



# Utility Rate and Long-term Infrastructure Plan 2023

## **Introduction**

The City of Sunset Valley provides water, wastewater, solid waste, and drainage services to its residents and businesses. From an accounting perspective, these are considered enterprise funds as they provide goods or services to the public for a fee. These funds receive revenues and have expenditures to provide those goods and services. To effectively establish rates, the City must look at the cost of operating these services, the investments needed for asset rehabilitation and repair, as well as revenue generation. Sunset Valley has historically subsidized the operation of the enterprise funds by transferring money from the general fund. This document will examine data over the last few years and the proposed budget for FY 24 to provide information on expenses and revenues. Long-term infrastructure needs and replacement will also be examined. This process will help the City of Sunset Valley to determine the best course of action to make these services and infrastructure sustainable for the future. For the purposes of this study 2022 is used as the study year for most analyses. This report will examine the water, wastewater, and solid waste utility fund. The drainage utility will be assessed at a future date.

In 2014, the City of Sunset Valley conducted a cost-of-service study. This study indicated that while all customer classes received some type of benefit, the residential customer class received the largest amount of benefit from the City. The study proposed rates in 2015 that would have brought the operational budget of the water and wastewater utility to a breakeven level. The City did not adopt these rates and continued to subsidize the cost of water, wastewater, and solid waste services. The rates were adjusted after this report, with the base rate being lowered and a restructuring of the rate tiers. This change did not increase revenue to match the cost of expenses and ultimately increased the amount of the transfer from the general fund to the utility budget.

## **1.0 Water and Wastewater Utility**

Since 2009, 100% of water supplied to the customers of Sunset Valley has been purchased from the City of Austin. The City of Sunset Valley receives water from 7 master meters from the City of Austin that distributes water to the distribution system. The City of Sunset Valley maintains over 7 miles of water line. The City also has about 5 miles of sanitary sewer lines and one lift station.

There are approximately 294 customer meters within the city. In 2022, there were 246 residential customers and 13 commercial customers. Commercial customers have 2-3 meters as commercial properties are required to have separate meters for irrigation. Additionally, the Public Works Department maintains 18 meters on City properties and associated plumbing and irrigation systems.

The City also maintains the well for irrigation purposes on the City Facilities property. This provides water for the pond behind City Hall and supplemental water to the community garden. This water is non-potable and is for irrigation purposes only.

### **1.1 Water Usage**

Since 2009, the City of Sunset Valley has provided water to its customers by purchasing water wholesale from the City of Austin. **Table 1** shows water usage and differences between what the City is charged from the City of Austin and what the City bills its customers. The difference between the two is considered to be the water lost through the distribution system. Water loss is a combination of real loss (water leaks) and apparent loss. Although leaks are corrected as soon as possible, apparent loss from old meters, inaccurate calculations, and meter reading errors can account for apparent water loss. According to the Texas [Water Conservation Scorecard](#), small water utilities averaged about 15.3 % water loss in 2020. Sunset Valley's water loss has fluctuated from as low as 6% to as high as 17%. The Public Works Department has been working to try to address water loss and is in the process of initiating Automated Metering Infrastructure to address water loss from older meters and meter reading errors.

**Table 2** demonstrates the percentage of water use by customer class. Most of the water use is by the commercial areas averaging 52% from 2020-2022. Residential usage averaged 32% and multifamily usage is about 11%. Institutional water use is water used by the City for city facilities, irrigation, and system maintenance. These percentages will be used to determine operational costs by customer class.

**Table 1. Water Usage 2013-2022**

Year	2013	2014	2015	2016	2017
Water Usage	101,665,440	92,760,991	94,630,218	91,776,259	87,109,074
COA Water Meter	108,383,040	100,900,750	103,998,970	104,528,600	102,223,800
Difference	6,717,600	8,139,759	9,368,752	12,752,341	15,114,726
% Loss	6%	8%	9%	12%	15%
Year	2018	2019	2020	2021	2022
Water Usage	76,228,103	84,111,606	83,305,415	79,864,965	88,152,581
COA Water Meter	92,181,560	94,404,040	91,285,300	89,347,700	96,133,300
Difference	15,953,457	10,292,434	7,979,885	9,482,735	7,980,719
% Loss	17%	11%	9%	11%	8%

**Table 2: Water Usage by Customer Class Three Year Average**

Water Usage by Customer Class							
	2020	% by Class	2021	% by Class	2022	% by Class	Average
Residential Usage	26,315,479	32%	25,583,771	32%	28,423,563	32%	32%
Institutional	5,148,211	6%	3,335,885	4%	3,933,550	4%	5%
Commercial	41,916,924	50%	40,908,317	51%	48,959,471	56%	52%
Multifamily	9,924,758	12%	10,036,992	13%	6,195,597	7%	11%
Total	83,307,392	100%	79,864,965	100%	87,512,181	100%	100%

## 1.2 Residential Water Usage

In 2022, there were 246 residential water customers. The average water use was 9,633 gallons. This is down from the 11,662 gallons per customer in 2013. **Table 3** list the number of residential customers per volume class.

**Table 3: Residential Water Use by Volume Class**

2022 Water Use Data	
Volume Tiers	# of Residential Customers
0-3000	25
3000-9,999	131
10,001-20,000	70
20,000+	20
Total Residential Water Customers	246
Average Water Use	9,633 gallons per customer address

### 1.3 Commercial Water Usage

Sunset Valley charges the same rate for commercial and multifamily housing. For the purposes of this analysis the usage of these customer classes was combined. In 2022, water use was split between interior and exterior uses for this customer class. **Table 4** shows the split between uses for 2022.

**Table 4: Commercial Water Usage**

2022 Commercial Water Use		
	Interior Use	Irrigation
Commercial Water Use	26,878,646	28,276,422

### 1.4 Water Use Projection

The Texas Water Development Board has created [water use projections](#) based on historical use. The current rate of use is approximately 354 gallons per capita per day (GPCD). Using the 10-year average of the water purchased from the City of Austin and the GPCD projections were made with a goal to reduce water used by 4 GPCD each year for the next five years. **Table 5** includes those projections and shows a reduction in water use of nearly 4 million gallons of over the next four years. This will require better control of water loss as well as conservation efforts throughout the City. Since wastewater is a function of water use, no projections are included for wastewater.

**Table 5: Water Use Projections**

Water Use Projections					
	FY24	FY 25	FY 26	FY 27	FY 28
Residential	31,465,219	31,109,680	30,754,141	30,576,371	30,398,602
Commercial	51,130,981	50,553,230	49,975,479	49,686,603	49,397,728
Institutional	4,916,441	4,860,888	4,805,335	4,777,558	4,749,782
Multifamily	10,816,169	10,693,953	10,571,736	10,510,628	10,449,519
Total	98,328,810	97,217,750	96,106,690	95,551,160	94,995,630

### 1.5 Revenues Vs. Expenses Water and Wastewater

Historically, the General Fund has been used to subsidize the operation of water, wastewater, and solid waste utility funds. The general fund is derived from sales tax collected from the commercial areas. Declines in sales tax revenue and other expenses can affect the ability for the General Fund to continue to support the operations of the utility funds. Providing clean drinking water and disposal of waste

is a primary function of the City. The Utility Fund operations and revenue should be designed to have more resiliency to address these potential issues.

### **1.6 Fixed vs. Variable Costs**

For the purposes of this analysis, there are two types of costs within the water and wastewater utility departments: fixed and variable. Fixed costs include personnel and operational expenses. These are costs associated with managing and maintaining the system. This is the cost for the delivery of water to the customers. This total does not include capital expenditures for new and replacement infrastructure. These are costs that are predictable each year through the budget process.

Variable costs include the amount of purchased water as this is based on demand and usage. This amount fluctuates each year. This also provides for the largest source of reduction in actuals vs. budgeted expenses. **Table 6** demonstrates the expenses and revenues since FY 20 with fixed and variable costs for the water department. **Table 7** shows revenues, expenses, and subsidies for the past 10 years. **Table 8 and 9** show similar information for the wastewater utility.

**Table 6: Water Utility Operational Expense and Revenue**

Expenses	2019-20 Actual	2020-21 Actual	2021-22 Actual	2022-23 Budget	2023-24 Proposed Budget
Fixed Costs					
Salaries, Benefits, and other Compensation	\$172,029.59	\$ 95,451.87	\$ 164,009.10	\$211,067.00	\$197,214.00
Operating Expense	\$ 126,892.73	\$ 73,948.23	\$89,324.72	\$ 122,256.00	\$114,206.00
Contractual/Design Fees	\$ 3,210.32	\$14,190.98	\$10,155.32	\$16,500.00	\$ 16,500.00
Variable Costs					
Contractual (Purchased Water)	\$ 464,152.52	\$506,037.89	\$422,010.12	\$610,364.00	\$634,780.00
<b>Total Expense</b>	<b>\$ 766,285.16</b>	<b>\$ 689,628.97</b>	<b>\$ 685,499.26</b>	<b>\$ 960,187.00</b>	<b>\$ 962,700.00</b>
Revenue	2019-20 Actual	2020-21 Actual	2021-22 Actual	2022-23 Budget	2023-24 Proposed Budget
Utility Sales	\$ 562,896.67	\$ 497,982.83	\$ 478,511.52	\$ 564,139.00	\$ 561,724.00
Interest	\$ 27,428.21	\$ 2,332.14	\$ 14,060.46	\$ 31,129.00	\$ 65,000.00
Tap Fees	\$ 450.00	\$ -	\$ -	\$ 839.00	\$ 500.00
Credit Card Convenience Fees	\$	\$	\$ 257.82	\$	\$ 900.00
Penalties/Fines/Surcharges	\$ -	\$ -	\$ 1,037.85	\$ 317.00	\$ 250.00
General Fees & Inspections	\$ -	\$ -	\$ 17.28	\$ 823.00	\$
<b>Total Revenue</b>	<b>\$ 590,774.88</b>	<b>\$ 500,314.97</b>	<b>\$ 493,884.93</b>	<b>\$ 597,247.00</b>	<b>\$ 628,374.00</b>
<b>Operational Deficit</b>	<b>\$ (175,510.28)</b>	<b>\$ (189,314.00)</b>	<b>\$ (191,614.33)</b>	<b>\$(362,940.00)</b>	<b>\$ (334,326.00)</b>

**Table 7: 10-Year Water Utility Revenues and Expenses**

10 Year Water Utility Revenues and Expenses										
Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Water Revenue	\$ 525,545.02	\$ 570,401.63	\$ 641,439.41	\$ 651,933.54	\$651,933.50	\$596,481.92	\$629,559.97	\$590,774.88	\$500,314.97	\$493,884.93
Water Expense	\$ 620,913.25	\$ 615,259.31	\$ 732,492.77	\$ 765,517.97	\$813,644.00	\$768,037.16	\$545,912.77	\$ 766,285.16	\$689,628.97	\$685,499.26
Difference	\$ (95,368.23)	\$ (44,857.68)	\$ (91,053.36)	\$ (113,584.43)	\$ (161,710.50)	\$ (171,555.24)	\$ 83,647.20	\$ (175,510.28)	\$ (189,314.00)	\$ (191,614.33)
Transfer from General Fund	\$ 125,228.35	\$ 192,356.00	\$ 101,825.00	\$100,988.00	\$213,539.00	\$ 251,531.00	\$ 311,606.00	\$ 3,483.86	\$ 181,184.00	\$254,913.00
Transfer to Utility Reserves	\$100,000.00	\$ 103,000.00	\$ 20,329.00			\$ 115,927.00	\$ 119,405.00			\$120,000.00
Total Expenditures with Transfer to Reserves	\$ 720,913.25	\$ 718,259.31	\$ 752,821.77	\$ 765,517.97	\$813,644.00	\$ 883,964.16	\$ 665,317.77	\$ 766,285.16	\$689,628.97	\$805,499.26
Total Revenue including Subsidy	\$650,773.37	\$ 762,757.63	\$ 743,264.41	\$ 752,921.54	\$865,472.50	\$ 848,012.92	\$ 941,165.97	\$ 594,258.74	\$681,498.97	\$748,797.93
Ending Revenues over Expenses	\$ (70,139.88)	\$ 44,498.32	\$ (9,557.36)	\$ (12,596.43)	\$ 51,828.50	\$ (35,951.24)	\$275,848.20	\$ (172,026.42)	\$ (8,130.00)	\$ (56,701.33)

**Table 8: Wastewater Utility Operational Expense and Revenue**

Expenses	2019-20 Actual	2020-21 Actual	2021-22 Actual	2022-23 Budget	2023-24 Proposed Budget
Fixed Costs					
Salaries, Benefits, and other Compensation	\$ 55,528.81	\$ 90,351.35	\$ 100,417.45	\$ 125,474.00	\$ 78,362.00
Operating Expense	\$ 8,068.05	\$ 19,981.23	\$ 9,521.90	\$ 56,825.00	\$ 52,950
Annual Inspections	\$ -	\$ 14,397.51	\$ 13,452.30	\$ 20,000.00	\$ 20,000.00
Fees/Other Services	\$ 523.10	\$ 4,136.59	\$ 16,076.17	\$ 500.00	\$ 500.00
Contractual (Cost Wastewater)	\$ 461,168.50	\$ 485,981.00	\$ 353,475.52	\$ 540,136.00	\$ 561,741.00
<b>Total Expense</b>	<b>\$ 525,288.46</b>	<b>\$ 614,847.68</b>	<b>\$ 492,943.34</b>	<b>\$ 742,935.00</b>	<b>\$ 713,553.00</b>
Revenue					
Revenue	2019-20 Actual	2020-21 Actual	2021-22 Actual	2022-23 Budget	2023-24 Proposed Budget
Utility Sales	\$ 366,370.23	\$ 505,750.52	\$ 350,603.99	\$ 386,641.00	\$ 410,997.00
Interest	\$ 27,428.27	\$ 2,332.15	\$ 14,060.43	\$ 31,129.00	\$ 65,000.00
Tap Fees	\$ 460.00	\$ 1,760.00	\$ -	\$ -	\$ -
General Fees & Inspections	\$ 50.00	\$ -	\$ -	\$ 665.00	\$ -
<b>Total Revenue</b>	<b>\$ 394,308.50</b>	<b>\$ 509,842.67</b>	<b>\$ 364,664.42</b>	<b>\$ 418,435.00</b>	<b>\$ 475,997.00</b>
<b>Operational Deficit</b>	<b>\$ (130,979.96)</b>	<b>\$ (105,005.01)</b>	<b>\$ (128,278.92)</b>	<b>\$ (324,500.00)</b>	<b>\$ (237,556.00)</b>

**Table 9: 10-Year Wastewater Utility Revenues and Expenses**

10 Year Wastewater Utility Revenues and Expenses										
Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Wastewater Revenue	\$ 373,645.73	\$357,486.38	\$429,347.72	\$418,634.77	452,933.83	\$408,620.18	\$ 431,879.18	\$394,308.50	\$509,842.67	\$ 306,105.21
Wastewater Expense	\$ 558,410.45	\$520,708.12	\$ 532,813.22	\$ 512,157.63	\$537,044.62	\$ 569,333.62	\$ 497,132.99	\$525,288.46	\$614,847.68	\$ 492,943.34
Difference	\$(184,764.72)	\$(163,221.74)	\$(103,465.50)	\$(93,522.86)	\$(84,110.79)	\$(160,713.44)	\$ (65,253.81)	\$(130,979.96)	\$(105,005.01)	\$ (186,838.13)
Transfer from General Fund	\$222,170.00	\$355,747.00	\$309,022.00	\$287,436.00	\$231,296.00	\$ 239,170.00	\$225,504.00		\$ 134,135.00	\$ 251,614.00
Transfer to Utility Reserves	\$ 75,000.00	\$ 77,250.00	\$ 20,329.00			\$ 86,946.00	\$ 89,554.00			\$ 330,234.00
Total Expenditures with Transfer to Reserves	\$ 633,410.45	\$597,958.12	\$ 553,142.22	\$ 512,157.63	\$537,044.62	\$656,279.62	\$586,686.99	\$525,288.46	\$614,847.68	\$ 823,177.34
Total Revenue including Transfer from GF	\$ 595,815.73	\$ 713,233.38	\$738,369.72	\$706,070.77	\$684,229.83	\$647,790.18	\$ 657,383.18	\$394,308.50	\$643,977.67	\$ 557,719.21
Ending Revenues over Expenses	\$ (37,594.72)	\$ 115,275.26	\$ 185,227.50	\$ 193,913.14	\$ 147,185.21	\$ (8,489.44)	\$ 70,696.19	\$(130,979.96)	\$ 29,129.99	\$(265,458.13)

## 1.8 Water and Wastewater Customer Rate Information

In 2014, the base rate and volumetric rates were adjusted. **Table 10** lays out the residential water and wastewater rates. Customers who use less than 3,000 gallons of water do not pay the base or volumetric rate for water consumption. This is paid by the City from the Water Conservation budget within the Water Utility.

**Table 10: Sunset Valley Residential Water and Wastewater Rates**

Sunset Valley Residential Water Rates	
Base Rate	\$9.14
Volumetric Rate:	Cost per 1,000 gallons
Tier 0: under 3,000	No base rate or volumetric charge
Tier 1: 0-9,999 gallons	\$3.31
Tier 2: 10,000-19,999 gallons	\$5.60
Tier 3: 20,000 gallons and up	\$9.92
Sunset Valley Residential Wastewater Rates	
Base Rate	\$4.00
Tier 1: 0-9,999 gallons	\$0.00
Tier 2: 10,000+	\$5.71

In 2014, Commercial water rates were made the same for irrigation or domestic use. The rate was raised and remains in effect to this day. Commercial rates are listed below in **Table 11**.

**Table 11: Sunset Valley Commercial Water and Wastewater Rates.**

Sunset Valley Commercial Water Rates	
Base Charge based on Meter Size	
5/8"	\$126.92
1"	\$142.77
1-1.5"	\$190.36
2"	\$253.82
3"	\$507.64
4"	\$634.56
6"	\$888.38
Commercial Irrigation Base Rate	
\$25.00	
Volumetric Rate	Cost per 1,000 gallons
\$6.30	
Sunset Valley Commercial Wastewater Rates	
Volumetric Rate	Cost per 1,000 gallons
\$9.97	

## **1.9 Purchased Water Rates and Charges**

The purchased water costs are also important to understanding their effect on expenses and revenues. The costs to purchase water from the City of Austin are listed in **Table 12**. **Table 13** also includes an analysis of rates from other Cities. The City of Stafford, is another city in Texas that has no property taxes similar to Sunset Valley. However, the water and wastewater service is provided by a Fort Bend County Water Control and Improvement District that imposes a property tax and water/wastewater rates for customers.

**Table 12: Purchased water and wastewater costs**

Purchased Water and Wastewater Costs from the City of Austin	
Water Monthly Charges	
Volumetric Rate-Cost per 1,000 gallons	
\$4.24	
Reserve surcharge-Cost per 1,000 gallons	
\$0.10	
Customer Base Charges by Location	Based on Meter Size
Stearn's Lane	\$8.00
Stearn's Lane	\$14.00
Ernest Robles	\$186.00
HWY 290	\$131.00
Brodie	\$131.00
Brodie	\$186.00
Brodie	\$84.00
Backflow Charges-Cost per backflow	
\$2.87	
Hydrant Charges-Cost per hydrant per month	
\$2.69	
Wastewater Monthly Charges	
Customer Charge-charges per meter	
\$10.30	
Volumetric Rate	Cost per 1,000 gallons
\$5.71	
Industrial Waste Surcharge	
\$3,961.84	

**1.10 Residential Rate Comparison of other Utility Service Providers**

**Table 13. Rates from other Utility Service Providers for Residential Customers**

Utility Service Provider		Travis County Water Control and Improvement District #19	Westlake Hills	SWWC and Midtex Utilities	City of Rollingwood
<b>Water</b>					
Property Tax Rate (assessed per \$100 value)		Effective Tax Rate 0.2049	0.318239		0.1796
Base Rate Residential Water					
Based on Meter Size	5.8" or ¾"	\$67.80	Travis County WCID #10 provides water service	\$39.95	\$20.00
	1"	\$112.50		\$99.88	\$30.00
	1.5"	\$360		\$199.75	\$80.00
	2"	TBD		\$319.60	\$128.00
	3"	TBD		\$599.25	\$240.00
	4"	TBD		\$998.75	\$400.00
	6"	TBD		\$1,997.50	\$800.00
	8"	TBD		\$3,196.00	\$1,280.00
	10"	TBD		\$4,594.25	NA
	12"	TBD	\$9,987.50	NA	
Volumetric Rates Residential Water (Cost per 1000 gallons)		0-5000 gallons-\$2.35 5,001-25,000-\$2.85 25,001-45,000-\$3.35 45,000-70,000-\$3.85 70,001 and above-\$4.35		0-2,000 gallons-\$6.05 2,002-10,000 gallons-\$7.45 10,001-20,000 gallons-\$8.45 20,000 gallons or more-\$9.00	0-2,000 gallons-\$2.00 2,001-8,000 gallons-\$5.00 8,001-13,000 gallons-\$7.00 13,001-25,000 gallons-\$10.00 25,001-35,000 gallons-\$15.00 35,001-50,000 gallons-\$21.00 Over 50,000 gallons-\$28.00
<b>Wastewater</b>					
Base Rate Residential Wastewater		Up to 1.5" meter-\$50.82 2" meter and above-\$388.32	2022-2023-\$82.44 2024-2024-\$85.74		\$13.07
Volumetric rate		Up to 1.5: meter-\$1.50 per 1,000 gallons over 2,000 2" meter and up-\$2.63 per 1,000 gallons over 2,000	2022-2023-\$10.64 per 1,000 gallons 2024-2024-\$11.07 per 1,000 gallons		\$7.81 Per 1,000 gallons

Utility Service Provider		Travis County Water Control and Improvement District #10	Shady Hollow	Creedmore-Maha Utility Services	City of Manor
<b>Water</b>					
Property Tax Rate (assessed per \$100 value)		0.0625	0.0928	Water Pass Through charge of \$2.27 per 1,000 gallons	0.7827
Base Rate Residential Water					
Based on Meter Size	5.8" or ¾"	\$25.00	In District- \$34.00 Out of District-\$38.00	\$39.90/\$59.85	\$27.16/23.13 (senior citizen)
	1"	\$27.50		\$99.75	\$45.36
	1.5"	\$36.75		\$199.50	
	2"	\$43.00		\$319.20	
	3"	\$52.00		\$598.50	
	4"	\$92.50			
	6"	\$205.00			
	8"	\$328.00			
	10"	\$471.00			
	12"	NA			
Volumetric Rates Residential Water (Cost per 1000 gallons)		0-5000 gallons-\$2.50 5,001-10,000 gallons -\$3.13 10,001-15,000 gallons -\$3.91 15,001-20,000 gallons -\$4.88 20,001-30,000 gallons -\$6.10 30,001-45,000 gallons-\$7.63 45,001 and more gallons-\$9.71	2,000-10,000 gallons-\$7.94 10,000-30,000 gallons-\$10.32 Greater than 30,000 gallons-\$13.94	0-5,000 gallons-\$5.56 5,001-10,000 gallons-\$6.12 10,001-15,000 gallons-\$6.67 15,001-20,000 gallons- \$6.86 20,001-25,000 gallons-\$7.39 25,001-30,000 gallons-\$7.92 30,001-35,000 gallons- \$8.45 35,001-40,000 gallons- \$9.50 40,001-45,000- gallons-\$10.03 45,001-50,000 gallons-\$10.56 Over 50,000 gallons-\$10.56	0-2,000 gallons-\$0.56 2,001-5,000 gallons-\$3.02 5,001-10,000 gallons-\$3.36 10,001-15,000 gallons -\$3.64 15,001-25,000 gallons- \$3.92 Over 25,000 gallons- \$4.72
<b>Wastewater</b>					
Base Rate Residential Wastewater		NA	In District \$60.00 Includes first 2,000 gallons Out of District \$69.00 includes first 2,000 gallons	NA	5/8" meter-\$19.00/\$13.00 Senior Citizen 1" meter-\$37.50
Residential Volumetric Tiers Wastewater (per 1,000 gallons)		NA	In-District-\$8.00 Out of District-\$9.20	NA	0-8,000-\$3.75 8,001 and greater-\$4.40

### **1.11 Benefits Received by Customer Class**

For this analysis the operational budget from 2022 and the three-year average for each user group by volume was used to determine benefits received to different customer classes. Multifamily was included in the commercial numbers. This means that 63% of use is from commercial and multifamily and 32% of use is from residential customers. Percentage of revenue was based on the amount billed to residential and commercial customers. For water, residential customers are 10% of the revenue and commercial customers provide 90% of revenue. For wastewater, residential customers make 3% of the revenue and 97% of the revenue is provided by commercial customers. **Table 14** shows the benefits received by user class. In the wastewater utility both user groups receive benefits. Since the number of commercial customers only represents a fraction of the actual businesses within the City due to submetering within the shopping centers average benefit per user was not calculated for commercial customers. Overall, the residential customer class receives the most benefits it both utilities. This is possibly due to the industrial user fee charged to the City of Sunset Valley by the City of Austin, but that cost is not passed on to the commercial customers.

**Table 14: Benefit Analysis by User Class**

Water Utility Benefit Analysis FY 22				
Operating Costs	\$ 685,499.26	Revenue	Difference	Average Benefit to User
Residential	\$ 191,939.79	\$ 49,388.49	\$ (142,551.30)	\$ (579.48)
Commercial+Multifamily	\$ 431,864.53	\$ 444,496.44	\$ 12,631.90	NA
Wastewater Utility Benefit Analysis FY 22				
Operating Costs	\$ 492,943.34	Revenue	Difference	Average Benefit to User
Residential	\$ 157,741.87	\$ 9,183.16	\$ (148,558.71)	\$ (603.90)
Commercial+Multifamily	\$ 315,483.74	\$ 275,494.69	\$ (39,989.05)	NA

## **1.12 Residential Benefits by Gallons Used**

**Table 15** demonstrates the benefits residents receive based on the cost of purchased water and wastewater only. The rate from the City of Austin includes the volumetric rate plus all customer charges divided equally among all customers. This does not reflect operational cost or capital costs that will be discussed on the following pages.

Overall, the utility subsidizes every residential customer using less than 26,000 gallons of water. The most benefits are seen by customers using between 9,000 to 10,000 gallons of water. Only residential customers who average more than 10,000 gallons of water use during the winter averaging months pay for wastewater service. These residents also only pay for wastewater use above \$10,000 gallons. This is approximately only 46 residents in 2022. All other residents only pay the base rate for wastewater service of \$4.00 per month.

**Table 15: Residential Benefits by Water Usage based on Cost to Sunset Valley from the City of Austin.**

Water Usage (1,000 Gallons)	City of Austin Cost to Sunset Valley	Total Bill to Sunset Valley Customer	Subsidy (-), Profit +
0	\$ 4.33	\$ 4.00	\$(0.33)
1	\$ 14.38	\$ 4.00	\$(10.38)
2	\$ 24.43	\$ 4.00	\$(20.43)
3	\$ 34.48	\$ 4.00	\$(30.48)
4	\$ 44.53	\$ 26.38	\$(18.15)
5	\$ 54.58	\$ 29.69	\$(24.89)
6	\$ 64.63	\$ 33.00	\$(31.63)
7	\$ 74.68	\$ 36.31	\$(38.37)
8	\$ 84.73	\$ 39.62	\$(45.11)
9	\$ 94.78	\$ 42.93	\$(51.85)
10	\$ 104.83	\$ 54.24	\$(50.59)
11	\$ 114.88	\$ 65.55	\$(49.33)
12	\$ 124.93	\$ 76.86	\$(48.07)
13	\$ 134.98	\$ 88.17	\$(46.81)
14	\$ 145.03	\$ 99.48	\$(45.55)
15	\$ 155.08	\$ 110.79	\$(44.29)
16	\$ 165.13	\$ 122.10	\$(43.03)
17	\$ 175.18	\$ 133.41	\$(41.77)
18	\$ 185.23	\$ 144.72	\$(40.51)
19	\$ 195.28	\$ 156.03	\$(39.25)
20	\$ 205.33	\$ 171.66	\$(33.67)
21	\$ 215.38	\$ 187.29	\$(28.09)
22	\$ 225.43	\$ 202.92	\$(22.51)
23	\$ 235.48	\$ 218.55	\$(16.93)
24	\$ 245.53	\$ 234.18	\$(11.35)
25	\$ 255.58	\$ 249.81	\$(5.77)
26	\$ 265.63	\$ 265.44	\$(0.19)
27	\$ 275.68	\$ 281.07	\$5.39
28	\$ 285.73	\$ 296.70	\$10.97
29	\$ 295.78	\$ 312.33	\$16.55
30	\$ 305.83	\$ 327.96	\$22.13
31	\$ 315.88	\$ 343.59	\$27.71
32	\$ 325.93	\$ 359.22	\$33.29
33	\$ 335.98	\$ 374.85	\$38.87
34	\$ 346.03	\$ 390.48	\$44.45
35	\$ 356.08	\$ 406.11	\$50.03

### 1.12 Operational Costs

Water and wastewater are services that require maintenance, inspection, and monitoring. This requires personnel and other operational costs in order to deliver the services. As described earlier, there are fixed and variable costs to provide utility services. Generally, the base rate should cover the cost of the operational expenses of the utility. The volumetric rate can be designed to cover the variable costs, such as the cost to purchase water from the City of Austin. In **Table 16 and 17** below the breakeven rate for base rates has been calculated for water and wastewater residential services. The rate was calculated based on the average of actuals (FY 20, 21, 22), FY 23 current budget, and FY 24 proposed budget operational costs only. FY 24 has personnel cost allocated based on data collected over the past years. This represents a more realistic split on the time devoted to water and waste water utility tasks. Based on these calculations the rate for residents should be \$30.94 for water and 14.90 for wastewater. This equals \$45.84 per residential customer to cover the cost of delivering water to an end user.

**Table 16: Breakeven Rate-Water**

Water Breakeven Operational Costs	
5 year Average Wastewater Operating Costs	Residential Percent of Cost of Operations
\$ 285,391.17	\$ 91,325.18
Number of Customers	246
Base Rate-Breakeven	\$ 30.94

**Table 17: Breakeven Rate- Wastewater**

Wastewater Breakeven Operational Costs	
5 year Average Wastewater Operating Costs	Residential Percent of Cost of Operations
\$ 137,413.09	\$ 43,972.19
Number of Customers	246
Base Rate-Breakeven	\$ 14.90

In **Table 18** the operational costs were added to the total cost to determine the effective benefit to each level of residential customer. Once the operational costs are added into the total cost, the City does not cover the cost until over 34,000 gallons of water usage.

**Table 18: Residential Benefits by Water Usage based on Cost to Sunset Valley from the City of Austin with operational expenses included.**

Water Usage (1,000 Gallons)	City of Austin Cost to Sunset Valley	Operational Expense	Total Bill to Sunset Valley Customer	Subsidy (-) Profit (+)
0	\$ 4.33	\$ 45.84	\$ 4.00	\$(46.17)
1	\$ 14.38	\$ 45.84	\$ 4.00	\$(56.22)
2	\$ 24.43	\$ 45.84	\$ 4.00	\$(66.27)
3	\$ 34.48	\$ 45.84	\$ 4.00	\$(76.32)
4	\$ 44.53	\$ 45.84	\$ 26.38	\$(63.99)
5	\$ 54.58	\$ 45.84	\$ 29.69	\$(70.73)
6	\$ 64.63	\$ 45.84	\$ 33.00	\$(77.47)
7	\$ 74.68	\$ 45.84	\$ 36.31	\$(84.21)
8	\$ 84.73	\$ 45.84	\$ 39.62	\$(90.95)
9	\$ 94.78	\$ 45.84	\$ 42.93	\$(97.69)
10	\$ 104.83	\$ 45.84	\$ 54.24	\$(96.43)
11	\$ 114.88	\$ 45.84	\$ 65.55	\$(95.17)
12	\$ 124.93	\$ 45.84	\$ 76.86	\$(93.91)
13	\$ 134.98	\$ 45.84	\$ 88.17	\$(92.65)
14	\$ 145.03	\$ 45.84	\$ 99.48	\$(91.39)
15	\$ 155.08	\$ 45.84	\$ 110.79	\$(90.13)
16	\$ 165.13	\$ 45.84	\$ 122.10	\$(88.87)
17	\$ 175.18	\$ 45.84	\$ 133.41	\$(87.61)
18	\$ 185.23	\$ 45.84	\$ 144.72	\$(86.35)
19	\$ 195.28	\$ 45.84	\$ 156.03	\$(85.09)
20	\$ 205.33	\$ 45.84	\$ 171.66	\$(79.51)
21	\$ 215.38	\$ 45.84	\$ 187.29	\$(73.93)
22	\$ 225.43	\$ 45.84	\$ 202.92	\$(68.35)
23	\$ 235.48	\$ 45.84	\$ 218.55	\$(62.77)
24	\$ 245.53	\$ 45.84	\$ 234.18	\$(57.19)
25	\$ 255.58	\$ 45.84	\$ 249.81	\$(51.61)
26	\$ 265.63	\$ 45.84	\$ 265.44	\$(46.03)
27	\$ 275.68	\$ 45.84	\$ 281.07	\$(40.45)
28	\$ 285.73	\$ 45.84	\$ 296.70	\$(34.87)
29	\$ 295.78	\$ 45.84	\$ 312.33	\$(29.29)
30	\$ 305.83	\$ 45.84	\$ 327.96	\$(23.71)
31	\$ 315.88	\$ 45.84	\$ 343.59	\$(18.13)
32	\$ 325.93	\$ 45.84	\$ 359.22	\$(12.55)
33	\$ 335.98	\$ 45.84	\$ 374.85	\$(6.97)
34	\$ 346.03	\$ 45.84	\$ 390.48	\$(1.39)
35	\$ 356.08	\$ 45.84	\$ 406.11	\$4.17

## 2.0 Long-term Water and Wastewater Infrastructure

The long-term infrastructure plan is intended to help prioritize and determine projects for consideration into periods of capital improvement planning. The plan includes an inventory of existing infrastructure, estimated costs for the replacement of the infrastructure over time, information regarding future infrastructure as well as recommendations for annual funding commitments and reserves. The plan is designed to help shape future capital improvement planning while also determining funding strategies to continue the City’s effort to fund infrastructure improvements without debt.

### 2.1 Water Distribution System Analysis

The City of Sunset Valley owns and maintains approximately seven miles of water distribution lines. This includes 7 interconnections with the City of Austin providing water to customers within the City of Sunset Valley. **Table 19** includes a list of existing infrastructure within the City. The City Council has decided to use a 40 year service life for water and wastewater infrastructure. The water system in Sunset Valley is relatively young with the oldest section of waterline being on Sunset Trail which is being replaced in 2023.

**Table 19: Waterline Inventory 9/1/2022**

Water System Infrastructure	Build Year	Estimated Replacement Year	Size (inches)	Length (Feet)	Type	Average Life (years)
Sunset Trail Section I	1989	2029	4	944	PVC	40
Sunset Trail Section II	1998	2038	6	986	PVC	40
Market Fair 12"	1991	2031	12	837	PVC	40
Interconnection Lone Oak to Pillow	1994	2034	6	501	PVC	40
Interconnection Pillow to Reese	1994	2034	6	523	PVC	40
Jones Road 8"	1994	2034	8	1693	PVC	40
Ernest Robles Way at 4715 Lamar 6"	1995	2035	6	586	DI	40
Home Depot Blvd to Market Fair	1996	2036	12	557	DI	40
Ernest Robles South 6"	1998	2038	6	2650	PVC	40
Lone Oak	1998	2038	6	2573	PVC	40
Sunset Valley Village 8"	1998	2038	8	585	DI	40
Sunset Valley Village 16"	1998	2038	16	557	DI	40

Water System Infrastructure	Build Year	Estimated Replacement Year	Size (inches)	Length (feet)	Type	Average Life (years)
Sunset Valley Meadows 12"	1998	2038	12	1750	DI	40
Oakdale Warnken Line	1999	2039	8	848	PVC	40
Sunset Valley Meadows 8"	2000	2040	8	3338	PVC	40
Home Depot	2002	2042	12	1052	PVC	40
Meadowview 8"	2002	2042	8	437	PVC	40
Ernest Robles North 12 "	2002	2042	12	665	PVC	40
Highway 290 West Section I	2004	2044	8	1085	PVC	40
Highway 290 West Section II	2005	2045	8	650	PVC	40
Sunset Valley Villas	2005	2045	8	2317	DI	40
Jones Road 16"	2005	2045	16	1460	DI	40
Ernest Robles South 12 " La Madeline	2006	2046	12	437	DI	40
Ernest Robles South 12 "Homestead	2006	2046	12	835	DI	40
Emergency Bypass 8"	2007	2047	8	700	PVC	40
Oakdale	2010	2050	8	3288	PVC	40
Reese	2011	2051	8	2526	PVC	40
Interconnection Lone Oak to Pillow	2012	2052	8	677	PVC	40
Pillow	2012	2052	8	3123	PVC	40
Ernest Robles Midsection 12" Creek crossing	2013	2053	12	1000	DI	40
City of Austin Bypass	2007	2047	16 8	400 1200	DI PVC	40
AMI-Residential	2020-2023	2028-2031	Various	N/A	N/A	8 years

## 2.2 Future Infrastructure

There are several areas of the City where the City of Austin is providing water to customers within the City of Sunset Valley service area. This includes Sunset Valley Elementary School, the Toney Burger Center and Country White Lane. Additionally, the City of Austin is wanting to reduce the number of interconnections between their system and homes along Stearn's Lane will be eventually served by the

connection on HWY 290. The City of Sunset Valley is also undertaking the process to change all meters to automated metering infrastructure (AMI). Additionally, there will be infrastructure projects associated with converting all commercial meters to automated metering infrastructure. The following is a list of proposed projects to improve the current water distribution system:

- Conversion of AISD properties to become City of Sunset Valley customers.
  - This project was completed in the summer of 2023.
- Stearns Lane Waterline Phase 1
  - This project is proposed for FY 23 and will include connecting the water from HWY 290 and coming down Stearns Lane to the lift station location.
- Stearns Lane Waterline Phase 2
  - This project will connect the remainder residents of Sunset Valley to an extended waterline along Stearns Lane
- Country White Lane Waterline
  - This project will replace the existing two-inch line in Country White Lane with a larger, eight-inch waterline and add additional fire hydrants to the system. The project is in the design phase in 2023 and will move to construction in 2024.
- Commercial AMI
  - This project will replace the existing meters with meters capable of AMI. This project is estimated to begin in 2024-2025.

### **2.3 Cost Estimates**

In 2013, the estimated cost of waterline infrastructure was approximately \$5,436,530. Based on the Bureau of Labor Statistics inflation calculator, with an adjustment for inflation this would equal approximately \$6,994,586 in 2022. The cumulative inflation from 2013 until 2022 was 28.66. Averaged over the 10-year period this would be approximately 2.86 % per year. There are several assumptions that must be addressed with these estimates. First, this estimate does consider local area factors that may affect cost. For example, the Austin area is booming, and construction is typically more expensive in this area. Second, infrastructure such as backflow assembly devices, vaults, and meters were not included in the original replacement schedule. Each of these items have service lives that will need to be considered and included in future planning efforts.

In **Table 20** costs are predicted for replacement of waterline infrastructure. Unlike wastewater lines that can be inspected, waterlines are replaced on a more routine schedule. The City has adopted a 40 year replacement schedule for underground infrastructure. The predications are based on an assumption of 3% inflation each year and does not account for the other items mentioned above.

Location/Year	Table 20: 3% annual inflation estimated. Yellow highlighted area is anticipated replacement date. Beige highlighted area is the replacement date based on age.																													
	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051
Sunset Trail Section I	157,890.36	162,627.07	167,505.88	172,531.06	177,706.99	183,038.20	188,529.35	194,185.23	200,010.79	206,011.11	212,191.44	218,557.19	225,113.90	231,867.32	238,823.34	245,988.04	253,367.68	260,968.71	268,797.77	276,861.70	285,167.56	293,722.58	302,534.26	311,610.29	320,958.60	330,587.35	340,504.98	350,720.12	361,241.73	372,078.98
Sunset Trail Section II	164,915.14	169,862.60	174,958.48	180,207.23	185,613.45	191,181.85	196,917.31	202,824.83	208,909.57	215,176.86	221,632.16	228,281.13	235,129.56	242,183.45	249,448.95	256,932.42	264,640.39	272,579.61	280,756.99	289,179.70	297,855.10	306,790.75	315,994.47	325,474.30	335,238.53	345,295.69	355,654.56	366,324.20	377,313.92	388,633.34
Market Fair 12"	215,375.22	221,836.47	228,491.57	235,346.31	242,406.70	249,678.90	257,169.27	264,884.35	272,830.88	281,015.81	289,446.28	298,129.67	307,073.56	316,285.77	325,774.34	335,547.57	345,614.00	355,982.42	366,661.89	377,661.75	388,991.60	400,661.35	412,681.19	425,061.62	437,813.47	450,947.87	464,476.31	478,410.60	492,762.92	507,545.81
Interconnection Lone Oak to Pillow	64,458.17	66,391.92	68,383.68	70,435.19	72,548.24	74,724.69	76,966.43	79,275.42	81,653.69	84,103.30	86,626.40	89,225.19	91,901.94	94,659.00	97,498.77	100,423.73	103,436.45	106,539.54	109,735.73	113,027.80	116,418.63	119,911.19	123,508.53	127,213.78	131,030.20	134,961.10	139,009.94	143,180.23	147,475.64	151,899.91
Interconnection Pillow to Reese	67,288.67	69,307.33	71,386.55	73,528.15	75,733.99	78,006.01	80,346.19	82,756.58	85,239.28	87,796.46	90,430.35	93,143.26	95,937.56	98,815.68	101,780.15	104,833.56	107,978.57	111,217.92	114,554.46	117,991.09	121,530.83	125,176.75	128,932.06	132,800.02	136,784.02	140,887.54	145,114.16	149,467.59	153,951.62	158,570.17
Jones Road 8"	217,819.74	224,354.33	231,084.96	238,017.51	245,158.03	252,512.77	260,088.16	267,890.80	275,927.53	284,205.35	292,731.51	301,513.46	310,558.86	319,875.63	329,471.90	339,356.05	349,536.74	360,022.84	370,823.52	381,948.23	393,406.68	405,208.88	417,365.14	429,886.10	442,782.68	456,066.16	469,748.14	483,840.59	498,355.81	513,306.48
Ernest Robles Way at 4715 Lamar 6"	150,788.38	155,312.03	159,971.40	164,770.54	169,713.65	174,805.06	180,049.22	185,450.69	191,014.21	196,744.64	202,646.98	208,726.39	214,988.18	221,437.82	228,080.96	234,923.39	241,971.09	249,230.22	256,707.13	264,408.34	272,340.59	280,510.81	288,926.13	297,593.92	306,521.74	315,717.39	325,188.91	334,944.58	344,992.92	355,342.70
Home Depot Blvd to Market Fair	179,157.70	184,532.43	190,068.40	195,770.46	201,643.57	207,692.88	213,923.66	220,341.37	226,951.61	233,760.16	240,772.97	247,996.16	255,436.04	263,099.12	270,992.10	279,121.86	287,495.51	296,120.38	305,003.99	314,154.11	323,578.73	333,286.10	343,284.68	353,583.22	364,190.72	375,116.44	386,369.93	397,961.03	409,899.86	422,196.85
Ernest Robles South 6"	340,946.43	351,174.82	361,710.07	372,561.37	383,738.21	395,250.36	407,107.87	419,321.10	431,900.74	444,857.76	458,203.49	471,949.60	486,108.08	500,691.33	515,712.07	531,183.43	547,118.93	563,532.50	580,438.47	597,851.63	615,787.18	634,260.79	653,288.62	672,887.27	693,073.89	713,866.11	735,282.09	757,340.56	780,060.77	803,462.60
Lone Oak	364,143.65	375,067.96	386,320.00	397,909.60	409,846.89	422,142.30	434,806.56	447,850.76	461,286.28	475,124.87	489,378.62	504,059.98	519,181.78	534,757.23	550,799.95	567,323.95	584,343.66	601,873.97	619,930.19	638,528.10	657,683.94	677,414.46	697,736.89	718,669.00	740,229.07	762,435.94	785,309.02	808,868.29	833,134.34	858,128.37
Sunset Valley Village 8"	112,898.30	116,285.25	119,773.81	123,367.02	127,068.03	130,880.07	134,806.47	138,850.67	143,016.19	147,306.67	151,725.87	156,277.65	160,965.98	165,794.96	170,768.81	175,891.87	181,168.63	186,603.69	192,201.80	197,967.85	203,906.89	210,024.09	216,324.82	222,814.56	229,499.00	236,383.97	243,475.49	250,779.75	258,303.14	266,052.24
Sunset Valley Village 16"	179,157.70	184,532.43	190,068.40	195,770.46	201,643.57	207,692.88	213,923.66	220,341.37	226,951.61	233,760.16	240,772.97	247,996.16	255,436.04	263,099.12	270,992.10	279,121.86	287,495.51	296,120.38	305,003.99	314,154.11	323,578.73	333,286.10	343,284.68	353,583.22	364,190.72	375,116.44	386,369.93	397,961.03	409,899.86	422,196.85
Sunset Valley Meadows 12"	562,883.26	579,769.75	597,162.85	615,077.73	633,530.06	652,535.97	672,112.04	692,275.41	713,043.67	734,434.98	756,468.03	779,162.07	802,536.93	826,613.04	851,411.43	876,953.77	903,262.39	930,360.26	958,271.07	987,019.20	1,016,629.77	1,047,128.67	1,078,542.53	1,110,898.80	1,144,225.77	1,178,552.54	1,213,909.12	1,250,326.39	1,287,836.18	1,326,471.27
Oakdale Warken Line	109,102.86	112,375.94	115,747.22	119,219.64	122,796.23	126,480.11	130,274.52	134,182.75	138,208.24	142,354.48	146,625.12	151,023.87	155,554.59	160,221.22	165,027.86	169,978.70	175,078.06	180,330.40	185,740.31	191,312.52	197,051.90	202,963.45	209,052.36	215,323.93	221,783.65	228,437.15	235,290.27	242,348.98	249,619.45	257,108.03
Sunset Valley Meadows 8"	429,463.84	442,347.76	455,618.19	469,286.74	483,365.34	497,866.30	512,802.29	528,186.36	544,031.95	560,352.90	577,163.49	594,478.40	612,312.75	630,682.13	649,602.59	669,090.67	689,163.39	709,838.29	731,133.44	753,067.45	775,659.47	798,929.25	822,897.13	847,584.05	873,011.57	899,201.91	926,177.97	953,963.31	982,582.21	1,012,059.68
Home Depot	203,023.95	209,114.67	215,388.11	221,849.75	228,505.24	235,360.40	242,421.21	249,693.85	257,184.66	264,900.20	272,847.21	281,032.63	289,463.61	298,147.51	307,091.94	316,304.70	325,793.84	335,567.45	345,634.68	356,003.72	366,683.84	377,684.35	389,014.88	400,685.33	412,705.89	425,087.06	437,839.68	450,974.87	464,504.11	478,439.24
Meadowview 8"	56,224.00	57,910.72	59,648.04	61,437.48	63,280.60	65,179.02	67,134.39	69,148.42	71,222.88	73,359.56	75,560.35	77,827.16	80,161.97	82,566.83	85,043.84	87,595.15	90,223.01	92,929.70	95,717.59	98,589.12	101,546.79	104,593.19	107,730.99	110,962.92	114,291.81	117,720.56	121,252.18	124,889.74	128,636.44	132,495.53
Ernest Robles North 12 "	128,337.38	132,187.50	136,153.13	140,237.72	144,444.85	148,778.20	153,241.55	157,838.79	162,573.96	167,451.18	172,474.71	177,648.95	182,978.42	188,467.77	194,121.81	199,945.46	205,943.82	212,122.14	218,485.80	225,040.38	231,791.59	238,745.34	245,907.70	253,284.93	260,883.47	268,709.98	276,771.28	285,074.42	293,626.65	302,435.45
Highway 290 West Section I	139,595.05	143,782.90	148,096.39	152,539.28	157,115.46	161,828.92	166,683.79	171,684.30	176,834.83	182,139.87	187,604.07	193,232.19	199,029.16	205,000.03	211,150.03	217,484.54	224,009.07	230,729.34	237,651.22	244,780.76	252,124.18	259,687.91	267,478.55	275,502.90	283,767.99	292,281.03	301,049.46	310,080.94	319,383.37	328,964.87
Highway 290 West Section II	83,628.37	86,137.22	88,721.34	91,382.98	94,124.47	96,948.20	99,856.65	102,852.35	105,937.92	109,116.05	112,389.54	115,761.22	119,234.06	122,811.08	126,495.41	130,290.27	134,198.98	138,224.95	142,371.70	146,642.85	151,042.14	155,573.40	160,240.80	165,047.82	169,999.26	175,099.23	180,352.21	185,762.78	191,335.66	197,075.73
Sunset Valley Villas	596,205.95	614,092.12	632,514.89	651,490.33	671,035.04	691,166.10	711,901.08	733,258.11	755,255.85	777,913.53	801,250.93	825,288.46	850,047.12	875,548.53	901,814.99	928,869.44	956,735.52	985,437.58	1,015,000.71	1,045,450.73	1,076,814.26	1,109,118.68	1,142,392.24	1,176,664.01	1,211,963.93	1,248,322.85	1,285,772.53	1,324,345.71	1,364,076.08	1,404,998.36
Jones Road 16"	469,605.46	483,693.62	498,204.43	513,150.56	528,545.08	544,401.43	560,733.48	577,555.48	594,882.15	612,728.61	631,110.47	650,043.78	669,545.10	689,631.45	710,320.39	731,630.00	753,578.90	776,186.27	799,471.86	823,456.02	848,159.70	873,604.49	899,812.62	926,807.00	954,611.21	983,249.55	1,012,747.03	1,043,129.44	1,074,423.33	1,106,656.03
Ernest Robles South 12" La Madeline	112,447.99	115,821.43	119,296.07	122,874.96	126,561.21	130,358.04	134,268.78	138,296.85	142,445.75	146,719.12	151,120.70	155,654.32	160,323.95	165,133.67	170,087.68	175,190.31	180,446.02	185,859.40	191,435.18	197,178.24	203,093.58	209,186.39	215,461.98	221,925.84	228,583.62	235,441.12	242,504.36	249,779.49	257,272.87	264,991.06
Ernest Robles South 12 "Homestead	214,860.58	221,306.40	227,945.59	234,783.96	241,827.48	249,082.30	256,554.77	264,251.41	272,178.95	280,344.32	288,754.65	297,417.29	306,339.81	315,530.01	324,995.91	334,745.78	344,788.16	355,131.80	365,785.76	376,759.33	388,062.11	399,703.97	411,695.09	424,045.94	436,767.32	449,870.34	463,366.45	477,267.44	491,585.47	506,333.03
Emergency Bypass 8"	180,122.64	185,526.32	191,092.11	196,824.87	202,729.62	208,811.51	215,075.85	221,528.13	228,173.97	235,019.19	242,069.77	249,331.86	256,811.82	264,516.17	272,451.66	280,625.21	289,043.96	297,715.28	306,646.74	315,846.14	325,321.53	335,081.17	345,133.61	355,487.62	366,152.25	377,136.81	388,450.92	400,104.44	412,107.58	424,470.80
Oakdale	423,030.89	435,721.82	448,793.47	462,257.28	476,124.99	490,408.74	505,121.01	520,274.64	535,882.88	551,959.36	568,518.14	585,573.69	603,140.90	621,235.12	639,872.18	659,068.34	678,840.39	699,205.												

## 2.4 Wastewater System Analysis

The City of Sunset Valley owns and maintains approximately five miles of wastewater lines. These lines are interconnected to the lines of the City of Austin. **Table 21** includes a list of existing infrastructure within the City. The City Council has decided to use a 40-year service life for water and wastewater infrastructure. However, wastewater lines can be inspected, and the replacement of these lines can be based on the condition of the lines. Below is a table of wastewater system infrastructure including the sewer main lines and the lift station.

Water System Infrastructure	Build Year	Estimated Replacement Year	Size (inches)	Length (feet)	Type	Average Life (years)
Lone Oak Trail	1991	2031	8	2631	SDR 35	40
Sunset Trail	1991	2031	8	1676	SDR 35	40
Clarmac	1991	2031	8	331	SDR 35	40
Reese Drive line O	1991	2031	8	284	SDR 35	40
Stearns Lane connection lift station to COA	1991	2031	8	473	SDR 26	40
Oakdale Drive line A	1991	2031	8	2676	SDR 35	40
Oakdale Drive line C	1991	2031	8	548	SDR 35	40
Sunset Valley Meadows	1998	2038	8	5164	SDR 35	40
Sunset Valley Village	1998	2038	8	420	SDR 35	40
Oakdale Drive line B	1998	2038	8	568	SDR 35	40
Home Depot Blvd	2001	2041	8	210	SDR 35	40
Stearns Lane	2002	2042	8	1101	SDR 35	40
Highway 290 East	2002	2042	8	1786	SDR 35	40
Highway 290 West	2003	2043	8	1950	SDR 26	40
Sunset Valley Villas (all streets)	2005	2045	8	2058	SDR 35	40
LaMadeline	2005	2045	8	325	SDR 35	40
Homestead	2009	2049	8	638	SDR 35	40
Reese Drive main line	2011	2051	8	1804	SDR 35	40

Water System Infrastructure	Build Year	Estimated Replacement Year	Size (inches)	Length (feet)	Type	Average Life (feet)
Pillow Road	2012	2052	8	2176	SDR 35	40
Lift Station	2023	2043	N/A			20

**2.5 Cost Estimates**

In 2013, the estimated cost of all wastewater infrastructure was \$3,802,357. With an adjustment of 3% per annual inflation this would equal approximately \$4,892,098 in 2023.

In **Table 22**, costs are estimated for replacement of wastewater lines. This assumes a 40-year replacement schedule. However, wastewater lines can be inspected as well as, repaired and maintained. This can extend the lifespan of the infrastructure. As such, the replacement for these lines may occur at a different frequency than anticipated depending on the condition of the line.

Location/Year	2022 Cost Estimates	Table 22: Wastewater Infrastructure replacement. 3% annual inflation estimated. Yellow highlighted area is anticipated replacement date. Beige highlighted area is the replacement date based on age.																												
		2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Lone Oak Trail	423,127.38	435,821.21	448,895.84	462,362.72	476,233.60	490,520.61	505,236.23	520,393.31	536,005.11	552,085.27	568,647.82	585,707.26	603,278.48	621,376.83	640,018.13	659,218.68	678,995.24	699,365.10	720,346.05	741,956.43	764,215.12	787,141.58	810,755.82	835,078.50	860,130.85	885,934.78	912,512.82	939,888.21	968,084.85	997,127.40
Sunset Trail	269,540.67	277,626.89	285,955.69	294,534.37	303,370.40	312,471.51	321,845.65	331,501.02	341,446.05	351,689.44	362,240.12	373,107.32	384,300.54	395,829.56	407,704.44	419,935.58	432,533.65	445,509.65	458,874.94	472,641.19	486,820.43	501,425.04	516,467.79	531,961.83	547,920.68	564,358.30	581,289.05	598,727.72	616,689.55	635,190.24
Clarmac	53,232.67	54,829.65	56,474.54	58,168.78	59,913.84	61,711.26	63,562.60	65,469.47	67,433.56	69,456.57	71,540.26	73,686.47	75,897.06	78,173.98	80,519.20	82,934.77	85,422.81	87,985.50	90,625.06	93,343.82	96,144.13	99,028.45	101,999.31	105,059.29	108,211.07	\$ 111,457.40	114,801.12	118,245.15	121,792.51	125,446.28
Reese Drive line O	45,673.96	\$47,044.17	\$ 48,455.50	\$ 49,909.16	\$ 51,406.44	\$ 52,948.63	\$ 54,537.09	56,173.20	57,858.40	59,594.15	\$ 61,381.98	63,223.44	65,120.14	67,073.74	69,085.96	71,158.53	73,293.29	\$ 75,492.09	\$ 77,756.85	80,089.56	82,492.24	84,967.01	\$ 87,516.02	90,141.50	92,845.75	95,631.12	98,500.05	101,455.06	104,498.71	107,633.67
Stearns Laneconnection lift station to COA	76,069.65	78,351.74	80,702.29	\$ 83,123.36	\$ 85,617.06	\$ 88,185.57	\$ 90,831.14	93,556.08	96,362.76	99,253.64	102,231.25	105,298.19	108,457.13	111,710.85	115,062.17	118,514.04	122,069.46	125,731.54	129,503.49	133,388.59	137,390.25	141,511.96	145,757.3	150,130.04	154,633.94	159,272.96	164,051.15	168,972.68	174,041.86	179,263.12
Oakdale Drive line A	430,364.46	43,275.39	456,573.65	470,270.86	484,378.99	498,910.36	513,877.67	529,294.00	545,172.82	561,528.00	578,373.84	595,725.06	613,596.81	632,004.71	650,964.85	670,493.80	690,608.61	711,326.87	732,666.68	754,646.68	777,286.08	800,604.66	824,622.80	849,361.48	874,842.33	901,087.60	928,120.23	\$ 955,963.83	984,642.75	1,014,182.03
Oakdale Drive line C	88,131.44	90,775.38	\$93,498.64	96,303.60	99,192.71	102,168.49	105,233.54	108,390.55	111,642.27	114,991.53	118,441.28	121,994.52	125,654.35	129,423.98	133,306.70	137,305.90	141,425.08	145,667.83	150,037.87	154,539.01	159,175.18	163,950.43	168,868.94	173,935.01	179,153.06	184,527.65	190,063.48	195,765.39	201,638.35	207,687.50
Sunset Valley Meadows	830,494.04	855,408.86	881,071.13	907,503.26	934,728.36	962,770.21	991,653.31	1,021,402.91	1,052,045.00	1,083,606.35	1,116,114.54	1,149,597.98	1,184,085.92	1,219,608.49	1,256,196.75	1,293,882.65	\$1,332,699.13	1,372,680.11	1,413,860.51	1,456,276.32	1,499,964.61	1,544,963.55	1,591,312.46	1,639,051.83	1,688,223.39	1,738,870.09	1,791,036.19	1,844,767.28	1,900,110.30	1,957,113.60
Sunset Valley Village	67,545.99	69,572.37	71,659.54	73,809.33	76,023.61	78,304.32	80,653.45	\$83,073.05	85,565.24	88,132.20	90,776.16	93,499.45	96,304.43	99,193.56	102,169.37	105,234.45	108,391.49	111,643.23	114,992.53	118,442.30	121,995.57	125,655.44	129,425.10	133,307.86	137,307.09	141,426.30	145,669.09	150,039.17	154,540.34	159,176.55
Oakdale Drive line B	91,347.91	94,088.35	96,911.00	99,818.33	102,812.88	105,897.27	109,074.18	112,346.41	115,716.80	119,188.31	122,763.95	126,446.87	130,240.28	134,147.49	\$138,171.91	\$ 142,317.07	146,586.58	150,984.18	155,513.70	160,179.12	164,984.49	169,934.02	175,032.04	180,283.01	185,691.50	191,262.24	197,000.11	202,910.11	208,997.41	215,267.34
Home Depot Blvd	33,773.00	34,786.19	35,829.77	36,904.66	38,011.80	\$39,152.16	40,326.72	41,536.52	42,782.62	44,066.10	45,388.08	46,749.72	48,152.22	49,596.78	51,084.69	52,617.23	54,195.74	55,821.62	57,496.26	59,221.15	60,997.79	62,827.72	64,712.55	66,653.93	68,653.55	70,713.15	72,834.55	75,019.58	77,270.17	79,588.28
Stearns Lane	177,066.99	182,379.00	187,850.37	193,485.88	199,290.46	205,269.17	211,427.25	217,770.06	224,303.17	231,032.26	237,963.23	245,102.12	252,455.19	260,028.84	267,829.71	275,864.60	284,140.54	292,664.76	\$301,444.70	310,488.04	319,802.68	329,396.76	339,278.66	349,457.02	359,940.73	370,738.96	\$381,861.12	393,316.96	405,116.47	417,269.96
Highway 290 East	287,231.28	295,848.22	304,723.67	13,865.38	323,281.34	332,979.78	342,969.17	353,258.25	363,856.00	374,771.68	386,014.83	397,595.27	409,523.13	421,808.82	434,463.09	447,496.98	460,921.89	474,749.55	488,992.03	503,661.80	518,771.65	\$534,334.80	550,364.84	566,875.79	583,882.06	601,398.52	619,440.48	638,023.69	657,164.41	676,879.34
Highway 290 West	313,606.39	323,014.58	332,705.01	342,686.16	352,966.75	363,555.75	374,462.42	\$385,696.30	397,267.19	409,185.20	421,460.76	434,104.58	447,127.72	460,541.55	474,357.80	488,588.53	503,246.19	518,343.57	533,893.88	549,910.70	\$566,408.02	\$ 583,400.26	600,902.26	618,929.33	637,497.21	656,622.13	\$ 676,320.79	696,610.42	717,508.73	739,033.99
Sunset Valley Villas (all streets)	330,975.35	340,904.62	351,131.75	361,665.71	\$72,515.68	383,691.15	395,201.88	407,057.94	419,269.68	431,847.77	444,803.20	458,147.30	471,891.72	486,048.47	\$500,629.92	515,648.82	531,118.28	547,051.83	\$563,463.39	\$ 580,367.29	\$ 597,778.31	\$ 615,711.66	634,183.01	653,208.50	672,804.75	692,988.89	713,778.56	\$735,191.92	757,247.67	779,965.10
LaMadeline	52,267.73	53,835.76	55,450.84	57,114.36	58,827.79	60,592.63	62,410.40	64,282.72	66,211.20	68,197.53	70,243.46	72,350.76	74,521.29	76,756.93	79,059.63	81,431.42	83,874.36	86,390.60	88,982.31	91,651.78	94,401.34	97,233.38	100,150.38	103,154.89	106,249.54	109,437.02	112,720.13	116,101.74	119,584.79	123,172.33
Homestead	102,605.58	105,683.74	108,854.26	112,119.88	115,483.48	118,947.98	122,516.42	\$26,191.92	129,977.67	133,877.00	137,893.31	142,030.11	146,291.02	150,679.75	155,200.14	159,856.14	164,651.83	169,591.38	174,679.13	179,919.50	185,317.08	190,876.60	196,602.89	202,500.98	208,576.01	214,833.29	221,278.29	227,916.64	234,754.14	241,796.76
Reese Drive main line	290,126.11	298,829.90	307,794.79	317,028.64	326,539.50	336,335.68	346,425.75	356,818.52	367,523.08	378,548.77	389,905.23	401,602.39	413,650.46	426,059.98	438,841.78	452,007.03	465,567.24	479,534.26	493,920.29	508,737.89	524,000.03	539,720.03	555,911.63	572,588.98	589,766.65	607,459.65	625,683.44	644,453.94	663,787.56	683,701.19
Pillow Road	349,952.56	360,451.14	371,264.67	382,402.61	393,874.69	405,690.93	417,861.66	430,397.51	443,309.43	456,608.72	470,306.98	484,416.19	498,948.67	513,917.13	529,334.65	545,214.69	561,571.13	578,418.26	\$595,770.81	613,643.94	632,053.25	651,014.85	670,545.30	690,661.66	711,381.50	732,722.95	754,704.64	777,345.78	800,666.15	824,686.14
Lift Station	578,965.64	596,334.60	614,224.64	632,651.38	651,630.92	671,179.85	691,315.25	712,054.70	733,416.34	755,418.83	778,081.40	801,423.84	825,466.56	850,230.55	875,737.47	902,009.59	929,069.88	956,941.98	985,650.24	1,015,219.75	1,045,676.34	1,077,046.63	1,109,358.03	1,142,638.77	1,176,917.93	1,212,225.47	1,248,592.23	1,286,050.00	1,324,631.50	1,364,370.44
<b>Estimated Value of Water Infrastructure</b>	4,892,098.79	5,038,861.76	5,190,027.61	5,345,728.44	5,506,100.29	5,671,283.30	5,841,421.80	6,016,664.45	6,197,164.38	6,383,079.32	6,574,571.70	6,771,808.85	6,974,963.11	7,184,212.01	7,399,738.37	7,621,730.52	7,850,382.43	8,085,893.91	8,328,470.72	8,578,324.84	8,835,674.59	9,100,744.83	9,373,767.17	9,654,980.19	9,944,629.59	10,242,968.48	10,550,257.53	10,866,765.26	11,192,768.22	11,528,551.27
<b>Annual Replacement Costs</b>									96,362.76	59,594.15	68,647.82	446,793.79	125,654.35	\$ 632,004.71		\$ 142,317.07	1,332,699.13	111,643.23		59,221.15	319,802.68	534,334.80		103,154.89	672,804.75			227,916.64		683,701.19

## 2.6 Utility Infrastructure Investment Analysis

The City of Sunset Valley has a history of paying for projects without incurring debt. As such, a balanced approach to annual investments in infrastructure must be considered. In 2020, anticipating shortages in sales tax revenue as result of the impacts of closures due to Covid-19, the City stopped investing into utility infrastructure. In the years following, investments into infrastructure were also reduced.

**Table 23** demonstrates the results of different annual investments into utility infrastructure. There are several assumptions included in these projections. First, the annual growth of 3% inflation is adequate to account for the changes in the local economy. Second, no other repairs or improvements are required or completed. Third, that the repairs occur on the timeline as presented. Finally, the beginning budget of the utility fund is estimated for the end of the FY 2023. This number could change due to changes in the cost of CIP projects.

The first scenario assumes an annual investment based on \$210,000 included in the FY 2023 budget. In this scenario the fund would be depleted by 2038. Increasing the annual investments to \$300,000 would extend the life of the fund until 2041. Annual investments of \$400,000 would allow the fund to extend until 2046, and investments of \$500,000 would extend the life of the fund until 2051. Overall, all scenarios resulted in a depletion of the fund over time.

Between 45-50% of all of the water and wastewater infrastructure in the City was constructed between 1996 and 2006. With a 40 year replacement schedule this means that this infrastructure would be replaced over a ten-year period straining the utility fund. Replacing this amount of infrastructure in such a short time span would not only be fiscally challenging, but the number of projects that would need to be completed in that timeframe is likely not possible without major impacts to the function of the City.

Instead of focusing on a replacement timeline that may not be feasible to maintain, improvements and replacement of infrastructure should take an approach that considers maintenance, operational status, and the needs of the community. Taking these driving factors into account, can allow the City flexibility to make the investment into improving infrastructure while also being fiscally responsible.

Based on the projected cost of projects over the next 30 years, it is estimated that the City will spend approximately 2.5-3 million dollars on infrastructure improvements every 5 years. If the City is to maintain this funding and allow for the infrastructure improvements without incurring debt, a minimum of \$500,000 will need to be invested into the utility fund annually.

Table 23: Utility Investment Costs Annual Utility Reserves															
	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	
Water									281,015.81	489,378.62	301,513.46	187,839.50	221,437.82	270,992.10	
Wastewater								96,362.76	59,594.15	568,647.82	446,793.79	125,654.35	632,004.71	-	
<b>Total Expense</b>								<b>96,362.76</b>	<b>340,609.96</b>	<b>1,058,026.44</b>	<b>748,307.25</b>	<b>313,493.85</b>	<b>853,442.54</b>	<b>270,992.10</b>	
	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051
Water	531,183.43	1,371,926.53	180,330.40	731,133.44	987,019.20	468,230.63	238,745.34	427,719.15	1,176,664.01	954,611.21	685,311.46	388,450.92		967,864.08	765,866.61
Wastewater	142,317.07	1,332,699.13	111,643.23	731,133.44	59,221.15	319,802.68	534,334.80	427,719.15	103,154.89	672,804.75			227,916.64		683,701.19
<b>Total</b>	<b>673,500.50</b>	<b>2,704,625.66</b>	<b>291,973.63</b>	<b>731,133.44</b>	<b>1,046,240.35</b>	<b>788,033.31</b>	<b>773,080.14</b>	<b>427,719.15</b>	<b>1,279,818.90</b>	<b>1,627,415.96</b>	<b>685,311.46</b>	<b>388,450.92</b>	<b>227,916.64</b>	<b>967,864.08</b>	<b>1,451,618.80</b>
\$210,000 Annual Investment															
	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	
Infrastructure Investment	210,000.00	210,000.00	210,000.00	210,000.00	210,000.00	210,000.00	210,000.00	210,000.00	210,000.00	210,000.00	210,000.00	210,000.00	210,000.00	210,000.00	
Infrastructure Expense								96,362.76	340,609.96	1,058,026.44	748,307.25	313,493.85	853,442.54	270,992.10	
<b>Balance of Fund</b>	<b>3,700,000.00</b>	<b>3,910,000.00</b>	<b>4,120,000.00</b>	<b>4,330,000.00</b>	<b>4,540,000.00</b>	<b>4,750,000.00</b>	<b>4,960,000.00</b>	<b>5,073,637.24</b>	<b>4,829,390.04</b>	<b>3,981,363.60</b>	<b>3,443,056.35</b>	<b>3,339,562.49</b>	<b>2,696,119.96</b>	<b>2,635,127.86</b>	
	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051
Infrastructure Investment	210,000.00	210,000.00	210,000.00	210,000.00	210,000.00	210,000.00	210,000.00	210,000.00	210,000.00	210,000.00	210,000.00	210,000.00	210,000.00	210,000.00	210,000.00
Infrastructure Expense	673,500.50	2,704,625.66	291,973.63	731,133.44	1,046,240.35	788,033.31	773,080.14	427,719.15	1,279,818.90	1,627,415.96	685,311.46	388,450.92	227,916.64	967,864.08	1,451,618.80
<b>Balance of Fund</b>	<b>2,171,627.36</b>	<b>(322,998.29)</b>	<b>(404,971.92)</b>	<b>(926,105.37)</b>	<b>(1,762,345.72)</b>	<b>(2,340,379.02)</b>	<b>(2,903,459.16)</b>	<b>(3,121,178.31)</b>	<b>(4,190,997.21)</b>	<b>(5,608,413.17)</b>	<b>(6,083,724.63)</b>	<b>(6,262,175.55)</b>	<b>(6,280,092.19)</b>	<b>(7,037,956.27)</b>	<b>(8,279,575.07)</b>
\$300,000 Annual Investment															
	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	
Infrastructure Investment	210,000.00	300,000.00	300,000.00	300,000.00	300,000.00	300,000.00	300,000.00	300,000.00	300,000.00	300,000.00	300,000.00	300,000.00	300,000.00	300,000.00	
Infrastructure Expense								96,362.76	340,609.96	1,058,026.44	748,307.25	313,493.85	853,442.54	270,992.10	
<b>Balance of Fund</b>	<b>3,700,000.00</b>	<b>4,000,000.00</b>	<b>4,300,000.00</b>	<b>4,600,000.00</b>	<b>4,900,000.00</b>	<b>5,200,000.00</b>	<b>5,500,000.00</b>	<b>5,703,637.24</b>	<b>5,663,027.28</b>	<b>4,905,000.84</b>	<b>4,456,693.59</b>	<b>4,443,199.73</b>	<b>3,889,757.20</b>	<b>3,918,765.10</b>	
	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051
Infrastructure Investment	300,000.00	300,000.00	300,000.00	300,000.00	300,000.00	300,000.00	300,000.00	300,000.00	300,000.00	300,000.00	300,000.00	300,000.00	300,000.00	300,000.00	300,000.00
Infrastructure Expense	673,500.50	2,704,625.66	291,973.63	731,133.44	1,046,240.35	788,033.31	773,080.14	427,719.15	1,279,818.90	1,627,415.96	685,311.46	388,450.92	227,916.64	967,864.08	1,451,618.80
<b>Balance of Fund</b>	<b>3,545,264.61</b>	<b>1,140,638.95</b>	<b>1,148,665.32</b>	<b>717,531.87</b>	<b>(28,708.47)</b>	<b>(516,741.78)</b>	<b>(989,821.92)</b>	<b>(1,117,541.07)</b>	<b>(2,097,359.97)</b>	<b>(3,424,775.93)</b>	<b>(3,810,087.39)</b>	<b>(3,898,538.31)</b>	<b>(3,826,454.95)</b>	<b>(4,494,319.03)</b>	<b>(5,645,937.83)</b>
\$400,000 Annual Investment															
	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	
Infrastructure Investment	210,000.00	400,000.00	400,000.00	400,000.00	400,000.00	400,000.00	400,000.00	400,000.00	400,000.00	400,000.00	400,000.00	400,000.00	400,000.00	400,000.00	
Infrastructure Expense								96,362.76	340,609.96	1,058,026.44	748,307.25	313,493.85	853,442.54	270,992.10	
<b>Balance of Fund</b>	<b>3,700,000.00</b>	<b>4,100,000.00</b>	<b>4,500,000.00</b>	<b>4,900,000.00</b>	<b>5,300,000.00</b>	<b>5,700,000.00</b>	<b>6,100,000.00</b>	<b>6,403,637.24</b>	<b>6,463,027.28</b>	<b>5,805,000.84</b>	<b>5,456,693.59</b>	<b>5,543,199.73</b>	<b>5,089,757.20</b>	<b>5,218,765.10</b>	
	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051
Infrastructure Investment	400,000.00	400,000.00	400,000.00	400,000.00	400,000.00	400,000.00	400,000.00	400,000.00	400,000.00	400,000.00	400,000.00	400,000.00	400,000.00	400,000.00	400,000.00
Infrastructure Expense	673,500.50	2,704,625.66	291,973.63	731,133.44	1,046,240.35	788,033.31	773,080.14	427,719.15	1,279,818.90	1,627,415.96	685,311.46	388,450.92	227,916.64	967,864.08	1,451,618.80
<b>Balance of Fund</b>	<b>4,945,264.61</b>	<b>2,640,638.95</b>	<b>2,748,665.32</b>	<b>2,417,531.87</b>	<b>1,771,291.53</b>	<b>1,383,258.22</b>	<b>1,010,178.08</b>	<b>982,458.93</b>	<b>102,640.03</b>	<b>(1,124,775.93)</b>	<b>(1,410,087.39)</b>	<b>(1,398,538.31)</b>	<b>(1,226,454.95)</b>	<b>(1,794,319.03)</b>	<b>(2,845,937.83)</b>
\$500,000 Annual Investment															
	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	
Infrastructure Investment	210,000.00	500,000.00	500,000.00	500,000.00	500,000.00	500,000.00	500,000.00	500,000.00	500,000.00	500,000.00	500,000.00	500,000.00	500,000.00	500,000.00	
Infrastructure Expense								96,362.76	340,609.96	1,058,026.44	748,307.25	313,493.85	853,442.54	270,992.10	
<b>Balance of Fund</b>	<b>3,700,000.00</b>	<b>4,200,000.00</b>	<b>4,700,000.00</b>	<b>5,200,000.00</b>	<b>5,700,000.00</b>	<b>6,200,000.00</b>	<b>6,700,000.00</b>	<b>7,103,637.24</b>	<b>7,263,027.28</b>	<b>6,705,000.84</b>	<b>6,456,693.59</b>	<b>6,643,199.73</b>	<b>6,289,757.20</b>	<b>6,518,765.10</b>	
	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051
Infrastructure Investment	500,000.00	500,000.00	500,000.00	500,000.00	500,000.00	500,000.00	500,000.00	500,000.00	500,000.00	500,000.00	500,000.00	500,000.00	500,000.00	500,000.00	500,000.00
Infrastructure Expense	673,500.50	2,704,625.66	291,973.63	731,133.44	1,046,240.35	788,033.31	773,080.14	427,719.15	1,279,818.90	1,627,415.96	685,311.46	388,450.92	227,916.64	967,864.08	1,451,618.80
<b>He</b>	<b>6,345,264.61</b>	<b>4,140,638.95</b>	<b>4,348,665.32</b>	<b>4,117,531.87</b>	<b>3,571,291.53</b>	<b>3,283,258.22</b>	<b>3,010,178.08</b>	<b>3,082,458.93</b>	<b>2,302,640.03</b>	<b>1,175,224.07</b>	<b>989,912.61</b>	<b>1,101,461.69</b>	<b>1,373,545.05</b>	<b>905,680.97</b>	<b>(45,937.83)</b>

### 3.0 Solid Waste Utility

The City of Sunset Valley provides residential solid waste services including trash, recycling, and green waste. These services are provided to residential customers by the City’s contractor, Texas Disposal Systems. The City has a franchise agreement that requires commercial businesses within the City to use Texas Disposal Systems for solid waste services but the City does not provide any assistance or support. Commercial businesses must secure their own services. **Table 24** shows a breakdown of expenses and revenues for the last five years. FY 24 budget has personnel costs attributed to the Solid Waste Utility based on data collected over the past year. **Table 25** displays the past 10 years of expenses, revenues, and transfers from the General fund.

**Table 24: Solid Waste Revenues and Expenses**

Expenses	2019-20 Actual	2020-21 Actual	2021-22 Actual	2022-23 Budget	2023-24 Proposed Budget
Salaries, Benefits, and other Compensation	\$ 34,576.28	\$ 57,105.19	\$ 67,784.25	\$ 77,927.00	\$ 133,462.00
Operating Expense	\$ 2,265.82	\$ 3,005.63	\$ 3,234.03	\$ 37,550.00	\$ 5,550
Brush Chipping	\$ 8,771.30	\$ 18,643.75	\$ 6,535.05	\$ 15,000.00	\$ 15,000.00
Dumpsters	\$ 6,105.81	\$ 3,625.66	\$ 4,349.16	\$ 7,000.00	\$ 4,000.00
Contractual (Cost TDS)	\$ 70,733.06	\$ 92,133.32	\$ 90,439.50	\$ 108,160.00	\$ 119,766.00
<b>Total Expense</b>	<b>\$ 122,452.27</b>	<b>\$ 174,513.55</b>	<b>\$ 172,341.99</b>	<b>\$ 245,637.00</b>	<b>\$ 277,778.00</b>
Revenue	2019-20 Actual	2020-21 Actual	2021-22 Actual	2022-23 Budget	2023-24 Proposed Budget
Utility Sales	\$ 6,977.48	\$ 6,934.86	\$ 6,509.35	\$ 9,003.00	\$ 14,273.00
Reclamation/Recycling	\$ 3.50			\$ 162.00	\$ 200.00
<b>Total Revenue</b>	<b>\$ 6,980.98</b>	<b>\$ 6,934.86</b>	<b>\$ 6,509.35</b>	<b>\$ 9,165.00</b>	<b>\$ 14,473.00</b>
<b>Operational Deficit</b>	<b>\$(115,471.29)</b>	<b>\$(167,578.69)</b>	<b>\$(165,832.64)</b>	<b>\$(236,472.00)</b>	<b>\$(263,305.00)</b>

**Table 25: 10-Year Solid Waste Revenues, Expenses, and Subsidy**

10 Year Solid Waste Utility Revenues and Expenses										
Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Solid Waste Revenue	\$ 1,124.76	\$ 991.55	\$ 4,004.00	\$ 3,895.14	\$ 3,963.04	\$ 4,277.90	\$ 6,964.54	\$ 6,980.98	\$ 6,934.86	\$ 6,509.35
Solid Waste Expense	\$ 105,050.26	\$99,590.68	\$ 111,783.21	\$ 121,920.99	\$ 117,555.43	\$ 135,208.38	\$ 111,386.38	\$ 122,452.27	\$ 174,513.55	\$ 172,341.99
Difference	\$(103,925.50)	\$(98,599.13)	\$(107,779.21)	\$(118,025.85)	\$(113,592.39)	\$(130,930.48)	\$(104,421.84)	\$(115,471.29)	\$(167,578.69)	\$(165,832.64)
Transfer from General Fund	\$ 105,162.00	\$ 111,130.00	\$114,098.00	\$ 123,326.00	\$ 131,516.00	\$ 134,680.00	\$ 130,915.00		\$ 136,711.00	\$194,900.00
Total Revenue including Transfer from GF	\$ 106,286.76	\$ 112,121.55	\$ 118,102.00	\$ 127,221.14	\$135,479.04	\$ 138,957.90	\$ 137,879.54	\$ 6,980.98	\$ 143,645.86	\$ 201,409.35
Ending Revenues over Expenses	\$ 1,236.50	\$ 12,530.87	\$ 6,318.79	\$ 5,300.15	\$ 17,923.61	\$ 3,749.52	\$ 26,493.16	\$(115,471.29)	\$(30,867.69)	\$ 29,067.36

### 3.1 Residential Solid Waste Costs

In FY 2023, the Solid Waste cost to residential customers is \$2.96 per month. Residents pay the full cost for extra carts. The costs the City pays for the contractual portion of solid waste services are summarized in **Table 26** below as well as the residential rates charged by Sunset Valley to residential customers.

**Table 26. Contractual Service Costs and Customer Charges for Residential Solid Waste Services**

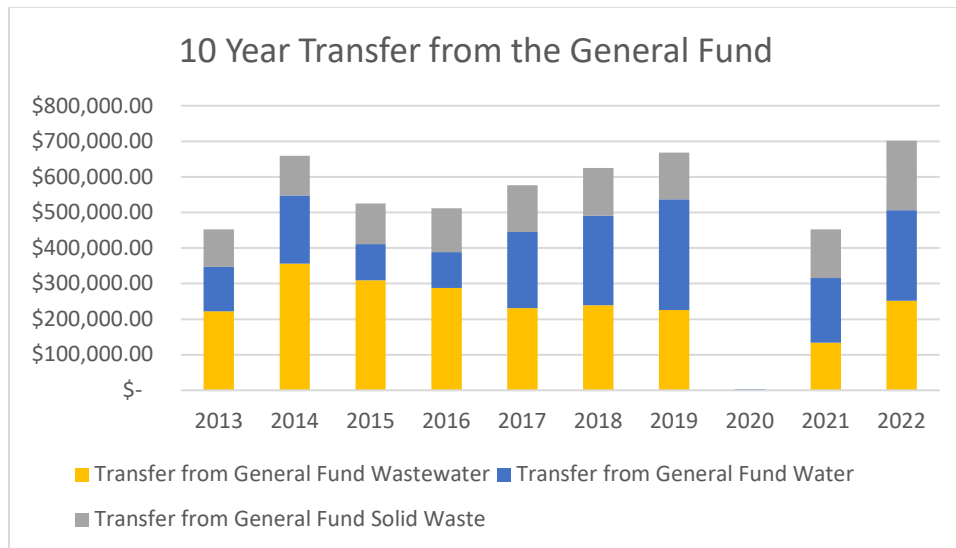
Description	Effective Date 11/1/21	Effective Date 11/1/22	Effective Date 11/1/23	Effective Date 11/1/24	Effective Date 11/1/21
<b>Refuse, Recycle, &amp; Green Waste</b>	\$28.10	\$29.22	\$30.39	\$31.61	\$32.87
<b>Extra Cart</b>	\$11.21	\$11.71	\$12.24	\$12.79	\$13.37
<b>Sunset Valley Customer Charge</b>	\$1.84	\$2.96	\$4.13	TBD	TBD

### 4.0 Utility Subsidy

The transfer from the General Fund to subsidize utility services has increased over the last 10 years (**Figure 1**). This is commonly referred to as the subsidy. A subsidy is generally money used by a governmental body to assist an industry to keep the cost of a commodity or service low. The City of Sunset Valley is providing funds to the utility fund to keep the cost of the service lower. The transfer in 2013 compared to 2022 is a 55% increase. Some years were higher and others lower. The City has historically transferred more than needed each year to add to the utility reserve to increase these funds for future use for infrastructure and emergencies. With no transfer in 2020 from the general fund, the operational budget was paid from the utility fund reserves.

However, the utility subsidy is likely to continue to grow each year if the City does not address utility rate levels. Operational costs will rise over time and the City of Austin could adopt new rates. As the utility subsidy grows, the City's ability to fund other projects may also be affected. Water, wastewater and solid waste are essential services and must take priority over other projects. In FY 24, the utility subsidy is estimated to be 1.2 million. This includes operational costs as well as an investment into infrastructure reserves. This is not likely to be sustainable over time. The investment into infrastructure has also been underfunded and the ability for the City to continue to fund repairs, upgrades, and service extensions will also be affected. As the utility subsidy grows, the City's ability to fund other projects may also be affected. Water, wastewater and solid waste are essential services and must take priority over other projects.

**Figure 1: 10-Year transfer from the General Fund**



#### 4.1 Utility Fund Rate Analysis

The rates for residential service do not cover the cost of service and provides greater benefit to the residential user class than any other user classes. There are several factors that contribute to this. First, the wastewater volumetric rates are nonexistent for residents using under 10,000 gallons of water and the base rate is too low. This creates a larger revenue deficit in wastewater than seen in the water utility. Second, the Water Utility has higher operational costs due to the monitoring requirements and the rates charged for water are insufficient to support the cost of service. When compared to neighboring utilities, most who are also purchased water systems the charges to Sunset Valley residential customers are well below those entities. Finally, the Solid Waste utility is funded on average 96% annually by the general fund. The City Council removed the operational costs from this budget in FY 24, but the solid waste utility continues to not be self-sustaining for contractual costs. Finally, utility rates should also be equitable across customer classes.

Staff reached out to the Texas Rural Water Association (TRWA) for their advice on utility rates. Staff has also spoken with representatives from the Public Utility Commission. Both entities recommend rates based on meter size and not making distinctions between user groups based on residential or commercial use. This is a structure that creates fairness and equity among users. Larger meters are more expensive and usually have greater demand. Residential meters tend to be smaller and have lower volume demands.

TRWA provides a utility rate template to participating organizations to develop utility rates. They also provide training and support on how to use the template. On the

following pages are estimates from the TRWA utility rate template using the data collected from 2022 and the current meter sizes throughout the entire City. The template used the actuals from 2022 and placed the purchased water cost in the variable expense category and the remainder of the items in the fixed costs category (**Table 27**). Budget line items were combined to match categories provided by TRWA. These percentages can be adjusted to create different rate scenarios. The meters are then calculated based on the American Water Works Associations meter use equivalency recommendations (**Table 28**). For example, a standard 5/8-inch residential meter is 1 unit but a 3-inch positive displacement meter is considered to be 9 units. These numbers are then used to determine the cost per meter based on the size of the meter. For wastewater a similar budget scenario was used to analyze rates. However, there is no metering function to wastewater. Each user has the same base rate for operation of the service.

**Table 27. Water Utility Revenue Requirement Expenses FY 2022**

<b>Revenue Requirement Expenses</b>	<b>Item Cost</b>	<b>%</b>	<b>Fixed Cost</b>	<b>%</b>	<b>Variable Cost</b>
SALARIES	121,887	100	121,887	0	-
OVERTIME	4,873	100	4,873	0	-
HEALTH INSURANCE	16,172	100	16,172	0	-
PAYROLL TAXES	2,278	100	2,278	0	-
OFFICE EXPENSES	14,261	100	14,261	0	-
RETIREMENT / BENEFITS	18,696	100	18,696	0	-
INSURANCE - WC & LIABILITY	104	100	104	0	-
EDUCATION / TRAINING	3,917	100	3,917	0	-
PURCHASED WATER	422,010	0	-	100	422,010
REPAIR AND MAINTENANCE	33,229	100	33,229	0	-
TRUCK & EQUIPMENT EXPENSES	33,625	100	33,625	0	-
MATERIALS & SUPPLIES	3,075	100	3,075	0	-
WATER CONSERVATION	11,373	100	11,373	0	-
<b>Totals</b>	<b>685,499</b>	<b>38%</b>	<b>263,489</b>	<b>62%</b>	<b>422,010</b>

**Table 28. Meter Equivalents**

Meters by Size	Systems Meters	AWWA Standards	Meter Equivalents
5/8" X 3/4"	232	1	232
3/4"	0	1.5	0
1"	20	2.5	50
1-1/2"	10	5	50
2"	10	8	80
3" Displacement	9	9	81
3" Compound	2	16	32
3" Turbine	0	17.5	0
4" Compound	6	25	150
4" Turbine	0	30	0
6" Compound	2	50	100
6" Turbine	1	62.5	62.5
8" Compound	0	80	0
10" Compound	0	115	0
Total Number of Equivalent Meter in System			837.5

**Water Rates**

Based on the expenses new monthly minimums are created based on the meter equivalents (**Table 29**). The monthly minimum for the smallest meter, mostly used by residential customers, is \$26.22. This represents a \$17.08 increase from the current rate of \$9.14. For commercial rates there are decreases for customers with smaller meters, but large increases for those customers with larger meters. Table 29 details all new proposed rates.

Volumetric rates were also analyzed based on water sold over the past 3 years. This generated a minimum rate of \$5.04 per 1,000 gallons (**Table 30**). This is a uniform rate and does not differentiate between user groups. This rate would recoup the cost of water purchased by the City. Tiered rates can be structured to increase revenue and encourage conservation. These rates should begin at the proposed minimum and then increase. Additional revenue, above operational expenses, could be used to offset the cost of infrastructure repair and replacement.

**Table 29. Current and Proposed Monthly Minimum Rates**

<b>Meters by Size</b>	<b>Number of Meters</b>	<b>Proposed Monthly Minimum Rate</b>	<b>Current Residential Base Rate</b>	<b>Residential Cost Difference</b>	<b>Current Commercial Rate</b>	<b>Commercial Cost Difference</b>
5/8" X 3/4"	232	\$ <b>26.22</b>	\$ 9.14	\$ 17.08	\$ 126.92	\$ 100.70
3/4"	0	\$ <b>39.33</b>	\$ 9.14	\$ 30.19		\$ (39.33)
1"	20	\$ <b>65.54</b>	\$ 9.14	\$ 56.40	\$ 142.77	\$ 77.23
1-1/2"	10	\$ <b>131.09</b>	\$ 9.14	\$ 121.95	\$ 190.36	\$ 59.27
2"	10	\$ <b>209.74</b>	\$ 9.14	\$ 200.60	\$ 253.82	\$ 44.08
3" Displacement	9	\$ <b>235.96</b>	\$ 9.14	\$ 226.82	\$ 507.64	\$ 271.68
3" Compound	2	\$ <b>419.49</b>			\$ 507.64	\$ 88.15
3" Turbine	0	\$ <b>458.81</b>			\$ 507.64	\$ 48.83
4" Compound	6	\$ <b>655.45</b>			\$ 634.56	\$ (20.89)
4" Turbine	0	\$ <b>786.54</b>			\$ 634.56	\$ (151.98)
6" Compound	2	\$ <b>1,310.90</b>			\$ 888.38	\$ (422.52)
6" Turbine	1	\$ <b>1,638.62</b>			\$ 888.38	\$ (750.24)
8" Compound	0	\$ <b>2,097.43</b>				\$ (2,097.43)
10" Compound	0	\$ <b>3,015.06</b>				\$ (3,015.06)

**Table 30. Proposed Minimum Volumetric Rate**

<b>Sunset Valley Residential Current Water Rates</b>	
Current Tier 0: under 3,000	No base rate or volumetric charge
Current Tier 1: 0-9,999 gallons	\$3.31 per 1,000 gallons
Current Tier 2: 10,000-19,999 gallons	\$5.60 per 1,000 gallons
Tier 3: 20,000 gallons and up	\$9.92 per 1,000 gallons
<b>Sunset Valley Commercial Current Water Rates</b>	
Cost per 1,000 gallons	\$6.30
<b>Proposed Minimum Rate</b>	
Cost per 1,000 gallons	\$5.04

## Wastewater Rates

**Table 31** shows the revenue requirements that are needed based on the expenses from FY 22. These numbers were then used to determine the required minimum base rates based on the number of customers. This minimum rate is proposed at \$39.80 for all users. The minimum volumetric rate is recommended to be \$6.03 (**Table 32**). This was based on the amount of water consumed and a reduction of about 30% for irrigation purposes.

**Table 31. Wastewater Revenue Requirements**

REVENUE REQUIREMENT WASTEWATER					
BUDGET/COST OF SERVICE ITEM	Item Cost	% Fixed	\$ Value Fixed	% Variable	\$ Value Variable
SALARIES	\$ 100,417.45	100	\$100,417.45	0	\$0.00
OPERATIONAL SUPPLIES	\$ 9,521.90	100	\$ 9,521.90	0	\$0.00
INSPECTION SEWER LINES	\$ 13,452.30	100	\$ 13,452.30	0	\$0.00
MAINTENANCE SEWER LINES	\$ 16,076.17	100	\$ 16,076.17	0	\$0.00
PURCHASE COST	\$ 353,475.52	0	\$ 0.00	100	\$ 353,475.52
TOTAL	\$ 492,943.34		\$139,467.82	100	\$ 353,475.52

**Table 32. Proposed Wastewater Rates**

Current Wastewater Rates	
Current Residential Base Rate	\$ 4.00
Current Residential Tier 1: 0-9,999 gallons	\$ -
Current Residential Tier 2: 10,000+ (per 1,000 gallons)	\$ 5.71
Current Commercial Volumetric Rate (per 1,000 gallons)	\$ 9.97
Proposed Wastewater Rates	
Base Rate	\$ 39.80
Volumetric rate (per \$1,000 gallons)	\$ 6.03

## Utility Rate Summary

Currently, all utility funds are subsidized by the City's general fund. The general fund of the City is funded nearly exclusively from sales tax. However, water, wastewater, and solid waste are essential services that are required regardless of fluctuations in sales tax revenue. The operation of these utilities should be sustainable without increasing support from the general fund. The operation of the utilities includes not only the commodity of purchased water/wastewater, but also the daily delivery of that service. This includes costs for personnel, repairs, monitoring, and operational fees. This is not the cost for infrastructure, but the cost to deliver a service and the commodity cannot be provided without operational support. The delivery of the service should be operationally independent of fluctuations in sales tax revenue. If a disaster was to occur, these services would still be required.

The water, wastewater, and solid waste utilities do not currently charge rates that are able to sustain operations. The template provided by the TRWA created rates that would result in a more balanced budget and ensure that daily operations of these essential services can be sustained. The rates are also equitable and defensible across all customer classes. Based on analysis of current rates, commercial users are not receiving the same benefits as residential users. The proposed rates are tied more fairly to customer meters and expected demand.

Infrastructure and capital improvements were not included in the rates developed above, only operational and contractual costs were analyzed. Infrastructure improvements are essential to continuing to provide the service but can be considered as part of the basic services the City provides similar to streets and sidewalks. These items may be funded through the general fund and are not subsidizing the operation of the utility but are an investment in public infrastructure. Infrastructure improvements are also planned investments and can be scheduled based on available funding.

If the City Council plans to pursue an equitable and sustainable utility, plans should be developed for incremental rate increases that bring the funds into balance while also providing for those customers who may be adversely impacted. There are some residents who may live on a fixed income and utility rate and program changes may have a negative financial impact. This is especially true for seniors. It is recommended that the City set up a Community Assistance Program (CAP) to address this need. Other residents within Sunset Valley could also contribute to this fund if they desire to do so. There are similar programs in the City of Austin and Travis County that Sunset Valley could model this program on. These rates are also included below. Here are links to examples of assistance programs:

[City of Austin Utility Bill Discounts – Customer Assistance Program \(CAP\)](#)

There are also state programs like [Texas Utility Help](#), which Cedar Park, Hutto and other cities have a link to other community resources on their city websites.

Finally, if the City Council plans to pursue changes to utility rates a public engagement process should begin to educate people about utility services, operational expenses, water conservation, and future increases in costs of purchased water. This will help to develop public input throughout the process and reduce negative responses if the City begins to adopt new rates.