



MEMORANDUM

Date: May 12, 2020

To: The Honorable Chairman and Members
Pima County Board of Supervisors

From: C.H. Huckelberry
County Administrator 

Re: **Regional Wastewater Reclamation Enterprise Fund 2020 Financial Plan**

Attached is the 2020 Financial Plan (Plan) for the Regional Wastewater Reclamation Enterprise Fund. The Plan was created prior to the Coronavirus (COVID-19) pandemic outbreak and therefore does not include the financial impacts associated with COVID-19. At this time, we do not believe the financial impacts associated with COVID-19 will materially affect the underlying assumptions or conclusions reflected within the attached Plan.

Due to our prepayment of debt issuances with available cash reserves, Fiscal Year 2021 will mark the fourth fiscal year Pima County has not increased user or connection fees. In addition, the Plan does not anticipate the need to increase user or connection fees for an additional four years. Therefore, resulting in eight years without an increase in both user and connection fees.

CHH/mp

Attachment

c: Jan Leshar, Chief Deputy County Administrator
Carmine DeBonis, Deputy County Administrator for Public Works
Michelle Campagne, Director, Finance and Risk Management
Jackson Jenkins, Director, Regional Wastewater Reclamation



2020 Financial Plan

Pima County

Regional Wastewater Reclamation Enterprise Fund

*Prepared by
Pima County Finance and Risk Management Department
May 2020*

2020 Financial Plan

Pima County Regional Wastewater Reclamation Enterprise Fund

EXECUTIVE SUMMARY	1
INTRODUCTION	2
KEY ASSUMPTIONS.....	2
METHODOLOGY	2
REVENUES	3
Fees	3
Declining Volume Usage.....	3
Total Revenues	4
CAPITAL IMPROVEMENT PROGRAM	5
OPERATING AND MAINTENANCE EXPENSES.....	6
SEWER REVENUE DEBT FINANCING	7
DEBT SERVICE PAYMENTS.....	8
CASH RESERVES AND CASH BALANCES	9
1. Emergency Reserve Fund.....	9
2. Operating Reserve Fund	10
3. Debt Service Reserve Fund	10
4. Debt Proceeds.....	10
RATING AGENCY DEBT SERVICE RATIO	10
EXPENDITURE LIMITATION	11
BOND RATING AGENCIES	12
LIST OF APPENDICES	13
Appendix A – Key Assumptions used for the 2020 Financial Plan	14
Appendix B – Rate Workbook	15
Appendix C – Summary of Planned Capital Improvement Projects as of March 2020.....	16
Appendix D – Cash Position Assuming the Prepayment of \$110.8 Million	18
Appendix E – Debt Service Ratio Calculations	19

Executive Summary

BACKGROUND

On an annual basis, Pima County reviews the financial information for the sanitary sewer services provided by its Regional Wastewater Reclamation Department. The focus of the review is to determine the optimal sewer rates needed to ensure that the County has sufficient revenues to meet all operating and maintenance expenses, debt service payments, required reserves, and to maintain an adequate debt service ratio to obtain favorable bond ratings. This enables the County to continue to issue debt for the anticipated improvements in the Capital Improvement Program.

RECOMMENDATIONS

Based on this review, the Finance and Risk Management Department is recommending:

1. Issuing \$160 million of new sewer revenue obligations to fund future capital improvement projects as follows:
 - a. \$40 million in Fiscal Year 2020-21,
 - b. \$40 million in Fiscal Year 2021-22,
 - c. \$40 million in Fiscal Year 2022-23, and
 - d. \$40 million in Fiscal Year 2023-24.
2. Using unrestricted cash to prepay debt as follows:
 - a. \$36.1 million in Fiscal Year 2020-21,
 - b. \$19.9 million in Fiscal Year 2021-22,
 - c. \$17.7 million in Fiscal Year 2022-23, and
 - d. \$14.7 million in Fiscal Year 2023-24.
3. Maintaining the current sewer revenue rates.

INTRODUCTION

This report addresses the financial needs for the Regional Wastewater Reclamation Department based on the projected revenues, projected expenses, and projected capital improvement program expenses for Fiscal Year 2019-20 through Fiscal Year 2023-24.

KEY ASSUMPTIONS

The Finance and Risk Management Department (Finance) worked with the Regional Wastewater Reclamation Department (Department) and the Regional Wastewater Reclamation Advisory Committee to develop these assumptions. The major assumptions include:

- relatively slow growth in the customer base,
- an increase in user fees and connection fees at the rate of population growth,
- a declining volume usage rate factor based on a three-year average,
- a capital improvement program of approximately \$228 million,
- additional sewer revenue debt of \$160 million, and
- using unrestricted cash for the prepayment of debt.

Appendix A further describes the assumptions used in this report.

METHODOLOGY

Finance used the following methods to determine optimal sewer rates.

1. Analyzed the revenue generating potential of the Department's existing sewer rates.
2. Identified the projected cash needs of the Department for upcoming capital projects, anticipated operating and maintenance costs, debt service payments for existing debt, anticipated debt service payments for planned debt, and planned prepayment of future debt.
3. Compared the revenue generating potential of the existing rates to the Department's identified cash needs to determine whether rate changes may be necessary. Finance used an industry standard debt service ratio comparing revenues less operating and maintenance costs to debt service requirements for this analysis.
4. Analyzed the Department's cash balances, the effects of Arizona's local expenditure limitation on the Department, and the Department's debt ratings.

The estimates used for this analysis are as of January 31, 2020. Projected amounts change throughout the year as plans are refined and actual costs are determined.

REVENUES

Fees:

The County's wastewater system generates revenues from two major sources, sewer user fees and sewer connection fees.

User fees are the combination of: (1) the standard service fee and (2) the volume rate fee. Rate increases or decreases depend upon future growth in the number of new users and volume usage rate. The Department will not collect user fee revenues above the current level without a rate increase, or growth in these two factors. The last rate increase took effect in June 2017.

Connection fees are charged when new construction connects to the sewer system for the first time or when renovation of existing structures requires additional or larger water meters. Connection fees are based primarily on water meter size, with fees increasing as water meter size increases. The principal factor that will affect revenues from future connection fees will be the volume of new construction within Pima County.

For purposes of this financial analysis, future user fees and connection fees are projected to increase at the same rate as the estimated rate of population growth issued in December 2019 by the University of Arizona Economic & Business Research Center. These estimates project population growth rates to be between 0.72 percent and 0.77 percent between Fiscal Year 2019-20 and Fiscal Year 2023-24, as indicated in Appendix A.

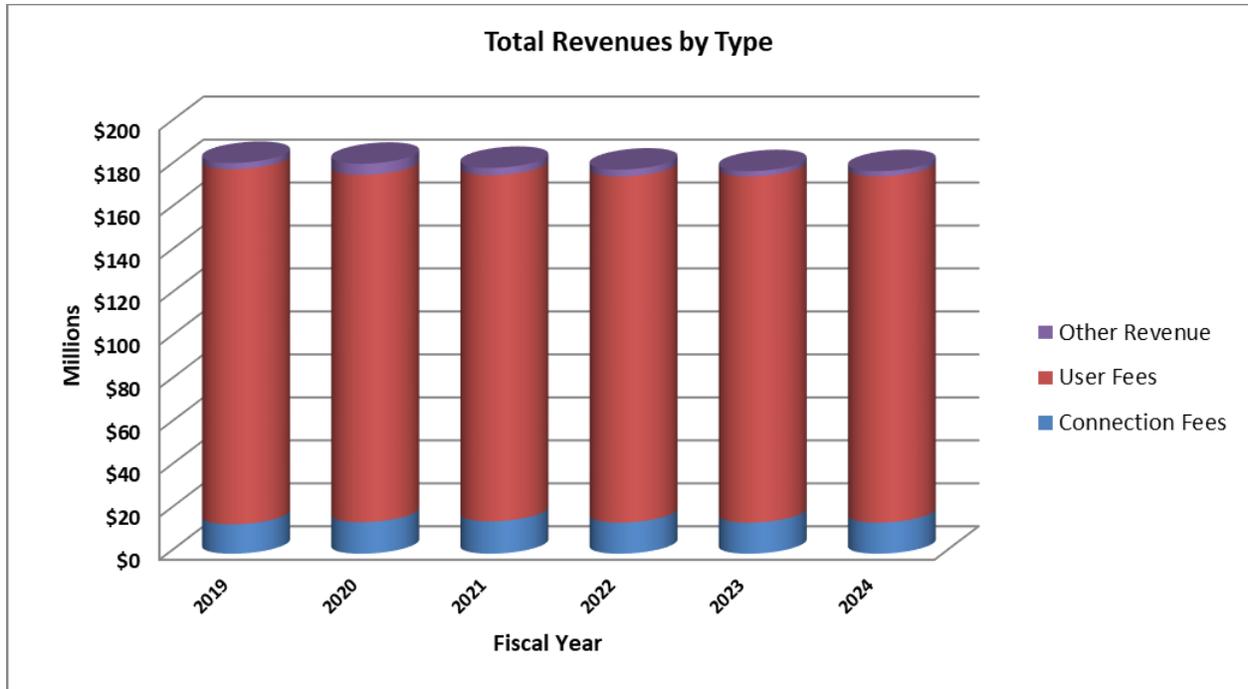
Declining Volume Usage:

Another factor that must be considered in determining future revenue projections is the recent downward trend in total influent flow, the amount of sewage flowing into the treatment plants. This downward trend has had a negative impact on the billings for the volume rate component within the user fee revenue calculation. The amount billed is based on an average water usage, also known as the winter quarter average, taken from the months of December, January, and February. As the monthly water consumption decreases, the amounts billed and collected also decrease. Based on the review of user fee revenues billed and collected for the current year and the past three years, this downward trend has decreased revenues by approximately 1.5 percent. Therefore, we have utilized a 98.5 percent (100 percent – 1.5 percent = 98.5 percent) rate factor for Fiscal Year 2020-21 and a rate factor of 99.0 percent for Fiscal Year 2021-22 through Fiscal Year 2023-24.

Total Revenues:

From Fiscal Year 2019-20 through Fiscal Year 2023-24, user fee revenues are expected to remain relatively flat. Figure 1, shows Total Revenues by Type, for Fiscal Year 2018-19, including projections through Fiscal Year 2023-24, with a portion of those revenues attributable to connection fees.

Figure 1: Total Revenues by Type



As detailed in Table 1, Connection Fees are expected to remain at or below \$15.1 million.

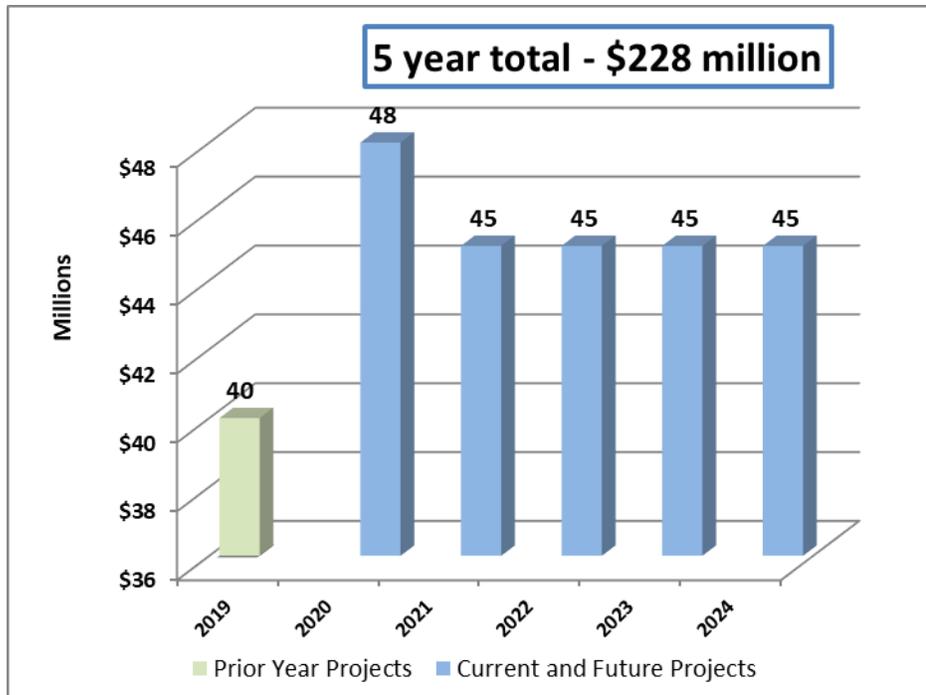
Table 1: Total Revenues by Type – Detail (in Millions)

Fiscal Year	Connection Fees	User Fees	Other Revenue	Total Revenues
2019	14.7	165.2	5.2	185.1
2020	15.1	161.7	3.4	180.2
2021	14.5	161.1	3.2	178.8
2022	14.5	161.1	2.4	178.0
2023	14.5	161.1	2.4	178.0
2024	14.5	161.1	2.4	178.0

CAPITAL IMPROVEMENT PROGRAM

As shown in Figure 2, capital expenditures are estimated to be \$228 million through the end of Fiscal Year 2023-24. Typically, an additional \$45 million in capital improvements are anticipated annually, thereafter.

Figure 2: Capital Project Costs

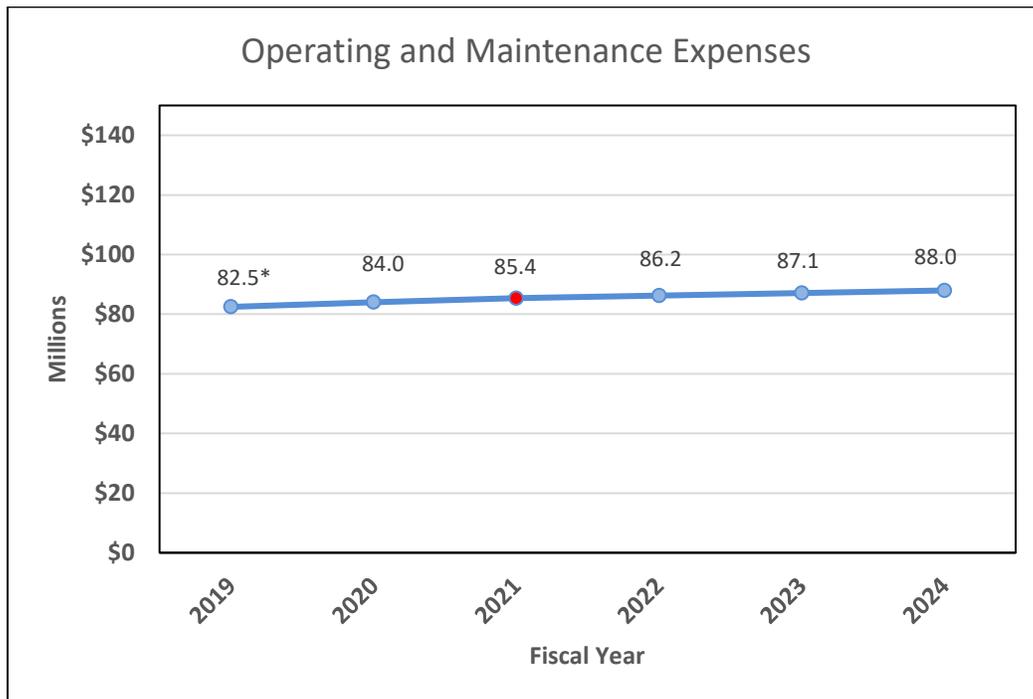


Projected future capital expenditures may change throughout the year as plans are refined and actual construction costs are determined. This analysis uses the Department’s estimate of capital projects as of March 2020. A summary of these capital projects for Fiscal Year 2019-20 through Fiscal Year 2023-24 can be found in Appendix C, *Summary of Planned Capital Improvement Projects as of March 2020*. As discussed on page 11, in the Expenditure Limitation section, for expenditure limitation reasons, Pima County must continue to borrow funds for the majority of the \$228 million planned capital improvements program, even though the County has cash available in the fund.

OPERATING AND MAINTENANCE EXPENSES

The Department is expecting to complete Fiscal Year 2019-20 with Operating and Maintenance (O&M) expenses of \$84 million. The budget for Fiscal Year 2020-21 has not yet been approved by the Board of Supervisors. For analysis purposes, the Department’s requested budget is \$85.4 million. Employee compensation is expected to be \$30.8 million in Fiscal Year 2020-21, representing 36 percent of total operating expenses and accounting for the greatest portion of O&M costs. This financial analysis assumes that operating expenses will increase by one percent each year, starting in Fiscal Year 2021-22. At this rate of increase, O&M costs are expected to increase by approximately \$4.0 million during the next four-year period. Figure 3 shows the increase in O&M expenses from Fiscal Year 2018-19 to Fiscal Year 2023-24.

Figure 3: Operating and Maintenance Expenses

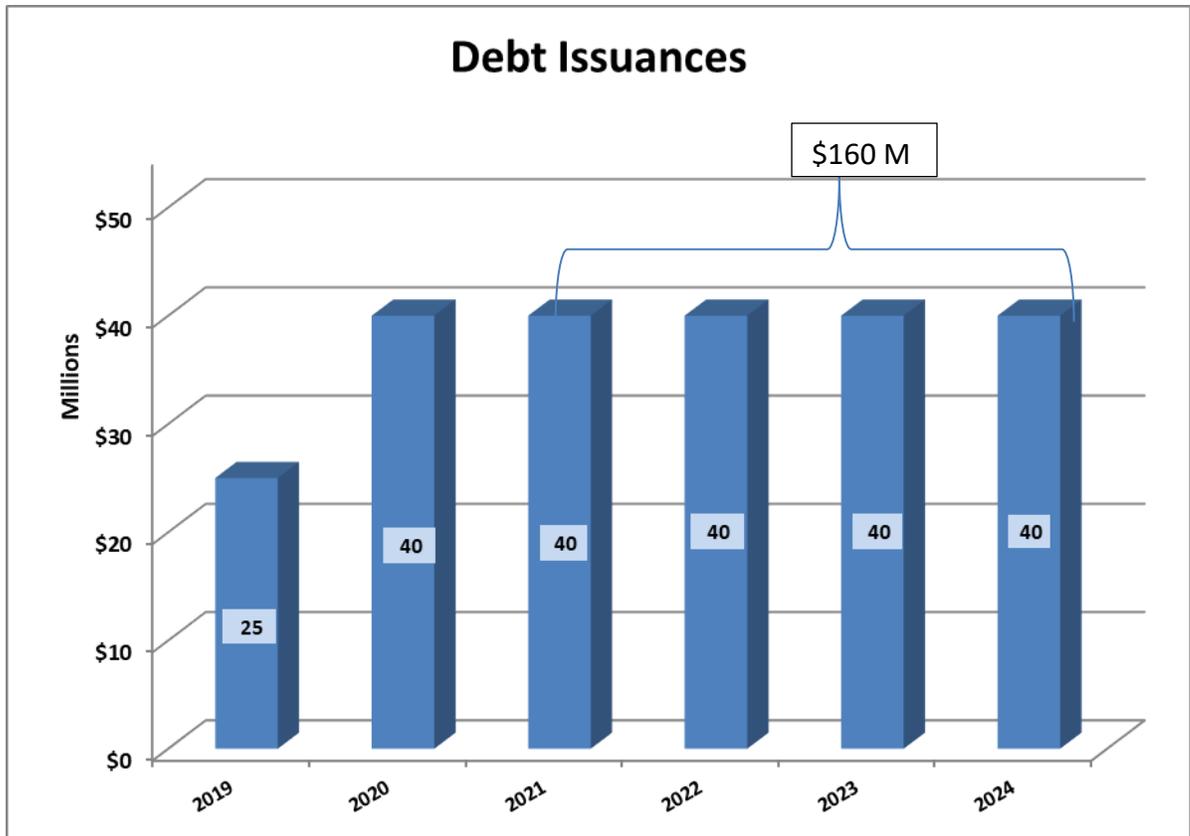


*Operating and Maintenance Expenses, excluding a non-cash accounting entry for Pension expenses.

SEWER REVENUE DEBT FINANCING

As of June 30, 2019, Pima County had \$480 million of sewer revenue debt outstanding. The County issued another \$40 million in sewer obligations in March 2020 and plans to issue an additional \$160 million of new sewer revenue obligations over the next four years. Figure 4 shows the amounts and timing of the future debt issues.

Figure 4: \$160 Million of Additional Debt 2021 Through 2024



DEBT SERVICE PAYMENTS

Total debt service payments are expected to remain constant over the next few years because the County anticipates issuing additional debt as shown in Figure 4 and utilizing unrestricted cash to prepay debt. Debt service for Fiscal Year 2019-20 will be approximately \$62 million, with the use of \$22.4 million in unrestricted cash to prepay the 2010 Sewer Obligations and the 2009 WIFA Loan.

Figure 5 shows the debt service payments from Fiscal Year 2018-19 and the projected payments through Fiscal Year 2025-26.

Figure 5: Debt Service Payments

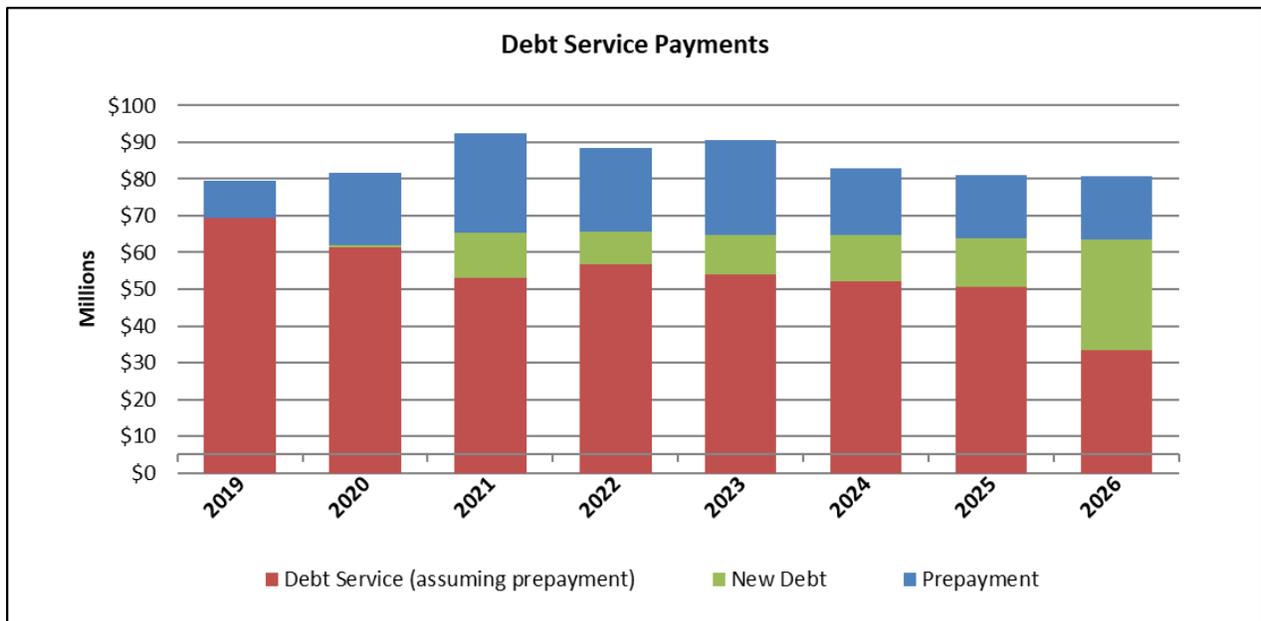


Table 2, details the impact on the debt service payments by year, if unrestricted cash is used to prepay debt service payments and debt is issued according to the Rate Workbook (see Appendix B) for Fiscal Years 2018-19 to 2025-26.

Table 2: Debt Service Payment – Detail (in Millions)

Fiscal Year	Debt Service on Existing Debt	Planned Debt Service on New Debt	Total Planned Debt Service WITHOUT Prepayments	Total Planned Prepayments	Total Planned Debt Service AFTER Prepayment
2019	79.6	0.0	79.6	10.1	69.5
2020	81.2	0.6	81.8	19.7	62.1
2021	80.1	12.2	92.3	26.9	65.4
2022	79.6	8.8	88.4	22.8	65.6
2023	79.7	10.8	90.5	25.8	64.7
2024	70.1	12.7	82.8	17.9	64.9
2025	67.8	13.4	81.2	17.3	63.9
2026	50.7	30.4	81.1	17.3	63.8

As shown in Table 2, when planned new debt is issued, the debt service payments without prepayments are expected to increase to \$92.3 million in Fiscal Year 2020-21, with an average of \$84.7 million. However, if the Department uses unrestricted cash to prepay debt, the Department’s highest debt service payment occurred last year at \$69.5 million, with an average payment of \$65.0 million.

CASH RESERVES AND CASH BALANCES

The Pima County Regional Wastewater Reclamation Enterprise Fund has unrestricted cash and several types of restricted and designated cash accounts to meet the various debt covenants and to maintain an emergency fund that enables the County to handle unexpected events. Appendix D, *Cash Position Assuming the Prepayment of \$110.8 Million of Debt between 2019-20 and 2023-24*, shows the balances and projected balances of the cash accounts. As of Finance and Risk Management’s January 31, 2020 Cash Flow report, the Fund will have an estimated \$147.1 million in cash at the end of Fiscal Year 2019-20, of which \$64.7 million is currently estimated to be unrestricted. The restricted and designated cash accounts described below include the remaining \$82.4 million balances:

1. **Emergency Reserve Fund (Unrestricted)** – In Fiscal Year 2009-2010, the Board of Supervisors established a \$20 million Emergency Reserve Fund. The fund is for unexpected events affecting the ongoing operations of the sewer system.

2. **Operating Reserve Fund (Partially Restricted)** – Various debt instruments require the County to maintain a 30 day balance of anticipated operating expenses. Pima County maintains 90 days of anticipated operating expenses in this fund, the remaining 60 days of reserve of cash is designated by management for operating expenses. By the end of Fiscal Year 2019-20, these reserves are projected to be \$21 million.
3. **Debt Service Reserve Fund (Restricted)** – This restricted fund is used to set aside cash for sewer debt service payments. On a monthly basis, the County transfers one-twelfth of budgeted annual debt service into this reserve account to ensure cash is available for the annual debt service payments. These funds will be applied to the final debt service payments for the respective debt. By the end of Fiscal Year 2019-20, these debt reserves are projected to be \$35.5 million.
4. **Debt Proceeds (Restricted)** – This restricted fund is used to restrict the debt proceeds received until the funds are spent for the various capital projects. By the end of the Fiscal Year 2019-20, this reserve is projected to be \$5.9 million.

RATING AGENCY DEBT SERVICE RATIO

Net Operating Revenue to Debt Service:

Net operating revenues are the regular, recurring revenues generated by operating the sewer system that remain after paying for sewer system operating expenses. Net operating revenues must be sufficient to do two things: (1) cover the required debt service payments and required reserves and (2) generate a sufficient margin that enables the County to pay non-operating costs and maintain additional reserves for unforeseen events.

Bond rating agencies use a basic ratio of net operating revenues to debt service to evaluate the financial health of governmental sewer operations. A ratio of 1 indicates that net operating revenues match debt service payments – net operating revenues are 100 percent of debt service payments. A ratio of less than 1, for example, 0.9, indicates that net revenues are less than, or in this example 90 percent of, debt service payments. A ratio of greater than 1, for example, 1.3, indicates that net revenues are larger than, or in this example 130 percent of, debt service payments.

Bond rating agencies have historically expected to see governmental sewer operators set rates that maintain a rating agency debt service ratio of 1.3. This enables governments to cover debt service payments and cash reserves, while making interest rates attractive to investors.

Since the beginning of the Regional Optimization Master Plan, Pima County administration has committed to setting rates that maintain a rating agency debt service ratio of 1.3. The Regional Wastewater Reclamation Advisory Committee formally stated this goal in a letter to Pima County's Board of Supervisors. Pima County's sewer revenue debt is highly rated and the County is able to sell debt for its Capital Improvement Program at low interest rates.

At its November 15, 2017 meeting, Pima County's Regional Wastewater Reclamation Advisory Committee identified two factors that would trigger discussions about possible rate increases: a rating agency debt service ratio falling below 1.2 or unrestricted cash reserves of less than three months of operating expenses (approximately \$21 million). As shown in Appendix B, the Fund's rating agency debt service ratio does not fall below 1.2 nor does the unrestricted cash balance fall below \$21 million. These factors do not indicate a need for rate increases. Also at its November 15, 2017 meeting, the Advisory Committee requested Finance and Risk Management to explore options for using unrestricted cash above the \$21 million amount to pay off debt early.

In recent years, Pima County has not needed to use its unrestricted financial reserves to pay for unforeseen events and the Fund has accumulated a significant balance (see Cash Balances section). Pima County's Finance and Risk Management Department recommends the prepayment of sewer revenue debt discussed in the Debt Service Payments section while carefully monitoring unrestricted cash balances to ensure they stay at reasonable levels.

It is important to note that during Fiscal Year 2019-20, the 2009 Water Infrastructure Finance Authority of Arizona (WIFA) Loan (i.e., senior debt) was paid off. Therefore, only the Sewer Obligation debt (i.e., junior debt) remains outstanding. The Sewer Obligation debt service ratio is calculated differently than the rating agency debt service ratio. This ratio is not used as an indicator of financial health. This ratio should not be used for financial planning in the same way the rating agency debt service ratio is used. This ratio is used by external parties to make legal determinations about whether Pima County is violating the contractual provisions of its debt. By setting rates to keep the bond rating agency debt service ratio at or near its target of 1.3, Pima County will not violate the contractual provisions of its debt. Additional details about this contractual debt service ratio can be found in Appendix E, *Debt Service Ratio Calculations*.

Appendix B provides more detail of the projected revenues, expenses, net operating revenues, and debt service ratios of the system.

EXPENDITURE LIMITATION

Impact to Wastewater Projects:

Due to the expenditure limitation restrictions in Article IX, Section 20, of the Arizona Constitution, the County is limited on its use of available cash to fund capital improvements. The expenditure limitation restricts the use of local revenues which consist of primary property taxes, impact fees,

connection fees, including all fees charged for sewer services, and any other fees charged for County services. The County may not exceed the expenditure limit even if the County has cash available to spend.

Because of the expenditure limitation restrictions, the County will continue to finance capital improvements. However, the County will begin transitioning from long-term debt financing to relatively short-term debt financing over the next few years. For Wastewater, this transition to a pay-as-you-go approach could take up to 10 years.

BOND RATING AGENCIES

In January 2020, Fitch Ratings reaffirmed the County's sewer debt rating of AA-. In addition, in January 2020, Standard and Poor's reaffirmed the County's sewer debt rating of AA. The issued reports explained the analysis of Pima County's financial condition for its sewer debt. The bond ratings reflect the rating agencies evaluation of the financial stability of the County and its ability to repay debt. As ratings increase, the interest rates offered by lenders decrease, reducing the overall debt cost to the County.

LIST OF APPENDICES

Appendix A – Key Assumptions used for the 2020 Financial Plan

Appendix B – Rate Workbook

Appendix C – Summary of Planned Capital Improvement Projects as of March 2020

Appendix D – Cash Position Assuming the Prepayment of \$110.8 Million

Appendix E – Debt Service Ratio Calculations

APPENDIX A

KEY ASSUMPTIONS 2020 Financial Plan

		Current Year					Totals		Comments
ASSUMPTION REGARDING:		2020	2021	2022	2023	2024	2020-2024		
1	Population Growth Factors		1.0077	1.0073	1.0072	1.0073	1.0074		2020 UA Economic & Business Research Center estimates for FY 2020 - 2024.
2	User Rate Increases:	Volumetric Fee increases	0.00%	0.00%	0.00%	0.00%	0.00%		Zero rate increase assumed for the next 4 years.
		Service Charge	0.00%	0.00%	0.00%	0.00%	0.00%		
3	Volume Usage Rate Factor		0.970	0.985	0.990	0.990	0.990		Rate based on 3 year average decline in volume usage.
4	Connection Fees	Population Growth	1.0077	1.0073	1.0072	1.0073	1.0074		2020 UA Economic & Business Research Center estimates for FY 2020 - 2024.
		Rate Increase	0.00%	0.00%	0.00%	0.00%	0.00%		Zero rate increase assumed for the next 4 years.
5	Annual rate of expense increase			1.02%	1.01%	1.01%	1.01%		Current year is based on projected expenses for Period 7. FY 2021 is based on Requested Budget amounts. For future years, assumption of 1% growth in operating costs over prior year's actual costs.
6	Capital Projects		48,000,000	45,000,000	45,000,000	45,000,000	45,000,000	228,000,000	For Fiscal Years 2020 - 2024, amounts per RWRD's March 2020 CIP Schedule.
7	Debt Assumptions	Sewer Obligations	40,000,000	40,000,000	40,000,000	40,000,000	40,000,000	200,000,000	
8	Interest Rate Assumptions		3.00%	3.00%	3.00%	3.00%	3.00%		

APPENDIX B

Regional Wastewater Reclamation Department Enterprise Fund
 Financial Projections - Rating Agency Ratio 1.2 or above and Unrestricted Cash Greater than Three Months of Operating Expenses
 Fiscal Years 2019 through 2025

January 2020 CURRENT FORECAST

	Actuals	Adopted Budget	Forecasted	Assumptions				
	FY18-19	FY19-20	FY19-20	FY20-21	FY21-22	FY22-23	FY23-24	FY24-25
Customers	280,984	282,526	283,148	285,215	287,268	289,365	291,506	293,634
Population Growth - UA Estimates	1.0079	1.0082	1.0077	1.0073	1.0072	1.0073	1.0074	1.0073
Volume Rate	3.6287	3.6287	3.6287	3.6287	3.6287	3.6287	3.6287	3.6287
Rate factor - Volume Fee	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Service Charge Rate	13.0000	13.0000	13.0000	13.0000	13.0000	13.0000	13.0000	13.0000
Rate factor - Flat Service Charge	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Rate factor - Connection Fee	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Rate factor - O&M Expenses	1.0000	1.0000	1.0000	1.0160	1.0100	1.0100	1.0100	1.0100
CCF - Calculated Flow Estimate	9.7474	9.5829	9.4729	9.3308	9.2375	9.1452	9.0537	8.9632
Rate factor - Volume	0.9900	0.9900	0.9700	0.9850	0.9900	0.9900	0.9900	0.9900

	Actuals	Adopted Budget	Forecasted	Forecasted				
	FY18-19	FY19-20	FY19-20	FY20-21	FY21-22	FY22-23	FY23-24	FY24-25
System Revenues:								
Volumetric User Fee	120,593,147	117,893,113	116,796,147	115,884,028	115,551,209	115,230,785	114,922,658	114,603,977
Fixed User Administrative Fee	43,833,504	44,074,056	44,171,022	44,493,470	44,813,823	45,140,964	45,475,007	45,806,975
Sanitation Fees	781,085	350,000	700,000	675,000	675,000	675,000	675,000	675,000
Total Sewer Utility Service	165,207,736	162,317,169	161,667,169	161,052,498	161,040,032	161,046,749	161,072,665	161,085,952
Sewer Connection Revenue	14,701,202	13,610,000	15,110,000	14,500,000	14,500,000	14,500,000	14,500,000	14,500,000
Interest	4,014,362	1,130,000	2,922,767	2,180,000	911,592	912,069	902,664	885,666
Other Income including Biogas	1,219,668	384,667	501,110	1,037,771	1,537,771	1,537,771	1,537,771	1,537,771
Total Revenues	185,142,968	177,441,836	180,201,046	178,770,269	177,989,395	177,996,589	178,013,100	178,009,389
Operations and Maintenance Costs	78,958,244	83,479,369	84,028,960	85,375,203	86,228,955	87,091,245	87,962,157	88,841,779
Net Revenues	106,184,724	93,962,467	96,172,086	93,395,066	91,760,440	90,905,344	90,050,943	89,167,610
Existing Debt Service - Senior Debt	698,239	36,934	35,292	-	-	-	-	-
Existing Debt Service - Subordinate Debt	68,838,824	61,448,003	61,448,003	53,225,850	56,779,257	53,935,697	52,186,922	50,467,667
Total Existing Debt Service Payments	69,537,063	61,484,937	61,483,294	53,225,850	56,779,257	53,935,697	52,186,922	50,467,667
Proposed Debt Service	-	750,000	568,642	12,164,750	8,864,750	10,784,750	12,674,750	13,399,750
Total Debt Service Payments	69,537,063	62,234,937	62,051,936	65,390,600	65,644,007	64,720,447	64,861,672	63,867,417
Rating Agency Ratio	1.53	1.51	1.55	1.43	1.40	1.40	1.39	1.40
Net Revenues after Debt Service Payments	36,647,661	31,727,530	34,120,150	28,004,466	26,116,434	26,184,897	25,189,272	25,300,194
Transfers out - COPs 2013								
Transfers out - COPs 2015	(12,327,125)	-	-	-	-	-	-	-
Transfers out - COPs 2016	(5,751,000)	-	-	-	-	-	-	-
Transfers out - COPs 2018	(10,577,966)	(4,803,319)	(4,788,971)	(4,897,669)	-	-	-	-
Transfer out - SDF	-	-	(3,109,385)	(5,000,000)	(5,000,000)	(5,000,000)	(5,000,000)	(5,000,000)
Debt Service Reserve (Obligations) Transfer	(1,191,125)	(4,564,948)	(5,882,375)	(3,450,000)	(3,055,000)	(3,055,000)	(2,890,000)	(2,600,000)
Operating Transfer In - Debt Reserve		11,588,406	11,214,253	9,323,143	1,847,950			
Other Operating Transfers Out	(350,278)	(513,892)	(501,965)	(1,817,665)	(454,840)	(454,840)	(454,840)	(454,840)
Prepayment of 2004 WIFA Loans								
Prepayment of 2008 Bonds								
Prepayment of 2009 Bonds	(2,889,382)							
Prepayment of 2009 WIFA Loans		(2,997,871)	(2,997,871)					
Prepayment of 2010 Obligations	(9,362,616)	(19,387,525)	(19,387,525)					
Prepayment of 2011 Obligations				(23,754,375)				
Prepayment of 2012 Obligations				(12,374,250)	(19,875,000)		(10,690,000)	(11,225,000)
Prepayment of 2014 Obligations						(9,153,125)	(4,020,000)	(4,220,000)
Prepayment of 2016 Obligations						(8,500,000)		
Net Changes in Assets and Liabilities	(1,232,560)	(2,303,193)	(1,567,431)	2,080,767	(1,657,550)	522,998	(1,774,981)	(1,911,312)
Subtotal	(7,034,391)	8,745,188	7,098,880	(11,885,583)	(2,078,006)	544,930	359,451	(110,958)
Beginning Unrestricted Cash Balance	78,192,048	66,723,819	66,723,819	64,665,006	52,348,625	50,137,756	50,460,408	50,688,493
Change in Restrictions of Cash	(4,433,838)	(700,000)	(9,157,693)	(430,798)	(132,863)	(222,279)	(131,366)	(93,065)
Ending Unrestricted Cash Balance	66,723,819	74,769,007	64,665,006	52,348,625	50,137,756	50,460,408	50,688,493	50,484,469

CIP Projections	40,376,151	48,001,306	48,000,000	45,000,000	45,000,000	45,000,000	45,000,000	45,000,000
Sewer Revenue debt	25,000,000	45,000,000	40,000,000	40,000,000	40,000,000	40,000,000	40,000,000	40,000,000
COPs debt								

APPENDIX C

PIMA COUNTY
Summary of Planned Capital Improvement Projects
Fiscal Year 2020-21



Department: WW-Regional Wastewater Reclamation
 Planned Expenses

Program Code	Program Name	Estimated Prior Year	Fiscal Year 2020/2021	Fiscal Year 2021/2022	Fiscal Year 2022/2023	Fiscal Year 2023/2024	Fiscal Year 2024/2025	Fiscal Year 2025/2026	Fiscal Year(s) Beyond	Program Total
CWW.322SC9	WW - 22nd St Swan to Craycroft Augmentation Phase 2	\$ -	\$ -	\$ -	\$ -	\$ 750,000	\$ 1,750,000	\$ -	\$ -	\$ 2,500,000
CWW.3A1195	WW - ADOT - W Ajo Way & I-19 Sewer Modifications	1,248,600	1,000	-	-	-	-	-	-	1,249,600
CWW.3ANOMX	WW - Anammox Treatment Process	650,000	3,650,000	100,000	-	-	-	-	-	4,400,000
CWW.3ASC15	WW - Old Nogales Interc. Aug - New Aerospace Corr Sewer	18,106,064	11,294,242	11,693,210	4,783,484	-	-	-	-	45,877,000
CWW.3AVEOB	WW - Avra Valley WRF Emergency Overflow Basin	-	-	2,906,117	3,200,000	-	-	-	-	6,106,117
CWW.3BBUMP	WW - Tres Rios WRF Nutrient Recovery Project	7,300,000	200,000	-	-	-	-	-	-	7,500,000
CWW.3CFS15	WW - Continental Ranch Pump Station - Second Force Main	926,187	4,780,949	12,230,903	10,830,907	3,731,054	-	-	-	32,500,000
CWW.3COC21	WW - Conveyance Odor Control Program Projects FY20/21	-	299,000	1,000	-	-	-	-	-	300,000
CWW.3COC22	WW - Conveyance Odor Control Program Projects FY21/22	-	-	299,000	1,000	-	-	-	-	300,000
CWW.3COC23	WW - Conveyance Odor Control Program Projects FY22/23	-	-	-	299,000	1,000	-	-	-	300,000
CWW.3COC24	WW - Conveyance Odor Control Program Projects FY23/24	-	-	-	-	299,000	1,000	-	-	300,000
CWW.3COC25	WW - Conveyance Odor Control Program Projects FY24/25	-	-	-	-	-	299,000	1,000	-	300,000
CWW.3CPS21	WW - Conveyance Pump Station Program Projects FY20/21	-	499,000	1,000	-	-	-	-	-	500,000
CWW.3CPS22	WW - Conveyance Pump Station Program Projects FY21/22	-	-	499,000	1,000	-	-	-	-	500,000
CWW.3CPS23	WW - Conveyance Pump Station Program Projects FY22/23	-	-	-	499,000	1,000	-	-	-	500,000
CWW.3CPS24	WW - Conveyance Pump Station Program Projects FY23/24	-	-	-	-	499,000	1,000	-	-	500,000
CWW.3CPS25	WW - Conveyance Pump Station Program Projects FY24/25	-	-	-	-	-	499,000	1,000	-	500,000
CWW.3CRISA	WW - Continental Ranch Interceptor Sewer Augmentation	-	-	-	-	2,000,000	-	-	-	2,000,000
CWW.3CRP01	WW - System-Wide Conveyance Rehabilitation Program	-	-	-	-	-	4,000,000	27,547,500	-	31,547,500
CWW.3CRS05	WW - CRRPS Facility Modifications	14,199,000	1,000	-	-	-	-	-	-	14,200,000
CWW.3DRACH	WW - Drachman Augmentation - Santa Rita to UPRR ROW	-	-	-	-	3,000,000	8,000,000	-	-	11,000,000
CWW.3GAS18	WW - TRWRF Biogas Cleaning & Utilization Project	11,687,481	2,700,000	-	-	-	-	-	-	14,387,481
CWW.3MMP20	WW - Sewer Utility Minor Modification Projects 2019/20	99,000	1,000	-	-	-	-	-	-	100,000
CWW.3MMP21	WW - Sewer Utility Minor Modification Projects 20/21	-	99,000	1,000	-	-	-	-	-	100,000
CWW.3MMP22	WW - Sewer Utility Minor Modification Projects 21/22	-	-	99,000	1,000	-	-	-	-	100,000
CWW.3MMP23	WW - Sewer Utility Minor Modification Projects 22/23	-	-	-	99,000	1,000	-	-	-	100,000
CWW.3MMP24	WW - Sewer Utility Minor Modification Projects 23/24	-	-	-	-	99,000	1,000	-	-	100,000
CWW.3MMP25	WW - Sewer Utility Minor Modification Projects 24/25	-	-	-	-	-	99,000	1,000	-	100,000
CWW.3MOGA0	WW - Tres Rios WRF-Bldgs 30/36 Motor Oper Gates & Actuators	-	-	-	710,000	-	-	-	-	710,000
CWW.3MR220	WW - Sewer Manhole Rehabilitation #10	2,199,000	1,000	-	-	-	-	-	-	2,200,000
CWW.3MR221	WW - Sewer Manhole Rehabilitation #11	-	1,599,000	1,000	-	-	-	-	-	1,600,000
CWW.3MR222	WW - Sewer Manhole Rehabilitation #12	-	-	1,399,000	1,000	-	-	-	-	1,400,000
CWW.3MR223	WW - Sewer Manhole Rehabilitation Projects - FY 22/23	-	-	-	1,599,000	1,000	-	-	-	1,600,000
CWW.3MR224	WW - Minor Manhole Rehabilitation Projects FY23/24	-	-	-	-	1,499,000	1,000	-	-	1,500,000
CWW.3MR225	WW - Sewer Manhole Rehabilitation Projects FY24/25	-	-	-	-	-	1,599,000	1,000	-	1,600,000
CWW.3MRP20	WW - Minor Rehabilitation Projects FY 19/20	9,999,000	1,000	-	-	-	-	-	-	10,000,000
CWW.3MRP21	WW - Minor Rehabilitation Projects FY 20/21	-	9,199,000	1,000	-	-	-	-	-	9,200,000
CWW.3MRP22	WW - Minor Rehabilitation Projects FY 21/22	-	-	5,999,000	1,000	-	-	-	-	6,000,000
CWW.3MRP23	WW - Minor Rehabilitation Projects FY 22/23	-	-	-	5,999,000	1,000	-	-	-	6,000,000
CWW.3MRP24	WW - Minor Pipe Rehabilitation Projects FY23/24	-	-	-	-	9,999,000	1,000	-	-	10,000,000
CWW.3MRP25	WW - Minor Rehabilitation Projects - FY24/25	-	-	-	-	-	9,999,000	1,000	-	10,000,000
CWW.3NWO19	WW - Northwest Outfall Siphon at the Santa Cruz River Rehab	-	900,000	642,347	-	-	-	-	-	1,542,347
CWW.3RAYAG	WW - Raytheon Augmentation	-	1,000	-	-	-	-	-	-	1,000
CWW.3RBP21	WW - Green Valley WRF - Recharge Basins Phase 2	-	-	-	900,000	2,900,000	-	-	-	3,800,000
CWW.3RI105	WW - ADOT W Ruthrauff Rd & Interstate 10 Sewer Modifications	165,566	20,000	20,000	20,000	-	-	-	-	225,566
CWW.3SAC15	WW - Speedway Bld Area Capacity Augmentation Alignment	1,770,191	1,318,809	-	-	-	-	-	-	3,089,000
CWW.3SNI19	WW - SCADA Network Implementation	349,500	1,000	-	-	-	-	-	-	350,500
CWW.3SNI21	WW - SCADA Network Implementation FY21	-	349,000	1,000	-	-	-	-	-	350,000
CWW.3SWT70	WW - System Wide Treatment Rehabilitation & Enhancement	-	-	-	-	2,800,000	1,900,000	-	-	4,700,000
CWW.3TDS20	WW - Tucson Blvd Flow Mgmt Structure & Siphon Inlet Rehab	-	1,835,000	2,335,000	-	-	-	-	-	4,170,000

APPENDIX C

PIMA COUNTY
 Summary of Planned Capital Improvement Projects
 Fiscal Year 2020-21



Department: WW-Regional Wastewater Reclamation
 Planned Expenses

Program Code	Program Name	Estimated Prior Year	Fiscal Year 2020/2021	Fiscal Year 2021/2022	Fiscal Year 2022/2023	Fiscal Year 2023/2024	Fiscal Year 2024/2025	Fiscal Year 2025/2026	Fiscal Year(s) Beyond	Program Total
CWW.3THBOC	WW - Tres Rios Headworks Biofilter Odor Control	-	1,400,000	100,000	-	-	-	-	-	1,500,000
CWW.3TRCAB	WW - TRCAB Class A Biosolids	-	-	-	-	4,700,000	7,300,000	-	-	12,000,000
CWW.3TREBP	WW - Tres Rios WRF Emergency Backup Power	-	-	-	-	2,380,000	4,620,000	-	-	7,000,000
CWW.3TROCC	WW - TRWRF Operational Command Control Center	-	-	-	1,600,000	1,400,000	-	-	-	3,000,000
CWW.3TRP20	WW - System-Wide Treatment Rehabilitation Program	2,999,000	1,000	-	-	-	-	-	-	3,000,000
CWW.3TRP21	WW - System-Wide Treatment Rehabilitation Program	-	4,999,000	1,000	-	-	-	-	-	5,000,000
CWW.3TRP22	WW - System-Wide Treatment Rehabilitation Program	-	-	4,299,000	1,000	-	-	-	-	4,300,000
CWW.3TRP23	WW - System-Wide Treatment Rehabilitation Program	-	-	-	4,495,000	1,000	-	-	-	4,496,000
CWW.3TRP24	WW - System-Wide Treatment Rehabilitation Program	-	-	-	-	4,899,000	1,000	-	-	4,900,000
CWW.3TRP25	WW - System-wide Treatment Rehabilitation Program	-	-	-	-	-	4,999,000	1,000	-	5,000,000
CWW.3TRPTA	WW - TRWRF Primary Treatment Augmentation	-	-	1,200,000	5,000,000	1,300,000	-	-	-	7,500,000
CWW.3TRSTA	WW - TRWRF Sludge Thickening Augmentation	-	-	1,200,000	5,000,000	1,300,000	-	-	-	7,500,000
CWW.3VTMSE	WW - Vector Truck Mechanical Separating Equipment	-	-	-	-	1,600,000	-	-	-	1,600,000
Total Planned Expenses		\$ 71,698,589	\$ 45,150,000	\$ 45,028,577	\$ 45,040,391	\$ 45,161,054	\$ 45,070,000	\$ 27,553,500	\$ -	\$ 324,702,111

APPENDIX D

Regional Wastewater Reclamation Enterprise Fund
 Cash Position Assuming the Prepayment of \$110.8 Million
 As of January 2020

	2019-20	2020-21	2021-22	2022-23	2023-24
Operations	110,103,343	98,217,760	96,139,754	96,684,685	97,044,137
Debt Proceeds for CIP Projects	31,368,230	25,345,087	26,523,560	29,538,169	32,267,115
CIP Projects	5,629,149	5,278,371	6,271,863	5,277,910	5,591,472
Estimated Cash Balance at End of Fiscal Year	147,100,722	128,841,218	128,935,177	131,500,764	134,902,724
<u>Less Reserves:</u>					
O&M - Operating Reserve	21,007,240	21,343,801	21,557,239	21,772,811	21,990,539
Debt Service Reserve	35,542,322	29,690,296	30,820,382	33,887,151	36,694,297
Construction - Debt Proceeds	5,886,154	5,458,496	6,419,800	5,380,394	5,529,395
Emergency Reserve	20,000,000	20,000,000	20,000,000	20,000,000	20,000,000
Projected Ending Cash Balance after Reserve Requirements are met	64,665,006	52,348,625	50,137,756	50,460,408	50,688,493

Appendix E

Debt Service Ratio Calculations

The County has historically maintained the goals of a rating agency debt service ratio of at least 1.3 as discussed in the Debt Service Ratio section. This ratio is used by the rating agencies and serves as a good financial planning tool.

In addition to the rating agency debt service ratio, Pima County's sewer revenue debt has an additional ratio that is mandated by the debt covenants. This debt covenant ratio is used by external parties to determine Pima County's compliance with contractual obligations related to its debt. While this debt covenant ratio should be considered when setting interest rates, it should not be used as a financial planning tool in the same way that the rating agency debt service ratio is used. By setting rates to maintain a rating agency debt service ratio at or near 1.3, the County will comply with the required debt covenant ratio.

The two debt service ratio calculations are as follows:

- 1) **Rating Agency Debt Service** - The Bond Rating Agencies calculate the debt service ratio using the excess of net revenues over the required debt service. The rating agencies require a 1.3x debt ratio be maintained. A debt service ratio lower than 1.3 could cause rating agencies to downgrade future sewer debt from its current rating. The impact of a downgrade would be additional interest costs for future debt. Because the majority of the needed debt for RWRD construction has already been issued, the impact, though negative, would not be significant to the overall outstanding debt service. This is the most conservative of the two calculations.

Rating Agency Debt Service Ratio =	$\frac{\text{Net Operating Revenues}}{\text{Debt Service Payments}}$
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- 2) **Sewer Obligation Debt Service Ratio** – The Sewer Obligation Debt Service Ratio is calculated by taking the net operating revenues plus unrestricted cash balance from the beginning of the fiscal year, over the amount of Debt. The County is required to maintain a 1.2x Debt Service Ratio. Failure to maintain a 1.2x triggers a default and provides a mechanism to force the County to increase rates.

Sewer Obl Debt Service Ratio =	$\frac{\text{Net Operating Revenues + Unrestricted Cash Balance}}{\text{Debt Service Payments}}$
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