Seattle Public Utilities

Our water. Our future.

PNWS-AWWA 2010

Water Benchmarking from a Large Utility Perspective

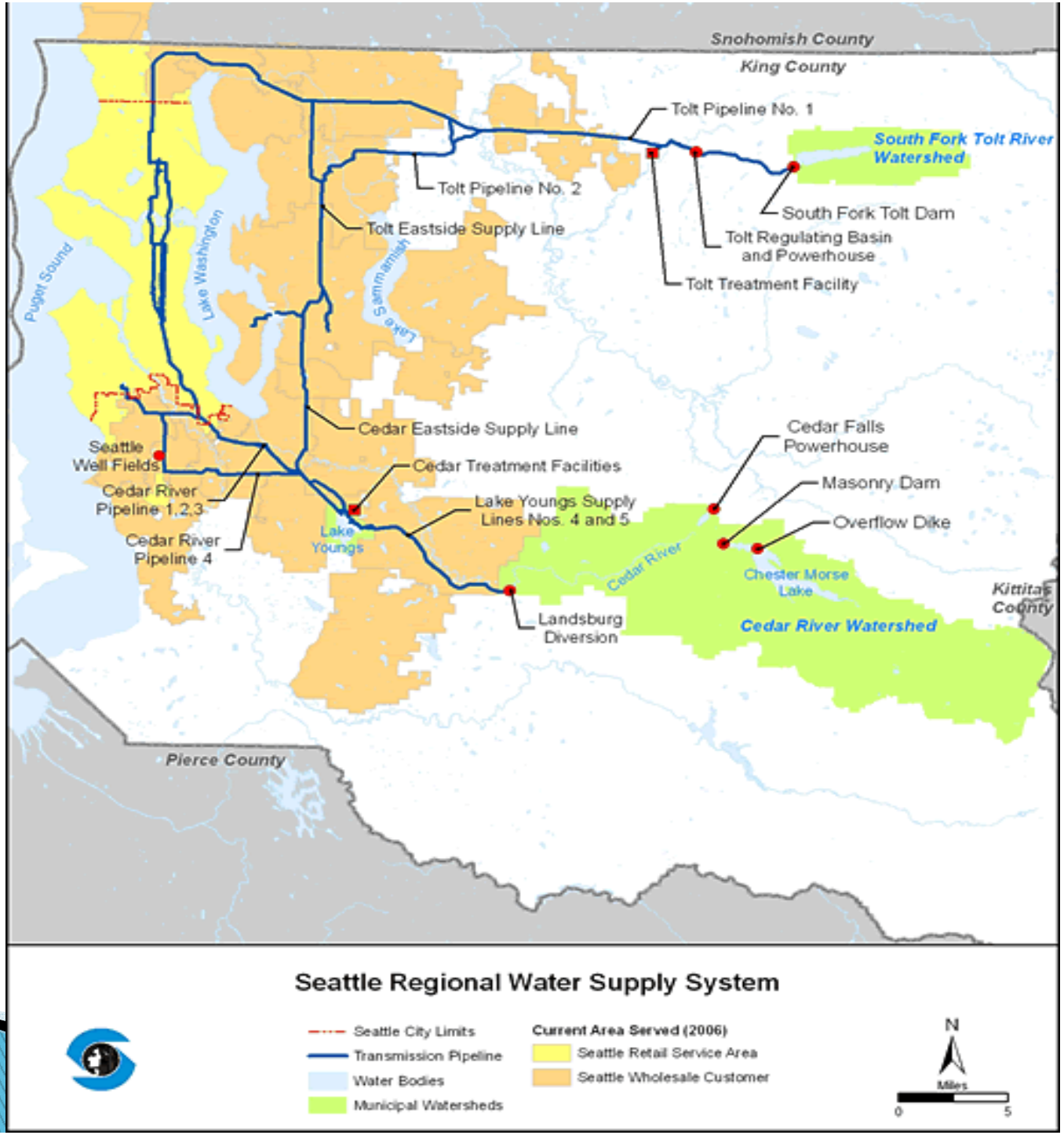
Julie Burman

SPU is owned and operated by the City of Seattle

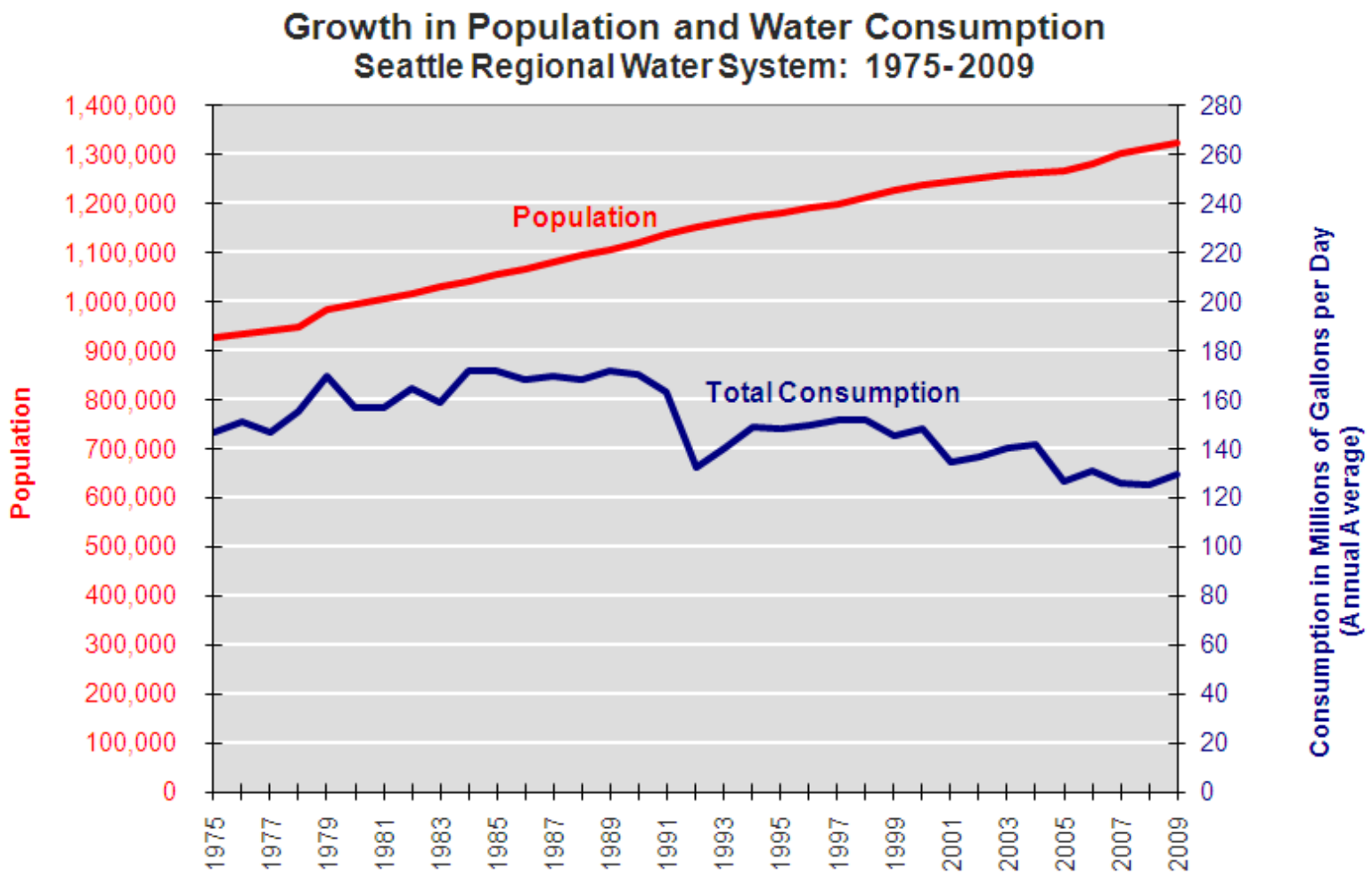
Drinking water is provided for

- 630,000 people in the City;
- 21 wholesale customers (850,000 people)

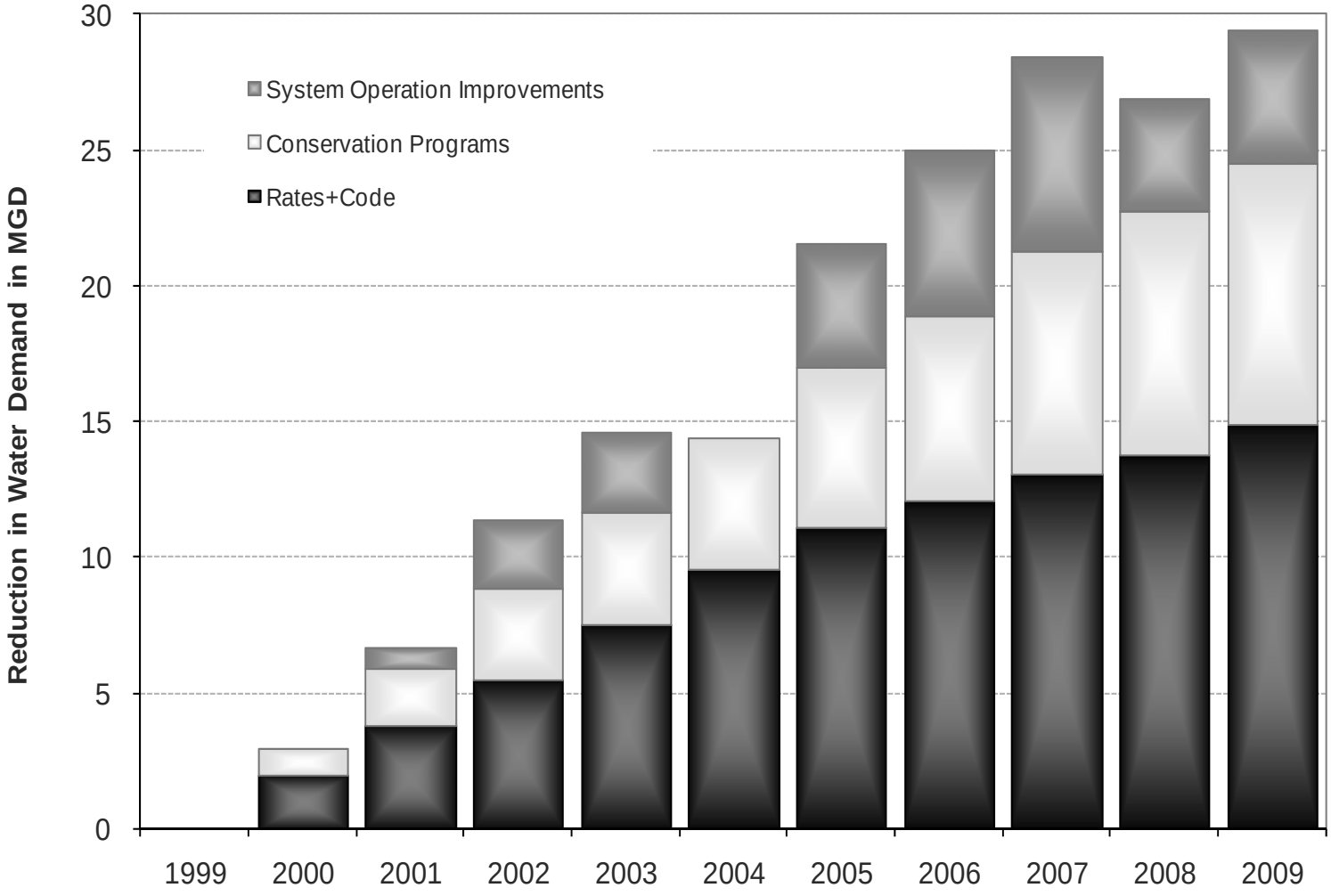
➢ www.seattle.gov/util/


Snohomish County
King County
Tolt Pipeline No. 1
South Fork Tolt River Watershed
Tolt Pipeline No. 2
South Fork Tolt Dam
Tolt Eastside Supply Line
Tolt Regulating Basin and Powerhouse
Tolt Treatment Facility
Puget Sound
Lake Washington
Lake Sammamish
Cedar Eastside Supply Line
Cedar Falls Powerhouse
Seattle Well Fields
Cedar Treatment Facilities
Masonry Dam
Cedar River Pipeline 1,2,3
Lake Youngs Supply Lines Nos. 4 and 5
Overflow Dike
Lake Youngs
Cedar River Pipeline 4
Cedar River
Chester Morse Lake
Kittitas County
Landsburg Diversion
Cedar River Watershed
Pierce County
Seattle Regional Water Supply System
Seattle City Limits
Transmission Pipeline
Water Bodies
Municipal Watersheds
Current Area Served (2006)
Seattle Retail Service Area
Seattle Wholesale Customer
N
Miles
0
5

Declining Seattle regional water consumption in context of rise in population



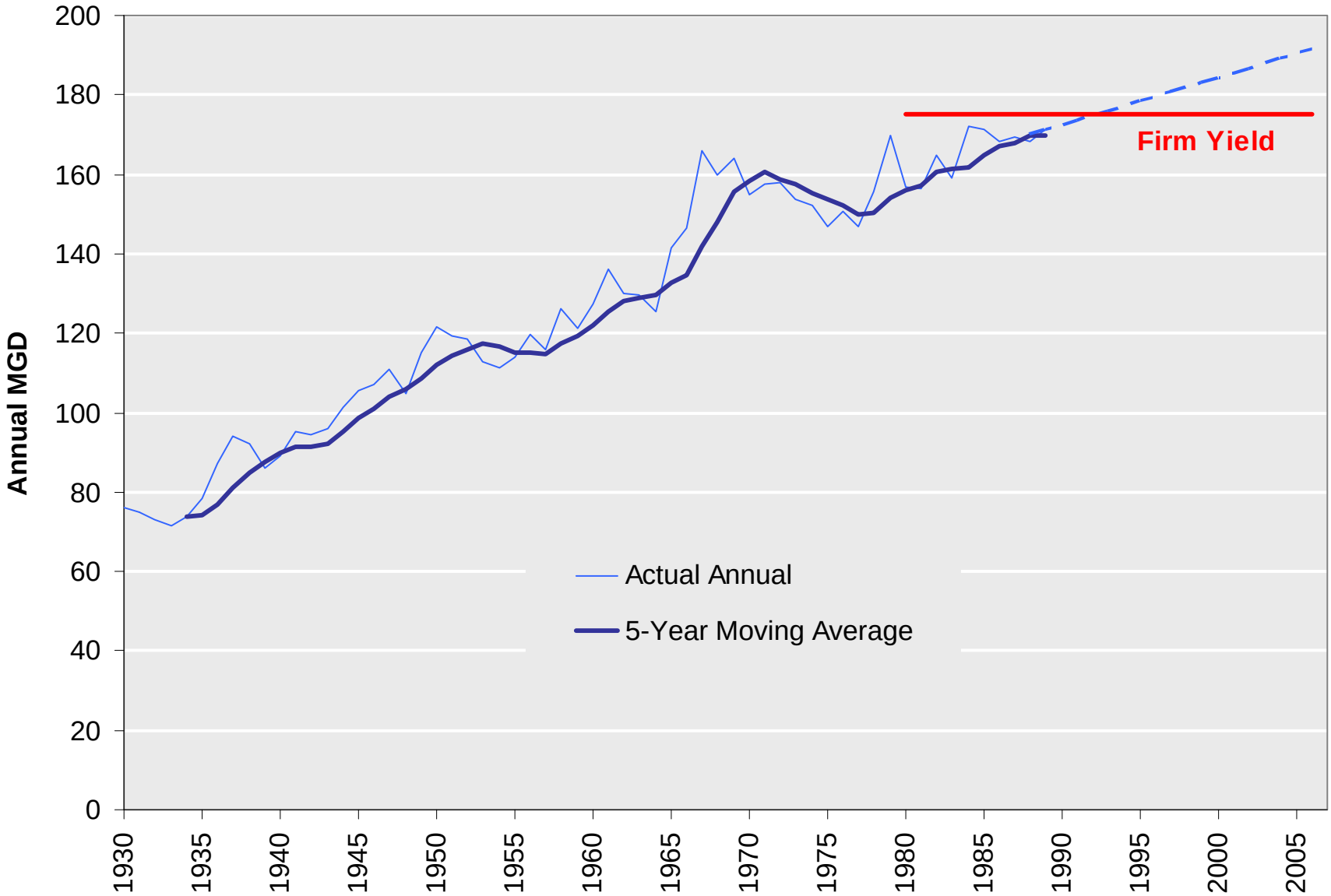
Four kinds of conservation contribute to decline in Seattle regional water consumption



Focus today on measurement of programmatic conservation savings

- Conservation goal
- Conservation target
- Observations about measurements
- First, flashback to 1990s

1990s: Seattle system considered water supply options



1990s: Conservation selected as next source of supply

- Goal = keep total consumption flat; translated to reduce per capita consumpion by 1% per year from 2000-2010
- Target = 11 mgd of average annual cumulative savings from 2000-2010 (programmatic conservation)
- ‘Conservation Potential Assessment’ for cost, volume, and reliability of water saving opportunities

Saving Water Partnership
Seattle and Participating Local Water Utilities

Conservation investments from 2000-2010

Saving Water Partnership
Seattle and Participating Local Water Utilities

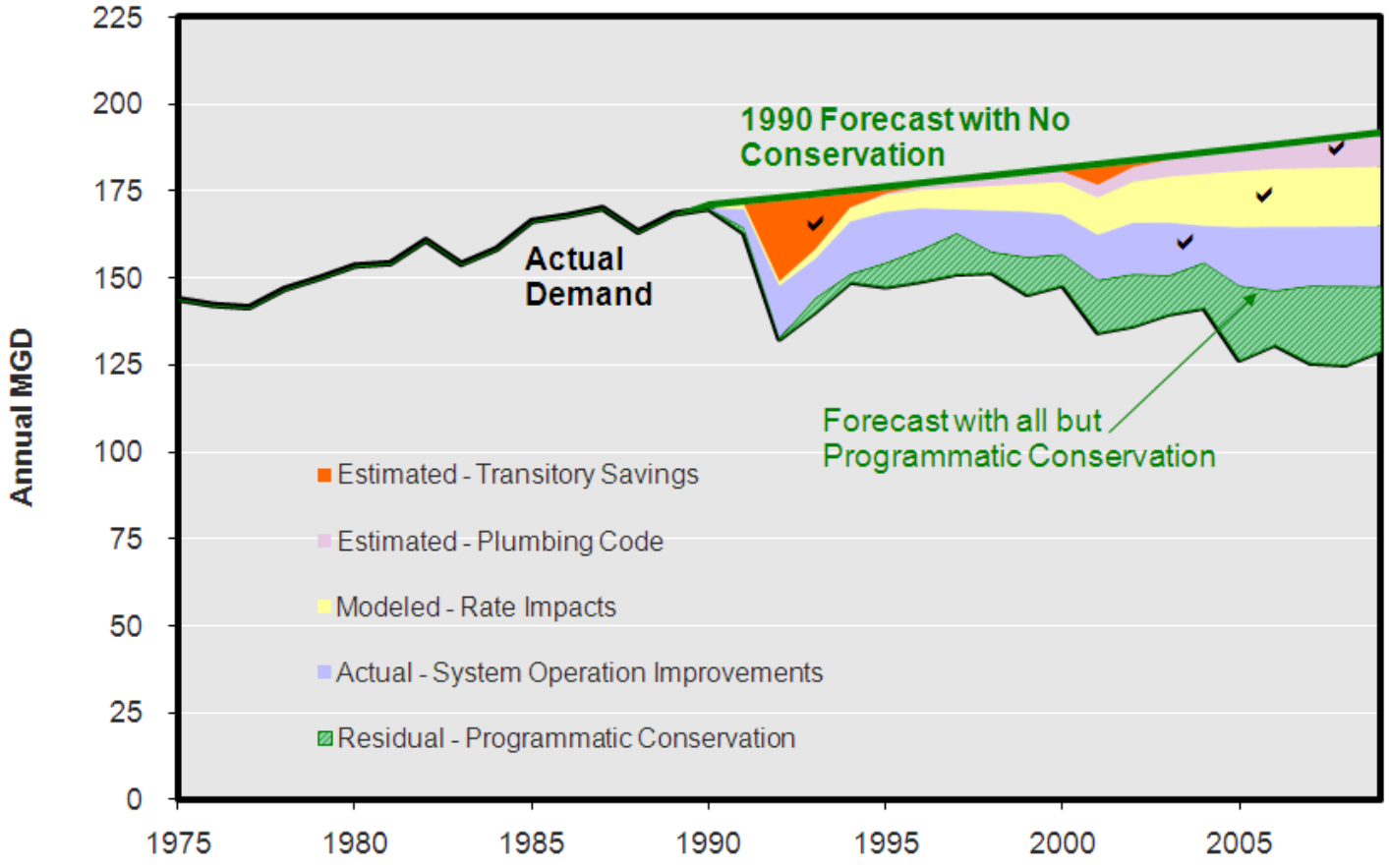
- Nearly $30 million CIP
- Approximately $6 million O&M
- Significant investments from customers
- Partnerships

Annual tally of cumulative water conservation savings aka "bottom-up" estimate

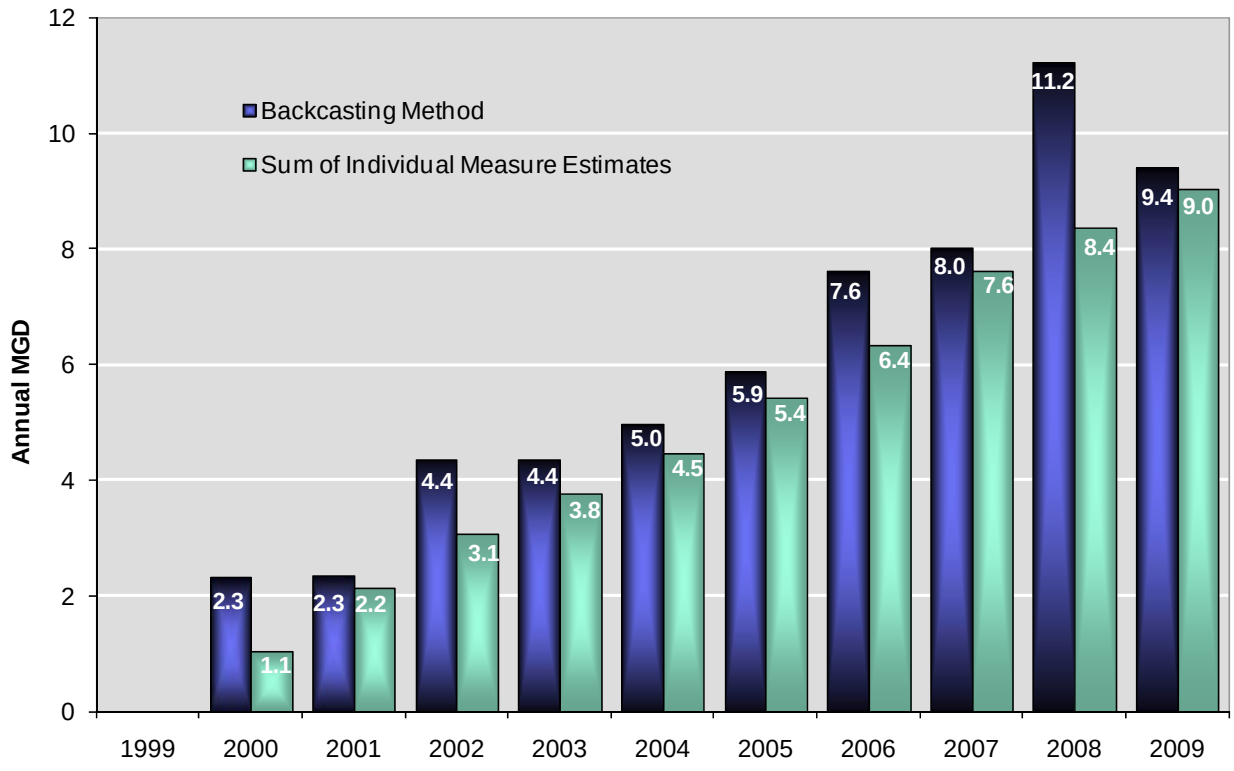
*Savings target through 2010 = 11 mgd

	2000-01	2002	2003	2004	2005	2006	2007	2008	2009	2010*
Tally	2.2	3.1	3.8	4.5	5.4	6.3	7.6	8.3	9.0	

Impact of conservation on historical water demand aka "top down" estimate

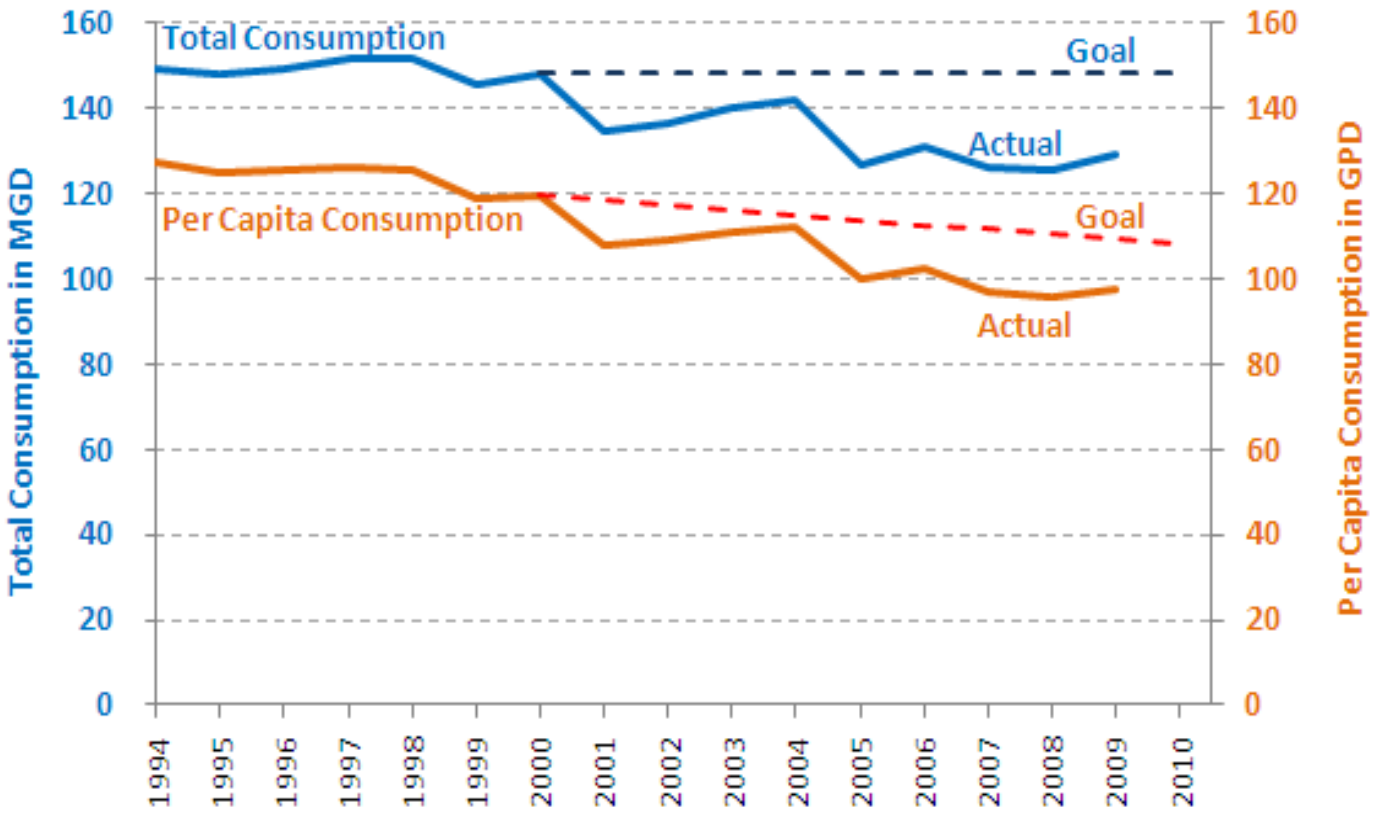


Two estimates of cumulative water savings from 2000-2010



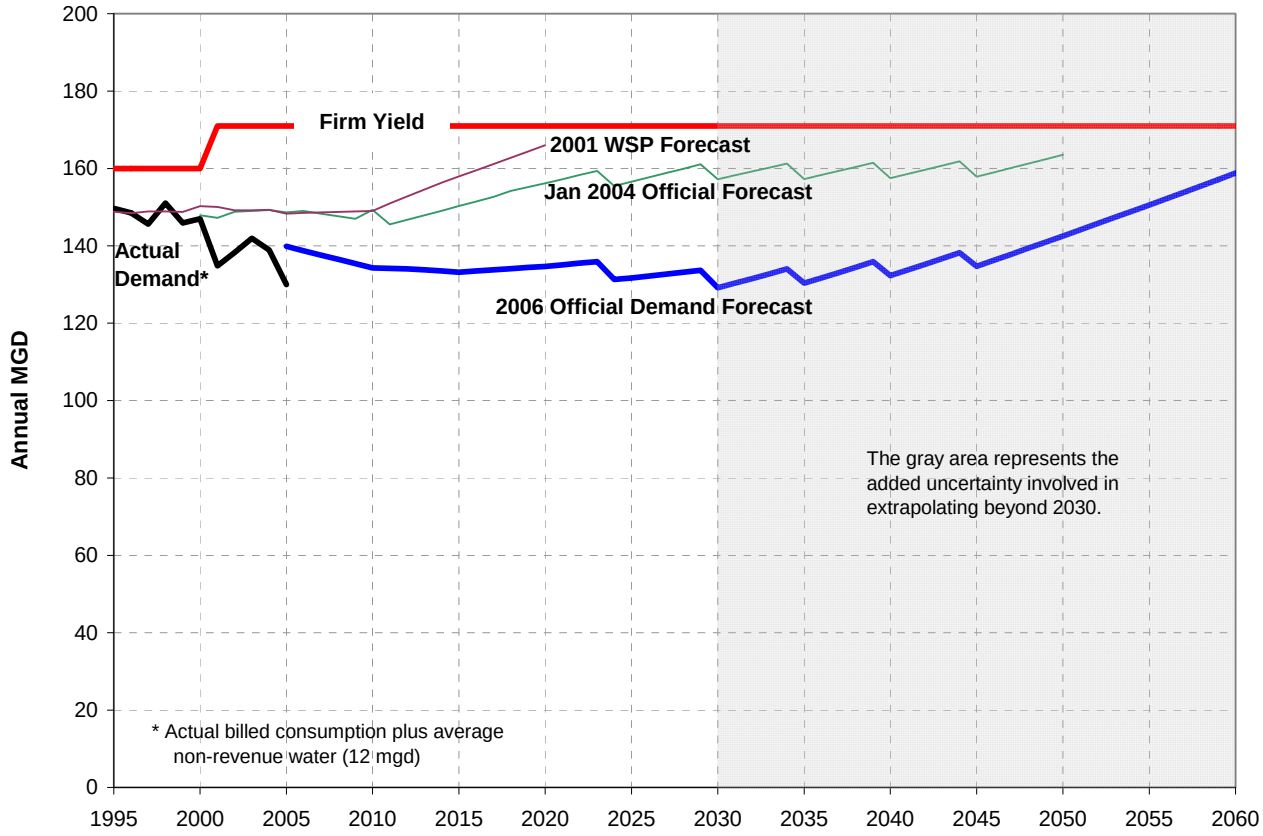
Total and per capita water consumption and conservation goals

Note: Actuals include 4 kinds of conservation



Forecast of future water use

SPU's 2006 Official Water Demand Forecast



Observations about conservation goals and targets

- Anticipate that circumstances change
- Think through how goals and targets will be used
- Recognize that the tallies are estimates of savings
- Read "Water Conservation Measures Metrics Guidance Report" by the American Water Works Association's Water Conservation Divison's Subcommittee, January 2010
- Seattle regional system 2011-2030: 'Driver's Analysis'; new conservation target; Business Case; Water System Plan