

Town of Prescott Valley, Arizona
Water and Sewer Rate Study Report
July 26, 2012

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 and in 2010, only system capacity charges remain different in the rate structure. [Note: this Study does not include an analysis of the current connection charges for either of these areas.]

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 small, incremental rate adjustments as necessary. 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.

For this particular Study, staff has as an objective to also keep current other rates, fees and charges of the Town, and is including these items in this Study. Changes proposed would be included in the Town's Water Rates, Fees and Charges. Further discussion of these items and the recommended changes are addressed in section VI. Recommendations.

III. CURRENT UTILITY RATES:

A. Water Service Rates – Water System (Last Revision November 1, 2010):

The following table shows the current water service rates for both 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" & 3/4"	\$ 9.00
	1"	13.50
	1 1/2"	18.00
	2"	22.50
	3"	27.00
	4"	31.50
	6"	36.00
	8"	40.50
USAGE CHARGES	Block 1	\$ 3.02
	Block 2	3.62
	Block 3	4.71

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 block rates based on meter size. The block 1 water use allowance for a 5/8" or 3/4" meter is up to 8 thousand gallons. For use between 9 thousand and up to 20 thousand gallons, the block 2 rate applies. For all usage over 20 thousand gallons, the highest rate - \$4.71 applies. The block usage allowances increase as the meter size increases.

Prescott Valley Water System Usage Block (gallons based on meter size)			
\$/1,000 gallons	\$3.02	\$3.62	\$4.71
Meter Size	Block 1	Block 2	Block 3
5/8" & 3/4"	0 – 8	9 – 20	> 20
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 3/4" 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):			
Block 1 (0 – 8)	8 kgals	\$3.02 x 8 =	\$24.16
Block 2 (9 – 20)	2 kgals	\$3.62 x 2 =	<u>\$ 7.24</u>
			<u>\$31.40</u>
 Total monthly water bill (excluding taxes)	 10 kgals.		 <u>\$40.40</u>

B. Wastewater Treatment Rates – Wastewater System (Last Revision November 1, 2011):

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> \$4.48

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	\$4.48 x 5	<u>\$22.40</u>
 Total monthly wastewater bill (excluding taxes):	 5 kgals.	 <u>\$27.47</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 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17
Personnel Services	2%	2%	2%	2%	2%
Other Operating Expenses	3%	10%	10%	10%	10%
Capital Outlays/Improvements	0%	0%	0%	0%	5%
OMI Contracts	0%	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 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17
VALUES USED		1.00%	1.00%	1.00%	1.00%	1.00%
Account Growth/Usage Fees						
Projected Accounts-Water	18,116*	18,183 0.37%	18,250 0.37%	18,317 0.37%	18,384 0.37%	18,451 0.37%
Projected Accounts-Wastewater	15,347*	15,385 0.25%	15,440 0.35%	15,494 0.35%	15,548 0.35%	15,603 0.35%

* Actual number of accounts as of May 2012

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.

A. Water System

As shown below, the Water System is projected to have healthy cash reserves and be financially strong until FY 2015-16. But, the Water System Cash Reserve Ratio is anticipated to reach a negative ratio in FY 2016-17, unless there are dramatic changes to revenues and/or expenditures. There are various contributing factors to this decline: revenues are increasing at a slower rate than expenditures, especially in the area of capacity fees and usage fees. The Town will have large capital expenditures beginning in FY 2013-14. Staff will evaluate these capital expenditures to determine if they can be postponed or if additional bonds need to be issued. New housing construction continues to be an issue. This has a direct effect on capacity fees, revenue projections and base fees. Based on current assumptions, growth as it relates to new customers will increase by less than 1%. Beginning in FY 2015-16 debt service coverage falls below the minimum level; expenditures are rising faster than revenues. If this trend continues, expenditures may need to be adjusted to be more aligned to projected revenues.

	Base Year					
	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17
Operating Revenues:						
Usage Fees	\$7,113,179	\$7,139,498	\$7,165,914	\$7,192,428	\$7,219,040	\$7,245,750
Capacity Fees	93,194	101,072	102,427	103,807	107,408	109,514
Water Meter Charge	46,246	47,633	49,062	50,534	52,050	53,612
Interest Income	53,171	57,665	58,775	57,788	50,578	42,252
Miscellaneous	273,991	275,000	290,000	315,724	341,514	367,368
Total Operating Revenue	<u>7,579,780</u>	<u>7,620,868</u>	<u>7,666,177</u>	<u>7,720,281</u>	<u>7,770,589</u>	<u>7,818,495</u>
Operating Expenses:						
Administrative Services - Town	586,876	590,480	602,290	614,336	626,622	639,155
Contract - OMI	2,035,960	2,035,960	2,137,758	2,244,646	2,356,878	2,474,722
Other Operating Expenses	1,677,517	2,027,843	2,230,627	2,453,690	2,699,059	2,968,965
Amortization/Depreciation	1,350,000	1,350,000	1,350,000	1,350,000	1,350,000	1,350,000
Total Operating Expenses	<u>5,650,353</u>	<u>6,004,283</u>	<u>6,320,675</u>	<u>6,662,672</u>	<u>7,032,560</u>	<u>7,432,842</u>
Operating Income (Loss)	1,929,427	1,616,585	1,345,502	1,057,610	738,030	385,654
Other Expenditures:						
Debt Service - Existing	1,882,794	1,871,036	1,886,153	1,891,816	1,878,423	1,891,606
Total Other Expenditures	<u>1,882,794</u>	<u>1,871,036</u>	<u>1,886,153</u>	<u>1,891,816</u>	<u>1,878,423</u>	<u>1,891,606</u>
Net Operating Income (Loss)	46,633	(254,451)	(540,651)	(834,206)	(1,140,394)	(1,505,952)
Capital Financing / (Expenditures)						
Capital Expenditures	(566,500)	(651,500)	(1,204,000)	(3,400,000)	(3,540,000)	(8,447,768)
Net Capital Funding	<u>(566,500)</u>	<u>(651,500)</u>	<u>(1,204,000)</u>	<u>(3,400,000)</u>	<u>(3,540,000)</u>	<u>(8,447,768)</u>
Net Income (Loss)	(519,867)	(905,951)	(1,744,651)	(4,234,206)	(4,680,394)	(9,953,720)
Cash and Cash Equivalents at BOY	6,235,843	7,065,976	7,510,025	7,115,374	4,231,169	900,775
Add Back Amortization/Depreciation	1,350,000	1,350,000	1,350,000	1,350,000	1,350,000	1,350,000
Total Cash and Investments at EOY	<u>\$7,065,976</u>	<u>\$7,510,025</u>	<u>\$7,115,374</u>	<u>\$4,231,169</u>	<u>\$900,775</u>	<u>(\$7,702,945)</u>
Cash Reserve Ratio (25%)	164%	161%	143%	80%	16%	-127%
Debt Service Coverage Ratio 1.25	1.74	1.59	1.43	1.27	1.11	0.92

B. Wastewater System

As shown below, beginning in FY 2012-13, the Wastewater System will not sufficiently meet the required debt service coverage ratio. In order to meet the debt service coverage ratio, an increase to the wastewater rates will be necessary. Various factors contribute to the decrease in the debt service coverage test. The primary factor is projected expenditures are increasing at a faster rate than projected revenues (especially in the area of capacity fees and usage fees). The number of gallons billed has been flat compared to the previous year. Based on current assumptions, growth as it relates to new customers will increase by less than 1%. In order to maintain an adequate debt service coverage ratio and to improve the cash balance, staff anticipates making small revisions to the rates over the next four years and by issuing bonds or delaying the proposed capital improvements. The housing market will have to substantially improve to avoid issuing bonds to fund new infrastructure.

There are adequate cash reserves until FY 2016-17. Beginning in FY 2015-16, there are major capital expenditures being proposed and these expenditures will need to be evaluated to determine if they can be postponed or if additional financing will be necessary.

	Base Year					
	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17
Operating Revenues:						
Usage Fees	\$4,471,688	\$4,482,867	\$4,498,557	\$4,514,302	\$4,530,102	\$4,545,957
Capacity Fees	310,213	46,440	73,801	75,389	77,001	81,574
Penalty Fees	106,336	109,526	112,812	116,197	119,683	123,273
Interest Income	18,855	29,887	44,104	28,913	24,939	16,804
Total Operating Revenue	<u>4,907,092</u>	<u>4,668,721</u>	<u>4,729,275</u>	<u>4,734,800</u>	<u>4,751,725</u>	<u>4,767,609</u>
Operating Expenses:						
Administrative Services - Town	462,675	482,559	492,210	502,054	512,095	522,337
Contract - OMI	1,003,000	1,186,557	1,245,885	1,597,356	1,677,224	1,761,085
Other Operating Expenses	777,218	840,535	924,588	1,017,047	1,118,752	1,230,627
Amortization/Depreciation	3,010,000	3,010,000	3,010,000	3,010,000	3,010,000	3,010,000
Total Operating Expenses	<u>5,252,894</u>	<u>5,519,651</u>	<u>5,672,683</u>	<u>6,126,458</u>	<u>6,318,071</u>	<u>6,524,049</u>
Operating Income (Loss)	(345,801)	(850,929)	(943,408)	(1,391,657)	(1,566,346)	(1,756,440)
Other Expenditures:						
Debt Service - Existing	1,798,191	1,797,553	1,797,729	1,798,173	1,797,385	1,798,908
Total Other Expenditures	<u>1,798,191</u>	<u>1,797,553</u>	<u>1,797,729</u>	<u>1,798,173</u>	<u>1,797,385</u>	<u>1,798,908</u>
Net Operating Income (Loss)	(2,143,992)	(2,648,483)	(2,741,138)	(3,189,831)	(3,363,731)	(3,555,349)
Capital Financing / (Expenditures)						
Capital Expenditures	(125,000)	(545,000)	(475,000)	(1,410,000)	(2,900,000)	(5,117,281)
Net Capital Funding	<u>(125,000)</u>	<u>(545,000)</u>	<u>(475,000)</u>	<u>(1,410,000)</u>	<u>(2,900,000)</u>	<u>(5,117,281)</u>
Cash and Cash Equivalents at BOY	11,213,871	11,954,879	11,771,396	11,565,258	9,975,428	6,721,696
Add Back Amortization/Depreciation	3,010,000	3,010,000	3,010,000	3,010,000	3,010,000	3,010,000
Total Cash and Investments at EOY	<u>\$11,954,879</u>	<u>\$11,771,396</u>	<u>\$11,565,258</u>	<u>\$9,975,428</u>	<u>\$6,721,696</u>	<u>\$1,059,066</u>
Cash Reserve Ratio (25%)	533%	469%	434%	320%	203%	30%
Debt Service Coverage Ratio 1.25	1.48	1.20	1.15	0.90	0.80	0.70

VI. RECOMMENDATIONS:

A. Water System

Water System Financial Planning Recap

Beginning in FY 2012-13, additional revenue increases (either rate increases or consumption) will be required to meet the minimum debt service coverage. Unless there is a significant change in the housing market or capital growth-related projects are delayed, the Town would need to issue additional bonds to fund a portion of its capital improvement requests and to maintain the required minimum cash reserves in FY 2015-16 and FY 2016-17.

Description	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17
PRESCOTT VALLEY WATER SYSTEM						
Revenue Increase (Decrease)	0%	0%	3%	5%	5%	7%
Effective Month of Revenue Change (Nov)	5	5	5	5	5	5
Loan Proceeds						
Operating Non- Growth	\$0	\$0	\$0	\$0	\$0	\$0
Development – Growth	0	0	0	0	0	0
Total	\$0	\$0	\$0	\$0	\$0	\$0
Cash Balance – End of Year						
Operating Non- Growth Fund 511	\$4,481,982	\$4,818,500	\$4,477,484	\$4,444,680	\$4,565,051	\$4,634,945
Development – Growth Fund 551	2,583,994	2,691,526	2,780,681	391,439	(2,210,175)	(9,515,249)
Total	\$7,065,976	\$7,510,026	\$7,258,165	\$4,836,119	\$2,354,876	(\$4,880,304)
Total Fund Cash Reserves Target: 25%	164%	161%	146%	91%	41%	-80%
Debt Service Coverage Target: 1.25	1.74	1.59	1.50	1.52	1.56	1.64

Based on the current assumptions and growth projections and anticipated cash reserves, **staff is not recommending an increase for the Prescott Valley Water System. No changes to the base or volume rates for the Water System are being proposed at this time.**

B. Wastewater System

Wastewater System Financial Planning Recap

Beginning in FY 2012-13, additional revenue increases (either rate increases or consumption) will be required to meet the minimum debt service coverages. Beginning in FY 2013-14, unless there is a significant change in the housing market or capital growth-related projects are delayed, the Town would need to issue additional bonds to fund a portion of its capital improvement requests or funds from the non-growth fund may need to be transferred to cover the shortfall.

Starting in FY 2012-13 the Development – Growth Fund (552) shows negative cash balances attributable to debt service payments. In FY 2014-15 through FY 2016-17 the negative cash balances are attributable to proposed capital projects. The capital projects would have to either be postponed or bonds would have to be issued to offset the negative balances.

Description	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17
PRESCOTT VALLEY WASTEWATER						
Revenue Increase (Decrease)	0%	2%	5%	10%	10%	3%
Effective Month – Revenue Change	5	5	5	5	5	5
Loan Proceeds						
Operating Non-Growth	\$0	\$0	\$0	\$0	\$0	\$0
Development – Growth	0	0	0	0	0	0
Total	\$0	\$0	\$0	\$0	\$0	\$0
Cash Balance – End of Year						
Operating Non-Growth Fund 501	\$11,040,334	\$12,021,079	\$13,137,091	\$13,268,995	\$12,256,348	\$9,135,472
Development – Growth Fund 552	914,544	(40,061)	(969,297)	(1,897,813)	(2,824,042)	(3,746,413)
Total	\$11,954,878	\$11,981,018	\$12,167,794	\$11,371,183	\$9,432,306	\$5,389,060
Total Fund Cash Reserves Target: 25%	533%	477%	457%	365%	285%	156%
Debt Service Coverage Target: 1.25	1.48	1.35	1.40	1.37	1.58	1.65

Based on the current assumptions, growth projections, anticipated cash reserves and to maintain an adequate debt service coverage, **staff is recommending an increase to the volume rate of the Wastewater System. The base rate for the system would remain unchanged.** The above financial planning recap does include the current wastewater connection charges.

Description	Current	Proposed	Difference	Difference
Volume Rate (\$/1,000 gallons)				
Residential/Multi-Family	\$4.48	\$4.54	\$0.06	2%
Non-Residential	\$4.48	\$4.54	\$0.06	2%

C. Other Recommended Changes

Other recommended changes are:

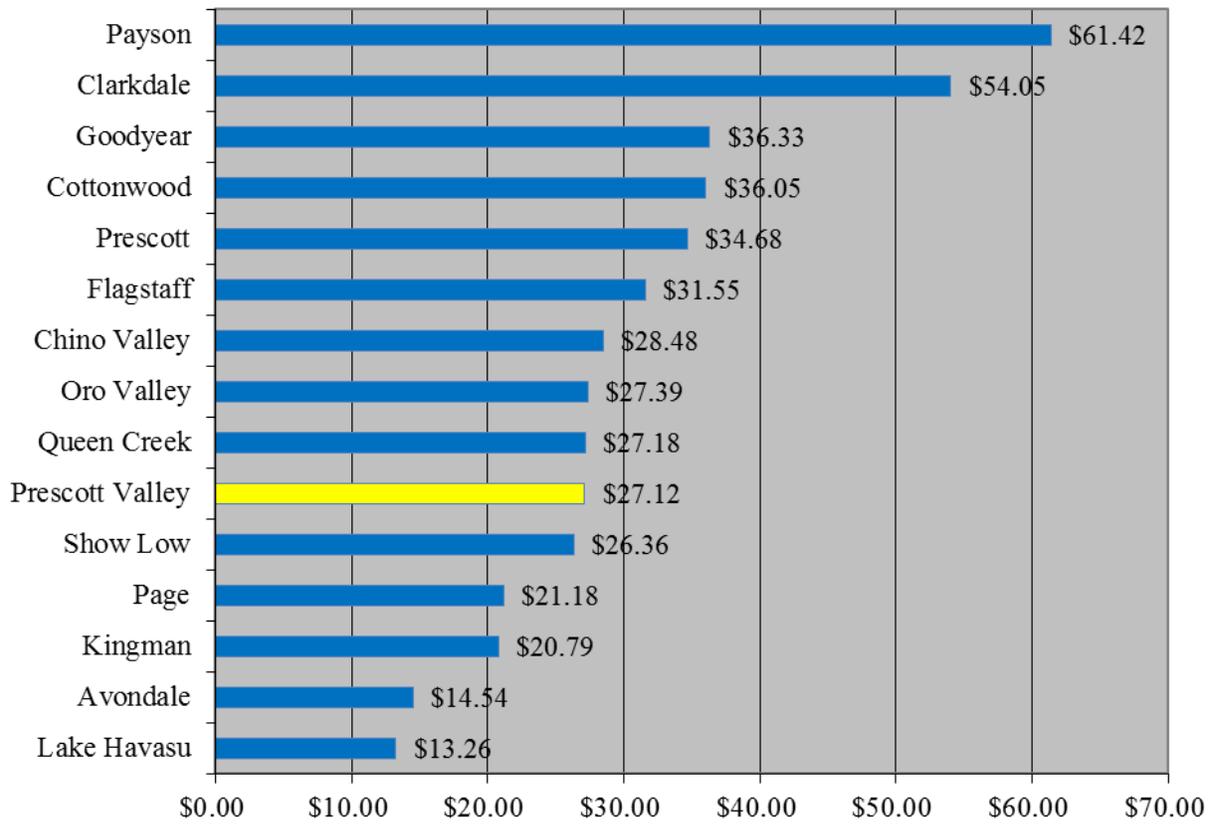
1. Removal of the Arizona Department Water Resources (ADWR) flat rate pro-rata fee.

Recommended Changes	Current Amount	Proposed Amount
ADWR Fee	\$0.46	\$0.00

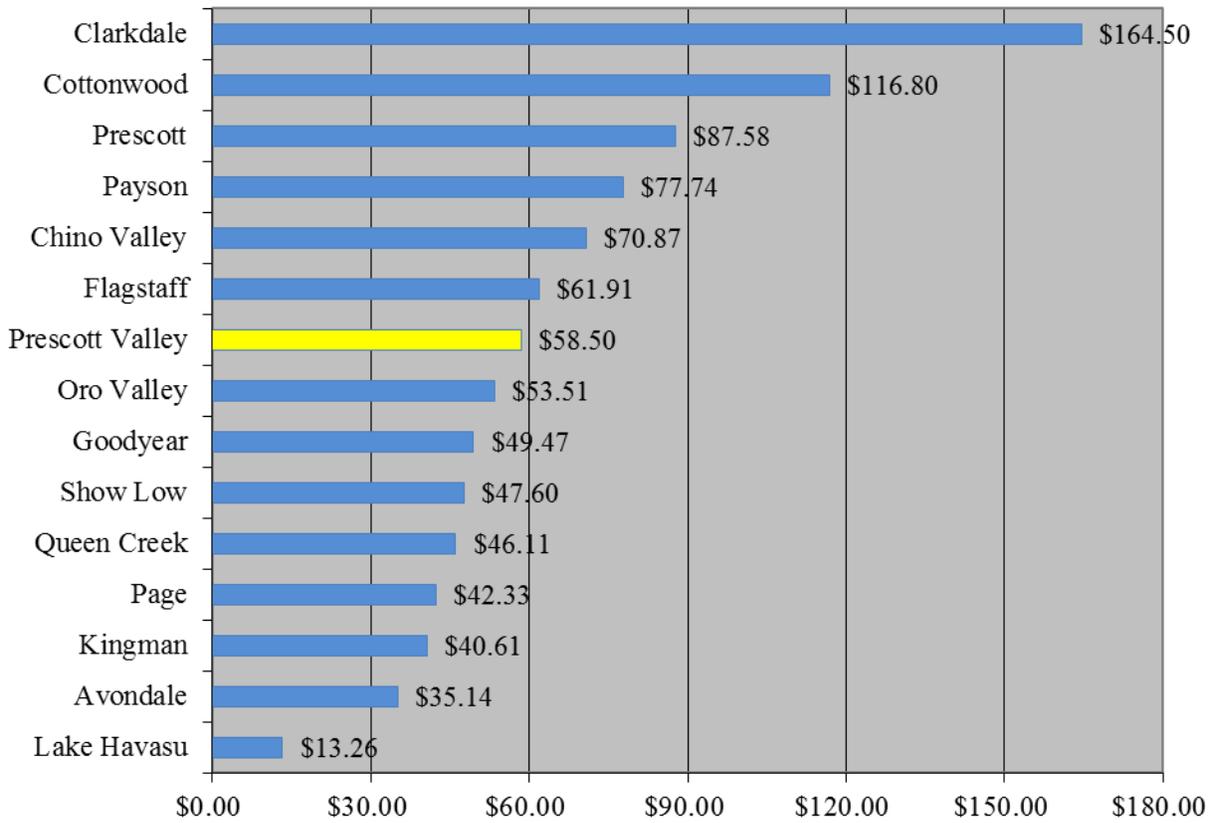
Staff is recommending removal of the monthly fee assessed to active water customers in FY 11-12. The State legislative session that adjourned May 3, 2012, passed a Senate bill effectively removing this requirement.

VII. COMPARISON OF WATER RATES WITH OTHER CITIES:

The following chart shows what a typical customer would pay if they used 6,000 gallons of water per month (assuming a 3/4" meter).



The following chart shows what a typical customer would pay if they used 15,000 gallons of water per month (assuming a ¾" meter).



The following chart shows what a typical customer would pay if they used 24,000 gallons of water per month (assuming a ¾" meter).

