several assumptions were used to conduct the Study for the period FY 2021-22 to FY 2025-26. The assumptions included growth rates in customer accounts and related consumption, expense inflation factors, financing and other assumptions used for projecting revenue and expense and estimating debt service payments. The financial planning assumptions are provided in Table 1.

Table 1

Assumptions and Planning Factors

|  |  |
| --- | --- |
| Description | Value |
| Annual Account & Demand growth [1] |  |
| Residential | 0.5% |
| All Other | 0.0% |
| Interest earnings on fund reserves (annual) | 0.25% |
| Cost Escalation |  |
| Personnel Services [2] | 2.0% |
| Benefits | 8.0% |
| Electrical Power | 3.0% |
| Chemicals | 3.0% |
| Purchased Water | 4.0% |
| All Other Operations & Maintenance | 2.0% |
| Capital | 3.0% |

1. Annualized growth in water accounts is based on historicalinformation provided by staff.
2. Personnel Services growth in staffing, promotions, and inflation

 is 2.0% annually.

## Reserve Policy

The District has reserve policy goals that include maintaining the level of reserves for the water and wastewater systems at appropriate levels. The reserve goals provide a means to meet unanticipated reductions in revenues, meet changes in the costs of providing services, provide for fixed asset repair and replacement, natural disaster needs, and other issues. The reserves also provide guidelines to maintain the financial health and stability of the enterprise funds. The reserve types and the amount of reserves used in this Study are discussed below.

### Operating Reserve

The purpose of the Operating Reserve is to provide working capital to meet cash flow needs during normal operations and support the operation, maintenance, and administration of the utility. This reserve ensures that operations can continue should there be significant events that impact cash flows. The target balance to be maintained is 180 days (50 percent) of the current annual operating expense budget.

### Capital Replacement Reserve

The purpose of the Capital Replacement Reserve is to fund future replacement of assets and CIP projects. The capital reserves are used to fund replacement of system assets as they reach their useful life or reach obsolescence. The reserve target has been established as 50 percent of annual depreciation.

### Emergency Capital Reserve

The purpose of the Emergency Capital Reserve is to provide protection against catastrophic loss and to provide a cushion for inaccuracy in the long-range replacement program. The Target reserve is established at 3 percent of the value of current capital fixed asset value. The system values are currently estimated at about $23.7 million for the water system and about $2.2 million for the wastewater system. These values will increase as CIP is booked into fixed assets.

## Beginning Balances and Reserve Targets

As of June 30, 2021, the District’s beginning reserve balances are listed in the table below. The reserves are used in developing the financial plans for the water and wastewater utility systems. The Target Reserves are also provided in the table.

Table 2

June 30, 2021 Beginning Fund Balances and Reserve Targets

|  |  |  |
| --- | --- | --- |
|  | Water | Wastewater |
|  | Reserve | Reserve | Reserve | Reserve |
| Reserve Type | Balance | Target | Balance | Target |
| Operating Fund Reserve | $4,427,747 | $358,000 | $3,233,695 | $497,000 |
| Capital Replacement Reserve | $533,408 | $414,000 | $428,734 | $65,000 |
| Emergency Capital Reserve | $0 | $713,000 | $0 | $68,000 |
|  Total | $4,961,155 | $1,485,000 | $3,662,429 | $630,000 |

# Water Financial Planning

Financial planning for the water system includes identifying and projecting revenues and revenue requirements for a five-year planning period. This section discusses current water rates, current user classifications, projected revenues and revenue requirements, capital improvement expenditures and financing sources, and proposed revenue adjustments.

## Current Water Rates

Table 3 provides the current water rates of the water system. The water rates consist of monthly fixed and variable charges to residential and non-residential customers. Residential customers are charged the same fixed charge monthly while Commercial customers are charged a monthly fixed charge that increases with their meter size.

All customers are charged for consumption using a uniform volume charge whereby all customers are charged the same rate for water consumption.

Table 3

Current Water Rates

|  |  |
| --- | --- |
|  | Fixed |
| Description | Charges |
|  | $/month |
| Residential | $34.97 |
| Multifamily | $27.97 |
| Commercial5/8" | $34.97 |
| 3/4"  | $34.97 |
| 1" | $58.27 |
| 1.5" | $116.55 |
| 2" | $186.49 |
| 3" | $349.64 |
| 4" | $582.74 |
| 6" | $1,398.58 |
|  |  |
|  | Variable |
| Customer Class | Rate |

($/HCF)

 All Customers $1.73

## Water User Classifications

### Number of Customers

The District classifies water customers as Single-family Residential (SFR), Multifamily Residential (MFR, consisting of apartments and mobile homes), and Commercial. Residential customers account for over 96 percent of the total customers/accounts served by the water system. Customer growth is projected to occur in SFR accounts at 0.5 percent annually, or about 6 new accounts per year. Table 4 provides the historical and projected average number of water customers by classification.

##### Table 4 Historical and Projected Average Number of Water Customers

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Historical |  |  | Projected |  |  |
| Customer Class | FY 20-21 | FY 21-22 | FY 22-23 | FY 23-24 | FY 24-25 | FY 25-26 |
| Number of AccountsSingle-family [1] | 1,272 | 1,278 | 1,284 | 1,290 | 1,296 | 1,302 |
| Multifamily [1] | 29 | 29 | 29 | 29 | 29 | 29 |
| CommercialTotal Accounts  | 44 | 44 | 44 | 44 | 44 | 44 |
| 1,345 | 1,351 | 1,357 | 1,363 | 1,369 | 1,375 |
| Number of Dwelling UnitsSingle-family [1] | 1,272 | 1,278 | 1,284 | 1,290 | 1,296 | 1,302 |
| Multifamily [1] | 448 | 450 | 452 | 454 | 456 | 458 |

 [1] Residential accounts/units increase at 0.5% annually.

### Number of Water Meters

Table 5 provides a summary of the current and projected average number of water customers by meter size. Most customers have a 3/4-inch meter (96 percent) installed at the service location. It is assumed that all new residential customers will have 1-inch meters installed and this is the minimum size for new meter installations for the District’s customer base.

Table 5

Historical and Projected Average Number of Water Meters by Size

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Historical Description FY 20-21 |  |  | Projected |  |  |
| FY 21-22 | FY 22-23 | FY 23-24 | FY 24-25 | FY 25-26 |
| Active Water Meters/Accounts [1] 5/8" 29 | 450 | 29 | 29 | 29 | 29 |
| 3/4"  | 1,294 | 1,294 | 1,294 | 1,294 | 1,294 | 1,294 |
| 1" | 3 | 9 | 15 | 21 | 27 | 33 |
| 1.5" | 1 | 1 | 1 | 1 | 1 | 1 |
| 2" | 11 | 11 | 11 | 11 | 11 | 11 |
| 3" | 3 | 3 | 3 | 3 | 3 | 3 |
| 4"Total Meters | 4 | 4 | 4 | 4 | 4 | 4 |
| 1,345 | 1,772 | 1,357 | 1,363 | 1,369 | 1,375 |

 [1] Historical water accounts/meters for FY 20-21 were provided through City billing records.

### Water Sales Volumes

Table 6 provides the historical and projected water sales volume by customer classification. Water sales volumes were projected by recognizing the growth in the number of accounts and the FY 2018-19 water use per customer.

##### Table 6 Historical and Projected Water Consumption (in HCF)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Description | Historical |  |  |  [1]Projected |  |
| FY 20-21 | FY 21-22 | FY 22-23 | FY 23-24 | FY 24-25 | FY 25-26 |
| Single-family | 310,656 | 222,125 | 223,168 | 224,211 | 225,254 | 226,297 |
| Multifamily | 13,132 | 45,590 | 45,792 | 45,995 | 46,197 | 46,400 |
| CommercialTotal Projected Consumption | 50,066 | 58,838 | 58,838 | 58,838 | 58,838 | 58,838 |
| 373,854 | 326,553 | 327,798 | 329,044 | 330,289 | 331,535 |

 [1] Forecast assumes that the use per customer from FY 18-19 and applied to the number of customers.

## Water Financial Plan

The financial plan provides the means of analyzing the revenue and revenue requirements of the water system and its impact on reserves as well as the ability to fund on-going operation and maintenance (O&M) expense and capital infrastructure requirements. Below is a discussion of the projection of revenue, O&M expense, capital improvement needs of the water system and its financing, debt service requirements, and revenue adjustments needed to maintain a sustainable water enterprise.

### Revenues

The Water Fund receives revenue from rates and charges for water service and miscellaneous sources. Revenue from water rates is projected by applying the current water rates to the projected number of accounts and consumption volume. Table 7 presents the projected revenue from current water rates of the water system.

##### Table 7 Projected Rate-based Water Revenue Using Existing Rates

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Description |  |  | Projected |  |  |
| FY 21-22 | FY 22-23 | FY 23-24 | FY 24-25 | FY 25-26 |
|  Water Service RevenuesFixed Charges  [1] | $765,242 | $768,430 | $771,620 | $774,809 | $777,998 |
| Variable Charges [2] | 564,939 | 567,093 | 569,248 | 571,401 | 573,557 |
| Total Revenues From Current Rates | $1,330,181 | $1,335,523 | $1,340,868 | $1,346,210 | $1,351,555 |

1. FY 21-22 and forecast revenue calculated by multiplying current water service rate by the number of projected meters.
2. FY 21-22 and forecast revenue calculated by multiplying projected water sales by the current variable rates.

### Miscellaneous Revenue

Miscellaneous revenues are received from several sources including inspection fees, late charges, penalties, backflow fees, and other sources. Table 8 below provides sources of miscellaneous revenue.

##### Table 8 Projected Water Miscellaneous Revenue

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Description | Budget |  | Projected |  |
| FY 21-22 | FY 22-23 | FY 23-24 | FY 24-25 | FY 25-26 |
|  Inspection Fee | $500 | $500 | $500 | $500 | $500 |
| Late Charges | 45,000 | 45,211 | 45,422 | 45,633 | 45,844 |
| Returned Check  |  300  |  301  |  302  |  303  |  304 |
| Water Violation  |  500 | 502 | 504 | 506 | 508 |
| Taxes Current Secured  |  600  |  600  |  600  |  600  |  600 |
| Taxes Current Unsecured  |  100 | 100 | 100 | 100 | 100 |
| Other Revenue  |  4,000  |  4,000  |  4,000  |  4,000  |  4,000 |
| Credit Card Fee  |  4,500 | 4,521 | 4,542 | 4,563 | 4,584 |
| Backflow Test  |  750  |  750  |  750  |  750  |  750 |

 Total Miscellaneous Revenues $56,250 $56,485 $56,720 $56,955 $57,190

### Revenue Requirements

Revenue requirements of the water system include O&M expense, debt service, payments to debt reserves, and capital replacement. Each of these items are discussed below.

#### Operation and Maintenance Expense

O&M expenses are an on-going obligation of the water system and such costs are normally met from water service revenue. O&M includes the cost to operate and maintain the water supply, reservoirs, and distribution system facilities. Costs also include technical services and other general and administrative expenses.

O&M has been projected recognizing the major expense categories of personnel services, electric power expense, chemicals, all other expenses, and capital outlay. Personnel costs consist of salaries and benefits expense of those personnel directly involved with providing water service. Salaries and wages are projected to increase by 2 percent annually, while benefits expense is projected to increase by 8 percent annually. Electric power expense is projected to increase annually by 3 percent while chemicals expense increases also by 3 percent annually. All other O&M expense is projected to increase by 2 percent annually. Capital outlay is projected to increase by 3 percent annually. Table 9 provides a summary of the O&M expenses for the Study period.

#### Existing Debt Service

The water system has outstanding debt from a State Water Resources Control Board (SWRCB) Safe Drinking Water (SDW) State Revolving Fund (SRF) loan. The annual payments are about $10,000 annually.

Table 9

Historical and Projected Water Operation and Maintenance Expense

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Description | Historical | Budget |  | Projected |  |
| FY 20-21 | FY 21-22 | FY 22-23 | FY 23-24 | FY 24-25 | FY 25-26 |
| AdmintrationAdmin Salaries | $77,000 | $82,200 | $83,844 | $85,521 | $87,232 | $88,976 |
| Admin Benefits  |  69,550  |  78,700  |  84,996  |  91,796  |  99,140  |  107,070 |
| All Other Subtotal |  130,179  |  98,450  |  99,909  |  101,905  |  103,944  |  106,021 |
| $276,729 | $259,350 | $268,749 | $279,222 | $290,316 | $302,067 |
|  MaintenanceMaint Salaries | $116,069 | $123,000 | $125,460 | $127,969 | $130,528 | $133,139 |
| Maint Benefits  |  105,715  |  114,000  |  116,280  |  118,606  |  120,979  |  123,399 |
| Maintenance Utilities  |  92,000  |  95,000  |  98,223  |  101,170  |  104,205  |  107,331 |
| Maintenance Chlorine  |  4,400  |  5,000  |  5,170  |  5,345  |  5,526  |  5,713 |
| All Other Subtotal |  194,602  |  119,450  |  121,839  |  124,276  |  126,762  |  129,295 |
| $512,786 | $456,450 | $466,972 | $477,366 | $488,000 | $498,877 |
| Arsenic Treatment FacilityTreatment Chemicals | $35,000 | $50,000 | $51,696 | $53,450 | $55,261 | $57,134 |
| Sludge Disposal  |  25,000  |  30,000  |  30,600  |  31,212  |  31,836  |  32,473 |
| Equipment Maintenance  |  17,000  |  20,000  |  20,400  |  20,808  |  21,224  |  21,648 |

 Arsenic Treatment Facility $77,000 $100,000 $102,696 $105,470 $108,321 $111,255

 Total Water System O&M Expense $866,515 $830,800 $853,867 $877,972 $903,028 $929,082

#### Debt Service Reserve Payments

A reserve is required for the SWRCB SDW SRF loan discussed above. The debt service reserve may be funded over a 10-year period and results in an annual payment of about 10 percent of the annual loan payment over that time frame.

##### Capital Replacement

An annual amount for capital replacement is generated from the current water rates and financial plan and is used towards capital spending or kept in reserve for such spending. The amount ranges from about $480,000 to $560,000 annually in the Study period.

### Water Capital Improvement Program

The District has developed a CIP shown in Table 10 that lists capital expenditures for FY 2021-22 through FY 202526. Over this period the District projects that it will spend a total of about $4.6 million related to wells, storage, and other projects. The CIP is planned to be funded from lawsuit proceeds, District rate revenue, and District cash reserves.

In November of 2020, the District entered into a settlement agreement with certain defendants whereby the defendants will pay the District certain sums of money, totaling $9 million, to settle allegations associated with Trichloropropane (TCP) contamination of District wells. The money received from the settlement will be used to pay for CIP projects associated with District wells identified in Table 10. The lawsuit proceeds are shown in Table 11 under Water Capital Sources of Funds.

Table 10

Water Capital Improvement Program

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Description | Budget |  | Projected |  |
| FY 21-22 | FY 22-23 | FY 23-24 | FY 24-25 | FY 25-26 |
| Current Capital Improvement Program (CIP) Projects [1]Maintenance Shop and Property Purchase | $450,000 | $0 | $0 | $0 | $0 |
| Well 7 - 123 TCP  |  1,203,000  |  -  |  -  |  -  |  - |
| Well 10 - 123 TCP  |  2,119,000  |  -  |  -  |  -  |  - |
| Washington Nunes Tie-in  |  -  |  -  |  31,800  |  -  |  - |
| 2nd Storage Tank  |  -  |  -  |  636,500  |  -  |  - |
| Proposed Asset Replacement Projects [2]  |  -  |  -  |  -  |  -  |  200,000 |

Total Water CIP

$3,772,000

$0

$668,300

$0

$200,000

 [1] CIP Source: FY 21-22 City CIP document.

### Water Financial Plan

A financial plan has been prepared that includes the projected revenues and revenue requirements that were identified for the water system. The financial plan, presented in Table 11, incorporates specific financial planning goals to provide guidance to maintain the health of the water utility on an on-going basis. The goals included the following.

* Generate positive levels of income in each year of the Study period
* Fund the capital improvement program requirements
* Maintain the operating and capital reserves at or greater than target levels
* Fund the required debt service reserves
* Maintain debt service coverage ratios at or greater than the minimum required

#### Proposed Revenue Adjustments

Table 11 provides the annual revenue increases recommended to meet the financial planning criteria for the five-year Study Period. The financial plan indicates that no revenue increases are required during the Study Period.

Table 11

Water Financial Plan

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Description |  |  | Projected |  |  |
| FY 21-22 | FY 22-23 | FY 23-24 | FY 24-25 | FY 25-26 |
|  Proposed Revenue Increase (January 1) | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
|  |  |  |  |  |  |
| Water Operations |  |  |  |  |  |
| RevenueRevenues from Existing Water Rates [1] | $1,330,181 | $1,335,523 | $1,340,868 | $1,346,210 | $1,351,555 |
|  Additional Revenue from Revenue Increases [2]  |  -  |  -  |  -  |  -  |  - |
| Miscellaneous Income [3] | 56,250 | 56,485 | 56,720 | 56,955 | 57,190 |
|  Interest Income [4]  |  15,887  |  21,305  |  24,319  |  27,292  |  29,558 |
| Total Revenues | $1,402,318 | $1,413,313 | $1,421,907 | $1,430,457 | $1,438,303 |
| Revenue RequirementsOperation and Maintenance Expense | $715,800 | $735,721 | $756,588 | $778,316 | $800,944 |
|  Capital Outlay  |  15,000  |  15,450  |  15,914  |  16,391  |  16,883 |
|  Arsenic Treatment Facility  |  100,000  |  102,696  |  105,470  |  108,321  |  111,255 |
|  SWRCB SDW SRF Loan  |  10,956  |  10,956  |  10,956  |  10,956  |  10,956 |
|  Payment to Debt Service Reserve [5]  |  1,200  |  1,200  |  1,200  |  1,200  |  1,200 |
|  Transfer to Water Capital Spending  |  559,362  |  537,290  |  521,779  |  504,273  |  486,065 |
| Total Revenue RequirementsNet Funds Available Before Capital | $1,402,318 | $1,403,313 | $1,411,907 | $1,419,457 | $1,427,303 |
| $0 | $10,000 | $10,000 | $11,000 | $11,000 |
| Water Capital |  |  |  |  |  |
| Capital Sources of Funds |  |  |  |  |  |
| Lawsuit Proceeds | $6,000,000 | $1,000,000 | $1,000,000 | $1,000,000 | $0 |
|  Transfer from Water Operations Total Capital SourcesCapital Uses of Funds |  559,362  |  537,290  |  521,779  |  504,273  |  486,065 |
| $6,559,362 | $1,537,290 | $1,521,779 | $1,504,273 | $486,065 |
| Capital Improvement Program | $3,772,000 | $0 | $668,300 | $0 | $200,000 |
| Total Capital Improvement Spending | $3,772,000 | $0 | $668,300 | $0 | $200,000 |
| Net Capital Sources and Uses | $2,787,362 | $1,537,290 | $853,479 | $1,504,273 | $286,065 |
| Net Funds Available After Capital | $2,787,362 | $1,547,290 | $863,479 | $1,515,273 | $297,065 |
| Available Operating and Capital Reserves |  |  |  |  |
| Beginning available reserves [6] | $4,961,155 | $7,748,517 | $9,295,806 | $10,159,285 | $11,674,558 |
| Additions (reductions) | 2,787,362 | 1,547,290 | 863,479 | 1,515,273 | 297,065 |
| Ending available reserves | 7,748,517 | 9,295,806 | 10,159,285 | 11,674,558 | 11,971,623 |
| Target Reserves [7] | 1,485,000 | 1,579,000 | 1,609,000 | 1,643,000 | 1,673,000 |
| Above (below) Target | $6,263,517 | $7,716,806 | $8,550,285 | $10,031,558 | $10,298,623 |
| Debt Service Coverage |  |  |  |  |  |
| Net Revenues [8] | $6,571,518 | $1,559,446 | $1,543,935 | $1,527,429 | $509,221 |
| Annual Debt Service | 10,956 | 10,956 | 10,956 | 10,956 | 10,956 |
| Coverage [9] | 59980% | 14233% | 14092% | 13941% | 4648% |

1. Projected using the existing rate schedule effective July 1,2019.
2. Additional revenue from proposed rate adjustments.
3. Includes late charges, miscellaneous, and other income.
4. Interest earnings on the average fund balance calculated at 0.25%.
5. Payment to fund required reserves for the SWRCB SDW SRF Loan.
6. The available beginning FY 21-22 cash balance provided by City.
7. Includes Operation and Maintenance reserve, Capital Replacement reserve, and Emergency Capital reserve.
8. Includes all revenues of the water system.
9. Minimum coverage is 125 percent.

A graphical depiction of the revenue and revenue requirements from Table 11 are presented in Figure 1. Revenue using the current rates is shown as the red line. Figure 1 shows that the revenue from current water rates meets annual O&M expense and capital spending needs during the Study period and 10-year period. The current water rates generate sufficient revenue to initially provide about $500,000 annually for capital spending needs or for accumulation in capital reserves shown as the green column in Figure 1. The annual amount decreases over the 10-year period.

Figure 1

Water Financial Plan

Comparison of Annual Revenue with Revenue Requirements

$0.0

$0.2

$0.4

$0.6

$0.8

$1.0

$1.2

$1.4

$1.6

FY 21-22

FY 25-26

FY 27-28

FY 29-30

FY 23-24

Revenue and Revenue Requirements ($ Millions)

O&M

Arsenic Treatment Facility

Replacement

Debt Service

Transfer to Water Capital Spending

Additions to Reserves

Revenue with Increases

Revenue w/o Increases

Figure 2 shows the projected cash reserves and the target reserves established for the District. The columns represent the cash position at the end of the year (which includes operating and capital reserves) while the red line represents the Target Reserve level for the District. The figure shows that the District maintains the cash reserves to at least the Target reserve maintenance level and has adequate cash reserves during all years of the 10-year period.

Figure 2

Water Cash Reserves

Comparison of Projected End of Year Cash Reserves with Target Reserve Level

$0

$2

$4

$6

$8

$10

$12

$14

FY 21-22

FY 23-24

FY 25-26

FY 27-28

FY 29-30

(

)

$ Millions

Total Reserves

Target Reserves

# Water Rate Design

From the analysis in Table 11, no revenue increases are required to maintain a financially sustainable water enterprise. Additionally, no change is proposed in the District’s current water rate structure. The current water rate structure charges for all water consumed through the meter for each District water customer.

## Proposed Water Rates

Table 12 presents the proposed fixed charges and variable charges for the water system for the next five years. Table 12 also includes the current fixed and variable rates as well as the proposed water rates using the current uniform volume rate structure.

Table 12

Current and Proposed Water Fixed and Variable Charges

|  |  |
| --- | --- |
| Current | January 1, January 1, January 1, January 1, January 1,  |
| Rate |  2022 2023 2024 2025 2026 |

 Fixed Charge ($ per month)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| $34.97$27.97 | $34.97 | $34.97 | $34.97 | $34.97 | $34.97 |
| $27.97 | $27.97 | $27.97 | $27.97 | $27.97 |

Residential

Multifamily

Commercial

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 5/8" | $34.97 | $34.97 | $34.97 | $34.97 | $34.97 | $34.97 |
| 3/4"  | $34.97 | $34.97 | $34.97 | $34.97 | $34.97 | $34.97 |
| 1" | $58.27 | $58.27 | $58.27 | $58.27 | $58.27 | $58.27 |
| 1.5" | $116.55 | $116.55 | $116.55 | $116.55 | $116.55 | $116.55 |
| 2" | $186.49 | $186.49 | $186.49 | $186.49 | $186.49 | $186.49 |
| 3" | $349.64 | $349.64 | $349.64 | $349.64 | $349.64 | $349.64 |
| 4" | $582.74 | $582.74 | $582.74 | $582.74 | $582.74 | $582.74 |
| 6" | $1,398.58 | $1,398.58 | $1,398.58 | $1,398.58 | $1,398.58 | $1,398.58 |

Variable Charge ($ per HCF)

|  |
| --- |
| $1.73 |

 All Consumption$1.73 $1.73 $1.73 $1.73 $1.73

# Water Bill Impact Analysis

There is no impact to SFR customer water bills because the analysis in Table 11 determined that no revenue increases are required and the there is no change to the current District rate structure. As shown in Table 13, a SFR customer using the average consumption of 14 HCF monthly experiences no change in their monthly bill.

Table 13

Comparison of Current Single-family Residential Monthly Water Bill with Bills Using Proposed Water Rates

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  | Current Bill |  |  | Proposed January 1, 2022 Bill |  |
|  |  | Service | Volume | Current | Service | Volume Proposed | Dollar | Percent |
| Description | Use (HCF) | Charge | Charge | Bill | Charge | Charge Bill | Difference | Change |
|  | 0 | $34.97 | $0.00 | $34.97 | $34.97 | $0.00 $34.97 $0.00 | 0.0% |
| Very Low | 5 | $34.97 | $8.65 | $43.62 | $34.97 | $8.65 $43.62 $0.00 | 0.0% |
| Low | 8 | $34.97 | $13.84 | $48.81 | $34.97 | $13.84 $48.81 $0.00 | 0.0% |
| Median | 10 | $34.97 | $17.30 | $52.27 | $34.97 | $17.30 $52.27 $0.00 | 0.0% |
| Average | 14 | $34.97 | $24.22 | $59.19 | $34.97 | $24.22 $59.19 $0.00 | 0.0% |
| High | 20 | $34.97 | $34.60 | $69.57 | $34.97 | $34.60 $69.57 $0.00 | 0.0% |
| Very High | 30 | $34.97 | $51.90 | $86.87 | $34.97 | $51.90 $86.87 $0.00 | 0.0% |
|  | 50 | $34.97 | $86.50 | $121.47 | $34.97 | $86.50 $121.47 $0.00 | 0.0% |

# Water Rate Survey

A water rate survey was conducted for neighboring communities to the Keyes Community Services District shown in Chart 1. The rate survey includes rate schedules in effect October 2021. The chart is prepared using the smallest meter size listed in a community’s rate schedule and at a consumption of 14 HCF which is the District’s average water consumption for a SFR customer. Water bills for the District are shown using the current rates and the proposed rates which are the same as the current rates. The chart indicates that a District SFR customer will experience a bill that is in the mid-range of the communities listed.

Chart 1

Comparison of Single-family Residential Monthly Water Bills Using 14 HCF



Note: Above table uses water rates in effect October 2021. Keyes CSD bill is based on the rate structure and rates in Table 12. Communities other than Keyes CSD are based on the smallest meter size listed in their rate schedule.

# Wastewater Financial Planning

Financial planning for the wastewater enterprise includes identifying and projecting revenues and revenue requirements of the wastewater system for a five-year planning period. Estimates of revenue from various sources are compared with the projected revenue requirements. This comparison allows the review of the adequacy of existing revenue to meet annual obligations and provide the basis for revenue adjustments.

This section discusses the current wastewater rates, user classifications, revenues and revenue requirements, planned CIP projects and financing sources, and proposed revenue adjustments.

## Current Wastewater Rates

The current wastewater rates consist of monthly fixed charges to residential and non-residential customers.

Commercial customers are further broken down into 4 categories consisting of Commercial Low, Commercial Medium, Commercial High, and Schools. The description of Low, Medium, and High refers to the strength of the wastewater in terms of bio-chemical oxygen demand (BOD) and suspended solids (SS). The current rates are presented in Table 14.

Table 14

Current Wastewater Rates

|  |  |
| --- | --- |
| Customer | Fixed |
| Classification | Charge |
|  | ($/month) |
| Single-family | $64.23 |
| Multifamily | $51.39 |
| Commercial Low | $64.23 |
| Commercial Medium | $111.28 |
| Commercial High | $166.67 |
| Schools (Elem and Middle) | $1,816.67 |

## Wastewater User Classifications

### Number of Customers

The District currently classifies wastewater customers as SFR, MFR, Commercial Low, Commercial Medium, Commercial High, and Schools classifications. Customer growth is projected to occur in SFR accounts at 0.5 percent annually or about 6 accounts per year. Residential customers account for about 97 percent of the total customers/accounts served by the wastewater system. Table 15 provides the historical and projected average number of customers by classification, MFR dwelling units, and Average Daily Attendance (ADA) for Schools.

Table 15

Historical and Projected Average Number of Wastewater Customers by Classification

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Historical |  |  | Projected |  |  |
| Customer Class | FY 20-21 | FY 21-22 | FY 22-23 | FY 23-24 | FY 24-25 | FY 25-26 |
| Number of AccountsSingle-family [1] | 1,272 | 1,278 | 1,284 | 1,290 | 1,296 | 1,302 |
| Multifamily | 28 | 28 | 28 | 28 | 28 | 28 |
| Commercial Low | 27 | 27 | 27 | 27 | 27 | 27 |
| Commercial Medium | 1 | 1 | 1 | 1 | 1 | 1 |
| Commercial High | 3 | 3 | 3 | 3 | 3 | 3 |
| Schools (Elem and Middle) | 2 | 2 | 2 | 2 | 2 | 2 |
| Total Accounts  | 1,333 | 1,339 | 1,345 | 1,351 | 1,357 | 1,363 |
| Number of UnitsMultifamily (Dwelling Units) [1] | 390 | 392 | 394 | 396 | 398 | 400 |
| Schools (Elem and Middle) (ADA) [2] | 796 | 796 | 796 | 796 | 796 | 796 |

1. Residential accounts increase by 0.5% annually.
2. Average Daily Attendance (ADA).

### Number of Water Meters of Wastewater Customers

Table 16 provides a summary of the current and projected average number of wastewater customers by meter size. Most customers have a 3/4-inch meter (97 percent) installed at the service location. It is assumed that all new residential customers will have 1-inch meters installed and this is the minimum size for new meter installations for the District’s customer base.

Table 16

Historical and Projected Number of Water Meters by Size of Wastewater Customers

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Historical Description FY 20-21 |  |  | Projected |  |  |
| FY 21-22 | FY 22-23 | FY 23-24 | FY 24-25 | FY 25-26 |
| Active Wastewater Meters/Accounts [1] 5/8" 28 | 28 | 28 | 28 | 28 | 28 |
| 3/4"  | 1,290 | 1,290 | 1,290 | 1,290 | 1,290 | 1,290 |
| 1" | 1 | 7 | 13 | 19 | 25 | 31 |
| 1.5" | 0 | 0 | 0 | 0 | 0 | 0 |
| 2" | 11 | 11 | 11 | 11 | 11 | 11 |
| 3" | 0 | 0 | 0 | 0 | 0 | 0 |
| 4" Total Accounts | 3 | 3 | 3 | 3 | 3 | 3 |
| 1,333 | 1,339 | 1,345 | 1,351 | 1,357 | 1,363 |

 [1] Historical Sewer accounts for FY 20-21 were provided through City billing records.

### Water Sales Volumes of Wastewater Customers

Table 17 provides the historical and projected water sales volumes of wastewater customers by classification.

Water sales volumes were projected by recognizing the growth in the number of accounts and the FY 2018-19 use per customer. Residential customers account for more than 87 percent of the water sales volumes of wastewater customers.

The water sales volumes of wastewater customers are used to calculate projected wastewater revenue and estimate wastewater discharge volumes. The wastewater discharge volumes are used for cost allocation purposes to assign cost responsibility to each class based on wastewater flow.

Table 17

Historical and Projected Water Consumption of Wastewater Customers (in HCF)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Historical Description FY 20-21 |  |  |  [1]Projected |  |
| FY 21-22 | FY 22-23 | FY 23-24 | FY 24-25 | FY 25-26 |
| Single-family 310,656 | 220,637 | 221,673 | 222,709 | 223,745 | 224,781 |
| Multifamily 13,132 | 41,042 | 41,251 | 41,461 | 41,670 | 41,879 |
| Commercial Low 6,275 | 5,479 | 5,479 | 5,479 | 5,479 | 5,479 |
| Commercial Medium 47 | 41 | 41 | 41 | 41 | 41 |
| Commercial High 15,832 | 13,824 | 13,824 | 13,824 | 13,824 | 13,824 |
| Schools (Elem and Middle) 17,912 | 15,640 | 15,640 | 15,640 | 15,640 | 15,640 |
| Total Projected Consumption 363,854 | 296,663 | 297,908 | 299,154 | 300,399 | 301,644 |

 [1] Forecast assumes that the use per customer from FY 18-19 and applied to the number of customers.

## Wastewater Financial Plan

The financial plan provides the means of analyzing the revenue and revenue requirements of the wastewater system and its impact on reserves as well as the ability to fund on-going O&M expense and capital infrastructure requirements. Discussed below are the projection of revenue, O&M expense, CIP needs of the wastewater system and its financing, and revenue adjustments needed to maintain a sustainable wastewater enterprise.

### Revenues

The Sewer Fund receives revenue from charges for wastewater service and miscellaneous sources. Wastewater service revenue is received from rates and charges for wastewater service. Table 18 presents the projected fixed and variable rate revenue from current wastewater rates of the wastewater system. The revenue is projected by applying the current wastewater rates from Table 14 to the projected number of accounts and consumption volume. The revenue calculated is entirely fixed rate revenue.

##### Table 18 Projected Rate-based Wastewater Revenue Using Existing Rates

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Description |  |  | Projected |  |  |
| FY 21-22 | FY 22-23 | FY 23-24 | FY 24-25 | FY 25-26 |
|  Wastewater Service RevenuesFixed Charges  [1] | $1,298,516 | $1,304,374 | $1,310,232 | $1,316,090 | $1,321,948 |
| Variable Charges [2] | 0 | 0 | 0 | 0 | 0 |
| Total Revenues From Current Rates | $1,298,516 | $1,304,374 | $1,310,232 | $1,316,090 | $1,321,948 |

1. FY 21-22 and forecast revenue calculated by multiplying current water service rate by the number of projected accounts.
2. There are no variable charges to w astewater customerscurrently. See Table 14.

### Miscellaneous Revenue

Miscellaneous revenues are received from inspection fees. Table 19 below provides sources of wastewater miscellaneous revenue. The amount shown in the first year reflects a budgeted amount.

##### Table 19 Projected Wastewater Miscellaneous Revenue

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Description | Budget |  | Projected |  |
| FY 21-22 | FY 22-23 | FY 23-24 FY 24-25 | FY 25-26 |

 Inspection Fees $5,000 $500 $500 $500 $500

 Total Miscellaneous Revenues $5,000 $500 $500 $500 $500

## Revenue Requirements

Revenue requirements of the wastewater system include O&M expense and capital replacement. Each of these items are discussed below.

### Operation and Maintenance Expense

O&M are an on-going obligation of the wastewater system and such costs are normally met from wastewater service revenue. O&M includes the cost to operate and maintain the wastewater collection system, lift stations, and treatment and disposal facilities. Costs also include technical services and other general and administrative expenses.

O&M has been projected recognizing the major expense categories of personnel services, electric power expense, capital outlay, and all other expenses. Personnel costs consist of salaries and benefits expense of those personnel directly involved with providing wastewater service. Salaries expense is projected to increase by 2 percent annually while benefits expense is projected to increase by 8 percent annually. Electric power expense is projected to increase annually at 3 percent while chemicals expense increases by 3 percent. All other O&M expense is projected to increase by 2 percent annually. Capital outlay is projected to increase by 3 percent annually. Table 25 provides a summary of the wastewater O&M expenses for the Study period.

Table 20

Historical and Projected Wastewater Operation and Maintenance Expense

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Description | Historical | Budget |  | Projected |  |
| FY 20-21 | FY 21-22 | FY 22-23 | FY 23-24 | FY 24-25 | FY 25-26 |
| AdministrationAdmin Salaries | $77,000 | $82,200 | $83,844 | $85,521 | $87,232 | $88,976 |
| Benefits  |  69,550  |  78,700  |  84,996  |  91,796  |  99,140  |  107,070 |
| All Other Subtotal |  123,680  |  100,550  |  102,561  |  104,610  |  106,702  |  118,834 |
| $270,230 | $261,450 | $271,401 | $281,927 | $293,074 | $314,880 |
| MaintenanceMaint Salaries | $118,701 | $128,000 | $130,560 | $133,171 | $135,834 | $138,551 |
| Benefits  |  103,682  |  114,000  |  123,120  |  132,970  |  143,608  |  155,096 |
| Maintenance Contract Turlock  |  8,000  |  360,000  |  367,200  |  374,544  |  382,035  |  389,676 |
| Maintenance Utilities  |  20,553  |  10,000  |  10,300  |  10,609  |  10,927  |  11,255 |
| All Other  |  406,379  |  105,050  |  107,151  |  109,295  |  111,481  |  123,710 |

 Subtotal $657,815 $717,050 $738,331 $760,589 $783,885 $818,288

 Total Wastewater System O&M Expense $928,045 $993,500 $1,025,182 $1,058,430 $1,093,350 $1,150,051

### Capital Replacement

An annual amount for capital replacement is generated from the current wastewater rates and financial plan and is used towards capital spending or kept in reserve for such spending. The amount ranges from about $150,000 to $320,000 annually in the Study period.

## Wastewater Capital Improvement Program

The District has developed a CIP that lists wastewater capital expenditures for FY 2021-22 through FY 2025-26, presented in Table 21. The largest project identified is the vacuum truck purchase with the maintenance shop and other asset replacement purchases shown in the table. The District projects that it will spend approximately $2.0 million over this period. The CIP is funded through wastewater rate revenue and cash reserves.

Table 21

Wastewater Capital Improvement Program

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Description | Budget |  | Projected |  |
| FY 21-22 | FY 22-23 | FY 23-24 FY 24-25 | FY 25-26 |
| Current Capital Improvement Program (CIP) Projects [1]Maintenance Shop and Property Purchase | $450,000 | $0 |  $0 $0 | $0 |
| Camel Vacuum Truck Purchase  |  800,000  |  -  |  - -  |  - |
| Replace Lamp Holes with Manholes  |  -  |  -  |  - 109,300  |  - |
| Proposed Asset Replacement Projects [2]  |  130,000  |  130,000  |  130,000 130,000  |  130,000 |

Total Wastewater CIP

$1,380,000

$130,000

$130,000

$239,300

$130,000

1. CIP Source: FY 21-22 District CIP document.
2. Assumed annual replacement.

## Wastewater Financial Plan

A financial plan has been prepared for the wastewater utility that includes the revenues and revenue requirements that were identified for the wastewater system. The plan is presented in Table 22 and incorporates specific financial planning goals to provide guidance to maintain the health of the wastewater utility on an on-going basis. The goals included the following items.

* Generate positive levels of income in each year of the Study period
* Fund capital improvement program requirements
* Maintain the operating and capital reserves at or greater than target levels
* Fund the required debt service reserve
* Maintain debt service coverage ratios at or greater than the minimum required

### Proposed Revenue Adjustments

Table 22 provides the annual revenue increases recommended to meet the financial planning goals for the fiveyear Study period. The financial plan indicates that no revenue increases are required during the Study period.

###### Table 22 Wastewater Financial Plan

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Description |  |  | Projected |  |  |
| FY 21-22 | FY 22-23 | FY 23-24 | FY 24-25 | FY 25-26 |
|  Proposed Revenue Increase (January 1) | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
|  |  |  |  |  |  |
| Wastewater Operations |  |  |  |  |  |
| RevenueRevenues from Existing Sewer Rates [1] | $1,298,516 | $1,304,374 | $1,310,232 | $1,316,090 | $1,321,948 |
|  Additional Revenue from Revenue Increases [2]  |  -  |  -  |  -  |  -  |  - |
|  Miscellaneous Income [3]  |  5,000  |  500  |  500  |  500  |  500 |
|  Interest Income [4]  |  9,156  |  6,524  |  6,915  |  7,240  |  7,231 |

 Total Revenues $1,312,672 $1,311,398 $1,317,647 $1,323,830 $1,329,679

Revenue Requirements

 Operation and Maintenance Expense $993,500 $1,025,182 $1,058,430 $1,093,350 $1,150,051

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Transfer to Wastewater Capital |  319,172 |  270,216 |  243,217 |  212,480 |  151,628 |
| Total Revenue RequirementsNet Funds Available Before Capital | $1,312,672 | $1,295,398 | $1,301,647 | $1,305,830 | $1,301,679 |
| $0 | $16,000 | $16,000 | $18,000 | $28,000 |
| Wastewater Capital |  |  |  |  |  |
| Capital Sources of FundsTransfer from Wastewater OperationsTotal Capital SourcesCapital Uses of Funds | $319,172 | $270,216 | $243,217 | $212,480 | $151,628 |
| $319,172 | $270,216 | $243,217 | $212,480 | $151,628 |
| Capital Improvement Program | $1,380,000 | $130,000 | $130,000 | $239,300 | $130,000 |
| Total Capital Improvement Spending | $1,380,000 | $130,000 | $130,000 | $239,300 | $130,000 |
| Net Funds After Capital | ($1,060,828) | $156,216 | $129,217 | ($8,820) | $49,628 |
| Available Operating and Capital Reserves |  |  |  |  |
| Available ReservesBeginning available reserves [5] | $3,662,429 | $2,601,601 | $2,757,817 | $2,887,034 | $2,878,214 |
| Additions (reductions) | (1,060,828) | 156,216 | 129,217 | (8,820) | 49,628 |
| Ending available reserves | 2,601,601 | 2,757,817 | 2,887,034 | 2,878,214 | 2,927,842 |
| Target Reserves [6] | 630,000 | 697,000 | 714,000 | 734,000 | 767,000 |
| Above (below) Target | $1,971,601 | $2,060,817 | $2,173,034 | $2,144,214 | $2,160,842 |

1. Projected using the existing rate schedule effective July 1, 2019.
2. Additional revenue from proposed rate adjustments.
3. Includes late charges, miscellaneous, and other income.
4. Interest earnings on the average fund balance calculated at 0.25%.
5. The available beginning FY 21-22 cash balance provided by City.
6. Includes Operation and Maintenance reserve, Capital Replacement reserve, and Emergency Capital Reserve.

A graphical depiction of the revenue and revenue requirements from Table 27 are presented in Figure 3. Revenue using the current rates is shown as the red line. The figure shows that the wastewater revenue received from the current rates is sufficient to meet the needs of the wastewater utility’s annual O&M and capital requirements.

The orange column indicates that the current wastewater rates are generating cash available for capital spending and or for accumulation for such purposes in the future.

Figure 3

Wastewater Financial Plan

Comparison of Annual Revenue with Revenue Requirements

$0.0

$0.2

$0.4

$0.6

$0.8

$1.0

$1.2

$1.4

$1.6

FY 21-22

FY 23-24

FY 25-26

FY 27-28

FY 29-30

Revenues and Revenue Requirements ($ Millions)

O&M

Replacement

Debt Service

Revenue with Increases

Revenue w/o Increases

Figure 4 compares the cash reserves at the end of year with the Target Reserve level. The columns represent the cash reserve balance at the end of year while the red line indicates the Target Reserve level. The figure shows that the operating and capital fund reserve balance (column) is above the Target Reserve (red line) in all years and is adequate to meet Target Reserve levels.

Figure 4

Wastewater Cash Reserves

Comparison of Projected End of Year Cash Reserves with Target Reserve Level

$0.0

$0.5

$1.0

$1.5

$2.0

FY 21-22

FY 23-24

FY 25-26

FY 27-28

FY 29-30

(

)

$ Millions

Total Reserves

Target Reserves

# Wastewater Rate Design

The goal of the rate design is to achieve fairness while ensuring that each customer class pays its fair share of costs. Rates should be simple to administer, easy to understand, and comply with regulatory requirements. The current District wastewater rates account for customer flow and strength and meet industry accepted methodology for wastewater rates.

From Table 22, no revenue increases were required to maintain a sustainable wastewater enterprise and no change to the District’s wastewater rate structure is recommended at this time.

## Proposed Wastewater Rates

Table 23 presents the proposed fixed charges for the wastewater system for the next five years. The current fixed charges are provided in the table as well as the proposed charges.

Table 23

Current and Proposed Wastewater Fixed Charges

|  |  |
| --- | --- |
| Current | January 1, January 1, January 1, January 1, January 1,  |
| Rate |  2022 2023 2024 2025 2026 |

 Fixed Charge ($ per month)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Single-family | $64.23 | $64.23 | $64.23 | $64.23 | $64.23 | $64.23 |
| Multifamily | $51.39 | $51.39 | $51.39 | $51.39 | $51.39 | $51.39 |
| Commercial Low | $64.23 | $64.23 | $64.23 | $64.23 | $64.23 | $64.23 |
| Commercial Medium | $111.28 | $111.28 | $111.28 | $111.28 | $111.28 | $111.28 |
| Commercial High | $166.67 | $166.67 | $166.67 | $166.67 | $166.67 | $166.67 |
| Schools (Elem and Middle) | $1,816.67 | $1,816.67 | $1,816.67 | $1,816.67 | $1,816.67 | $1,816.67 |

# Wastewater Bill Impact Analysis

There is no impact to SFR customer wastewater bills since the proposed wastewater rates are the same as the current rates. As shown in Table 24, a SFR customer experiences no change in their monthly bill. Wastewater bills for other classifications are also provided in the table.

Table 24

Comparison of Current Monthly Wastewater Bills with Bills Using

Proposed Wastewater Rates

|  |  |
| --- | --- |
|  | Proposed January 1, 2022 Bill |
| Customer Class |  Current Monthly Bill  |  Proposed Monthly Bill  | Dollar Difference |  Percent Increase  |
| Single-family | $64.23 | $64.23 | $0.00 | 0.0% |
| Multifamily | $51.39 | $51.39 | $0.00 | 0.0% |
| Commercial Low | $64.23 | $64.23 | $0.00 | 0.0% |
| Commercial Medium | $111.28 | $111.28 | $0.00 | 0.0% |
| Commercial High | $166.67 | $166.67 | $0.00 | 0.0% |
| Schools (Elem and Middle) | $1,816.67 | $1,816.67 | $0.00 | 0.0% |

# Wastewater Rate Survey

A wastewater rate survey was conducted for neighboring communities to the Keyes Community Services District. Chart 2 compares the District’s SFR monthly wastewater bill with those of neighboring communities. The rate survey includes rate schedules in effect October 2021. Wastewater bills for the District are shown using the current rates and the proposed rates. The chart indicates that a District SFR customer will experience a bill that is in the mid to upper range of the communities listed.

Chart 2

Comparison of Single-family Residential Monthly Wastewater Bills



Note: Above table uses wastewater rates in effect October 2021. Keyes Community Services District bill is based on the rate structure and rates in Table 23.