

Town of Prescott Valley, Arizona
Water and Sewer Rate Study Report
July 7, 2016

I. PURPOSE:

The primary purpose of this Water and Sewer Rate Study (Study) is to develop multi-year financial projections for the Town of Prescott Valley (Town) Water System (Water) and the Town's Wastewater System (Wastewater), and to establish the service and treatment rates at a level related to the total cost of providing those services. The Water System historically was divided into two separate areas: a newer "Town" system providing services to residents and businesses north of State Route 89A and to the Yavapai County Fairgrounds, and an older "District" system providing services to all of the other residents and businesses of Prescott Valley, as well as those in Castle Canyon Mesa and Prescott Country Club.

However, on March 13, 2008, by Resolution No. 1570, the Prescott Valley Water District was dissolved and the assets of the Prescott Valley Water Company were merged into the Town's water system. Yet, combination of the assets under a single management did not remove the disparity in utility rate structures between the systems. This disparity was the result of the age difference between the two systems and the fact that bond financing had been necessary for the District system, but not the Town system. In 2009, the revenues and the expenditures for both systems were combined. [Note: this Study does not include an analysis of the current connection charges for either of these areas.]

This report does not contain any recommendations with respect to the Rates, Fees and Charges schedule. Staff is presenting this report to Council for discussion and to obtain Council's approval to proceed, provide further direction and changes, or instruct staff to not pursue any changes.

If changes are proposed, a subsequent report containing any recommended changes will be provided at a future Council meeting. If no changes are recommended, then the Rates, Fees and Charges current schedule will continue to be in force until the following year when this rate analysis will again be concluded.

When establishing service and treatment rates, the following issues must be considered:

- Cost of service;
- Pricing to encourage conservation, limit demand or discourage waste; and
- Financial performance measures such as debt service coverage and cash reserve requirements.

Any proposed increases to service and treatment rates must be based on the following criteria:

- Sufficiency – any service and treatment rate increase should be sufficient to recover the full cost of administration and enforcement, recognizing that adjustments may be necessary for the benefit of the public;
- Efficiency – service and treatment rates should be designed for easy, inexpensive administration and compliance by the individual/business paying the said rates; and
- Simplicity – service and treatment rates should be easily understood by payees and administrators, limiting the possibility of subjective interpretations.

II. OBJECTIVES:

An objective of the Town is to annually review its respective rate structures and to recommend, if necessary, small, incremental rate adjustments. Based on public financing obligations, the Town is

legally required to maintain minimum debt service coverage and minimum cash reserves. These obligations are reiterated in the Town Financial Policies.

Therefore, this study attempts to meet the following objectives:

- Compile and interpret historical financial results;
- Update the rate and financial planning model for the Town utilities as originally developed by outside consultants;
- Design service and treatment rates based upon projected revenue requirements and estimated expenditures (both operating and capital); and
- Comply with bond indentures and financial policies.

Bond indentures require that the Town maintain a minimum net revenue to annual debt service (both principal and interest) coverage ratio of at least 1.25:1 times (1.50:1 times if additional debt is to be issued).

Net revenues represent the difference between operating revenues (e.g. service and treatment rates, connection charges, new account fees and other fees, charges and penalties) and operating expenditures (all expenditures except capital outlay, debt service and depreciation). The Town’s ultimate goal is to maintain a minimum ratio of net revenue to debt service of 1.60:1 to ensure debt coverage in times of revenue fluctuations attributable to weather or other causes, and to ensure a balanced “pay-as-you-go” capital improvement plan. Also, the Town Financial Policy requires maintaining a minimum cash reserve equal to 90 days (approximately 25%) of operating expenditures.

III. CURRENT UTILITY RATES:

A. Water Service Rates – Water System (Last Revision November 1, 2015):

The following table shows the current water service rates for the Prescott Valley Water System (monthly base user rates – per billing period, and volume rates - per 1,000 gallons).

Description	Meter Size	Prescott Valley Water System
MONTHLY BASE RATES	5/8”	\$ 9.00
	3/4”	11.25
	1”	13.50
	1 ½”	18.00
	2”	22.50
	3”	27.00
	4”	31.50
	6” 8”	36.00 40.50
USAGE CHARGES	Tier 1	\$ 3.08
	Tier 2	3.69
	Tier 3	4.80

Customers’ meters are generally read on a monthly basis, and their bills are based on every **thousand gallons** of water read. Base user rates and volume rates are each based on meter size. The following chart illustrates the different tier rates based on meter size. The tier 1 water use allowance for a 5/8” meter is up to 8 thousand gallons. For use between 9 thousand and up to 20 thousand gallons, the tier 2

rate applies. For all usage over 20 thousand gallons, the highest rate - \$4.80 applies. The tier usage allowances increase as the meter size increases.

Prescott Valley Water System Usage Tier (gallons based on meter size)			
\$/1,000 gallons	\$3.08	\$3.69	\$4.80
Meter Size	Tier 1	Tier 2	Tier 3
5/8"	0 – 8	9 – 20	> 20
3/4"	0 – 11	12 – 27	> 27
1"	0 – 14	15 – 34	> 34
1 1/2"	0 – 26	27 – 66	> 66
2"	0 – 42	43 – 106	> 106
3"	0 – 86	87 – 214	> 214
4"	0 – 134	135 – 334	> 334
6"	0 – 266	267 – 666	> 666
8"	0 – 427	428 – 1,067	> 1,067

For example, if a customer resides in the Water System area and uses 10 thousand gallons (assuming 5/8" meter) in a month, that customer's monthly water bill (excluding wastewater rates, fees, taxes and other charges) would be calculated as follows:

Base User Rate				\$ 9.00
Volume Rate (in thousands):				
Tier 1 (0 – 8)	8 kgals	\$3.08 x 8 =	\$24.64	
Tier 2 (9 – 20)	2 kgals	\$3.69 x 2 =	\$ 7.38	\$32.02
Total monthly water bill (excluding taxes)	10 kgals.			<u>\$41.02</u>

B. Wastewater Treatment Rates – Wastewater System (Last Revision November 1, 2012):

The Town's current wastewater treatment rates are as follows (monthly base rates – per billing period, and volume rates - per 1,000 gallons):

Description	Meter Size	Wastewater
MONTHLY BASE RATES	5/8" & 3/4"	\$ 5.07
	1"	8.06
	1 1/2"	11.06
	2"	14.05
	3"	17.04
	4"	20.03
	6"	23.03
	8"	26.02
VOLUME RATE	All	<u>\$/1,000 gallons</u> \$4.54

A residential customer's wastewater bill is based on each residential unit's average metered water use for each account for the months of November through March (winter average), times 90%, OR actual water usage (whichever is lower). Bills for commercial and industrial customers are based on actual metered water usage.

For example, if a residential customer has a winter average of 6,000 gallons (but only uses 5,000 gallons during a particular month), the customer’s wastewater bill will be based on the 5,000 gallons actually used. The wastewater bill (excluding water rates, fees, taxes and other charges) would be calculated as follows:

Base User Rate (assuming 3/4” meter)		\$ 5.07
Volume Rate	\$4.54 x 5	<u>\$22.70</u>
Total monthly wastewater bill (excluding taxes):	5 kgals.	<u>\$27.77</u>

IV. GROWTH AND INFLATION ASSUMPTIONS:

This Study involves a variety of assumptions about future revenues, expenses and capital expenditures. Estimates of growth in water and wastewater utility accounts are based on historical information. Because growth and inflation do not remain constant, it is extremely important to annually review and update the assumptions.

A. Revenue and Expenditures Projections:

Based on historical and anticipated costs for personnel services, other operating expenses (i.e. electricity, professional services, etc.), anticipated capital improvements and contracts with the current private operator of the water and wastewater system (CH2MHill OMI), the following general inflation increases are projected:

	General Inflation Factors				
	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
Personnel Services	6%	5%	5%	5%	5%
Other Operating Expenses	6%	5%	5%	5%	5%
Capital Outlays/Improvements	0%	0%	0%	0%	0%
OMI Contracts	8%	5%	5%	5%	5%

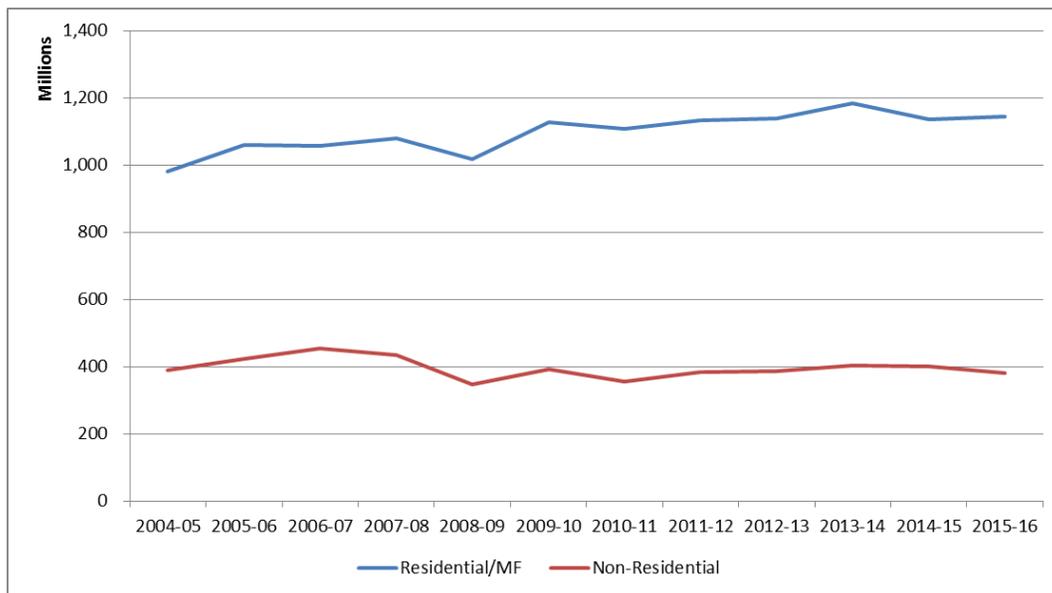
Projected revenues for the system are based on the projected number of accounts (see below) and the proposed rate increases in this Report as needed to maintain compliance with bond indentures and financial policies, and to build cash reserves to fund planned capital projects:

		Revenue Inflation Factors				
		FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
VALUES USED		1.00%	1.00%	1.00%	1.00%	1.00%
Account Growth/Usage Fees						
Projected Accounts - Water	19,703*	20,010 1.56%	20,327 1.58%	20,645 1.56%	20,963 1.54%	21,306 1.63%
Projected Accounts-Wastewater	16,992*	17,275 1.67%	17,581 1.77%	17,887 1.74%	18,194 1.72%	18,487 1.61%

* Actual number of accounts as of May 2016.

B. Gallons billed Projections:

Probably the most important component on calculating utility rates is projecting the number of gallons to be billed for the upcoming fiscal year. The chart below shows the actual number of gallons billed from the Water System for the last twelve (12) years. Non-residential usage would include commercial, irrigation, hydrant, Diamond Valley and Bradshaw Mountain. Residential/Multi-Family annual consumption ranges from a low of 980.8M gallons (FY2004-05) to a high of 1,182.3M gallons (FY2013-14). Non-residential annual consumption ranges from a low of 346.8M gallons (FY2008-09) to a high of 454.9M (FY2006-07). For the upcoming fiscal year, staff is projecting that the Town will bill 1,131.5M gallons to residential customers and 402.0M to non-residential customers for a total billed 1,533.5M. Sewer gallons billed is based off of the number of gallons billed from the Water System.



Generally, no one factor (i.e. revenue and expenditure projections, number of customers, gallons billed, etc.) affects utility rates unless the change is severe (e.g. dramatic increase in expenditures or decline in gallons billed), but an increase to rates is the result of changes to a combination of the factors listed above.

V. FIVE-YEAR CASH FLOW SUMMARY – Combined Operating and Capital (Growth):

This section provides expected scenarios in the event the projected growth and inflation from above were to occur without any increases to either the Water System or Wastewater rate structures. The financial projections on the following pages represent both growth and non-growth related revenues and expenditures for both the Water and Wastewater funds.

A. Water System

As shown below, the Water System is projected for the FY 2016-17 through FY 2020-21, to exceed both of the required financial performance requirements. The Cash Reserve Ratio begins to slightly decrease in FY 2017-18 and continues to decrease through FY 2019-20, which coincides with the decline in the Total Cash and Investment at the end of year balances. However, the reserves are still well above the Town’s financial policy goal of 25%. The decrease in cash balances is primarily due to the number of capital expenditures (i.e. East Well Field in the amount of \$2.5M, Summit Tank II in the amount of

\$1.0M, additional well capacity, etc.) budgeted in the next five years especially in FY 2016-17 and FY 2019-20. In the next five years, total CIP for the Water funds equals \$10,987,250. Annually, capital expenditures are re-evaluated to determine need for each of these projects that are currently included in the Town's FY 2016-17 Five-Year Capital Improvement Plan. Most of the large water projects would be driven by growth. If housing continues to increase in the upcoming years, the amount collected from capacity will be used to fund these capital projects.

The operating income (loss) line indicates operating expenses (including depreciation) are increasing slightly faster than operating revenues with the exception of FY 2018-19. Net operating income, excluding depreciation (not shown), ranges from a profit of approximately \$866,000 in FY 2018-19 to \$2.6M in FY 2019-20.

	Base Year					
	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
Operating Revenues:						
Usage Fees	\$7,255,884	\$7,369,076	\$7,485,507	\$7,602,281	\$7,719,356	\$7,845,182
Capacity Fees	413,104	461,256	478,397	482,270	502,633	552,265
Water Meter Charge	225,986	232,766	239,749	246,941	254,350	261,980
Interest Income	103,598	64,447	60,566	57,978	57,056	53,709
Miscellaneous	286,042	300,000	315,062	340,850	366,702	392,619
Total Operating Revenue	<u>8,284,614</u>	<u>8,427,545</u>	<u>8,579,281</u>	<u>8,730,320</u>	<u>8,900,097</u>	<u>9,105,755</u>
Operating Expenses:						
Administrative Services - Town	669,259	722,415	758,535	796,462	836,285	878,099
Contract - OMI	2,261,185	2,352,080	2,469,684	2,593,168	2,722,826	2,858,968
Other Operating Expenses	2,467,456	2,349,503	2,466,979	2,590,327	2,719,844	2,855,836
Amortization/Depreciation	1,375,000	1,375,000	1,375,000	1,375,000	1,375,000	1,375,000
Total Operating Expenses	<u>6,772,900</u>	<u>6,798,998</u>	<u>7,070,198</u>	<u>7,354,957</u>	<u>7,653,955</u>	<u>7,967,903</u>
Operating Income (Loss)	1,511,714	1,628,547	1,509,083	1,375,362	1,246,141	1,137,852
Other Expenditures:						
Debt Service - Existing	1,894,794	1,899,036	1,897,153	1,884,116	-	-
Debt Service - Proposed	-	-	-	-	-	-
Total Other Expenditures	<u>1,894,794</u>	<u>1,899,036</u>	<u>1,897,153</u>	<u>1,884,116</u>	<u>-</u>	<u>-</u>
Net Operating Income (Loss)	(383,080)	(270,488)	(388,069)	(508,753)	1,246,141	1,137,852
Capital Financing / (Expenditures)						
Capital Expenditures	(1,107,250)	(2,657,000)	(2,028,000)	(1,235,000)	(3,960,000)	(1,135,000)
Net Capital Funding	<u>(1,107,250)</u>	<u>(2,657,000)</u>	<u>(2,028,000)</u>	<u>(1,235,000)</u>	<u>(3,960,000)</u>	<u>(1,135,000)</u>
Net Income (Loss)	(1,490,330)	(2,927,488)	(2,416,069)	(1,743,753)	(2,713,859)	2,852
Cash and Cash Equivalents at BOY	9,894,121	9,778,791	8,226,303	7,191,233	6,822,480	5,483,621
Add Back Amortization/Depreciation	1,375,000	1,375,000	1,375,000	1,375,000	1,375,000	1,375,000
Total Cash and Investments at EOY	<u>\$9,778,791</u>	<u>\$8,226,303</u>	<u>\$7,185,233</u>	<u>\$6,822,480</u>	<u>\$5,483,621</u>	<u>\$6,861,473</u>
Cash Reserve Ratio (25%)	181%	152%	126%	114%	87%	104%
Debt Service Coverage Ratio 1.25	1.52	1.58	1.52	1.46	N/A	N/A

B. Wastewater System

Although the Cash Reserves are extremely healthy, as shown on the following page, beginning in FY 2017-18 and continuing through the following years, the Wastewater System's Total Cash and Investments at end of year are projected to consistently exceed \$4.5M and that is based on two large capital projects being completed in FY 2017-18 and FY 2020-21. Additionally, the Cash Reserve Ratio

starts to fall in FY 2017-18 and continues to decrease through FY 2020-21. However, the Cash Reserve rate consistently exceeds the Town’s policy of 25%, with the lowest cash reserve projection for the next five years being 108%.

The primary factors that contribute to the decrease in cash balances are:

- Reduced number of capital expenditures being projected in the next five years; and
- With the increase in housing, we are projecting an increase of approximately 300 utility customers or 2% growth in revenues.

The lowest projected debt service reserve coverage within the next five years is 1.66 in FY 2020-21, which is higher than the minimum requirement of 1.25 and the Town’s policy of 1.60. Based on these assumptions, no increase in the rates would be required.

Staff is projecting basically no change in the number of gallons to be billed for FY 2016-17 as compared to the amount actually billed in the previous fiscal year. Based on current assumptions, new customer growth will increase by less than 2% (approximately 300 customers a year).

	Base Year					
	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
Operating Revenues:						
Usage Fees	\$5,051,000	\$5,095,352	\$5,226,248	\$5,317,185	\$5,408,641	\$5,495,720
Capacity Fees	877,067	913,062	1,005,634	1,027,678	1,050,150	1,022,769
Penalty Fees	106,700	109,901	113,198	116,594	120,092	123,695
Interest Income	23,881	17,618	33,803	13,554	12,292	13,241
Total Operating Revenue	<u>6,092,954</u>	<u>6,135,933</u>	<u>6,378,883</u>	<u>6,475,011</u>	<u>6,591,175</u>	<u>6,655,425</u>
Operating Expenses:						
Administrative Services - Town	537,603	571,859	600,452	630,475	661,998	695,098
Contract - OMI	1,334,656	1,478,428	1,552,350	1,629,967	1,711,466	1,797,039
Other Operating Expenses	1,077,539	1,209,191	1,269,651	1,333,133	1,399,790	1,469,780
Amortization/Depreciation	3,025,000	3,025,000	3,025,000	3,025,000	3,025,000	3,025,000
Total Operating Expenses	<u>5,974,798</u>	<u>6,284,479</u>	<u>6,447,453</u>	<u>6,618,576</u>	<u>6,798,254</u>	<u>6,986,917</u>
Operating Income (Loss)	118,156	(148,546)	(68,570)	(143,564)	(207,079)	(331,492)
Other Expenditures:						
Debt Service - Existing	1,628,191	1,620,553	1,620,729	1,621,173	1,623,385	1,624,908
Total Other Expenditures	<u>1,628,191</u>	<u>1,620,553</u>	<u>1,620,729</u>	<u>1,621,173</u>	<u>1,623,385</u>	<u>1,624,908</u>
Net Operating Income (Loss)	(1,510,035)	(1,769,100)	(1,689,299)	(1,764,738)	(1,830,464)	(1,956,400)
Capital Financing / (Expenditures)						
Capital Expenditures	(2,304,450)	(652,000)	(3,565,000)	(1,765,000)	(815,000)	(2,105,000)
Net Capital Funding	<u>(2,304,450)</u>	<u>(652,000)</u>	<u>(3,565,000)</u>	<u>(1,765,000)</u>	<u>(815,000)</u>	<u>(2,105,000)</u>
Cash and Cash Equivalents at BOY	7,836,490	7,047,005	7,650,906	5,421,607	4,916,869	5,296,405
Add Back Amortization/Depreciation	3,025,000	3,025,000	3,025,000	3,025,000	3,025,000	3,025,000
Total Cash and Investments at EOY	<u>\$7,047,005</u>	<u>\$7,650,906</u>	<u>\$5,421,607</u>	<u>\$4,916,869</u>	<u>\$5,296,405</u>	<u>\$4,260,005</u>
Cash Reserve Ratio (25%)	239%	235%	158%	137%	140%	108%
Debt Service Coverage Ratio 1.25	1.93	1.77	1.82	1.78	1.74	1.66