City of Toledo

LINCOLN COUNTY, OREGON

WATER and SEWER RATE STUDIES

July 24, 2020

REGISTERED PROFESSIONAL ENGINEER
66913PE
OREGON
MAY 15, 2001
KEVEN T. SHREEVE
RENEWS: 06/30/20

Civil West
Engineering Services, Inc.

Table of Contents

1. Executive Summary

Section 1

1.1 Background

The City of Toledo authorized Civil West Engineering Services, Inc. to prepare the rate study for the City's water and sewer systems. The purpose of this study is to form a foundation for potential changes to the City's water and sewer rate structure in support of financial stability and for major infrastructure development. This study will also discuss the impact of losing a major water consumer, the Seal Rock Water District (SRWD), when they no longer purchase water from the City in the next couple of years.

Pricing of services should accurately reflect the true costs of providing high-quality water and sewer services to consumers to operate and maintain infrastructure and plan for upcoming repairs, rehabilitation, and replacement of that infrastructure. Rates must be sufficient enough to *maintain* and *sustain* reliable, safe, and efficient water and sewer service, now and into the future.

In general, it has been found the current rates for water and sewer services do not provide adequate capital to maintain a healthy and consistent balance in the water and sewer funds. Currently neither fund is in a deficit, but neither is sufficient for funding recommended needed improvements.

- The Water System fund balance currently has an upward account trend. However, in the past five years, some years finished "in the black," while others were "in the red." It is noted the expenses for all the years considered in this Study exceeded the revenue generated from the residents of the City of Toledo only (Figure 2.1). The water fund, due to the loss of SRWD, will be impacted.

- The Sewer System fund balance currently has an upward account trend. However, in the past three years expenditures have exceeded the revenues. The sewer system is in particularly in need of a rate adjustment.

This Study includes review of the 2014-2018 City Audits and the current 2019-20 budget. This Rate Study uses four City funds in this analysis:

1. Water Fund
2. Water Reserve Fund
3. Sewer Fund
4. Sewer Reserve Fund

Other funds, like the Water Construction Fund (fund used minimally) and System Development Fund (which deals with System Development Charges) were not included in this evaluation because of the nature and use of the Fund.

1.2 Current Water Rate Structure

The City of Toledo implemented the current water rate structure in May of 2019. For a typical residential water customer (5/8" meter) the base charge is $29.47/month (facility charge of $24.04 plus service charge of $5.43) for no water allotment. The first thousand gallons and every thousand gallons thereafter is charged at $4.61/month. For the past few years, the City has been increasing rates annually at 2%. Figure 2.2 shows the fund essentially breaking even. Table 2.3 presents the water rate schedule and is placed here for convenience to the reader.

Table 2.3 Current Water Rate Structure Effective May 21, 2019

City of Toledo		**Facilities Charge**	**Service Charge**	**Usage Charge per 1,000 gallons**
		$24.04	$5.43	$4.61
Flat Rates by Meter Size				
Meter Size	**Multiplier**	**Facilities Charge**	**plus Service Charge**	**Outside City**
5/8	1.0	$24.04	$29.47	$58.95
3/4	1.5	$36.06	$41.49	$82.99
1	2.6	$62.50	$67.94	$135.87
1.25	4.1	$98.56	$104.00	$207.99
1.5	5.9	$141.84	$147.27	$294.54
2	10.5	$252.42	$257.85	$515.70
3	23.6	$567.34	$572.78	$1,145.55
4	41.9	$1,007.27	$1,012.71	$2,025.41
6	94.3	$2,266.96	$2,272.40	$4,544.79
8	167.5	$4,026.69	$4,032.12	$8,064.24
10	261.0	$6,274.42	$6,279.85	$12,559.70
12	377.0	$9,063.05	$9,068.48	$18,136.96

Seal Rock Water District	$3.67 per 1,000 gallons

The average residential connection (5/8" meter) water consumption is near 4,000 gallons per month (Water Master Plan Update 2017). Based on 4,000 gallons per month, a typical average residential monthly water bill in Toledo is:

Current Base Rate (Facilities+Service Charges) = $29.47 per month per EDU (no water included)
Current Usage Charge (Consumption Rate) = $4.61 per 1,000 gallons of water consumed
Current Average Water Charge = $47.91 based on 4,000 gallons of use per month

Note the following aspects of the above rate structure:

1. A fixed base rate ("Facilities Charge + Service Charge") is used but varies for the size of meter.
2. A flat rate usage charge is consistent to every user regardless of the meter size. Customers pay the same amount per 1,000-gallons regardless of quantity of water used.

3. There are many customers who live outside the City limits – "Outside City" users base rate is doubled but the same flat rate is applied. "Outside City" users do not include Seal Rock Water District (SRWD).
4. SRWD has their own rate and is charged a straight flat usage charge per 1,000 gallons.

The City has a Capital Improvement Plan (Water Master Plan Update 2017) with the first two phases already completed. The remaining recommended projects are:

- Phase 3 – refurbishment of two water storage tanks.
- Phase 4 – replacement of the Mill Creek Pump Station and transmission piping. The 2017 Plan Update indicates a cost share with Seal Rock Water District for the Mill Creek improvements. However, with this customer soon leaving, the burden of finishing the CIP projects will fall entirely upon the City of Toledo.
- The total estimated capital project cost is nearly $15,000,000.

Contrary to the 2017 Water Master Plan, the City has since determined the best long-term approach is total replacement of the Ammon Road Storage Tank and to maintain refurbishment of the Graham Street Storage Tank. Tank replacement is expected to be nearly $1,200,000. The total capital project, taking into account replacement of one tank, becomes $16,000,000.

1.3 Current Sewer Rate Structure

The City of Toledo implemented the current sewer structure in May of 2019. For a typical residential sewer customer, the base charge is $17.10/month for the first 1,000 gallons of water. The second thousand gallons and every thousand gallons thereafter is charged a flat rate of $15.99/month. For the past few years, the City has been increasing rates annually at 2%. Sewer flows are based on metered water consumption from January to April. The sewer rate schedule is presented in Table 2.4, shown for convenience to the reader.

Table 2.4 Current Sewer Rate Structure Effective May 21, 2019

Base rate includes first thousand gallons. Rate per thousand based on average usage January - April	
Base rate	**Flat Rate per thousand**
$17.10	$15.99

The past year the City, recognizing the need for additional sewer revenue, redirected $5/month from the street lighting fund to the sewer fund. Based on 4,000 gallons per month of water consumption, a typical average residential monthly sewer bill in Toledo is:

Current Base Rate =	$17.10 per month per EDU (1,000 gallons incl.)
Street Lighting Fund =	$ 5.00 per month
Current Usage Charge (Consumption Rate) =	$15.99 per 1,000 gallons of water consumed after the first
Current Average Sewer Charge =	***$70.07 based on 4,000 gallons of use per month***

Having such a low base rate with a relatively high consumption rate can make for an inconsistent revenue stream, which would be reduced considerably if people started to use less water.

Regardless of water used, the cost of sewage treatment does not reduce significantly if people use less water.

The City has a Capital Improvement Plan (Wastewater Facilities Plan 2014) with improvement projects listed. The City has completed, or currently completing, a few of the projects. Taking into account inflation and subtracting the completed projects from the CIP, there is over $8,000,000 worth of priority improvements to make.

1.4 Philosophy

The City is a business that must generate revenue. How that is done varies from City to City and from user to user. Fairness and equity is a goal, but what is fair to one may be perceived as not fair to another. The rate study analysis contained herein considers the financial requirements of the City for operation and maintenance of the systems. It also considers the financial requirements that will occur when the City undertakes the planned CIP projects. The following criteria were considered in this study:

1. Rates fair and equitable to all customers
2. Account for current times and future projections (CIPs, changes and needs, loss of Seal Rock WD)
3. Revenue reflective of usage
4. Goal: Pay-As-You-Go for smaller capital projects

The new rates and projected revenues provide the City with the necessary revenue required to support operations and improvement plans as well as provide the requisite debt service coverage for the lending institutions.

1.5 Proposed Rate Increase

1.5.1. Water Rate

Based upon discussions with City elected officials and staff, analysis of the City's financial situation, and experience in other communities, the following new water rate structure is recommended to the City:

New water base rate.....$60.30 per EDU per month
New consumption rate .....$5.00 per 1,000 gallons
Proposed average new rate .....$80.30 per month / EDU based on 4,000 gal/month

The rate increase can be incremental over several years as discussed later.

The City may choose to set aside money to fund a hardship water rate program. The details about who will qualify for this program and how it will be administered will be determined outside of this rate study.

It is also recommended the City adopt an annual rate increase philosophy to counteract the effects of inflation. It was determined a minimum annual rate increase of 3% per EDU should be

part of the City's water rate program. The increase is recommended to be applied directly to both the base rate and the consumption rate.

By setting and maintaining an adequate water rate, the City will not have to defer maintenance and work to catch up on deficiencies in the future when improvements will cost more.

1.5.2. Sewer Rate

Sewer and water rates can be treated differently. Because collection and treatment costs of sewer, to a point, don't fluctuate greatly based on flow (e.g. treatment doesn't get much cheaper if people us less water), it is recommended there be a single base rate with no consumption component. Based upon discussions with staff, analysis of the City's financial situation, and experience in other communities, the following new sewer rate structure is recommended to the City:

Proposed sewer base rate .....$103.44 per EDU per month

The rate increase can be incremental over several years as discussed later.

1.6 Conclusions

Based on our analysis of the financial records and other information and taking into account conservative considerations and assumptions as set forth in this report, we conclude and are of the opinion that:

1. The City's current rate structures are not adequate to support a healthy and stable water and sewer system operation in Toledo nor is it capable of supporting planned CIP upgrades as set forth in the City's Water Master Plan and Wastewater Facility Plan Capital Improvement Plans. Therefore, rate increases are recommended to be implemented.

2. Based on the analysis herein, the City should increase water rates by around $30 per month per EDU and sewer rates by $33 per month per EDU. This will allow the City to continue to make improvements outlined in the CIPs, put the City on a firm financial footing moving forward, and provide a conservative level of lien coverage to satisfy the funding institutions. Any changes to the forecast or conditions of assumptions outlined in this analysis could change these conclusions.

3. An annual rate increase of 3% should be implemented to help the water and sewer fund keep up with potential inflationary impacts.

4. By implementing the proposed rate increases, the City's water and sewer systems should be healthy, solvent, and capable of meeting all of their debts and obligations in a responsible way.

2. Introduction to Rate Study

Section 2

The City of Toledo is located approximately 10 miles due east of Newport and 45 miles west of Corvallis on Highway 20, in Lincoln County. The City owns and operates a water and sewer system comprised of the following components:

Water Infrastructure:

- Two raw water intakes
- Miles of raw water piping
- Water Treatment Facility
- Two treated water storage tanks
- Miles of treated water distribution piping
- Booster pump stations, and other related facilities.

Sewer Infrastructure:

- Miles of gravity collection piping
- Manholes
- Wastewater Treatment Facility
- Lift Stations
- Miles of pressure force main

Summaries of the financial history of the water and sewer funds from 2014-2019 and current budget are presented below in Tables 2.1 and 2.2 respectively and accompanying graphs.

2.1 Historical and Existing Water System

2.1.1. Water Revenue

Revenues for the water fund are obtained from a variety of sources. These include customer payments, connection fees, service charges, and other minor income sources. Most revenues to the water fund are derived from local customers in Toledo and from revenue received from the Seal Rock Water District (note: SRWD will soon be leaving as a customer). The City also serves as the wholesale supplier of finished water the Wright Creek Road Water Improvement District.

As indicated in Table 2.1, the amount of revenue received from all users has ranged from $1.64M to over $1.75M. Revenue projections for 2019-2020 assumed revenues from Toledo will essentially remain the same.

Table 2.1 also indicates revenues received from the SRWD, which have averaged around $390k historically. The budget forecast for 2019-2020 suggests nearly $347k in revenues to be received from SRWD.

2.1.2. Water Obligations / Expenditure

Obligations for the City's water fund include personnel, materials, and services for the water plant as well as for the distribution system. Other obligations for the account include operational costs, engineering and professional services support, repairs and maintenance, and many other categories of expenditures.

As indicated in Table 2.1, total expenditures for the Water Funds have historically ranged from $1.39M to as high as $1.90M. In year 18-19 the City started paying personnel directly from the water fund (rather than making transfers to other funds to pay for the personnel). In year 16-17

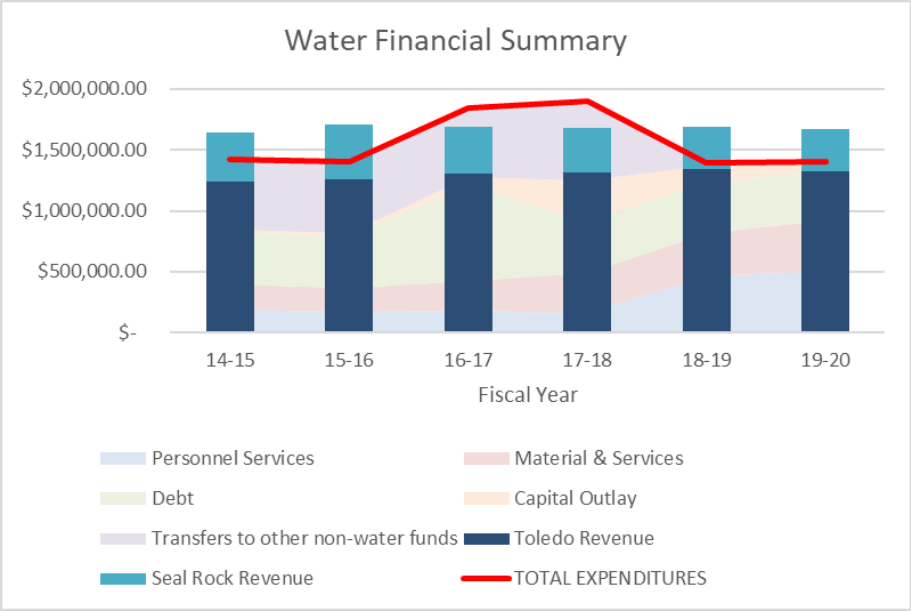
the City refinanced their debt and additional money was spent. Expenditures for 2020 are projected to essentially be the same as in prior years.

Table 2.1 Water System Revenues and Obligations

Description	Fiscal Year					Budget
	14-15	15-16	16-17	17-18	18-19	19-20
Toledo Revenue (General Fund)	$ 1,235,463.10	$ 1,256,886.24	$ 1,301,594.90	$ 1,313,110.60	$ 1,346,514.11	$1,323,485.00
Toledo Revenue (Reserve)	$ 3,769.69	$ 48,490.76	$ 12,711.77	$ 38,927.77	$ 645.41	
Seal Rock Revenue	$ 404,195.87	$ 446,284.55	$ 384,428.30	$ 370,913.90	$ 342,026.40	$ 346,985.00
TOTAL REVENUE	$ 1,643,428.66	$ 1,751,661.55	$ 1,698,734.97	$ 1,722,952.27	$ 1,689,185.92	$1,670,470.00
Transfers to other non-water funds	$ 574,730.17	$ 582,989.98	$ 562,976.84	$ 651,047.98	$ 18,760.00	$22,500.00
Personnel Services	$ 192,393.83	$ 170,511.94	$ 181,617.29	$ 162,830.91	$ 464,857.52	$509,684.00
Material & Services	$ 208,232.02	$ 196,053.44	$ 243,797.74	$ 331,147.29	$ 350,375.49	$409,622.00
Debt	$ 422,432.50	$ 422,932.50	$ 786,508.89	$ 414,191.13	$ 417,555.00	$417,562.00
Capital Outlay	$ 23,492.47	$ 28,254.74	$ 66,760.69	$ 344,701.26	$ 140,906.61	$45,575.00
TOTAL EXPENDITURES	$ 1,421,280.99	$ 1,400,742.60	$ 1,841,661.45	$ 1,903,918.57	$ 1,392,454.62	$1,404,943.00
SURPLUS / (SHORTFALL)	**$ 222,147.67**	**$ 350,918.95**	**$(142,926.48)**	**$(180,966.30)**	**$ 296,731.30**	**$ 265,527.00**
Beginning Balance						
Water Fund	$ 747,337.66	$ 740,007.97	$ 849,398.90	$ 429,307.57	$ 304,189.66	$ 404,190.00
Water Reserve Fund	$ 639,841.58	$ 869,318.94	$ 1,110,846.96	$ 1,388,011.81	$ 1,332,163.42	$ 2,001,880.42
TOTAL CASH IN HAND	$ 1,387,179.24	$ 1,609,326.91	$ 1,960,245.86	$ 1,817,319.38	$ 1,636,353.08	$ 2,406,070.42

Figure 2.1 illustrates the historical revenues (illustrated as revenue from Toledo and Seal Rock WD) and expenditures from the City of Toledo Water Fund for the past 5-years plus this budget year.

Figure 2.1 Water System Revenues vs. Expenditures



2.1.3. Water Fund Surplus / Shortfall

The history of shortfall and surplus for the water fund for the past several years is summarized below in Figure 2.2. As illustrated, the City has experienced a pattern of "up years" and "down years;" however, the 6-year trend is level, meaning there has essentially been sufficient revenue

to offset expenditures. While up and down years are not uncommon, the City should develop a revenue stream to avoid annual shortfalls that reduce the City's capacity to respond to emergencies and properly maintain and improve their water system.

Figure 2.2 Water Surplus and Shortfall History

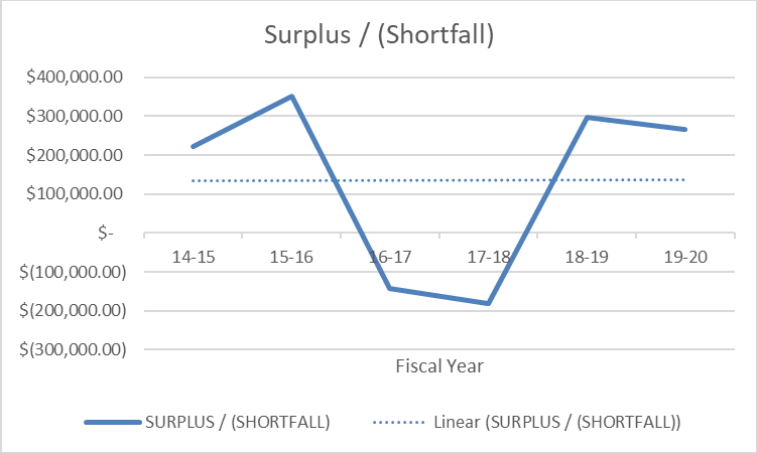
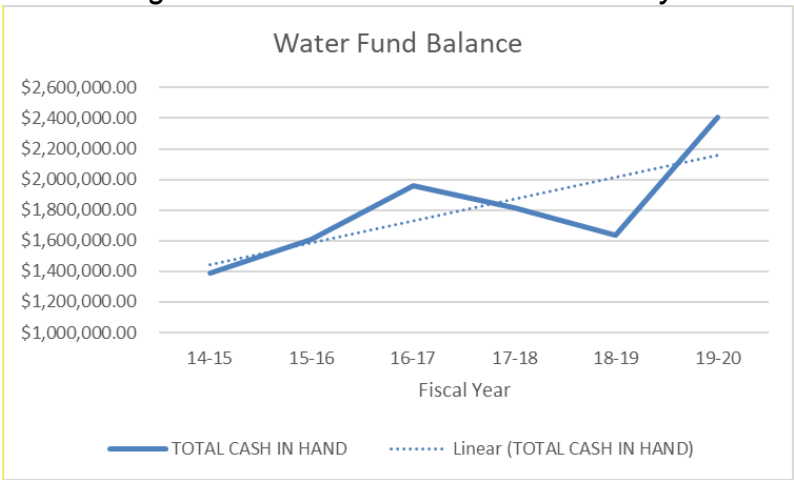


Figure 2.3 illustrates the recent history of the water fund balance (cash-in-hand) in Toledo. The 6-year trend shows the fund increasing.

Figure 2.3 Water Fund Balance History



2.2 Historical and Existing Sewer System

2.2.1. Sewer Revenue

Revenues for the sewer fund are obtained from a variety of sources. These include customer payments, connection fees, service charges, and other minor income sources.

As indicated in Table 2.2, the amount of sewer revenue received from Toledo patrons has ranged from around $985k to nearly $1.09M. Revenue projections for 2019-2020 assumed revenues from Toledo will essentially remain the same.

2.2.2. Sewer Obligations / Expenditures

Obligations for the City's sewer fund include personnel, materials, and services for the wastewater treatment plant as well as for the collection system. Other obligations for the account include operational costs, engineering and professional services support, repairs and maintenance, and many other categories of expenditures.

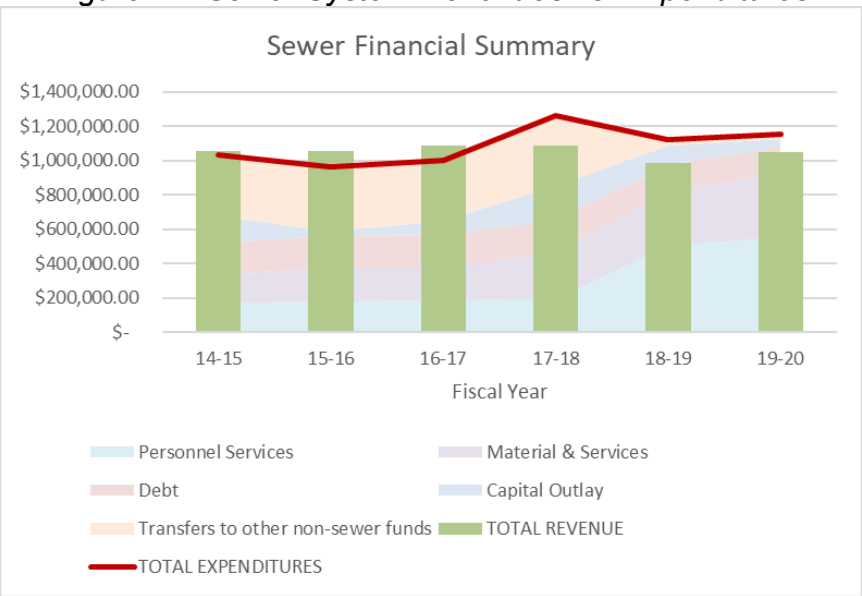
As indicated in Table 2.2, total expenditures for the Sewer Funds have historically ranged from $960k to as high as $1.26M. Revenue projections for 2020 have assumed that revenues from Toledo will essentially remain the same.

Table 2.2 Sewer System Revenues and Obligations

Description	Fiscal Year					Budget
	14-15	15-16	16-17	17-18	18-19	19-20
Toledo Revenue (General Fund)	$ 1,046,051.67	$ 1,054,477.82	$ 1,085,645.60	$ 1,079,601.35	$ 984,019.55	$1,161,590.00
Toledo Revenue (Reserve)	$ 7,809.44	$ 1,222.73	$ 3,253.75	$ 4,323.52	$ 1,769.02	
TOTAL REVENUE	$ 1,053,861.11	$ 1,055,700.55	$ 1,088,899.35	$ 1,083,924.87	$ 985,788.57	$1,161,590.00
Transfers to other non-sewer funds	$ 351,509.04	$ 375,406.72	$ 350,659.25	$ 408,622.73	$ 33,760.00	$25,000.00
Personnel Services	$ 170,204.54	$ 181,035.52	$ 185,604.49	$ 200,405.61	$ 500,431.18	$553,579.00
Material & Services	$ 164,034.34	$ 191,591.44	$ 192,109.40	$ 264,844.80	$ 323,010.37	$362,575.00
Debt	$ 188,952.00	$ 188,952.00	$ 188,977.29	$ 190,021.97	$ 148,245.00	$164,438.00
Capital Outlay	$ 159,708.98	$ 23,671.54	$ 83,823.12	$ 194,847.90	$ 118,470.10	$45,998.00
TOTAL EXPENDITURES	$ 1,034,408.90	$ 960,657.22	$ 1,001,173.55	$ 1,258,743.01	$ 1,123,916.65	**$1,151,590.00**
SURPLUS / (SHORTFALL)	**$ 19,452.21**	**$ 95,043.33**	**$ 87,725.80**	**$ (174,818.14)**	**$ (138,128.08)**	**$ 10,000.00**
Beginning Balance						
Sewer Fund	$ 111,848.98	$ 226,879.35	$ 199,162.49	$ 224,330.95	$ 134,540.98	$ 110,490.00
Sewer Reserve Fund	$ 315,258.32	$ 219,680.16	$ 342,440.35	$ 404,997.69	$ 319,969.52	$ 319,969.52
TOTAL CASH IN HAND	$ 427,107.30	$ 446,559.51	$ 541,602.84	$ 629,328.64	$ 454,510.50	$ 430,459.52

Figure 2.4 illustrates the historical revenues and expenditures for the City of Toledo Sewer Fund for the past 5-years. In year 18-19 the City started paying personnel directly from the sewer fund (rather than making transfers to other funds). Expenses have exceeded revenue the past three years.

Figure 2.4 Sewer System Revenues vs. Expenditures



2.2.3. Sewer Fund Surplus / Shortfall

The history of shortfall and surplus for the sewer fund for the past several years is summarized below in Figure 2.5. The 6-year trend shows the sewer revenue not keeping up with expenditures. This graph (trend) alone warrants consideration to a sewer rate increase.

Figure 2.5 Sewer Surplus and Shortfall History

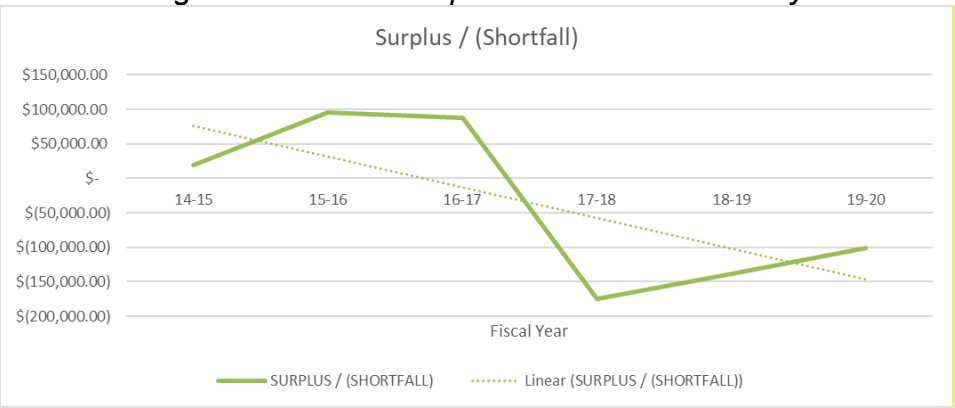
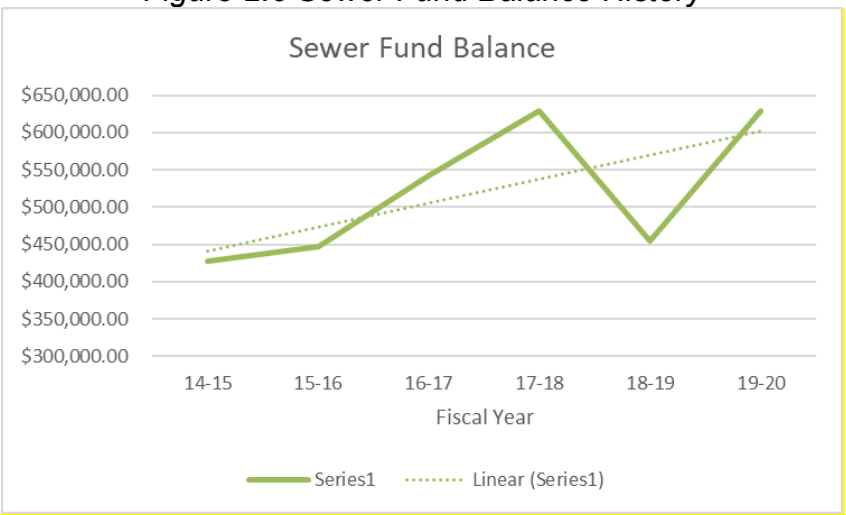


Figure 2.6 illustrates the recent history of the sewer fund balance. While the fund has a positive balance history, it's up and down performance should be leveled out with a more consistent revenue/expense ratio. The fund balance is very small, even at its highest point. The 6-year trend shows the fund increasing.

Figure 2.6 Sewer Fund Balance History



2.3 Rate Structures

2.3.1 Current Water Rate Structure (Fiscal Year 2019-2020)

The existing rate structure in the City of Toledo includes a base rate and a volumetric consumption rate. For larger customers, or commercial and industrial customers utilizing larger

meters, a unit multiplier is applied against the base rate to account for increased demand placed on the system by large users or the potential of such demand.

Table 2.3 summarizes the basic components of the existing water rate structure in Toledo. The facilities charge and the service charge make up the total base rate for the overall water rate structure. Currently, the base rate for a typical 5/8" meter residential connection is $29.47. Users are also charged a flat consumption rate of $4.61/1000 gallons of water used.

The standard meter size in Toledo is the 5/8" meter. The existing rate structure is built upon a system where the 5/8" meter is the common denominator resulting in a "multiplier" of 1.0 against the base rate. For larger meters, a multiplier is applied against the base rate to compensate for the actual or potential demand of the larger user (using a larger meter) on the overall water system.

The average water use, per the City's Water Master Plan Update, February 2017, is approximately 4,000 gallons/month. Based on the rates below, the average water charge is calculated as follows:

Base Rate =	$29.47/month
Consumption Rate = 4,000/1,000 gallons x $4.61 =	$18.44/month
Total Average Residential Charge =	$47.91/month

Table 2.3 Current Water Rate Structure Effective May 21, 2019

		Facilities Charge	Service Charge	Usage Charge	
		$24.04	$5.43	$4.61	
Meter Size	**Multiplier**	**(A) Facilities Charge**	**(B) Facilities Charge + Service Charge (inside City)**	**(C) Facilities Charge + Service Charge (outside City)**	**Usage Charge (all users) $/1000 gal**
5/8"	1.0	$24.04	$29.47	$58.95	$4.61
3/4"	1.5	$36.06	$41.49	$82.99	$4.61
1"	2.6	$62.50	$67.93	$135.87	$4.61
1-1/4"	4.1	$98.56	$103.99	$207.99	$4.61
1-1/2"	5.9	$141.84	$147.27	$294.54	$4.61
2"	10.5	$252.42	$257.85	$515.70	$4.61
3"	23.6	$567.34	$572.77	$1,145.55	$4.61
4"	41.9	$1,007.28	$1,012.71	$2,025.41	$4.61
6"	94.3	$2,266.97	$2,272.40	$4,544.79	$4.61
8"	167.5	$4,026.70	$4,032.13	$8,064.24	$4.61
10"	261.0	$6,274.44	$6,279.87	$12,559.70	$4.61
12"	377.0	$9,063.08	$9,068.51	$18,136.96	$4.61

(A) = base facilities charge x multiplier (B) = A + Service Charge (C)= B x 2

Seal Rock Water District	$3.67 per 1,000 gallons (effective January 1, 2020)

The City also provides water to two wholesale water districts and several dozen water customers who are located outside of the City Limits but not within one of the wholesale districts. A

special rate is applied to these customers that doubles the base rate but charges the same consumption rate as all other customers.

2.3.2 Current Sewer Rate Structure (Fiscal Year 2019-2020)

The City currently uses metered "winter average" water consumption when calculating sewer fees. The fee rate is based on water usage during the winter (January to April). There is no differentiation as to the size of the meter or whether the customer is residential, commercial, or industrial. The Sewer Base Rate of $17.10 includes the first thousand gallons and every thousand gallons thereafter is charged at $15.99. For the past few years, the City has been increasing their rates annually at 2%. Table 2.4 summarizes the existing sewer rate structure in Toledo.

Table 2.4 Current Sewer Rate Structure Effective May 21, 2019

Base Rate includes first thousand gallons. Rate per thousand based on average usage January - April	
Base Rate	**Rate per thousand**
$17.10	$15.99
$5/month/User from Street Lighting Fund transferred to Sewer	

The average water use, per the City's Water Master Plan Update, February 2017, is approximately 4,000 gallons/month. Based on the rates below, the average sewer charge is calculated as follows:

Base Rate (includes first 1,000 gallons) =	$17.10/month
Street Lighting Transfer =	$ 5.00/month
Consumption Rate = 3,000/1,000 gallons x $15.99 =	$47.97/month
Total Average Residential Charge =	$70.07/month

2.4 Needed Revenue Adjustment

2.4.1. Basic Rate Increase

Based on the above summary, it is apparent both systems are in need of a general rate adjustment. The water system needs to anticipate and account for the loss of the Seal Rock Water District. The sewer system has been struggling for a few years with expenses exceeding revenues.

2.4.2. Capital Improvement Plans (CIP)

Both systems have identified needed capital improvements. At this time, financing of these improvements has not been accounted for. Rate adjustments are necessary to pay the debt that will be incurred to pay for these improvements. The following Section 3 will summarize the identified CIP projects, the financial costs, and financing/funding scenarios. The project and financing costs will be summarized as the impact to an equivalent dwelling unit (EDU), Tables 3.5 and 3.6.

2.4.3. Annual System Replacements

The City does not have an active and aggressive system replacement program. The City is encouraged to include in their maintenance budget a revenue stream earmarked for various identified system component replacements. An aggressive and consistent replacement program will significantly reduce the need for capital projects and thereby, in the long run, save the citizens of Toledo money.

3. Capital Improvement Plan (CIP) Projects

Section 3

3.1 CIP Water System

Recently, the City completed a comprehensive Water Master Plan (WMP) Update (Civil West, February 2017) that evaluated all the existing City water facilities, identified deficiencies, and developed projects to address those deficiencies over a 20-year planning horizon. The recommended projects were organized into priority groups listed in the order they should be undertaken. Together, this group of projects became the City's Capital Improvement Plan for the water system.

A detailed description of each project, project cost estimates, and other information can be found in the City of Toledo Water Master Plan Update. The following projects (two phases) have not been completed and are recommended:

- Refurbishment of both the Ammon Road and Graham Street water storage tanks. Both tanks need interior refurbishment, with the larger Ammon Road tank needing both interior and exterior work. *However, due to the continuing severity of the condition of the Ammon Road tank, City staff has recently determined to seek to replace this tank as soon as possible. Tank replacement is expected to be nearly $1,200,000.* The cost of replacement has been taken into account in this rate analysis.

- Replacement of the Mill Creek Pump Station and Transmission Piping. This project is high in cost but must be addressed to avoid potential disruption of service should a catastrophic line break occur. In the past year there has been some talk about changing the treatment type to membranes which would allow water to be used from the Siletz year-round. This change may be cheaper than replacing the entire Mill Creek Transmission Piping. A study and cost analysis are necessary to further consider the best alternative. For purposes here, the original pipeline replacement costs will be used.

Table 3.1 Water CIP Projects (WMP Update 2017)

Water CIP - Phase 3			Potential Cost Share Distribution	
Item	*Description*	*Opinion of Probable Project Cost*	*Toledo Share*	*Seal Rock Share*
S2	Ammon Rd. Storage Tank Refurbishment	$318,000	$318,000	$0
S3	Graham St. Storage Tank Refurbishment	$176,000	$176,000	$0
		$494,000	**$494,000**	**$0**
Water CIP - Phase 4			**Potential Cost Share Distribution**	
Item	*Description*	*Opinion of Probable Project Cost*	*Toledo Share*	*Seal Rock Share*
WS3	Mill Creek Pump Station and Transmission Piping	$11,300,000	$5,650,000	$5,650,000
		$11,300,000	**$5,650,000**	**$5,650,000**

The table above summarizes the total estimated project costs associated with each remaining project on the CIP and the estimated share of each project between the City of Toledo and the Seal Rock Water District.

The City cannot undertake all projects simultaneously and not all projects are as critical as the next. Therefore, an effort was made to organize the projects into priority categories. It should be understood that all projects on the CIP are important and none should be considered as optional. However, if the City wishes to undertake projects in a systematic and orderly manner, a phasing plan was recommended in the Toledo Water Master Plan Update.

Accounting for 7-years of inflation, and increasing the cost due to replacement of the water tanks, it is estimated the total remaining Water CIP cost is approximately $17.0M as shown in Table 3.2 (not taking into account any other identified improvements since the completion of the WMP).

Table 3.2 Water CIP Present Cost Projection

City of Toledo - Water 2017 CIP Prioirty Cost Adjustment	
Description	**Item Cost**
Phase 3:	
Ammon Rd. Storage Tank - Replace	$ 1,200,000.00
Graham St. Storage Tank - Refurbish	$ 176,000.00
Phase 4:	
Mill Creek Pump Station and Piping	$ 11,300,000.00
Total Identified CIP Costs (2017)	*$ 12,676,000.00*
Inflation Interest Rate (7-years)	2.5%
Future Value (2024) rounded	*$ 15,100,000.00*
Project Interim Financing	$ 900,000.00
Opinion of Probable Cost Total (rounded)	**$16,000,000.00**

Depending on when projects are undertaken and how fast they are completed, the project costs will increase over time. As such, rates will need to be reviewed to confirm that the City has the revenue required to fund the projects over time.

3.2 CIP Sewer System

The City completed a comprehensive Wastewater Facilities Plan (WWFP) in March 2014 that evaluated all the existing City wastewater facilities, identified deficiencies, and developed projects to address those deficiencies over a 20-year planning horizon. The recommended projects were organized into priority groups and became the City's Capital Improvement Plan for the sewer system. The following is only a summary of the projects that have not been completed since the WWFP was written. It is recommended the City consider an update to the WWFP (plans should be updated at least every five years).

- Wastewater Treatment Facility Improvements: Headworks, Effluent Booster Pumps, Outfall, Sludge Handling and Storage.

- Gravity Collection System Improvements: There were many improvement projects identified and prioritized in the Inflow and Infiltration (I&I) investigation study (May 2011). Projects involve completing necessary improvements to the City's gravity

wastewater collection system. Many improvements have been made, or currently underway.

- Lift Station Improvements: Butler Bridge Station Improvements; Ammon Road Lift Station Improvements; "A" Street Lift Station Improvements and the "A" Street Lift Station Force Main; High School Lift Station Improvements; Lincoln Way Lift Station Improvements.

The projects vary in their criticality. A summary of the recommended projects costs (Year 2014 costs) are provided in the table below.

Table 3.3 Wastewater CIP Project Cost Summary

Recommended Improvements and Alternatives:			
Priority 1 Projects:			
Facility	**Alternative, Recommendation**	**Description**	**Total Cost**
Wastewater Treatment Plant	Headworks	New Flow Equalization Weir	$25,000
	Outfall Pipe	Replace Portion of Outfall	$207,230
	Effluent Booster Pumps	Install Effluent Booster pumps	$246,935
	Sludge Alternative A	Sludge Storage Tank	$514,829
Ammon Road Lift Station	Alternative B	New Wet Well	$1,303,543
Butler Bridge Lift Station	Alternative B	New Wet Well	$1,404,767
Butler Bridge Force Main	Recommendation	Replace Portion of Force Main	$262,049
Collection System (Piping and Manholes)	I & I - Priority 1	Pipe Replacement, Lining, Bursting or Patching; Manhole Rehabilitation	$380,935
		Total Priority 1 Projects:	$4,345,288
Priority 2 Projects:			
Facility	**Alternative, Recommendation**	**Description**	**Total Cost**
"A" Street Lift Station	Alternative A	Dry Pit Upgrade	$671,248
"A" Street Lift Station Force Main	Recommendation	Replace Force Main	$172,175
Collection System (Piping and Manholes)	I & I - Priority 2	Pipe Replacement, Lining, Bursting or Patching; Manhole Rehabilitation	$565,400
		Total Priority 2 Projects:	$1,408,823
Priority 3 Projects:			
Facility	**Alternative, Recommendation**	**Description**	**Total Cost**
High School Lift Station	Alternative B	Upgrades and Life Extension Improvements	$233,651
Hospital Lift Station	Alternative B	Upgrades and Life Extension Improvements	$148,928
Collection System (Piping and Manholes)	I & I - Priority 3 & 4	Pipe Replacement, Lining, Bursting or Patching; Manhole Rehabilitation	$490,340
		Total Priority 3 Projects:	$872,919
		Total Overall Plan Cost:	**$6,627,030**

Accounting for 10-years of inflation and realizing a few of the projects listed above (e.g. Butler Bridge Force Main and other I/I projects) have been completed, it is estimated the total remaining Sewer CIP cost is approximately $8.17M as shown in Table 3.4 (not taking into account any other identified improvements since the completion of the WWFP).

Table 3.4 Sewer CIP Present Cost Projection

City of Toledo - Wastewater 2014 CIP Priority Cost Adjustment		
Priority	**Cost**	
Priority 1 Projects	$	4,345,288.00
Butler Bridge FM completed	$	(262,049.00)
I/I Improvements in progress	$	(380,935.00)
Priority 2 Projects	$	1,408,823.00
Priority 3 Projects	$	872,919.00
Total Identified CIP Costs (2014)	*$*	*5,984,046.00*
Inflation Interest Rate (10-years)		2.5%
Future Value (2024) rounded	*$*	*7,670,000.00*
Project Interim Financing	$	500,000.00
Opinion of Probable Cost Total (rounded)	**$**	**8,170,000.00**

It should be understood all projects on the CIP are important and none should be considered as optional. Depending on when projects are undertaken and how fast they are completed, the project costs will increase over time. As such, rates will need to be reviewed to confirm that the City has the revenue required to fund the projects over time.

3.3 Background Data for Funding

Infrastructure funding for municipalities is usually accomplished through public finance, loans, grants, bonds, principle forgiveness, or a combination thereof. Funding agencies usually use certain parameters to assess the type and level of funding assistance that a community can receive. These parameters include:

- Local and State Median Household Income (MHI)
- Existing Debt Services
- Water and Sewer Uses Rates
- Low/Moderate Income Level Percentage
- Financial Stability
- Project Need

3.4 CIP Project Funding and Financing Options

The City has a variety of options available for funding water and sewer improvement projects. This section will briefly discuss the funding alternatives that are available to the City for funding water and sewer system upgrades.

Unfortunately, there are likely no grants that will pay for 100% of the needed improvements, the City will need to incur debt to complete the CIP projects, and other major projects that may develop. Based on recent history, the City could anticipate 20%-30% grant contribution, the remaining balance to be financed over the amount of time deemed reasonable and practical. Based on CIP project costs presented in Sections 3.1 and 3.2 above, the following tables present probable financing scenarios for both the water and sewer systems for 20- to 40-year debt service. Financing interest rate of 3.50% was used. The bottom line shows the monthly increase

per EDU (equivalent dwelling unit) if all the recommended CIP projects were done. A 30-year financing strategy is typical among many municipalities.

Table 3.5 Water CIP Financing Scenarios

Financial Components	Financing Years				
	20	25	30	35	40
Capital Cost	$16,000,000	$16,000,000	$16,000,000	$16,000,000	$16,000,000
Net Capital Cost to City (assume 25% Grant Award)	***$12,000,000***	***$12,000,000***	***$12,000,000***	***$12,000,000***	***$12,000,000***
Total Payment per Year (3.50%)	$844,333	$728,088	$652,456	$599,980	$561,927
Total Monthly Cost	$70,361	$60,674	$54,371	$49,998	$46,827
Total Interest Cost over loan	$4,886,658	$2,202,211	$3,573,679	$4,999,306	$6,477,095
Total Cost of Funding (P+I)	$20,886,658	$18,202,211	$19,573,679	$20,999,306	$22,477,095
Monthly Share Per EDU	**$30.22**	**$26.06**	**$23.36**	**$21.48**	**$20.11**

Table 3.6 Sewer CIP Financing Scenarios

Financial Components	Financing Years				
	20	25	30	35	40
Capital Cost	$8,170,000	$8,170,000	$8,170,000	$8,170,000	$8,170,000
Net Capital Cost to City (assume 25% Grant Award)	***$6,127,500***	***$6,127,500***	***$6,127,500***	***$6,127,500***	***$6,127,500***
Total Payment per Year (3.50%)	$431,137	$371,780	$333,160	$306,365	$286,934
Total Monthly Cost	$35,928	$30,982	$27,763	$25,530	$23,911
Total Interest Cost over loan	$2,495,250	$3,167,004	$3,867,310	$4,595,271	$5,349,867
Total Cost of Funding (P+I)	$10,665,250	$11,337,004	$12,037,310	$12,765,271	$13,519,867
Monthly Share Per EDU	**$23.47**	**$20.24**	**$18.13**	**$16.68**	**$15.62**

Funding agencies generally require cities to include an additional 10 percent to the overall monthly loan payment to cover any incidental cost or any unanticipated decrease in water consumption. The City's ability to obtain funding will greatly affect the rate increase applied to all customers.

3.4.1. Bond Sales

The City may choose to sell bonds to raise the capital necessary to make the system improvements. Two types of bonds are generally used for this purpose:

General Obligation Bonds. General obligation or GO bonds are municipal bonds that are "backed" by the full faith and credit of the issuer. GO bonds are generally repaid through an increase in property taxes. For a community such as Toledo, the GO bonds can be an attractive option as the property tax payments are tax deductible, are not based on use, and are collected whether a customer occupies the home full or part time. GO bonds guarantee a stable and consistent stream of revenue. As they are considered a lower risk investment, the interest rates on GO bonds issued are generally lower than other alternatives. GO bonds require voter approval for issuance.

Revenue Bonds. Revenue bonds differ from GO bonds in that they are repaid through a municipality's revenue stream or by user rates. The full faith of the issuer is not behind revenue bonds; therefore, the interest rate on revenue bonds is generally higher than GO bonds. One advantage of revenue bonds is that they do not require voter approval.

Bonds sales, regardless of type, have several requirements and processes that must be met for the bond sale to move forward. These requirements vary but generally include:

- Project documentation to prove feasibility of the project and the funding plan.
- Assistance from a bond counsel agent
- Retain a year of payments, in reserve, to provide a level of confidence that the City will not default on their debt payments.
- The bond process includes issuance costs and, many times, interim financing that increases the overall cost of a project.
- Other requirements and steps to negotiate the process of obtaining funding.

3.4.2. Bank Loans

In some cases, regular lending institutions will provide funding for public infrastructure projects. However, banks typically do not provide long term infrastructure funding. Banks generally seek to limit their funding to 5-7-year interim financing for public infrastructure projects.

3.4.3. Business Oregon (e.g. Infrastructure Finance Authority)

Business Oregon (BO) administers resources aimed at community development activities primarily in the water and sewer infrastructure sectors. Funding programs include:

- Community Development Block grants (CDBG)
- Safe Drinking Water Revolving Loan Fund (SDWRLF)
- Special Public Works Funds
- Water/Wastewater Financing

The SDWRLF provides below market interest rates and forgivable loan awards. Financial offerings vary based on factors including the community's median household income (MHI), current water rates, and how rates would be impacted when the project is complete. The MHI is based on the 5-Year American Community Survey (ACS) figure for the city or other more appropriate census statistical unit (e.g., census tract and/or block group) that is representative of the water system's users.

The SDWRLF generally must be used to address a health or compliance issue and could potentially provide a loan up to $6 million per project. To receive a loan, the project must be ranked high enough on the Project Priority List in the Intended Use Plan developed by the State. A Letter of Interest (LOI) must be submitted before a project can be listed in the Intended Use Plan. The LOI Process is open all year long for submissions. Loan terms are typically 3-4% interest for 20 years; however, "Disadvantaged Communities" can potentially qualify for 1% loans for 30 years as well as partial principle forgiveness.

All recipients of SDWRLF awards need to complete an environmental review on every project in accordance with the State Environmental Review Process (SERP), pursuant to federal and state environmental laws. The Environmental Report typically required can cost $25,000 to $75,000 depending on the specific biological, cultural, waterway, and wetland issues that arise.

Loans and grant are available through the Special Public Works funds and Water/Wastewater Financing depending on need and financial reviews by Business Oregon.

Drawbacks of the SDWRLF program include:

- It is highly competitive.
- There is no guarantee the City will receive funding and grant awards are unlikely.
- There are extensive environmental and permitting requirements in the program that take time and money to obtain approval.
- The program is generally slow to materialize funding, with many variables affecting timing. Generally speaking, obtaining funding from the SDWRLF program is at least a two-year process.

3.4.4. Rural Development/Rural Utilities Services (RUS)

The United States Department of Agriculture (USDA) Rural Utilities Services (RUS) has a Water and Wastewater Programs Division which provides loans, guaranteed loans, and grants for water infrastructure projects for towns of less than 10,000 persons. Grants are only available when necessary to keep user costs at reasonable levels (very similar to BO threshold rates). Loans can be made with repayment periods up to 40 years. Interest rates vary but often are around 4% for design/construction loans. Environmental reporting is required similar to that for the SDWRLF but with slightly different criteria.

3.4.5. DEQ Clean Water State Revolving Fund (CWSRF)

The Clean Water State Revolving Fund (CWSRF) Loan Program administered by the Oregon Department of Environmental Quality (DEQ) provides low-cost loans for the planning, design, and construction of a variety of projects that address water pollution. The loans through the CWSRF program are available to Oregon's public agencies, including cities, counties, sanitary districts, soil and water conservation districts, irrigation districts and various special districts.

Congress established the CWSRF in 1987, to replace the Construction Grants program, which has provided direct grants to communities to complete sewer infrastructure projects. The CWSRF program provides several types of loans and varying interest rates. Loans may be available with terms of 5 years around 1.00% APR to 20 years around 2.50% APR.

There are six different types of loans available within the program. These include traditional planning design and construction loans. There are loans available for emergencies, urgent repairs and local community projects. Each of these types has different financial terms and is intended to provide communities with choices when financing water quality improvements. Interest rates of various loans are substantially discounted from the bond rate. For example, with a quarterly bond

rate of 5.0%, the CWSRF interest rates (depending on the type of loan) would range from 0.97% to 3.88%. Loan payback periods vary, ranging from 5 to 20 years. Loans do include an annual loan fee of 0.5% of the outstanding balance. Planning loans are exempt from this fee.

Eligible projects include:

- Wastewater system plans and studies
- Secondary or advanced wastewater treatment facilities
- Irrigation improvements
- Infiltration and inflow correction
- Major sewer replacement and rehabilitation
- Qualified storm water control
- Onsite wastewater system repairs
- Matching funds for some U.S. Department of Agriculture conservation programs
- Estuary management efforts
- Various nonprofit source projects (stream restorations, animal waste management, conservation easements)
- Qualified brownfields projects

All eligible proposed projects are ranked based upon their application information and entered on the program's Project Priority List. Points are assigned based on specific ranking criteria. Newly ranked projects are integrated into the priority list on a regular basis. The Project Priority List is incorporated within DEQ's annual Intended Use Plan which indicates the proposed use of the funds each year.

Projects are funded based on the availability of loan monies. If monies are insufficient to fund all the approved projects, funds are distributed to as many projects as possible based on the Project Priority List. Each time new monies become available, those monies are allocated to as many unfunded or partially funded projects as possible.

3.4.6. System Development Charges (SDC)

Portions of the project that are necessary or related to growth in the system or increases in capacity can be paid for through System Development Charge (SDC) contributions. The City has an active SDC program that collects SDC fees from new development or customers that require a significant increase or change in water consumption.

The drawback of utilizing SDC funds for payment of a major public infrastructure project is that the funding is not guaranteed to be in place. Because SDC collection requires development or growth in the system, it cannot be relied upon to provide funding for City projects.

For the purposes of this rate study, we are neglecting any potential funding that may, or may not be, available from SDC's. If additional funding becomes available through the collection of SDC's, and the selected project is SDC eligible, it can be utilized to accelerate loan payback or offset future rate increases where appropriate.

4. Proposed Water Rate Structure

Section 4

The primary purpose of a water rate is to generate revenue for the City to cover the costs to deliver reliable water service to residents and businesses. There are a number of options available for establishing rates. The structure presented in this section relies on common methods and industry standards for rate structures.

4.1 Rate Structure Options

4.1.1. Water Base Rate

The base rate (or fixed regular service charge) is a charge to "customers even if they use no water at all. Most of the water system's costs are fixed, so it makes sense that the base charge makes up most of a customer's bill" (Oregon Health Authority (OHA) Drinking Water Services: Developing a Rate Structure).

The base rate may or may not include a usage allowance. If the base rate includes a certain amount of use, it means a higher base rate must be charged resulting in less control over the size of utility bill for the customer. However, it also means a steadier cash flow for the City.

Base rates that do not include consumption allow individual customers the freedom to lower their effective monthly rates by reducing consumption. Rates of this type also encourage conservation, and typically make customers more aware of their monthly water use. The City of Toledo currently has a base rate with no base allowance of consumption.

Generally speaking, a base rate should be developed that will cover all, or nearly all, of the City's fixed obligations, administrative costs, and operating costs if little or no water is actually sold. The logic is that, regardless of water consumption, the City can meet their obligations and continue to operate the water system. An adequate base rate ensures a steady revenue stream regardless of whether people are using water or not. In practice, setting the base rate requires a balance of consideration of the users, both large and small, and actual water consumption.

In short, the base rate could account for the following *fixed expenses*:

- Personnel: Labor, Retirement, Training, Benefits
- Operation (daily/annual): Power, Supplies, Equipment
- Maintenance: Materials, Supplies, Equipment
- Loan Debt(s)
- Capital Improvements (short- and long-term)

4.1.2. Water Consumption (Commodity) Rate

The variable portion of a customer's bill that tracks water consumption is the commodity rate. It is simplest to set one price per gallon (flat rate) for any amount of water used. However, tiered rates, discussed below, can be used if deemed appropriate and practical.

A consumption rate is a charge that is applied to defined units of water consumption in a community. Usually based on blocks of 100 cubic feet or 1,000 gallons, a water supplier can charge an equitable amount of water per unit based on what it costs to produce and provide water services for that unit of water. Many consider the consumption rate the best approach for water sales as those who use a great deal of water will pay an appropriate amount based on the water they used. Also, customers can relate to consumption billing as it compares to familiar practices for fuel, electricity, phone bills, and other common billing practices.

Historically, the City of Toledo has relied upon a combination base rate plus consumption rate (per 1,000 gallons of water consumed) to charge their customers. Through the utilization of an appropriate consumption rate charge, individual customers can lower their monthly water expense by using less water. Consumption rates also prevent small users from subsidizing larger users.

Consumption rates can be flat or tiered:

- Single Block or Flat. Regardless of the volume of water used, the usage rate remains the same. This rate is often coupled with a minimum base charge for having service available. Toledo currently uses a flat consumption rate coupled with a base charge.

- Decrease Block or Tiered. The price of water declines as the amount used increases. Each succeeding consumption block is cheaper. This structure is based on the assumption that costs decline as consumption goes up. A step-down rate structure may be justified for users like industries and businesses who employ local residents and otherwise support a community and provide beneficial uses.

- Increase Block or Tiered. The price of water increases as the amount used increases. Each succeeding consumption block is more expensive. Structure based on the assumption that water rates should promote water conservation and require high water use customers to bear the burden of increased capacity requirements.

In short, and whatever the type of rate used, the consumption rate should account for:

- Contingency / Emergency
- Savings

4.2 Reasonable and Affordable Water Rates

Public funding agencies adjust their interest rates, grant assistance, and other funding categories depending on the level of need or support a community has. The funding available through the funding agencies is limited, and therefore, the programs are highly competitive. Criteria are established to help determine who is in greater need of support. The agencies also do not want to subsidize systems that are not charging enough for their water. Therefore, defining what a "reasonable" water rate is requires an evaluation of each community and their particular circumstances.

"Affordability calculations can provide a general idea of the water bill's impacts on a customer's monthly budget. And these calculations can help determine eligibility for grants or low-interest loans" (OHA, Developing a Rate Structure). Two water system affordability rate comparisons can be used:

1. **Rate Comparisons.** In order to compare the City's rates to the Oregon average, the unit cost of water is applied to a state average usage of 7,500 gallons of water per month. This is the Oregon standardized consumption rate which funding agencies typically use when awarding grants; this provides an "apples to apples" comparison. The current average water charge in the State of Oregon is around $55/month based on an average water consumption of 7,500 gallons per month. Table 4.1 below shows a Toledo resident would be charged $64.05/month for 7,500 gallons of usage at the City's current rate. This fee exceeds the current average statewide fee of $55.00.

Table 4.1 Reasonable Rates Based on Rate

Water Used (gal/month)	Base Charge	Consumption Charge	Total Monthly Charge
4,000	$29.47	$18.44	$47.91
7,500	$29.47	$34.58	$64.05
State of Oregon average (@ 7,500 gal.)			$55.00

2. **Median Household Income (MHI).** The most common method is to consider what portion of the typical Median Household Income (MHI) is dedicated to paying the average water rate in a community. Each agency is different with the criteria ranging from 1.25% to 1.75%. If the average water bill in a community exceeds the MHI criteria, it is generally considered to be excessive or burdensome to the residents of the community. Business Oregon calculates an Affordability Rate by multiplying the water system MHI by 1.25% and dividing by 12 months. The Affordability Rate is compared to the monthly residential water charge per equivalent dwelling unit (EDU). Those communities with both an MHI below the state average and projected rates in excess of the affordability rate *at project completion* are potentially eligible for lower interest rates and the greatest amount of forgivable loan award. Table 4.2 below provides a summary of a monthly rate based on the MHI in Toledo.

Table 4.2 Reasonable Rates Based on MHI

Water Used (gal/month)	2017 Average Mean Household Income (MHI)*	Average Water Cost Based on Current Rate Structure	1.25% MHI
4,000	$48,281.00	$47.91	$50.29

*2017 estimates from the US Census Bureau

Based upon the above analysis and realizing a rate increase is necessary as discussed within this report, the recommended rate increase will exceed the 1.25 % threshold. Toledo should qualify for the best financial assistance if they were to pursue project funding.

While passing the affordability test does not guarantee that a community would be eligible for grant assistance, it is one of the tools used by the funding agencies to determine what communities have the greatest needs.

4.3 Rate Methodology

When considering potential new rates for the City of Toledo, it was important to consider several key factors. These include:

1. How much revenue must be obtained by the new rate increase in order to meet the following expenses:
   a) Offset the loss of Seal Rock Water District?
   b) Replace equipment and materials?
   c) Repayment of loans for CIP projects?
2. How will the historic water use practices affect the revenue production of the City?
3. How will the historic water consumption practices of the community change in the face of a significant rate increase?
4. What combination of base and consumption rate will work the best for the most people in the community (knowing that no rate increase or proposed rate structure will be met with approval from everyone)?

The City will require a certain amount of revenue each month to accomplish the following:

1. Offset the loss of SRWD.
2. Pay for the operation and maintenance of the water system including personnel, materials, services, etc.
3. Pay existing debt
4. Pay new debt resulting from undertaking projects on the CIP.
5. Annual routine replacement of pipelines and equipment.
6. Cover increases in costs due to inflation.

4.4 Justification for New Water Rate

In order to determine new rates for the water system, a determination of necessary revenues was required. Three issues exist: (1) the lost revenue from Seal Rock Water District must be made up; (2) new revenues are necessary to keep the system financially stable and able to make identified capital improvements; and (3) annual system replacements and upgrades. The proforma (Section 4.5) analysis determined the amount of new revenues that are required to set the water fund on a firm foundation.

4.4.1. Seal Rock Water District (SWRD) Impact

The loss of the Seal Rock Water District's revenue (approximately $347,000/year) is the equivalent of increasing each current Toledo EDU's water rate approximately $12.50/month. In other words, to absorb the revenue loss, at a minimum, Toledo users would be paying another $12.50/month. The argument could be made that with the loss of SRWD less water is produced

and treated so therefore operation costs would decrease. This may be true, but the loss of revenue is significantly more noticeable than the operations saving. The City is losing net money by losing SRWD as a customer.

As noted earlier, the water system is generally fiscally sound. Although losing SRWD will be a significant impact, it is possible for the City to meet its day to day needs with little impact to the individual user. The proforma suggests the City needs to anticipate a minimum rate increase equivalent to 15% of the average SWRD revenue. A per Toledo EDU rate increase is calculated as follows:

- $52,050/year (15% of $347,000) = **$1.86/month per Toledo EDU**.

4.4.2. Recommended CIP Projects

As developed in Section 3.1, the total anticipated CIP is approximately $16,000,000. This amount of money would need to be borrowed with a means to pay back the debt. Table 3.5 showed financing scenarios based on an interest rate of 3.5%, 25% grant award, and 2,328 Toledo EDUs. As shown in the proforma, CIP revenue increase and spending are spread over three years. To accomplish all the CIP projects, as presented, the user rate increase for CIP work is:

- **$23.36/month per EDU**

4.4.3. Annual Replacement

Annual system replacements of pipes, pumps, etc. due to normal wear-and-tear should be proactively anticipated and planned for. Table 4.3 shows the water system components and an annual upkeep cost of the system. The life expectancy of components and equipment is the driving force behind determining a replacement revenue stream.

Table 4.3 Life Expectancies and Annual Replacement

Component	Life Expectancy Years	Units	Unit Cost	Value	Annual Depreciation / Replacement Value
Pipes	80	185,000	$ 70	$ 12,950,000	**$161,875**
Treatment Plant	40			$ 8,000,000	**$200,000**
equipment	20			$ 2,000,000	**$100,000**
Booster Station	40	3	$ 250,000	$ 750,000	**$18,750**
equipment, valves, PRV, etc.	20	3	$ 250,000	$ 750,000	**$37,500**
Tank	40	3,350,000	$ 1.25	$ 4,187,500	**$104,688**
Meters	12	1,486	$ 300	$ 445,800	**$37,150**
Service Laterals	12	1,486	$ 750	$ 1,114,500	**$92,875**
Intake on Siletz	40			$ 4,000,000	**$100,000**
Raw Water Pipeline from Siletz	80	30,000	$ 100	$ 3,000,000	**$37,500**
Mill Creek Dam	100			$ 4,600,000	**$46,000**
Raw water Pipeline from Mill Creek Dam	80			$ 10,000,000	**$125,000**
			TOTAL	**$ 51,797,800**	**$1,061,338**

On an average, per the above assumptions and calculations, the City should spend approximately $1,061,338/year for maintenance and upkeep of the water system. This would equate to

approximately a $38/month/EDU increase in the water rate, just for this category. This amount of money is significant. For purposes of this report, we recommend the City consider doing something rather than nothing. As such, we recommend the City budget a minimum of $200,000 earmarked for maintenance and replacement. A user rate increase is calculated as follows:

- $200,000/2,328 EDUs/12 months = **$7.16/month per EDU**

Table 4.4 summarizes the final end user rate based on the above discussion. It is not recommended the City immediately adjust the rate to this level. The proforma spreads the cost of CIP and system replacement over a few years. As such, rate increases can be incremental. Rather than a wide annual variation of rate adjustments, we recommend a systematic and incremental user rate increase to account for the above-described adjustments, approximately 7.2% each year for the next 6-years, as shown in Table 4.5 below.

Table 4.4 Potential New Average User Rate

Potential New Average User Rate			
Revenue Source		Net Annual Increase	EDU/Month
	Current Avg. Use Rate		$47.91
#1	SRWD Loss (2021)	$52,050.00	$1.86
#2	CIP (w 25% Grants) (2023-25)	$652,455.98	$23.36
#3	System Replacement (2022)	$200,000.00	$7.16
	Future New Rate	$904,505.98	**$80.29**

This proposed rate would place the City above the affordability threshold often used by funding agencies to determine grant needs for a community. The best funding options would be available to the City.

4.5 Water Proforma

A detailed proforma evaluation was completed for the water fund in Toledo for the next 20-year planning period. The goal of this proforma was to attempt to predict the performance and condition of the water fund while the City undertakes projects, repays debt, adjusts for inflation, and continues to provide water to their local and wholesale customers.

A number of conservative assumptions were made as part of this analysis. The purpose of the assumptions was to account for changing conditions and build in protection for the City resulting from the many unknown and uncertain variables that exist. Conservative assumptions that were built into the proforma include, but are not limited to, the following:

1. Inflation will increase steadily at a rate of 3% per year; therefore, rates are assumed to increase 3% each year to counteract the effects of inflation.
2. Population growth will be zero; therefore, there will be no income generated from new customers in the form of additional water sales or system development charges (SDCs).

With these assumptions in place, we will have considered an unlikely and, perhaps, worst case scenario for the City to ensure the finances of the City will be healthy under more likely

conditions. However, the financial health and the rate status of the water system should be regularly reviewed, and adjustments made as unknowns and assumptions become known and as conditions change.

Table 4.3 below summarizes the proforma analysis for the first 6 years of the planning cycle. A 20-year proforma can be found in the Appendix.

Table 4.5 Water System Proforma Summary (2019-2026)

7.2%	Incremental Rate Increase		$51.36	$55.06	$59.02	$63.27	$67.83	$72.71
	Average Monthly User Rate	$47.91	$50.84	$55.23	$55.04	$62.74	$70.48	$72.04
	Annual % Revenue Increase		6.1%	8.6%	-0.4%	14.0%	12.3%	2.2%
	Description	Budget	Budget	5-Year Fiscal Year Projections (3% Annual Revenue and Expenditure Increases)				
		19-20	20-21	21-22	22-23	23-24	24-25	25-26
	Annual Beginning Fund Balance	$0	$265,527	$603,597	$964,335	$1,186,748	$1,313,093	$1,343,751
Line	Decription							
Revenues								
1	Toledo Revenue Projections (w/ 3% annual increase)	$1,323,485.00	$1,363,189.55	$1,404,085.24	$1,446,207.79	$1,489,594.03	$1,534,281.85	$1,580,310.30
2	Rate Increase #1 (SRWD Replace) (w/ 3% annual increase)		$52,050.00	$53,611.50	$55,219.85	$56,876.44	$58,582.73	$60,340.22
3	Rate Increase #2 (CIP w/ 25% Grants)				*$217,485.33*	*$434,970.65*	*$652,455.98*	$652,455.98
4	Rate Increase #3 (System Replace) (w/ 3% annual increase)			$100,000.00	$200,000.00	$206,000.00	$212,180.00	$218,545.40
5	Seal Rock Revenue Projections	$346,985.00	$357,394.55	$368,116.39				
	Total Revenue	$1,670,470.00	$1,772,634.10	$1,925,813.12	$1,918,912.97	$2,187,441.12	$2,457,500.56	$2,511,651.90
Expenses and Debt								
6	Transfers to other non-water funds	$22,500	$23,175.00	$23,870.25	$24,586.36	$25,323.95	$26,083.67	$26,866.18
7	Personnel Services	$509,684	$524,974.52	$540,723.76	$556,945.47	$573,653.83	$590,863.45	$608,589.35
8	Material & Services	$409,622	$421,910.66	$434,567.98	$447,605.02	$461,033.17	$474,864.16	$489,110.09
9	Capital Outlay	$45,575	$46,942.25	$48,350.52	$49,801.03	$51,295.06	$52,833.92	$54,418.93
10	Rate Increase #3 (System Replace) (w/ 3% annual increase)			$100,000.00	$200,000.00	$206,000.00	$212,180.00	$218,545.40
	Sub-Total Typical Expenses	$987,381.00	$1,017,002.43	$1,147,512.50	$1,278,937.88	$1,317,306.01	$1,356,825.19	$1,397,529.95
11	Existing debt service	$417,562.00	$417,562.00	$417,562.00	$417,562.00	$417,562.00	$417,562.00	$417,562.00
12	Rate Increase #2 (CIP w/ 25% Grants)					*$326,227.99*	*$652,455.98*	$652,455.98
	Sub-Total Annual Debt Service	$417,562.00	$417,562.00	$417,562.00	$417,562.00	$743,789.99	$1,070,017.98	$1,070,017.98
	Total Expenditures	$1,404,943	$1,434,564	$1,565,075	$1,696,500	$2,061,096	$2,426,843	$2,467,548
	Water System Fund Yearly Savings	$265,527	$338,070	$360,739	$222,413	$126,345	$30,657	$44,104

The top three rows (orange highlight) shows the incremental rate increases over the next 6-years needed to bring the current rates to where the rates need to be, based on the projected income and projected expenses. An annual incremental rate of approximately 7.2% is required. After 6-years the rate increase will fall back to the inflation-offsetting rate of 3%.

Figure 4.1 below is a graphical summary of the proforma analysis of the water system for a few years of the planning period. As can be seen in the figure, the water system is projected to increase and keep in line with a 3% inflation rate. It is recommended the City review the financial status every five years and adjust the rate structure, as necessary, to account for changes that diverge from the assumptions in this analysis. This may necessitate further increases in the rate structure or, potentially, decreases in the rate structure if it is found that the conservative assumptions in this analysis prove to be too aggressive.

Figure 4.1 Water System Fund Proforma Analysis
Graphical Representation of Projected Fund Performance over Planning Period

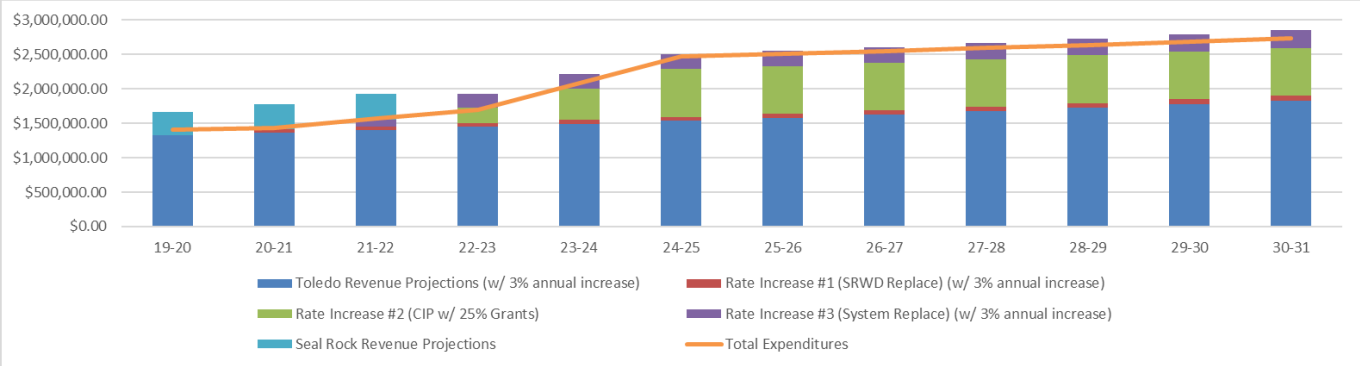


Figure 4.1 shows peaks indicating influxes of funding to pay for major capital improvement projects ("Rate Increase #2") during the planning period. It is anticipated funding will not be secured in lump sums, but rather more slowly over time as expenses are incurred.

4.6 New Rate Structure Options

Once the new average rate is determined, the City must select a new rate structure for the implementation and collection of the new rate. The new rate structure should include two components:

1. A base rate component
2. A consumption rate component

The combination of the two rate components, when considering typical water consumption patterns, should result in the new average water rate for the Toledo water system.

Table 4.7 illustrates a rate matrix for the City of Toledo. The matrix shows how the different combinations of base and consumption rates can be combined to meet the minimum average rate requirement needed to produce the required revenue stream. The grey-shaded area within the matrix indicates rate combinations (base and consumption) that meet or exceed the rate level that is required to meet the revenue requirements for the City. The combinations on the "edge" of the shaded area are the lowest-impact options that will satisfy the revenue requirements.

Any of the combinations below would qualify as a viable rate structure for the City of Toledo. The City should consider how much of an increase to place upon the base rate and the consumption rate when determining the final rate structure.

As discussed in Section 4.1, and from the matrix, the following are example rate structures.

100% Base Rate =	$80.29	+	$0.00 / 1,000-gallons (based on <u>no</u> consumption)
75% Base Rate =	$60.30	+	$5.00 / 1,000-gallons
50% Base Rate =	$40.30	+	$10.10 / 1,000-gallons
0% Base Rate =	$ 0.00	+	$20.07 / 1,000-gallons (based solely on consumption)

4.7 Recommended New Water Rate Structure

Recommending a new rate structure which is projected to provide the required revenues for the City's water fund, remaining CIP improvements, and to fund a system replacement fund, without high variations of revenue, is the overarching goal. While the decision ultimately rests with the City, we recommend a high base rate and accompanying consumption rate to match. We recommend the base rate be 75% of the needed revenue.

Table 4.6 summarizes the proposed rate structure for standard 5/8" residential meters and other sectors of the community including commercial, industrial, and customers located outside of the system (who are not part of the wholesale district customers).

Table 4.6 Rate Structure Table

		Base Facilities Charge	Usage Charge	
		$60.30	$5.00	
Meter Size	**Multiplier**	**(A) Facilities Charge**	**(B) Facilities Charge (outside City)**	**Usage Charge (all users) $/1000 gal**
5/8"	1.0	$60.30	$120.60	$5.00
3/4"	1.5	$90.45	$180.90	$5.00
1"	2.6	$156.78	$313.56	$5.00
1-1/4"	4.1	$247.23	$494.46	$5.00
1-1/2"	5.9	$355.77	$711.54	$5.00
2"	10.5	$633.15	$1,266.30	$5.00
3"	23.6	$1,423.08	$2,846.16	$5.00
4"	41.9	$2,526.57	$5,053.14	$5.00
6"	94.3	$5,686.29	$11,372.58	$5.00
8"	167.5	$10,100.25	$20,200.50	$5.00
10"	261.0	$15,738.30	$31,476.60	$5.00
12"	377.0	$22,733.10	$45,466.20	$5.00
	(A) = base facilities charge x multiplier		(B) = A x 2	

Table 4.7 Uniform Rate Matrix

Varying Base Rates ($ per month)	Varying Consumption Rates ($ per 1000 gal)														
	$4.61	$5.00	$5.30	$5.60	$5.90	$6.20	$6.50	$8.00	$8.30	$8.60	$8.90	$9.20	$9.50	$9.80	$10.10
$29.47	$47.91	$49.47	$50.67	$51.87	$53.07	$54.27	$55.47	$61.47	$62.67	$63.87	$65.07	$66.27	$67.47	$68.67	$69.87
$38.70	$57.1[illegible]	$58.70	$59.90	[illegible]	[illegible]	$63.50	$64.70	$70.70	$71.90	$73.10	$74.30	$75.50	$76.70	$77.90	$79.10
$39.50	$57.94	$59.50	$60.70	$61.90	$63.10	$64.30	$65.50	$71.50	$72.70	[illegible]	$75.10	$76.30	$77.50	$78.70	$79.90
$40.30	$58.74	$60.30	$61.50	$62.70	$63.90	$65.10	$66.30	$72.30	$73.50	$74.70	$75.90	$77.10	$78.30	$79.50	$80.70
$41.10	$59.54	$61.10	$62.30	$63.50	$64.70	$65.90	$67.10	$73.10	$74.30	$75.50	$76.70	$77.90	$79.10	$80.30	$81.50
$41.90	$60.34	$61.90	$63.10	$64.30	$65.50	$66.70	$67.90	$73.90	$75.10	$76.30	$77.50	$78.70	$79.90	$81.10	$82.30
$42.70	$61.14	$62.70	$63.90	$65.10	$66.30	$67.50	$68.70	$74.70	$75.90	$77.10	$78.30	$79.50	$80.70	$81.90	$83.10
$43.50	$61.94	$63.50	$64.70	$65.90	$67.10	$68.30	$69.50	$75.50	$76.70	$77.90	$79.10	$80.30	$81.50	$82.70	$83.90
$44.30	$62.74	$64.30	$65.50	$66.70	$67.90	$69.10	$70.30	$76.30	$77.50	$78.70	$79.90	$81.10	$82.30	$83.50	$84.70
$45.10	$63.54	$65.10	$66.30	$67.50	$68.70	$69.90	$71.10	$77.10	$78.30	$79.50	$80.70	$81.90	$83.10	$84.30	$85.50
$45.90	$64.34	$65.90	$67.10	$68.30	$69.50	$70.70	$71.90	$77.90	$79.10	$80.30	$81.50	$82.70	$83.90	$85.10	$86.30
$46.70	$65.14	$66.70	$67.90	$69.10	$70.30	$71.50	$72.70	$78.70	$79.90	$81.10	$82.30	$83.50	$84.70	$85.90	$87.10
$47.50	$65.94	$67.50	$68.70	$69.90	$71.10	$72.30	$73.50	$79.50	$80.70	$81.90	$83.10	$84.30	$85.50	$86.70	$87.90
$48.30	$66.74	$68.30	$69.50	$70.70	$71.90	$73.10	$74.30	$80.30	$81.50	$82.70	$83.90	$85.10	$86.30	$87.50	$88.70
$49.10	$67.54	$69.10	$70.30	$71.50	$72.70	$73.90	$75.10	$81.10	$82.30	$83.50	$84.70	$85.90	$87.10	$88.30	$89.50
$49.90	$68.34	$69.90	$71.10	$72.30	$73.50	$74.70	$75.90	$81.90	$83.10	$84.30	$85.50	$86.70	$87.90	$89.10	$90.30
$50.70	$69.14	$70.70	$71.90	$73.10	$74.30	$75.50	$76.70	$82.70	$83.90	$85.10	$86.30	$87.50	$88.70	$89.90	$91.10
$51.50	$69.94	$71.50	$72.70	$73.90	$75.10	$76.30	$77.50	$83.50	$84.70	$85.90	$87.10	$88.30	$89.50	$90.70	$91.90
$52.30	$70.74	$72.30	$73.50	$74.70	$75.90	$77.10	$78.30	$84.30	$85.50	$86.70	$87.90	$89.10	$90.30	$91.50	$92.70
$53.10	$71.54	$73.10	$74.30	$75.50	$76.70	$77.90	$79.10	$85.10	$86.30	$87.50	$88.70	$89.90	$91.10	$92.30	$93.50
$53.90	$72.34	$73.90	$75.10	$76.30	$77.50	$78.70	$79.90	$85.90	$87.10	$88.30	$89.50	$90.70	$91.90	$93.10	$94.30
$54.70	$73.14	$74.70	$75.90	$77.10	$78.30	$79.50	$80.70	$86.70	$87.90	$89.10	$90.30	$91.50	$92.70	$93.90	$95.10
$55.50	$73.94	$75.50	$76.70	$77.90	$79.10	$80.30	$81.50	$87.50	$88.70	$89.90	$91.10	$92.30	$93.50	$94.70	$95.90
$56.30	$74.74	$76.30	$77.50	$78.70	$79.90	$81.10	$82.30	$88.30	$89.50	$90.70	$91.90	$93.10	$94.30	$95.50	$96.70
$57.10	$75.54	$77.10	$78.30	$79.50	$80.70	$81.90	$83.10	$89.10	$90.30	$91.50	$92.70	$93.90	$95.10	$96.30	$97.50
$57.90	$76.34	$77.90	$79.10	$80.30	$81.50	$82.70	$83.90	$89.90	$91.10	$92.30	$93.50	$94.70	$95.90	$97.10	$98.30
$58.70	$77.14	$78.70	$79.90	$81.10	$82.30	$83.50	$84.70	$90.70	$91.90	$93.10	$94.30	$95.50	$96.70	$97.90	$99.10
$59.50	$77.94	$79.50	$80.70	$81.90	$83.10	$84.30	$85.50	$91.50	$92.70	$93.90	$95.10	$96.30	$97.50	$98.70	$99.90
$60.30	$78.74	$80.30	$81.50	$82.70	$83.90	$85.10	$86.30	$92.30	$93.50	$94.70	$95.90	$97.10	$98.30	$99.50	$100.70
$61.10	$79.54	$81.10	$82.30	$83.50	$84.70	$85.90	$87.10	$93.10	$94.30	$95.50	$96.70	$97.90	$99.10	$100.30	$101.50
$61.90	$80.34	$81.90	$83.10	$84.30	$85.50	$86.70	$87.90	$93.90	$95.10	$96.30	$97.50	$98.70	$99.90	$101.10	$102.30

5. Proposed Sewer Rate Structure

Section 5

5.1 Rate Structure Option

The primary purpose of a sewer rate is to generate revenue for the City. There are a number of options available for establishing rates. The structure presented in this section relies on common methods and industry standards for rate structures.

5.1.1. Sewer Base Rate

The base rate is the rate charged per connection. This rate may or may not include a base usage water allowance. If the base rate includes a certain amount of water use, it means a higher base rate and less control over the size of utility bill for the customer.

Base rates that do not include discharge allow individual customers the freedom to lower their effective monthly rates by reducing water consumption. The City of Toledo currently has a base rate with 1,000-gallons/month allowance for discharge (as measured with the water meters).

Generally speaking, a base rate should be developed that will cover all, or nearly all, of the City's obligations, administrative costs, and operating costs if little or no water is actually sold. Unlike a water system, a sewer system's operation and maintenance costs are fairly steady, regardless of the water flow. In fact, for most sewer systems, like Toledo's, the wastewater flow from residents is only part of the flow compared to Inflow and Infiltration (I/I) coming into the system. As such, regardless of the water used by each resident and discharged into the sewer system, the expenses of a sewer system are constant. Many consider a base rate with essentially unlimited discharge the best approach. Whether people conserve with their water use or not generally has little effect on the sewer system.

In short, the base rate could, at a minimum, account for the following fixed expenses:

- Personnel: Labor, Retirement, Training, Benefits
- Operation (daily/annual): Power, Supplies, Equipment
- Maintenance: Materials, Supplies, Equipment
- Loan Debt(s)
- Capital Improvements (short- and long-term)

5.1.2. Sewer Discharge (Water Consumption) Rate

Historically, the City of Toledo has relied upon water consumption to charge their customers for sewer per 1,000 gallons of water consumed (as metered). The first 1000 gallons is part of the base rate, but every 1,000 gallons thereafter is charge a usage charge. Through the utilization of a consumption rate charge, individual customers can lower their monthly sewer expense by consuming/discharging less water. Consumption rates are typically flat. In short, if consumption rates were used, the rates should account for:

- Contingency / Emergency
- Savings

5.2 Rate Methodology

When considering potential new rates for the City of Toledo, it was important to consider several key factors. These include:

1. How much revenue must be obtained by the new rate increase in order to meet the following expenses:
   a) Maintain status quo
   b) Replace equipment and materials
   c) Bonding requirements to pay back loans for CIP projects
2. How will the historic water discharge practices of the community change in the face of a significant rate increase?
3. What combination of base and consumption rate will work the best for the most people in the community (knowing that no rate increase or proposed rate structure will be met with approval from everyone)?

The City will require a certain amount of revenue each month to accomplish the following:

1. Catch up with spending demands and maintain status quo.
2. Pay for the operation and maintenance of the sewer system including personnel, materials, services, etc.
3. Pay existing debt and new debt resulting from undertaking projects on the CIP.
4. Annual routine replacement of pipelines and equipment.
5. Cover increases in costs due to inflation.

5.3 Justifications for New Sewer Rates

In order to determine new rates for the sewer system, a determination of necessary revenues was required. Three issues exist: (1) the sewer fund historically has not been keeping up with expenses; (2) new revenues are necessary to keep the system financially stable and able to make identified capital improvements; and (3) annual system replacements and upgrades. The proforma analysis (Section 5.4) determined the amount of new revenues that was required to set the sewer fund on a firm foundation.

5.3.1 Needed Adjustment

As shown earlier, the sewer fund revenue generally has not been keeping up with necessary expenses. The proforma suggests the City increase the general revenue stream. A per Toledo EDU rate increase is calculated as follows:

- $80,000/year = **$4.35/month per Toledo EDU**.

5.3.2 Recommended CIP Projects

As developed in Section 3.2, the total anticipated CIP need is approximately $8,170,000. This amount of money would need to be borrowed with a means to pay back the debt. Table 3.6 showed financing scenarios based on an interest rate of 3.5%, 25% grant award, and 1,531 Toledo EDUs. To accomplish all the CIP projects, as presented, the user rate increase for CIP work is:

- **$18.13/month per EDU**

5.3.3 Annual Replacement

Annual system replacements of pipes, pumps, etc. due to normal wear-and-tear should be proactively anticipated and planned for. Table 5.1 shows the sewer system components and an annual upkeep cost of the system. The life expectancy of components and equipment is the driving force behind determining a replacement revenue stream.

Table 5.1 Life Expectancies and Annual Replacement

Component	Life Expectancy Years	Units	Unit Cost	Value	Annual Depreciation / Replacement Value
Gravity Pipes	80	115,700	$ 120	$ 13,884,000	**$ 173,550**
Forcemains	80	6,000	$ 100	$ 600,000	**$ 7,500**
Manholes	80	655	$ 1,500	$ 982,500	**$ 12,281**
Service Laterals	40	1,531	$ 1,000	$ 1,531,000	**$ 38,275**
Lift Stations	40	5	$ 450,000	$ 2,250,000	**$ 56,250**
equipment, valves, PRV, etc.	20	5	$ 200,000	$ 1,000,000	**$ 50,000**
Treatment Plant	40			$ 8,000,000	**$ 200,000**
equipment	20			$ 2,000,000	**$ 100,000**
Effluent Discharge to Yaquina River	80	1,500	$ 130	$ 195,000	**$ 2,438**
			TOTAL	**$ 30,442,500**	**$ 640,294**

On an average, per the above assumptions and calculations, the City should spend over $640,000/year for maintenance and upkeep of the sewer system. This would equate to nearly a $35/month/EDU increase in the sewer rate, just for this work. This amount of money is significant. For purposes of this report, we recommend the City consider doing something rather than nothing. As such, we recommend the City budget a minimum of $200,000 earmarked for maintenance and replacement. For purposes of a gradual, steady incremental rate increase, this budget starts at 100,000 and grows over a couple of years. A user rate increase is calculated as follows:

- $200,000/1,531 EDUs/12 months = **$10.89/month per EDU**

Table 5.2 summarizes the end user rate based on the above discussion. It is not recommended the City immediately adjust the rate to this level. The proforma spreads the cost of CIP and system replacement over a few years. As such, rate increases can be incremental. Rather than a wide annual variation of rate adjustments, we recommend a systematic and incremental user rate increase to account for the above-described adjustments, approximately 11.2% each year for the next 5-years, as shown in Table 5.4.

Table 5.2 Potential New Average Sewer User Rate

Revenue Source		Net Annual Increase	EDU/Month
	Avg. Use Rate		$70.07
#1	Needed Adjustment	$80,000.00	$4.35
#2	CIP (w/ 25% Grants)	$333,160.33	$18.13
#3	System Replacement (2022)	$200,000.00	$10.89
	New Rate (today)	**$613,160.33**	**$103.44**

5.4 Sewer Proforma

A detailed proforma evaluation was completed for the sewer fund in Toledo for the next 20-year planning period. The goal of this proforma was to attempt to predict the performance and condition of the sewer fund while the City undertakes projects, repays debt, adjusts for inflation, and continues to provide water to their local and wholesale customers.

A number of conservative assumptions were made as part of this analysis. The purpose of the assumptions were to account for changing conditions and build in protection for the City resulting from the many unknown and uncertain variables that exist. Conservative assumptions that were built into the proforma include, but are not limited to, the following:

1. Inflation will increase steadily at a rate of 3% per year; therefore, rates will be increased 3% each year to counteract the effects of inflation.
2. Population growth will be zero; therefore, there will be no income generated from new customers in the form of additional water sales or system development charges (SDCs).

With these assumptions in place, we will have considered an unlikely and, perhaps, worst case condition for the City to ensure the finances of the City will be healthy under more likely conditions. However, the financial health and the rate status of the sewer system should be regularly reviewed, and adjustments made as unknowns and assumptions become known and as conditions change.

The City is currently working under a Mutual Agreement and Order (MAO) with the Department of Environmental Quality (DEQ). The MAO requires the City to make several improvements to improve their collection system and reduce Inflow/Infiltration (I/I). There is a current debt associated with some of this work; however, the City realizes more investment will be necessary to accomplish the identified work. As such, this study and proforma includes an additional future anticipated loan debt as shown in Table 5.3.

Table 5.3 Anticipated MAO I/I Loan

Financial Components	Financing Years
	20
Capital Cost	$1,000,000
Net Capital Cost to City (assume 0% Grant Award)	***$1,000,000***
Total Payment per Year (3.50%)	$70,361
Total Monthly Cost	$5,863

Table 5.4 below summarizes the proforma analysis for the first 6 years of the planning cycle. A 20-year proforma can be found in the Appendix.

Table 5.4 Water System Proforma Summary (2019-2026)

11.2%	Incremental Rate Increase		$77.92	$86.64	$96.35	$107.14	$119.14	
	Average Monthly User Rate	$70.07	$77.00	$85.34	$90.74	$106.25	$119.19	$122.16
	Annual % Revenue Increase		9.9%	10.8%	6.3%	17.1%	12.2%	2.5%
Description		Budget	Budget	5-Year Fiscal Year Projections (3% Annual Revenue and Expenditure Increases)				
		19-20	20-21	21-22	22-23	23-24	24-25	25-26
	Annual Beginning Fund Balance	$0.00	$10,000.00	$89,133.14	$106,056.41	$131,003.53	$164,215.19	$205,939.35
Line	Decription							
Revenues								
1	Toledo Revenue Projections (w/ 3% annual increase)	$1,161,590.00	$1,196,437.70	$1,232,330.83	$1,269,300.76	$1,307,379.78	$1,346,601.17	$1,386,999.21
2	Rate Increase #1 (Needed Adjustment) (w/ 3% increase)		$80,000.00	$82,400.00	$84,872.00	$87,418.16	$90,040.70	$92,741.93
3	Rate Increase #2 (CIP w/ 25% Grants)					$166,580.17	$333,160.33	$333,160.33
4	Rate Increase #3 (System Replace) (w/ 3% increase)			$100,000.00	$150,000.00	$200,000.00	$206,000.00	$212,180.00
	Total Revenue	$1,161,590.00	$1,276,437.70	$1,414,730.83	$1,504,172.76	$1,761,378.11	$1,975,802.21	$2,025,081.47
Expenses and Debt								
5	Transfers to other non-water funds	$25,000	$25,750.00	$26,522.50	$27,318.18	$28,137.72	$28,981.85	$29,851.31
6	Personnel Services	$553,579	$570,186.37	$587,291.96	$604,910.72	$623,058.04	$641,749.78	$661,002.28
7	Material & Services	$362,575	$373,452.25	$384,655.82	$396,195.49	$408,081.36	$420,323.80	$432,933.51
8	Capital Outlay	$45,998	$47,377.94	$48,799.28	$50,263.26	$51,771.15	$53,324.29	$54,924.02
9	Rate Increase #3 (System Replace) (w/ 3% increase)			$100,000.00	$150,000.00	$200,000.00	$206,000.00	$212,180.00
	Sub-Total Typical Expenses	$987,152.00	$1,016,766.56	$1,147,269.56	$1,228,687.64	$1,311,048.27	$1,350,379.72	$1,390,891.11
10	Existing debt service	$164,438.00	$164,438.00	$164,438.00	$164,438.00	$164,438.00	$164,438.00	$164,438.00
11	DEQ MAO Sewer Replacement debt (IFA)		$16,100.00	$16,100.00	$16,100.00	$16,100.00	$16,100.00	$16,100.00
12	DEQ Additional MAO-related loan			$70,000.00	$70,000.00	$70,000.00	$70,000.00	$70,000.00
13	Rate Increase #2 (CIP w/ 25% Grants)					$166,580.17	$333,160.33	$333,160.33
	Sub-Total Annual Debt Service	$164,438.00	$180,538.00	$250,538.00	$250,538.00	$417,118.17	$583,698.33	$583,698.33
	Total Expenditures	$1,151,590	$1,197,305	$1,397,808	$1,479,226	$1,728,166	$1,934,078	$1,974,589
	Sewer System Fund Yearly Savings	$10,000	$79,133	$16,923	$24,947	$33,212	$41,724	$50,492

The top three rows (orange highlight) shows the incremental rate increases over the next 5-years needed to bring the current rates to where the rates need to be, based on the projected income and projected expenses. An annual incremental rate of approximately 11.2% is required. After 5-years the rate increase will fall back to the inflation-offsetting rate of 3.0%.

Figure 5.1 below is a graphical summary of the proforma analysis of the sewer system for a few years of the planning period. As can be seen in the figure, the sewer system is projected to increase and keep in line with a 3% inflation rate. It is recommended the City review the financial status every five years and adjust the rate structure, as necessary, to account for changes that diverge from the assumptions in this analysis. This may necessitate further increases in the rate structure or, potentially, decreases in the rate structure if it is found that the conservative assumptions in this analysis prove to be too aggressive.

Figure 5.1 Sewer System Fund Proforma Analysis
Graphical Representation of Projected Fund Performance over Planning Period

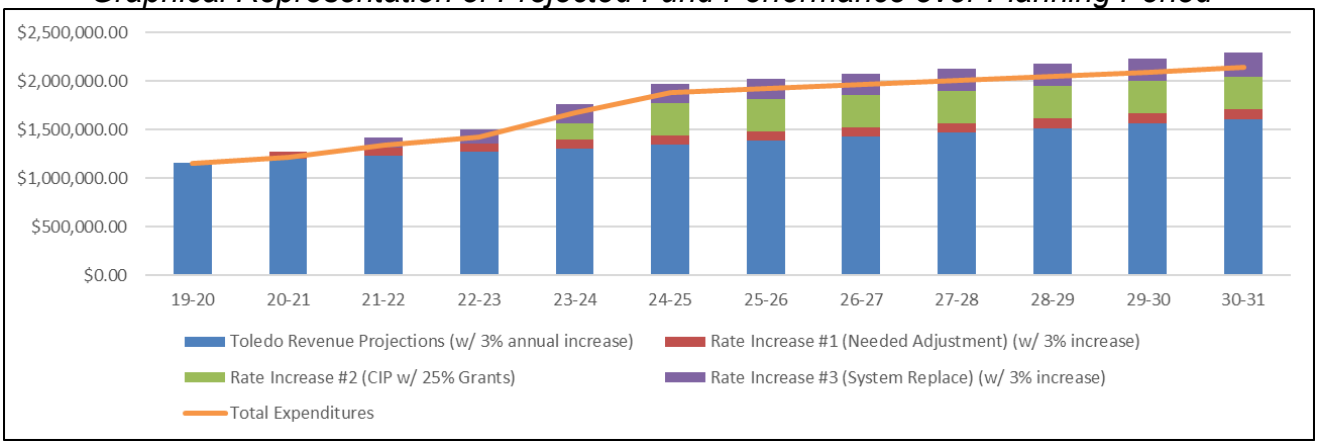


Figure 5.1 shows peaks indicating influxes of funding to pay for major capital improvement projects ("Rate Increase #2") during the planning period. It is anticipated funding will not be secured in lump sums, but rather more slowly over time as expenses are incurred.

5.5. New Rate Structure Options

Once the new average rate is determined, the City must select a new rate structure for the implementation and collection of the new rate. The new rate structure could include two components:

1. A base rate component
2. A consumption rate component (based on metered water consumption)

Table 5.5 illustrates a rate matrix for the City of Toledo. The matrix shows how the different combinations of base and consumption rates can be combined to meet the minimum average rate requirement needed to produce the required revenue stream. The grey-shaded area within the matrix indicates rate combinations (base and consumption) that meet or exceed the rate level that is required to meet the revenue requirements for the City. The combinations on the "edge" of the shaded area are the lowest-impact options that will satisfy the revenue requirements.

Any of the combinations below would qualify as a viable rate structure for the City of Toledo. The City should consider how much of an increase to place upon the base rate and the consumption rate when determining the final rate structure.

Table 5.5 Uniform Rate Matrix

Varying Base Rates ($ per month)	Varying Consumption Rates ($ per 1000 gal)																		
	$15.99	$8.00	$8.60	$9.20	$9.80	$10.40	$11.00	$11.60	$12.20	$12.80	$13.40	$14.00	$14.60	$15.20	$15.80	$16.40	$17.00	$17.60	$18.20
$22.10	$70.07	$46.10	$47.90	$49.70	$51.50	$53.30	$55.10	$56.90	$58.70	$60.50	$62.30	$64.10	$65.90	$67.70	$69.50	$71.30	$73.10	$74.90	$76.70
$49.00	$96.97	$73.00	$74.80	[illegible]	[illegible]	$80.20	$82.00	$83.80	$85.60	$87.40	$89.20	$91.00	$92.80	$94.60	$96.40	$98.20	$100.00	$101.80	$103.60
$50.00	$97.97	$74.00	$75.80	$77.60	$79.40	$81.20	$83.00	$84.80	[illegible]	[illegible]	$89.20	$92.00	$93.80	$95.60	$97.40	$99.20	$101.00	$102.80	$104.60
$51.00	$98.97	$75.00	$76.80	$78.60	$80.40	$82.20	$84.00	$85.80	$87.60	$89.40	$91.20	$93.00	$94.80	$96.60	[illegible]	[illegible]	$102.00	$103.80	$105.60
$52.00	$99.97	$76.00	$77.80	$79.60	$81.40	$83.20	$85.00	$86.80	$88.60	$90.40	$92.20	$94.00	$95.80	$97.60	$99.40	$101.20	$103.00	$104.80	$106.60
$53.00	$100.97	$77.00	$78.80	$80.60	$82.40	$84.20	$86.00	$87.80	$89.60	$91.40	$93.20	$95.00	$96.80	$98.60	$100.40	$102.20	$104.00	$105.80	$107.60
$54.00	$101.97	$78.00	$79.80	$81.60	$83.40	$85.20	$87.00	$88.80	$90.60	$92.40	$94.20	$96.00	$97.80	$99.60	$101.40	$103.20	$105.00	$106.80	$108.60
$55.00	$102.97	$79.00	$80.80	$82.60	$84.40	$86.20	$88.00	$89.80	$91.60	$93.40	$95.20	$97.00	$98.80	$100.60	$102.40	$104.20	$106.00	$107.80	$109.60
$56.00	$103.97	$80.00	$81.80	$83.60	$85.40	$87.20	$89.00	$90.80	$92.60	$94.40	$96.20	$98.00	$99.80	$101.60	$103.40	$105.20	$107.00	$108.80	$110.60
$57.00	$104.97	$81.00	$82.80	$84.60	$86.40	$88.20	$90.00	$91.80	$93.60	$95.40	$97.20	$99.00	$100.80	$102.60	$104.40	$106.20	$108.00	$109.80	$111.60
$58.00	$105.97	$82.00	$83.80	$85.60	$87.40	$89.20	$91.00	$92.80	$94.60	$96.40	$98.20	$100.00	$101.80	$103.60	$105.40	$107.20	$109.00	$110.80	$112.60
$59.00	$106.97	$83.00	$84.80	$86.60	$88.40	$90.20	$92.00	$93.80	$95.60	$97.40	$99.20	$101.00	$102.80	$104.60	$106.40	$108.20	$110.00	$111.80	$113.60
$60.00	$107.97	$84.00	$85.80	$87.60	$89.40	$91.20	$93.00	$94.80	$96.60	$98.40	$100.20	$102.00	$103.80	$105.60	$107.40	$109.20	$111.00	$112.80	$114.60
$61.00	$108.97	$85.00	$86.80	$88.60	$90.40	$92.20	$94.00	$95.80	$97.60	$99.40	$101.20	$103.00	$104.80	$106.60	$108.40	$110.20	$112.00	$113.80	$115.60
$62.00	$109.97	$86.00	$87.80	$89.60	$91.40	$93.20	$95.00	$96.80	$98.60	$100.40	$102.20	$104.00	$105.80	$107.60	$109.40	$111.20	$113.00	$114.80	$116.60
$63.00	$110.97	$87.00	$88.80	$90.60	$92.40	$94.20	$96.00	$97.80	$99.60	$101.40	$103.20	$105.00	$106.80	$108.60	$110.40	$112.20	$114.00	$115.80	$117.60
$64.00	$111.97	$88.00	$89.80	$91.60	$93.40	$95.20	$97.00	$98.80	$100.60	$102.40	$104.20	$106.00	$107.80	$109.60	$111.40	$113.20	$115.00	$116.80	$118.60
$65.00	$112.97	$89.00	$90.80	$92.60	$94.40	$96.20	$98.00	$99.80	$101.60	$103.40	$105.20	$107.00	$108.80	$110.60	$112.40	$114.20	$116.00	$117.80	$119.60
$66.00	$113.97	$90.00	$91.80	$93.60	$95.40	$97.20	$99.00	$100.80	$102.60	$104.40	$106.20	$108.00	$109.80	$111.60	$113.40	$115.20	$117.00	$118.80	$120.60
$67.00	$114.97	$91.00	$92.80	$94.60	$96.40	$98.20	$100.00	$101.80	$103.60	$105.40	$107.20	$109.00	$110.80	$112.60	$114.40	$116.20	$118.00	$119.80	$121.60
$68.00	$115.97	$92.00	$93.80	$95.60	$97.40	$99.20	$101.00	$102.80	$104.60	$106.40	$108.20	$110.00	$111.80	$113.60	$115.40	$117.20	$119.00	$120.80	$122.60
$69.00	$116.97	$93.00	$94.80	$96.60	$98.40	$100.20	$102.00	$103.80	$105.60	$107.40	$109.20	$111.00	$112.80	$114.60	$116.40	$118.20	$120.00	$121.80	$123.60
$70.00	$117.97	$94.00	$95.80	$97.60	$99.40	$101.20	$103.00	$104.80	$106.60	$108.40	$110.20	$112.00	$113.80	$115.60	$117.40	$119.20	$121.00	$122.80	$124.60
$71.00	$118.97	$95.00	$96.80	$98.60	$100.40	$102.20	$104.00	$105.80	$107.60	$109.40	$111.20	$113.00	$114.80	$116.60	$118.40	$120.20	$122.00	$123.80	$125.60
$72.00	$119.97	$96.00	$97.80	$99.60	$101.40	$103.20	$105.00	$106.80	$108.60	$110.40	$112.20	$114.00	$115.80	$117.60	$119.40	$121.20	$123.00	$124.80	$126.60
$73.00	$120.97	$97.00	$98.80	$100.60	$102.40	$104.20	$106.00	$107.80	$109.60	$111.40	$113.20	$115.00	$116.80	$118.60	$120.40	$122.20	$124.00	$125.80	$127.60
$74.00	$121.97	$98.00	$99.80	$101.60	$103.40	$105.20	$107.00	$108.80	$110.60	$112.40	$114.20	$116.00	$117.80	$119.60	$121.40	$123.20	$125.00	$126.80	$128.60
$75.00	$122.97	$99.00	$100.80	$102.60	$104.40	$106.20	$108.00	$109.80	$111.60	$113.40	$115.20	$117.00	$118.80	$120.60	$122.40	$124.20	$126.00	$127.80	$129.60
$76.00	$123.97	$100.00	$101.80	$103.60	$105.40	$107.20	$109.00	$110.80	$112.60	$114.40	$116.20	$118.00	$119.80	$121.60	$123.40	$125.20	$127.00	$128.80	$130.60
$77.00	$124.97	$101.00	$102.80	$104.60	$106.40	$108.20	$110.00	$111.80	$113.60	$115.40	$117.20	$119.00	$120.80	$122.60	$124.40	$126.20	$128.00	$129.80	$131.60
$78.00	$125.97	$102.00	$103.80	$105.60	$107.40	$109.20	$111.00	$112.80	$114.60	$116.40	$118.20	$120.00	$121.80	$123.60	$125.40	$127.20	$129.00	$130.80	$132.60
$79.00	$126.97	$103.00	$104.80	$106.60	$108.40	$110.20	$112.00	$113.80	$115.60	$117.40	$119.20	$121.00	$122.80	$124.60	$126.40	$128.20	$130.00	$131.80	$133.60
$80.00	$127.97	$104.00	$105.80	$107.60	$109.40	$111.20	$113.00	$114.80	$116.60	$118.40	$120.20	$122.00	$123.80	$125.60	$127.40	$129.20	$131.00	$132.80	$134.60

5.6 Recommended New Sewer Rates

As discussed in Section 5.1, and from the matrix, Table 5.6 shows some example rates.

Table 5.6 Rate Structure Recommendation

Options	Description	Base rate includes first thousand gallons*	
		Base rate	Rate per thousand
Recommended #1	100% Base Rate, based on no consumption	$103.44	$0.00
Recommended #2	75% Base Rate	$78.00	$8.60
#3	50% Base Rate	$51.00	$17.60
#4	0% Base Rate, based solely on consumption	$0.00	$25.86
*Rate per thousand based on average usage January - April			

While the decision ultimately rests with the City, we recommend consideration of only two new rate structures which is projected to provide the required revenues for the City's sewer fund, remaining CIP improvements, and to fund a system replacement fund, without high variations of revenue. The two options are:

1. Fixed Base Rate (100%). This structure takes the base rate and makes it fixed; all users pay the same rate across the board regardless of water used. As mentioned earlier, sewer flows can be greatly affected from external water discharge into the system (I/I), making the contribution of domestic sewage less impactful, regardless of the domestic discharges. This rate concept would also be simpler to manage, and no water meter readings would be required.

2. Base Rate @ 75% of needed revenue with 25% accompanying consumption rate to match. This concept follows the existing rate structure concept, seasonal water meter readings would be required. We recommend keeping the first 1,000-gallons as part of the base rate.

Section 6

6. Conclusion – Water and Sewer Rates

The primary purpose of a sewer rate is to generate revenue for the City. Simply stated, the City is in the "Water and Sewer Business," and like any other successful business, revenues must stay above expenditures and money must be reinvested into the business (e.g. new equipment and pipes) regularly and routinely. Both systems have old equipment that needs to be replaced and all equipment requires routine maintenance; pipes need to be replaced/repaired; treatment facilities to manage; and staff to hire. No matter the amount of water used, there is a fixed cost of doing business. How to distribute the cost to the users has been discussed for both systems previously.

Based on our analysis as discussed earlier, we conclude and are of the opinion that:

1. The City's current rate structures are not adequate to support a healthy and stable water and sewer system operation in Toledo nor are they capable of supporting planned CIP upgrades as set forth in the respective Master Plans and Capital Improvement Plans.

2. Therefore, a rate increase is recommended to be implemented at this time. This will allow the City to undertake needed CIP and maintenance work and put them on a firm financial footing moving forward. Any changes to the forecast or conditions of assumptions outlined in this analysis could change these conclusions.

By implementing the proposed rate increases, the City's water/sewer systems should be healthy, solvent, and capable of meeting all of their debts and obligations in a responsible way.

6.1 Annual Rate Increase

Inflation will continue to increase the cost of operating and maintaining the systems as time passes. The rate of inflation varies due to an abundance of variables that are nearly all beyond the ability of the City to control. Cities have to respond to inflation by either increasing their charges to their patrons or by reducing services or operating costs. As most public utility agencies are already operating with lean staff and resources, we are not recommending the City have a policy of addressing inflationary impacts through budget cuts.

As part of the proforma analysis completed in this rate study, an effort was made to determine the minimum annual rate increase that would be needed to keep the funds in the black and viable throughout the planning period. Because of the wide range of variables, this can only be an estimate at this time. However, the City should be aware of the need to combat inflation and maintain their rate structures so they do not "fall behind." The only real response to not keeping up with inflation is to defer or delay maintenance. Systems that fall into this trap eventually have to make major investments in their infrastructure to catch up.

The proforma evaluation suggests a minimum annual rate increase be 3% annually.

If the City adopts a policy of annual maintenance and inflation countering rate increases, they will be able to avoid the steep vertical increases that some communities face when they only raise rates once every ten years. They will also find that they will be in a better position to operate and maintain their system rather than defer maintenance to offset cost increases delivered by inflation.

6.2 Utility Bill Comparison

When considering changes to their utility rates, many communities wish to compare their rate structures to other communities in an effort to weigh the reasonableness of their own rates. It should be understood that water systems and communities vary in many ways including:

1. The complexity and size of the water system and the related infrastructure components
2. The level of effort that is required to obtain, treat, and deliver water to their customers
3. The operational history of the water system, debt history, health of the water fund, and other financial issues
4. The number of customers that can help shoulder the financial burdens of the system
5. The condition and legacy of the system components

When considering the vast differences that exist from one system to another, a simple rate comparison is not a fair or accurate way of comparing the reasonableness of one water rate over another. However, for comparison sake, we acquired researched information (Table 6.1) from another City summarizing a total combined utility bill, including water, sewer, power, streets, etc. As can be seen in, the proposed rate increase in Toledo will move Toledo from the middle of the rate spectrum to the upper end of the spectrum for the systems that were used in this comparison. This comparison is not comprehensive and is only included to provide perspective.

6.3 Final Thoughts and Considerations

Aside from rates, we bring up other issues City's face in "running their business" for additional discussion purposes and awareness. Some issues are presented in question form hoping to spur conversation within the City. We provide a simple recommendation within each topic, recognizing there could be extenuating circumstances and unique situations where our recommendation could be refuted and justified differently.

1. <u>The more paying customers, the less each pay.</u> The City apparently has part-time, seasonal users connected to their systems who put their service on "hold" while away and do not pay. Should part-time residents pay the full year, just to have service available when they return? Should all customers (active or not) pay at least a base rate to cover the fixed costs of the utility?

   If service is available and customers are hooked up, whether in use or not, at a minimum the base rate should be paid and collected each month from all users. Regardless of usage, a system exists that must be maintained, and should continually be ready and available for use when such part-time folks come back. These part-time residents should be expected to contribute to a system they have ready access to.

2. Service charge. For situations where services are being disconnected and reconnected, or other such customer management situations, an appropriate service charge should be calculated and implemented to cover the cost of the field and office employees for this personal service. It appears this charge should be evaluated and adjusted upward.

3. Late fees, bad debt collection. Should active users pay for the time staff spends on debt collecting from others? Should user rates increase across the board to offset those who don't pay? Keep in mind, when calculating the above recommended rates, it was assumed all user accounts would pay, not just "most" of the users.

   In general practice, debt should be collected, and late fees paid. Certainly, leniency and forgiveness (one-time grace) can be applied on a case-by-case basis, but each user should equally share the opportunity to have domestic water and sewer service.

Table 6.1 Total Utility Bill Comparison

2018-19 Average Monthly Utility Bills in Oregon Cities

Single-Family Residential Customers - Total Utility Bill

Population 2018 PSU	City / District	600 cu ft $ / mo	600 cu ft Rank	800 cu ft* $ / mo	800 cu ft* Rank
648,740	Portland	$167.15	1	$197.99	1
9,225	Sweet Home	$117.70	6	$152.98	2
38,215	Lake Oswego	$141.71	2	$151.79	3
16,920	Lebanon	$116.95	7	$140.07	4
9,370	Independence	$122.72	4	$133.40	5
860	Adair Village	$124.37	3	$131.33	6
52,785	Tigard	$114.88	8	$130.02	7
11,935	Cornelius	$118.29	5	$127.73	8
19,505	Sherwood	$111.07	10	$123.62	9
4,715	Philomath	$102.90	12	$122.20	10
53,145	Albany	$110.14	11	$121.17	11
34,860	Oregon City	$111.47	9	$116.94	12
89,505	Bend	$98.39	13	$109.73	13
60,865	Springfield	$90.33	14	$105.33	14
24,760	Woodburn	$77.64	21	$98.85	15
97,000	Beaverton	$87.65	18	$98.05	16
101,920	Hillsboro	$88.73	15	$96.77	17
24,125	Forest Grove	$88.32	16	$95.02	18
165,265	Salem	$82.02	20	$94.12	19
110,505	Gresham	$85.20	19	$91.64	20
33,810	McMinnville	$76.19	24	$90.46	21
25,830	West Linn	$87.72	17	$90.44	22
169,695	Eugene / EWEB	$77.41	22	$87.00	23
59,280	Corvallis	$75.23	25	$84.93	24
9,890	Monmouth	$76.76	23	$82.00	25
38,505	Keizer	$66.40	26	$76.88	26
37,285	Grants Pass	$64.62	28	$73.70	27
24,820	Roseburg	$64.82	27	$68.66	28
	Average	$98.10		$110.46	

Utility bill calculation includes water, sewer, stormwater and transportation fees, if applicable

Rates are calculated on 3/4-inch meters for residential accounts only; all units calculated in cubic feet

*800 cubic feet is the comparison used by the League of Oregon Cities

600 cubic feet is approximately 4,500 gallons - Average for the City of Toledo

*Does not include revenues from property taxes or GO bonds.

SEWER PROFORMA

11.2%	Incremental Rate Increase		$77.92	$86.64	$96.35	$107.14	$119.14	
	Average Monthly User Rate	$70.07	$77.00	$85.34	$90.74	$106.25	$119.19	$122.16
	Annual % Revenue Increase		9.9%	10.8%	6.3%	17.1%	12.2%	2.5%
	Description	Budget	Budget	5-Year Fiscal Year Projections (3% Annual Revenue and Expenditure Increases)				
		19-20	20-21	21-22	22-23	23-24	24-25	25-26
	Annual Beginning Fund Balance	$0.00	$10,000.00	$89,133.14	$106,056.41	$131,003.53	$164,215.19	$205,939.35
Line	Decription							
Revenues								
1	Toledo Revenue Projections (w/ 3% annual increase)	$1,161,590.00	$1,196,437.70	$1,232,330.83	$1,269,300.76	$1,307,379.78	$1,346,601.17	$1,386,999.21
2	Rate Increase #1 (Needed Adjustment) (w/ 3% increase)		$80,000.00	$82,400.00	$84,872.00	$87,418.16	$90,040.70	$92,741.93
3	Rate Increase #2 (CIP w/ 25% Grants)					$166,580.17	$333,160.33	$333,160.33
4	Rate Increase #3 (System Replace) (w/ 3% increase)			$100,000.00	$150,000.00	$200,000.00	$206,000.00	$212,180.00
	Total Revenue	$1,161,590.00	$1,276,437.70	$1,414,730.83	$1,504,172.76	$1,761,378.11	$1,975,802.21	$2,025,081.47
Expenses and Debt								
5	Transfers to other non-water funds	$25,000	$25,750.00	$26,522.50	$27,318.18	$28,137.72	$28,981.85	$29,851.31
6	Personnel Services	$553,579	$570,186.37	$587,291.96	$604,910.72	$623,058.04	$641,749.78	$661,002.28
7	Material & Services	$362,575	$373,452.25	$384,655.82	$396,195.49	$408,081.36	$420,323.80	$432,933.51
8	Capital Outlay	$45,998	$47,377.94	$48,799.28	$50,263.26	$51,771.15	$53,324.29	$54,924.02
9	Rate Increase #3 (System Replace) (w/ 3% increase)			$100,000.00	$150,000.00	$200,000.00	$206,000.00	$212,180.00
	Sub-Total Typical Expenses	$987,152.00	$1,016,766.56	$1,147,269.56	$1,228,687.64	$1,311,048.27	$1,350,379.72	$1,390,891.11
10	Existing debt service	$164,438.00	$164,438.00	$164,438.00	$164,438.00	$164,438.00	$164,438.00	$164,438.00
11	DEQ MAO Sewer Replacement debt (IFA)		$16,100.00	$16,100.00	$16,100.00	$16,100.00	$16,100.00	$16,100.00
12	DEQ Additional MAO-related loan			$70,000.00	$70,000.00	$70,000.00	$70,000.00	$70,000.00
13	Rate Increase #2 (CIP w/ 25% Grants)					$166,580.17	$333,160.33	$333,160.33
	Sub-Total Annual Debt Service	$164,438.00	$180,538.00	$250,538.00	$250,538.00	$417,118.17	$583,698.33	$583,698.33
	Total Expenditures	$1,151,590	$1,197,305	$1,397,808	$1,479,226	$1,728,166	$1,934,078	$1,974,589
	Sewer System Fund Yearly Savings	$10,000	$79,133	$16,923	$24,947	$33,212	$41,724	$50,492

$125.22	$128.37	$131.62	$134.97	$138.41	$141.96	$145.62	$149.38	$153.26	$157.26	$161.37	$165.61	$169.98	$174.47	$179.10
2.5%	2.5%	2.5%	2.5%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.7%
15-Year Fiscal Year Projections (3% Annual Revenue and Expenditure Increases)														
26-27	27-28	28-29	29-30	30-31	31-32	32-33	33-34	34-35	35-36	36-37	37-38	38-39	39-40	40-41
$256,431.37	$315,954.29	$439,779.04	$573,184.67	$716,458.61	$869,896.91	$1,033,804.50	$1,208,495.45	$1,394,293.27	$1,591,531.17	$1,800,552.35	$2,021,710.30	$2,255,369.13	$2,501,903.86	$2,761,700.78
$1,428,609.18	$1,471,467.46	$1,515,611.48	$1,561,079.83	$1,607,912.22	$1,656,149.59	$1,705,834.08	$1,757,009.10	$1,809,719.37	$1,864,010.95	$1,919,931.28	$1,977,529.22	$2,036,855.10	$2,097,960.75	$2,160,899.57
$95,524.18	$98,389.91	$101,341.61	$104,381.85	$107,513.31	$110,738.71	$114,060.87	$117,482.70	$121,007.18	$124,637.39	$128,376.52	$132,227.81	$136,194.64	$140,280.48	$144,488.90
$333,160.33	$333,160.33	$333,160.33	$333,160.33	$333,160.33	$333,160.33	$333,160.33	$333,160.33	$333,160.33	$333,160.33	$333,160.33	$333,160.33	$333,160.33	$333,160.33	$333,160.33
$218,545.40	$225,101.76	$231,854.81	$238,810.46	$245,974.77	$253,354.02	$260,954.64	$268,783.28	$276,846.77	$285,152.18	$293,706.74	$302,517.94	$311,593.48	$320,941.29	$330,569.53
$2,075,839.10	**$2,128,119.46**	**$2,181,968.24**	**$2,237,432.48**	**$2,294,560.64**	**$2,353,402.65**	**$2,414,009.92**	**$2,476,435.41**	**$2,540,733.66**	**$2,606,960.86**	**$2,675,174.87**	**$2,745,435.31**	**$2,817,803.56**	**$2,892,342.86**	**$2,969,118.33**
$30,746.85	$31,669.25	$32,619.33	$33,597.91	$34,605.85	$35,644.02	$36,713.34	$37,814.74	$38,949.19	$40,117.66	$41,321.19	$42,560.83	$43,837.65	$45,152.78	$46,507.36
$680,832.34	$701,257.31	$722,295.03	$743,963.89	$766,282.80	$789,271.29	$812,949.42	$837,337.91	$862,458.04	$888,331.79	$914,981.74	$942,431.19	$970,704.13	$999,825.25	$1,029,820.01
$445,921.52	$459,299.16	$473,078.14	$487,270.48	$501,888.60	$516,945.25	$532,453.61	$548,427.22	$564,880.04	$581,826.44	$599,281.23	$617,259.67	$635,777.46	$654,850.78	$674,496.30
$56,571.74	$58,268.89	$60,016.96	$61,817.47	$63,671.99	$65,582.15	$67,549.61	$69,576.10	$71,663.39	$73,813.29	$76,027.69	$78,308.52	$80,657.77	$83,077.50	$85,569.83
$218,545.40	$225,101.76	$231,854.81	$238,810.46	$245,974.77	$253,354.02	$260,954.64	$268,783.28	$276,846.77	$285,152.18	$293,706.74	$302,517.94	$311,593.48	$320,941.29	$330,569.53
$1,432,617.85	**$1,475,596.38**	**$1,519,864.27**	**$1,565,460.20**	**$1,612,424.01**	**$1,660,796.73**	**$1,710,620.63**	**$1,761,939.25**	**$1,814,797.43**	**$1,869,241.35**	**$1,925,318.59**	**$1,983,078.15**	**$2,042,570.49**	**$2,103,847.61**	**$2,166,963.03**
$164,438.00	$164,438.00	$164,438.00	$164,438.00	$164,438.00	$164,438.00	$164,438.00	$164,438.00	$164,438.00	$164,438.00	$164,438.00	$164,438.00	$164,438.00	$164,438.00	$164,438.00
$16,100.00	$16,100.00	$16,100.00	$16,100.00	$16,100.00	$16,100.00	$16,100.00	$16,100.00	$16,100.00	$16,100.00	$16,100.00	$16,100.00	$16,100.00	$16,100.00	$16,100.00
$70,000.00	$15,000.00	$15,000.00	$15,000.00	$15,000.00	$15,000.00	$15,000.00	$15,000.00	$15,000.00	$15,000.00	$15,000.00	$15,000.00	$15,000.00	$15,000.00	$15,000.00
$333,160.33	$333,160.33	$333,160.33	$333,160.33	$333,160.33	$333,160.33	$333,160.33	$333,160.33	$333,160.33	$333,160.33	$333,160.33	$333,160.33	$333,160.33	$333,160.33	$333,160.33
$583,698.33	**$528,698.33**	**$528,698.33**	**$528,698.33**	**$528,698.33**	**$528,698.33**	**$528,698.33**	**$528,698.33**	**$528,698.33**	**$528,698.33**	**$528,698.33**	**$528,698.33**	**$528,698.33**	**$528,698.33**	**$528,698.33**
$2,016,316	**$2,004,295**	**$2,048,563**	**$2,094,159**	**$2,141,122**	**$2,189,495**	**$2,239,319**	**$2,290,638**	**$2,343,496**	**$2,397,940**	**$2,454,017**	**$2,511,776**	**$2,571,269**	**$2,632,546**	**$2,695,661**
$59,523	$123,825	$133,406	$143,274	$153,438	$163,908	$174,691	$185,798	$197,238	$209,021	$221,158	$233,659	$246,535	$259,797	$273,457

WATER PERFORMA

7.2%	Incremental Rate Increase		$51.36	$55.06	$59.02	$63.27	$67.83	$72.71
	Average Monthly User Rate	$47.91	$50.84	$55.23	$55.04	$62.74	$70.48	$72.04
	Annual % Revenue Increase		6.1%	8.6%	-0.4%	14.0%	12.3%	2.2%
	Description	Budget	Budget	5-Year Fiscal Year Projections (3% Annual Revenue and Expenditure Increases)				
		19-20	20-21	21-22	22-23	23-24	24-25	25-26
	Annual Beginning Fund Balance	$0	$265,527	$603,597	$964,335	$1,186,748	$1,313,093	$1,343,751
Line	**Decription**							
Revenues								
1	Toledo Revenue Projections (w/ 3% annual increase)	$1,323,485.00	$1,363,189.55	$1,404,085.24	$1,446,207.79	$1,489,594.03	$1,534,281.85	$1,580,310.30
2	**Rate Increase #1 (SRWD Replace) (w/ 3% annual increase)**		$52,050.00	$53,611.50	$55,219.85	$56,876.44	$58,582.73	$60,340.22
3	**Rate Increase #2 (CIP w/ 25% Grants)**				*$217,485.33*	*$434,970.65*	*$652,455.98*	$652,455.98
4	**Rate Increase #3 (System Replace) (w/ 3% annual increase)**			$100,000.00	$200,000.00	$206,000.00	$212,180.00	$218,545.40
5	Seal Rock Revenue Projections	$346,985.00	$357,394.55	$368,116.39				
	Total Revenue	**$1,670,470.00**	**$1,772,634.10**	**$1,925,813.12**	**$1,918,912.97**	**$2,187,441.12**	**$2,457,500.56**	**$2,511,651.90**
Expenses and Debt								
6	Transfers to other non-water funds	$22,500	$23,175.00	$23,870.25	$24,586.36	$25,323.95	$26,083.67	$26,866.18
7	Personnel Services	$509,684	$524,974.52	$540,723.76	$556,945.47	$573,653.83	$590,863.45	$608,589.35
8	Material & Services	$409,622	$421,910.66	$434,567.98	$447,605.02	$461,033.17	$474,864.16	$489,110.09
9	Capital Outlay	$45,575	$46,942.25	$48,350.52	$49,801.03	$51,295.06	$52,833.92	$54,418.93
10	**Rate Increase #3 (System Replace) (w/ 3% annual increase)**			$100,000.00	$200,000.00	$206,000.00	$212,180.00	$218,545.40
	Sub-Total Typical Expenses	**$987,381.00**	**$1,017,002.43**	**$1,147,512.50**	**$1,278,937.88**	**$1,317,306.01**	**$1,356,825.19**	**$1,397,529.95**
11	Existing debt service	$417,562.00	$417,562.00	$417,562.00	$417,562.00	$417,562.00	$417,562.00	$417,562.00
12	**Rate Increase #2 (CIP w/ 25% Grants)**					*$326,227.99*	*$652,455.98*	$652,455.98
	Sub-Total Annual Debt Service	**$417,562.00**	**$417,562.00**	**$417,562.00**	**$417,562.00**	**$743,789.99**	**$1,070,017.98**	**$1,070,017.98**
	Total Expenditures	**$1,404,943**	**$1,434,564**	**$1,565,075**	**$1,696,500**	**$2,061,096**	**$2,426,843**	**$2,467,548**
	Water System Fund Yearly Savings	$265,527	$338,070	$360,739	$222,413	$126,345	$30,657	$44,104

$73.64	$75.28	$76.98	$78.73	$80.53	$82.38	$84.29	$86.26	$88.29	$90.37	$92.52	$94.74	$97.02	$99.37	$101.79
2.2%	2.2%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%
15-Year Fiscal Year Projections (3% Annual Revenue and Expenditure Increases)														
26-27	27-28	28-29	29-30	30-31	31-32	32-33	33-34	34-35	35-36	36-37	37-38	38-39	39-40	40-41
$1,387,855	$1,445,809	$1,518,028	$1,604,941	$1,706,988	$1,824,624	$1,958,315	$2,108,544	$2,275,806	$2,460,614	$2,663,492	$2,884,984	$3,125,647	$3,386,057	$3,666,806
$1,627,719.61	$1,676,551.20	$1,726,847.74	$1,778,653.17	$1,832,012.76	$1,886,973.15	$1,943,582.34	$2,001,889.81	$2,061,946.51	$2,123,804.90	$2,187,519.05	$2,253,144.62	$2,320,738.96	$2,390,361.13	$2,462,071.96
$62,150.42	$64,014.93	$65,935.38	$67,913.44	$69,950.85	$72,049.37	$74,210.85	$76,437.18	$78,730.30	$81,092.20	$83,524.97	$86,030.72	$88,611.64	$91,269.99	$94,008.09
$652,455.98	$652,455.98	$652,455.98	$652,455.98	$652,455.98	$652,455.98	$652,455.98	$652,455.98	$652,455.98	$652,455.98	$652,455.98	$652,455.98	$652,455.98	$652,455.98	$652,455.98
$225,101.76	$231,854.81	$238,810.46	$245,974.77	$253,354.02	$260,954.64	$268,783.28	$276,846.77	$285,152.18	$293,706.74	$302,517.94	$311,593.48	$320,941.29	$330,569.53	$340,486.61
$2,567,427.78	**$2,624,876.93**	**$2,684,049.56**	**$2,744,997.37**	**$2,807,773.61**	**$2,872,433.14**	**$2,939,032.45**	**$3,007,629.75**	**$3,078,284.96**	**$3,151,059.83**	**$3,226,017.94**	**$3,303,224.80**	**$3,382,747.87**	**$3,464,656.62**	**$3,549,022.64**
$27,672.16	$28,502.33	$29,357.40	$30,238.12	$31,145.26	$32,079.62	$33,042.01	$34,033.27	$35,054.27	$36,105.89	$37,189.07	$38,304.74	$39,453.89	$40,637.50	$41,856.63
$626,847.03	$645,652.44	$665,022.02	$684,972.68	$705,521.86	$726,687.51	$748,488.14	$770,942.78	$794,071.06	$817,893.20	$842,429.99	$867,702.89	$893,733.98	$920,546.00	$948,162.38
$503,783.39	$518,896.89	$534,463.80	$550,497.72	$567,012.65	$584,023.03	$601,543.72	$619,590.03	$638,177.73	$657,323.06	$677,042.75	$697,354.04	$718,274.66	$739,822.90	$762,017.58
$56,051.50	$57,733.05	$59,465.04	$61,248.99	$63,086.46	$64,979.05	$66,928.42	$68,936.28	$71,004.37	$73,134.50	$75,328.53	$77,588.39	$79,916.04	$82,313.52	$84,782.93
$225,101.76	$231,854.81	$238,810.46	$245,974.77	$253,354.02	$260,954.64	$268,783.28	$276,846.77	$285,152.18	$293,706.74	$302,517.94	$311,593.48	$320,941.29	$330,569.53	$340,486.61
$1,439,455.85	**$1,482,639.52**	**$1,527,118.71**	**$1,572,932.27**	**$1,620,120.24**	**$1,668,723.85**	**$1,718,785.56**	**$1,770,349.13**	**$1,823,459.60**	**$1,878,163.39**	**$1,934,508.29**	**$1,992,543.54**	**$2,052,319.85**	**$2,113,889.44**	**$2,177,306.13**
$417,562.00	$417,562.00	$417,562.00	$417,562.00	$417,562.00	$417,562.00	$417,562.00	$417,562.00	$417,562.00	$417,562.00	$417,562.00	$417,562.00	$417,562.00	$417,562.00	$417,562.00
$652,455.98	$652,455.98	$652,455.98	$652,455.98	$652,455.98	$652,455.98	$652,455.98	$652,455.98	$652,455.98	$652,455.98	$652,455.98	$652,455.98	$652,455.98	$652,455.98	$652,455.98
$1,070,017.98	**$1,070,017.98**	**$1,070,017.98**	**$1,070,017.98**	**$1,070,017.98**	**$1,070,017.98**	**$1,070,017.98**	**$1,070,017.98**	**$1,070,017.98**	**$1,070,017.98**	**$1,070,017.98**	**$1,070,017.98**	**$1,070,017.98**	**$1,070,017.98**	**$1,070,017.98**
$2,509,474	**$2,552,658**	**$2,597,137**	**$2,642,950**	**$2,690,138**	**$2,738,742**	**$2,788,804**	**$2,840,367**	**$2,893,478**	**$2,948,181**	**$3,004,526**	**$3,062,562**	**$3,122,338**	**$3,183,907**	**$3,247,324**
$57,954	$72,219	$86,913	$102,047	$117,635	$133,691	$150,229	$167,263	$184,807	$202,878	$221,492	$240,663	$260,410	$280,749	$301,699