2021 RECYCLED WATER RATE STUDY

San Elijo Joint Powers Authority

April 2021

carollo

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Section 1

INTRODUCTION

1.1 Background

1.1.1 About San Elijo Joint Powers Authority

The San Elijo Joint Powers Authority (SEJPA or Authority) owns and operates a recycled water utility within San Diego County, California with deliveries beginning in 2000. At that time, SEJPA initiated recycled water service to Santa Fe irrigation District (SFID), the San Dieguito Water District (SDWD), and the City of Del Mar. Starting in 2011, SEJPA began providing interruptible recycled water service to the Encinitas Ranch Golf Authority (ERGA) as part of an agreement with SDWD and ERGA. Recycled water service to Olivenhain Municipal Water District (OMWD) began in 2012. Service is provided to the purveyors and to ERGA through contract agreements with SEJPA that includes specifications for water quality, annual consumption volume, pricing, and other terms and conditions.

SEJPA's recycled water system includes tertiary treatment, transmission, storage, distribution, and advanced water purification (AWP) facilities. The recycled water utility can produce more than three million gallons per day (gpd). SEJPA's recycled water program creates a locally produced and drought resistant water supply for irrigation and industrial uses, thereby improving water reliability regionally. The San Diego region currently relies on imported water for the majority of its water supply. In addition, recycled water generally has a lower energy footprint than imported water or ocean desalination, which aligns with both local and state climate action goals.

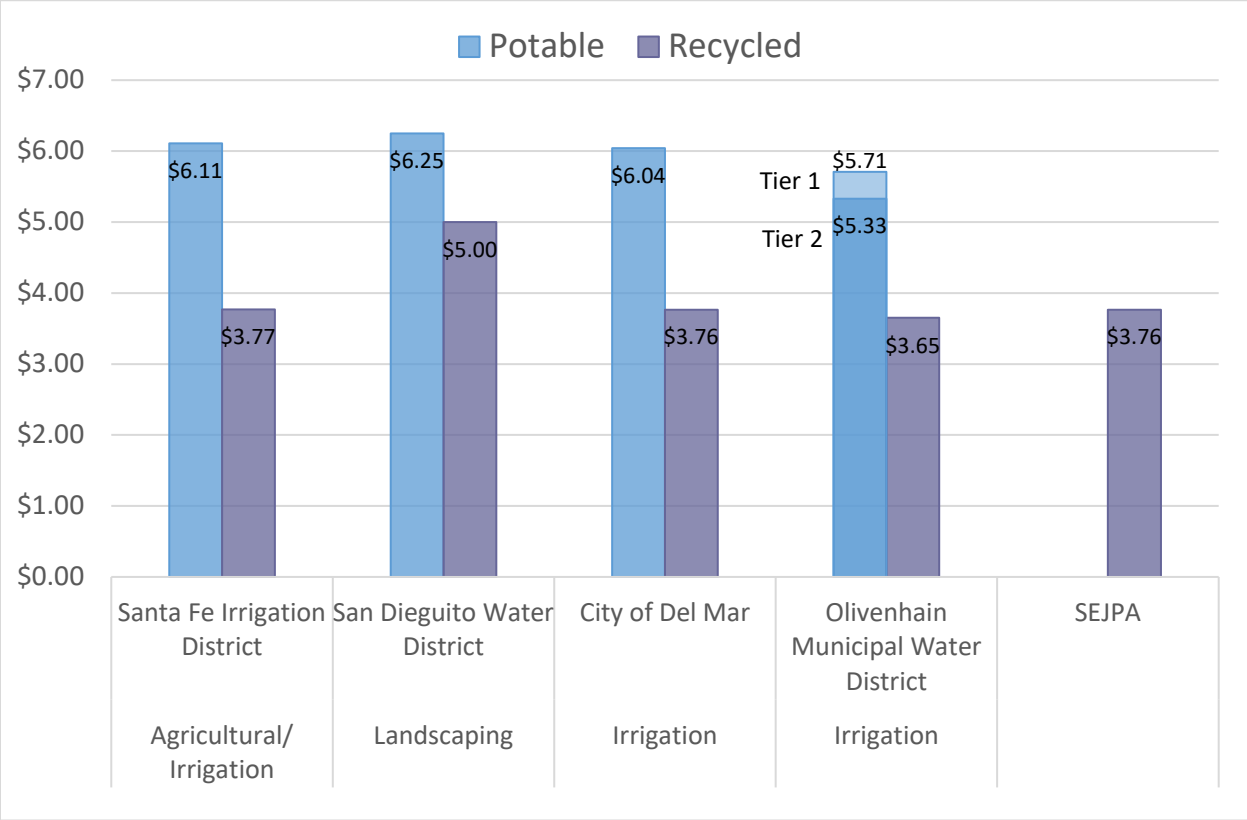
SEJPA actively collaborates with the water purveyors to expand the use of recycled water by facilitating customer conversions and connections, expanding distribution and storage infrastructure, and incentivizing infrastructure expansion by the purveyors through pipeline lease and purchase agreements.

When the recycled water utility launched in 2000, water pricing was established as 85-percent of the applicable potable water rate as set by the water purveyors, which provided a 15-percent discount to the customer as incentive to use recycled water. In 2014, the recycled water agreements between SEJPA and the water purveyors were amended to remove the "indexing" of recycled water rates to potable water rates. In lieu of indexing, future recycled water rates would be established using cost of service principles. This change in recycled water pricing produced additional savings to water purveyors and ultimately the customers. For example, SFID in 2021 retails recycled water at $3.77 per HCF or 62-percent of the Irrigation/Commercial Agriculture water rate, producing a 38-percent discount to recycled water customers.

OMWD's rate for recycled water is $3.65 per HCF; SDWD's rate for recycled water varies from $4.34 to $5.09 per HCF based on use type; and Del Mar's rate is $3.76 per HCF. Each water purveyor has its own methodology for recovering costs for the provision of recycled water service and all rate are at least 20-percent less than the corresponding potable water category. Looking forward, each water purveyor has developed its own potable water cost of service forecast with future water rates generally increasing between 2.6-percent and 6.5-percent with SFID forgoing its planned 2021 rate increase of 3% due to local economic conditions. On the regional level, San Diego County Water Authority is planning its 2021 rate increase at 4.8-percent. Figure 1

compares the water purveyors' current potable water irrigation or landscape rate and recycled water rate to SEJPA's current rate.

Figure 1 Water Purveyors Current Potable and Recycled Water Rates per HCF



1.1.2 Study Purpose

SEJPA retained Carollo Engineers (Carollo) to conduct this 2021 Recycled Water Rate Study (Study). The purpose of this Study is to assess SEJPA's current recycled water wholesale rates, financial metrics, and recycled water demands and provide rate recommendations starting with FYE 2022 through FYE 2026.

Having been in operation for just over 20 years, SEJPA's recycled water program is in the process of maturing into an established utility. While the customer base continues to grow slowly, which adds a level of certainty to expected demands, demand fluctuation and revenue volatility can be impacted by weather. Further, some system components are beginning to near the end of their expected useful life and will require rehabilitation or replacement in the near term to ensure the system's reliability. Lastly, the incentives that SEJPA receives from the Metropolitan Water District of Southern California (MWD) and from the San Diego County Water Authority (SDCWA) will sunset after FYE 2026, decreasing annual revenues by approximately $700,000. Given these factors, it is important that the rate plan provides fiscal stability by providing sufficient reserves to protect from demand fluctuations, and generate the necessary revenues to continue investing in the system through capital projects.

1.1.3 Forward-Looking Statement

The calculations and forecasts of this analysis are based on a reasonable projection of existing service costs, recycled water demands, and system operations with information available, and on existing legal

requirements. These projections are based upon operational and financial data provided by SEJPA. SEJPA may need to revisit the financial plan and rate setting analysis if significant changes occur in the assumed inputs for this analysis, such as unexpected changes to SEJPA's recycled water agreements, changes occurring in specific California law governing water agencies, or further regulatory actions by the Governor of California or the California State Water Resources Control Board (SWRCB) in regard to water.

1.2 Overview of Rate-Setting Process

Carollo's rate-setting methodology is consistent with industry guidelines established by the M1 Manual, which is published by the American Water Works Association (AWWA), a national industry trade group that makes recommendations on generally accepted practices in the water industry. An overview of this approach is outlined in Figure 2.

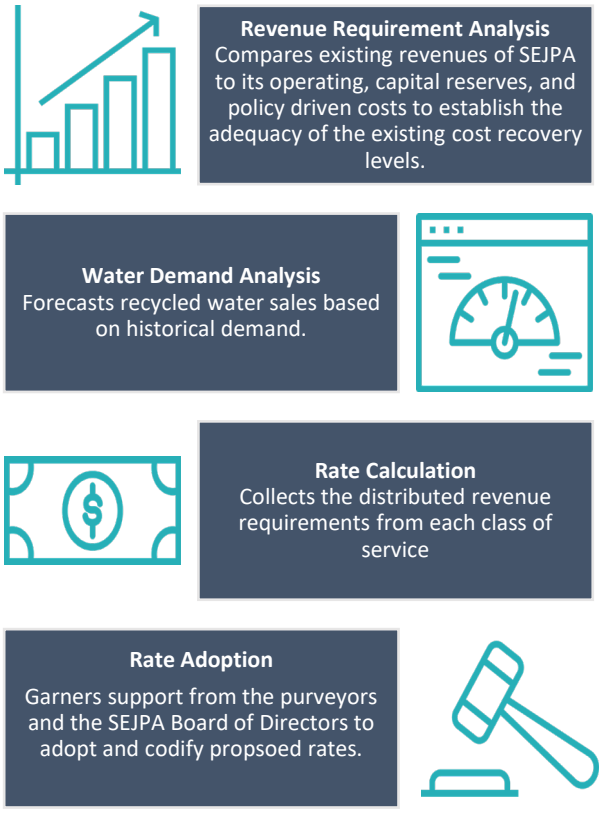


Figure 2 Conceptual Overview of the Rate-Setting Process

1.2.1 Revenue Requirement Analysis

The revenue requirement analysis compares the forecasted revenues of SEJPA (under existing rates and forecasted recycled water demands) to its forecasted operating and capital costs. This step tests the adequacy of the existing rates to recover SEJPA's forecasted costs. If there are shortfalls, increases to rate revenue are recommended until the tests are passed.

1.2.2 Recycled Water Demand Analysis

Forecasting recycled water sales is a critical component in the rate setting process. As part of the budget process, SEJPA forecasts the expected recycled water demand based on historical demand, weather, and other variables. Future demands are based on historic sales and escalated for projected growth. Two scenarios were developed that forecasted future water sales creating high and low demand projection. These forecasted recycled water demands are then compared against forecasted revenue requirements and various rates scenarios are developed to recover costs, fund capital projects, and meet reserve fund goals.

1.2.3 Rate Calculation

The rate calculation provides the final nexus between the revenue requirements and final rates that purveyors are charged. This process connects planned expenditures to the designed rates by establishing rates to match the estimated revenue generation with expenditures and to account for adequate program reserves.

1.2.4 Rate Adoption

As a wholesaler providing service under contract agreements, SEJPA is not subject to the procedural requirements for rate adoption under California Proposition 218, as well as its strict rate setting requirements. Nonetheless, it is important that the recycled water rates are set in a manner that reflects the true revenue requirements of providing recycled water service and proportionally recover those costs to the purveyors

based on their usage of the system. SEJPA also proactively engages with the purveyors during the rate setting process to garner support for the rates prior to presenting them to the Board of Directors for consideration and adoption.

1.3 Existing Rate Structure

SEJPA's agreements with SFID, SDWD, OMWD, and the City of Del Mar include minimum annual purchase volumes. SEJPA's interruptible service agreement with ERGA includes a minimum annual delivery volume. All of these minimum volume agreements allow the Authority to establish a minimum annual revenue stream for the program, which helps support the Authority's AA+ financial rating as well as to help reduce future rate volatility that can result from dramatic swings in annual water purchases from the program participants.

Table 1 Minimum Purchase Volumes

Purveyor	Minimum Purchase Volume (AFY), as of FYE 2021
Santa Fe Irrigation District	450
San Dieguito Water District	300
City of Del Mar	85
Encinitas Ranch Golf Authority	200
Olivenhain Municipal Water District	185
Total Minimum Purchase Volume, All Purveyors	**1,220 AFY**

Rate volatility is also limited by terms and condition within the existing purveyor agreements, which have a floor and ceiling provision that limits rate increases between 2 and 5 percent annually. Following the Authority's previous 2018 Recycled Water Rate Study, SEJPA implemented annual 3.8-percent rate increases from FYE 2018 through FYE 2021. Each recycled water purveyor, which the exception of ERGA, has a non-interruptible service agreement with SEJPA and each is charged the same recycled water rate on a $/AF basis as shown in Table 2 below. ERGA receives a pre-determined 4-percent annual increase as set forth in the agreement with the Authority, as this is an interruptible service agreement.

Table 2 Existing Recycled Water Rate

	FYE 2018	FYE 2019	FYE 2020	FYE 2021
Approved Rate Increase	3.8%	3.8%	3.8%	3.8%
Recycled Water Rate ($/AF)	**$1,466**	**$1,522**	**$1,580**	**$1,640**

Section 2

ASSUMPTIONS

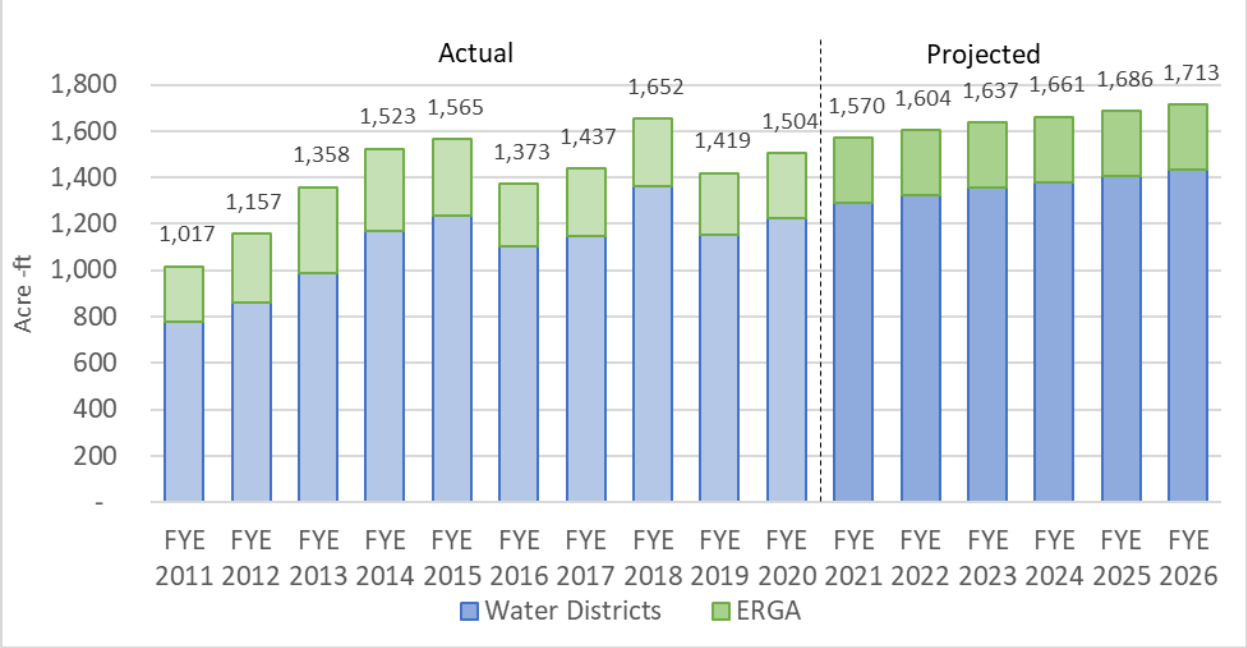
The Authority's recycled water revenues and expenses analyzed in this Study are forecasted based on actual and budgeted revenues, expenses, and demands by customer. Actual and budgeted revenues and expense data were provided by SEJPA in the form of audited financial statements and budget documents. Recycled water demands and cost escalation factors were forecasted based on discussion with Authority staff, industry data, and historical trends.

2.1 Recycled Water Demand

Recycled water sold by SEJPA via the purveyors is used almost exclusively for outdoor irrigation, with a minor demand component for industrial uses such as cooling towers and wash-water. Annual demands are influenced heavily by weather variation year-over-year. As shown in Figure 3, recycled water demands have fluctuated historically, with a general upward trend. Demands decreased in FYE 2016 during the last major drought as the State and local agencies mandated conservation measures. Although conservation was not mandated for recycled water, the message to conserve appeared to be received by both potable and recycled water customers as consumption was noticeably reduced. Demands then rebounded through FYE 2018 before decreasing again in FYE 2019 due to above average rainfall.

The Authority, its Member Agencies (City of Encinitas and Solana Beach), and the water purveyors have supported the continued investment and growth of recycled water use within their area of influence. Projects completed in the last five years include Village Park, Encinitas Ranch, and Via de la Valle expansion projects. It should be noted that the connection of new customers to these projects has been slower than originally forecasted.

Figure 3 Historical and Projected Recycled Water Demands



When looking forward, this Study considered annualized demand growth at 1.8% in the near team (next five years) and 0.5% thereafter. SEJPA has made investments to expand and improve the recycled water utility, often in partnership with the water purveyors or with the Cities of Encinitas and Solana Beach. The forecasted increase in recycled water demands reflects the expectation that new customers will continue to connect to the system via the recently constructed pipelines in the cities of Solana Beach and Encinitas, coupled with infill connections and retrofits to SEJPA's existing distribution system, as well as with the return of Caltrans landscape irrigation within the I-5 corridor.

The recycled water revenues analyzed in this Study are forecasted based on the expected demands from each purveyor. Table 3 summarizes the actual and forecasted recycled water demands by purveyor. Projected increases in demand for each customer are based on the expected new connections to the recycled water system within each customer's service area.

Table 3 Actual and Forecasted Recycled Water Demands (AF)

Customer	Actual FYE 2020	Budget FYE 2021	Forecasted FYE 2022	Forecasted FYE 2023	Forecasted FYE 2024	Forecasted FYE 2025	Forecasted FYE 2026
SFID	522	550	555	558	561	564	566
SDWD	366	385	397	409	411	413	415
City of Del Mar	108	114	114	114	114	114	114
ERGA	279	280	280	280	280	280	280
OMWD	229	241	258	276	295	316	338
Total Customer Usage[1]	**1,504**	**1,570**	**1,604**	**1,637**	**1,661**	**1,686**	**1,713**
(Less): ERGA	(279)	(280)	(280)	(280)	(280)	(280)	(280)
Total Usage for Rate Calculation	**1,225**	**1,290**	**1,324**	**1,357**	**1,381**	**1,406**	**1,433**

Notes:
(1) Projected usage includes supplemental potable water use, projected to be 6 AF per year in FYE 2021 through FYE 2025 and 7 AF in FYE 2026.
(2) Totals may not tie due to rounding.

2.2 Operating Revenues

SEJPA collects approximately 75-percent of its revenues through recycled water sales. SEJPA's other operating revenues include grants and annual incentives provided by MWD and SDCWA, which provides an incentive for up to 1,600 AFY in total annual sales. MWD provides $250/AF, and SDCWA provides $200/AF. The incentive program will sunset in September 2025.

Table 4 shows operating revenues from FYE 2021 budget to FYE 2026 projections. Each revenue item was calculated based on the projected recycled water demands. ERGA revenue was escalated at 4-percent per year, based on the existing agreement with the Authority.

Table 4 Projected Revenues with Current Rates

Revenue Item	Budget FYE 2021	Projection FYE 2022	Projection FYE 2023	Projection FYE 2024	Projection FYE 2025	Projection FYE 2026
Santa Fe Irrigation District	$902	$911	$915	$920	$924	$929
San Dieguito Water District	632	651	670	673	677	680
City of Del Mar	187	187	187	187	187	187
Olivenhain Municipal Water District	395	423	453	484	518	554
Total Water District Revenues	**$2,116**	**$2,171**	**$2,225**	**$2,265**	**$2,306**	**$2,351**
MWD/SDCWA Incentives(1)	707	720	720	720	720	311
IRWM Grant - Capital	50	-	250	500	400	600
IRWM Grant - Interfund Debt	-	600	-	-	-	-
Encinitas Ranch Golf Authority	291	303	315	328	341	354
Total Other Revenues	**$1,048**	**$1,623**	**$1,285**	**$1,548**	**$1,461**	**$1,265**
Total Revenues	**$3,163**	**$3,794**	**$3,510**	**$3,812**	**$3,767**	**$3,616**

Notes:
(1) FYE 2026 MWD/SDCWA subsidy revenue reflects a partial year of funding, as the program sunsets in September 2025.
(2) All monetary values in thousands of dollars.
(3) Totals may not tie due to rounding.

2.3 Operating Expenses

Operating expenses are costs that SEJPA incurs on an ongoing basis to provide recycled water service to its customers. These costs include items such as personnel expenses, supplies and services, utilities, rent, retrofit expenses, and capital outlay. Costs for most operating line items are projected using SEJPA's FYE 2021 budget as a basis and applying annual escalation factors. Retrofit expenses are projected at $100,000 in FYE 2021 and $50,000 per year thereafter. Capital outlay is expected to remain flat at $50,000 per year.

2.3.1 Cost Escalators

The assumed cost escalation factors for operating and maintenance (O&M) expenses are summarized Table 5 below. Cost escalators are held relatively constant through FYE 2023. Starting in FYE 2024, many of the escalators are increased by 0.5%. In FYE 2025, all escalators are increasing by 0.5% to account for greater uncertainty in projections as time progresses.

Table 5 O&M Cost Escalation Factors

Cost Escalator	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Operations	2.0%	2.0%	2.5%	3.0%	3.0%
Labor	2.5%	2.5%	2.5%	3.0%	3.0%
Energy	3.0%	3.0%	3.5%	4.0%	4.0%
Chemicals	3.0%	3.0%	3.5%	4.0%	4.0%
Water Cost	2.5%	3.0%	3.5%	4.0%	4.5%
Construction/Capital	2.0%	2.0%	2.0%	2.5%	3.0%

2.3.2 Projected Operating Expenses

Projected operating expenses are summarized in Table 6. As shown, total operating expenses are expected to increase from approximately $1.86 million in FYE 2021 to approximately $2.10 million in FYE 2026, an annualized increase of 2.5-percent. This increase is driven solely by expected cost inflation as SEJPA does not anticipate any changes to recycled water operations that would impact costs over the Study timeframe.

Table 6 Projected Operating Expenses

Expense Category/Item	FYE 2021	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Personnel Costs	$642	$658	$675	$691	$712	$733
Supplies and Services	610	624	638	655	676	698
Rent	108	116	124	133	142	152
Retrofit Expenses	100	50	50	50	50	50
Utilities	353	363	374	387	402	418
Capital Outlay	50	50	50	50	50	50
Total Operating Expenses	**$1,864**	**$1,861**	**$1,910**	**$1,966**	**$2,033**	**$2,102**

Notes:
(1) All monetary values in thousands of dollars.
(2) Totals may not tie due to rounding.

2.4 Existing Debt Service

The Authority has two outstanding debt service obligations, three pipeline cost reimbursement commitments, and one interfund loan with the Authority's wastewater program. Debt service associated with each of the existing debt service obligations is presented below in Table 7.

2.4.1 Outside Debt Obligations

Existing debt service includes a 2012 Municipal Finance Corporation Loan, which funded the Authority's AWP facility, and a State Revolving Fund (SRF) Loan, which funded the Authority's original recycled water system infrastructure. The SRF loan will be fully repaid in FYE 2021. The Authority's 2012 Municipal Finance Corporation Loan has the potential to be refinanced at a lower interest rate in FYE 2022.

2.4.2 Pipeline Cost Reimbursements

SEJPA has promoted the expansion of recycled water service within the purveyors' service areas by offsetting the costs of local recycled water transmission and distribution systems through pipeline reimbursement agreements. Existing pipeline cost reimbursement obligations include agreements with SFID, OMWD, and Solana Beach.

SFID Pipeline Transfer and Cost Reimbursement

The SFID Pipeline Transfer and Cost Reimbursement is designed to reimburse SFID for pipeline infrastructure that was constructed to expand its recycled water service. Based on the agreement, SEJPA pays SFID $450 per AF delivered via the subject pipeline, as well as interest payments on the outstanding principal balance. As of the end of FYE 2021, the outstanding principal is anticipated to be $422,971. For this analysis, future payments are projected assuming that 28.7 AF are delivered via the pipeline each year. Interest payments are calculated assuming a 2-percent interest rate.

Solana Beach Pipeline Transfer and Cost Reimbursement

The Solana Beach Pipeline Transfer and Cost Reimbursement Agreement is designed to reimburse the City of Solana Beach for pipeline infrastructure that was constructed to expand its recycled water service. Based on the agreement, SEJPA pays Solana Beach $450 per AF delivered via the subject pipeline and payments will continue until the full construction cost of the pipeline is reimbursed to Solana Beach. At the end of FYE 2021, the outstanding balance is anticipated to be $554,752 with the planned receipt of $600,000 in IRWM grant revenues. The payment for this pipeline in FYE 2021 (which is the first payment) is calculated based on deliveries made via the pipeline from FYE 2017 though FYE 2021, for a projected total of 82 AF. Payments for subsequent years are based on the actual deliveries via the pipeline, which is projected to be 22 AF in FYE 2022, with annual deliveries expected to increase as new customers connect to the pipeline (2 AF annually until the ultimate pipeline demand of 40 AFY is reached in FYE 2031).

OMWD Pipeline Cost Reimbursement

SEJPA and OMWD entered the OMWD Pipeline Cost Reimbursement to provide a means for SEJPA to compensate OMWD for the use of the OMWD's local distribution infrastructure, which it self-funded. Based on the agreement, SEJPA pays OMWD $450 per AF delivered to OMWD customers. The projected payments are based on the forecasted demands shown above in Table 3. Based on the specific agreement with OMWD, these payments are included in the "Rent" line item of Table 6 and are not considered as debt service.

2.4.3 Interfund Loan

The interfund loan payments are included to repay the Authority's wastewater Capital Projects fund (Fund 50) for the Encinitas Ranch capital improvement project that it funded on behalf of the Recycled Water fund (Fund 20). The total amount of $1.7 million is to be refunded to Fund 50 over FYE 2022 and FYE 2023. The $1,050,000 payment in FYE 2022 will be partially offset by $600,000 in IRWM grant revenues (shown above in Table 4).

Table 7 Existing Debt Service

Debt Item	FYE 2021	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
AWP Loan	$148	$148	$148	$148	$148	$148
SRF Loan	835	-	-	-	-	-
SFID Pipeline Transfer & Cost Reimbursement	17	17	21	20	20	20
Solana Beach Pipeline Transfer & Cost Reimbursement	37	10	11	12	13	14
Interfund Loan	-	1,050	660	-	-	-
Total Debt Service	**$1,037**	**$1,225**	**$840**	**$180**	**$181**	**$182**

Notes:
(1) All monetary values in thousands of dollars.
(2) Totals may not tie due to rounding.

2.5 Capital Expenditures

SEJPA provided Carollo with its planned recycled water capital improvement plan (CIP) for the rate-setting period. The CIP includes a total of $10.7 million (2021 dollars) in capital expenditures for FYE 2021 through FYE 2030, with $7.2 million occurring within the Study period, FYE 2022 through FYE 2026.

Analyzed future costs were derived from the budgetary estimates that were provided in FYE 2021 dollars. Costs in future years were escalated between 2-percent and 3-percent annually between FYE 2022 and FYE 2025, then escalated at 3-percent thereafter to account for expected inflation in construction costs. With

the escalation factor applied, the analysis includes $11.9 million in capital expenditures from FYE 2021 to FYE 2030.

The CIP includes projects that are necessary to replace or rehabilitate aging infrastructure, as well as to enhance the reliability of the recycled water utility and allow for expanded service as forecasted in this Study.

- The recycled water treatment improvements will allow SEJPA to maintain and improve treatment production, recycle stormwater, and fulfill expected demands while continuing to meet water quality targets.
- The recycled water conveyance and storage project involves increasing system storage by up to 3 million gallons (MG); building infrastructure to more efficiently transfer water between storage tanks, reservoirs, and ponds; and to replace or rehabilitate an aging existing steel water storage tank.
- The recycled water distribution pumping reliability project will replace aging pumping infrastructure and add system improvements to ensure service reliability.
- Distribution system valves and miscellaneous appurtenances replacement program will provide funding for ongoing repair and replacement of discreet assets associated with the recycled water distribution system.

The projected annual planned CIP, in escalated dollars, is summarized in Table 8.

Table 8 Planned Capital Improvement Plan

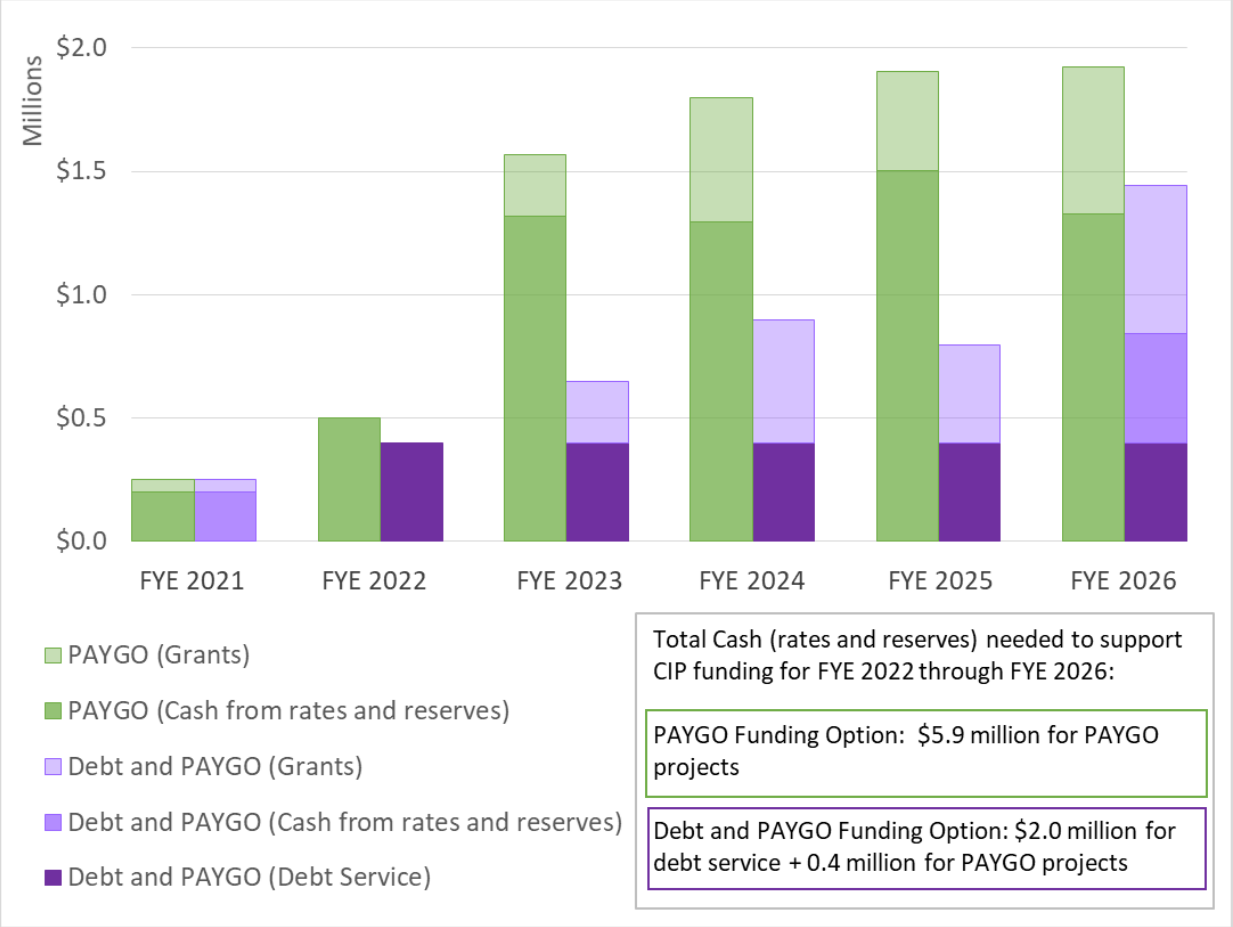
CIP Project	FYE 2021	FYE 2022[(1)]	FYE 2023	FYE 2024	FYE 2025	FYE 2026
RW Conveyance Projects	$-	$-	$-	$-	$-	$878
RW Storage Projects	-	245	216	226	1,193	990
RW Treatment Projects	-	255	1,353	1,571	710	56
Valve/Misc. Appurtenance Replacement	250	-	-	-	-	-
Total Planned CIP	**$250**	**$500**	**$1,569**	**$1,797**	**$1,904**	**$1,925**

Notes:
(1) Escalated from FYE 2021 dollars.
(2) All monetary values in thousands of dollars.
(3) Totals may not tie due to rounding.

The planned CIP from FYE 2021 through FYE 2030 is $11.9 million (escalated dollars), with $7.7 million (escalated dollars) in CIP expenses over the Study period. The Study considered two options to fund CIP. The first option is to use pay-as-you-go (PAYGO) cash funding, reserves, and grant funds. The second option considered is to use debt financing coupled with PAYGO cash funding, reserves, and grant funds. In both options, the grant funding assumption used is $1.75 million, which represents current grant awards to SEJPA for recycle water projects. The second option assumes that debt financing in the amount of $5.5 million would be available to fund projects starting in FYE 2022.

Figure 4 compares the annual capital funding needs for each option, PAYGO or Debt and PAYGO. The darker portion of the columns represent the amount of cash from rates or reserves that would be needed in each year to support the capital program. The lighter portions show the estimated amount of grant revenues to be applied to offset capital funding needs. The annual amounts for the Debt and PAYGO option include any cash funded projects as well as the debt service on the assumed bond or loan. As shown, the use of debt would require less cash over the study period, which could relieve pressure on rates and reserves.

Figure 4 CIP Funding Scenarios



2.6 Reserve Fund Targets

SEJPA's Recycled Water Program is a developing utility with a modest formal reserve policy associated with SRF debt service. To compliment this SRF debt reserve, the Board and Authority staff have completed previous financial planning with the goal of maintaining sufficient funds on hand to protect from and respond to unforeseen circumstances, along with building toward a replacement reserve target to fund ongoing and future rehabilitation and replacement of the recycled water system. Specifically, the Authority's prior financial planning efforts targeted a minimum reserve balance equal to 90 days of operating expenses, 1-year of debt service, and a repair and replacement reserve. The maximum reserve target has been the recycled water system's accumulated capital depreciation. Based on these assumptions, the minimum reserve target for FYE 2022 would be approximately $2.8 million, and the maximum target would be $9.7 million.

As a component of this Study, the Authority has developed updated reserve targets and assumptions. The developed reserve strategy more closely mirrors the policies of the individual water purveyors, with modifications and refinements to reflect the Authority's unique needs. The overall reserve target includes three main components: an operating reserve, a rate stabilization reserve, and a capital improvement and replacement reserve. Each component of the operational reserve provides its own unique set of funding and expense criteria and as such, each has varying target balances based on that defined criteria. The reserve components and associated targets are described in Table 9 and Table 10, respectively.

Table 9 Reserve Components

Reserve Fund Component	Function
Operating	Provides funds to ensure continuity of operations during short-term fluctuations in cash flows due to demand volatility, unanticipated costs, or other factors.
Rate Stabilization	Provides funding to: (1) Avoid unacceptable rate increases in combination with a cost-of-service study (2) Accommodate a temporary reduction in revenues or increase in expenses (3) Maintain compliance with any indebtedness obligations
Capital Improvement and Replacement	Provides funds for: (1) Unplanned or accelerated capital projects (2) Smooth budgetary and rate impacts of capital expenses (3) Fund replacement of equipment with short service life (4) Fund asset management activities

Table 10 Reserve Component Targets

Reserve Fund Component	Minimum Target	Maximum Target
Operating Reserve	60 days of operating expenses	120 days of operating expenses
Rate Stabilization Reserve	One year of debt service payments *Plus* 25-percent of the current fiscal year's budgeted sales revenue	One year of debt service payments *Plus* 100-percent of the current fiscal year's budgeted sales revenue
Capital Improvement and Replacement Reserve	100-percent current year cash CIP, 50% second year cash CIP, and 25% third year cash CIP	100-percent of current, second, and third year cash CIP

Table 11 shows the minimum and maximum reserve targets for FYE 2022. Because the component targets are tied to specific costs within the projections, the component and overall targets will vary each fiscal year depending upon the value of those specific costs. The targets presented in Table 11 are based on the operating cost projected above, no additional debt financing, and the CIP with the planned project implementation timing. If additional debt were to be issued, the reserve target would be adjusted accordingly based on the associated annual debt service.

Table 11 FYE 2022 Reserve Targets

Reserve Fund	Minimum Target	Maximum Target
Operating Reserve	$298	$595
Rate Stabilization Reserve - Debt Service	*$572*	*$572*
Rate Stabilization Reserve - Budgeted Revenues[(1)]	*$564*	*$2,256*
Subtotal: Rate Stabilization Reserve	$1,136	$2,828
Capital Improvement and Replacement Reserve	$1,733	$3,865
Total Reserve Target	**$3,167**	**$7,288**

Notes:
(1) Based on rate revenues assuming that a 3.9-percent rate increase is implemented fir FYE 2022.
(2) All monetary values in thousands of dollars.
(3) Totals may not tie due to rounding.

Section 3

REVENUE REQUIREMENTS AND RATES

The revenue requirement analysis is a test of a utility's fiscal health, scrutinizing the adequacy of current revenues against funding needs. This test sets the basis for rate planning and reviews the viability of the utility's revenues against operating and capital expenses, debt service, and reserve targets. Where cash flows and balances are insufficient, the revenue requirement analysis recommends the needed additional cash flows to meet all funding goals.

Carollo collected actual and budgeted revenues and expenditures, reserve fund balances and policies, planned capital improvement plan expenditures, existing and future annual debt service, and other relevant financial data to forecast funding needs. Once this forecast is established, three tests are performed to define the annual revenues requirements.

1. The **Cash Flow Sufficiency Test** looks for a net positive cash flow at the end of each fiscal year. This test looks at whether revenues exceed expenses. When they do not, this test recommends additional revenue.
2. The **Debt Service Coverage Test** assesses the ability of the utility to cover debt service payments. Utility bond issuances regularly include a stipulation that the agency maintain enough cash flows to cover the planned debt service plus an additional percent of that debt service. SEJPA's targeted ratio from its bond issuances is 1.5x. The higher multiple can provide credit rating agencies with additional evidence of SEJPA's strong financial health and support SEJPA's current AA+ rating to reduce long-term borrowing costs. If net revenues fall below this ratio, this test recommends additional revenue.
3. The **Reserve Sufficiency Test** assesses the ability of the utility to meet the minimum reserve target through the Study period. If projected year end reserve balances fall below the minimum target, this test recommends additional revenue.

Carollo looks at all three tests over the study period to identify years where revenue adjustments are necessary. Carollo also considers the impact of the projected financial plan on SEJPA's reserve balances and looks at operating, capital, and other funds' performance against Authority policy minimums.

3.1 Baseline Revenue Requirements – 2-percent Rate Increase

The cash flow sufficiency test evaluates revenues received by SEJPA to see that they are projected to cover both operating and non-operating expenses. If recycled water rates increase at the lowest level allowed by the agreement with the water purveyors (2-percent annually), inflation increases on program expenses erode program reserves impacting the ability to fund future capital projects and to meet minimum recommend reserve levels. As summarized in Table 12, increasing rates at 2-percent annually during the 5 year rate period of this Study produces insufficient revenues.

Table 12 Cash Flow Sufficiency Test with 2-percent Annual Rate Increases

Revenue/Expense Item[1]	FYE 2021	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Rate Revenues under Annual 2% Rate Increases	$2,116	$2,215	$2,315	$2,403	$2,497	$2,595
Incentives	707	720	720	720	720	311
Grants	50	600	250	500	400	600
Encinitas Ranch Golf Authority	291	303	315	328	341	354
Total Revenues	**$3,163**	**$3,837**	**$3,600**	**$3,951**	**$3,957**	**$3,860**
Total Operating Expenses	**$1,864**	**$1,861**	**$1,910**	**$1,966**	**$2,033**	**$2,102**
Debt Service	$1,037	$175	$180	$180	$181	$182
Interfund Loan	0	1,050	660	0	0	0
Total Debt Service	**$1,037**	**$1,225**	**$840**	**$180**	**$181**	**$182**
Capital Expenses	$250	$500	$1,569	$1,797	$1,904	$1,925
Total Revenue Requirements	**$3,150**	**$3,586**	**$4,319**	**$3,943**	**$4,117**	**$4,208**
Cash Flow Surplus/Deficit	**$13**	**$252**	**($719)**	**$7**	**($160)**	**($348)**
Beginning Fund Balance[3]	$2,794	$2,807	$3,059	$2,339	$2,347	$2,187
Contribution to (Use of) Reserves	13	252	(719)	7	(160)	(348)
Ending Fund Balance	**$2,807**	**$3,059**	**$2,339**	**$2,347**	**$2,187**	**$1,839**
Minimum Reserve Target	*$2,756*	*$2,760*	*$4,007*	*$4,326*	*$4,285*	*$3,885*
Maximum Reserve Target	*$6,067*	*$6,850*	*$8,375*	*$8,838*	*$8,312*	*$7,392*

Notes:
(1) All monetary values are in thousands of dollars.
(2) Totals may not tie due to rounding.
(3) Includes funds from SRF loan reserve.

3.2 Baseline Debt Coverage Test – 2-percent Rate Increase

Assuming annual inflationary increases of 2-percent, SEJPA is projected to meet the targeted debt service coverage ratio (DSCR) of 1.5 times debt service in FYE 2022 and through the five-year rate setting period. Table 13 summarizes the debt service coverage test.

Table 13 Debt Coverage Test with 2-percent Annual Rate Increases

Revenue/Expense Item	FYE 2021	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Operating Revenues [1]	**$3,113**	**$3,237**	**$3,350**	**$3,451**	**$3,557**	**$3,260**
Operating Expenses exc. Capital Outlay	1,814	1,811	1,860	1,916	1,983	2,052
Revenues Available for Debt Service	**$1,300**	**$1,426**	**$1,489**	**$1,534**	**$1,574**	**$1,208**
Debt Service[2]	**$1,037**	**$175**	**$180**	**$180**	**$181**	**$182**
DSCR[3]	**1.25x**	**8.15x**	**8.29x**	**8.51x**	**8.70x**	**6.65x**

Notes:
(1) Excluding grants.
(2) Excluding interfund loans.
(3) DSCR equal to "Revenues Available for Debt Service" divided by "Debt Service".
(4) All monetary values are in thousands of dollars.
(5) Totals may not tie due to rounding.

3.3 Modeled Financial Scenarios

Carollo evaluated multiple financial scenarios to compare various rate increases, capital funding plans, and debt financing options for the Authority.

1. 2.0-percent rate Increase with PAYGO Funding[1]
2. 3.9-percent rate Increase with PAYGO Funding
3. 5.0-percent rate Increase with PAYGO Funding
4. 3.9-percent rate Increase with Debt & PAYGO Funding

3.3.1 3.9-percent Rate Increases with PAYGO Funding

Table 14 summarizes the financial forecast with annual 3.9-percent increases and planned annual CIP expenses. While this level of increase would be sufficient to cover expenses and meet debt service coverage requirements, the timing of the CIP would lead to reserves being spent down over the next five years. The projected operational fund balance would remain below the minimum reserve target in all years of the study period, providing diminutive shelter from unforeseen increases in costs or decreases in revenues.

Table 14 Financial Forecast – 3.9-percent Rate Increases with PAYGO Funding

Revenue/Expense Item(1)	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Rate Increase	**3.9%**	**3.9%**	**3.9%**	**3.9%**	**3.9%**
Rate Revenues (Existing Rates)	$2,171	$2,225	$2,265	$2,306	$2,351
Revenue From Rate Increases	85	177	275	381	496
Other Revenues	1,623	1,285	1,548	1,461	1,265
Total Revenues	**$3,879**	**$3,687**	**$4,087**	**$4,148**	**$4,111**
Total Operating Expenses	1,861	1,910	1,966	2,033	2,102
Debt Service	175	180	180	181	182
Interfund Loan	1,050	660	0	0	0
Rate Funded Capital (PAYGO)	500	1,569	1,797	1,904	1,925
Total Revenue Requirements	**$3,586**	**$4,319**	**$3,943**	**$4,117**	**$4,208**
DSCR, after rate increase	**8.39x**	**8.77x**	**9.27x**	**9.76x**	**8.04x**
Cash Flow Surplus/Deficit	$293	($632)	$144	$31	($97)
Ending Fund Balance	**$3,100**	**$2,468**	**$2,612**	**$2,643**	**$2,546**
Minimum Reserve Target	*$2,770*	*$4,029*	*$4,360*	*$4,333*	*$3,948*
Maximum Reserve Target	*$6,892*	*$8,462*	*$8,975*	*$8,503*	*$7,643*

Notes:
(1) All monetary values are in thousands of dollars.
(2) Totals may not tie due to rounding.

Table 15 shows the calculated rates for the forecast presented above in Table 14. Rates are calculated by dividing the revenue required from rates by the total projected usage. The rate revenue requirement for each year is equal to the total expenses, plus or minus any contribution to or use of reserves, less other revenues.

[1] Summarized above in Section 3.1

Table 15 Calculated Rates – 3.9-percent Rate Increases with PAYGO Funding

Item [1]	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Total Expenses ($1,000s)	$3,586	$4,319	$3,943	$4,117	$4,208
Contribution To (Use Of) Reserves ($1,000s)	293	(632)	144	31	(97)
Less: Other Revenues ($1,000s)	(1,623)	(1,285)	(1,548)	(1,461)	(1,265)
Total Rate Revenue Requirement ($1,000s)	**$2,256**	**$2,402**	**$2,540**	**$2,688**	**$2,846**
Usage Subject to Rates (AF)	1,324	1,357	1,381	1,406	1,433
Calculated Rate ($/AF)[1]	**$1,704**	**$1,770**	**$1,839**	**$1,911**	**$1,986**

Notes:
(1) Calculated rate equal to "Total Rate Revenue Requirement" divided by "Usage Subject to Rates".
(2) Totals may not tie due to rounding.

3.3.2 5.0-percent Rate Increases with PAYGO Funding

The 5.0-percent rate increase is the highest allowed by agreement with the water purveyors and provides the upper bookend to the considered rate increases. Table 16 summarizes the financial forecast with annual 5.0-percent increases and planned annual CIP expenses. While this level of increase would be sufficient to cover expenses and meet debt service coverage requirements, the timing of the CIP would lead to reserves being spent down in FYE 2022 and FYE 2023 before beginning to rebound slowly. The projected fund balance would remain below the minimum target in all years of the Study period, providing little shelter from unforeseen increases in costs or decreases in revenues.

Table 16 Financial Forecast – 5.0-percent Rate Increases with PAYGO Funding

Revenue/Expense Item[1]	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Rate Increase	**5.0%**	**5.0%**	**5.0%**	**5.0%**	**5.0%**
Rate Revenues (Existing Rates)	$2,171	$2,225	$2,265	$2,306	$2,351
Revenue From Rate Increases	109	228	357	497	649
Other Revenues	1,623	1,285	1,548	1,461	1,265
Total Revenues	**$3,903**	**$3,738**	**$4,169**	**$4,264**	**$4,265**
Total Operating Expenses	1,861	1,910	1,966	2,033	2,102
Debt Service	175	180	180	181	182
Interfund Loan	1,050	660	0	0	0
Rate Funded Capital (PAYGO)	500	1,569	1,797	1,904	1,925
Total Revenue Requirements	**$3,586**	**$4,319**	**$3,943**	**$4,117**	**$4,208**
DSCR, after rate increase	**8.52x**	**9.06x**	**9.72x**	**10.40x**	**8.88x**
Cash Flow Surplus/Deficit	$317	($581)	$226	$147	$57
Ending Fund Balance	**$3,124**	**$2,543**	**$2,769**	**$2,915**	**$2,972**
Minimum Reserve Target	*$2,776*	*$4,042*	*$4,380*	*$4,362*	*$3,986*
Maximum Reserve Target	*$6,916*	*$8,513*	*$9,057*	*$8,619*	*$7,797*

Notes:
(1) All monetary values in thousands of dollars.
(2) Totals may not tie due to rounding.

Table 17 shows the determination of rates for the forecast presented in Table 16. Rates are calculated by dividing the revenue required from rates by the projected usage of the water districts. The revenue required

from rates for each year is equal to the total expenses, plus or minus any contribution to or use of reserves, less other revenues

Table 17 Calculated Rates – 5.0% Rate Increases with PAYGO Funding

Item [1]	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Total Expenses ($1,000s)	$3,586	$4,319	$3,943	$4,117	$4,208
Contribution To (Use Of) Reserves ($1,000s)	317	(581)	226	147	57
Less: Other Revenues ($1,000s)	(1,623)	(1,285)	(1,548)	(1,461)	(1,265)
Total Rate Revenue Requirement ($1,000s)	**$2,280**	**$2,453**	**$2,621**	**$2,803**	**$3,000**
Usage Subject to Rates (AF)	1,324	1,357	1,381	1,406	1,433
Calculated Rate ($/AF)[1]	**$1,722**	**$1,808**	**$1,899**	**$1,993**	**$2,093**

Notes:
(1) Calculated rate equal to "Total Rate Revenue Requirement" divided by "Usage Subject to Rates".
(2) Totals may not tie due to rounding.

3.3.3 3.9-percent Rate Increases with Debt Funding

As an alternative option to using PAYGO funding for all CIP expenses, the CIP could be implemented as planned and partially funded using debt financing. The evaluated debt and PAYGO funding scenario includes 3.9-percent annual revenue increases. Such revenue increases are projected to keep SEJPA's revenues in line with cost inflation while supporting a debt financing required to fund the majority of near-term capital improvement expenditures. Combining this debt financing with inflationary revenue increases would avoid future rate hikes above inflation and would allow for reserve balances to reach the minimum target over the next four years.

Table 18 shows the assumptions used to estimate the annual debt service associated with the $5.5 million debt issuance. The assumed issuance cost and interest rate are intended to be conservative assumptions and as such, the actual debt service that SEJPA would pay could be lower if it elects to issue debt. Conversely, if market condition change leading to higher interest rates, the level of the debt service payment could rise.

Table 18 Debt Issuance Assumptions

Assumption	Value
Year of Issuance	FYE 2022
Project Funds Required	**$5,500,000**
Issuance Costs	137,500
Total Amount Financed	**$5,673,500**
Interest Rate	3.50%
Period (years)	20
Annual Debt Service	**$397,000**

Table 19 summarizes the financial forecast with 3.9-percent annual rate increases and the use of debt funding for $5.5 million of the projected CIP expenses.

Table 19 Financial Forecast – 3.9-percent Rate Increases with Debt & PAYGO Funding

Revenue/Expense Item[1]	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Rate Increase	**3.9%**	**3.9%**	**3.9%**	**3.9%**	**3.9%**
Debt Issuance	**$5,500**				
Rate Revenues (Existing Rates)	$2,171	$2,225	$2,265	$2,306	$2,351
Revenue From Rate Increases	85	177	275	381	496
Other Revenues	1,623	1,285	1,548	1,461	1,265
Total Revenues	**$3,879**	**$3,687**	**$4,087**	**$4,148**	**$4,111**
Total Operating Expenses	1,861	1,910	1,966	2,033	2,102
Existing Debt Service	175	180	180	181	182
New Debt Service	397	397	397	397	397
Subtotal: Debt Service	**572**	**576**	**577**	**578**	**578**
Interfund Loan	1,050	660	0	0	0
Rate Funded Capital (PAYGO)	0	250	500	400	1,044
Total Expenses	**$3,483**	**$3,397**	**$3,043**	**$3,010**	**$3,724**
DSCR, after rate increase	**2.57x**	**2.74x**	**2.90x**	**3.06x**	**2.52x**
Cash Flow Surplus/Deficit	$396	$290	$1,044	$1,138	$387
Ending Fund Balance	**$3,203**	**$3,493**	**$4,537**	**$5,675**	**$6,063**
Minimum Reserve Target	*$3,167*	*$4,426*	*$4,757*	*$4,730*	*$4,344*
Maximum Reserve Target	*$7,288*	*$8,859*	*$9,372*	*$8,900*	*$8,040*

Notes:
(1) All monetary values in thousands of dollars.
(2) Totals may not tie due to rounding.

Table 20 shows the determination of rates for the forecast presented in Table 19. Rates are calculated by dividing the revenue required form rates by the projected usage of the water districts. The revenue required from rates for each year is equal to the total expenses, plus or minus any contribution to or use of reserves, less other revenues.

Table 20 Financial Forecast – 3.9-percent Rate Increases with Debt & PAYGO Funding

Item	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Total Expenses ($1,000s)	$3,483	$3,397	$3,043	$3,010	$3,724
Contribution To (Use Of) Reserves ($1,000s)	396	290	1,044	1,138	387
Less: Other Revenues ($1,000s)	(1,623)	(1,285)	(1,548)	(1,461)	(1,265)
Total Rate Revenue Requirement ($1,000s)	**$2,256**	**$2,402**	**$2,540**	**$2,688**	**$2,846**
Usage Subject to Rates (AF)	1,324	1,357	1,381	1,406	1,433
Calculated Rate ($/AF)	**$1,704**	**$1,770**	**$1,839**	**$1,911**	**$1,986**

Notes:
(1) Calculated rate equal to "Total Rate Revenue Requirement" divided by "Usage Subject to Rates"..
(2) Totals may not tie due to rounding.

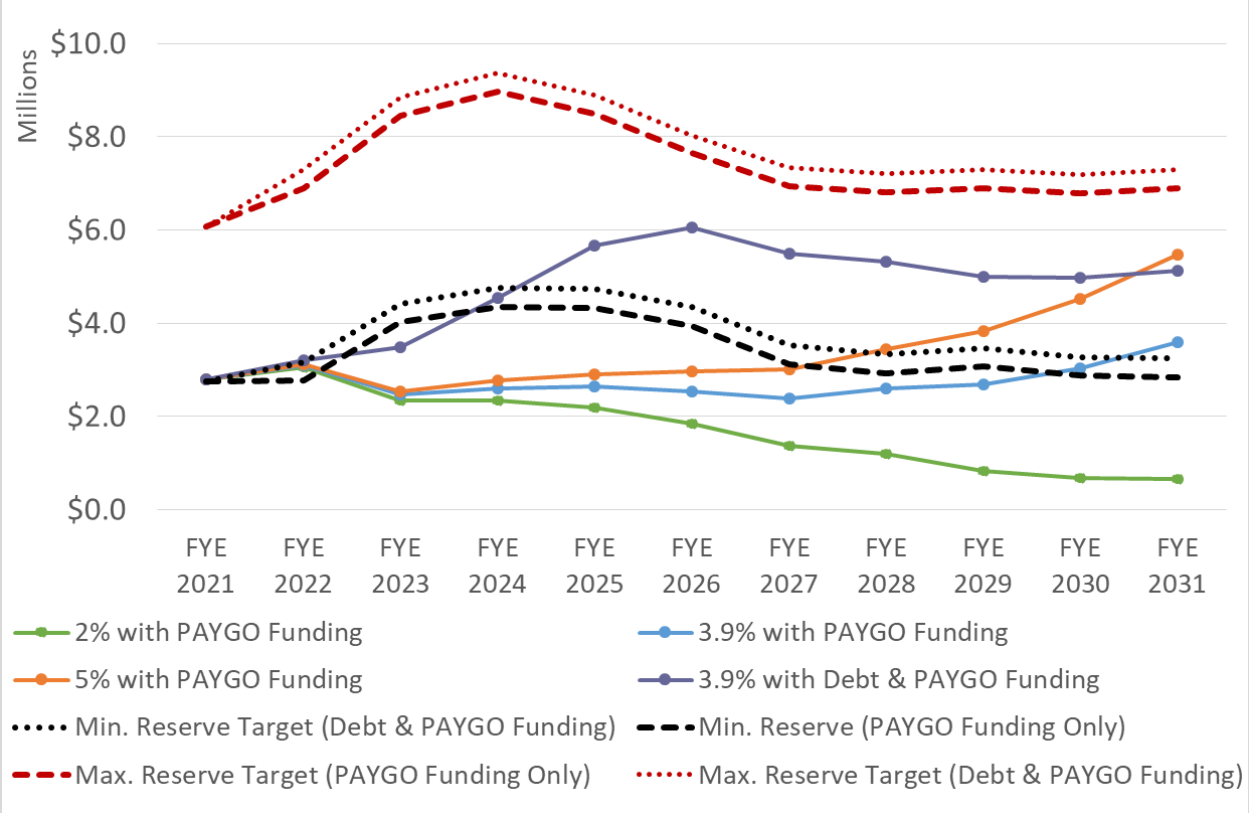
3.4 Revenue Requirements Comparison

The following subsections compare the results of the revenue requirements and rate analyses for the analyzed rate increase and capital funding strategies. Though the study is focused on developing rates for the five-year period of FYE 2022 through FYE 2026, the strategies are compared through FY 2031 to provide additional context. This longer-term comparison helps to ensure that financial decisions made now do not have adverse effects on the long-term trajectory of the recycled water fund. Because each of the strategies can provide funding for the full CIP and generates sufficient revenues for debt coverage, the comparison is focused on projected reserve fund balances and rates.

3.4.1 Reserve Fund Projection Comparison

Figure 5 shows the projected reserves for each of the analyzed rate increase and capital funding strategies as well as the minimum and maximum reserve targets.

Figure 5 Projected Reserve Fund Balance Comparison



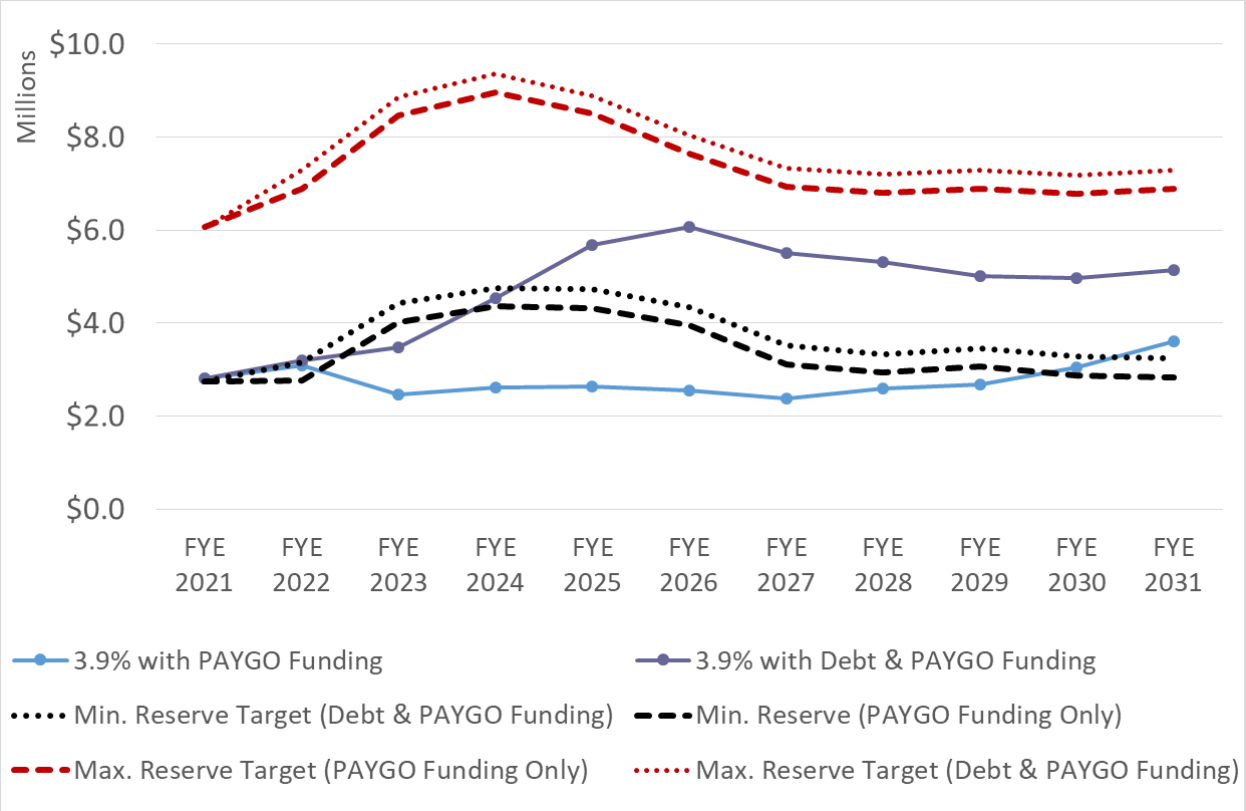
As shown in the figure, the projected fund balance shows greater sensitivity to the strategy for CIP funding than to the level of rate increases over the Study period. Each of the PAYGO only funding scenarios would see reserves drawn down, and remaining below the minimum target through the study period.

Over the longer term, the rate increase scenarios would show greater deviation in the projected reserve levels that they could support due to compounding. By FYE 2031, the projected reserve would range from approximately $654,000 if 2.0-percent increases are implemented, and $5.5 million if 5-percent increases are implemented. With 5.0-percent annual increases and PAYGO only funding, reserves would not reach the minimum target until FYE 2028, with 3.9-percent annual increases and PAYGO only funding, reserves would

not reach the minimum target until FYE 2030. With 2.0-percent annual increases, reserves would continue to decrease each year through FYE 2031.

If debt is used to fund a portion of the CIP costs, reserves could be increased to the meet the minimum target by FYE 2025 and be held above the target thereafter with 3.9-percent annual increases. The additional funds would be available for further CIP projects as needed or be held in reserve for future capital replacement projects. Figure 6 shows the projected fund balance for scenarios with 3.9-percent increases compared to the operational and capital reserve targets.

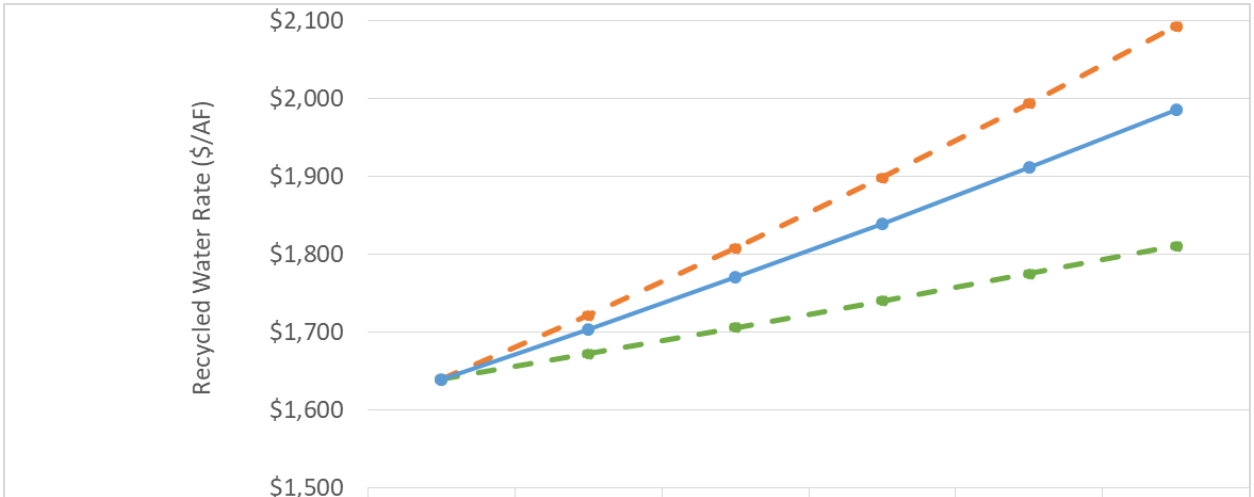
Figure 6 Projected Reserves with 3.9-percent Revenue Increases



3.4.2 Projected Rates Comparison

Figure 7 shows the projected rates under each rate increase strategy. By the end of the five-year study period in FY 2026, rates would reach $1,811 for the 2-percent, $1,986 for the 3.9-percent revenue increase strategy, or $2,093 for the 5-percent rate increase strategy.

Figure 7 Projected Rates Comparison



	FYE 2021	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
	Exisiting Rate	Forecasted Rates				
5.0% Revenue Increases	$1,640	$1,722	$1,808	$1,899	$1,993	$2,093
2.0% Revenue Increases	$1,640	$1,673	$1,706	$1,740	$1,775	$1,811
3.9% Revenue Increases	$1,640	$1,704	$1,770	$1,839	$1,911	$1,986

3.4.3 Sensitivity Analysis

A sensitivity analysis was performed to test the impact of a demand reduction event, similar to those that have occurred in recent years, on the finances of the recycled water fund. The demand reduction analysis is based on the financial forecast with 3.9-percent annual revenue increases and includes a reduction in demands of 15-percent in FYE 2022 and FYE 2023 and 7.5-percent in FYE 2024, from the baseline demand projections shown in Table 3. The continuation of such a reduction for two years followed by a third year with a lesser reduction (as analyzed) would represent a significant but not unprecedented demand reduction event. For example, actual demand decreases of 12.1-percent and 14.3-percent occurred in FYE 2016 and 2019 respectively.

Figure 8 compares the projected sales with the demand reduction event to the baseline projection. The demand reduction projection would result in an overall sales decrease of 611 AF from the baseline projection over the course of the demand reduction event.

Figure 8 Projected Demands for Sensitivity Analysis

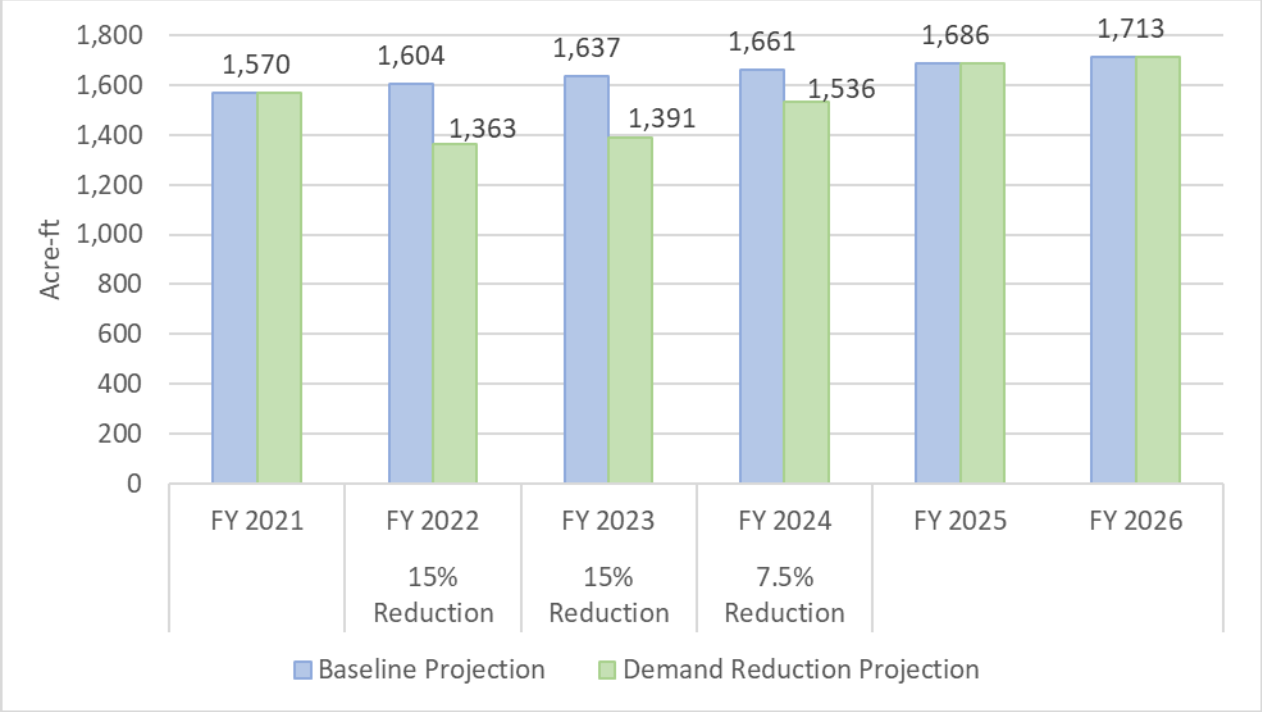


Table 21 shows the revenue impact of the demand reduction under 3.9-percent annual revenue increases. The tested reduction in demands would impact revenues generated from sales to the water districts and to ERGA as well as the amount of MWD and SDCWA subsidy revenues that SEJPA would receive. Overall, the reduced demands would result a revenue reduction of over $1.2 million as compared to the baseline projections.

Table 21 Revenue Impact of Reduced Demands

	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE2026
Baseline Demands					
Sales Revenue[(2)]	$2,559	$2,717	$2,867	$3,028	$3,200
MWD and SDCWA Incentives	720	720	720	720	311
Baseline Demand Driven Revenues	**$3,279**	**$3,437**	**$3,587**	**$3,748**	**$3,511**
Reduced Demands					
Sales Revenue[(2)]	$2,175	$2,309	$2,652	$3,028	$3,200
MWD and SDCWA Incentives	614	626	691	720	311
Reduced Demand Driven Revenues	**$2,788**	**$2,935**	**$3,344**	**$3,748**	**$3,511**
Revenue Reduction	**($490)**	**($501)**	**($244)**	**$0**	**$0**
Total Revenue Impact (FYE 2022 through FYE 2024)			**($1,236)**		

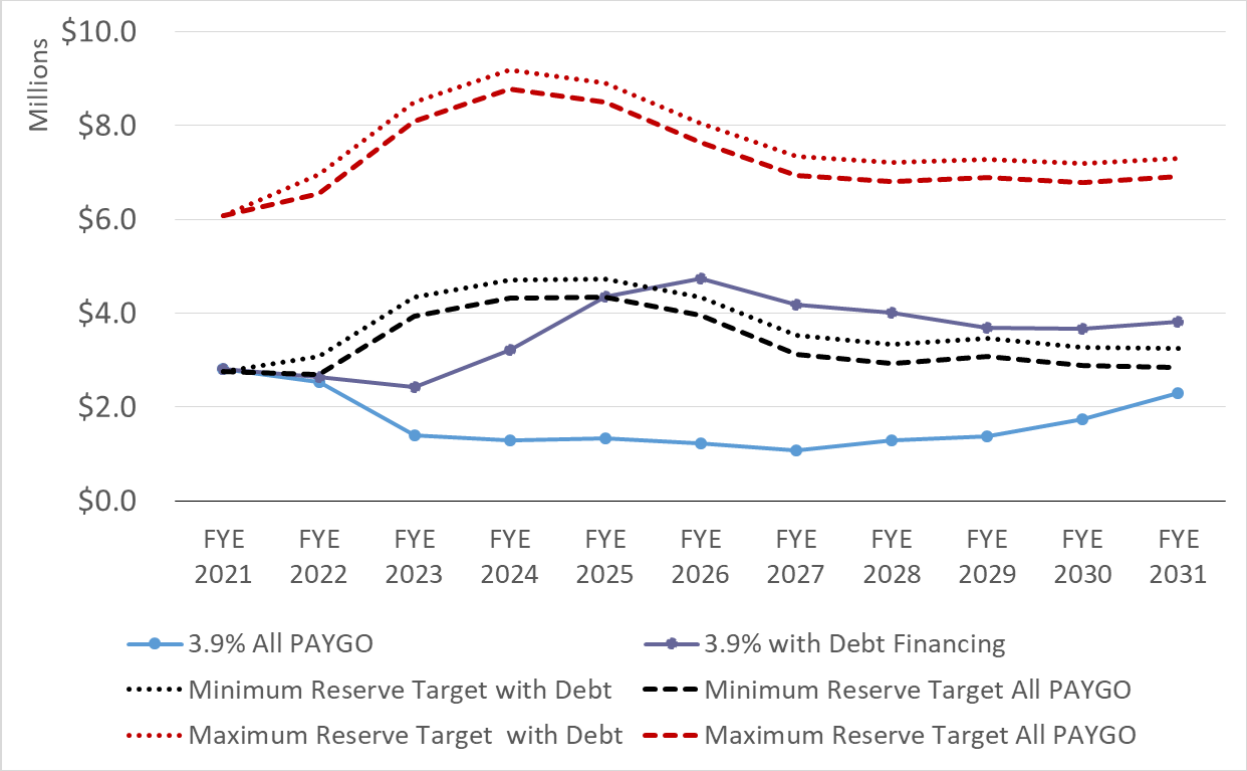
Notes:
(1) All monetary values in thousands of dollars.
(2) Totals may not tie due to rounding.

Figure 9 shows the projected reserve fund balances with reduced demands and 3.9-percent revenue increases.

Under a cash funding strategy with the planned CIP implementation schedule, the revenue shortfalls resulting from the reduction in demands would lead to reserve funds being fully depleted in FYE 2024. The fund balance would not meet or exceed the operational reserve target until FYE 2031.

If debt funding is used for the CIP, the reserve fund balance could remain favorable in spite of potential demand reductions. The balance would remain above the operational reserve target from FYE 2026 through FYE 2031.

Figure 9 Projected Reserves with Reduced Demands



Section 4

RECOMMENDATIONS

4.1 Rate Increases

As shown by the analysis and the comparison of rate increase and CIP funding strategies, any of the analyzed levels of rate increases of 3.9-percent or greater would be sufficient to meet SEJPA's financial obligations. Given that the majority of SEJPA's recycled water revenues are based directly on sales, revenues have the potential to be adversely impacted by price elasticity when rates are increases. Because higher levels of rate increases could lead to decreased usage there is an incentive to maintain rates at the lowest level that can provide sufficient revenues and a sustainable financial forecast. Based on these factors, Carollo recommends that rate increases be implemented at the 3.9-percent per year level for FYE 2022 through FYE 2026 and that those increases be coupled with the use of debt to fund a portion of CIP costs. The recommended rates are shown in Table 22.

Table 22 Recommended Rates

	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Revenue Increase	3.9%	3.9%	3.9%	3.9%	3.9%
Recommended Recycled Water Rate ($/AF)	**$1,704**	**$1,770**	**$1,839**	**$1,911**	**$1,986**

If SEJPA opts to forgo the recommended increases and proposed debt issuance, expenses could exceed revenues. This could jeopardize SEJPA's ability to sufficiently fund reserves targets, debt service coverage, and planned capital projects. By implementing annual increases of 3.9-percent beginning in FYE 2022 and issuing a $5.5 million debt financing in FYE 2022, SEJPA is projected to avoid this situation and maintain financial health.

4.2 Reserves and Capital Funding

At a minimum, SEJPA should work toward funding reserves to the minimum target level to protect from and respond to unforeseen circumstances that impact revenues or costs. To this end, a CIP funding strategy that smooths the impact of CIP projects by utilizing debt financing for a portion of the CIP so that costs can be amortized over multiple years is preferable. Utilizing debt financing has the added advantages of allowing for reserve to be built to more quickly to reach the reserve targets, allowing the Authority to take advantage of historically low finance rates, and allowing for CIP projects to be built sooner, reducing the exposure to anticipated construction inflation.

4.3 Future Rate Considerations

During future cost of service and rate evaluations, the Authority should consider making further updates to the rate structure, as appropriate, to enhance revenue stability and financial sustainability. The potential updates could include implementing an annual fixed charge, to be assessed to the water purveyors, to recover a share of the recycled water system's fixed costs. Such a charge would provide a stable source of revenue to pay for costs such as debt service, system maintenance, or infrastructure replacement that do not vary based on the amount of water produced. Multiple methods of assessing a potential fixed charge to the purveyors could be available including, but not limited to, charges based on rolling average deliveries, the number of connected meter equivalent units, minimum purchase volumes, or other indicators of the capacity required to serve each purveyor. If the Authority ultimately decides to implement a fixed charge, it should be done so only after a cost of service analysis is completed to determine the appropriate level of fixed revenue recovery and the most equitable manner of assessing individual purveyors.