



TOWN OF ORO VALLEY
WATER UTILITY
WATER RATES ANALYSIS REPORT

MARCH 2020

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Executive Summary

An annual review of the revenue requirements and water rates is a critical component in ensuring the long-term financial health of the Water Utility. Functions of the Oro Valley Water Utility Commission include reviewing and developing recommendations for water revenue requirements, water rates and fee structures. The Commission evaluates staff recommendations based on a rates analysis to ensure the recommendations meet Town policies and bond covenants. Water rates and charges are reviewed annually in accordance with Mayor and Town Council Water Policies – II.A.2.b(4).

The Utility has based this financial analysis on the American Water Works Associations (AWWA) Cash Needs Approach. The AWWA is the largest national organization that develops water and wastewater policies, specifications and rate setting guidelines accepted by both government-owned and private water and wastewater utilities worldwide.

This Water Rates Analysis Report contains detailed information on the Operating Fund and the Water Resources and System Development Impact Fee Fund. Each fund is individually analyzed with regard to revenue and revenue requirements. As an enterprise of the Town, the Utility generates revenue from rates, fees and charges and does not receive revenue from taxes or other monies from the General Fund. Additionally, revenue generated by the Utility does not fund operating costs of any other Town department.

In accordance with policy, the water rates analysis is prepared annually based on the most up-to-date information available for a five year period. Although the analysis is for five years, any rate increase considered would be approved only for the first year in the five year projection period.

In the past, emphasis was placed on developing commodity rates that would promote water conservation. The current tiered rate structure for the commodity rates encourages water conservation as intended. Because of the decline in water consumption, the emphasis of the rate design has transitioned to increase the Utility's fixed cost recovery for revenue stability. This is accomplished over time with increases to the monthly base rate.

The Water Utility Commission has made a recommendation for a Preferred Financial Scenario. Under the Preferred Financial Scenario, the Operating Fund is projected to have a cash balance of \$4,508,508 at the end of the five year projection period. This meets the cash reserve requirement. In addition, the debt service coverage ratio of 1.3 is met or exceeded each year. Operational needs and capital improvements are included in the analysis. The Preferred Financial Scenario demonstrates a strategic balance between incurring new debt and a planned use of cash reserves to finance capital projects.

The Preferred Financial Scenario evaluates the impact of future costs and the revenue sources that will be required to meet those costs. The proposed water rates in the Preferred Financial Scenario will increase the Utility's fixed cost recovery.

The Water Utility Commission and Water Utility staff have made the following recommendations on water rates in the Preferred Financial Scenario for FY 2020-21:

- Increase the potable water base rates
- Decrease the reclaimed commodity rate
- Decrease the reclaimed groundwater preservation fee

Current and proposed monthly base rates for potable water use are provided in Table 1 below:

Table 1

Meter Size (in inches)	Current Base Rate	Proposed Base Rate	Monthly Increase
5/8	\$ 18.26	\$ 19.26	\$ 1.00
3/4	\$ 27.38	\$ 28.89	\$ 1.51
1	\$ 45.63	\$ 48.14	\$ 2.51
1.5	\$ 91.26	\$ 96.28	\$ 5.02
2	\$ 146.03	\$ 154.06	\$ 8.03
3	\$ 292.03	\$ 308.09	\$ 16.06
4	\$ 456.31	\$ 481.41	\$ 25.10
6	\$ 912.62	\$ 962.81	\$ 50.19
8	\$1,460.19	\$1,540.50	\$ 80.31

Cost per month.

The financial impact of the proposed rates for a customer with a 5/8-inch meter is an increase of \$1.00 per month. Since this is a base rate increase only, the increase will be the same for all customers with this meter size regardless of the volume of water used. Customers with a 5/8-inch meter represent 88 percent of the total customer base and include residential, commercial and irrigation classifications with the vast majority of those being residential.

The potable groundwater preservation fee will remain unchanged while the reclaimed groundwater preservation fee is proposed to decrease by \$0.10 in FY 2020-21 with smaller decreases in later years.

The reclaimed base rate remains unchanged while the commodity rate is proposed to decrease by \$0.12 per 1,000 gallons beginning in FY 2020-21. The proposed decrease in the reclaimed groundwater preservation fee coupled with the decrease in the reclaimed commodity rate result in a reduction of approximately \$2,200 per month for an average turf customer.

As part of the 2019 Development Impact Fee Analysis, the two existing impact fee funds were combined into one fund known as the Water Resource and System Development Impact Fee Fund. The Preferred Financial Scenario illustrates a financially sound cash balance in the Water Resource and System Development Impact Fee fund. In compliance with state statutes, the cash balance will be used to finance capital projects to meet the demands of new growth.

The Water Utility presents this Water Rates Analysis in support of the proposed rates contained in the Preferred Financial Scenario. The Oro Valley Water Utility Commission and Water Utility staff respectfully recommend the proposed increase to the potable base rate, decrease to the reclaimed commodity rates and decrease to the reclaimed groundwater preservation fee as detailed in the Preferred Financial Scenario.

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Introduction

The Oro Valley Water Utility was established in 1996 as a self-supporting enterprise of the Town. The Utility is comprised of two separate funds that have been established for specific purposes. The Funds are as follows:

- Operating Fund
- Water Resource and Development Impact Fee Fund

The Operating Fund is the primary fund for the Utility. Revenue for this fund includes water sales, service fees, miscellaneous charges and interest income. The expenses managed from this fund include personnel, operations and maintenance for both potable and reclaimed water systems, capital costs for existing potable water system improvements and related debt service. The Utility pays the General Fund for services received including finance, human resources, fleet services, information technology, legal, insurance and rental of office space; however, it does not receive revenue from taxes or other payments from the General Fund. Groundwater Preservation Fee (GPF) revenue and expenses are accounted for within the Operating Fund but are segregated because GPF revenue is restricted for specific uses. This is illustrated in Appendix A, Page A-2.

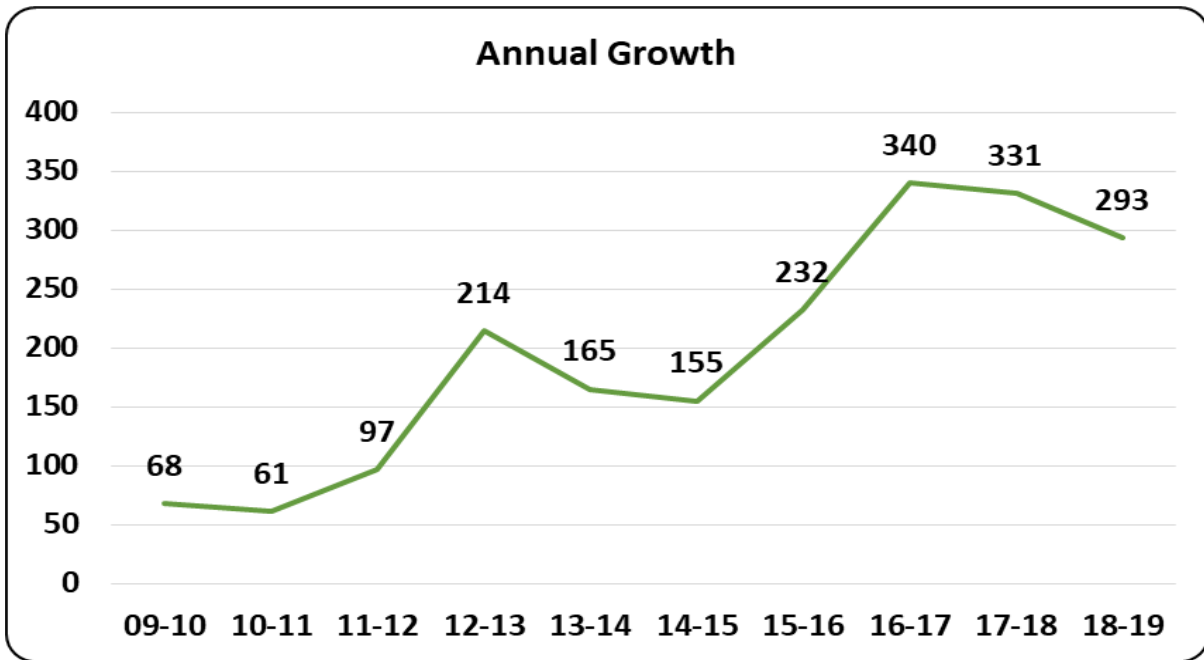
TischlerBise, Inc. was hired in October 2019 by the Town to update land use assumptions, prepare an infrastructure improvements plan and development impact fees pursuant to Arizona Revised Statutes (ARS) 9-436.05. The proposed development impact fees will be referred to as the Water Resources and System Development Impact Fees (WRSDIF) and will replace the Alternative Water Resource Development Impact Fee and the Potable Water System Development Impact Fee. The WRSDIF may be used to fund all types of water resources, the infrastructure to deliver those resources and any related debt including CAP capital infrastructure repayment costs. More information on the WRSDIF may be found on page 12.

The revenue and expenses of the Operating Fund and the WRSDIF Fund are combined to determine if the Utility meets the debt service coverage requirement established in the Mayor and Town Council Water Policies and current bond covenants. Otherwise, each fund is independent with regard to revenue and expenses. Pursuant to ARS 9-463.05 Section B.9., impact fees must be placed in a separate fund and accounted for separately. ARS 9-463.05 Section B.5. states that the impact fees may not be used for operations and maintenance of existing facilities.

Growth Rates

The Utility's growth rates have fluctuated during the past several years. Figure 1 illustrates the Utility's growth of 1,956 new metered connections over the last 10 years. At the end of FY 2018-19 the customer base totaled 20,217 metered connections.

Figure 1



Throughout the rates analysis process, Utility staff collaborated with other Town staff. In developing the growth projections, assistance was received from the Community and Economic Development staff who reviewed the current housing inventory, along with plans that have been submitted for review, to conservatively estimate future growth. The growth projections used for this report are consistent with the Town's financial forecasting and are shown in the following table.

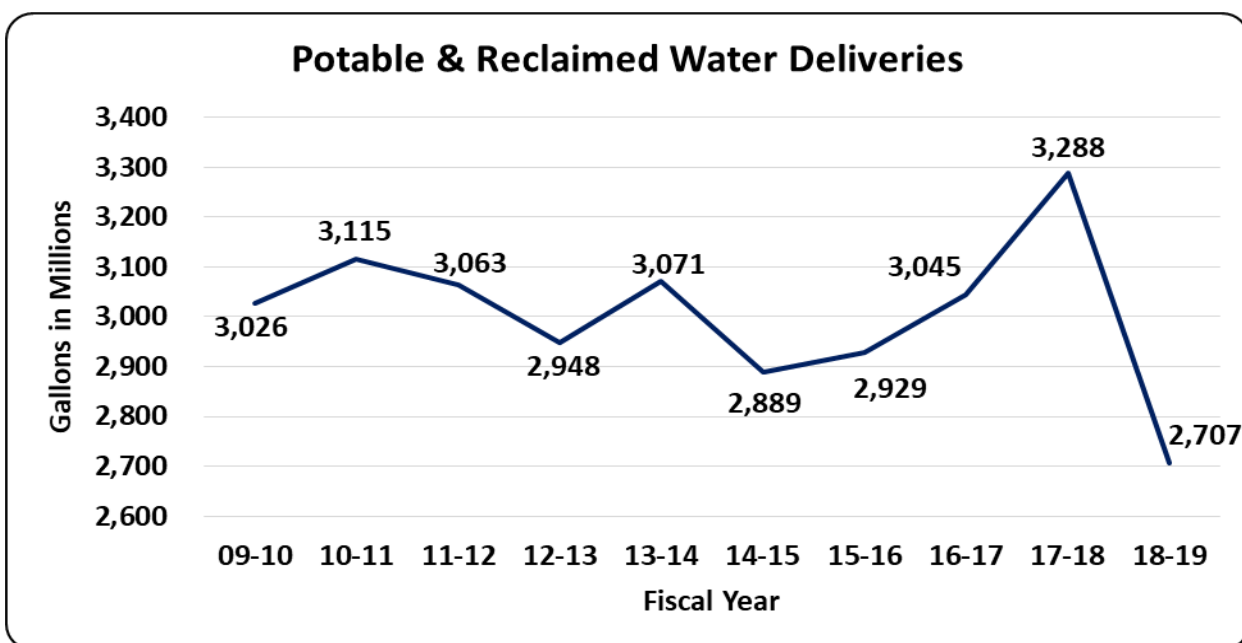
Table 2

New Metered Connections	2020-21	2021-22	2022-23	2023-24	2024-25
Single Family Residential	325	350	330	240	225
Commercial, Multi-Family, Irrigation	8	4	4	4	4

Water Use Trends

The Utility has experienced a reduction in water use, both potable and reclaimed, over the last 10 years. Figure 2 illustrates this reduction in total water use from FY 2009-10 through FY 2018-19. The graph depicts an overall decline in water use even though the Utility experienced growth of 1,956 metered connections in that same time frame. Water use decreased in FY 2018-19 by approximately 581,000 gallons. Of that amount 230,000 gallons was a decline in reclaimed water use. During FY 2017-18, a single family residential customer with a 5/8-inch water meter used an average of 7,900 gallons of water per month. The weather conditions in the current fiscal year are significantly different than last fiscal year. Because of the increased rain and cooler temperatures, residential water use is trending closer to 7,000 gallons per month in FY 2018-19. For a conservative approach, the revenue projections in this analysis used water patterns similar to those in FY 2016-17 when the average water use was 7,300 gallons per month which is consistent with prior years.

Figure 2



The historical decline in water use has been experienced not only on a local level, but also on regional and national levels. This can be largely attributed to water conservation – both intentional and unintentional. Intentional water conservation is the conscious effort to reduce water use by commonly known measures including changing landscape to drought tolerant plants and the removal of lawns. Unintentional water conservation is a result of plumbing code changes and other regulatory changes regarding water efficiency. For example, all new water using appliances and fixtures are required to be low flow. The consumer's intention may not have been to conserve water when they chose to replace an aging or broken dishwasher, clothes washer or bathroom faucet.

Debt Service

The current annual debt service obligations are met with revenue generated from water rates, the GPF and impact fees. A summary of the existing debt and the outstanding balances at the December 31, 2019 are provided in Table 3.

Table 3

Repayment	Year	Description of Debt	Purpose	Balance
Water Rates	2009	WIFA Loan	Existing Potable System	\$ 1,274,073
Water Rates	2012	Sr. Lien Bonds – Refinance 2003	Existing Potable System	\$ 2,202,306
Water Rates	2014	WIFA Loan	AMI Meter Replacement	\$ 3,014,023
Water Rates	2015	Excise Tax Bonds – Refinance 2005	Land for MOC	\$ 852,060
Water Rates	2017	Excise Tax Bonds – Refinance 2007	Existing Potable System	\$ 10,555,978
Water Rates	2018	Excise Tax Bonds	Existing Potable System	\$ 5,873,250
GPF	2008	WIFA Loan	Reclaimed Water System	\$ 2,160,662
GPF	2012	Sr. Lien Bonds – Refinance 2003	Reclaimed Water System	\$ 4,014,308
WRSDIF	2012	Sr. Lien Bonds – Refinance 2003	Potable System Expansion	\$ 1,238,386
Total Debt				\$ 31,185,046

The Town entered into an IGA with Metropolitan Domestic Water Improvement District and the Town of Marana to construct a recharge, recovery and delivery system known as the NWRRDS project to bring additional CAP water into the Town. This rates analysis includes an assumption for new debt in the amount of \$10,000,000 in FY 2021-22 to finance portions of the NWRRDS project. The timing of this debt is dependent on the progress of the project. If the project is delayed, the debt will also be delayed. It is assumed that the Utility will issue traditional bonds with a 20-year term at a five percent interest rate.

The debt will be repaid with revenue derived from the GPF as this portion of the project benefits the existing customers. There is no proposed debt associated with the growth-related portion of the NWRRDS project. The growth-related portion of the project will be paid for with cash from development impact fees. Project costs identified for the NWRRDS project may be found in the five year capital plan shown in Appendix C.

Additionally, the rates analysis includes an assumption for new debt in FY 2022-23 in the amount of \$3,700,000 to finance existing system improvements. It is assumed the Utility will issue a private placement bond issue with a 10-year term at a five percent interest rate. This debt will be repaid with revenue from potable and reclaimed water sales.

Debt Service Coverage Requirements

The method for calculating the debt service coverage ratio is pursuant to the Town Financial and Budgetary Policies adopted by the Town Council in 2008. Section C.1 – Debt Capacity, Issuance & Management states the following with respect to debt service coverage ratios:

“When utility revenues are pledged as debt service payments, the Town will strive to maintain a 1.3 debt service coverage ratio or the required ratio in the bond indenture (whichever is greater) to ensure debt coverage in times of revenue fluctuation.”

The Water Utility currently pays debt service on a number of outstanding debt issuances and loans. For the Series 2012 Senior Lien Water Revenue Bonds, the 2008, 2009 and 2014 Water Infrastructure Finance Authority (WIFA) Loans, Water Utility revenues are specifically pledged as the repayment source for these obligations at 1.3 times coverage per the Town’s adopted financial policy.

The remaining outstanding debt obligations of the Water Utility are excise tax pledged obligations meaning that the Town’s unrestricted sources of sales taxes, fines, permit fees and state shared revenues are pledged as the repayment sources for these bonds in the bond indentures. Even though the bond indentures pledge these excise taxes as the repayment source, the Water Utility is responsible to pay for these debt service payments from water sales revenues. However, since excise taxes are pledged as coverage, a calculated debt service coverage ratio of 1.0 is applied to avoid double coverage when calculating the debt service coverage ratio for these excise tax-backed bonds in the water rates analysis.

It is important to note that the bond indentures for the excise tax-backed bonds require that the Town’s excise tax collections each fiscal year total at least 2.5 times the annual debt service requirements in order to avoid having to fund a debt service reserve fund. These conditions have been met annually in the past and are expected to continue in the future. For FY 2018-19 the debt service coverage ratio was 12.27 for the General Fund which exceeds the 2.5 requirement.

This methodology of segregating the water utility revenue-pledged debt from the excise tax-pledged debt in the rates analysis process is an accepted practice in the industry and has been reviewed by the Town's Chief Financial Officer and the Town's financial advisors with Stifel, Nicolaus & Company, Inc.

The debt service coverage ratio is determined by dividing the annual net operating revenue by the annual debt service payments. The methodology described above is in accordance with the 2008 policy and reduces the amount of the required debt service coverage. Applying this methodology has been key in minimizing water rate increases.

Debt service coverage for the Water Utility's outstanding senior lien debt issuances and loans in the Preferred Financial Scenario is shown in Table 4. This includes current and proposed new debt.

Table 4					
	2020-21	2021-22	2022-23	2023-24	2024-25
Debt Service Coverage	2.83	2.41	2.02	2.80	2.90

Cash Reserve Policy

The cash reserve policy may be found in the Town of Oro Valley Mayor and Council Water Policies Section II.A.1.d. The policy states *"The Utility shall maintain a cash reserve in the Operating Fund of not less than 20% of the combined total of the annual budgeted amounts for personnel, operations and maintenance, and debt service. This cash reserve amount specifically excludes budgeted amounts for capital projects, depreciation, amortization and contingency. No cash reserve is required for the water utility impact fee funds."* In the Preferred Financial Scenario, the projected cash reserve balance for the Operating Fund for each year in the analysis is listed in Table 5 showing compliance in all years. The projected cash reserve balances include annual increases in the monthly base rates.

Table 5					
Operating Fund	2020-21	2021-22	2022-23	2023-24	2024-25
Cash Reserve Requirement	\$ 2,833,292	\$ 2,956,487	\$ 3,055,984	\$ 3,073,629	\$ 3,154,900
Cash Reserve Balance	\$ 7,635,153	\$ 6,275,621	\$ 5,538,993	\$ 5,049,093	\$ 4,508,508

Cash reserve balances in the Operating Fund are projected to be stable throughout the analysis. This is a result of strategically balancing the required financing of capital projects with the planned use of cash reserves. The Utility works diligently to balance the use of cash reserves with the issuance of new debt to minimize rate increases.

There is no cash reserve requirement for revenue from the GPF because these funds are restricted to pay for renewable water resources, infrastructure and associated debt. Although accounted for in the Operating Fund, the GPF cash is segregated from the Operating Fund cash. It is not fiscally prudent to combine cash that has a restricted use with cash that has unrestricted use when determining compliance with a cash reserve policy. Similarly, the expenses paid by GPF revenue are segregated from the general operating expenses for purposes of calculating the cash reserve requirement. In the Preferred Financial Scenario, the projected cash reserve balance for the GPF in each year of the analysis is listed in Table 6.

Table 6

Groundwater Preservation Fees	2020-21	2021-22	2022-23	2023-24	2024-25
Cash Reserve Balance	\$ 1,777,659	\$ 1,748,760	\$ 1,357,398	\$ 1,491,800	\$ 1,929,192

GPF cash reserve balances are projected to remain stable over the five year projection period. This is a direct result of balancing the use of cash and issuance of new debt to pay for capital projects associated with the delivery of additional CAP water through the NWRD project. The on-going revenue from the GPF will be used to pay future annual debt service on the portion of capital costs that will be financed.

Operating Fund

Revenue Forecast

The Operating Fund is projected to have a cash balance of \$8,197,303 at the beginning of FY 2019-20 and is projected to have a balance of \$4,508,508 at the end of FY 2024-25. These funds may be used for operating costs including personnel, operations and maintenance, capital improvements for the existing potable water system and debt service. Groundwater Preservation Fees are included in the Operating Fund; however, the revenues, expenses and cash balances for the GPF are accounted for separately within the Operating Fund. As discussed above, use of GPF funds is restricted to renewable water resources, infrastructure and associated debt.

The following revenue forecast was based on analysis of the Utility's historic water use trends for and projected growth in the number of new connections detailed in Table 2 on page 4. The revenue forecast includes proposed increases in the potable water base rates shown below in Table 7.

Table 7

Base Rates Potable Water Meter Sizes (inches)	Current Rates 2019-20	Proposed Rates 2020-21	Proposed Rates 2021-22	Proposed Rates 2022-23	Proposed Rates 2023-24	Proposed Rates 2024-25
5/8	\$ 18.26	\$ 19.26	\$ 20.32	\$ 21.39	\$ 22.46	\$ 23.53
3/4	\$ 27.38	\$ 28.89	\$ 30.47	\$ 32.07	\$ 33.68	\$ 35.28
1	\$ 45.63	\$ 48.14	\$ 50.79	\$ 53.45	\$ 56.13	\$ 58.79
1.5	\$ 91.26	\$ 96.28	\$ 101.57	\$ 106.91	\$ 112.25	\$ 117.58
2	\$ 146.03	\$ 154.06	\$ 162.54	\$ 171.07	\$ 179.62	\$ 188.15
3	\$ 292.03	\$ 308.09	\$ 325.04	\$ 342.10	\$ 359.21	\$ 376.27
4	\$ 456.31	\$ 481.41	\$ 507.88	\$ 534.55	\$ 561.28	\$ 587.94
6	\$ 912.62	\$ 962.81	\$ 1,015.77	\$ 1,069.10	\$ 1,122.55	\$ 1,175.87
8	\$ 1,460.19	\$ 1,540.50	\$ 1,625.23	\$ 1,710.55	\$ 1,796.08	\$ 1,881.39

The potable water base rates are projected to increase annually beginning in FY 2020-21. There are no recommended increases in potable water commodity rates while the Utility continues to focus the rate design on increase fixed cost recovery. Fixed costs are costs the Utility incurs that do not fluctuate based on the volume of water sold. Examples of fixed costs include, but are not limited to, debt service, personnel, billing costs, fleet maintenance and regulatory costs. The current base rates generate a 53 percent fixed cost recovery. The remaining 47 percent of the fixed costs are recovered with revenue generated from the volume of water sold. Increasing the Utility's ability to recover fixed costs with fixed

rate revenue or base rates will ensure revenue stability. Water rates dependent on the volume of water sales to pay for fixed costs can result in revenue volatility.

The reclaimed base rates are proposed to remain unchanged throughout the projection period; however, the reclaimed commodity rate is proposed to decrease in years one and two as shown in Table 8. The proposed decrease will generate the revenue needed to operate the reclaimed system and will continue to provide an incentive to use reclaimed water.

Table 8

Base Rates Reclaimed Water Meter Sizes (inches)	Current Rates	Proposed Rates 2020-21	Proposed Rates 2021-22	Proposed Rates 2022-23	Proposed Rates 2023-24	Proposed Rates 2024-25
5/8	\$ 14.62	\$ 14.62	\$ 14.62	\$ 14.62	\$ 14.62	\$ 14.62
3/4	\$ 21.93	\$ 21.93	\$ 21.93	\$ 21.93	\$ 21.93	\$ 21.93
1	\$ 36.54	\$ 36.54	\$ 36.54	\$ 36.54	\$ 36.54	\$ 36.54
1.5	\$ 73.08	\$ 73.08	\$ 73.08	\$ 73.08	\$ 73.08	\$ 73.08
2	\$ 116.94	\$ 116.94	\$ 116.94	\$ 116.94	\$ 116.94	\$ 116.94
3	\$ 233.86	\$ 233.86	\$ 233.86	\$ 233.86	\$ 233.86	\$ 233.86
4	\$ 365.41	\$ 365.41	\$ 365.41	\$ 365.41	\$ 365.41	\$ 365.41
6	\$ 730.83	\$ 730.83	\$ 730.83	\$ 730.83	\$ 730.83	\$ 730.83
8	\$1,169.32	\$1,169.32	\$1,169.32	\$1,169.32	\$1,169.32	\$1,169.32
Commodity Rates Reclaimed Water All Usage	\$ 2.27	\$ 2.15	\$ 2.10	\$ 2.10	\$ 2.10	\$ 2.10
Reclaimed GPF	\$.47	\$.37	\$.35	\$.35	\$.30	\$.30

The potable reclaimed GPF rates will remain unchanged while the reclaimed GPF rates will decrease over the projection period as depicted above in Table 8. The financial analysis illustrates that expenses to be funded with GPF revenue are being met annually.

Table 9 provides the water sales and GPF revenue forecast for the five year projection period using the proposed base rates in Tables 7 and 8. The Utility will be utilizing \$754,995 in funds conditionally allocated to the Town by the Central Arizona Project. The funds are restricted and may only be used for infrastructure that provides the Town with water resource reliability. The funds will be used to pay for NWRRDS project costs.

Table 9

Revenue Source	2020-21	2021-22	2022-23	2023-24	2024-25
Potable Water	\$11,985,463	\$12,459,653	\$12,950,102	\$13,424,305	\$13,882,420
Reclaimed Water	<u>\$ 1,367,466</u>	<u>\$ 1,340,751</u>	<u>\$ 1,340,751</u>	<u>\$ 1,340,751</u>	<u>\$ 1,340,751</u>
Total Water Sales	\$13,352,929	\$13,800,404	\$14,290,853	\$14,765,056	\$15,223,171
GPF Revenue	\$ 2,216,499	\$ 2,219,882	\$ 2,234,665	\$ 2,214,872	\$ 2,225,638
NW Reliability Funds	\$ 354,995			\$ 400,000	

Other revenue generated by the Utility consists of charges for services. Charges for services include funds received as a result of an IGA with the Pima County Wastewater Reclamation Department to provide

monthly billing services on their behalf. The IGA was renewed in June 2019 and included an increase in the amount to be paid to the Water Utility. The IGA is reviewed annually to ensure cost recovery. Charges for services also include, but are not limited to, new service establishment fees, late fees, reconnection fees, inspection fees and plan review fees. The total of all charges for services are projected to generate annual revenue ranging from \$866,100 to \$888,219.

Projections for interest income for the Operating Fund are a cumulative total of \$461,907 over the five year period. Projected interest income for the GPF monies are a cumulative total of \$130,668 over the five year period. The interest rate assumed for the projection period is 1.5 percent annually.

Revenue Requirements

Table 10 is a summary of revenue requirements for the Operating Fund that were used in the financial analysis. These revenue requirements exclude expenses to be paid with GPF revenue.

Table 10

Operating Fund	2020-21	2021-22	2022-23	2023-24	2024-25
Expenses					
Personnel	\$ 3,102,282	\$ 3,161,551	\$ 3,222,036	\$ 3,283,761	\$ 3,346,752
Operations/Maintenance	2,148,590	2,191,562	2,235,393	2,280,101	2,325,702
Power for Pumping	831,904	846,549	862,765	881,675	894,301
NWRRDS Operating Costs					\$1,566,000
CAP Wheeling Costs	1,828,632	1,898,273	1,954,506	2,041,009	817,857
CAP Recharge Costs	1,684,535	2,096,735	2,158,565	2,158,565	2,156,875
Reclaimed Personnel	341,254	347,774	354,427	361,217	368,146
Reclaimed Operations/Maint.	773,544	789,014	804,795	820,891	837,309
Reclaimed Power for Pumping	45,241	45,241	45,241	49,766	49,766
Subtotal Expenses	\$ 10,755,982	\$ 11,376,699	\$ 11,637,718	\$ 11,876,985	\$ 12,362,708
Debt Service	3,410,479	3,405,738	3,642,203	3,491,162	3,411,795
Capital Outlay	733,000	1,352,000	710,000	844,000	949,000
Total Expenses	\$ 14,899,461	\$ 16,134,437	\$ 15,989,921	\$ 16,212,147	\$ 16,723,503

Projected personnel costs include two percent annual merit increases, two percent annual increases in retirement contributions and half a percent annual increases in health care costs. Health care costs are reduced primarily because employees are paying a higher portion of the premiums. There are no new employees being added within the five year projection period. These projected increases are consistent with the General Fund's financial planning. A portion of the personnel costs are allocated to the reclaimed water system based on a weighted average of 9.91 percent annually.

The projected operations and maintenance (O&M) costs for both the potable and reclaimed water systems are based on the FY 2019-20 budget and include inflationary increases of two percent annually. The inflation factors are consistent with the General Fund's financial planning. Beginning in FY 2020-21, a new cost allocation model was utilized to allocate various administrative and operational costs to the reclaimed water system.

In September 2019, a reclaimed cost allocation analysis was prepared by WestLand Resources, Inc. to aid in identifying costs associated with the reclaimed water system. The intent was to develop an intuitive methodology for allocating costs between the potable and reclaimed water systems that could be used in a cost allocation model.

The model is used to allocate costs based on a variety of methodologies. These methodologies are based on a percentage of staffing costs; the volume of water delivered; miles of pipeline; the number of meters; number of facilities; and the value of facility assets net of depreciation.

Budgeted O&M expenditures for FY 2019-20 were used to allocate reclaimed costs based on various methodologies used in the model. These allocations were then increased by a two percent inflation factor for each year in the pro forma.

Power costs for the potable and reclaimed water systems were segregated from the traditional O&M costs because they are not subject to annual inflationary increases. Tucson Electric Power has historically increased its pumping rates every four years. In 2017, the power rate increased by 10 percent. Another 10 percent rate increase has been projected in FY 2020-21.

CAP wheeling costs are fees charged by Tucson Water to wheel Oro Valley's CAP water through their recharge and recovery system. The IGA with Tucson Water was renegotiated in FY 2016-17. Based on the new IGA, costs are assumed to increase annually by four percent. The total annual delivery of 2,510 acre feet is projected in FY 2020-21 through FY 2023-24. The operating costs for the delivery of CAP water through the NWRDPS project are estimated at \$1,566,000 beginning in FY 2024-25. These costs are offset by a reduction in CAP wheeling charges from Tucson Water which are projected to decrease by approximately \$1.2 million in FY 2024-25 when the NWRDPS becomes operational.

CAP water recharge costs represent costs to take annual delivery of the Utility's entire CAP water allotment of 10,305 acre feet. This water will be recharged and stored in various recharge facilities including the Tucson Water facilities. Costs to take delivery of and store the CAP water are based on the rate schedule adopted by the Central Arizona Project.

Projected capital outlay for existing system improvements in this analysis includes drilling and equipping one replacement well, re-lining of reservoirs, booster station modifications, water main replacements, vehicles and water meters. The schedule for five year capital improvements may be found in Appendix C.

Debt service costs are relatively flat over the projection period. The existing debt service is declining as older debt is paid off while the proposed new debt increases the annual costs netting a flat annual cost.

Table 11 is a summary of revenue requirements paid with GPF revenue that were used in this financial analysis.

Table 11

Groundwater Preservation Fees	2020-21	2021-22	2022-23	2023-24	2024-25
Expenses					
Capital Cost of \$7,305 AF of CAP	\$ 482,130	\$ 518,655	\$ 496,740	\$ 511,350	\$ 511,350
Capital Cost for NWRDPS project	1,772,000	----	----	544,000	----
Debt Service	1,364,417	1,756,411	2,152,667	1,446,260	1,302,108
Total GPF Expenses	\$ 3,618,547	\$ 2,275,066	\$ 2,649,407	\$ 2,501,610	\$ 1,813,458

Expenses paid with GPF funds include the existing customers' portion of the CAP water capital costs associated with ownership of the CAP water allotment. These costs increase annually based on projected rates developed by the Central Arizona Project. During the projection period, the Utility will use approximately \$755,000 of the Northwest Reliability Funds allocated to the utility by the Central Arizona Project. The Central Arizona Project conditionally allocated a total of \$924,000 to the Utility with the requirement that the funds be used solely for a project that would result in water reliability. The NWRRDS project meets the intent of the Central Arizona Project requirements.

Debt service for the reclaimed water system is paid with GPF funds. Outstanding debt on the reclaimed water system will be paid in full by July 2029. This analysis includes an assumption that the Utility will borrow an additional \$10 million in FY 2021-22.

Water Resource System Development Impact Fee Fund

The relationship between infrastructure historically funded with Potable Water System Development Impact Fees (PWSDIF) and infrastructure funded with Alternative Water Resources Development Impact Fees (AWRDIF) are very similar. Both are potable water resource driven and both are required to meet the demands of growth. As such, the infrastructure needs are being combined into one capital plan resulting in the creation of one new development impact fee to replace the two existing impact fees. Effective July 1, 2020, the AWRDIF and the PWSDIF will be combined into one fee known as the Water Resource and System Development Impact Fee (WRSDIF). Revenues for the WRSDIF Fund will be from impact fees collected at the time water meters are purchased and from interest income. Expenses include capital repayment obligation charges for the Town's CAP allotment, CAP infrastructure and associated debt incurred to deliver CAP water to the Town to meet the demands of future growth. In addition, wells, pump stations, reservoirs and mains for the potable water system required to meet the demands of future growth will also be financed with these impact fees.

The WRSDIF Fund is projected to have a cash balance of \$13,046,938 at the beginning of FY 2020-21 and is projected to have \$1,527,507 at the end of FY 2024-25. The revenue sources for the WRSDIF Fund are from impact fees collected when a water meter is purchased and from interest earned on cash balances. Interest income is projected to be a total of \$463,811 for this analysis. The interest rate assumed for the projection period is 1.5%.

The revenue forecast was based on new service units related to the number of new connections. A service unit is the equivalent of one single family residential (SFR) 5/8-inch water meter. The SFR service units are equal to the number of new connections. Other service units are forecast based on pending development projects within the Town. Other service units include commercial, multi-family and irrigation uses with the number of service units depending on the estimated meter sizes for each project. In addition, the service units are forecasted based on historic trends and pending development projects within the Town.

The impact fee for a SFR 5/8-inch water meter or one service unit is projected to be \$6,387. It is assumed that the Development Impact Fees will remain constant throughout the five year projection period. Table 12 provides the projected growth in service units and the revenue associated with that growth. These growth projections are consistent with the Town's financial planning.

Table 12

Growth / Revenue	2020-21	2021-22	2022-23	2023-24	2024-25
SFR Service Units	325	350	330	240	225
Other Service Units	61	10	10	10	10
Projected Revenue	\$2,504,337	\$2,378,746	\$2,251,006	\$1,676,176	\$1,580,371

WRSDIF funds may be used for capital expenses related to CAP water. Capital expenses during this projection period total \$20,759,000 and include the capital costs assessed by the Central Arizona Project for 3,000 acre feet of our CAP water allotment and design and construction of the NWRD project that will deliver additional CAP water to the Town. These projects are identified in the five year capital improvement project schedule shown in Appendix C. All projects will be cash funded.

The WRSDIF fund may also be used for capital expenses related to potable water system improvements including wells, booster stations, reservoirs and water mains required to meet the demands of new growth. Capital projects are identified in the five year capital improvement plan shown in Appendix C.

Debt service for previously constructed growth-related facilities is also paid from impact fee revenue. The annual capital expenses and debt service for the WRSDIF Fund are listed in Table 13 below. No new debt is proposed during this projection period.

All expenses will be paid for with impact fees collected. Projects will be constructed commensurate with the timing of new development demands.

Table 13

Expenses	2020-21	2021-22	2022-23	2023-24	2024-25
CAP Capital Charges	\$ 198,000	\$ 213,000	\$ 204,000	\$ 210,000	\$ 210,000
Capital Costs NWRD	\$ 2,658,000	\$ 5,004,000	\$ 7,092,000	\$ 3,720,000	
Capital Costs Potable	\$ 750,000				\$ 500,000
Debt Service	\$ 325,099	\$ 323,180	\$ 322,578	\$ 104,707	\$ 60,288
Total Expenses	\$ 3,931,099	\$ 5,540,180	\$ 7,618,578	\$ 4,034,707	\$ 770,288

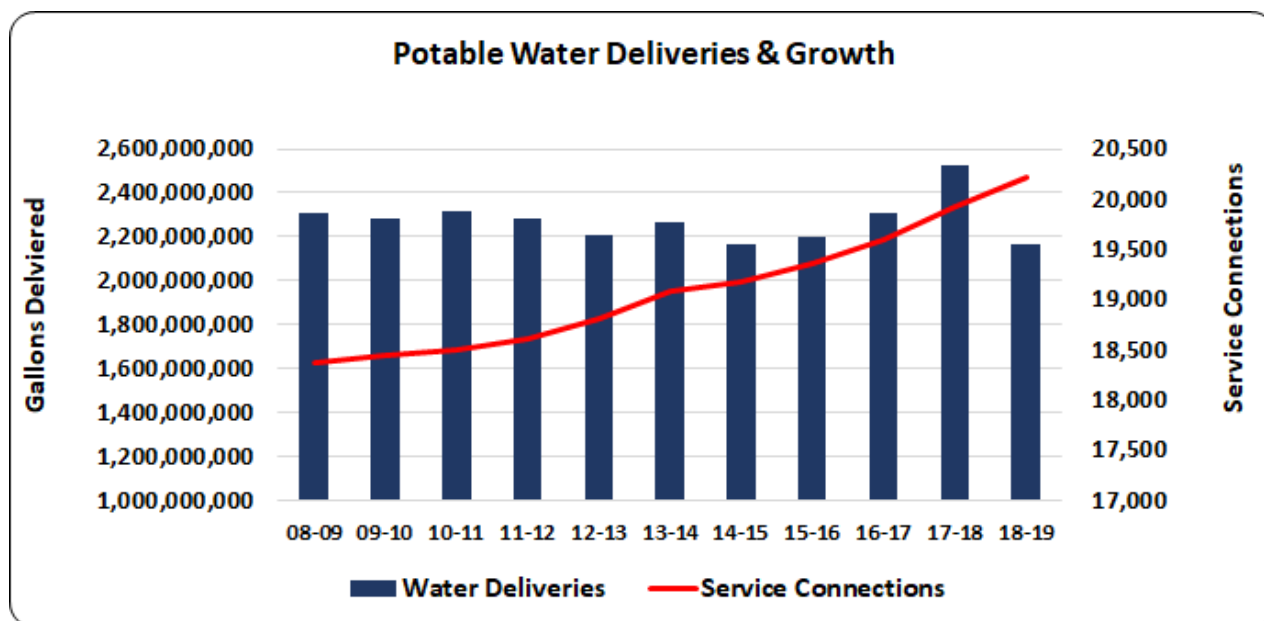
Preferred Financial Scenario

Prior to developing forecasts, financial considerations were evaluated relating to projected operating costs, capital expenses, the Utility's existing cash reserves, existing outstanding debt and debt service payments. When developing a Preferred Financial Scenario, the goals of the Utility are to ensure that all existing rate setting policies are met, cash reserves are utilized to minimize future debt and proposed rate increases do not result in rate shock. One of the rate setting policies included in the Mayor and Council Water Policies is for rate structures to be designed to encourage water conservation.

The development of water conservation pricing, also known as a tiered commodity rate, began in 1999 when a second tier was added to the uniform or flat commodity rate. That structure evolved into four tiers by 2007. Over the last 12 years, the Utility has increased the tiered commodity rates to a level that encourages water conservation. Having achieved rates that encourage water conservation, the Utility is continuing to place emphasis on the rate design that will increase fixed cost recovery to ensure revenue stability.

Figure 3 illustrates an overall decline in potable water deliveries even though the Utility experienced growth in the customer base. There was a 14 percent decrease in potable water deliveries in FY 2018-19 compared to FY 2017-18 resulting from consumer conservation and improved rainfall compared to previous years.

Figure 3



To stabilize revenue when water deliveries decline or fluctuate, it is necessary to increase fixed charge revenue which is revenue received from base rates. Fixed costs are costs incurred by the Utility that do not fluctuate based on the volume of water delivered. These costs include, but are not limited to, billing related costs, regulatory expenses, personnel, debt service, insurance, fleet maintenance and administrative services paid to the Town's General Fund. These costs are all incurred every year regardless of the volume of water delivered. The Utility's fixed costs projected for FY 2020-21 total \$10.6 million. Ideally, these costs would be paid by revenues received from the base rate revenue. Base rates charged to customers are the same every month regardless of the volume of water delivered. The existing base rates generate just under \$5.6 million or 53 percent of the fixed costs. As a result, the Utility is

dependent on water sales to generate the revenue needed to recover the remaining fixed costs as well as the variable costs.

Variable costs are those costs incurred by the Utility that fluctuate based on the volume of water delivered. If the deliveries decrease, the costs decrease and likewise, if deliveries increase, the costs increase. Variable costs include, but are not limited to, power for pumping, chemicals for disinfection, delivery of reclaimed water, CAP water wheeling costs and maintenance on plant facilities. The Utility's variable costs projected for FY 2020-21 total \$3.6 million. These costs are paid by revenues received from the variable charge revenue also known as commodity rate revenue. Commodity rates are charged on the volume of water delivered which varies from customer to customer and from month to month. The existing commodity rates generate \$7.5 million. Funds in excess of the variable costs are used to help pay for fixed costs.

The Utility's customer base is not diverse enough to rely so heavily on revenue from commodity rates. To increase revenue stability, the Utility will need to reduce its dependence on water sales for fixed cost recovery. This can be accomplished by increasing the monthly base rates. Declining water consumption has impacted water providers on a regional level. Table 16 illustrates how regional water providers, except Marana, have increased their base rates to compensate for the declines in water consumption as compared to the historical and the 2020 proposed rates for Oro Valley.

Year	Oro Valley	Metro	Marana	Tucson
2020	19.26	30.45	15.96	16.33
2019	18.26	29.50	19.09	16.33
2018	16.45	29.50	19.09	15.00
2017	14.62	29.50	19.09	14.39
2016	14.19	29.50	18.18	12.67
2015	14.19	27.00	17.31	11.90
2014	14.19	22.00	16.18	11.00
2013	14.19	20.00	15.12	9.68
2012	14.19	17.50	15.12	8.27
2011	14.19	17.50	15.12	7.53
2010	14.19	15.03	15.12	5.87

The Water Utility developed a Preferred Financial Scenario that supports key financial and policy goals. The scenario generates the revenue needed to maintain an adequate cash balance in all funds over the projected five year period thus meeting the cash reserve requirements in each year. Additionally, the scenario balances the use of both available cash and proposed new debt to finance capital projects. Under this scenario, the fixed cost recovery is projected to increase from 53 percent to 56 percent by the end of FY 2020-21. If all proposed rate increases are implemented as shown in the Preferred Financial Scenario, fixed cost recovery will be approximately 63 percent by the end of FY 2024-25.

The financial projections for the Operating Fund and WRSDIF Fund were combined to evaluate the overall debt service coverage at the end of each fiscal year. Analysis indicates that, under the Preferred Financial Scenario, the Utility will meet the debt service coverage requirement established by the Mayor and Council Water Policies and bond covenants for all five years.

The pro forma for the Preferred Financial Scenario may be found in Appendix A. The assumptions used to develop the financial projections in the Preferred Financial Scenario may be found in Appendix D.

Recommendation on Rates, Fees & Charges

After reviewing the analysis of the two funds and their respective revenue requirements contained in the Preferred Financial Scenario, the Water Utility Commission and Utility staff recommend the following for FY 2020-21:

- Increase the potable water monthly base rates
- Decrease the reclaimed commodity rate
- Decrease the reclaimed groundwater preservation fee

With regard to the recommendation to increase the water rates, table 17 shows the proposed potable water base rates for each meter size. Approximately 88 percent of the Utility's customers use a 5/8-inch water meter and will see an increase of \$1.00 per month regardless of the volume of water they use.

Table 17

Meter Size (in inches)	Current Base Rate	Proposed Base Rate	Monthly Increase
5/8	\$ 18.26	\$ 19.26	\$ 1.00
3/4	\$ 27.38	\$ 28.89	\$ 1.51
1	\$ 45.63	\$ 48.14	\$ 2.51
1.5	\$ 91.26	\$ 96.28	\$ 5.02
2	\$ 146.03	\$ 154.06	\$ 8.03
3	\$ 292.03	\$ 308.09	\$ 16.06
4	\$ 456.31	\$ 481.41	\$ 25.10
6	\$ 912.62	\$ 962.81	\$ 50.19
8	\$1,460.19	\$1,540.50	\$ 80.31

Monthly charge.

There is no recommended increase in the potable water commodity rates. In the past, emphasis was placed on developing commodity rates that would promote water conservation. The current tiered rate structure for the commodity rates encourages water conservation as intended. Because of the decline in water consumption, the continued emphasis of the rate design will be to increase the Utility's fixed cost recovery to ensure revenue stability. This will be accomplished with increases to the monthly base rates.

The reclaimed base rates will remain unchanged while the commodity rate is proposed to decrease twice over the projection period. It is proposed to decrease by \$0.12 in FY 2020-21 with another decrease of \$0.05 in FY 2021-22 as shown below in Table 18.

The potable GPF rate will remain unchanged while the reclaimed GPF rate is proposed to decrease three times over the five year projection period as shown in Table 18. The financial analysis illustrates that the expenses to be funded with GPF revenue will continue to be met with the proposed GPF rates.

Table 18

Reclaimed Water Rates Cost per 1,000 Gallons	Current 2019-20	Proposed 2020-21	Proposed 2021-22	Proposed 2022-23	Proposed 2023-24	Proposed 2024-25
Commodity	\$ 2.27	\$ 2.15	\$ 2.10	\$ 2.10	\$ 2.10	\$ 2.10
GPF	\$.47	\$.37	\$.35	\$.35	\$.30	\$.30

Table 19 illustrates Oro Valley's current and proposed potable water rates for a customer with a 5/8-inch water meter. Water rates of other water providers in the region are included for comparison of the base rates and the cost per 1,000 gallons.

Table 19

Water Provider	Monthly Base Rate	Tier 1	Tier 2	Tier 3	Tier 4	Tier 5	GPF or Water Resource Fee
Oro Valley Current	\$18.26	\$2.34	\$3.25	\$4.53	\$6.29	---	\$0.90
Oro Valley Proposed	\$19.26	\$2.34	\$3.25	\$4.53	\$6.29	---	\$0.90
Metro Water	\$30.45	\$2.75	\$4.65	\$6.20	\$7.25	---	\$1.55
Marana Water	\$15.96	\$3.15	\$4.41	\$5.67	\$7.09	\$10.23	\$1.13
Tucson Water	\$16.33	\$2.77	\$5.12	\$11.24	\$17.33	---	\$1.07

Tier rates and GPF are the cost per 1,000 gallons.

Direct comparison of specific base rates and commodity rates is not ideal for cost comparisons because of the varying rate structures of each utility. A more effective comparison is to calculate the cost for specific consumption levels for one month. Table 20 provides a calculation of a monthly bill amount for a single family residential customer with a 5/8-inch meter for the water utilities surrounding the Oro Valley Water Utility service area. The following bill comparisons include water rates and water resource fees similar to the Utility's GPF.

Table 20

Water Provider	Cost for 7,000 Gallons	Cost for 15,000 Gallons	Cost for 25,000 Gallons	Cost for 40,000 Gallons
Oro Valley Current	\$40.94	\$ 74.14	\$127.16	\$222.69
Oro Valley Proposed	\$41.94	\$ 75.14	\$128.16	\$223.69
Metro Water	\$45.65	\$ 85.75	\$153.25	\$271.00
Marana Water	\$45.92	\$ 86.46	\$148.16	\$264.36
Tucson Water	\$47.32	\$119.80	\$258.19	\$533.61

Table 21 illustrates the financial impact to customers with varying meter sizes based on monthly water use for specific customer classifications. These charges are for Oro Valley Water Utility customers and include the base rates, commodity rates and groundwater preservation fees.

Table 21

Classification	Meter Size (inches)	Water Use (gallons)	Current Bill	Proposed Bill	Increase
SF Residential	5/8	7,000	\$ 40.94	\$ 41.94	\$ 1.00
SF Residential	5/8	15,000	\$ 74.14	\$ 75.14	\$ 1.00
Irrigation	5/8	25,000	\$127.16	\$128.16	\$ 1.00
Commercial	5/8	40,000	\$147.86	\$148.86	\$ 1.00
Irrigation	1	27,000	\$142.21	\$144.72	\$ 2.51
Commercial	2	57,000	\$330.71	\$338.74	\$ 8.03
MF Residential	4	700,000	\$ 2,724.31	\$ 2,749.41	\$ 25.10
Turf – Potable	4	4,000,000	\$13,416.31	\$13,441.41	\$ 25.10
Commercial	6	6,000,000	\$20,352.62	\$20,402.81	\$ 50.19

Proposed rates for all Oro Valley Water Utility meter sizes may be found in Appendix B. Tables that calculate monthly bills under the proposed rates may also be found in Appendix B. Monthly bill amounts are calculated in 1,000 gallon increments for the 5/8-inch meters and a variety of increments for larger meter sizes.

Conclusion

Each year the water rates analysis is prepared based on the most up-to-date information available. Operational needs and capital improvement requirements change annually and are carefully evaluated when they are included in the analysis. It is important that the Utility perform a water rates analysis every year to plan for changes in debt service, operating or capital costs.

This Water Rates Analysis Report is presented in support of the proposed water rates contained in the Preferred Financial Scenario. The Oro Valley Water Utility Commission and the Water Utility staff respectfully recommend approval of the water rates detailed in the Preferred Financial Scenario.

The Oro Valley Water Utility staff and Commission are dedicated to serving the Town of Oro Valley and the customers of its water utility and extend their appreciation to the Mayor and Council for consideration of the proposed water rates.

APPENDIX A

Preferred Financial Scenario Pro Forma

A-1 Operating Fund

A-2 Groundwater Preservation Fee

A-3 Water Resources and System Development Impact Fee Fund

A-4 Summary of All Funds

Oro Valley Water Utility - Operating Fund

	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
REVENUES					
Water Sales					
Potable Water Sales (excluding golf courses)	\$ 11,850,708	\$ 12,172,783	\$ 12,497,127	\$ 12,822,243	\$ 13,146,546
Potable Water Sales from Growth - Res. & Com.	64,853	216,650	382,435	531,201	664,693
Potable Water Sales - Golf Course	69,902	70,220	70,540	70,861	71,181
Total Potable Water Sales	11,985,463	12,459,653	12,950,102	13,424,305	13,882,420
Reclaimed Water Sales	1,367,466	1,340,751	1,340,751	1,340,751	1,340,751
Total Water Sales	13,352,929	13,800,404	14,290,853	14,765,056	15,223,171
Other Operating Revenue					
Service Fees & Charges	866,100	870,039	873,978	878,018	888,219
Interest Income	118,282	104,462	88,462	79,173	71,528
Total Other Operating Revenue	984,382	974,501	962,440	957,191	959,747
Total Operating Revenue	\$ 14,337,311	\$ 14,774,905	\$ 15,253,293	\$ 15,722,247	\$ 16,182,918
OPERATING EXPENSES					
Potable Operating Expenses					
Personnel	3,102,282	3,161,551	3,222,036	3,283,761	3,346,752
Operations & Maintenance	2,148,590	2,191,562	2,235,393	2,280,101	2,325,702
Power for Pumping	831,904	846,549	862,755	881,675	894,301
NWRRDS Operating Costs					1,566,000
CAP Wheeling Costs	1,828,632	1,898,273	1,954,506	2,041,009	817,857
CAP Water Recharge Costs	1,684,535	2,096,735	2,158,565	2,158,565	2,156,875
Total Potable Operating Expenses	\$ 9,595,943	\$ 10,194,670	\$ 10,433,255	\$ 10,645,111	\$ 11,107,487
Reclaimed Operating Expenses					
Personnel	341,254	347,774	354,427	361,217	368,146
Operating & Maintenance	773,544	789,014	804,795	820,891	837,309
Power for Pumping	45,241	45,241	45,241	49,766	49,766
Total Reclaimed Operating Expenses	\$ 1,160,039	\$ 1,182,029	\$ 1,204,463	\$ 1,231,874	\$ 1,255,221
Total Operating Expenses	\$ 10,755,982	\$ 11,376,699	\$ 11,637,718	\$ 11,876,985	\$ 12,362,708
Net Operating Revenue	\$ 3,581,329	\$ 3,398,206	\$ 3,615,575	\$ 3,845,262	\$ 3,820,210
DEBT SERVICE - POTABLE					
P&I - 2009 WIFA Loan - Exist. System CIP	149,069	149,014	148,956	148,897	148,836
P&I - 2012 Sr. Lien Bonds - Exist. System-Refi 2003	578,149	574,737	573,666	186,209	107,215
P&I - 2014 WIFA Loan - Sr. Lien - AMI	376,856	376,750	376,642	376,530	376,416
P&I - 2015 Excise Tax Bonds - Refinance 2005	149,797	149,756	149,975	151,098	150,494
P&I - 2017 Excise Tax Bonds - Refinance 2007	1,640,923	1,640,567	1,640,294	1,639,079	1,638,991
P&I - 2018 Excise Tax Bonds - Exist. System CIP- 15 yrs.\$6M	515,685	514,914	515,326	514,660	515,154
P&I - 2023 Sr. Lien Bonds - Exist. System CIP- 10 yrs.\$3.7M	-	-	237,344	474,689	474,689
Total Potable System Debt Service	\$ 3,410,479	\$ 3,405,738	\$ 3,642,203	\$ 3,491,162	\$ 3,411,795
Net Balance From Operations before capital outlay	\$ 170,850	\$ (7,532)	\$ (26,628)	\$ 354,100	\$ 408,415
Other Obligations					
Meters & Equipment & Vehicles	\$ 113,000	\$ 432,000	\$ 210,000	\$ 194,000	\$ 249,000
Capital Improvements: Existing System	620,000	920,000	500,000	650,000	700,000
Total Other Obligations	\$ 733,000	\$ 1,352,000	\$ 710,000	\$ 844,000	\$ 949,000
Net Balance From Operations including capital outlay	\$ (562,150)	\$ (1,359,532)	\$ (736,628)	\$ (489,900)	\$ (540,585)
Beginning Cash Balance	\$ 8,197,303	\$ 7,635,153	\$ 6,275,621	\$ 5,538,993	\$ 5,049,093
Net Balance From Operations	(562,150)	(1,359,532)	(736,628)	(489,900)	(540,585)
Ending Cash Balance	\$ 7,635,153	\$ 6,275,621	\$ 5,538,993	\$ 5,049,093	\$ 4,508,508

Oro Valley Water Utility - Operating Fund

Groundwater Preservation Fees

	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
GPF Beginning Balance	\$ 2,790,060	\$ 1,777,659	\$ 1,748,760	\$ 1,357,398	\$ 1,491,800
Revenue					
GPF Revenue - Potable	1,974,244	1,974,244	1,974,244	1,974,244	1,974,244
GPF Revenue - Reclaimed	230,388	217,934	217,934	186,801	186,801
GPF Revenue - Growth	11,867	27,704	42,487	53,827	64,593
Total GPF Revenue	\$ 2,216,499	\$ 2,219,882	\$ 2,234,665	\$ 2,214,872	\$ 2,225,638
NW Reliability Restricted Cash	354,995	-	-	400,000	-
Interest Income	34,652	26,285	23,380	21,140	25,211
Total All Revenue	\$ 2,606,146	\$ 2,246,167	\$ 2,258,045	\$ 2,636,012	\$ 2,250,849
GPF Expenses					
Capital Cost for CAP Allotment 7,305 AF	482,130	518,655	496,740	511,350	511,350
Capital Costs for NWRDRS Project	1,772,000	-	-	544,000	-
P&I - 2007 Sr. Lien - WIFA -Reclaimed Ph.2	310,583	310,434	310,280	310,120	309,955
P&I - 2012 Sr. Lien Bonds - Reclaimed Ph.1	1,053,834	1,047,615	1,045,662	339,415	195,428
P&I - 2021 Sr. Lien Bonds - NWRDRS \$10M	-	398,362	796,725	796,725	796,725
Total GPF Expenses	3,618,547	2,275,066	2,649,407	2,501,610	1,813,458
GPF Ending Balance	\$ 1,777,659	\$ 1,748,760	\$ 1,357,398	\$ 1,491,800	\$ 1,929,192

Water Resource and System Development Impact Fee Fund

	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
REVENUES					
Impact Fee Revenue- Residential	\$ 2,075,775	\$ 2,235,450	\$ 2,107,710	\$ 1,532,880	\$ 1,437,075
Impact Fee Revenue- Non-Residential	428,562	143,296	143,296	143,296	143,296
Subtotal Revenue	\$ 2,504,337	\$ 2,378,746	\$ 2,251,006	\$ 1,676,176	\$ 1,580,371
Other Operating Revenue					
Interest Income	182,602	148,121	87,755	29,244	16,089
Subtotal Other Operating Revenue	182,602	148,121	87,755	29,244	16,089
Total Operating Revenue	\$ 2,686,939	\$ 2,526,867	\$ 2,338,761	\$ 1,705,420	\$ 1,596,460
OPERATING EXPENSES					
N/A	-	-	-	-	-
Total Operating Expenses	\$ -	\$ -	\$ -	\$ -	\$ -
Net Operating Revenue	\$ 2,686,939	\$ 2,526,867	\$ 2,338,761	\$ 1,705,420	\$ 1,596,460
DEBT SERVICE					
P&I - Sr. Lien Bonds - Expansion Related (2012)	\$ 325,099	\$ 323,180	\$ 322,578	\$ 104,707	\$ 60,288
Total Debt Service	\$ 325,099	\$ 323,180	\$ 322,578	\$ 104,707	\$ 60,288
OTHER OBLIGATIONS					
Capital Improvements:					
CAP Capital Charges 3,000 acre feet	198,000	213,000	204,000	210,000	210,000
Capital Costs for NWRDRS Projects	2,658,000	5,004,000	7,092,000	3,720,000	
Capital Costs for Other Potable Projects	750,000	-	-	-	500,000
Total Other Obligations	\$ 3,606,000	\$ 5,217,000	\$ 7,296,000	\$ 3,930,000	\$ 710,000
Net Balance From Operations	\$ (1,244,160)	\$ (3,013,313)	\$ (5,279,817)	\$ (2,329,287)	\$ 826,172
Beginning Cash Balance	\$ 13,046,938	\$ 11,802,778	\$ 8,789,464	\$ 3,509,647	\$ 1,180,360
Net Balance From Operations	\$ (1,244,160)	\$ (3,013,313)	\$ (5,279,817)	\$ (2,329,287)	\$ 826,172
Ending Cash Balance	\$ 11,802,778	\$ 8,789,464	\$ 3,509,647	\$ 1,180,360	\$ 2,006,532

Summary of All Funds

	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
REVENUES					
Water Sales					
Potable Water Sales (exclude golf courses)	\$ 11,850,708	\$ 12,172,783	\$ 12,497,127	\$ 12,822,243	\$ 13,146,546
Potable Water Sales from Growth	64,853	216,650	382,435	531,201	664,693
Potable Water Sales - Golf Course	69,902	70,220	70,540	70,861	71,181
Total Potable Water Sales	11,985,463	12,459,653	12,950,102	13,424,305	13,882,420
Reclaimed Water Sales	1,367,466	1,340,751	1,340,751	1,340,751	1,340,751
Total Water Sales	13,352,929	13,800,404	14,290,853	14,765,056	15,223,171
Other Operating Revenue					
Groundwater Preservation Fees					
Groundwater Preservation Fee - Potable	1,974,244	1,974,244	1,974,244	1,974,244	1,974,244
Groundwater Preservation Fee - Reclaimed	230,388	217,934	217,934	186,801	186,801
Groundwater Preservation Fee - Growth	11,867	27,704	42,487	53,827	64,593
Total Groundwater Preservation Fees	2,216,499	2,219,882	2,234,665	2,214,872	2,225,638
Water Resource & System Development Impact Fees	2,504,337	2,378,746	2,251,006	1,676,176	1,580,371
Service Fees & Charges	866,100	870,039	873,978	878,018	888,219
NW Reliability Restricted Cash	354,995	-	-	400,000	-
Interest Income	335,536	278,868	199,597	129,557	112,828
Total Other Operating Revenue	6,277,467	5,747,535	5,559,246	5,298,623	4,807,056
Total Operating Revenue	\$ 19,630,396	\$ 19,547,939	\$ 19,850,099	\$ 20,063,679	\$ 20,030,227
OPERATING EXPENSES					
Potable Operating Expenses					
Personnel	3,102,282	3,161,551	3,222,036	3,283,761	3,346,752
Operations & Maintenance	2,148,590	2,191,562	2,235,393	2,280,101	2,325,702
Power for Pumping	831,904	846,549	862,755	881,675	894,301
NWRRDS Operating Costs	-	-	-	-	1,566,000
CAP Wheeling Costs	1,828,632	1,898,273	1,954,506	2,041,009	817,857
CAP Recharge Costs	1,684,535	2,096,735	2,158,565	2,158,565	2,156,875
Costs paid by GPF Revenue (excludes debt & capital project)	482,130	518,655	496,740	511,350	511,350
Total Potable Operating Expenses	\$ 10,078,074	\$ 10,713,325	\$ 10,929,995	\$ 11,156,461	\$ 11,618,837
Reclaimed Operating Expenses					
Personnel	341,254	347,774	354,427	361,217	368,146
Operating & Maintenance	773,544	789,014	804,795	820,891	837,309
Power for Pumping	45,241	45,241	45,241	49,766	49,766
Total Reclaimed Operating Expenses	\$ 1,160,039	\$ 1,182,029	\$ 1,204,464	\$ 1,231,875	\$ 1,255,220
Total Operating Expenses	\$ 11,238,112	\$ 11,895,354	\$ 12,134,458	\$ 12,388,336	\$ 12,874,057
Net Operating Revenue	\$ 8,392,284	\$ 7,652,585	\$ 7,715,641	\$ 7,675,343	\$ 7,156,170

Summary of All Funds

	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
Debt Service					
Debt Service - Potable- Existing System					
P&I - 2009 WIFA Loan - Exist. System CIP	149,069	149,014	148,956	148,897	148,836
P&I - 2012 Sr. Lien Bonds - Existing System-Refinance 2003	578,149	574,737	573,666	186,209	107,215
P&I - 2014 WIFA Loan - Sr. Lien - AMI	376,856	376,750	376,642	376,530	376,416
P&I - 2015 Excise Tax Bonds - Refinance 2005	149,797	149,756	149,975	151,098	150,494
P&I - 2017 Excise Tax Bonds - Refinance 2007	1,640,923	1,640,567	1,640,294	1,639,079	1,638,991
P&I - 2018 Excise Tax Bonds - Exist. System CIP- 15 yrs. \$6M	515,685	514,914	515,326	514,660	515,154
P&I - 2023 Sr. Lien Bonds - Exist. System CIP- 10 yrs. \$3.7M	-	-	237,344	474,689	474,689
Total Potable Existing System Debt Service	\$ 3,410,480	\$ 3,405,738	\$ 3,642,203	\$ 3,491,161	\$ 3,411,795
Debt Service - GPF					
P&I - Sr. Lien - WIFA -Reclaimed Ph.2 (2007)	\$ 310,583	\$ 310,434	\$ 310,280	\$ 310,120	\$ 309,955
P&I - Sr. Lien Bonds - Reclaimed Ph.1 (2012)	1,053,834	1,047,615	1,045,662	339,415	195,428
P&I - Sr. Lien Bonds - NWRDSD - Exist. Customers (2021)\$10M	-	398,362	796,725	796,725	796,725
Total GPF Debt Service	\$ 1,364,417	\$ 1,756,411	\$ 2,152,667	\$ 1,446,260	\$ 1,302,108
Debt Service - WRSDF - Growth Related					
P&I - Sr. Lien Bonds - Growth Related (2012)	325,099	323,180	322,578	104,707	60,288
Total WRSDF Growth Related Debt Service	\$ 325,099	\$ 323,180	\$ 322,578	\$ 104,707	\$ 60,288
Total Water System Debt Service	\$ 5,099,996	\$ 5,485,329	\$ 6,117,448	\$ 5,042,127	\$ 4,774,190
Other Obligations					
Meters & Equipment & Vehicles	\$ 113,000	\$ 432,000	\$ 210,000	\$ 194,000	\$ 249,000
Capital Improvements:					
Existing System	620,000	920,000	500,000	650,000	700,000
Groundwater Preservation Fees	1,772,000	-	-	544,000	-
NWRDSD Projects	2,658,000	5,004,000	7,092,000	3,720,000	-
Other Potable Growth Related Projects	750,000	-	-	-	500,000
Total Other Obligations	\$ 5,913,000	\$ 6,356,000	\$ 7,802,000	\$ 5,108,000	\$ 1,449,000
Net Balance From Operations	\$ (2,620,712)	\$ (4,188,744)	\$ (6,203,807)	\$ (2,474,784)	\$ 932,980
Growth - New Metered Connections	250	350	330	240	225
Monthly increase to residential customer using 7K gals.	2.4%	2.5%	2.5%	2.4%	2.4%
Monthly increase to residential customer using 7K gals.	\$1.00	\$1.06	\$1.07	\$1.07	\$1.07
Monthly decrease to reclaimed customer using 10M gals.	-7.8%	-2.7%	0.0%	-2.0%	0.0%
Monthly decrease to reclaimed customer using 10M gals.	(\$2,200.00)	(\$700.00)	\$0.00	(\$500.00)	\$0.00
Debt Service Coverage Ratio: Sr. Lien & WIFA	3.00	2.41	2.02	2.80	2.90
Debt Service Coverage Requirement = 1.30					
Required Cash Reserves (20% of personnel, O&M, debt) (does not include depreciation/amortization)	\$ 2,833,292	\$ 2,956,487	\$ 3,055,984	\$ 3,073,629	\$ 3,154,900
Operating Fund	\$ 7,635,153	\$ 6,275,621	\$ 5,538,993	\$ 5,049,093	\$ 4,508,508
Groundwater Preservation Fees	1,777,659	1,748,760	1,357,398	1,491,800	1,929,192
WRSDF Impact Fee Fund	11,802,778	8,789,464	3,509,647	1,180,360	2,006,532
Total Ending Cash Balance	\$ 21,215,590	\$ 16,813,845	\$ 10,406,038	\$ 7,721,253	\$ 8,444,232

APPENDIX B

Rate Schedules & Tables for Bill Comparisons

B-1 Proposed Water Rate Schedule

B-2 Tables for Bill Comparisons by Meter Size - Potable

B-8 Tables for Bill Comparisons by Meter Size – Reclaimed

ORO VALLEY WATER UTILITY

PROPOSED WATER RATES

METER SIZE (in inches)	POTABLE BASE RATE	RECLAIMED BASE RATE
5/8	\$19.26	\$14.62
3/4	\$28.89	\$21.93
1	\$48.14	\$36.54
1.5	\$96.28	\$73.08
2	\$154.06	\$116.94
3	\$308.09	\$233.86
4	\$481.41	\$365.41
6	\$962.81	\$730.83
8	\$1,540.50	\$1,169.32

COMMODITY RATES - POTABLE WATER				
RESIDENTIAL & IRRIGATION CLASSIFICATIONS				
METER SIZE	COMMODITY TIER 1 \$2.34 COST PER 1000 GALS.	COMMODITY TIER 2 \$3.25 COST PER 1000 GALS.	COMMODITY TIER 3 \$4.53 COST PER 1000 GALS.	COMMODITY TIER 4 \$6.29 COST PER 1000 GALS.
5/8	0 - 7,000	7,001 - 16,000	16,001 - 32,000	OVER 32,000
3/4	0 - 10,000	10,001 - 24,000	24,001 - 48,000	OVER 48,000
1	0 - 17,000	17,001 - 40,000	40,001 - 80,000	OVER 80,000
1.5	0 - 35,000	35,001 - 80,000	80,001 - 160,000	OVER 160,000
2	0 - 56,000	56,001 - 128,000	128,001 - 256,000	OVER 256,000
3	0 - 112,000	112,001 - 256,000	256,001 - 512,000	OVER 512,000
4	0 - 175,000	175,001 - 400,000	400,001 - 800,000	OVER 800,000
6	0 - 860,000	860,001 - 2,000,000	2,000,001 - 3,500,000	OVER 3,500,000
8	0 - 860,000	860,001 - 2,000,000	2,000,001 - 3,500,000	OVER 3,500,000
COMMERCIAL CLASSIFICATION			\$2.34 per 1000 gallons for all water use	
MASTER-METERED MULTIFAMILY CLASSIFICATION			\$2.34 per 1000 gallons for all water use	
CONSTRUCTION WATER			\$7.29 per 1000 gallons for all water use	

COMMODITY RATES - RECLAIMED WATER	
ALL RECLAIMED WATER USES & CLASSIFICATIONS	\$ 2.15 per 1000 gallons for all water use

GROUNDWATER PRESERVATION FEES	
POTABLE WATER	\$ 0.90 per 1000 gallons for all water use
RECLAIMED WATER	\$ 0.37 per 1000 gallons for all water use

TABLE FOR MONTHLY CHARGES & PERCENT INCREASE COMPARISON
RESIDENTIAL & IRRIGATION CUSTOMERS WITH A 5/8-INCH METER

Tier Levels

GALLONS USED	CURRENT WATER	CURRENT GPF	CURRENT MONTHLY BILL	PROPOSED WATER	PROPOSED GPF	PROPOSED MONTHLY BILL	TOTAL MONTHLY INCREASE	PERCENT INCREASED
0	18.26	-	18.26	19.26	-	19.26	1.00	5.5%
1,000	20.60	0.90	21.50	21.60	0.90	22.50	1.00	4.7%
2,000	22.94	1.80	24.74	23.94	1.80	25.74	1.00	4.0%
3,000	25.28	2.70	27.98	26.28	2.70	28.98	1.00	3.6%
4,000	27.62	3.60	31.22	28.62	3.60	32.22	1.00	3.2%
5,000	29.96	4.50	34.46	30.96	4.50	35.46	1.00	2.9%
6,000	32.30	5.40	37.70	33.30	5.40	38.70	1.00	2.7%
7,000	34.64	6.30	40.94	35.64	6.30	41.94	1.00	2.4%
8,000	37.89	7.20	45.09	38.89	7.20	46.09	1.00	2.2%
9,000	41.14	8.10	49.24	42.14	8.10	50.24	1.00	2.0%
10,000	44.39	9.00	53.39	45.39	9.00	54.39	1.00	1.9%
11,000	47.64	9.90	57.54	48.64	9.90	58.54	1.00	1.7%
12,000	50.89	10.80	61.69	51.89	10.80	62.69	1.00	1.6%
13,000	54.14	11.70	65.84	55.14	11.70	66.84	1.00	1.5%
14,000	57.39	12.60	69.99	58.39	12.60	70.99	1.00	1.4%
15,000	60.64	13.50	74.14	61.64	13.50	75.14	1.00	1.3%
16,000	63.89	14.40	78.29	64.89	14.40	79.29	1.00	1.3%
17,000	68.42	15.30	83.72	69.42	15.30	84.72	1.00	1.2%
18,000	72.95	16.20	89.15	73.95	16.20	90.15	1.00	1.1%
19,000	77.48	17.10	94.58	78.48	17.10	95.58	1.00	1.1%
20,000	82.01	18.00	100.01	83.01	18.00	101.01	1.00	1.0%
21,000	86.54	18.90	105.44	87.54	18.90	106.44	1.00	0.9%
22,000	91.07	19.80	110.87	92.07	19.80	111.87	1.00	0.9%
23,000	95.60	20.70	116.30	96.60	20.70	117.30	1.00	0.9%
24,000	100.13	21.60	121.73	101.13	21.60	122.73	1.00	0.8%
25,000	104.66	22.50	127.16	105.66	22.50	128.16	1.00	0.8%
26,000	109.19	23.40	132.59	110.19	23.40	133.59	1.00	0.8%
27,000	113.72	24.30	138.02	114.72	24.30	139.02	1.00	0.7%
28,000	118.25	25.20	143.45	119.25	25.20	144.45	1.00	0.7%
29,000	122.78	26.10	148.88	123.78	26.10	149.88	1.00	0.7%
30,000	127.31	27.00	154.31	128.31	27.00	155.31	1.00	0.6%
31,000	131.84	27.90	159.74	132.84	27.90	160.74	1.00	0.6%
32,000	136.37	28.80	165.17	137.37	28.80	166.17	1.00	0.6%
33,000	142.66	29.70	172.36	143.66	29.70	173.36	1.00	0.6%
34,000	148.95	30.60	179.55	149.95	30.60	180.55	1.00	0.6%
35,000	155.24	31.50	186.74	156.24	31.50	187.74	1.00	0.5%
36,000	161.53	32.40	193.93	162.53	32.40	194.93	1.00	0.5%
37,000	167.82	33.30	201.12	168.82	33.30	202.12	1.00	0.5%
38,000	174.11	34.20	208.31	175.11	34.20	209.31	1.00	0.5%
39,000	180.40	35.10	215.50	181.40	35.10	216.50	1.00	0.5%
40,000	186.69	36.00	222.69	187.69	36.00	223.69	1.00	0.4%

TABLE FOR MONTHLY CHARGES AND PERCENT INCREASE COMPARISON

FOR SF & MF RESIDENTIAL & IRRIGATION CUSTOMERS WITH A 3/4-INCH METER

BASE RATE \$ 28.89

COMMODITY RATE: TIER 1 = \$ 2.34 FOR 0 - 10,000 GALLONS
 TIER 2 = \$ 3.25 FOR 10,001 - 24,000 GALLONS
 TIER 3 = \$ 4.53 FOR 24,001 - 48,000 GALLONS
 TIER 4 = \$ 6.29 FOR ALL USAGE OVER 48,000 GALLONS

GALLONS USED IN 1 MONTH	CURRENT WATER	CURRENT GPF	CURRENT MONTHLY BILL	PROPOSED WATER	PROPOSED GPF	PROPOSED MONTHLY BILL	TOTAL MONTHLY INCREASE	PERCENT INCREASED
0	27.38	-	27.38	28.89	-	28.89	1.51	5.5%
7,000	43.76	6.30	50.06	45.27	6.30	51.57	1.51	3.0%
11,000	54.03	9.90	63.93	55.54	9.90	65.44	1.51	2.4%
28,000	114.40	25.20	139.60	115.91	25.20	141.11	1.51	1.1%
50,000	217.58	45.00	262.58	219.09	45.00	264.09	1.51	0.6%

TABLE FOR MONTHLY CHARGES AND PERCENT INCREASE COMPARISON

FOR COMMERCIAL CUSTOMERS WITH A 3/4-INCH METER

BASE RATE \$ 28.89

COMMODITY RATE: TIER 1 = \$ 2.34 FOR ALL WATER USAGE
 TIER 2 = N/A
 TIER 3 = N/A
 TIER 4 = N/A

GALLONS USED IN 1 MONTH	CURRENT WATER	CURRENT GPF	CURRENT MONTHLY BILL	PROPOSED WATER	PROPOSED GPF	PROPOSED MONTHLY BILL	TOTAL MONTHLY INCREASE	PERCENT INCREASED
0	27.38	-	27.38	28.89	-	28.89	1.51	5.5%
7,000	43.76	6.30	50.06	45.27	6.30	51.57	1.51	3.0%
11,000	53.12	9.90	63.02	54.63	9.90	64.53	1.51	2.4%
28,000	92.90	25.20	118.10	94.41	25.20	119.61	1.51	1.3%
50,000	144.38	45.00	189.38	145.89	45.00	190.89	1.51	0.8%

TABLE FOR MONTHLY CHARGES AND PERCENT INCREASE COMPARISON

FOR SF & MF RESIDENTIAL & IRRIGATION CUSTOMERS WITH A 1-INCH METER

BASE RATE \$ 48.14

COMMODITY RATE: TIER 1 = \$ 2.34 FOR 0 - 17,000 GALLONS
 TIER 2 = \$ 3.25 FOR 17,001 - 40,000 GALLONS
 TIER 3 = \$ 4.53 FOR 40,001 - 80,000 GALLONS
 TIER 4 = \$ 6.29 FOR ALL USAGE OVER 80,000 GALLONS

GALLONS USED IN 1 MONTH	CURRENT WATER	CURRENT GPF	CURRENT MONTHLY BILL	PROPOSED WATER	PROPOSED GPF	PROPOSED MONTHLY BILL	TOTAL MONTHLY INCREASE	PERCENT INCREASED
0	45.63	-	45.63	48.14	-	48.14	2.51	5.5%
17,000	85.41	15.30	100.71	87.92	15.30	103.22	2.51	2.5%
27,000	117.91	24.30	142.21	120.42	24.30	144.72	2.51	1.8%
38,000	153.66	34.20	187.86	156.17	34.20	190.37	2.51	1.3%
50,000	205.46	45.00	250.46	207.97	45.00	252.97	2.51	1.0%

TABLE FOR MONTHLY CHARGES AND PERCENT INCREASE COMPARISON

FOR COMMERCIAL CUSTOMERS WITH A 1-INCH METER

BASE RATE \$ 48.14

COMMODITY RATE: TIER 1 = \$ 2.34 FOR ALL WATER USAGE
 TIER 2 = N/A
 TIER 3 = N/A
 TIER 4 = N/A

GALLONS USED IN 1 MONTH	CURRENT WATER	CURRENT GPF	CURRENT MONTHLY BILL	PROPOSED WATER	PROPOSED GPF	PROPOSED MONTHLY BILL	TOTAL MONTHLY INCREASE	PERCENT INCREASED
0	45.63	-	45.63	48.14	-	48.14	2.51	5.5%
15,000	80.73	13.50	94.23	83.24	13.50	96.74	2.51	2.7%
27,000	108.81	24.30	133.11	111.32	24.30	135.62	2.51	1.9%
38,000	134.55	34.20	168.75	137.06	34.20	171.26	2.51	1.5%
50,000	162.63	45.00	207.63	165.14	45.00	210.14	2.51	1.2%

TABLE FOR MONTHLY CHARGES AND PERCENT INCREASE COMPARISON

FOR IRRIGATION CUSTOMERS WITH A 1.5-INCH METER

BASE RATE \$ 96.28

COMMODITY RATE: TIER 1 = \$ 2.34 FOR 0 - 35,000 GALLONS
 TIER 2 = \$ 3.25 FOR 35,001 - 80,000 GALLONS
 TIER 3 = \$ 4.53 FOR 80,001 - 160,000 GALLONS
 TIER 4 = \$ 6.29 FOR ALL USAGE OVER 160,000 GALLONS

GALLONS USED IN 1 MONTH	CURRENT WATER	CURRENT GPF	CURRENT MONTHLY BILL	PROPOSED WATER	PROPOSED GPF	PROPOSED MONTHLY BILL	TOTAL MONTHLY INCREASE	PERCENT INCREASED
0	91.26	-	91.26	96.28	-	96.28	5.02	5.5%
38,000	182.91	34.20	217.11	187.93	34.20	222.13	5.02	2.3%
64,000	267.41	57.60	325.01	272.43	57.60	330.03	5.02	1.5%
90,000	364.71	81.00	445.71	369.73	81.00	450.73	5.02	1.1%
125,000	523.26	112.50	635.76	528.28	112.50	640.78	5.02	0.8%

TABLE FOR MONTHLY CHARGES AND PERCENT INCREASE COMPARISON

FOR COMMERCIAL & MULTIFAMILY CUSTOMERS WITH A 1.5-INCH METER

BASE RATE \$ 96.28

COMMODITY RATE: TIER 1 = \$ 2.34 FOR ALL WATER USAGE
 TIER 2 = N/A
 TIER 3 = N/A
 TIER 4 = N/A

GALLONS USED IN 1 MONTH	CURRENT WATER	CURRENT GPF	CURRENT MONTHLY BILL	PROPOSED WATER	PROPOSED GPF	PROPOSED MONTHLY BILL	TOTAL MONTHLY INCREASE	PERCENT INCREASED
0	91.26	-	91.26	96.28	-	96.28	5.02	5.5%
30,000	161.46	27.00	188.46	166.48	27.00	193.48	5.02	2.7%
64,000	241.02	57.60	298.62	246.04	57.60	303.64	5.02	1.7%
90,000	301.86	81.00	382.86	306.88	81.00	387.88	5.02	1.3%
125,000	383.76	112.50	496.26	388.78	112.50	501.28	5.02	1.0%

TABLE FOR MONTHLY CHARGES AND PERCENT INCREASE COMPARISON

FOR IRRIGATION CUSTOMERS WITH A 2-INCH METER

BASE RATE \$ 154.06

COMMODITY RATE: TIER 1 = \$ 2.34 FOR 0 - 56,000 GALLONS
 TIER 2 = \$ 3.25 FOR 56,001 - 128,000 GALLONS
 TIER 3 = \$ 4.53 FOR 128,001 - 256,000 GALLONS
 TIER 4 = \$ 6.29 FOR ALL USAGE OVER 256,000 GALLONS

GALLONS USED IN 1 MONTH	CURRENT WATER	CURRENT GPF	CURRENT MONTHLY BILL	PROPOSED WATER	PROPOSED GPF	PROPOSED MONTHLY BILL	TOTAL MONTHLY INCREASE	PERCENT INCREASED
0	146.03	-	146.03	154.06	-	154.06	8.03	5.5%
57,000	280.32	51.30	331.62	288.35	51.30	339.65	8.03	2.4%
130,000	520.13	117.00	637.13	528.16	117.00	645.16	8.03	1.3%
250,000	1,063.73	225.00	1,288.73	1,071.76	225.00	1,296.76	8.03	0.6%
325,000	1,524.92	292.50	1,817.42	1,532.95	292.50	1,825.45	8.03	0.4%

TABLE FOR MONTHLY CHARGES AND PERCENT INCREASE COMPARISON

FOR COMMERCIAL & MULTIFAMILY CUSTOMERS WITH A 2-INCH METER

BASE RATE \$ 154.06

COMMODITY RATE: TIER 1 = \$ 2.34 FOR ALL WATER USAGE
 TIER 2 = N/A
 TIER 3 = N/A
 TIER 4 = N/A

GALLONS USED IN 1 MONTH	CURRENT WATER	CURRENT GPF	CURRENT MONTHLY BILL	PROPOSED WATER	PROPOSED GPF	PROPOSED MONTHLY BILL	TOTAL MONTHLY INCREASE	PERCENT INCREASED
0	146.03	-	146.03	154.06	-	154.06	8.03	5.5%
57,000	279.41	51.30	330.71	287.44	51.30	338.74	8.03	2.4%
128,000	445.55	115.20	560.75	453.58	115.20	568.78	8.03	1.4%
250,000	731.03	225.00	956.03	739.06	225.00	964.06	8.03	0.8%
325,000	906.53	292.50	1,199.03	914.56	292.50	1,207.06	8.03	0.7%

TABLE FOR MONTHLY CHARGES AND PERCENT INCREASE COMPARISON

FOR IRRIGATION CUSTOMERS WITH A 3-INCH METER

BASE RATE \$ 308.09

COMMODITY RATE: TIER 1 = \$ 2.34 FOR 0 - 112,000 GALLONS
 TIER 2 = \$ 3.25 FOR 112,001 - 256,000 GALLONS
 TIER 3 = \$ 4.53 FOR 256,001 - 512,000 GALLONS
 TIER 4 = \$ 6.29 FOR ALL USAGE OVER 512,000 GALLONS

GALLONS USED IN 1 MONTH	CURRENT WATER	CURRENT GPF	CURRENT MONTHLY BILL	PROPOSED WATER	PROPOSED GPF	PROPOSED MONTHLY BILL	TOTAL MONTHLY INCREASE	PERCENT INCREASED
0	292.03	-	292.03	308.09	-	308.09	16.06	5.5%
50,000	409.03	45.00	454.03	425.09	45.00	470.09	16.06	3.5%
150,000	677.61	135.00	812.61	693.67	135.00	828.67	16.06	2.0%
300,000	1,221.43	270.00	1,491.43	1,237.49	270.00	1,507.49	16.06	1.1%
500,000	2,127.43	450.00	2,577.43	2,143.49	450.00	2,593.49	16.06	0.6%

TABLE FOR MONTHLY CHARGES AND PERCENT INCREASE COMPARISON

FOR COMMERCIAL & MULTIFAMILY CUSTOMERS WITH A 3-INCH METER

BASE RATE \$ 308.09

COMMODITY RATE: TIER 1 = \$ 2.34 FOR ALL WATER USAGE
 TIER 2 = N/A
 TIER 3 = N/A
 TIER 4 = N/A

GALLONS USED IN 1 MONTH	CURRENT WATER	CURRENT GPF	CURRENT MONTHLY BILL	PROPOSED WATER	PROPOSED GPF	PROPOSED MONTHLY BILL	TOTAL MONTHLY INCREASE	PERCENT INCREASED
0	292.03	-	292.03	308.09	-	308.09	16.06	5.5%
50,000	409.03	45.00	454.03	425.09	45.00	470.09	16.06	3.5%
150,000	643.03	135.00	778.03	659.09	135.00	794.09	16.06	2.1%
300,000	994.03	270.00	1,264.03	1,010.09	270.00	1,280.09	16.06	1.3%
500,000	1,462.03	450.00	1,912.03	1,478.09	450.00	1,928.09	16.06	0.8%

TABLE FOR MONTHLY CHARGES AND PERCENT INCREASE COMPARISON

FOR IRRIGATION CUSTOMERS WITH A 4-INCH METER

BASE RATE \$ 481.41

COMMODITY RATE: TIER 1 = \$ 2.34 FOR 0 - 175,000 GALLONS
 TIER 2 = \$ 3.25 FOR 175,001 - 400,000 GALLONS
 TIER 3 = \$ 4.53 FOR 400,001 - 800,000 GALLONS
 TIER 4 = \$ 6.29 FOR ALL USAGE OVER 800,000 GALLONS

GALLONS USED IN 1 MONTH	CURRENT WATER	CURRENT GPF	CURRENT MONTHLY BILL	PROPOSED WATER	PROPOSED GPF	PROPOSED MONTHLY BILL	TOTAL MONTHLY INCREASE	PERCENT INCREASED
0	456.31	-	456.31	481.41	-	481.41	25.10	5.5%
300,000	1,272.06	270.00	1,542.06	1,297.16	270.00	1,567.16	25.10	1.6%
550,000	2,276.56	495.00	2,771.56	2,301.66	495.00	2,796.66	25.10	0.9%
700,000	2,956.06	630.00	3,586.06	2,981.16	630.00	3,611.16	25.10	0.7%
850,000	3,723.56	765.00	4,488.56	3,748.66	765.00	4,513.66	25.10	0.6%

TABLE FOR MONTHLY CHARGES AND PERCENT INCREASE COMPARISON

FOR COMMERCIAL & MULTIFAMILY CUSTOMERS WITH A 4-INCH METER

BASE RATE \$ 481.41

COMMODITY RATE: TIER 1 = \$ 2.34 FOR ALL WATER USAGE
 TIER 2 = N/A
 TIER 3 = N/A
 TIER 4 = N/A

GALLONS USED IN 1 MONTH	CURRENT WATER	CURRENT GPF	CURRENT MONTHLY BILL	PROPOSED WATER	PROPOSED GPF	PROPOSED MONTHLY BILL	TOTAL MONTHLY INCREASE	PERCENT INCREASED
0	456.31	-	456.31	481.41	-	481.41	25.10	5.5%
300,000	1,158.31	270.00	1,428.31	1,183.41	270.00	1,453.41	25.10	1.8%
550,000	1,743.31	495.00	2,238.31	1,768.41	495.00	2,263.41	25.10	1.1%
700,000	2,094.31	630.00	2,724.31	2,119.41	630.00	2,749.41	25.10	0.9%
850,000	2,445.31	765.00	3,210.31	2,470.41	765.00	3,235.41	25.10	0.8%

TABLE FOR MONTHLY CHARGES AND PERCENT INCREASE COMPARISON

FOR RESIDENTIAL & IRRIGATION CUSTOMERS WITH A 6-INCH METER

BASE RATE \$ 962.81

COMMODITY RATE: TIER 1 = \$ 2.34 FOR 0 - 860,000 GALLONS
 TIER 2 = \$ 3.25 FOR 860,001 - 2,000,000 GALLONS
 TIER 3 = \$ 4.53 FOR 2,000,001 - 3,500,000 GALLONS
 TIER 4 = \$ 6.29 FOR ALL USAGE OVER 3,500,000 GALLONS

GALLONS USED IN 1 MONTH	CURRENT WATER	CURRENT GPF	CURRENT MONTHLY BILL	PROPOSED WATER	PROPOSED GPF	PROPOSED MONTHLY BILL	TOTAL MONTHLY INCREASE	PERCENT INCREASED
0	912.62	-	912.62	962.81	-	962.81	50.19	5.5%
425,000	1,907.12	382.50	2,289.62	1,957.31	382.50	2,339.81	50.19	2.2%
1,000,000	3,380.02	900.00	4,280.02	3,430.21	900.00	4,330.21	50.19	1.2%
1,500,000	5,005.02	1,350.00	6,355.02	5,055.21	1,350.00	6,405.21	50.19	0.8%
2,000,000	6,630.02	1,800.00	8,430.02	6,680.21	1,800.00	8,480.21	50.19	0.6%

TABLE FOR MONTHLY CHARGES AND PERCENT INCREASE COMPARISON

FOR COMMERCIAL & MULTIFAMILY CUSTOMERS WITH A 6-INCH METER

BASE RATE \$ 962.81

COMMODITY RATE: TIER 1 = \$ 2.34 FOR ALL WATER USAGE
 TIER 2 = N/A
 TIER 3 = N/A
 TIER 4 = N/A

GALLONS USED IN 1 MONTH	CURRENT WATER	CURRENT GPF	CURRENT MONTHLY BILL	PROPOSED WATER	PROPOSED GPF	PROPOSED MONTHLY BILL	TOTAL MONTHLY INCREASE	PERCENT INCREASED
0	912.62	-	912.62	962.81	-	962.81	50.19	5.5%
425,000	1,907.12	382.50	2,289.62	1,957.31	382.50	2,339.81	50.19	2.2%
1,000,000	3,252.62	900.00	4,152.62	3,302.81	900.00	4,202.81	50.19	1.2%
1,500,000	4,422.62	1,350.00	5,772.62	4,472.81	1,350.00	5,822.81	50.19	0.9%
2,000,000	5,592.62	1,800.00	7,392.62	5,642.81	1,800.00	7,442.81	50.19	0.7%

TABLE FOR MONTHLY CHARGES AND PERCENT INCREASE COMPARISON

FOR CUSTOMERS WITH A 8-INCH METER

BASE RATE \$ 1,540.50

COMMODITY RATE: TIER 1 = \$ 2.34 FOR 0 - 860,000 GALLONS
 TIER 2 = \$ 3.25 FOR 860,001 - 2,000,000 GALLONS
 TIER 3 = \$ 4.53 FOR 2,000,001 - 3,500,000 GALLONS
 TIER 4 = \$ 6.29 FOR ALL USAGE OVER 3,500,000 GALLONS

GALLONS USED IN 1 MONTH	CURRENT WATER	CURRENT GPF	CURRENT MONTHLY BILL	PROPOSED WATER	PROPOSED GPF	PROPOSED MONTHLY BILL	TOTAL MONTHLY INCREASE	PERCENT INCREASED
0	1,460.19	-	1,460.19	1,540.50	-	1,540.50	80.31	5.5%
425,000	2,454.69	382.50	2,837.19	2,535.00	382.50	2,917.50	80.31	2.8%
1,000,000	3,927.59	900.00	4,827.59	4,007.90	900.00	4,907.90	80.31	1.7%
1,500,000	5,552.59	1,350.00	6,902.59	5,632.90	1,350.00	6,982.90	80.31	1.2%
2,000,000	7,177.59	1,800.00	8,977.59	7,257.90	1,800.00	9,057.90	80.31	0.9%

(There are no active 8-inch potable meters in the OVWU system)

TABLE FOR MONTHLY CHARGES AND PERCENT INCREASE COMPARISON

FOR COMMERCIAL AND MULTIFAMILY CUSTOMERS WITH A 8-INCH METER

BASE RATE \$ 1,540.50

COMMODITY RATE: TIER 1 = \$ 2.34 FOR ALL WATER USAGE

TIER 2 = N/A

TIER 3 = N/A

TIER 4 = N/A

GALLONS USED IN 1 MONTH	CURRENT WATER	CURRENT GPF	CURRENT MONTHLY BILL	PROPOSED WATER	PROPOSED GPF	PROPOSED MONTHLY BILL	TOTAL MONTHLY INCREASE	PERCENT INCREASED
0	1,460.19	-	1,460.19	1,540.50	-	1,540.50	80.31	5.5%
425,000	2,454.69	382.50	2,837.19	2,535.00	382.50	2,917.50	80.31	2.8%
1,000,000	3,800.19	900.00	4,700.19	3,880.50	900.00	4,780.50	80.31	1.7%
1,500,000	4,970.19	1,350.00	6,320.19	5,050.50	1,350.00	6,400.50	80.31	1.3%
2,000,000	6,140.19	1,800.00	7,940.19	6,220.50	1,800.00	8,020.50	80.31	1.0%

(There are no active 8-inch potable meters in the OVWU system)

TABLE FOR MONTHLY CHARGES AND PERCENT INCREASE COMPARISON

FOR CUSTOMERS WITH A 1.5-INCH METER - RECLAIMED WATER USE

BASE RATE \$ 73.08

COMMODITY RATE: TIER 1 = \$ 2.15 FOR ALL WATER USAGE

TIER 2 = N/A

TIER 3 = N/A

TIER 4 = N/A

GALLONS USED IN 1 MONTH	CURRENT WATER	CURRENT GPF	CURRENT MONTHLY BILL	PROPOSED WATER	PROPOSED GPF	PROPOSED MONTHLY BILL	TOTAL MONTHLY DECREASE	PERCENT DECREASED
0	73.08	-	73.08	73.08	-	73.08	0.00	0.0%
50,000	186.58	23.50	210.08	180.58	18.50	199.08	(11.00)	-5.2%
135,000	379.53	63.45	442.98	363.33	49.95	413.28	(29.70)	-6.7%
200,000	527.08	94.00	621.08	503.08	74.00	577.08	(44.00)	-7.1%
250,000	640.58	117.50	758.08	610.58	92.50	703.08	(55.00)	-7.3%

TABLE FOR MONTHLY CHARGES AND PERCENT INCREASE COMPARISON

FOR CUSTOMERS WITH A 2-INCH METER - RECLAIMED WATER USE

BASE RATE \$ 116.94

COMMODITY RATE: TIER 1 = \$ 2.15 FOR ALL WATER USAGE

TIER 2 = N/A

TIER 3 = N/A

TIER 4 = N/A

GALLONS USED IN 1 MONTH	CURRENT WATER	CURRENT GPF	CURRENT MONTHLY BILL	PROPOSED WATER	PROPOSED GPF	PROPOSED MONTHLY BILL	TOTAL MONTHLY DECREASE	PERCENT DECREASED
0	116.94	-	116.94	116.94	-	116.94	0.00	0.0%
150,000	457.44	70.50	527.94	439.44	55.50	494.94	(33.00)	-6.3%
240,000	661.74	112.80	774.54	632.94	88.80	721.74	(52.80)	-6.8%
450,000	1,138.44	211.50	1,349.94	1,084.44	166.50	1,250.94	(99.00)	-7.3%
600,000	1,478.94	282.00	1,760.94	1,406.94	222.00	1,628.94	(132.00)	-7.5%

TABLE FOR MONTHLY CHARGES AND PERCENT INCREASE COMPARISON

FOR CUSTOMERS WITH A 3-INCH METER - RECLAIMED WATER USE

BASE RATE \$ 233.86

COMMODITY RATE: TIER 1 = \$ 2.27 FOR ALL WATER USAGE
 TIER 2 = N/A
 TIER 3 = N/A
 TIER 4 = N/A

GALLONS USED IN 1 MONTH	CURRENT WATER	CURRENT GPF	CURRENT MONTHLY BILL	PROPOSED WATER	PROPOSED GPF	PROPOSED MONTHLY BILL	TOTAL MONTHLY DECREASE	PERCENT DECREASED
0	233.86	-	233.86	233.86	-	233.86	0.00	0.0%
20,000	279.26	9.40	288.66	279.26	7.40	286.66	(2.00)	-0.7%
80,000	415.46	37.60	453.06	415.46	29.60	445.06	(8.00)	-1.8%
100,000	460.86	47.00	507.86	460.86	37.00	497.86	(10.00)	-2.0%
150,000	574.36	70.50	644.86	574.36	55.50	629.86	(15.00)	-2.3%

TABLE FOR MONTHLY CHARGES AND PERCENT INCREASE COMPARISON

FOR CUSTOMERS WITH A 4-INCH METER - RECLAIMED WATER USE

BASE RATE \$ 365.41

COMMODITY RATE: TIER 1 = \$ 2.15 FOR ALL WATER USAGE
 TIER 2 = N/A
 TIER 3 = N/A
 TIER 4 = N/A

GALLONS USED IN 1 MONTH	CURRENT WATER	CURRENT GPF	CURRENT MONTHLY BILL	PROPOSED WATER	PROPOSED GPF	PROPOSED MONTHLY BILL	TOTAL MONTHLY DECREASE	PERCENT DECREASED
0	365.41	-	365.41	365.41	-	365.41	0.00	0.0%
220,000	864.81	103.40	968.21	838.41	81.40	919.81	(48.40)	-5.0%
300,000	1,046.41	141.00	1,187.41	1,010.41	111.00	1,121.41	(66.00)	-5.6%
450,000	1,386.91	211.50	1,598.41	1,332.91	166.50	1,499.41	(99.00)	-6.2%
600,000	1,727.41	282.00	2,009.41	1,655.41	222.00	1,877.41	(132.00)	-6.6%

TABLE FOR MONTHLY CHARGES AND PERCENT INCREASE COMPARISON

FOR CUSTOMERS WITH A 6-INCH METER - RECLAIMED WATER USE

BASE RATE \$ 730.83

COMMODITY RATE: TIER 1 = \$ 2.15 FOR ALL WATER USAGE
 TIER 2 = N/A
 TIER 3 = N/A
 TIER 4 = N/A

GALLONS USED IN 1 MONTH	CURRENT WATER	CURRENT GPF	CURRENT MONTHLY BILL	PROPOSED WATER	PROPOSED GPF	PROPOSED MONTHLY BILL	TOTAL MONTHLY DECREASE	PERCENT DECREASED
0	730.83	-	730.83	730.83	-	730.83	0.00	0.0%
900,000	2,773.83	423.00	3,196.83	2,665.83	333.00	2,998.83	(198.00)	-6.2%
5,000,000	12,080.83	2,350.00	14,430.83	11,480.83	1,850.00	13,330.83	(1,100.00)	-7.6%
10,000,000	23,430.83	4,700.00	28,130.83	22,230.83	3,700.00	25,930.83	(2,200.00)	-7.8%
15,000,000	34,780.83	7,050.00	41,830.83	32,980.83	5,550.00	38,530.83	(3,300.00)	-7.9%
20,000,000	46,130.83	9,400.00	55,530.83	43,730.83	7,400.00	51,130.83	(4,400.00)	-7.9%

APPENDIX C

5-Year Capital Improvement Schedules

C-1 Operating Fund

C-2 Groundwater Preservation Fee

C-3 Water Resource and System Development Impact Fee Fund

**Oro Valley Water Utility
Existing System Capital Projects**

Project No.	Project Name	2020-21	2021-22	2022-23	2023-24	2024-25	Totals
Wells							
1	Well Rehab. (2 per year - Const.)	150,000	150,000	150,000	150,000	240,000	840,000
2	Hydropneumatic Tank Replacement (1 - 2/yr)	150,000	100,000	100,000	100,000	150,000	600,000
3	Well D8 Replacement Drill & Construct			450,000	1,010,000		1,460,000
	Subtotal	300,000	250,000	700,000	1,260,000	390,000	2,900,000
Reservoirs							
4	Reservoir Relining		120,000		120,000		240,000
	Subtotal		120,000		120,000		240,000
Booster Stations							
5	Bstr. Rehab (2 per year - Design)	20,000	20,000	20,000	20,000	20,000	100,000
6	Bstr. Rehab (2 per year - Const.)	400,000	150,000	150,000	150,000	400,000	1,250,000
7	Hydropneumatic Tank Replacement (1-4/yr)	200,000	225,000	300,000	100,000	300,000	1,125,000
8	E-F & E-G La Canada Off-site elect. upgrades (Const.)	151,500					151,500
9	E-F & E-G La Canada Off-site dischr. piping (Const.)	151,500					151,500
10	E-F & E-G La Canada Bstr. Stations (Design)		150,000				150,000
11	E-F & E-G La Canada Bstr. Stations (Const.)			500,000			500,000
	Subtotal	923,000	545,000	970,000	270,000	720,000	3,428,000
Mains							
12	Main Valve & ARV Valve Replacements	50,000	50,000	50,000	50,000	50,000	250,000
13	4-inch PRV on Rancho Sonora Dr (Design / Const.)	10,000	70,000				80,000
14	6-inch PRV @ Lambert D-8 (Design / Const.)	10,000	70,000				80,000
15	Fireline Backflow Protection	70,000					70,000
16	Palisades Area Supply Redundancy (Design / Const.)			50,000	470,000		520,000
17	El Con/Cmo Diestro main & valve repl.t (Const.)	200,000					200,000
18	Hilton Hotel & Casitas Main Replacement (Design)					75,000	75,000
19	El Con Resort Supply redundancy (Design / Const.)	50,000	285,000				335,000
20	Pusch Ridge Estates Main Replacement (Design)					75,000	75,000
21	34 Countryside DVA's (Design)					10,000	10,000
	Subtotal	390,000	475,000	100,000	520,000	210,000	1,695,000
Structures & Walls							
22	Wall Upgrades and Improvements (WP 16 - Const.)		100,000			200,000	300,000
23	Production Facility Storage & Drainage Imp. (Const.)	100,000					100,000
	Subtotal	100,000	100,000	-	-	200,000	400,000
Total Capital Projects							
		1,713,000	1,490,000	1,770,000	2,170,000	1,520,000	8,663,000
Meters & Equipment							
24	Water Meters - New Connections	75,000	106,000	102,000	76,000	73,000	432,000
25	SCADA Equipment	85,000				50,000	135,000
26	Instrumentation Replacement	54,000	250,000			50,000	354,000
	Subtotal	214,000	356,000	102,000	76,000	173,000	921,000
Vehicles							
27	Replacement Vehicles - Meter Operations	-	-	38,000	38,000	38,000	114,000
28	Replacement Vehicles - Dist Vehicles	-		70,000			70,000
29	Replacement Vehicles - Production Vehicles	38,000	76,000				114,000
30	New Vehicle - Water Control System Oper. - F150	38,000					38,000
31	Replacement Vehicles - Const Inspectors				80,000		80,000
32	Replacement Vehicles - Water Quality					38,000	38,000
	Subtotal	76,000	76,000	108,000	118,000	76,000	454,000
	Total for all projects 1-32	2,003,000	1,922,000	1,980,000	2,364,000	1,769,000	10,038,000

Groundwater Preservation Fees
NWRRDS Projects - Existing Customers Only - 40% of Total Costs

Project No.	Project Name	Percent	2020-21	2021-22	2022-23	2023-24	2024-25	Totals
Northwest Recovery & Delivery System (Partnered Projects)								
1	Program Management Support Services	40%	192,000	296,000	8,000	-		496,000
2	Water quality, native plants, assessment & relocate	40%						-
3	Hydrogeological support, well explore, permits	40%						-
4	Well design, permit, drill, development, testing	40%	1,000,000					1,000,000
5	Well site design, improvements, equip, power	40%		1,200,000				1,200,000
6	Pipeline design (recovered water & transmission)	40%						-
7	Pipe const. (recovered water & transmission 9 mi.)	40%		1,440,000	1,440,000			2,880,000
8	NWRRDS forebay design	40%						-
9	NWRRDS forebay reservoir construction	40%		300,000	300,000			600,000
	Subtotal for NWRRDS Partnered Projects (number 1-9)		1,192,000	3,236,000	1,748,000	-	-	6,176,000
Northwest Recovery & Delivery System (Independent Projects)								
10	Pipeline route study and prelim design (6+ Mi.)	40%						-
11	Shannon Rd forebay res & bster station land acq	40%	160,000					160,000
12	Pipeline easement acquisition	40%	300,000					300,000
13	Pipeline design	40%						-
14	NWRRDS forebay reservoir bster station design	40%						-
15	Shannon road forebay res & bster station design	40%	120,000					120,000
16	Bster Station Const at NWRRDS forebay reservoir	40%		100,000	100,000			200,000
17	Shannon road forebay reservoir construction	40%			560,000			560,000
18	Bster Station Const at Shannon road forebay res	40%			360,000			360,000
19	Pipe const from Bster Sta at NWRRDS to La Canada Res	40%			1,960,000	1,960,000		3,920,000
	Subtotal for NWRRDS Independent Projects (number 10-19)		580,000	100,000	2,980,000	1,960,000	-	5,620,000
Internal System Improvement to Convey NWRRDS water in OVWU system								
20	NWRRDS interconnect to Tangerine	40%				180,000		180,000
21	NWRRDS interconnect to Naranja	40%				340,000		340,000
	Subtotal for NWRRDS Independent Projects (number 20-21)		-	-	-	520,000	-	520,000
	Total for all projects 1-21		1,772,000	3,336,000	4,728,000	2,480,000	-	12,316,000

Water Resources and System Development Impact Fee Fund
NWRRDS Projects - Growth Related Only - 60% of Total Costs
Miscellaneous Potable Water Growth Related Projects

Project No.	Project Name	Percent	2020-21	2021-22	2022-23	2023-24	2024-25	Totals
Northwest Recovery & Delivery System (Partnered Projects)								
1	Program Management Support Services	60%	288,000	444,000	12,000	-		744,000
2	Water quality, native plants, assessment & relocate	60%						-
3	Hydrogeological support, well explore, permits	60%						-
4	Well design, permit, drill, development, testing	60%	1,500,000					1,500,000
5	Well site design, improvements, equip, power	60%		1,800,000				1,800,000
6	Pipeline design (recovered water & transmission)	60%						-
7	Pipe const. (recovered water & transmission 9 mi.)	60%		2,160,000	2,160,000			4,320,000
8	NWRRDS forebay design	60%						-
9	NWRRDS forebay reservoir construction	60%		450,000	450,000			900,000
Subtotal for NWRRDS Partnered Projects (number 1-9)			1,788,000	4,854,000	2,622,000	-	-	9,264,000
Northwest Recovery & Delivery System (Independent Projects)								
10	Pipeline route study and prelim design (6+ Mi.)	60%						-
11	Shannon Rd forebay res & bster station land acq	60%	240,000					240,000
12	Pipeline easement acquisition	60%	450,000					450,000
13	Pipeline design	60%						-
14	NWRRDS forebay reservoir bster station design	60%						-
15	Shannon road forebay res & bster station design	60%	180,000					180,000
16	Bster Station Const at NWRRDS forebay reservoir	60%		150,000	150,000			300,000
17	Shannon road forebay reservoir construction	60%			840,000			840,000
18	Bster Station Const at Shannon road forebay res	60%			540,000			540,000
19	Pipe const from Bster Sta at NWRRDS to La Canada Res	60%			2,940,000	2,940,000		5,880,000
Subtotal for NWRRDS Independent Projects (number 10-19)			870,000	150,000	4,470,000	2,940,000	-	8,430,000
Internal System Improvement to Convey NWRRDS water in OVWU system								
20	NWRRDS interconnect to Tangerine	60%				270,000		270,000
21	NWRRDS interconnect to Naranja	60%				510,000		510,000
Subtotal for NWRRDS Independent Projects (number 20-21)			-	-	-	780,000	-	780,000
Total for all projects 1-21			2,658,000	5,004,000	7,092,000	3,720,000	-	18,474,000

Project No.	Project Name	Percent	2020-21	2021-22	2022-23	2023-24	2024-25	Totals
Misc. Growth Related Project to Convey Potable Water								
22	Steam Pump D-Zone Well Drill	100%						-
23	Steam Pump D-Zone Well Equipping	100%						-
24	Palisades C-zone storage tank and pipeline	100%					500,000	500,000
25	Water Plant 14 Booster Capacity Expansion	100%						-
26	Moore Road F-Zone Interconnect	100%	750,000					750,000
27	Pressure Zone G,H and I Storage Expansion	100%						-
28	Pressure Zone G Storage Expansion	100%						-
Total for misc. growth related projects project numbers 22-28			750,000	-	-	-	500,000	1,250,000

APPENDIX D

Assumptions for Preferred Financial Scenario

D-1 Operating Fund

D-6 Water Resource and System Development Impact Fee Fund

PREFERRED FINANCIAL SCENARIO

ASSUMPTIONS FOR OPERATING FUND

Growth

SFR growth rates for FY 2020-21 through FY 2024-25 were based on worksheets provided by D. Laws on 2/12/19 and were updated with information from the Finance Department to be consistent with the Town financial forecasting. Other growth rates include commercial, irrigation and multi-family connections that were projected by Water Utility Staff.

Connections	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25
SFR	325	350	330	240	225
Other	8	4	4	4	4

Current Water Rate Structure

The following base rates are for both the potable and reclaimed water meters:

Meter Sizes <i>(in inches)</i>	Potable	Reclaimed
5/8 x 3/4	\$ 18.26	\$ 14.62
3/4 x 3/4	\$ 27.38	\$ 21.93
1	\$ 45.63	\$ 36.54
1.5	\$ 91.26	\$ 73.08
2	\$ 146.03	\$ 116.94
3	\$ 292.03	\$ 233.86
4	\$ 456.31	\$ 365.41
6	\$ 912.62	\$ 730.83
8	\$ 1,460.19	\$ 1,169.32

The following commodity rates are the cost per 1,000 gallons for potable and reclaimed water use:

Classifications	Tier 1	Tier 2	Tier 3	Tier 4
Single Family Residential	\$ 2.34	\$ 3.25	\$ 4.53	\$ 6.29
Irrigation	\$ 2.34	\$ 3.25	\$ 4.53	\$ 6.29
Multi-family Residential	\$ 2.34	---	---	---
Commercial	\$ 2.34	---	---	---
Construction Water	\$ 7.29	---	---	---
Reclaimed Water	\$ 2.27	---	---	---
GPF – Potable	\$ 0.90	---	---	---
GPF – Reclaimed	\$ 0.47	---	---	---

Proposed Base Rates for FY 2020-21

The following are the proposed base rates for the potable and reclaimed water meters:

Meter Sizes <i>(in inches)</i>	Potable	Reclaimed
5/8 x 3/4	\$ 19.26	\$ 14.62
3/4 x 3/4	\$ 28.89	\$ 21.93
1	\$ 48.14	\$ 36.54
1.5	\$ 96.28	\$ 73.08
2	\$ 154.06	\$ 116.94
3	\$ 308.09	\$ 233.86
4	\$ 481.41	\$ 365.41
6	\$ 962.81	\$ 730.83
8	\$ 1,540.50	\$ 1,169.32

PREFERRED FINANCIAL SCENARIO

ASSUMPTIONS FOR OPERATING FUND (continued)

Proposed Commodity Rates for FY 2020-21

The following proposed commodity rates are the cost per 1,000 gallons for potable and reclaimed water use:

Classifications	Tier 1	Tier 2	Tier 3	Tier 4
Single Family Residential	\$ 2.34	\$ 3.25	\$ 4.53	\$ 6.29
Irrigation	\$ 2.34	\$ 3.25	\$ 4.53	\$ 6.29
Multi-family Residential	\$ 2.34	---	---	---
Commercial	\$ 2.34	---	---	---
Construction Water	\$ 7.29	---	---	---
Reclaimed Water	\$ 2.15	---	---	---
GPF – Potable	\$ 0.90	---	---	---
GPF – Reclaimed	\$ 0.37	---	---	---

There are no proposed changes to the usage allowed in each tier of the SF Residential and Irrigation classifications.

Proposed Potable Water Rate Increases

The “overall impact” and “monthly increase” are representative of a customer with a 5/8-inch water meter using 7,000 gallons of water per month.

	Base Rate	Tier 1	Tier 2	Tier 3	Tier 4	GPF	Overall Impact	Monthly Increase
FY 20-21	5.50%	0.0%	0.0%	0.0%	0.0%	0.0%	2.4%	\$ 1.00
FY 21-22	5.50%	0.0%	0.0%	0.0%	0.0%	0.0%	2.5%	\$ 1.06
FY 22-23	5.25%	0.0%	0.0%	0.0%	0.0%	0.0%	2.5%	\$ 1.07
FY 23-24	5.00%	0.0%	0.0%	0.0%	0.0%	0.0%	2.4 %	\$ 1.07
FY 24-25	4.75%	0.0%	0.0%	0.0%	0.0%	0.0%	2.4%	\$ 1.07

Proposed Reclaimed Water Rate Impact

The reclaimed base rate remains the same for the five year period however, the reclaimed commodity rate will be reduced FY 20-21. The “overall impact” and “monthly increase” are representative of a turf customer with a 6-inch meter using 10,000,000 gallons of water per month.

	Base Rate	Commodity Rate	GPF	Overall Impact	Monthly Decrease
FY 20-21	0.0%	-5.5%	\$ 0.37	- 7.8%	-\$ 2,200.00
FY 21-22	0.0%	-2.0%	\$ 0.35	-2.7%	-\$ 700.00
FY 22-23	0.0%	0.0%	\$ 0.35	0.0%	\$ 0.00
FY 23-24	0.0%	0.0%	\$ 0.30	-2.0%	-\$ 500.00
FY 24-25	0.0%	0.0%	\$0.30	0.0%	\$ 0.00

Groundwater Preservation Fee Rates (cost per 1,000 gallons)

The tables above indicates the proposed decrease in the reclaimed GPF throughout the five-year projection period. There are no proposed changes to the potable water GPF throughout the projection period.

Water Use Trends

The average monthly water use for a residential customer with a 5/8-inch water meter in 2018-19 was 6,900 gallons per month due to extreme wet weather conditions. However, this analysis assumes 7,000 gallons per month. Projected reclaimed deliveries were reduced annually due to the closure of the Vistoso Golf Course.

PREFERRED FINANCIAL SCENARIO

ASSUMPTIONS FOR OPERATING FUND (continued)

Other Revenue

Other revenue is based on FY 2019-20 proposed budget. Revenue from billing sewer fees for Pima County will increase annually as a result of growth and minor rate increases. The remaining other revenue is not projected to increase although misc. charges fluctuate annually and includes late fees, reconnect fees, new service establishment fees, storm water billing and meter income.

Beginning Cash Balance

Cash balance is estimated based on budgeted revenue, expenditures and known cost over runs for FY 2019-20. Began with actual cash balance at 6/30/19 as shown on the Balance Sheet report dated 10-17-19 added budgeted revenues, subtracted budgeted and known unbudgeted expenditures.

Interest Income

The interest rates vary for the five years in the analysis period. Interest rates are projected in at 1.5% across the board. These projections were estimated by Water Utility staff.

Personnel Costs

No new employees were added during the projection period. The following increases were provided by the Finance Department on 8/08/19 and are consistent with Town financial forecasting: the annual merit increase is projected to be 2% annually and health care costs are projected to increase by 0.5% annually. It is projected that the state pension is projected to increase 2% annually over the five-year projection period.

O&M Costs - Potable

Based on the Utility's proposed budget for FY 2019-20 plus 2% inflation. Costs increase annually by 2% inflation except power costs. Projected 10% increase in power costs for a potential Tucson Electric rate increase in FY 2020-21 and again in FY 2023-24.

O&M Costs – NWRD

It is assumed that the NWRD project will begin operations in FY 2024-25 with estimated operating costs of \$1,566,000.

Groundwater Extinguishment Credits

The Utility does not project Groundwater Extinguishment credits to be purchased during this projection period.

O&M Costs - Reclaimed

The overall reduction in water use created an effluent shortage. As such, costs to purchase additional reclaimed water from Tucson Water has been included annually. Remaining O&M costs are based on the Utility's proposed budget for FY 2019-20 plus 2% inflation. Costs increase annually by 2% inflation except power costs. Projected 10% increase in power costs for a potential Tucson Electric rate increase in FY 2020-21 and again in FY 2023-24. The O&M costs include allocations for personnel, administrative costs, fleet service costs and trustee services. Cost allocations were made using a variety of methodologies supporting the calculations. Personnel costs were allocated using a weighted average of 9.91%. Refer to the reclaimed cost allocation worksheet.

Inflation Rates

The Town's Finance Department provided rate of 2% annually for inflation rates on 8/08/19. For purposes of this report, the inflation rate will be 2% annually for the 5-year period.

Reclaimed Water Wheeling Costs

Pursuant to the existing IGA, the reclaimed water is delivered on a non-interruptible basis at an interruptible rate. Inflationary increases of 2% are included annually.

PREFERRED FINANCIAL SCENARIO

ASSUMPTIONS FOR OPERATING FUND (continued)

CAP Wheeling Costs

Costs include the fees charged by Tucson Water to wheel the CAP water through their recharge and recovery system. Tucson Water fees are in accordance with an IGA. The increases will be 4% each year. It is also assumed that the Utility will wheel 2,510 AF annually for the first 4 years. In FY 2024-25 the NWRDSS system will be in operation; therefore, the amount of CAP wheeling will be reduced to 960 acre feet.

CAP Recharge Costs

Costs are based on the rate schedule adopted by CAP 6/06/19. The figures represent the annual cost to deliver the Utility's entire allotment of CAP water (10,305 AF) for recharge.

Capital Improvements – Operating Fund

The following table identifies the amount of the capital projects for the existing potable water system for each fiscal year and the projected financing as identified in the revised five-year CIP dated 10/30/19.

Fiscal Year	Total Capital Costs	Project Financing		
		Cash Reserves	Existing Debt	New Debt
2020-21	\$ 2,003,000	\$ 733,000	\$ 1,270,000	-----
2021-22	\$ 1,922,000	\$ 1,352,000	\$ 570,000	-----
2022-23	\$ 1,980,000	\$ 710,000		\$ 1,270,000
2023-24	\$ 2,364,000	\$ 844,000		\$ 1,520,000
2024-25	\$ 1,769,000	\$ 949,000		\$ 820,000
	\$10,038,000	\$ 4,588,000	\$ 1,840,000	\$ 3,610,000

Capital Improvements – Groundwater Preservation Fee

The following table identifies the capital projects for the existing customers' portion of the NWRDSS CAP water delivery system and the projected financing as identified in the revised CIP dated 10/30/19. The projects will be both cash funded with revenue from groundwater preservation fees.

Fiscal Year	Total Capital Costs	Project Financing	
		Cash Reserves	New Debt
2020-21	\$ 1,772,000	\$ 1,772,000	-----
2021-22	\$ 3,336,000	-----	\$ 3,336,000
2022-23	\$ 4,728,000	-----	\$ 4,728,000
2023-24	\$ 2,480,000	\$ 544,000	\$ 1,936,000
2024-25	-----	-----	-----
	\$ 12,316,000	\$ 2,316,000	\$10,000,000

Debt Service

The following table identifies the existing and proposed debt service included in this pro forma:

Bonds	Type	Description	Amortization Schedule By
2008	Sr. Lien	Reclaimed Ph. 2	WIFA
2009	Sr. Lien	Existing System CIP	WIFA
2012	Sr. Lien	Refunding (Reclaim Ph. 1)	Stone & Youngberg
2014	Sr. Lien	AMI Project	WIFA
2015	Excise Tax	Refunding (2005)	Stifel & Nicolaus & Co.
2017	Excise Tax	Refunding (2007)	Stifel & Nicolaus & Co.
2018	Excise Tax	Existing System CIP	Stifel & Nicolaus & Co.
2021	Sr. Lien	NWRDSS	Utility Staff
2022	Sr. Lien	Existing System CIP	Utility Staff

PREFERRED FINANCIAL SCENARIO

ASSUMPTIONS FOR OPERATING FUND (continued)

Minimum Debt Service Coverage Requirement

- 1.30 debt service coverage ratio for 2012 Sr. Lien Bonds & all WIFA Loans
- 1.00 debt service coverage ratio for all Excise Tax Pledged Bonds

Cash Reserve Requirement

Mayor and Town Council Water Policies require the Utility to maintain cash reserves in the Operating Fund of not less than 20% of the combined total of the annual budgeted amounts for personnel, O&M and debt service. This specifically excludes costs for capital projects, depreciation, amortization and contingency.

PREFERRED FINANCIAL SCENARIO

ASSUMPTIONS FOR WATER RESOURCE AND SYSTEM DEVELOPMENT IMPACT FEE FUND

Growth

SFR growth rates for FY 2020-21 through FY 2024-25 were based on worksheets provided by D. Laws on 2/12/19 and were updated with information from the Finance Department to be consistent with the Town financial forecasting. Other growth rates include commercial, irrigation and multi-family connections that were projected by Water Utility

	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25
SFR SU's	325	350	330	240	225
Other SU's	61	10	10	10	10

Impact Fees

The mandatory 5-year Impact Fee Analysis was in process during this rates analysis period. The new impact fees are projected to be \$6,387 per service unit. These projected fees are included in this rates analysis beginning in FY 2020-21 and are used throughout the analysis. It is assumed that the new fees will become effective July 1, 2020.

Beginning Cash Balance

Cash balance is estimated based on budgeted revenue and expenditures for FY 2019-20. Began with actual cash balance on 6/30/19 as shown on the Balance Sheet report dated 9-22-19, added budgeted revenue and subtracted budgeted expenditures.

Interest Income

The interest rates vary for the five years in the analysis period. Interest rates are projected in at 1.5% across the board. These projections were estimated by Water Utility staff.

Debt Service

There is no new debt in this fund during the projection period. The following table identifies the existing debt service included in this pro forma:

Bonds	Type	Description	Amortization Schedule By
2012	Sr. Lien	Refunding (2003)	Stone & Youngberg

Debt Service Coverage

1.30 debt service coverage ratio for 2012 Sr. Lien Bonds

CAP Capital Costs

Based on 3,000 AF using the rate schedule adopted by CAP 6/06/19.

Capital Improvements

The following table identifies the amount of the NWRD's CAP water capital projects for each fiscal year and the related financing as identified in the revised five year CIP dated 10/30/19:

Fiscal Year	Total Capital Costs	Project Financing	
		Cash Reserves	New Debt
2020-21	\$ 2,658,000	\$ 2,658,000	-----
2021-22	\$ 5,004,000	\$ 5,004,000	-----
2022-23	\$ 7,092,000	\$ 7,092,000	-----
2023-24	\$ 3,720,000	\$ 3,720,000	-----
2024-25	-----	-----	-----
	\$18,474,000	\$18,474,000	-----

PREFERRED FINANCIAL SCENARIO

ASSUMPTIONS FOR WATER RESOURCE AND SYSTEM DEVELOPMENT IMPACT FEE FUND (continued)

The following table identifies the amount of the miscellaneous growth related capital projects for each fiscal year and the related financing as identified in the revised five year CIP dated 10/30/19:

Fiscal Year	Total Capital Costs	Project Financing	
		Cash Reserves	New Debt
2020-21	\$ 750,000	\$ 750,000	-----
2021-22	-----	-----	-----
2022-23	-----	-----	-----
2023-24	-----	-----	-----
2024-25	\$ 500,000	\$ 500,000	-----
	\$ 1,250,000	\$ 1,250,000	-----

APPENDIX E

Proposed Development Impact Fee Schedule

E-1 Water Resource and System Development Impact Fees

**Oro Valley Water Utility
Proposed Development Impact Fees**

Residential Meter Size	Capacity Ratio	Demand Adjustment Factor	Proposed Fee
5/8 "	1.00	1.00	\$ 6,387
3/4"	1.50	1.00	\$ 9,569
1 "	2.50	1.00	\$ 15,934
1.5" standard	5.00	1.00	\$ 31,846
2" compound	8.00	1.00	\$ 50,941
Multi-Family (per unit)	N/A	0.32	\$ 2,044

Nonresidential Meter Size	Capacity Ratio	Demand Adjustment Factor	Proposed Fee
5/8 "	1.00	1.11	\$ 7,087
3/4"	1.50	1.11	\$ 10,619
1 "	2.50	1.11	\$ 17,684
1.5" standard	5.00	1.11	\$ 35,347
2" compound	8.00	1.11	\$ 56,542
3" compound	16.00	1.11	\$ 113,062
4" compound	25.00	1.11	\$ 176,647
6" compound	50.00	1.11	\$ 353,273
8" compound	80.00	1.11	\$ 565,224

Irrigation Meter Size	Capacity Ratio	Demand Adjustment Factor	Proposed Fee
5/8 "	1.00	2.25	\$ 14,343
3/4"	1.50	2.25	\$ 21,503
1 "	2.50	2.25	\$ 35,824
1.5" standard	5.00	2.25	\$ 71,627
2" compound	8.00	2.25	\$ 114,590
3" compound	16.00	2.25	\$ 229,158
4" compound	25.00	2.25	\$ 358,047
6" compound	50.00	2.25	\$ 716,072
8" compound	80.00	2.25	\$ 1,145,702