Task A: Review of Current and Prior Rate Structure

Task A

Qualitative comparison of current and prior rate structures in terms of:

- Conservation incentives
- Compliance with OAR Division 86
- Administrative costs

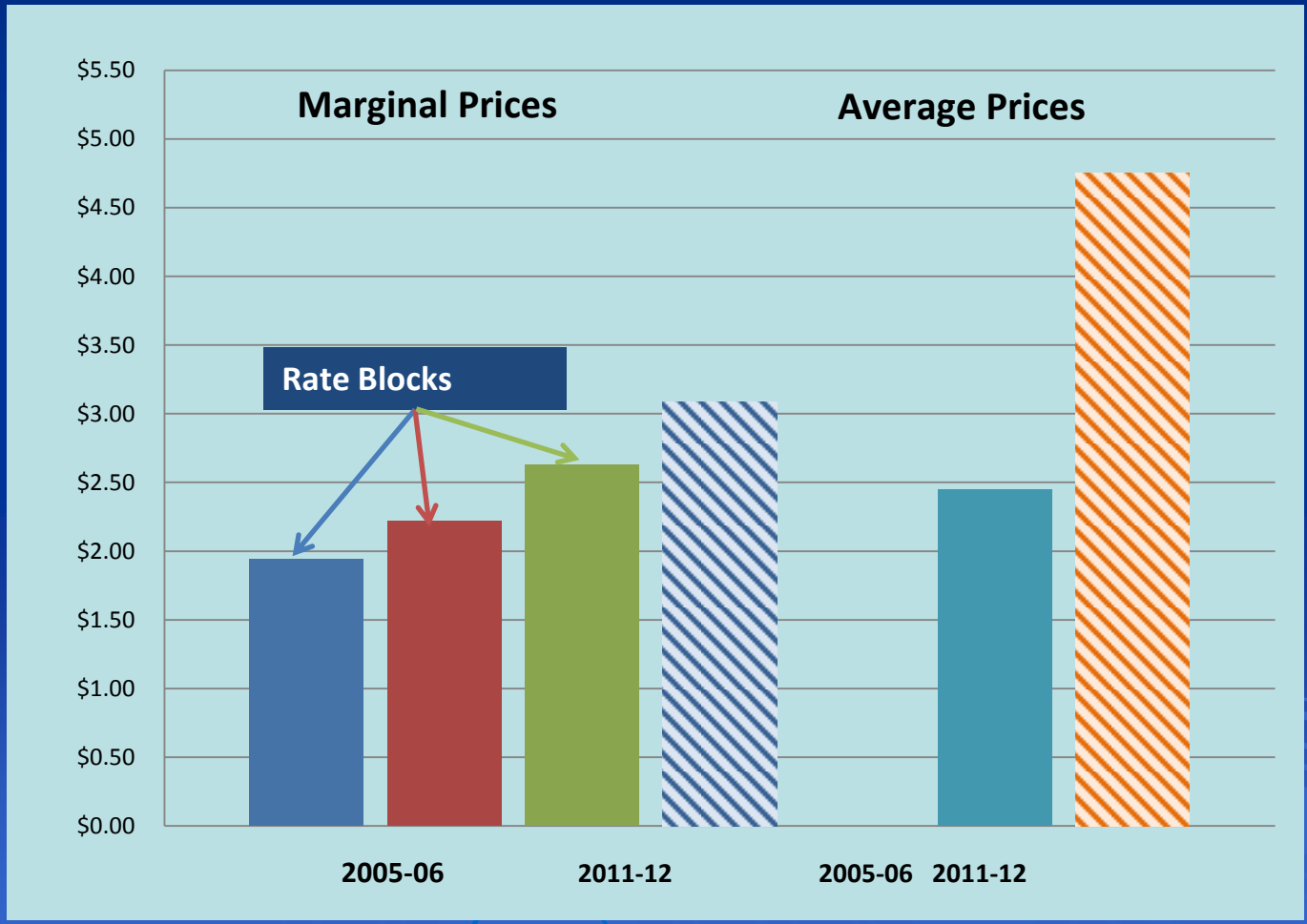
Comparison of Current & 2005-06 Rates

Year		Quarterly Base Charge *	Commodity Charges ($/ccf)				Average Rate ($/ccf) **
			Average Charge	Block 1	Block 2	Block 3	
2005-06	Nominal Dollars	$8.96	$1.75	$1.73	$1.98	$2.34	$2.18
	Real 2011-12 Dollars	$10.05	$1.964	$1.941	$2.222	$2.626	$2.45
2011-12		$27.99	$3.086				$4.75

* Beginning in 2007-08, the base charge collected by PWB included both water & sewer.

** Based on assumed SFR monthly per-account usage of 6.6 ccf in 2005-06 and 5.6 ccf in 2011-12.

Comparison of Current & 2005-06 Marginal & Average SFR Real Prices ("Height")

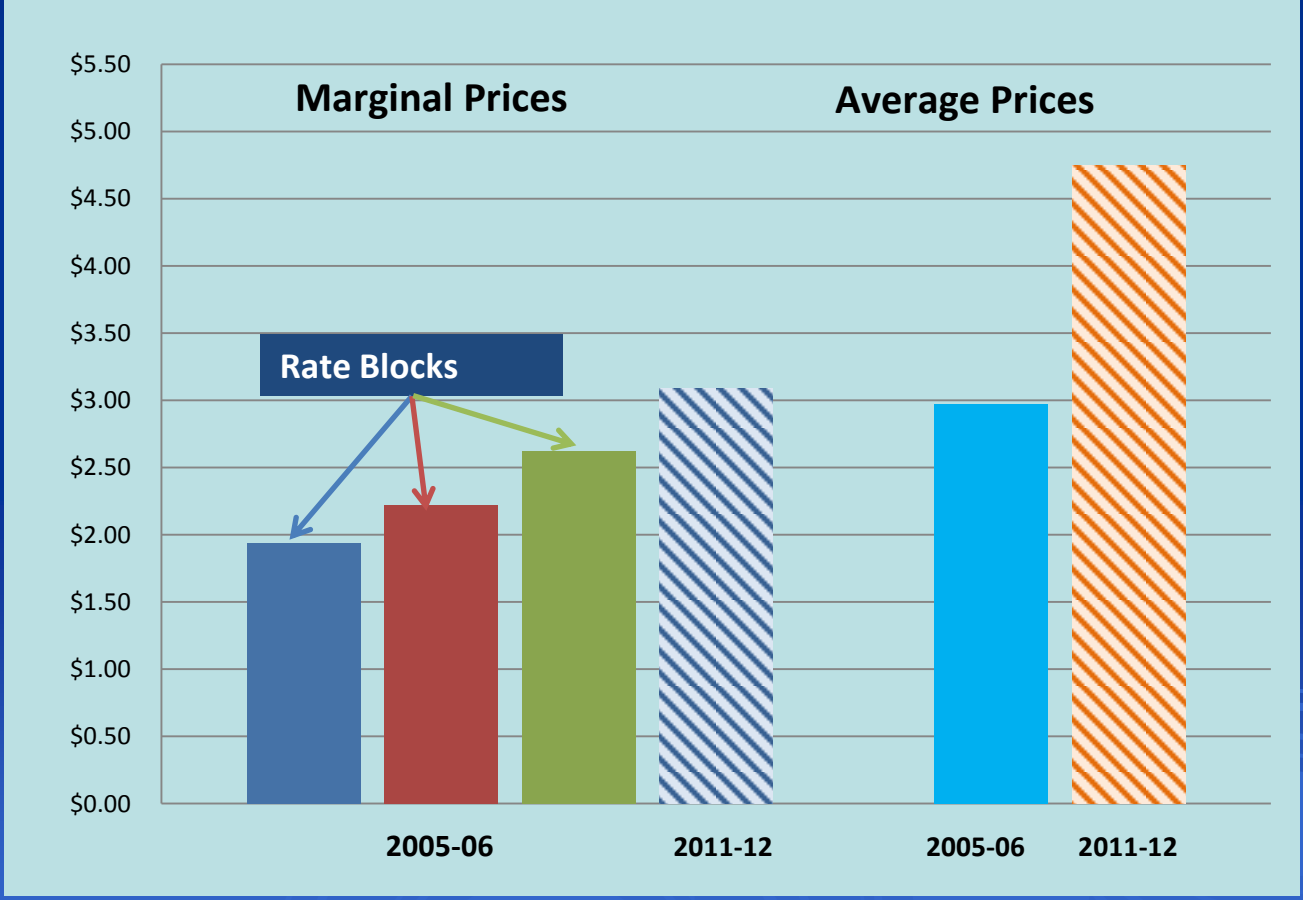


Comparison of Current & 2005-06 Rates (Revised)

Year		Quarterly Base Charge	Commodity Charges ($/ccf)				Average Rate ($/ccf) **
			Average Charge	Block 1	Block 2	Block 3	
2005-06	Nominal Dollars	$18.26	$1.75	$1.73	$1.98	$2.34	$2.18
	Real 2011-12 Dollars	$20.48	$1.964	$1.941	$2.222	$2.626	$2.98
2011-12		$27.99	$3.086				$4.75

** Based on assumed SFR monthly per-account usage of 6.6 ccf in 2005-06 and 5.6 ccf in 2011-12.

Revised Comparison of Current & 2005-06 Marginal & Average SFR Real Prices ("Height")



Impact of Rate Structure ("Shape")

Many water utilities that have implemented [increasing block rates] consider them part of their approach to water conservation; and many state agencies and other entities recommend them as water conservation tools. But analysis indicates that increasing-block prices, per se, have no impact on the quantity of water demanded, controlling for price levels.

Stavins, Robert N. "Misconceptions About Water Pricing," Harvard University, Belfer Center for Science and International Affairs.

Other Issues Addressed re: Conservation Incentive

- Combined bills
- Billing frequency
- Customer understanding

Conclusion

To the extent that the demands of Portland water customers are sensitive to price, the current rate structure provides a greater conservation incentive than the prior increasing block rates. While there are some rather speculative factors that may contribute in a small way to this conclusion, the overriding cause is the fact that, for all customers, real marginal and average water prices in 2011-12 are greater than those in 2005-06.

OAR Division 86 Requirements

Adoption of rate structures, billing schedules, and other associated programs that support and encourage water conservation

It appears likely that the current rates and billing schedule encourage customer conservation more than the earlier rates under the increasing-block structure, and therefore are in greater compliance with this requirement.

Administrative Costs

While comparative cost data is unavailable, it is at least plausible that the current uniform rate is less costly to administer than the prior increasing block rate.

Task D: Comparison of Water Utility Demand Trends

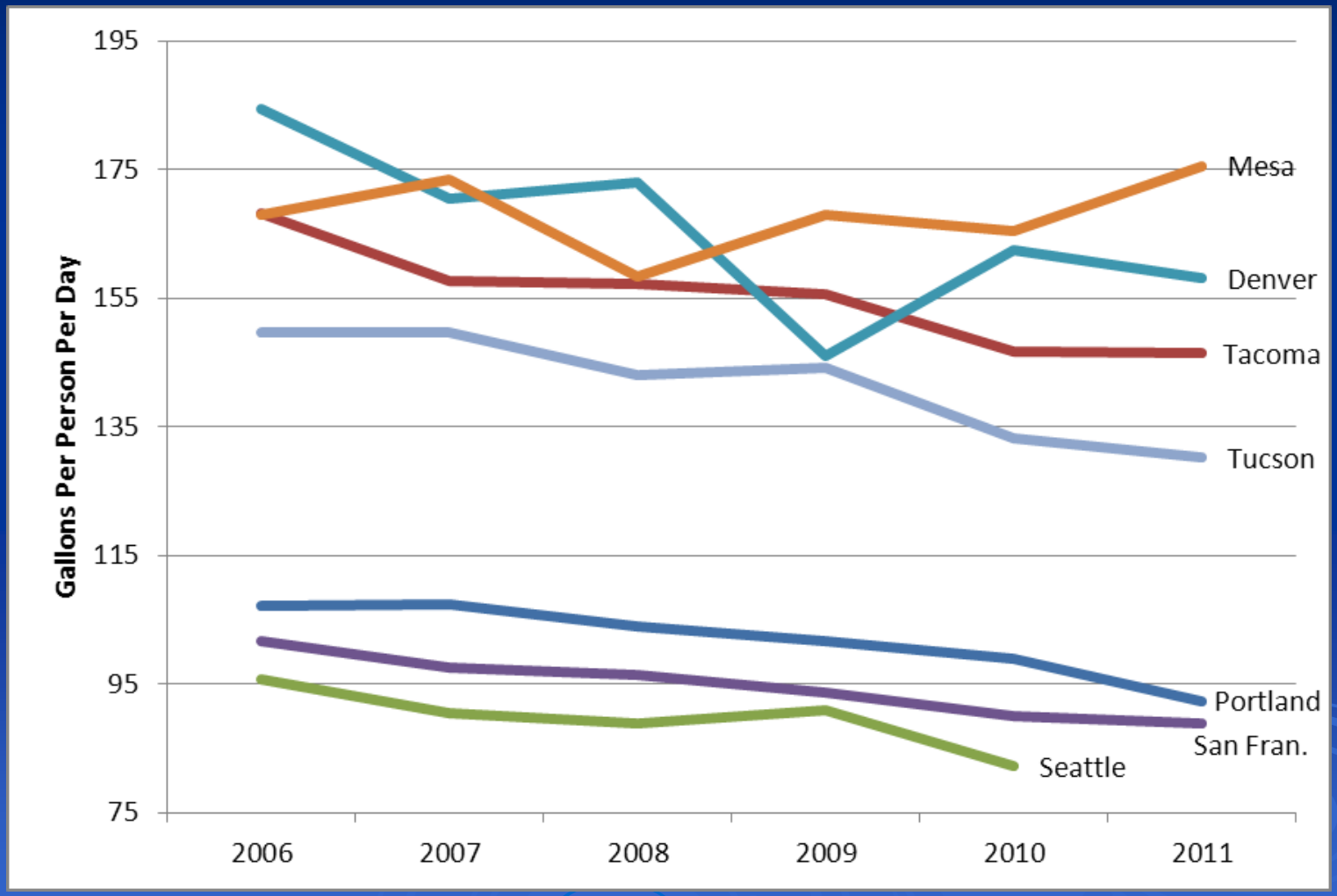
Index of Retail Water Demands (2006=100)

Year	Portland	Tacoma	Seattle	San Fran.	Denver	Mesa	Tucson	7-City Average
2006	100	100	100	100	100	100	100	100
2007	101	95	96	97	94	100	101	98
2008	99	95	96	97	96	93	97	96
2009	98	95	99	94	83	95	98	95
2010	97	90	90	91	93	88	92	92
2011	91	89	Data Not Available	90	91	95	91	91

Index of Per-Capita Retail Water Demands (2006=100)

Year	Portland	Tacoma	Seattle	San Fran.	Denver	Mesa	Tucson	7-City Average
2006	100	100	100	100	100	100	100	100
2007	100	94	95	96	92	103	100	97
2008	97	93	93	95	94	94	95	95
2009	95	93	95	92	79	100	96	93
2010	92	87	86	88	88	98	89	90
2011	86	87	Data Not Available	87	86	104	87	90

Comparison of Per-Capita Demand Trends



Key Conclusions

- From 2006 through 2011, Portland's water sales declined by approximately 9%. Per capita water use declined by an even greater amount. By 2011, per capita water use in Portland was 14% below its level in 2006.
- Other utilities in the western United States have experienced similar declines in water sales and per capita use. Portland's experience is not unique. Water sales declined on average by the same amount as Portland's for the six comparison service areas examined for this study. The decline in per capita water use was also essentially the same as Portland's for five of the six comparison service areas. Only Mesa Arizona showed any growth in per capita water use over the period.

Possible Explanations

- **Economy**: All of the service areas in this study experienced significant economic dislocation over the period of analysis. Unemployment at the end of the period was roughly double its level at the start.
- **Weather**: From 2007 through 2009 much of the western United States was in drought and many water utilities were promoting water conservation and discouraging outdoor water uses. By contrast, 2010 was extremely wet and the irrigation season was cooler and wetter than normal. While many utilities lifted their water use restrictions in 2010, the wet and cool weather may have further temporarily suppressed outdoor demand for water.
- **Water use efficiency improvements** driven by state and national plumbing and energy efficiency codes and standards have also contributed to a long term downward trend in per capita water use.
- **Unexplained**: Additional downward pressure on per-capita water use has been observed in many if not most water utilities.