
To:	Faith Smith Jeff Schreier	From:	Ethan Harden Siyuan Rao
Subject:	Town of Eaton, 2019 Water, Wastewater, and Irrigation Revenue Sufficiency Analysis	Date:	December 16, 2019

Summary

The Town of Eaton (Town) engaged Stantec Consulting Services Inc. (Stantec) to perform a comprehensive revenue sufficiency analysis and develop plant investment fees (Study) for the water, wastewater, and irrigation enterprise funds (funds) in Summer of 2019. The water, wastewater, and irrigation financial plans were built with fiscal year (FY) 2019 budgets and 10-year capital improvement plans (CIP) provided by Town staff. This study consisted of analyzing the funds' revenues and expenses in order to develop recommendations for adjusting the current utility rates to fund projected expenditures and reserve requirements in the future. Although our analysis includes projections of the funds through FY 2029, it is recommended that the Town review and update the rate plan annually due to the variability of and likelihood of significant changes in project cost projections in the future.

The Town's utility department serves approximately 2,280 accounts within its service area. Like many other utilities across northern Colorado, the Town must plan for its own water resource needs in the future as growth is realized and water rights become more scarce in the region. Smaller utilities face a difficult challenge in addressing infrastructure capital needs due to the lack of a large customer base over which the costs can be shared. This can translate into larger increases on customers' bills as the utility faces increased water resource project costs. To proactively address the needs of both building new and replacing existing infrastructure in the Town, Stantec developed a 10-year financial planning model for each fund that incorporated future expansion-related capital needs as well as increased costs in repair and replacement capital projects.

Throughout the project, Town staff and Stantec have worked together to refine budget inputs, assumptions, and analyze alternative capital funding scenarios. To assist funding the CIP provided by the Town's engineer, Town Staff and Stantec agreed on assumptions described in this technical memorandum. While overall project costs vary by fund, the water fund has significant capital needs to fund the Northern Integrated Supply Project (NISP) and construction of a regional water treatment plant.

Stantec recalculated plant investment fees for the water and wastewater system, incorporating updated fixed asset values and growth-related capital project costs. The Town currently purchases additional gallons per minute from North Weld County Water District (NWCWD). In conjunction with the growth projected, additional capacity-related costs for increased water purchases were included to accurately forecast the amount of capacity needed within the current treated water contract amount to meet future water demand. Plant investment fee calculations were completed following directives of Colorado Revised Statutes for these fees to achieve the objective that growth is paying for the costs of growth in a fair and adequate manner.

Long-Term Financial Plans

Stantec’s scope for this study is to provide long-term financial planning tools for the Town’s funds to adequately fund each enterprise into the future. Total operating and capital requirements are projected for 10 years and reflect each fund’s needs to recover revenues based on sustaining existing operations and projecting expected changes to these operations as a result of system growth and proposed capital facilities. The tools provide comprehensive cash-flow analysis incorporating financial goals that are maintained by the Town. This technical memorandum summarizes the assumptions and calculations supporting proposed rate revenue increases over a 10-year period.

A summary of proposed rate increases, and average bill impacts is presented below for all three funds. The water bill impacts for residential customers are based on typical monthly water usage of 8,000 gallons. This was derived from a full year of average consumption for water bills of FY 2018.

Table 1. Summary of Proposed Water, Wastewater and Irrigation System Rate Increases and Bill Impacts

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Water Rate Increase	9.0%	9.0%	9.0%	9.0%	9.0%	9.0%	9.0%	9.0%	9.0%	9.0%
Avg. Bill (8 kgal)	\$66.38	\$72.36	\$78.87	\$85.97	\$93.70	\$102.13	\$111.34	\$121.37	\$132.31	\$144.20
Wastewater Rate Increase	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Avg. Bill	\$26.50	\$26.50	\$26.50	\$26.50	\$26.50	\$26.50	\$26.50	\$26.50	\$26.50	\$26.50
Irrigation Rate Increase	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Avg. Bill (4-8k sq. ft)	\$14.00	\$14.00	\$14.00	\$14.00	\$14.00	\$14.00	\$14.00	\$14.00	\$14.00	\$14.00

Financial Planning Assumptions

Future revenue and expense projections require various assumptions to be applied to each enterprise fund’s financial plan. The following table summarizes the key assumptions used in the analysis. Note, the wastewater personal services increase at a faster rate than water personal services due to the recent addition a new, lower cost, employee and their salary escalating back to previous levels.

Table 2. Key Assumptions for Forecasting Water and Wastewater Revenues and Expenses

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Water and Wastewater System										
Avg. Customer Growth	4.50%	4.50%	4.50%	4.50%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
O&M Expenses										
Personal Services - Water	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Personal Services - Wastewater	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%
Fuel, Utilities Chemicals	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
NWCWD Water Production	10.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Default Inflation Rate	2.31%	2.31%	2.31%	2.31%	2.31%	2.31%	2.31%	2.31%	2.31%	2.31%

Additional assumptions that were included throughout the financial planning period include:

1. The 10-year CIP was provided by the Town’s engineer and encompassed years FY 2019-2029. A 3% escalation factor was applied to project costs starting in FY 2021.
2. A regional water treatment plant is expected to be needed towards the end of the projection period. To plan for this future project, 60% of Eaton’s share of costs was added in FY 2029.
3. To adequately fund renewal and replacement of the wastewater system, capital project costs were increased above the engineer’s projections in order to align the Town’s spending with its wastewater assets’ annual depreciation.

4. Rate revenue projections for future years are based on year-end projections for the current year, FY 2019.
5. Customer growth is projected similarly for both water and wastewater funds at 4.5% from FY 2020-2023 and 2.0% thereafter. Irrigation growth is projected at 1.5% in FY 2020 and 2021, and 0% thereafter.
6. Stantec used the FY 2019 budgets or year-end estimates as the basis year for expense projections going forward, depending on the fund. However, based on discussions with Town Staff, certain operating and maintenance (O&M) budget line items were revised for all funds.
7. Treated water purchases from NWCWD were estimated in conjunction with growth numbers and projected cost and usage amounts. Treated water costs are expected to increase 10.0% in 2020 and are indexed at 3.0% thereafter. Treatment costs account for more than 65% of the Town's total O&M expenditures; therefore, it is recommended that the Town review and update the financial plan when the projected treatment costs change.
8. A specific type of debt-instrument has not been assumed for projected debt issues, understanding that partnering with the other NISP participants could yield better lending terms and less risk. However, we have assumed all debt projections to consist of 2% issuance costs with 30-year terms, include funding one year of debt service as a reserve, and an interest rate of 5.0%. These amounts are estimates provided by Stantec for planning purposes and do not represent any decisions made by the Town.

Source Data

Beginning Fund Balances

The FY 2018 actual ending net positions provided by Town staff were used to establish the beginning FY 2019 balances for all systems.

Revenues

The revenues utilized in the financial plan reflect an evaluation of multiple years of customer demand history, based on billing records. Revenues consist of rate revenues (including water service, usage, and bulk water fees), plant investment fees, interest income, and miscellaneous service charges.

In discussions with Town staff, it was deemed appropriate to use the FY 2019 budgeted rate revenues as the basis for model inputs. However, for the water fund, 2019 year-end estimates were used to better align with current revenues. In the water fund, revenues are projected to increase by projected growth (new customers) entering the system as well as projected rate revenue increases. The wastewater and irrigation funds' revenues increase by projected growth only, due to no projected rate increases. Table 3 below summarizes expected revenues from FY 2020 through FY 2029 under proposed rates.

Table 3. Projected Water, Wastewater and Irrigation System Revenues under Proposed Rates (Thousands \$)

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Water System										
Revenue Projection	\$2,080.9	\$2,384.7	\$2,677.2	\$3,005.9	\$3,304.2	\$3,632.0	\$3,993.5	\$4,390.8	\$4,827.4	\$5,307.3
Wastewater System										
Revenue Projection	\$809.8	\$846.2	\$884.3	\$924.1	\$942.5	\$961.2	\$980.6	\$1,000.3	\$1,020.4	\$1,040.8
Irrigation System										
Revenue Projection	\$117.7	\$119.4	\$119.4	\$119.4	\$119.4	\$119.4	\$119.4	\$119.4	\$119.4	\$119.4
Total Revenue	\$3,008.4	\$3,350.3	\$3,680.9	\$4,049.5	\$4,366.1	\$4,712.6	\$5,093.5	\$5,510.5	\$5,967.2	\$6,467.5

Operating Expenses

Operating expenses include the expected operating and maintenance costs for the water, wastewater and irrigation systems. The Town's operating budget is organized by cost categories that can also be referred to as functions. The financial plan based operating expenditure projections on the individual expense accounts and amounts within the FY 2019 final budget and FY 2019 year-end estimates. Annual adjustments thereafter are based upon assumed cost escalation factors that were reviewed by Town staff. O&M expenses are summarized below in Table 4 for each fund. Water O&M expenses are divided between treatment and operations with water treatment representing the treatment costs billed by NWCWD.

Table 4. Projected Water, Wastewater and Irrigation System O&M Expenses (Thousands \$)

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Water System										
Water Operations	370.6	379.3	388.2	397.3	406.7	416.3	426.1	436.2	446.5	457.1
NWCWD Treatment	780.6	824.2	870.4	901.6	934.0	967.9	1,003.0	1,039.4	1,077.2	1,098.4
Total Water O&M	\$1,151.2	\$1,203.4	\$1,258.5	\$1,298.9	\$1,340.7	\$1,384.2	\$1,429.1	\$1,475.6	\$1,523.7	\$1,555.5
Wastewater System										
Total Wastewater O&M	\$388.6	\$401.6	\$415.3	\$429.5	\$444.4	\$460.0	\$476.3	\$493.4	\$511.3	\$530.1
Irrigation System										
Total Irrigation O&M	\$0.6	\$0.7	\$0.7	\$0.7	\$0.7	\$0.7	\$0.7	\$0.8	\$0.8	\$0.8
Total O&M	\$1,540.5	\$1,605.7	\$1,674.5	\$1,729.1	\$1,785.8	\$1,844.8	\$1,906.1	\$1,969.8	\$2,035.8	\$2,086.4

Capital Improvement Program

Town staff provided the multi-year CIP for each system in project level detail from FY 2019 through FY 2029. For this study, per discussion with Town staff, Stantec used the capital projects included in the 10-year capital improvement plan for the model input, which applies to all funds described in this technical memorandum. However, for the wastewater fund, Stantec added additional capital costs to allow the wastewater system to replace assets at a level equal to its current wastewater depreciation rate by FY 2029.

Throughout the study, Stantec has worked with staff to refine the capital project cost estimates, discuss timing of the projects, and review optimal funding methods of the projects for the water and wastewater systems. A major goal of the financial planning process is to optimize funding sources for the next ten years to achieve the necessary annual renewal and replacement project funding needs. Beginning in FY 2021, the financial plan includes an annual cost escalation factor of 3% applied to project estimates to account for adjustments in the future cost of construction. See Table 5 below for a summary of capital expenses projected through the planning period.

Table 5. Projected Water, Wastewater and Irrigation System Capital Improvement Expenditures (Thousands \$)

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Water System										
CIP (escalated)	\$920.9	\$959.3	\$1,000.3	\$2,617.2	\$1,835.7	\$5,444.4	\$6,743.3	\$7,061.5	\$6,989.8	\$18,587.4
Wastewater System										
CIP (escalated)	\$220.0	\$154.5	\$185.7	\$218.5	\$281.4	\$318.8	\$358.2	\$430.5	\$475.0	\$521.9
Irrigation System										
CIP (escalated)	\$46.9	\$48.3	\$49.7	\$51.2	\$52.7	\$54.3	\$55.9	\$57.6	\$59.4	\$61.1

Debt Service and Coverage Requirements

Outstanding Debt

The Town is currently obligated to repay a Colorado Water Resources & Power Development Authority (CWRPDA) loan related to its wastewater fund as well as a refunding bond to cover an additional CWRPDA loan related to the water fund. Each debt obligation is projected to be retired in FY 2027 and FY 2023, respectively.

Proposed Debt

Future debt issuances for the water fund, related to the NISP and regional water treatment plant projects, are expected to be required beginning in FY 2026. The proceeds needed are projected after considering fund balances, debt service coverage ratios, and rate revenues. Because of the uncertainty surrounding the two projects for which borrowing occurs, Stantec has projected a debt issuance in each year FY 2026-2029. Stantec does understand that most utilities bundle debt and issue one debt instrument for multiple years of projects. However, with the possibility of joining debt issuances through Northern Water or other means in each year of the NISP project, we have shown one issuance in each year mentioned above. It should be noted that due to changes in actual cash inflows and outflows the borrowing plan may not reflect the actual borrowing amount needed at that time.

Coverage Requirements

The Town's rate covenant for its outstanding debt requires a specific calculation of debt service coverage. Specifically, revenue available for debt service on the water 2014 Refunding Bond must be greater than or equal to 125% of that total debt service. If this coverage amount is not met, the issuer may call the loan or set other penalties in accordance with outstanding loan agreement. To calculate the coverage test, operating expenses are subtracted from total allowable revenues to determine revenue available for debt service. Stantec set the minimum rate covenant requirement for all systems at 125%. The financial plan meets this coverage requirement during the entirety of the rate study period for all funds.

Table 6 below presents the existing and proposed annual debt service payments. Note that the irrigation fund has been omitted from this table as there is no current or projected debt backed by that fund.

Table 6. Projected Water and Wastewater System Annual Debt Service (Thousands \$)

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Water System										
Existing Debt	\$184.2	\$186.3	\$184.5	\$155.2	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Proposed Debt	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$170.2	\$416.1	\$839.8
Total Water Debt	\$184.2	\$186.3	\$184.5	\$155.2	\$0.0	\$0.0	\$0.0	\$170.2	\$416.1	\$839.8
Wastewater System										
Existing Debt	\$313.6	\$312.4	\$315.7	\$314.2	\$316.4	\$312.9	\$314.3	\$314.5	\$0.0	\$0.0
Proposed Debt	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Total Wastewater Debt	\$313.6	\$312.4	\$315.7	\$314.2	\$316.4	\$312.9	\$314.3	\$314.5	\$0.0	\$0.0

Transfers

Both water and wastewater funds include annual transfers to the Town’s general fund for shared services. Table 7 below summarizes the annual transfer amount for both systems. The irrigation fund has been omitted due to no projected transfers within that fund.

Table 7. Projected Water and Wastewater System Transfer Out (Thousand \$)

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Water System										
Administration Transfer	\$28.0	\$28.8	\$29.7	\$30.6	\$31.5	\$32.5	\$33.4	\$34.4	\$35.5	\$36.5
Wastewater System										
Administration Transfer	\$28.0	\$30.0	\$32.1	\$34.3	\$36.7	\$39.3	\$42.0	\$45.0	\$48.1	\$51.5

Results

Based upon the data, assumptions, and policy targets presented, the Town’s current water rates will not provide sufficient revenue to meet its ongoing and forecasted debt service, capital, operating, and reserve requirements over the multi-year projection period. On the contrary, the analysis indicates the current wastewater and irrigation rate revenues are sufficient to meet these funds’ obligations in the future.

Stantec worked with Town staff to evaluate alternatives and built multiple scenarios for the water fund to highlight different policy objectives that could be achieved. Stantec presented all options to the Town Board of Eaton Board on November 20, 2019. The Board has selected the scenario which implements 9.0% rate increases from FY 2020-2029. The Board’s selected scenario includes higher rate increases but enables the Town more flexibility in the years beyond the projection period, through the end of the NISP project. The additional revenue will also set up the Town to afford future debt issuances in the future.

The tables below summarize the proposed rate increases, proposed debt issuances, debt-service coverage, and reserve balances from FY 2020 – FY 2029 under the selected scenario. Stantec recommends that the Town complete financial planning updates annually, or when major changes in the utility occur such as major capital projects or updates to master plans. Any changes to the assumptions or costs may have a measurable effect on the findings.

Table 8 below presents the key performance results of all funds, including the Board-selected scenario for the water fund.

Table 8. Key Performance Statistics Summary

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Water System										
Proposed Rate Increase	9.0%	9.0%	9.0%	9.0%	9.0%	9.0%	9.0%	9.0%	9.0%	9.0%
Proposed Debt Proceeds (\$M)	-	-	-	-	-	-	\$0.0	\$3.4	\$3.9	\$7.3
Debt Service Coverage Ratio	5.06	6.37	7.72	11.04	0.00	0.00	0.00	17.15	7.95	2.61
Ending Cash & Investment (\$M)	\$4.47	\$5.57	\$6.92	\$7.02	\$7.67	\$5.01	\$1.38	\$0.74	\$0.76	\$0.78
Wastewater System										
Proposed Rate Increase	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Proposed Debt Proceeds (\$M)	-	-	-	-	-	-	-	-	-	-
Debt Service Coverage Ratio	2.33	2.46	2.56	2.70	2.10	2.14	2.16	2.18	0.00	0.00
Ending Cash & Investment (\$M)	\$1.88	\$2.15	\$2.43	\$2.71	\$2.74	\$2.74	\$2.70	\$2.60	\$2.77	\$2.89
Irrigation System										
Proposed Rate Increase	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Proposed Debt Proceeds (\$K)	-	-	-	-	-	-	-	-	-	-
Debt Service Coverage Ratio	-	-	-	-	-	-	-	-	-	-
Ending Cash & Investment (\$K)	\$146.9	\$152.3	\$156.3	\$157.2	\$154.8	\$149.1	\$140.0	\$127.2	\$110.9	\$90.7

Impact Fees

Stantec’s scope also included a comprehensive review of the Town’s water and wastewater plant investment fees. This review excluded raw water costs. Raw water is encouraged to be brought to the Town by the new entity when a new development is platted and constructed.

Following the combined method of calculating PIFs, described in AWWA Manual M1¹ and WEF Manual of Practice No. 27², Stantec focused on the value of the current plant in service for both systems and calculated a total system value using the replacement cost new less depreciation (RCNLD) method. There are four accepted asset valuing methodologies including RNCLD, replacement cost new (RCN), original cost, and net book value. RCNLD values existing fixed assets according to the costs of replacing the asset in today’s dollars, adjusted by depreciation that has occurred in the system since the asset was placed in service.

Next, the cost of new capital improvements needed to serve new customers was added to the total RCNLD of the existing assets. The total system costs represent the value of the City’s investment in its water and wastewater systems to serve new customers. Table 9 below shows the RNCLD asset value, growth-related capital costs less the contributed asset value and corresponding debt service credits that are used to determine the each system’s net system value.

¹ American Water Works Association, Manual of Water Supply Practices M1, Principles of Water Rates, Fees and Charges, 7th ed., 2017.

² Water Environment Federation, Manual of Practice No. 27, Financing and Charges for Wastewater Systems, 2005.

Table 9. Net System Values Summary

	Water	Wastewater
Gross Plant in Service	\$ 6,823,988	\$ 8,135,796
Growth-Related Capital Improvement Costs	50,212,382	-
Less:		
Principal Credit	\$ 156,844	\$ -
Contributed Capital	3,577,078	3,315,074
Net System Value	\$ 53,302,448	\$ 4,820,722

In addition to determining the net system values, Stantec applied system capacity values for water and wastewater obtained from the recent master plans, NISP yield estimates, NWCWD treatment capacities and discussions with Town staff. Total capacity available for new customers and the number of equivalent residential units (ERUs) able to be served were used to calculate the remaining capacity within the system. From there we were able to determine the PIF for each new unit connecting to the City's water and wastewater systems. Given these independent calculations, Table 10 below shows the investment fee calculations for each fund.

Table 10. Water and Wastewater Plant Investment Fee Calculation per ERU

	Water	Wastewater
Net System Value	\$ 53,302,448	\$ 4,820,722
Capacity (MGD)	2.71	0.75
Level of Service (gpd)	515	221
Equivalent Residential Units	5,259	3,386
Plant Investment Fee per ERU	\$ 10,136	\$ 1,424

The wastewater PIF calculation results in a low dollar amount per ERU due to using the RCNLD method, as well as the amount of contributed capital to the system as shown in Table 9. Additionally, the largest wastewater asset, the treatment plant, was built in 2006 and has been depreciated by 43% to date. Using the replacement cost new (RCN) method, the wastewater net system value would equal about \$14.3M and the calculated PIF per ERU would equal \$4,224, illustrating the wide range using different methods for estimating net system value. Using this same RCN method, the water PIF was calculated at \$11,863. The water system has a smaller range of values due to the large amount of future capital expenditures which make up a larger proportion of the proposed fee.

Table 11 below shows the current fee, calculated fee using the RCNLD method, and the fee that Stantec is proposing.

Table 11. Current and Proposed Plant Investment Fees per ERU

	Current Fee	Calculated Fee	Proposed Fee
Water PIF	\$6,500	\$10,136	\$10,140
Wastewater PIF	\$3,000	\$1,424	\$3,000

Stantec's recommended PIFs are based on the following findings:

- The water PIF was calculated based on existing water fixed assets and the projection of growth-related projects, which include the NISP project, the regional water treatment plant, and additional water capacity purchases from NWCWD in the future. Additionally, we have excluded raw-water NISP-related costs so the Town can more adequately align those to market cost in the future. Therefore, a water 'infrastructure' fee is proposed at \$10,140 per ERU or a 56% increase from the current fee.
- The wastewater PIF calculation using the RCNLD method is 47% of the current PIF; however, the full range of PIFS using the multiple accepted asset valuing methodologies is \$982-\$4,224. Since the current fee falls within the range of accepted values, Stantec recommends no change to the current fee, leaving it at \$3,000 per ERU.

Finally, Stantec recommends maintaining the proposed PIFs annually and updating the PIFs when new growth-related projects are identified, significant changes in current growth-related project cost estimates occur, or during the Town's next comprehensive rate study, whichever comes first.

Appendix A Utilities Pro-Forma Projections

Table A-1 Water Fund Pro-Forma Projections

	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
1 Operating Revenue											
2 Water Rate Revenue	\$ 1,893,000	\$ 1,893,000	\$ 2,124,539	\$ 2,384,674	\$ 2,677,187	\$ 3,005,931	\$ 3,304,192	\$ 3,632,002	\$ 3,993,479	\$ 4,390,782	\$ 4,827,425
3 Change in Revenue From Growth	-	56,119	63,235	71,461	80,548	25,438	27,920	31,740	34,761	38,049	41,625
4 Subtotal	\$ 1,893,000	\$ 1,949,119	\$ 2,187,774	\$ 2,456,135	\$ 2,757,735	\$ 3,031,369	\$ 3,332,112	\$ 3,663,742	\$ 4,028,240	\$ 4,428,830	\$ 4,869,049
5 <i>Weighted Average Rate Increase</i>	0.00%	6.76%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%
6 Additional Rate Revenue From Rate Increase	-	131,805	196,900	221,052	248,196	272,823	299,890	329,737	362,542	398,595	438,214
8 Total Rate Revenue	\$ 1,893,000	\$ 2,080,924	\$ 2,384,674	\$ 2,677,187	\$ 3,005,931	\$ 3,304,192	\$ 3,632,002	\$ 3,993,479	\$ 4,390,782	\$ 4,827,425	\$ 5,307,264
9 Plus: Other Operating Revenue	1,346	1,346	1,346	1,346	1,346	1,346	1,346	1,346	1,346	1,346	1,346
10 Equals: Total Operating Revenue	\$ 1,894,346	\$ 2,082,269	\$ 2,386,020	\$ 2,678,533	\$ 3,007,277	\$ 3,305,538	\$ 3,633,348	\$ 3,994,825	\$ 4,392,127	\$ 4,828,770	\$ 5,308,609
11 Less: Operating Expenses											
12 Personal Services	\$ (75,922)	\$ (77,678)	\$ (79,487)	\$ (81,351)	\$ (83,270)	\$ (85,247)	\$ (87,283)	\$ (89,380)	\$ (91,540)	\$ (93,765)	\$ (96,056)
13 Variable Operations & Maintenance Costs	(692,647)	(780,649)	(824,159)	(870,361)	(901,610)	(934,019)	(967,898)	(1,003,026)	(1,039,445)	(1,077,198)	(1,098,418)
14 Operations & Maintenance Costs	(286,185)	(292,909)	(299,791)	(306,836)	(314,048)	(321,429)	(328,985)	(336,720)	(344,637)	(352,741)	(361,036)
15 Equals: Net Operating Income	\$ 839,591	\$ 931,033	\$ 1,182,582	\$ 1,419,985	\$ 1,708,349	\$ 1,964,843	\$ 2,249,182	\$ 2,565,699	\$ 2,916,506	\$ 3,305,067	\$ 3,753,098
16 Plus: Non-Operating Income/(Expense)											
17 Interest Income	\$ 1,872	\$ 2,027	\$ 5,021	\$ 6,243	\$ 6,966	\$ 11,014	\$ 9,512	\$ 4,795	\$ 2,120	\$ 1,500	\$ 1,540
18 Water Impact Fees	653,555	1,038,465	1,084,552	1,135,232	1,185,912	547,344	557,480	577,752	587,888	598,024	608,160
19 Equals: Net Income	\$ 1,495,018	\$ 1,971,525	\$ 2,272,155	\$ 2,561,460	\$ 2,901,226	\$ 2,523,201	\$ 2,816,174	\$ 3,148,246	\$ 3,506,514	\$ 3,904,591	\$ 4,362,798
20 Less: Revenues Excluded From Coverage Test											
21 Impact Fees	\$ (653,555)	\$ (1,038,465)	\$ (1,084,552)	\$ (1,135,232)	\$ (1,185,912)	\$ (547,344)	\$ (557,480)	\$ (577,752)	\$ (587,888)	\$ (598,024)	\$ (608,160)
22 Equals: Net Income Available For Debt Service	\$ 841,463	\$ 933,060	\$ 1,187,603	\$ 1,426,228	\$ 1,715,314	\$ 1,975,857	\$ 2,258,694	\$ 2,570,494	\$ 2,748,400	\$ 2,890,507	\$ 3,146,478
23 Senior Lien Debt Service Coverage Test											
24 Net Income Available for Senior-Lien Debt Service	\$ 841,463	\$ 933,060	\$ 1,187,603	\$ 1,426,228	\$ 1,715,314	\$ 1,975,857	\$ 2,258,694	\$ 2,570,494	\$ 2,748,400	\$ 2,890,507	\$ 3,146,478
25 Existing Senior-Lien Debt	184,957	184,168	186,306	184,548	155,234	-	-	-	-	-	-
26 Cumulative New Senior Lien Debt Service (calculated)	-	-	-	-	-	-	-	-	170,226	416,060	839,817
27 Total Annual Senior-Lien Debt Service	Req. \$ 184,957	\$ 184,168	\$ 186,306	\$ 184,548	\$ 155,234	\$ -	\$ -	\$ -	\$ 170,226	\$ 416,060	\$ 839,817
28 Calculated Senior-Lien Debt Service Coverage	1.25	4.55	5.07	6.37	7.73	11.05	-	-	16.15	6.95	3.75
29 Cash Flow Test											
30 Net Income	\$ 1,495,018	\$ 1,971,525	\$ 2,272,155	\$ 2,561,460	\$ 2,901,226	\$ 2,523,201	\$ 2,816,174	\$ 3,148,246	\$ 3,506,514	\$ 3,904,591	\$ 4,362,798
31 Less: Non-Operating Expenditures											
32 Net Interfund Transfers (In-Out)	(22,000)	(28,000)	(28,840)	(29,705)	(30,596)	(31,514)	(32,460)	(33,433)	(34,436)	(35,470)	(36,534)
33 Rate-Payer Debt Service Payment	(184,957)	(184,168)	(186,306)	(184,548)	(155,234)	-	-	-	-	-	(831,076)
34 Growth-Related Debt Service Payment	-	-	-	-	-	-	-	-	(170,226)	(416,060)	(608,160)
35 Capital Outlay	(293,000)	-	-	-	-	-	-	-	-	-	-
36 Impact Fee-Funded Capital	(272,250)	(304,006)	(323,848)	(345,761)	(2,298,176)	(1,507,169)	(1,159,302)	(578,203)	(417,663)	(181,964)	-
37 Cash-Funded Capital	(941,920)	(616,920)	(635,428)	(654,490)	(318,989)	(328,559)	(4,285,055)	(6,165,133)	(3,528,899)	(3,247,057)	(2,871,124)
38 Net Cash Flow	\$ (219,109)	\$ 838,430	\$ 1,097,733	\$ 1,346,955	\$ 98,231	\$ 655,960	\$ (2,660,643)	\$ (3,628,524)	\$ (644,710)	\$ 24,041	\$ 15,904
39 Unrestricted Reserve Fund Test											
40 Balance At Beginning Of Fiscal Year	\$ 3,853,487	\$ 3,634,378	\$ 4,472,808	\$ 5,570,542	\$ 6,917,496	\$ 7,015,728	\$ 7,671,687	\$ 5,011,045	\$ 1,382,521	\$ 737,811	\$ 761,852
41 Cash Flow Surplus/(Deficit)	995,061	1,759,357	2,057,009	2,347,206	2,715,396	2,491,687	2,783,714	3,114,813	3,301,852	3,453,062	2,887,028
42 Projects Designated To Be Paid With Cash	(650,000)	(325,000)	(334,750)	(344,793)	-	-	(180,186)	(190,473)	(556,716)	(574,917)	(593,659)
43 Impact Fee Funded Projects	(272,250)	(304,006)	(323,848)	(345,761)	(2,298,176)	(1,507,169)	(1,159,302)	(578,203)	(417,663)	(181,964)	-
44 Revenue Funded Projects	(291,920)	(291,920)	(300,678)	(309,698)	(318,989)	(328,559)	(4,104,869)	(5,974,660)	(2,972,184)	(2,672,140)	(2,277,465)
45 Balance At End Of Fiscal Year	\$ 3,634,378	\$ 4,472,808	\$ 5,570,542	\$ 6,917,496	\$ 7,015,728	\$ 7,671,687	\$ 5,011,045	\$ 1,382,521	\$ 737,811	\$ 761,852	\$ 777,756
46 Minimum Working Capital Reserve Target	527,377	575,618	601,719	629,274	649,464	670,347	692,083	714,563	737,811	761,852	777,756
47 Excess/(Deficiency) Of Working Capital To Target	\$ 3,107,001	\$ 3,897,190	\$ 4,968,823	\$ 6,288,222	\$ 6,366,264	\$ 7,001,340	\$ 4,318,962	\$ 667,958	\$ 0	\$ 0	\$ -



Appendix A Utilities Pro-Forma Projections

Table A-2 Wastewater Fund Pro-Forma Projections

	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
1 Operating Revenue											
2 Wastewater Rate Revenue	\$ 775,000	\$ 775,000	\$ 809,830	\$ 846,223	\$ 884,316	\$ 924,111	\$ 942,477	\$ 961,184	\$ 980,571	\$ 1,000,298	\$ 1,020,365
3 Change in Revenue From Growth	-	34,830	36,393	38,094	39,794	18,367	18,707	19,387	19,727	20,067	20,407
4 Subtotal	\$ 775,000	\$ 809,830	\$ 846,223	\$ 884,316	\$ 924,111	\$ 942,477	\$ 961,184	\$ 980,571	\$ 1,000,298	\$ 1,020,365	\$ 1,040,772
5 <i>Weighted Average Rate Increase</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
6 Additional Rate Revenue From Rate Increase	-	-	-	-	-	-	-	-	-	-	-
8 Total Rate Revenue	\$ 775,000	\$ 809,830	\$ 846,223	\$ 884,316	\$ 924,111	\$ 942,477	\$ 961,184	\$ 980,571	\$ 1,000,298	\$ 1,020,365	\$ 1,040,772
9 Plus: Other Operating Revenue	-	-	-	-	-	-	-	-	-	-	-
10 Equals: Total Operating Revenue	\$ 775,000	\$ 809,830	\$ 846,223	\$ 884,316	\$ 924,111	\$ 942,477	\$ 961,184	\$ 980,571	\$ 1,000,298	\$ 1,020,365	\$ 1,040,772
11 Less: Operating Expenses											
12 Personal Services	\$ (85,000)	\$ (101,550)	\$ (107,259)	\$ (113,367)	\$ (119,902)	\$ (126,895)	\$ (134,378)	\$ (142,385)	\$ (150,951)	\$ (160,118)	\$ (169,926)
13 Operations & Maintenance Costs	(279,946)	(287,074)	(294,386)	(301,887)	(309,583)	(317,478)	(325,579)	(333,889)	(342,414)	(351,161)	(360,136)
14 Equals: Net Operating Income	\$ 410,054	\$ 421,206	\$ 444,579	\$ 469,062	\$ 494,625	\$ 498,103	\$ 501,227	\$ 504,298	\$ 506,932	\$ 509,085	\$ 510,710
15 Plus: Non-Operating Income/(Expense)											
16 Interest Income	\$ 789	\$ 900	\$ 2,018	\$ 2,291	\$ 2,568	\$ 4,086	\$ 4,107	\$ 4,081	\$ 5,302	\$ 5,367	\$ 5,658
17 Wastewater Tap Fees	301,789	307,211	321,000	336,000	351,000	162,000	165,000	171,000	174,000	177,000	180,000
18 Equals: Net Income	\$ 712,632	\$ 729,317	\$ 767,597	\$ 807,353	\$ 848,194	\$ 664,189	\$ 670,335	\$ 679,378	\$ 686,234	\$ 691,452	\$ 696,368
19 Less: Revenues Excluded From Coverage Test											
20 Impact Fees	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
21 Equals: Net Income Available For Debt Service	\$ 712,632	\$ 729,317	\$ 767,597	\$ 807,353	\$ 848,194	\$ 664,189	\$ 670,335	\$ 679,378	\$ 686,234	\$ 691,452	\$ 696,368
22 Senior Lien Debt Service Coverage Test											
23 Net Income Available for Senior-Lien Debt Service	\$ 712,632	\$ 729,317	\$ 767,597	\$ 807,353	\$ 848,194	\$ 664,189	\$ 670,335	\$ 679,378	\$ 686,234	\$ 691,452	\$ 696,368
24 Existing Senior-Lien Debt	314,808	313,640	312,398	315,668	314,164	316,441	312,915	314,342	314,474	-	-
25 Cumulative New Senior Lien Debt Service (calculated)	-	-	-	-	-	-	-	-	-	-	-
26 Total Annual Senior-Lien Debt Service	\$ 314,808	\$ 313,640	\$ 312,398	\$ 315,668	\$ 314,164	\$ 316,441	\$ 312,915	\$ 314,342	\$ 314,474	\$ -	\$ -
27 Calculated Senior-Lien Debt Service Coverage	Req. 1.25	2.26	2.33	2.46	2.56	2.70	2.10	2.14	2.16	2.18	-
28 Cash Flow Test											
29 Net Income	\$ 712,632	\$ 729,317	\$ 767,597	\$ 807,353	\$ 848,194	\$ 664,189	\$ 670,335	\$ 679,378	\$ 686,234	\$ 691,452	\$ 696,368
30 Less: Non-Operating Expenditures											
31 Net Interfund Transfers (In - Out)	(22,000)	(28,000)	(29,960)	(32,057)	(34,301)	(36,702)	(39,271)	(42,020)	(44,962)	(48,109)	(51,477)
32 Net Debt Service Payment	(314,808)	(313,640)	(312,398)	(315,668)	(314,164)	(316,441)	(312,915)	(314,342)	(314,474)	-	-
33 Cash-Funded Capital	(100,000)	(220,000)	(154,500)	(185,658)	(218,545)	(281,377)	(318,800)	(358,216)	(430,456)	(475,039)	(521,909)
34 Net Cash Flow	\$ 275,823	\$ 167,676	\$ 270,738	\$ 273,971	\$ 281,183	\$ 29,668	\$ (652)	\$ (35,200)	\$ (103,658)	\$ 168,304	\$ 122,982
35 Unrestricted Reserve Fund Test											
36 Balance At Beginning Of Fiscal Year	\$ 1,439,552	\$ 1,715,375	\$ 1,883,051	\$ 2,153,790	\$ 2,427,760	\$ 2,708,944	\$ 2,738,612	\$ 2,737,960	\$ 2,702,760	\$ 2,599,102	\$ 2,767,406
37 Cash Flow Surplus/(Deficit)	375,823	387,676	425,238	459,628	499,729	311,046	318,148	323,015	326,798	643,343	644,891
38 Cash-Funded Capital	(100,000)	(220,000)	(154,500)	(185,658)	(218,545)	(281,377)	(318,800)	(358,216)	(430,456)	(475,039)	(521,909)
39 Balance At End Of Fiscal Year	\$ 1,715,375	\$ 1,883,051	\$ 2,153,790	\$ 2,427,760	\$ 2,708,944	\$ 2,738,612	\$ 2,737,960	\$ 2,702,760	\$ 2,599,102	\$ 2,767,406	\$ 2,890,388
40 Minimum Working Capital Reserve Target	182,473	194,312	200,822	207,627	214,743	222,187	229,978	238,137	246,683	255,640	265,031
41 Excess/(Deficiency) Of Working Capital To Target	\$ 1,532,902	\$ 1,688,740	\$ 1,952,968	\$ 2,220,133	\$ 2,494,201	\$ 2,516,425	\$ 2,507,982	\$ 2,464,623	\$ 2,352,419	\$ 2,511,766	\$ 2,625,357



Appendix A Utilities Pro-Forma Projections

Table A-3 Irrigation Fund Pro-Forma Projections

	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
1 Operating Revenue											
2 Irrigation Rate Revenue	\$ 116,000	\$ 116,000	\$ 117,676	\$ 119,422	\$ 119,422	\$ 119,422	\$ 119,422	\$ 119,422	\$ 119,422	\$ 119,422	\$ 119,422
3 Change in Revenue From Growth	-	1,676	1,746	-	-	-	-	-	-	-	-
4 Subtotal	\$ 116,000	\$ 117,676	\$ 119,422	\$ 119,422	\$ 119,422	\$ 119,422	\$ 119,422	\$ 119,422	\$ 119,422	\$ 119,422	\$ 119,422
5 Weighted Average Rate Increase	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
6 Additional Rate Revenue From Rate Increase	-	-	-	-	-	-	-	-	-	-	-
8 Total Rate Revenue	\$ 116,000	\$ 117,676	\$ 119,422	\$ 119,422	\$ 119,422	\$ 119,422	\$ 119,422	\$ 119,422	\$ 119,422	\$ 119,422	\$ 119,422
9 Plus: Other Operating Revenue	-	-	-	-	-	-	-	-	-	-	-
10 Equals: Total Operating Revenue	\$ 116,000	\$ 117,676	\$ 119,422	\$ 119,422	\$ 119,422	\$ 119,422					
11 Less: Operating Expenses											
12 Operations & Maintenance Costs	\$ (63,897)	\$ (65,549)	\$ (67,244)	\$ (68,984)	\$ (70,770)	\$ (72,603)	\$ (74,484)	\$ (76,415)	\$ (78,396)	\$ (80,430)	\$ (82,518)
13 Equals: Net Operating Income	\$ 52,103	\$ 52,127	\$ 52,178	\$ 50,438	\$ 48,652	\$ 46,819	\$ 44,938	\$ 43,007	\$ 41,026	\$ 38,992	\$ 36,904
14 Plus: Non-Operating Income/(Expense)											
15 Interest Income	\$ 72	\$ 75	\$ 154	\$ 157	\$ 156	\$ 228	\$ 217	\$ 200	\$ 238	\$ 202	\$ 157
16 Equals: Net Income	\$ 52,175	\$ 52,202	\$ 52,332	\$ 50,594	\$ 48,808	\$ 47,047	\$ 45,155	\$ 43,208	\$ 41,264	\$ 39,193	\$ 37,062
17 Less: Revenues Excluded From Coverage Test											
18 Impact Fees	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
19 Equals: Net Income Available For Debt Service	\$ 52,175	\$ 52,202	\$ 52,332	\$ 50,594	\$ 48,808	\$ 47,047	\$ 45,155	\$ 43,208	\$ 41,264	\$ 39,193	\$ 37,062
20 Senior Lien Debt Service Coverage Test											
21 Net Income Available for Senior-Lien Debt Service	\$ 52,175	\$ 52,202	\$ 52,332	\$ 50,594	\$ 48,808	\$ 47,047	\$ 45,155	\$ 43,208	\$ 41,264	\$ 39,193	\$ 37,062
22 Existing Senior-Lien Debt	-	-	-	-	-	-	-	-	-	-	-
23 Cumulative New Senior Lien Debt Service (calculated)	-	-	-	-	-	-	-	-	-	-	-
24 Total Annual Senior-Lien Debt Service	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
25 Calculated Senior-Lien Debt Service Coverage	Req. 1.25	-	-	-	-	-	-	-	-	-	-
26 Cash Flow Test											
27 Net Income	\$ 52,175	\$ 52,202	\$ 52,332	\$ 50,594	\$ 48,808	\$ 47,047	\$ 45,155	\$ 43,208	\$ 41,264	\$ 39,193	\$ 37,062
28 Less: Non-Operating Expenditures											
29 Net Interfund Transfers (In - Out)	-	-	-	-	-	-	-	-	-	-	-
30 Net Debt Service Payment	-	-	-	-	-	-	-	-	-	-	-
31 Cash-Funded Capital	(46,852)	(46,852)	(48,258)	(49,705)	(51,196)	(52,732)	(54,314)	(55,944)	(57,622)	(59,351)	(61,131)
32 Net Cash Flow	\$ 5,323	\$ 5,350	\$ 4,074	\$ 889	\$ (2,389)	\$ (5,685)	\$ (9,160)	\$ (12,736)	\$ (16,358)	\$ (20,157)	\$ (24,070)
33 Unrestricted Reserve Fund Test											
34 Balance At Beginning Of Fiscal Year	\$ 141,577	\$ 146,900	\$ 152,250	\$ 156,325	\$ 157,214	\$ 154,825	\$ 149,140	\$ 139,980	\$ 127,244	\$ 110,886	\$ 90,729
35 Cash Flow Surplus/(Deficit)	52,175	52,202	52,332	50,594	48,808	47,047	45,155	43,208	41,264	39,193	37,062
36 Cash-Funded Capital	(46,852)	(46,852)	(48,258)	(49,705)	(51,196)	(52,732)	(54,314)	(55,944)	(57,622)	(59,351)	(61,131)
37 Balance At End Of Fiscal Year	\$ 146,900	\$ 152,250	\$ 156,325	\$ 157,214	\$ 154,825	\$ 149,140	\$ 139,980	\$ 127,244	\$ 110,886	\$ 90,729	\$ 66,659
38 Minimum Working Capital Reserve Target	31,949	32,774	33,622	34,492	35,385	36,302	37,242	38,207	39,198	40,215	41,259
39 Excess/(Deficiency) Of Working Capital To Target	\$ 114,952	\$ 119,476	\$ 122,702	\$ 122,722	\$ 119,440	\$ 112,838	\$ 102,738	\$ 89,037	\$ 71,688	\$ 50,513	\$ 25,400