

Town of Prescott Valley, Arizona
Water and Sewer Rate Study Report
July 23, 2015

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 currently 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, 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 (1.35:1 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, 2010):

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" & 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 kgal	\$3.02 x 8 =	\$24.16
Block 2 (9 – 20)	2 kgal	\$3.62 x 2 =	\$ 7.24
			<u>\$31.40</u>
Total monthly water bill (excluding taxes)	10 kgal.		<u>\$40.40</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). Wastewater 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 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Personnel Services	6%	5%	5%	5%	5%
Other Operating Expenses	6%	5%	5%	5%	5%
Capital Outlays/Improvements	2%	2%	2%	2%	2%
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 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
VALUES USED		1.00%	1.00%	1.00%	1.00%	1.00%
Account Growth/Usage Fees						
Projected Accounts - Water	19,211*	19,560 1.82%	19,901 1.79%	20,264 1.77%	20,619 1.75%	20,976 1.73%
Projected Accounts-Wastewater	15,811*	16,121 1.96%	16,430 1.92%	16,739 1.88%	17,048 1.85%	17,357 1.81%

* Actual number of accounts as of May 2015.

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 on the following page, the Water System is projected for the FY 2015-16 through FY 2019-20, to exceed both of the required financial performance requirements. The Cash Reserve Ratio begins to slightly decrease in FY 2016-17 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. StoneRidge Water Tank, additional well capacity) budgeted in the next five years especially in FY 2017-18 and FY 2019-20. Still, annually, capital expenditures are re-evaluated to determine need for each of these projects that are currently included in the Town’s FY 2015-16 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. Net operating income, excluding depreciation (not shown), ranges from a profit of approximately \$966,000 in FY 2014-15 to \$3 million in FY 2019-20.

Water System billed volumes were slightly less in FY 2014-15 (through May 2015) compared to FY 2013-14 and customer growth is projected at less than 2% (approximately 350 new customers a year).

	Base Year					
	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Operating Revenues:						
Usage Fees	\$7,202,841	\$7,332,492	\$7,463,010	\$7,594,359	\$7,726,501	\$7,859,397
Capacity Fees	189,101	230,344	283,425	337,178	387,388	432,597
Water Meter Charge	109,907	113,204	116,600	120,098	123,701	127,412
Interest Income	109,581	64,909	64,881	62,336	58,952	58,486
Miscellaneous	287,182	300,000	315,062	340,850	366,702	392,619
Total Operating Revenue	7,898,612	8,040,950	8,242,979	8,454,822	8,663,243	8,870,510
Operating Expenses:						
Administrative Services - Town	641,481	679,970	713,968	749,667	787,150	826,508
Contract - OMI	2,195,310	2,260,935	2,373,982	2,492,681	2,617,315	2,748,180
Other Operating Expenses	2,201,156	2,127,225	2,233,587	2,345,266	2,462,529	2,585,656
Amortization/Depreciation	1,350,000	1,375,000	1,375,000	1,375,000	1,375,000	1,375,000
Total Operating Expenses	6,387,947	6,443,130	6,696,537	6,962,613	7,241,994	7,535,344
Operating Income (Loss)	1,510,665	1,597,820	1,546,442	1,492,208	1,421,249	1,335,167
Other Expenditures:						
Debt Service - Existing	1,894,794	1,877,036	1,899,153	1,897,816	1,884,423	-
Debt Service - Proposed	-	-	-	-	-	-
Total Other Expenditures	1,894,794	1,877,036	1,899,153	1,897,816	1,884,423	-
Net Operating Income (Loss)	(384,129)	(279,215)	(352,711)	(405,607)	(463,174)	1,335,167
Capital Financing / (Expenditures)						
Capital Expenditures	(281,500)	(1,107,250)	(2,040,000)	(2,323,213)	(1,098,350)	(3,718,154)
Net Capital Funding	(281,500)	(1,107,250)	(2,040,000)	(2,323,213)	(1,098,350)	(3,718,154)
Net Income (Loss)	(665,629)	(1,386,465)	(2,392,711)	(2,728,821)	(1,561,524)	(2,382,988)
Cash and Cash Equivalents at BOY	9,279,400	9,963,771	9,952,305	8,934,594	7,580,774	7,394,250
Add Back Amortization/Depreciation	1,350,000	1,375,000	1,375,000	1,375,000	1,375,000	1,375,000
Total Cash and Investments at EOY	\$9,963,771	\$9,952,305	\$8,934,594	\$7,580,774	\$7,394,250	\$6,386,262
Cash Reserve Ratio (25%)	198%	196%	168%	136%	126%	104%
Debt Service Coverage Ratio 1.25	1.51	1.58	1.54	1.51	1.48	N/A

B. Wastewater System

Although the Cash Reserves are extremely healthy, as shown on the following page, beginning in FY 2013-14 and continuing through the following years, the Wastewater System's Total Cash and Investments at EOY are projected to consistently exceed \$8M. Additionally, the Cash Reserve Ratio starts to fall in FY 2013-14 and continues to decrease through FY 2017-18. However, the Cash Reserve rate never falls below 200% compared to the Town's policy of 25%.

The primary factors that contribute to the increase 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.

In FY 2016-17 and the next three years, the debt service coverage begins to decrease and in FY 2019-20 falls below the legally required 1.25 minimum ratio as established by the bond covenants. Probably beginning in FY 2016-17 and based on projected expenditures (both operating and capital), an increase in the wastewater rate will be necessary to raise the debt service coverage ratio to the required 1.25. Rate increases would be required next year to reach the Town's policy of 1.60.

Staff is projecting basically no increase in the number of gallons to be billed for FY 2015-16 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 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Operating Revenues:						
Usage Fees	\$4,815,000	\$4,900,707	\$4,989,410	\$5,078,221	\$5,167,090	\$5,255,964
Capacity Fees	443,653	541,630	589,377	644,884	690,598	522,595
Penalty Fees	109,361	112,642	116,022	119,502	123,087	126,780
Interest Income	38,708	19,716	35,387	22,007	23,225	24,220
Total Operating Revenue	5,409,470	5,574,695	5,730,196	5,864,615	6,004,000	5,929,559
Operating Expenses:						
Administrative Services - Town	515,341	546,261	573,575	602,253	632,366	663,984
Contract - OMI	1,235,743	1,334,602	1,401,333	1,471,399	1,544,969	1,622,218
Other Operating Expenses	1,025,841	1,087,391	1,141,761	1,198,849	1,258,792	1,321,731
Amortization/Depreciation	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000
Total Operating Expenses	5,776,925	5,968,255	6,116,668	6,272,502	6,436,127	6,607,933
Operating Income (Loss)	(367,455)	(393,560)	(386,472)	(407,886)	(432,126)	(678,374)
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	1,628,191	1,620,553	1,620,729	1,621,173	1,623,385	1,624,908
Net Operating Income (Loss)	(1,995,646)	(2,014,114)	(2,007,201)	(2,029,059)	(2,055,511)	(2,303,282)
Capital Financing / (Expenditures)						
Capital Expenditures	(2,067,000)	(587,750)	(474,300)	(483,786)	(546,522)	(557,453)
Net Capital Funding	(2,067,000)	(587,750)	(474,300)	(483,786)	(546,522)	(557,453)
Cash and Cash Equivalents at BOY	8,949,010	7,886,364	8,284,501	8,802,999	9,290,154	9,688,120
Add Back Amortization/Depreciation	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000
Total Cash and Investments at EOY	\$7,886,364	\$8,284,501	\$8,802,999	\$9,290,154	\$9,688,120	\$9,827,386
Cash Reserve Ratio (25%)	284%	279%	282%	284%	282%	272%
Debt Service Coverage Ratio 1.25	1.62	1.61	1.61	1.60	1.58	1.43

VI. RECOMMENDATIONS:

A. Water System

Beginning in FY 2015-16, additional increases (either rate increases or consumption) will be required to meet the minimum debt service coverage. This usage charge increase will aid in maintaining the Town’s debt service coverage of 1.60 which will allow flexibility in the event of less than anticipated revenue amounts.

Description	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
PRESCOTT VALLEY WATER SYSTEM						
Revenue Increase (Decrease)	0%	1%	1%	1%	0%	0%
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	\$6,577,865	\$6,375,610	\$5,505,734	\$5,049,964	\$4,703,846	\$6,200,763
Development – Growth Fund 551	\$3,385,905	\$3,624,715	\$3,601,001	\$2,906,782	\$3,301,437	\$1,036,207
Total	\$9,963,770	\$10,000,325	\$9,106,735	\$7,956,746	\$8,005,283	\$7,236,970
Total Fund Cash Reserves Target: 25%	198%	196%	171%	142%	136%	117%
Debt Service Coverage Target: 1.25	1.51	1.61	1.60	1.62	1.61	N/A

Based on the current assumptions and growth projections and anticipated cash reserves, **staff is recommending an increase for the Water System volume rate as shown below. No changes to the base rate for the Water System are being proposed at this time.**

Description	Current	Proposed	Difference	Difference
Volume Rate (\$/1,000 gallons)				
Tier 1	\$3.02	\$3.08	\$0.06	2%
Tier 2	\$3.62	\$3.69	\$0.07	2%
Tier 3	\$4.71	\$4.80	\$0.09	2%

B. Wastewater System

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

Description	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
PRESCOTT VALLEY WASTEWATER SYSTEM						
Revenue Increase (Decrease)	0%	0%	0%	0%	0%	0%
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 501	\$9,340,057	\$10,197,895	\$11,128,054	\$11,972,228	\$12,679,828	\$13,297,443
Development – Growth Fund 552	(1,453,693)	(1,913,395)	(2,325,055)	(2,682,075)	(2,991,708)	(3,470,058)
Total	\$7,886,364	\$8,284,501	\$8,802,999	\$9,290,154	\$9,688,120	\$9,827,386
Total Fund Cash Reserves Target: 25%	284%	279%	282%	284%	282%	272%
Debt Service Coverage Target: 1.25	1.62	1.61	1.61	1.60	1.58	1.43

Description	Current	Proposed	Difference	Difference
Volume Rate (\$/1,000 gallons)				
Residential/Multi-Family	\$4.54	\$4.54	\$0.00	0%
Non-Residential	\$4.54	\$4.54	\$0.00	0%

C. Other Recommendations

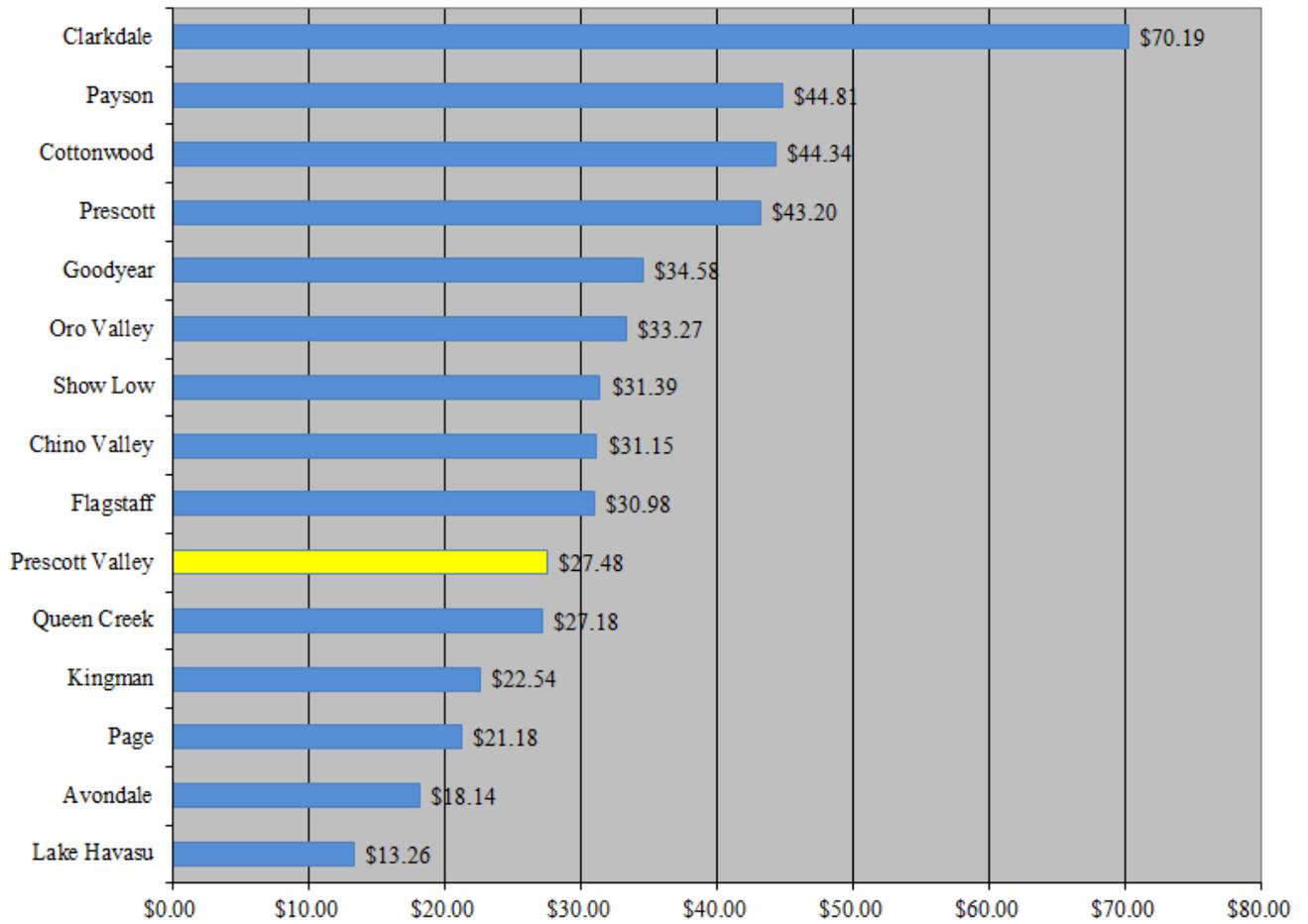
The following tables represent the implementation of the 3/4” meter size and the corresponding monthly base fee and usage blocks for consumption under this meter size.

Description	Meter Size	Prescott Valley Water System
MONTHLY BASE RATES	3/4”	\$11.25

Prescott Valley Water System Usage Block (gallons based on meter size)			
\$/1,000 gallons			
Meter Size	Block 1	Block 2	Block 3
3/4”	0 – 11	12-27	> 28

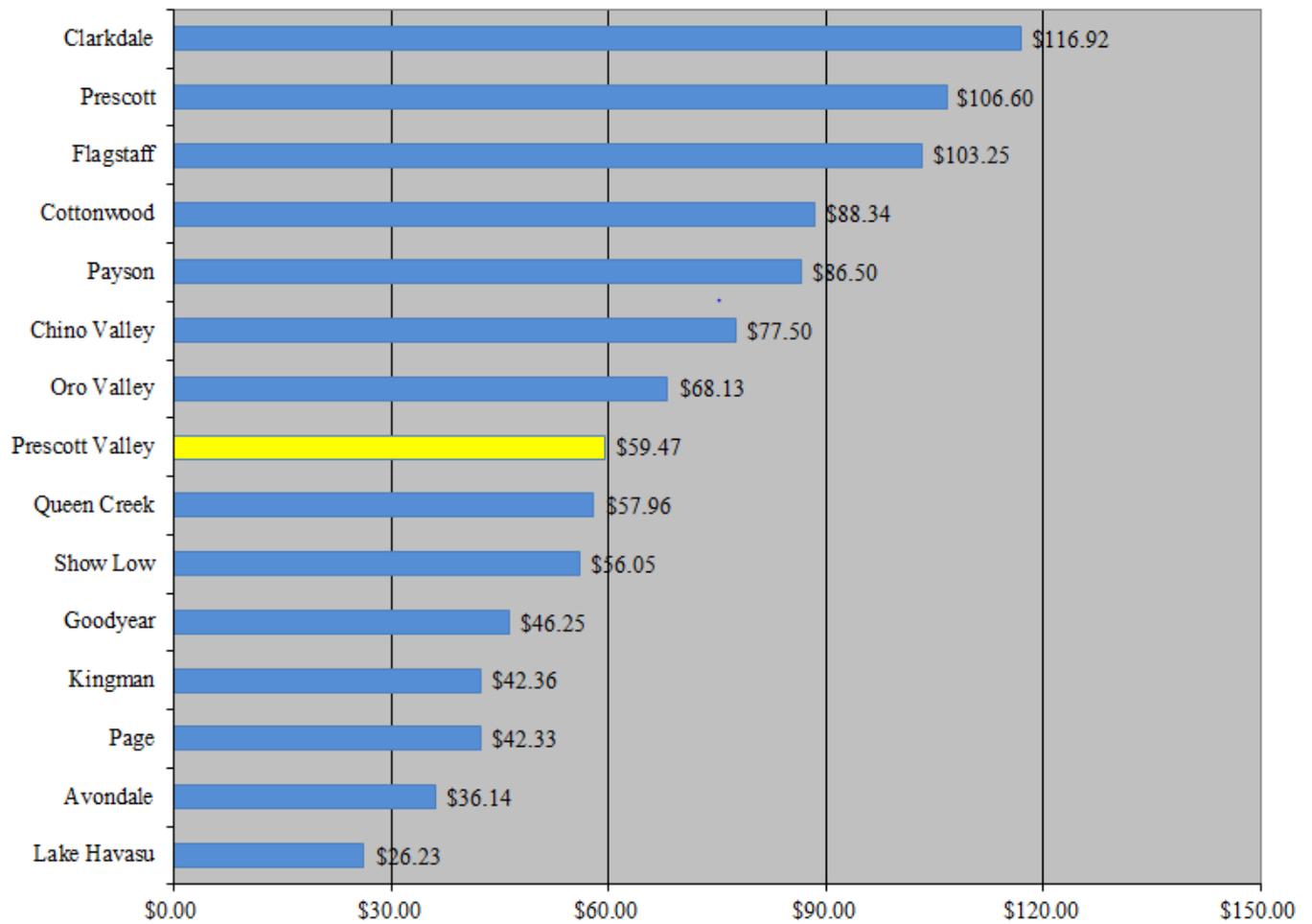
VII. COMPARISON OF WATER RATES WITH OTHER CITIES:

The following chart what a typical residential customer would pay if they used 6,000 gallons of water per month (assuming a 5/8” meter)



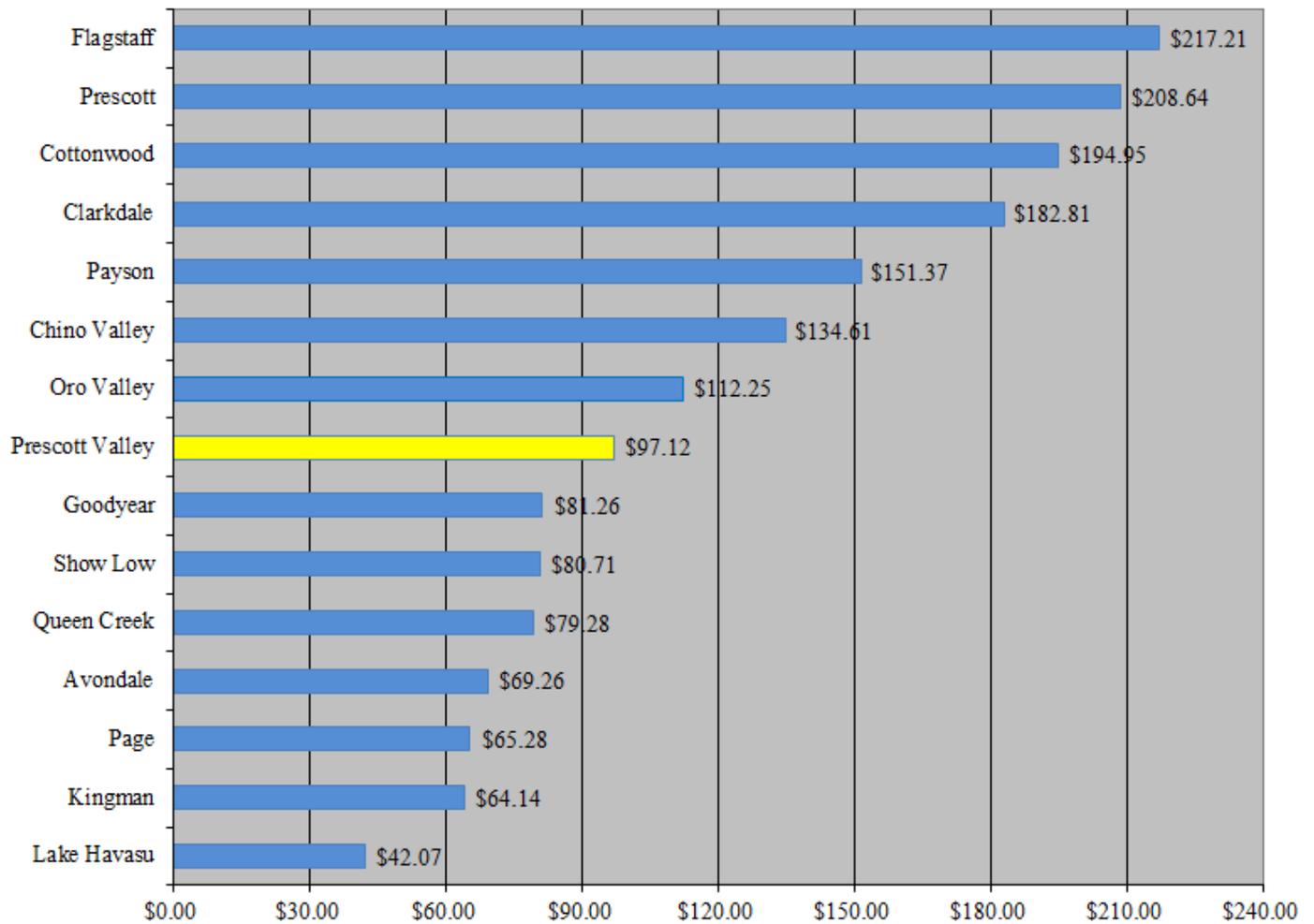
*Rates as of May 2015

The following chart what a typical residential customer would pay if they used 15,000 gallons of water per month (assuming a 5/8” meter)



*Rates as of May 2015

The following chart what a typical residential customer would pay if they used 24,000 gallons of water per month (assuming a 5/8” meter)



*Rates as of May 2015