



TOWN OF STAR VALLEY

Water Operation Analysis

September 30, 2023



Prepared by Tina Woody, Finance Administrator



Introduction

The purpose of this water rate analysis is to clarify the need for the Town of Star Valley, Arizona, to raise water rates to maintain existing services for our residents and build sufficient reserves to cover the inevitable need to maintain and replace operational components.

The Town Star Valley Water operation derives revenue from multiple sources, including water consumption, meter base fees, penalties, connection fees, and other miscellaneous fees. Water rates must be based on the actual financial needs of the town. Revenue generated from water rates must be used to procure, treat, and administrate water distribution within its service area and maintain adequate reserves for infrastructure and repair.

Historically, these operating expenditures have exceeded revenues, causing the general fund to subsidize the enterprise fund. An enterprise fund is used to account for operations that are financed and operated in a manner like a private business. The intent is that the costs of providing goods or services to the public be financed primarily through user charges.

Water System Description

The Town of Star Valley purchased the Water System in 2012 and owns extensive assets, including ten water production wells, three booster stations, six storage tanks (270,000 gallons), and approximately 5 miles of water mains ranging from 4 to 8 inches in diameter. The system's water is derived exclusively from groundwater sources. Excepting chlorine, which is added to maintain residual disinfection, water provided by the system is not treated.

Star Valley has invested more than \$2.5 million in purchasing the system and improving the well sites and storage tanks. At present, the town is dealing with the issue of replacing old water lines and exploring ways to prevent contamination of the well-sites by PFAS compounds.

A Growing Community

Star Valley is a small community of around 2,500 inhabitants located in Gila County, Arizona. The community relies on the provision of potable water, which is an essential service. According to the American Community Survey 2021, Star Valley's median household income (MHI) is \$48,600, which is lower than the Arizona State median household income of \$69,056. This information is of great importance as the MHI of a community is a key factor in determining grant funding and water pricing considerations.

Water System Production and Consumption

During fiscal year 2023, the water system provided water services to an average of 365 connections, of which 344 were residential and 21 were commercial. The majority of these connections (270) were equipped with standard 5/8” meters. It is worth noting that the base rates for commercial meters are currently higher than those for residential connections; however, both residential and commercial customers pay the same consumption-tiered rates.

The following table presents water production and usage data for fiscal years ending 2021, 2022, and 2023.

Table 1: Water Production and Usage

Item	FY2020-2021	FY2021-2022	FY2022-2023
Gallons Produced (Wells Only)	24,915,917 *	28,724,539	24,951,681
Gallons Billed	21,521,982	25,055,761	22,277,155
Town Hall Water - Unbilled **	3,009,180	1,732,010	2,028,190
Backup Water Operator - Unbilled ***	79,520	76,320	80,710
Average # of Billed Customers	322	361	365
Average Monthly Gallons Billed	5,563	5,779	5,093
Unbilled H2O (as % of Total Water Produced)	12.4%	6.3%	8.5%
Total Amount of Water Loss	1.23%	6.48%	2.27%

* In fiscal year 2021, there were issues with Quail Valley well site #2, which resulted in estimated rather than actual production gallons.

** Starting from the fiscal year 2023-2024, the enterprise fund will bill the general fund for the consumption usage revenues of the town hall, community garden, and park meter, which were not previously billed to the general fund.

*** Starting in fiscal year 2023-2024, revenue and expenditure for the backup water operator will be recognized. Customer 1047.00 is currently exempt from water billing as they serve as Star Valley’s water backup operator.

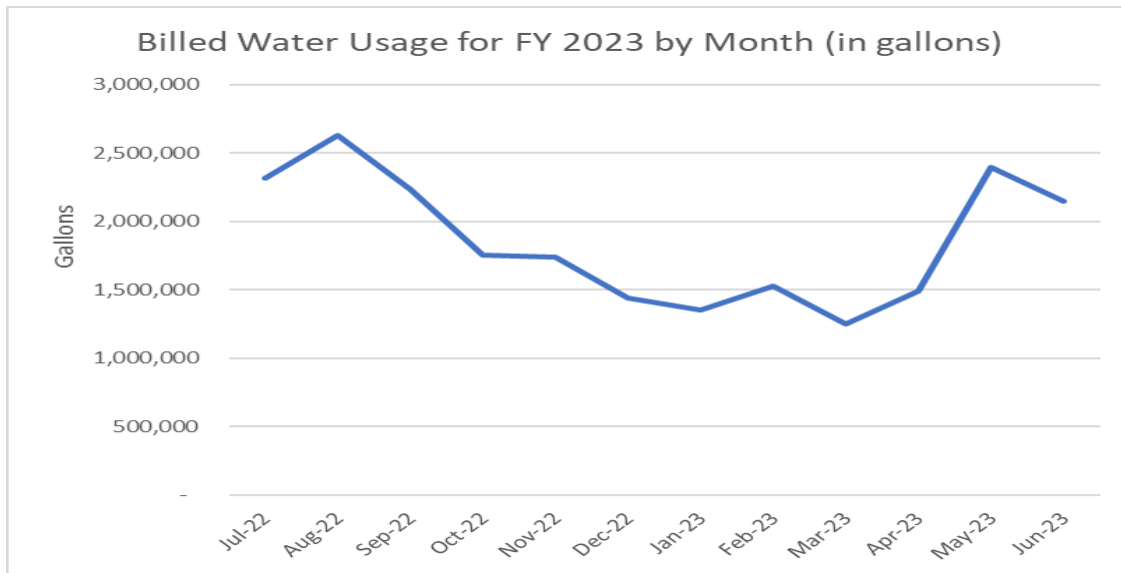
In the fiscal year of 2022-2023, there was a 12% increase in the number of connections that were billed as compared to the previous fiscal year. The town anticipates significant growth in the numbers for the fiscal year 2024 due to the addition of new commercial accounts and other aforementioned changes.

The increased water consumption during fiscal year 2021-2022 was likely due to more people being home during the COVID-19 pandemic, while the number of connections significantly increased from the budgetary year 2020-2021.

Seasonal Usage

The following graph shows that the town exhibits a seasonal pattern in billed water consumption, with the highest usage occurring during the summer. The fluctuation in water usage (and revenue) underscores the importance of an operating reserve.

Billed Monthly Water Usage (FY 2022-2023)



Rate Comparison

The below chart is a rate comparison with neighboring cities and towns: the Town of Payson, the Pine-Strawberry area, and the Payson Water Co., which covers the Meads Ranch, Deer Creek, East Verde Park, Flowing Springs, Geronimo Estates, Gisela\Tonto Creek Shores, Mesa Del Caballo, and Whispering Pines.

The total monthly costs are based on using a standard residential 5/8 " meter and the fiscal year 2023 average number of gallons billed of 5,093, as reflected on the previously shown Water Usage and Production chart.

	Based on Current Rates			
Average Usage 5,093 Gallons a Month	Town of Star Valley	Town of Payson	Pine-Strawberry	Payson Water Co.
Standard Residential 5/8" Meter	\$ 35.72	\$ 76.71	\$ 87.10	\$ 85.85

The Town of Star Valley Water Department is 53% less than the Town of Payson, 59% less than Pine-Strawberry, and 58% less than the Payson Water Co.

According to the Pine-Strawberry Water Study of March 2022 and recently advertised in the Payson Roundup, the water rates will continue to rise for Pine-Strawberry residents as the governing body has approved a 5-year tiered increase plan.

Star Valley Water Fund: Financial Condition

The Star Valley Water operation derives revenue from multiple sources, including water consumption, meter base fees, penalties, connection fees, and other miscellaneous fees. Expenditures are divided into personnel costs, administrative, infrastructure repair, purchased services, and depreciation.

Historically, Star Valley water operation had negative operating revenues, resulting in the enterprise fund's inability to build necessary reserves to sustain the water system with its existing rates.

The graph shows operating revenues have decreased while operating expenditures have increased over the past three years. As a result, net loss has significantly increased during this period, as demonstrated by the "Total Operating Revenues over Expenditures" data.

**Town of Star Valley
Water Department - Historic Revenues and Expenditures**

	FY2020-2021	FY2021-2022	FY2022-2023
Operating Revenue			
Customer Water Sales	230,746	231,064	210,032
Total Operating Revenue	\$ 230,746	\$ 231,064	\$ 210,032
Operating Expenditures			
Personnel	76,691	82,021	114,908
Administrative	52,095	55,468	50,191
Infrastructure Repair	24,400	23,653	4,120
Purchased Services	55,367	72,716	106,039
Depreciation	78,300	80,388	85,305
Total Operating Expenditures	\$ 286,852	\$ 314,245	\$ 360,563
Total Operating Revenues over Expenditures	\$ (56,106)	\$ (83,181)	\$ (150,531)

Operating Reserves

Operating reserves are established to allow the utility to withstand short-term cash-flow fluctuations. Recommendations range between 1.5 to 3 times the revenue collected during a fiscal period.

Other Reserves

Other reserves include emergency and capital replacement funds. Emergency funds help utilities deal with short-term emergencies like mainline breaks or pump failures. Capital replacement reserves are used strictly to fund the portion of any replacement of capital assets that are worn out.

Reserve Amount for the Town of Star Valley

Using a calculation of a 1% annual growth rate in system connections beginning in fiscal year 2024-2025 and no change in water rates and per-connection water consumption and usage based on fiscal year 2023. The Town of Star Valley water fund must contribute 100k annually over the next five years to establish the recommended reserve amount.

Using current water rates, calculations are as follows:

Forecasted Revenues		
Year 1	FY2024-2025	235,000
Year 2	FY2025-2026	237,350
Year 3	FY2026-2027	239,724
Year 4	FY2027-2028	242,121
Year 5	FY2028-2029	244,542
		Total Forecasted Revenues
		FY2025 - FY2029
		\$ 1,198,736


	<u>\$ 239,747</u>	Average Estimated Revenues
	\$ 719,242	Reserve Amount (Avg Rev.*3)
	<u>\$ (220,000)</u>	Existing Reserves (Available Cash)
	<u>\$ 499,242</u>	Funds Needed to Reach Reserve Target
	\$ 99,848	Annual Contribution for the Next 5 Years

A selected target of 3 times the estimated revenues to be funded over the next five (5) years will require the water fund to make an estimated annual contribution of \$99,848\ \$8,321 monthly.

Summary of Rate Options

Water rates must cover the costs of providing water services in the Town of Star Valley now and in the future. Ensuring that water rates are equitable to all ratepayers is crucial, and no individual or group should be subject to different rates. Additionally, the town must not charge more for water than it costs to provide and should have simple rates for staff to comprehend, implement, and explain to customers. Finally, the structure of water rates should be compatible with the town's current utility billing software.

It is important to note that if the town chooses not to implement any rate change over the forecasted period (FY25-FY29), taxpayer dollars will have to be used to continue subsidizing the water operation. To resolve this issue and achieve our objectives, I have developed three (3) options that will enable the enterprise fund to reach its reserve target.



Option 1 provides modest customer rate increases, which would eventually enable the enterprise fund to break even by year three (FY2026-2027). However, this option would not allow the town to establish and maintain reserves, and the general fund would continue to bear the administrative costs of operating our water system.

Option 2 provides a considerable increase in rates for our customers while also generating more revenue for the town. This helps cover the expenses by the end of the second fiscal year (2025-2026). By the end of the five-year plan, the water fund would be able to start building reserves and eventually reach the reserve target of three times the average revenues. Even with this option, the water rates in Star Valley remain significantly lower than those in neighboring cities and towns.

Option 3 provides a substantial increase in rates for our customers, which, in turn, generates more revenue for the town. This will allow the water fund to accumulate reserves immediately in the fiscal year 2024-2025. As a result, the general fund will not have to subsidize the water fund annually. Additionally, this option ensures that our rates align with those of our neighboring cities and towns.

Rate Option Details

Option 1: Implement a uniform increase of 40% in meter base and consumption usage rates in the fiscal year 2024-2025. Followed by a 10% increase in both meter base and consumption usage in the fiscal year 2025-2026. In the fiscal year 2026-2027, there will be a 15% increase in both meter base and consumption usage, which will continue through FY27-28. Additionally, there will be a 5% increase across the board in the fiscal year 2028-2029.

The chart below reflects the individual rate increases for the fiscal year 2024-2025 and subsequent years through the budgetary period 2029. The first column represents the type of meter (“R” residential or “C” commercial), meter size, number of existing connections, current rates, and current revenue based on actual connections and average consumption usage over 12 months (FY22-FY23).

The chart displays the total revenue for each fiscal period with the estimated fiscal revenue at the bottom.

Meter Base Rates					40%		10%		15%		10%		5%			
Type	Meter Size	Connections	Existing Rate	Current Revenue	FY2024-2025		FY2025-2026		FY2026-2027		FY2027-2028		FY2028-2029			
R	5/8"	270	\$ 18.50	\$ 4,995	\$ 25.90	\$ 6,993	\$ 28.49	\$ 7,692	\$ 32.76	\$ 8,845	\$ 36.04	\$ 9,731	\$ 37.84	\$ 10,217		
R	3/4"	32	21.20	678	29.68	950	32.65	1,045	37.55	1,202	41.30	1,322	43.36	1,388		
R	1"	73	24.50	1,789	34.30	2,504	37.73	2,754	43.39	3,167	47.73	3,484	50.11	3,658		
C	5/8"	14	34.77	487	48.68	682	53.55	750	61.58	862	67.74	948	71.12	996		
C	1"	2	73.33	147	102.66	205	112.93	226	129.87	260	142.85	286	150.00	300		
C	1.5"	2	132.67	265	185.74	371	204.31	409	234.96	470	258.45	517	271.38	543		
C	2"	3	\$206.27	\$ 619	\$288.78	\$ 866	\$ 317.66	\$ 953	\$ 365.30	\$ 1,096	\$ 401.83	\$ 1,205	\$ 421.93	\$ 1,266		
Totals		396	\$ 8,979		\$ 12,571		\$ 13,829		\$ 15,902		\$ 17,493		\$ 18,367			
Additional Monthly Revenue - Water Base					\$ 3,592		\$ 1,257		\$ 2,073		\$ 1,591		\$ 873			
Average Monthly Consumption					40%		10%		15%		10%		5%			
1-2000 gallons	66,700	0.002240	\$ 149	0.003136	\$ 209	0.003450	\$ 230	0.003967	\$ 265	0.004364	\$ 291	0.004582	\$ 306			
2001-5000 gallons	97,040	0.003510	341	0.004914	477	0.005405	525	0.006216	603	0.006838	664	0.007180	697			
5001-10,000 gallons	154,280	0.004131	637	0.005783	892	0.006362	981	0.007316	1,129	0.008048	1,242	0.008450	1,304			
10,0001 + gallons	1,533,300	0.006162	\$ 9,448	0.008627	\$ 13,227	0.009489	\$ 14,550	0.010913	\$ 16,733	0.012004	\$ 18,406	0.012604	\$ 19,326			
Totals			\$ 10,576		\$ 14,806		\$ 16,286		\$ 18,729		\$ 20,602		\$ 21,632			
Additional Monthly Revenue - Consumption					\$ 4,230		\$ 1,481		\$ 2,443		\$ 1,873		\$ 1,030			
Total Additional Monthly Revenue					\$ 7,822		\$ 2,738		\$ 4,516		\$ 3,464		\$ 1,904			
			\$ 19,555	\$ 27,377	\$ 30,115	\$ 34,631	\$ 38,095	\$ 39,999								
Total Fiscal Year Revenue					FY23-24	\$234,660	FY24-25	\$328,525	FY25-26	\$361,379	FY26-27	\$415,575	FY27-28	\$457,144	FY28-29	\$479,987

Most Star Valley water customers use a standard 5/8" water meter, and they consume an average of 5,093 gallons of water per month. The following chart shows how tiered pricing impacts a customer's monthly water bill and the five-year changes under option one.

Based on the typical amount of water usage (5,093, 7,500, & 12,000 gallons), the calculations show that a customer using 5,093 gallons pays \$35.72. However, if option one is implemented, that same customer will have to pay \$71.16 for the same amount of usage by the fiscal year 2029.

Option 1

Town of Star Valley			
<i>Rates are based on a Standard Residential 5/8" Meter</i>			
Gallon Usage	5,093	7,500	12,000
Current Rate	\$ 35.72	\$ 45.83	\$ 68.77
FY2024-2025	49.28	63.36	95.36
FY2025-2026	54.03	69.50	104.67
FY2026-2027	61.85	79.62	120.03
FY2027-2028	67.86	87.39	131.81
FY2028-2029	71.16	91.66	138.28

In fiscal year 2029, the water rates in the Town of Star Valley remain lower than those of neighboring cities and towns for 2023.

Option 1 Financial Impact

The chart below reflects the Option 1 estimated changes in revenue starting with fiscal period 2024-2025 through budgetary period 2029.

Implementing Option 1 would not generate enough revenue to cover expenditures until FY2026-2027, year three. While this option would allow us to break even in subsequent years, it would not allow the town to accrue reserves.

Operating expenditures are estimated using a 3% inflation rate for Personnel, Administrative, and Infrastructure Repair and a 1% increase for Purchased Services and Depreciation. These inflation rates are a minimal estimate.

**Town of Star Valley
Water Department - 6-Year Forecast
Option 1 Financial Impact**

	FY2023- 2024	FY2024- 2025	FY2025- 2026	FY2026- 2027	FY2027- 2028	FY2028- 2029
Operating Revenue	Current Year					
Customer Water Sales	234,660	328,525	361,379	415,575	457,144	479,987
Total Operating Revenue	\$ 234,660	\$ 328,525	\$ 361,379	\$ 415,575	\$ 457,144	\$ 479,987
Operating Expenditures						
3% Personnel	123,600	127,308	131,127	135,061	139,113	143,286
3% Administrative	51,697	53,248	54,845	56,491	58,185	59,931
3% Infrastructure Repair	21,600	22,248	22,915	23,603	24,311	25,040
1% Purchased Services	108,160	109,241	110,334	111,437	112,552	113,677
1% Depreciation	86,158	87,019	87,890	88,769	89,656	90,553
Total Operating Expenditures	\$ 391,215	\$ 399,065	\$ 407,111	\$ 415,360	\$ 423,817	\$ 432,487
Total Operating Revenues over Expenditures	\$(156,554)	\$(70,540)	\$(45,733)	\$ 215	\$ 33,327	\$ 47,500

Option 2

Option two proposes implementing a uniform increase of 60% in both meter base and consumption usage rates for the fiscal year 2024-2025. This will be followed by an annual increase of 10% to both meter base and consumption usage rates for the budget period of FY2025-2026 through FY2027-2028. Finally, there will be a 3% increase for the fiscal period ending in 2029.

Star Valley currently has a system of tiered rates for its water meters, and the income expected from each meter size is listed. The table also displays the suggested tiered rates for the coming years until 2029, using Option 2's proposed rates. The meter base rates are listed above the consumption rates.

Option 2

Meter Base Rates					60%		10%		10%		10%		3%	
Type	Meter Size	Connections	Existing Rate	Current Revenue	FY2024-2025		FY2025-2026		FY2026-2027		FY2027-2028		FY2028-2029	
R	5/8"	270	\$ 18.50	\$ 4,995	\$ 29.60	\$ 7,992	\$ 32.56	\$ 8,791	\$ 35.82	\$ 9,670	\$ 39.40	\$ 10,637	\$ 40.58	\$ 10,956
R	3/4"	32	21.20	678	33.92	1,085	37.31	1,194	41.04	1,313	45.15	1,445	46.50	1,488
R	1"	73	24.50	1,789	39.20	2,862	43.12	3,148	47.43	3,463	52.18	3,809	53.74	3,923
C	5/8"	14	34.77	487	55.63	779	61.20	857	67.31	942	74.05	1,037	76.27	1,068
C	1"	2	73.33	147	117.33	235	129.06	258	141.97	284	156.16	312	160.85	322
C	1.5"	2	132.67	265	212.27	425	233.50	467	256.85	514	282.53	565	291.01	582
C	2"	3	\$206.27	\$ 619	\$330.03	\$ 990	\$363.04	\$ 1,089	\$399.34	\$ 1,198	\$439.27	\$ 1,318	\$452.45	\$ 1,357
Totals		396		\$ 8,979	\$ 14,367		\$ 15,804		\$ 17,384		\$ 19,123		\$ 19,696	
Additional Monthly Revenue - Water Base					\$ 5,388		\$ 1,437		\$ 1,580		\$ 1,738		\$ 574	
Average Monthly Consumption					60%		10%		10%		10%		3%	
1-2000 gallons		66,700	0.002240	\$ 149	0.003584	\$ 239	0.003942	\$ 263	0.004337	\$ 289	0.004770	\$ 318	0.004913	\$ 328
2001-5000 gallons		97,040	0.003510	341	0.005616	545	0.006178	599	0.006795	659	0.007475	725	0.007699	747
5001-10,000 gallons		154,280	0.004131	637	0.006610	1,020	0.007271	1,122	0.007998	1,234	0.008797	1,357	0.009061	1,398
10,0001+ gallons		1,533,300	0.006162	\$ 9,448	0.009859	\$ 15,117	0.010845	\$ 16,629	0.011930	\$ 18,292	0.013123	\$ 20,121	0.013516	\$ 20,725
Totals				\$ 10,576	\$ 16,921		\$ 18,613		\$ 20,474		\$ 22,522		\$ 23,197	
Additional Monthly Revenue - Consumption					\$ 6,345		\$ 1,692		\$ 1,861		\$ 2,047		\$ 676	
Total Additional Monthly Revenue						\$ 11,733		\$ 3,129		\$ 3,442		\$ 3,786		\$ 1,249
				\$ 19,555	\$ 31,288	\$ 34,417	\$ 37,859	\$ 41,644	\$ 42,894					
Total Fiscal Year Revenue					FY23-24 \$234,660	FY24-25 \$375,457	FY25-26 \$413,002	FY26-27 \$454,303	FY27-28 \$499,733	FY28-29 \$514,725				

The chart below illustrates how Option 2's tiered pricing impacts a customer's monthly water bill based on the usual gallon amounts consumed (5,093, 7,500, & 12,000). Currently, a customer using 5,093 gallons pays \$35.72. By implementing Option 2, that same customer will pay \$76.18 for the same amount of usage by fiscal year 2029. It's important to note that even with Option 2, the Town of Star Valley's water is still less expensive than neighboring cities and towns for 2023 (based on current rates).

Option 2

Town of Star Valley				
<i>Rates are based on a Standard Residential 5/8" Meter</i>				
Gallon Usage		5,093	7,500	12,000
Current Rate	\$	35.72	\$ 45.83	\$ 68.77
FY2024-2025		56.06	72.13	108.66
FY2025-2026		61.48	79.14	119.30
FY2026-2027		67.45	86.86	131.01
FY2027-2028		74.01	95.35	143.88
FY2028-2029		76.18	98.15	148.12

Financial Impact of Implementing Option 2

The chart below reflects the estimated revenue increase through the forecasted fiscal years 2024-2025 through 2029-2030. Revenue estimates include a 60% increase in rates for the fiscal year 2024-2025, a 10% increase for the next three years through the fiscal year 2027-2028, and a 3% increase for fiscal periods 2028-2029 and 2029-2030. In addition, there is a 1% annual growth rate in revenues starting in fiscal year 2025-2026.

By choosing Option 2, the expected revenues will rise immediately and be sufficient to cover all expenses by the fiscal year 2025-2026. By the fiscal year 2028-2029, the water fund will have made significant progress towards building reserves. By implementing Option 2, the town can ensure a positive start toward reaching its reserve target.

Operating expenditures are calculated using a 3% inflation rate for Personnel, Administrative, and Infrastructure Repair. For Purchased Services and Depreciation, a 1% increase is used. Both inflation rates remain minimal.

**Town of Star Valley
Water Department - 6-Year Forecast
Option 2 Financial Impact**

	FY2023- 2024	FY2024- 2025	FY2025- 2026	FY2026- 2027	FY2027- 2028	FY2028- 2029
Operating Revenue	Current Year					
Customer Water Sales	234,660	375,457	413,002	454,303	499,733	514,725
Total Operating Revenue	\$ 234,660	\$ 375,457	\$ 413,002	\$ 454,303	\$ 499,733	\$ 514,725
Operating Expenditures						
3% Personnel	123,600	127,308	131,127	135,061	139,113	143,286
3% Administrative	51,697	53,248	54,845	56,491	58,185	59,931
3% Infrastructure Repair	21,600	22,248	22,915	23,603	24,311	25,040
1% Purchased Services	108,160	109,241	110,334	111,437	112,552	113,677
1% Depreciation	86,158	87,019	87,890	88,769	89,656	90,553
Total Operating Expenditures	\$ 391,215	\$ 399,065	\$ 407,111	\$ 415,360	\$ 423,817	\$ 432,487
Total Revenues over Expenditures	\$ (156,554)	\$ (23,608)	\$ 5,891	\$ 38,942	\$ 75,916	\$ 82,237

Option 3

To align Star Valley's water rates with those of neighboring cities and towns, we propose implementing a uniform 100% increase in both meter base and consumption usage rates for the fiscal year 2024-2025. This will be followed by a 2% annual increase to the meter base and a 5% increase in consumption usage rates for the fiscal period 2025-2026. For budgetary periods 2027 through 2029, there will be an increase of 2% to both meter base and consumption usage. This gradual increase will help maintain the water utility's financial stability while ensuring that customers are charged fairly for their usage.

Option 3

Meter Base Rates					100%		2%		2%		2%		2%	
Type	Meter Size	Connections	Existing Rate	Current Revenue	FY2024-2025		FY2025-2026		FY2026-2027		FY2027-2028		FY2028-2029	
R	5/8"	270	\$ 18.50	\$ 4,995	\$ 37.00	\$ 9,990	\$ 37.74	\$ 10,190	\$ 38.49	\$ 10,392	\$ 39.26	\$ 10,600	\$ 40.05	\$ 10,814
R	3/4"	32	21.20	678	42.40	1,357	43.25	1,384	44.11	1,412	45.00	1,440	45.90	1,469
R	1"	73	24.50	1,789	49.00	3,577	49.98	3,649	50.98	3,722	52.00	3,796	53.04	3,872
C	5/8"	14	34.77	487	69.54	974	70.93	993	72.35	1,013	73.80	1,033	75.27	1,054
C	1"	2	73.33	147	146.66	293	149.59	299	152.29	305	155.64	311	158.75	318
C	1.5"	2	132.67	265	265.34	531	270.65	541	276.06	552	281.58	563	287.21	574
C	2"	3	\$206.27	\$ 619	\$412.54	\$ 1,238	\$420.79	\$ 1,262	\$429.21	\$ 1,288	\$437.79	\$ 1,313	\$446.55	\$ 1,340
Totals		396		\$ 8,979	\$ 17,959		\$ 18,318		\$ 18,683		\$ 19,057		\$ 19,440	
Additional Monthly Revenue - Water Base					\$ 8,979		\$ 359		\$ 364		\$ 375		\$ 382	
Average Monthly Consumption					100%		5%		2%		2%		2%	
1-2000 gallons	66,700	0.002240	\$ 149	0.004480	\$ 299	0.004704	\$ 314	0.004798	\$ 320	0.004894	\$ 326	0.004992	\$ 333	
2001-5000 gallons	97,040	0.003510	341	0.007020	681	0.007371	715	0.007518	730	0.007669	744	0.007822	759	
5001-10,000 gallons	154,280	0.004131	637	0.008262	1,275	0.008675	1,338	0.008849	1,365	0.009026	1,392	0.009206	1,420	
10,0001+ gallons	1,533,300	0.006162	\$ 9,448	0.012324	\$ 18,896	0.012940	\$ 19,841	0.013199	\$ 20,238	0.013463	\$ 20,643	0.013732	\$ 21,056	
Totals			\$ 10,576	\$ 21,151	\$ 22,209	\$ 22,653	\$ 23,106	\$ 23,568						
Additional Monthly Revenue - Consumption					\$ 10,576		\$ 1,058		\$ 444		\$ 453		\$ 462	
Total Additional Monthly Revenue					\$ 19,555		\$ 1,417		\$ 809		\$ 828		\$ 844	
					\$ 39,110		\$ 40,527		\$ 41,335		\$ 42,163		\$ 43,008	
Total Fiscal Year Revenue					FY23 \$234,660	FY24 \$469,321	FY25 \$486,322	FY26 \$496,025	FY27 \$505,957	FY28 \$516,091				

The chart below shows how the tiered pricing under Option 3 influences a customer's monthly water bill. The calculations are based on the usual gallon amounts consumed (5,093, 7,500, & 12,000). A customer using 5,093 gallons is currently paying \$35.72. By implementing Option 3, that same customer will pay \$76.87 for the same amount of usage by fiscal year 2029.

Option 3

Town of Star Valley			
<i>Rates are based on a Standard Residential 5/8" Meter</i>			
Gallon Usage	5,093	7,500	12,000
Current Rate	\$ 35.72	\$ 45.83	\$ 68.77
FY2024-2025	69.62	89.66	135.26
FY2025-2026	71.90	92.94	140.80
FY2026-2027	73.30	94.75	143.56
FY2027-2028	74.72	96.61	146.39
FY2028-2029	76.87	99.63	151.41

Financial Impact of Implementing Option 3

The chart below reflects the estimated revenue increase through the forecasted fiscal years 2024-2025 through 2028-2029.

If the town chooses Option 3, the expected revenues will increase immediately, covering all expenses by the first year, which is 2024-2025. By the fiscal year 2028-2029, the water operations will have made substantial progress towards building reserves. Opting for Option 3 will guarantee a positive start towards reaching the reserve target.

Operating expenditures are calculated using a 3% inflation rate for Personnel, Administrative, and Infrastructure Repair. For Purchased Services and Depreciation, a 1% increase is used. Both inflation rates remain minimal.

Town of Star Valley Water Department - 6-Year Forecast Option 3 Financial Impact

	FY2023- 2024	FY2024- 2025	FY2025- 2026	FY2026- 2027	FY2027- 2028	FY2028- 2029
Operating Revenue	Current Year					
Customer Water Sales	234,660	469,321	486,322	496,025	505,957	516,091
Total Operating Revenue	\$ 234,660	\$ 469,321	\$ 486,322	\$ 496,025	\$ 505,957	\$ 516,091
Operating Expenditures						
3% Personnel	123,600	127,308	131,127	135,061	139,113	143,286
3% Administrative	51,697	53,248	54,845	56,491	58,185	59,931
3% Infrastructure Repair	21,600	22,248	22,915	23,603	24,311	25,040
1% Purchased Services	108,160	109,241	110,334	111,437	112,552	113,677
1% Depreciation	86,158	87,019	87,890	88,769	89,656	90,553
Total Operating Expenditures	\$ 391,215	\$ 399,065	\$ 407,111	\$ 415,360	\$ 423,817	\$ 432,487
Total Revenues over Expenditures	\$ (156,554)	\$ 70,256	\$ 79,211	\$ 80,665	\$ 82,140	\$ 83,603

Summarizing the Options

The following charts are arranged based on the number of gallons used and then by the available options to provide a side-by-side comparison of the customer's monthly water bill outcomes for each option. For instance, if a customer consumes 5,093 gallons of water per month in the fiscal year 2024-2025, they will need to pay \$49.28 for option one, \$56.06 for option two, and \$69.62 for option three.

Rates are based on a Standard Residential 5/8" Meter				Rates are based on a Standard Residential 5/8" Meter				Rates are based on a Standard Residential 5/8" Meter			
Options	1	2	3	Options	1	2	3	Options	1	2	3
Gallon Usage	5,093	5,093	5,093	Gallon Usage	7,500	7,500	7,500	Gallon Usage	12,000	12,000	12,000
Current Rate	\$ 35.72	\$ 35.72	\$ 35.72	Current Rate	\$ 45.83	\$ 45.83	\$ 45.83	Current Rate	\$ 68.77	\$ 68.77	\$ 68.77
FY2024-2025	\$ 49.28	\$ 56.06	\$ 69.62	FY2024-2025	\$ 63.36	\$ 72.13	\$ 89.66	FY2024-2025	\$ 95.36	\$108.66	\$135.26
FY2025-2026	\$ 54.03	\$ 61.48	\$ 71.90	FY2025-2026	\$ 69.50	\$ 79.14	\$ 92.94	FY2025-2026	\$104.67	\$119.30	\$140.80
FY2026-2027	\$ 61.85	\$ 67.45	\$ 73.30	FY2026-2027	\$ 79.62	\$ 86.86	\$ 94.75	FY2026-2027	\$120.03	\$131.01	\$143.56
FY2027-2028	\$ 67.86	\$ 74.01	\$ 74.72	FY2027-2028	\$ 87.39	\$ 95.35	\$ 96.61	FY2027-2028	\$131.81	\$143.88	\$146.39
FY2028-2029	\$ 71.16	\$ 76.18	\$ 76.87	FY2028-2029	\$ 91.66	\$ 98.15	\$ 99.63	FY2028-2029	\$138.28	\$148.12	\$151.41

The table displays the estimated profit or loss for each option and fiscal period.

Town of Star Valley

Water Department 5-Year Forecast

		FY2024-2025	FY2025-2026	FY2026-2027	FY2027-2028	FY2028-2029
Total Operating Revenues over Expenditures	Opt 1	\$ (70,540)	\$ (45,733)	\$ 215	\$ 33,327	\$ 47,500
Total Operating Revenues over Expenditures	Opt 2	\$ (23,608)	\$ 5,891	\$ 38,942	\$ 75,916	\$ 82,237
Total Operating Revenues over Expenditures	Opt 3	\$ 70,256	\$ 79,211	\$ 80,665	\$ 82,140	\$ 83,603



Conclusion and Recommendation

The purpose of this report is to provide the governing body of the Town of Star Valley with relevant information to make informed decisions about the town's water operating entity. The report includes data on the average amount of water produced over a fiscal period and the average amount of water lost each year. The report also details recent changes to the water system, contributing to the revenues.

Seasonal changes affect the amount of water consumed, with higher usage during the summer resulting in revenue fluctuations. When compared to neighboring cities and towns, it becomes apparent that the town's water pricing is significantly lower. However, the current pricing structure is insufficient to cover operating expenses for the water system.

In the upcoming five years, through fiscal year 2029, the water operation of the Town of Star Valley will require additional revenue to cater to the anticipated system needs. These include daily operating expenses, unforeseen infrastructure replacement and repair, and capital improvement projects.

The Town of Star Valley expects the Water Model Study to be complete soon. It will help identify the necessary capital improvement projects. Even without the expected recommendations for improvements included in the Water Model Study, we know the costs in front of us are enormous. For example, the water line replacement project costs \$3,000,000. The water pump station has an estimated cost of \$150,000. This rate increase will help build a CIP reserve for the current and future water system needs.

This analysis has identified three rate options for the board to consider. The report suggests choosing Rate Option 2 as it offers a balanced and long-lasting solution for fulfilling the system's revenue requirements, considering the size of the meter and the water consumed. Although Option 3 can also fulfill the requirements to operate the water system, it would increase the rates, causing more financial strain on the residents of Star Valley. It is expected that both options 2 and 3 will meet the revenue goals identified with this analysis.