



## **2019 Financial Plan**

### **Pima County**

#### **Regional Wastewater Reclamation Enterprise Fund**

*Prepared by  
Pima County Finance and Risk Management Department  
April 2019*

# 2019 Financial Plan

## Pima County Regional Wastewater Reclamation Enterprise Fund

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# 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 \$165 million of new sewer revenue obligations to fund future capital improvement projects as follows:
  - a. \$45 million in Fiscal Year 2019-20,
  - b. \$45 million in Fiscal Year 2020-21,
  - c. \$45 million in Fiscal Year 2021-22, and
  - d. \$30 million in Fiscal Year 2022-23.
  
2. Using unrestricted cash to prepay debt as follows:
  - a. \$22.4 million in Fiscal Year 2019-20,
  - b. \$36.1 million in Fiscal Year 2020-21,
  - c. \$19.9 million in Fiscal Year 2021-22, and
  - d. \$17.7 million in Fiscal Year 2022-23.
  
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 2018-19 through Fiscal Year 2022-23.

## 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 \$220 million,
- additional sewer revenue debt of \$190 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 February 28, 2019. 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 November 2018 by the University of Arizona Economic & Business Research Center. These estimates project population growth rates to be between 0.79 percent and 0.84 percent between Fiscal Year 2018-19 and Fiscal Year 2022-23, as indicated in Appendix A.

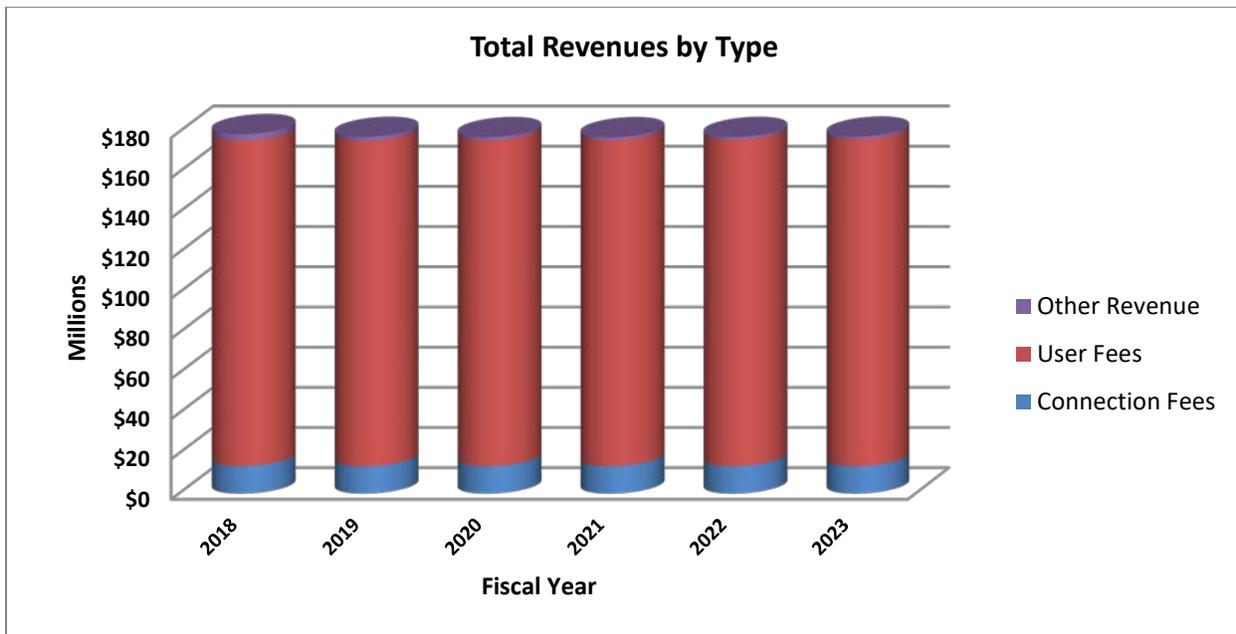
### Declining Volume Usage:

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 past three years, this downward trend has decreased revenues on average by approximately 1.0 percent. Therefore, we have utilized a 99.0 percent (100 percent – 1.0 percent = 99.0 percent) rate factor for future year projections.

**Total Revenues:**

From Fiscal Year 2018-19 through Fiscal Year 2022-23, user fee revenues are expected to remain relatively flat. Figure 1, shows Total Revenues by Type, for Fiscal Year 2017-18, including projections through Fiscal Year 2022-23, 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 \$13.7 million.

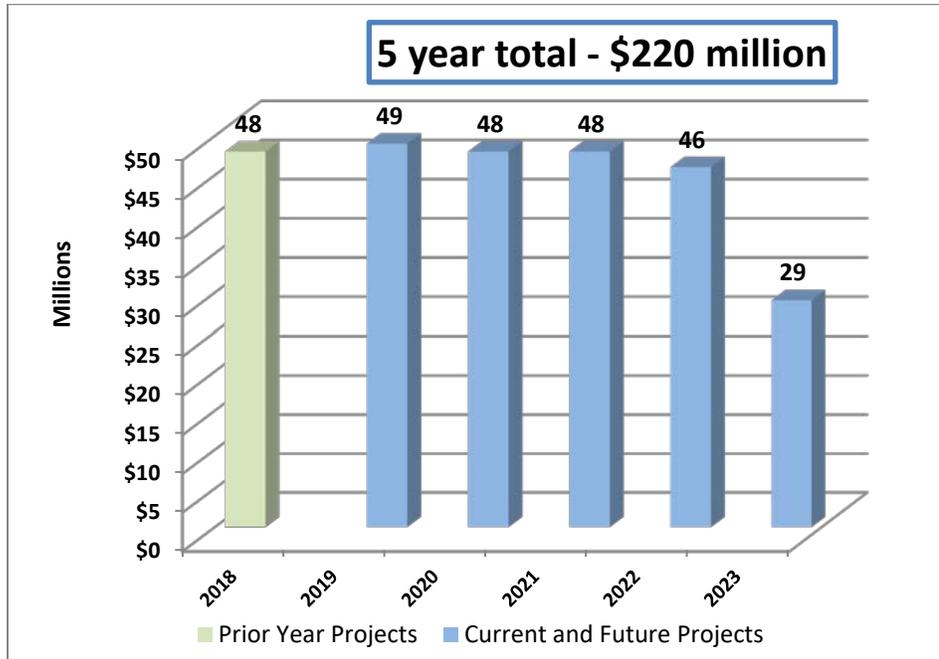
**Table 1: Total Revenues by Type – Detail (in Millions)**

Fiscal Year	Connection Fees	User Fees	Other Revenue	Total Revenues
2018	13.7	162.3	2.9	178.9
2019	13.5	162.3	2.9	178.7
2020	13.6	162.3	1.5	177.4
2021	13.6	162.5	1.3	177.4
2022	13.6	162.6	1.3	177.5
2023	13.6	162.8	1.3	177.7

**CAPITAL IMPROVEMENT PROGRAM**

As shown in Figure 2, capital expenditures are estimated to be \$220 million through the end of Fiscal Year 2022-23. Typically, an additional \$30 to \$45 million in capital improvements are anticipated annually, thereafter.

**Figure 2: Capital Project Costs**

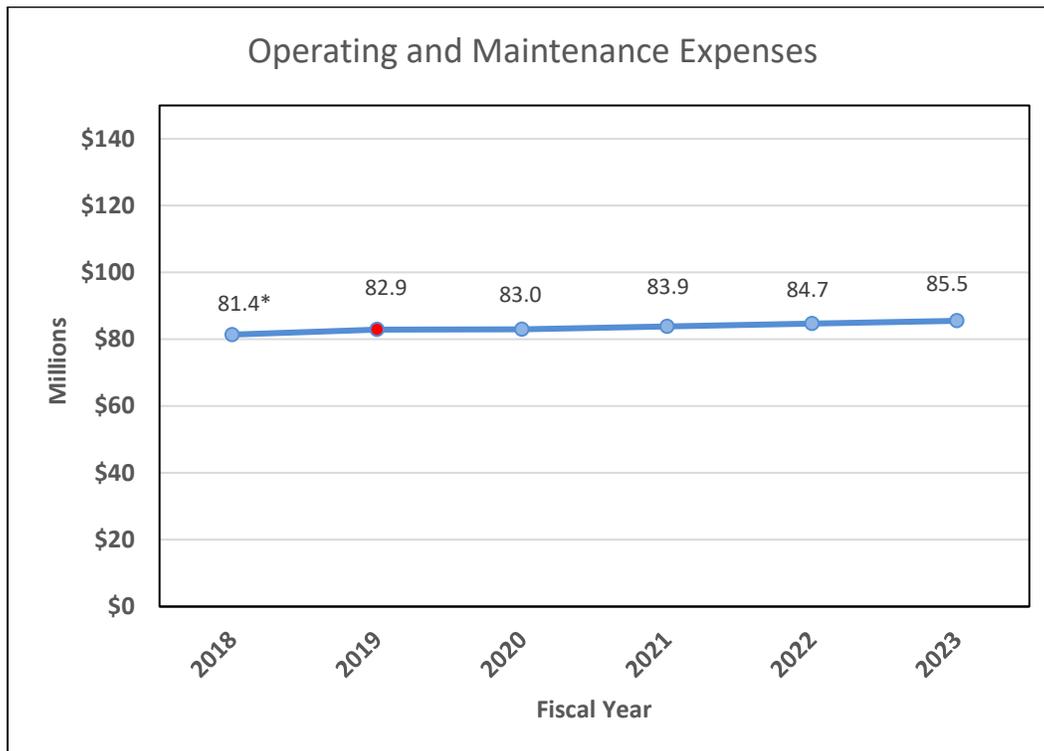


Projected future capital expenditures may change throughout the year as plans are refined and actual construction costs are determined. This analysis uses the Department’s estimate of capital projects as of March 2019. A summary of these capital projects for Fiscal Year 2018-19 through Fiscal Year 2022-23 can be found in Appendix C, *Summary of Planned Capital Improvement Projects as of April 2019*. As discussed on page 11, in the Expenditure Limitation section, for expenditure limitation reasons, Pima County must continue to borrow funds for the \$220 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 2018-19 with Operating and Maintenance (O&M) expenses of \$82.9 million. The budget for Fiscal Year 2019-20 has not yet been approved by the Board of Supervisors. For analysis purposes, the Department’s recommended budget is \$83.0 million. Employee compensation is expected to be \$30.8 million in Fiscal Year 2019-20, representing 37 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 2020-21. At this rate of increase, O&M costs are expected to increase by approximately \$2.6 million during the next four-year period. Figure 3 shows the increase in O&M expenses from Fiscal Year 2017-18 to Fiscal Year 2022-23.

**Figure 3: Operating and Maintenance Expenses**

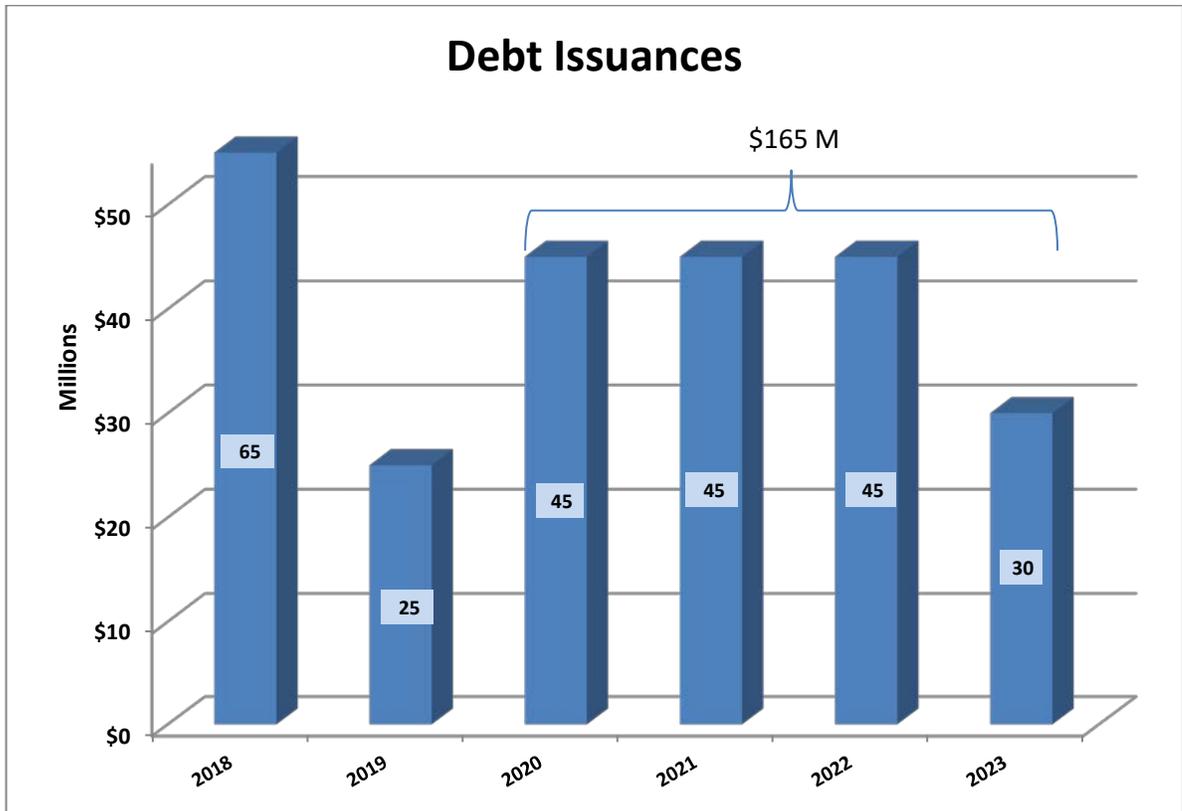


\*Operating and Maintenance Expenses, excluding a non-cash accounting entry for Pension expenses.

**SEWER REVENUE DEBT FINANCING**

As of June 30, 2018, Pima County had \$515 million of sewer revenue debt outstanding. The County issued another \$25 million in sewer obligations in April 2019 and plans to issue an additional \$165 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: \$165 Million of Additional Debt 2020 Through 2023**



**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 2018-19 will be \$69.5 million, with the use of \$12.4 million in unrestricted cash to prepay the 2009 Sewer Bonds and a portion of the 2010 Sewer Obligations.

Figure 5 shows the debt service payments from Fiscal Year 2017-18 and the projected payments through Fiscal Year 2024-25.

**Figure 5: Debt Service Payments**

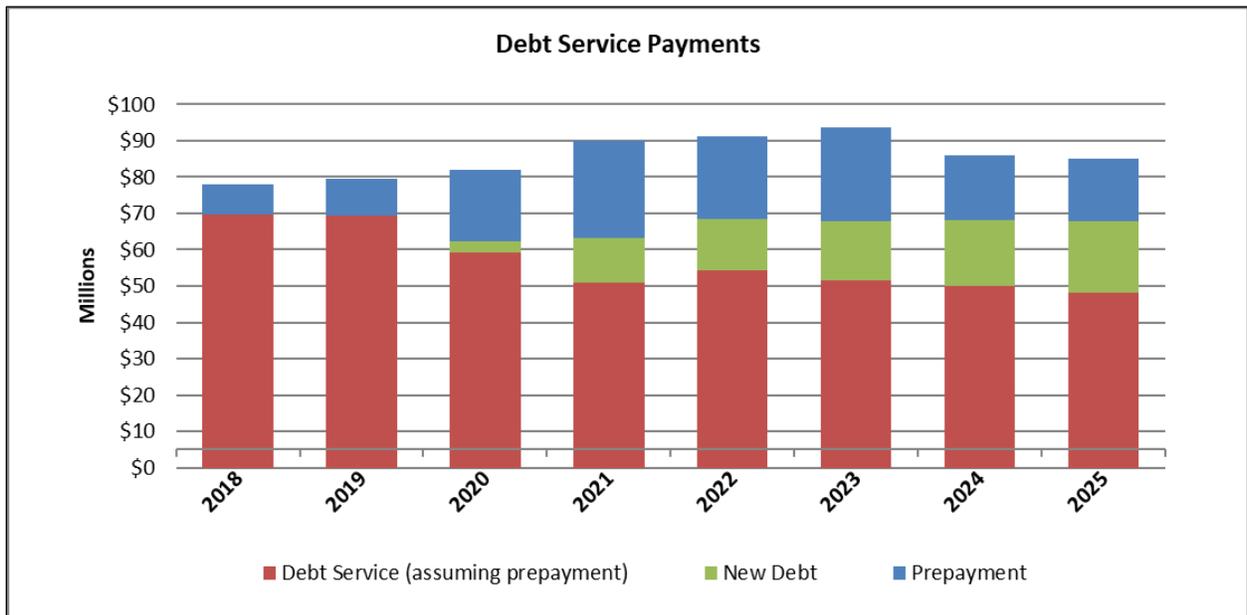


Table 2, details the impact on the debt service payments by year, if unrestricted cash is used to prepay debt service payments and debt is issued according to the Rate Workbook (see Appendix B) for Fiscal Years 2018-19 to 2024-25.

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

<b>Fiscal Year</b>	<b>Debt Service on Existing Debt</b>	<b>Planned Debt Service on New Debt</b>	<b>Total Planned Debt Service WITHOUT Prepayments</b>	<b>Total Planned Prepayments</b>	<b>Total Planned Debt Service AFTER Prepayment</b>
2018	78.1	0.0	78.1	8.3	69.8
2019	79.4	0.2	79.6	10.1	69.5
2020	78.8	3.1	81.9	19.7	62.2
2021	77.8	12.2	90.0	26.9	63.1
2022	77.2	14.1	91.3	22.8	68.5
2023	77.4	16.2	93.6	25.8	67.8
2024	67.8	18.3	86.1	17.9	68.2
2025	65.4	19.8	85.2	17.3	67.9

As shown in Table 2, when planned new debt is issued, the debt service payments without prepayments are expected to increase to \$93.6 million in Fiscal Year 2022-23, with an average of \$86.8 million between now and Fiscal Year 2024-25. However, if the Department uses unrestricted cash to prepay debt, the Department’s highest debt service payment occurred last year at \$69.8 million, with an average payment of \$66.7 million between now and Fiscal Year 2024-25.

<b>CASH RESERVES AND CASH BALANCES</b>
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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 \$108.4 Million of Debt between 2018-19 and 2022-23*, shows the balances and projected balances of the cash accounts. As of Finance and Risk Management’s February 28, 2019 Cash Flow report, the Fund will have an estimated \$140.5 million in cash at the end of Fiscal Year 2018-19, of which \$49.7 million is currently estimated to be unrestricted. The restricted and designated cash accounts described below include the remaining \$90.8 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 2018-19, these reserves are projected to be \$20.7 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 2018-19, these debt reserves are projected to be \$40.8 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 2018-19, this reserve is projected to be \$9.3 million.

<b>RATING AGENCY DEBT SERVICE RATIO</b>
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**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 authorized 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 Pima County has two additional debt service ratios. These two ratios (the senior debt service ratio and the junior debt service ratio) are calculated differently than the rating agency debt service ratio. These two ratios are not used as indicators of financial health. They should not be used for financial planning in the same way the rating agency debt service ratio is used. These two ratios are 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 these two contractual debt service ratios 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 March 2019, Fitch Ratings reaffirmed the County's sewer debt rating of AA for the Senior Debt and AA- for the Junior Debt. In addition, in March 2019, Standard and Poor's reaffirmed the County's sewer debt rating of AA for the Senior Debt and AA for the Junior Debt. 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.

#### **RECOMMENDATIONS**

##### **The Regional Wastewater Reclamation Advisory Committee Recommendation:**

The Finance and Risk Management Department presented the 2019 Financial Plan at the April 25, 2019 Regional Wastewater Reclamation Advisory Committee (RWRAC) meeting. At that meeting, the RWRAC recommended and approved the 2019 Financial Plan.

**LIST OF APPENDICES**

Appendix A – Key Assumptions used for the 2019 Financial Plan

Appendix B – Rate Workbook

Appendix C – Summary of Planned Capital Improvement Projects as of April 2019

Appendix D – Cash Position Assuming the Prepayment of \$108.4 Million

Appendix E – Debt Service Ratio Calculations

## APPENDIX A

### KEY ASSUMPTIONS 2019 Financial Plan

		Current Year					Totals		Comments
ASSUMPTION REGARDING:		2019	2020	2021	2022	2023	2019-2023		
1	Population Growth Factors		1.0079	1.0082	1.0082	1.0083	1.0084		2019 UA Economic & Business Research Center estimates for FY 2019 - 2023.
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		0.990	0.990	0.990	0.990	0.990		Rate based on 3 year average decline in volume usage.
4	Connection Fees	Population Growth	1.0079	1.0082	1.0082	1.0083	1.0084		2019 UA Economic & Business Research Center estimates for FY 2019 - 2023.
		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				1.00%	1.00%	1.00%		Current year is based on projected expenses for Period 8. FY 2020 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		49,000,000	48,000,000	48,000,000	46,000,000	29,000,000	220,000,000	For Fiscal Years 2019 - 2023, amounts per RWRD's March 2019 CIP Schedule.
7	Debt Assumptions	Sewer Obligations	25,000,000	45,000,000	45,000,000	45,000,000	30,000,000	190,000,000	
8	Interest Rate Assumptions		5.00%	5.00%	5.00%	5.00%	5.00%		

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 2018 through 2025 **Excess Cash used to Advance Refund through Insurbance Defeasance**

February 2019 CURRENT FORECAST

	Actuals	Adopted Budget	Forecasted	Assumptions						
	2017-18	2018-19	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	
Customers	278,032	279,777	280,228	282,526	284,843	287,207	289,620	292,024	294,447	
Population Growth - UA Estimate	1.0078	1.0059	1.0079	1.0082	1.0082	1.0083	1.0084	1.0083	1.0083	
Volume Rate	3.6287	3.6287	3.6287	3.6287	3.6287	3.6287	3.6287	3.6287	3.6287	
Rate factor - Volume Fee	1.0300	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	13.0000	
Rate factor - Flat Service Charge	1.0300	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	
Rate factor - Connection Fee	1.0300	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	1.0000	1.0100	1.0100	1.0100	1.0100	1.0100	
CCF - Calculated Flow Estimate	9.7775	9.4774	9.6797	9.5829	9.4871	9.3922	9.2983	9.2053	9.1133	
Rate factor - Volume	0.9800	0.9800	0.9900	0.9900	0.9900	0.9900	0.9900	0.9900	0.9900	
	Actuals	Adopted Budget	Forecasted	Requested Budget	Forecasted					
	2017-18	2018-19	2018-19*	2019-20**	2020-21	2021-22	2022-23	2023-24	2024-25	
System Revenues:										
Volumetric User Fee	118,382,344	115,490,124	118,115,356	117,893,063	117,671,188	117,461,380	117,263,575	117,054,494	116,845,786	
Fixed User Administrative Fee	43,372,992	43,645,212	43,715,639	44,074,107	44,435,515	44,804,329	45,180,686	45,555,685	45,933,798	
Sanitation Fees	545,197	310,000	519,000	350,000	350,000	350,000	350,000	350,000	350,000	
Total Sewer Utility Service	162,300,533	159,445,336	162,349,994	162,317,169	162,456,702	162,615,709	162,794,261	162,960,180	163,129,584	
Sewer Connection Revenue	13,687,625	11,504,784	13,500,000	13,610,000	13,600,000	13,600,000	13,600,000	13,600,000	13,600,000	
Interest	2,106,547	1,095,000	2,211,148	1,130,000	972,012	935,333	923,134	922,921	922,921	
Other Income	837,415	284,260	652,886	384,667	384,667	384,667	384,667	384,667	384,667	
Total Revenues	178,932,120	172,329,380	178,714,028	177,441,836	177,413,382	177,535,710	177,702,062	177,867,768	178,037,172	
Operations and Maintenance Costs	79,207,737	83,480,997	82,911,191	83,021,258	83,851,471	84,689,985	85,536,885	86,392,254	87,256,177	
Net Revenues	99,724,383	88,848,383	95,802,837	94,420,578	93,561,911	92,845,724	92,165,177	91,475,514	90,780,995	
Existing Debt Service - Senior Debt	2,452,952	698,238	698,238	36,934	-	-	-	-	-	
Existing Debt Service - Subordinate Debt	67,352,044	68,866,128	68,641,128	59,065,753	50,879,600	54,450,507	51,601,947	49,856,922	48,139,917	
Total Existing Debt Service Payments	69,804,996	69,564,366	69,339,366	59,102,686	50,879,600	54,450,507	51,601,947	49,856,922	48,139,917	
Proposed Debt Service	-	750,000	199,977	3,144,500	12,238,397	14,053,191	16,241,593	18,344,544	19,788,995	
Total Debt Service Payments	69,804,996	70,314,366	69,539,343	62,247,186	63,117,997	68,503,697	67,843,540	68,201,466	67,928,911	
Rating Agency Ratio	1.43	1.26	1.38	1.52	1.48	1.36	1.36	1.34	1.34	
Net Revenues after Debt Service Payments	29,919,387	18,534,017	26,263,495	32,173,392	30,443,914	24,342,027	24,321,637	23,274,048	22,852,084	
Transfers out - COPs 2013										
Transfers out - COPs 2015	(15,977,900)	(12,327,125)	(12,327,125)	-	-	-	-	-	-	
Transfers out - COPs 2016	(7,200,250)	(5,751,000)	(5,751,000)	-	-	-	-	-	-	
Transfers out - COPs 2018	-	(10,577,966)	(10,577,966)	(4,802,569)	(4,897,019)	-	-	-	-	
Debt Service Reserve (Obligations) Transfer	(2,964,060)	(3,100,000)	(1,199,625)	(2,243,325)	(2,280,825)	(2,326,843)	(1,512,371)	(1,543,299)	(1,512,371)	
Operating Transfer In - Debt Reserve				11,296,972	9,380,568					
Other Operating Transfers Out	(876,360)	(830,569)	(847,766)	(493,136)	(493,136)	(493,136)	(493,136)	(493,136)	(493,136)	
Prepayment of 2004 WIFA Loans	-	-	-	-	-	-	-	-	-	
Prepayment of 2008 Bonds	(16,601,585)	-	-	-	-	-	-	-	-	
Prepayment of 2009 Bonds		(2,913,625)	(2,913,625)	(2,997,871)						
Prepayment of 2009 WIFA Loans				(19,387,525)						
Prepayment of 2010 Obligations		(9,478,050)	(9,450,000)		(23,754,375)					
Prepayment of 2011 Obligations					(12,374,250)	(19,875,000)				
Prepayment of 2012 Obligations							(9,153,125)	(10,690,000)	(11,225,000)	
Prepayment of 2014 Obligations							(4,020,000)	(4,220,000)		
Prepayment of 2016 Obligations							(8,500,000)			
Net Changes in Assets and Liabilities	3,847,638	(1,633,648)	(7,877,765)	(1,930,623)	(1,913,321)	(1,914,650)	(1,776,905)	(2,044,150)	(2,139,374)	
Subtotal	(9,853,130)	(28,077,966)	(24,681,377)	11,615,316	(5,888,444)	(267,602)	2,886,100	4,483,463	3,262,203	
Beginning Unrestricted Cash Balance	89,315,783	62,000,000	78,192,048	49,711,509	62,066,741	55,521,935	54,889,718	55,749,266	60,018,886	
Change in Restrictions of Cash	(1,270,605)	(700,000)	(3,799,162)	739,916	(656,362)	(364,615)	(2,026,552)	(213,843)	(88,267)	
Ending Unrestricted Cash Balance	78,192,048	33,222,034	49,711,509	62,066,741	55,521,935	54,889,718	55,749,266	60,018,886	63,192,823	
CIP Projections	48,241,719	41,000,000	49,000,000	48,000,000	48,000,000	46,000,000	29,000,000	29,000,000	30,000,000	
Sewer Revenue debt	45,000,000	45,000,000	25,000,000	45,000,000	45,000,000	45,000,000	30,000,000	30,000,000	30,000,000	
COPs debt	20,000,000									

\* As of period 8  
 \*\* As of March 18, 2019

**PIMA COUNTY**  
**Summary of Planned Capital Improvement Projects**  
**Fiscal Year 2019-20**



**Department: WW-Regional Wastewater Reclamation**

**Planned Expenses**

Program Code	Program	Estimated Prior Year(s)	Fiscal Year 2019/2020	Fiscal Year 2020/2021	Fiscal Year 2021/2022	Fiscal Year 2022/2023	Fiscal Year 2023/2024	Fiscal Year 2024/2025	Fiscal Year(s) Beyond	Program Total
CWW.322SC9	WW - 22nd St Swan to Craycroft	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,500,000	\$ -	\$ -	\$ 2,500,000
CWW.3AI195	WW - ADOT - W Ajo Way & I-19	940,917	309,083	-	-	-	-	-	-	1,250,000
CWW.3ANOMX	WW - Anammox Treatment Process	100,000	4,300,000	-	-	-	-	-	-	4,400,000
CWW.3ASC15	WW - Old Nogales Interc. Aug -	19,908,886	300,000	12,609,012	11,987,621	4,000,000	-	-	-	48,805,519
CWW.3AVB16	WW - New Influent Emergency	466,433	1,200,000	-	2,706,117	-	-	-	-	4,372,550
CWW.3AVRP0	WW - Avra Valley WRF - RAS	-	-	-	-	-	-	400,000	-	400,000
CWW.3BBUMP	WW - Tres Rios WRF Nutrient	2,780,124	3,779,492	-	-	-	-	-	-	6,559,616
CWW.3CDTA0	WW - Corona de Tucson WRF - Air	-	-	-	-	-	-	700,000	-	700,000
CWW.3CFS15	WW - Continental Ranch Pump	264,871	2,000,000	8,930,889	8,129,500	-	-	-	-	19,325,260
CWW.3CRP01	WW - System-Wide Conveyance	-	251,000	501,000	501,000	3,400,000	1,000	7,200,000	60,000,000	71,854,000
CWW.3CRS05	WW - CRRPS Facility Modifications	13,209,632	1,000	-	-	-	-	-	-	13,210,632
CWW.3DRS17	WW - Facilities Modification - IPS	734,300	113,220	-	-	-	-	-	-	847,520
CWW.3FGS17	WW - PC Fairgrounds WRF	1,218,560	2,813,993	967,447	-	-	-	-	-	5,000,000
CWW.3GAS18	WW - TRWRF Biogas Cleaning &	4,277,877	4,201,495	-	-	-	-	-	-	8,479,372
CWW.3MMP20	WW - Sewer Utility Minor	-	100,000	-	-	-	-	-	-	100,000
CWW.3MOGA0	WW - Tres Rios WRF-Bldgs 30/36	-	-	-	-	710,000	-	-	-	710,000
CWW.3MR220	WW - Sewer Manhole Rehabilitation	-	1,599,000	1,000	-	-	-	-	-	1,600,000
CWW.3MR221	WW - Sewer Manhole Rehabilitation	-	-	1,599,000	1,000	-	-	-	-	1,600,000
CWW.3MR222	WW - Sewer Manhole Rehabilitation	-	-	-	1,599,000	1,000	-	-	-	1,600,000
CWW.3MR223	WW - Sewer Manhole Rehabilitation	-	-	-	-	1,599,000	1,000	-	-	1,600,000
CWW.3MR224	WW - Minor Manhole Rehabilitation	-	-	-	-	-	1,599,000	1,000	-	1,600,000
CWW.3MR919	WW - Sewer Manhole Rehabilitation	1,599,000	1,000	-	-	-	-	-	-	1,600,000
CWW.3MRP19	WW - Minor Rehabilitation Projects	6,995,000	5,000	-	-	-	-	-	-	7,000,000
CWW.3MRP20	WW - Minor Rehabilitation Projects	-	9,995,000	5,000	-	-	-	-	-	10,000,000
CWW.3MRP21	WW - Minor Rehabilitation Projects	-	-	9,995,000	5,000	-	-	-	-	10,000,000
CWW.3MRP22	WW - Minor Rehabilitation Projects	-	-	-	9,995,000	5,000	-	-	-	10,000,000
CWW.3MRP23	WW - Minor Rehabilitation Projects	-	-	-	-	9,995,000	5,000	-	-	10,000,000
CWW.3MRP24	WW - Minor Pipe Rehabilitation	-	-	-	-	-	9,995,000	5,000	-	10,000,000
CWW.3NRI20	WW - North Rillito Interceptor	-	-	-	-	-	3,311,830	-	-	3,311,830
CWW.3NWO19	WW - Northwest Outfall Siphon at	-	-	-	1,548,770	-	-	-	-	1,548,770
CWW.3OPR19	WW - Prince Rd Sewer	85,396	2,358,283	-	-	-	-	-	-	2,443,679
CWW.3PGC18	WW - Pantano Grade Control	-	-	-	-	754,000	-	-	-	754,000
CWW.3PPS13	WW - Principal Pump Station	8,905	514,887	-	-	-	-	-	-	523,792
CWW.3PTI18	WW - Pantano Interceptor	-	-	-	-	-	3,000,000	4,800,000	-	7,800,000
CWW.3PTI22	WW - Pantano Interceptor	-	-	-	-	200,000	2,777,000	-	-	2,977,000

**PIMA COUNTY**  
**Summary of Planned Capital Improvement Projects**  
**Fiscal Year 2019-20**



**Department: WW-Regional Wastewater Reclamation**

**Planned Expenses**

<b>Program Code</b>	<b>Program</b>	<b>Estimated Prior Year(s)</b>	<b>Fiscal Year 2019/2020</b>	<b>Fiscal Year 2020/2021</b>	<b>Fiscal Year 2021/2022</b>	<b>Fiscal Year 2022/2023</b>	<b>Fiscal Year 2023/2024</b>	<b>Fiscal Year 2024/2025</b>	<b>Fiscal Year(s) Beyond</b>	<b>Program Total</b>
CWW.3RAYAG	WW - Raytheon Augmentation	-	1,210,000	-	-	-	-	-	-	1,210,000
CWW.3RBP21	WW - Green Valley WRF -	-	-	-	-	-	400,000	3,400,000	-	3,800,000
CWW.3RI105	WW - ADOT W Ruthrauff Rd &	144,106	5,000	-	-	-	-	-	-	149,106
CWW.3SAC15	WW - Speedway Bld Area Capacity	561,881	3,573,000	7,967,119	-	-	-	-	-	12,102,000
CWW.3SNI19	WW - SCADA Network	-	349,000	1,000	-	-	-	-	-	350,000
CWW.3SPS15	WW - Silverado Pump Station	-	-	-	514,000	-	-	-	-	514,000
CWW.3SR863	WW - ADOT SR86 Valencia Rd to	879,147	20,853	-	-	-	-	-	-	900,000
CWW.3SWT70	WW - System Wide Treatment	-	1,000	1,000	500,000	3,500,000	500,000	14,000,000	-	18,502,000
CWW.3TDS20	WW - Tucson Blvd Flow Mgmt	-	-	420,000	3,750,000	-	-	-	-	4,170,000
CWW.3TPBBS	WW - Twin Peaks - Blue Bonnet	5,027,523	6,000,000	-	-	-	-	-	-	11,027,523
CWW.3TRP19	WW - System-wide Treatment	2,995,000	5,000	-	-	-	-	-	-	3,000,000
CWW.3TRP20	WW - System-Wide Treatment	-	2,995,000	5,000	-	-	-	-	-	3,000,000
CWW.3TRP21	WW - System-Wide Treatment	-	-	4,995,000	5,000	-	-	-	-	5,000,000
CWW.3TRP22	WW - System-Wide Treatment	-	-	-	4,995,000	5,000	-	-	-	5,000,000
CWW.3TRP23	WW - System-Wide Treatment	-	-	-	-	4,995,000	5,000	-	-	5,000,000
CWW.3TRP24	WW - System-Wide Treatment	-	-	-	-	-	4,995,000	5,000	-	5,000,000
<b>Total Planned Expenses</b>		<b>\$ 62,197,558</b>	<b>\$ 48,001,306</b>	<b>\$ 47,997,467</b>	<b>\$ 46,237,008</b>	<b>\$ 29,164,000</b>	<b>\$ 29,089,830</b>	<b>\$ 30,511,000</b>	<b>\$ 60,000,000</b>	<b>\$ 353,198,169</b>

## APPENDIX D

Regional Wastewater Reclamation Enterprise Fund  
 Cash Position Assuming the Prepayment of \$108.4 Million  
 As of February 2019

	2018-19	2019-20	2020-21	2021-22	2022-23
Operations	91,426,573	103,041,889	97,153,446	96,885,842	99,771,942
Debt Proceeds for CIP Projects	40,832,825	28,777,872	18,683,624	19,773,996	22,250,839
CIP Projects	8,217,081	9,584,380	10,583,813	9,227,310	6,308,898
Estimated Cash Balance at End of Fiscal Year	140,476,479	141,404,141	126,420,883	125,887,148	128,331,679
<u>Less Reserves:</u>					
O&M - Operating Reserve	20,727,798	20,755,315	20,962,868	21,172,496	21,384,221
Debt Service Reserve	40,740,558	31,759,478	25,108,542	27,380,372	28,922,570
Construction - Debt Proceeds	9,296,614	6,822,607	4,827,538	2,444,562	2,275,622
Emergency Reserve	20,000,000	20,000,000	20,000,000	20,000,000	20,000,000
<b>Projected Ending Cash Balance after Reserve Requirements are met</b>	<b>49,711,509</b>	<b>62,066,741</b>	<b>55,521,935</b>	<b>54,889,718</b>	<b>55,749,266</b>

## 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 two additional ratios that are mandated by the debt covenants. These debt covenant ratios are used by external parties to determine Pima County's compliance with contractual obligations related to its debt. While these debt covenant ratios should be considered when setting interest rates, they 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 required debt covenant ratios.

The first debt covenant ratio is the Senior Debt Service Ratio. The first layer of debt is Senior Debt. Senior Debt consists of the 2009 Water Infrastructure Finance Authority of Arizona (WIFA) loan, issued before the County began issuing the sewer revenue obligations in Fiscal Year 2009-2010. The Senior Debt Service Ratio only uses the senior debt service in its calculation, because the Senior Debt holders have a priority claim on the net revenues of the sewer system.

The second debt covenant ratio is the Junior Debt Service Ratio. The second layer of debt is Junior Debt. As implied by those terms, Junior Debt is junior in priority to Senior Debt. Moreover, the pledge of revenues for Senior Debt must be paid before payments are made for Junior Debt. The Junior Debt Service Ratio uses both the senior debt service and the junior debt service in its calculation, because the Senior Debt must be paid first.

Including the rating agency debt service ratio, the three 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 three calculations.

$$\text{Rating Agency Debt Service Ratio} = \frac{\text{Net Operating Revenues}}{\text{Senior and Junior Debt Service Payments}}$$

- 2) **Senior Debt Service Ratio** - The Senior Debt Service Ratio is calculated by taking net operating revenues over the amount of Senior Debt. The debt service ratio for the Senior Debt is improving each year, because the balance of the outstanding Senior Debt is decreasing each year. This is because the net revenues are many times greater than the ever declining debt service payments for the Senior Debt, in any given year. The County is required to maintain a 1.2x Senior Debt Service Ratio. Failure to maintain a 1.2x triggers a default and provides a mechanism to force the County to increase rates.

$$\text{Senior Debt Service Ratio} = \frac{\text{Net Operating Revenues}}{\text{Senior Debt Service Payments}}$$

- 3) **Junior Debt Service Ratio** – The Junior 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 Senior and Junior Debt. The County is required to maintain a 1.2x Junior Debt Service Ratio. Failure to maintain a 1.2x triggers a default and provides a mechanism to force the County to increase rates.

$$\text{Junior Debt Service Ratio} = \frac{\text{Net Operating Revenues} + \text{Unrestricted Cash Balance}}{\text{Senior and Junior Debt Service Payments}}$$