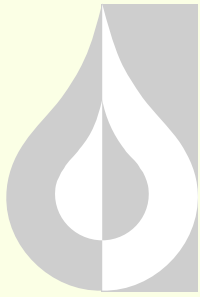


City of Port Angeles
Water Use Efficiency Program

Public Forum

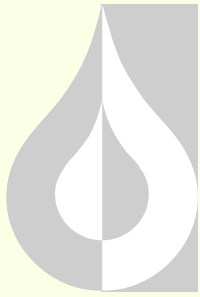
November 29, 2007



Tonight's Agenda

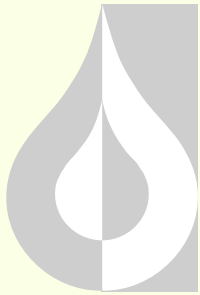
Stewardship of Our Current and Future Water Resources

- Water Use Efficiency (WUE) Requirements & Deadlines
 - Proposed goals
-



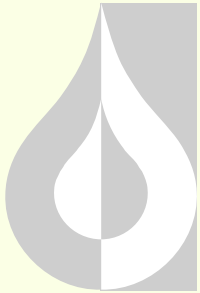
WUE HISTORY

- Municipal Water Law of 2003.
 - Request from water systems for water right flexibility.
 - Legislature granted the flexibility but, in return, gave specific direction to the Dept of Health (DOH). . .
-



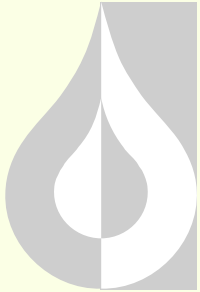
WUE HISTORY

- To adopt an enforceable efficiency program that would contribute to:
 - Long term supply reliability.
 - Promote good stewardship of the state's water resources.
 - Ensure efficient operation and management of water systems.
-



WUE Requirements & Deadlines

Rule Requirement	Deadline
Performance reports	2008-2013
Consider conservation rate options	December 2008
Consider supply, demand & leakage forecasts	January 2008
Supply & demand-side activities	January 2008
Set WUE program goals	January 2008



WUE Performance Report

Annual Report

- Production and service meter data
 - Distribution system leakage
 - Progress on reaching goals
 - Provide by July 1st
-

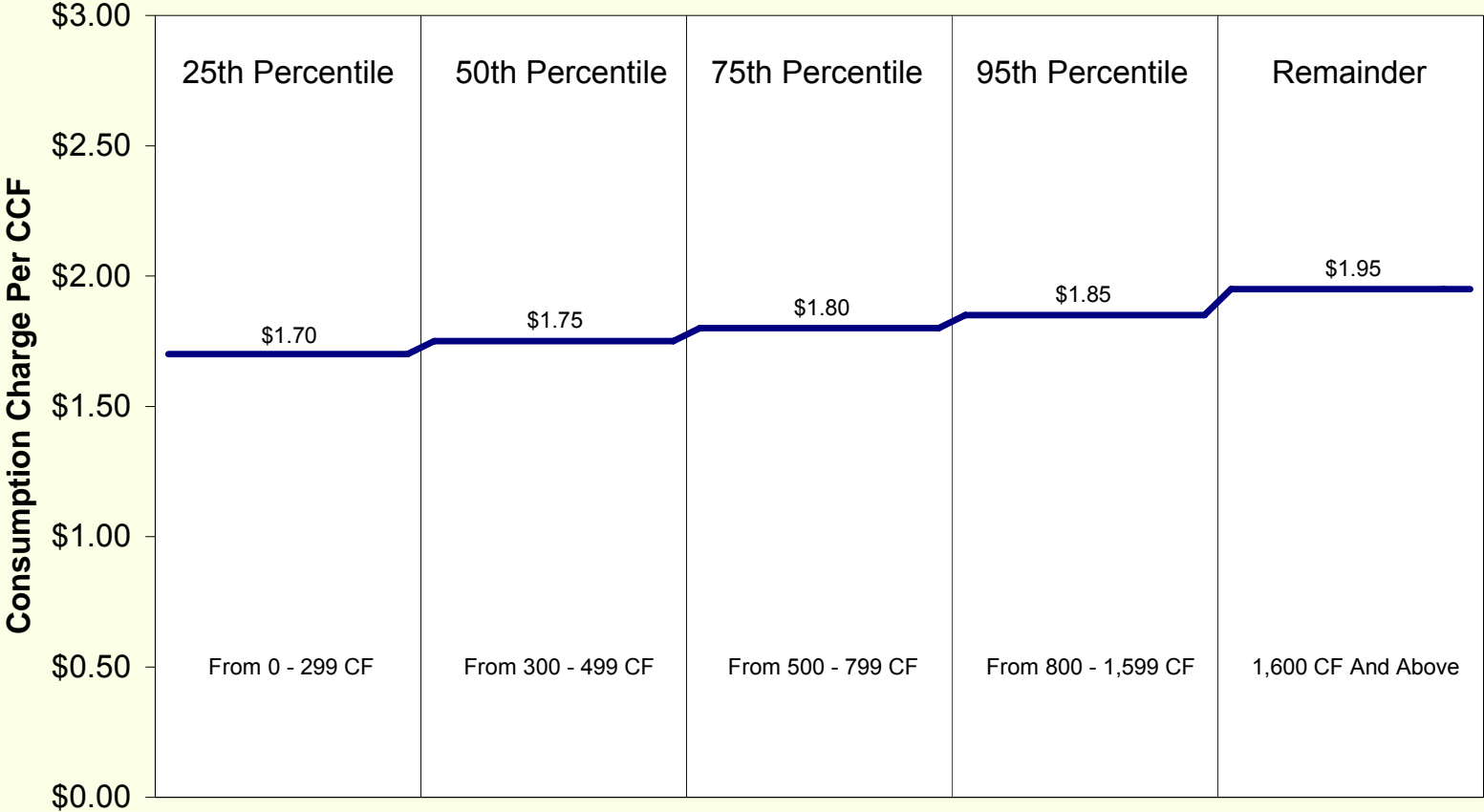


2008 Conservation Rate Options

- WUE program rate financing options
 - Consider eliminating flat rate if possible
 - Wholesale water contract & wastewater rate implications
 - Inclining block or seasonal rate structure options
-

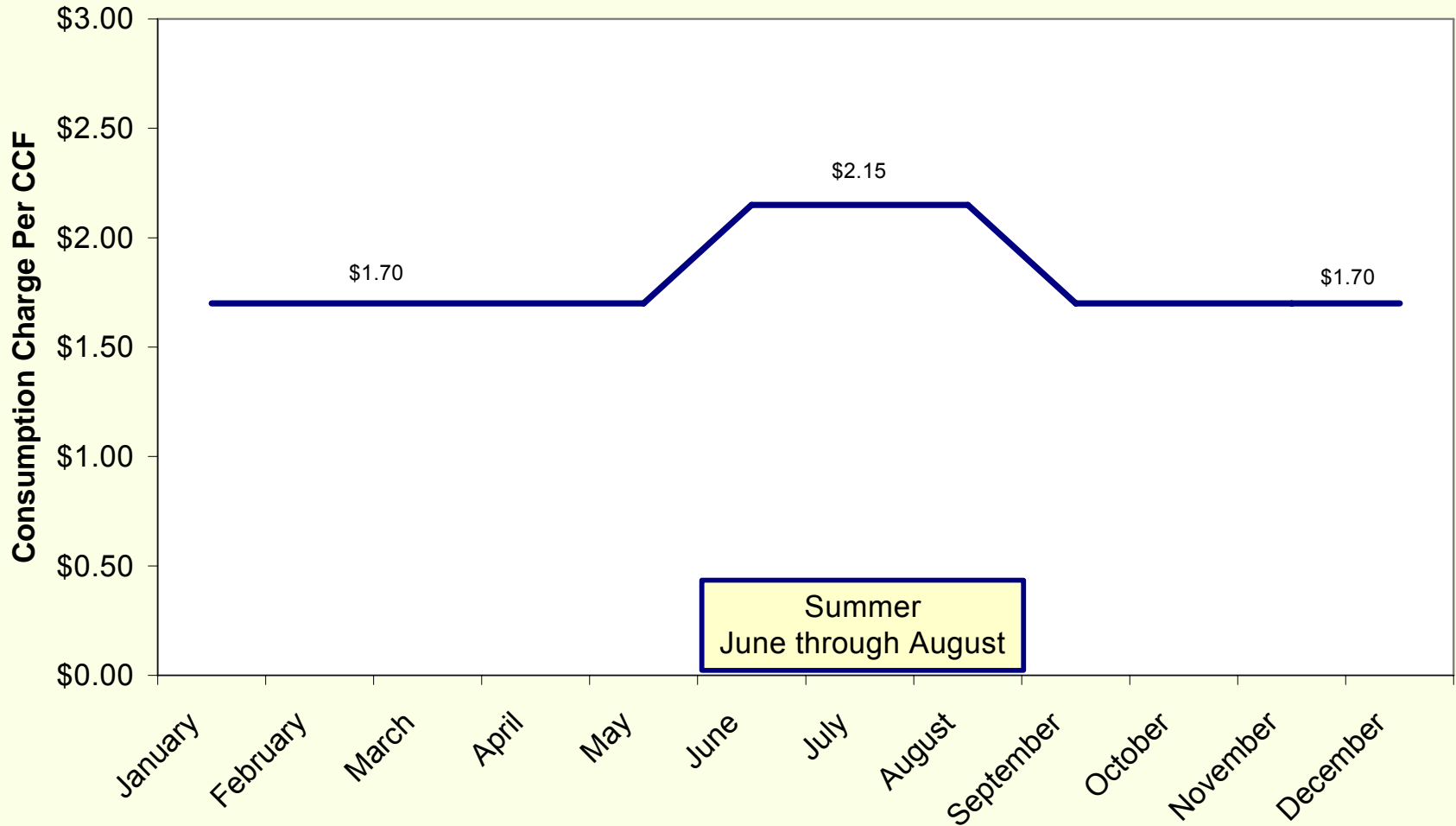
2008 Conservation Rate Options

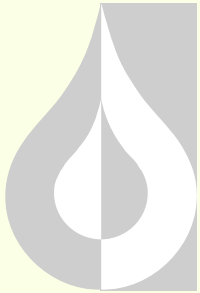
Residential Inclining Block Rate Option



2008 Conservation Rate Options

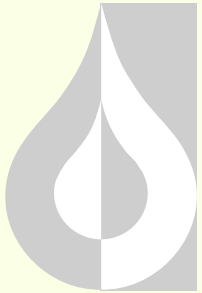
Residential Seasonal Rate Option





Supply-Demand-Leakage Forecasts

- **Current Distribution System Leakage 22%**
 - 10 Years Ahead of WUE Metering Requirements
 - Real losses (i.e., leakage)
 - Apparent losses (e.g., theft, meter error, data accuracy)
 - 8% above 10% standard in 2010
 - 2010 Remedy:
Assess data accuracy & action plan
-



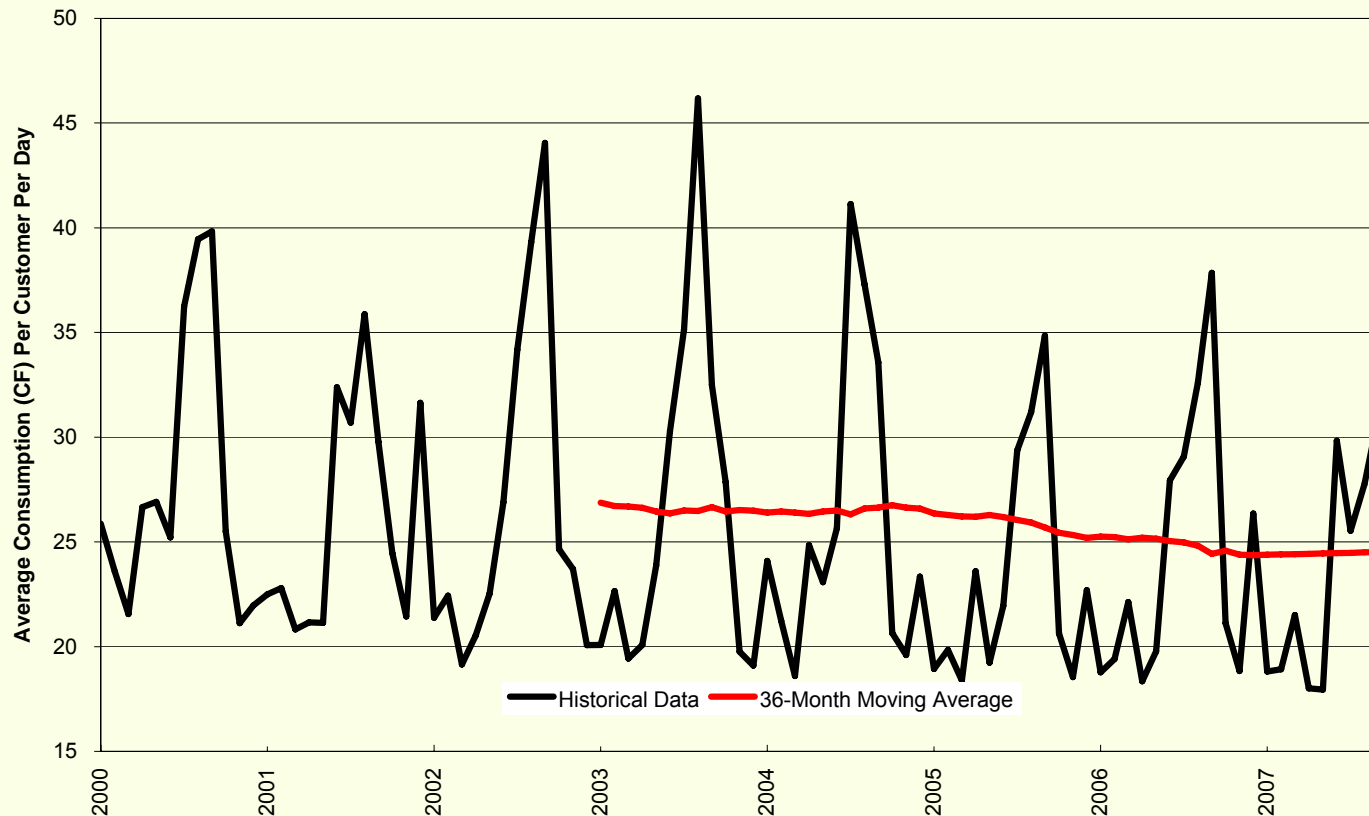
Supply-Demand-Leakage Forecasts

- Wholesale customer trend – status quo
 - Industrial customer trend – status quo
 - Residential customer growth 0.8% per year
 - Commercial customer growth 0.9% per year
 - Irrigation customer growth 10.5% per year
-

Residential & Commercial Trends

Residential Consumption – Reduction trend

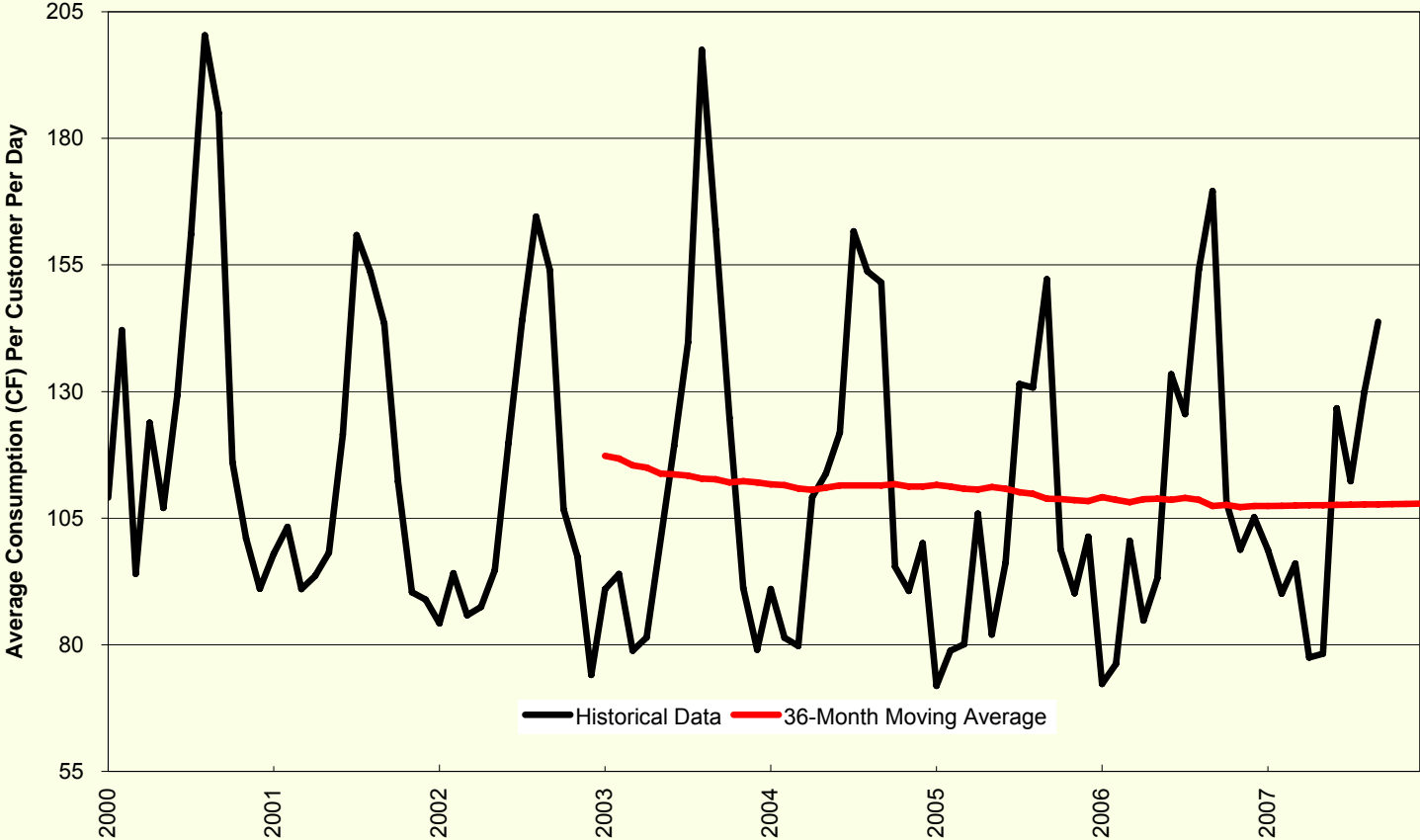
Residential Water Consumption



Residential & Commercial Trends

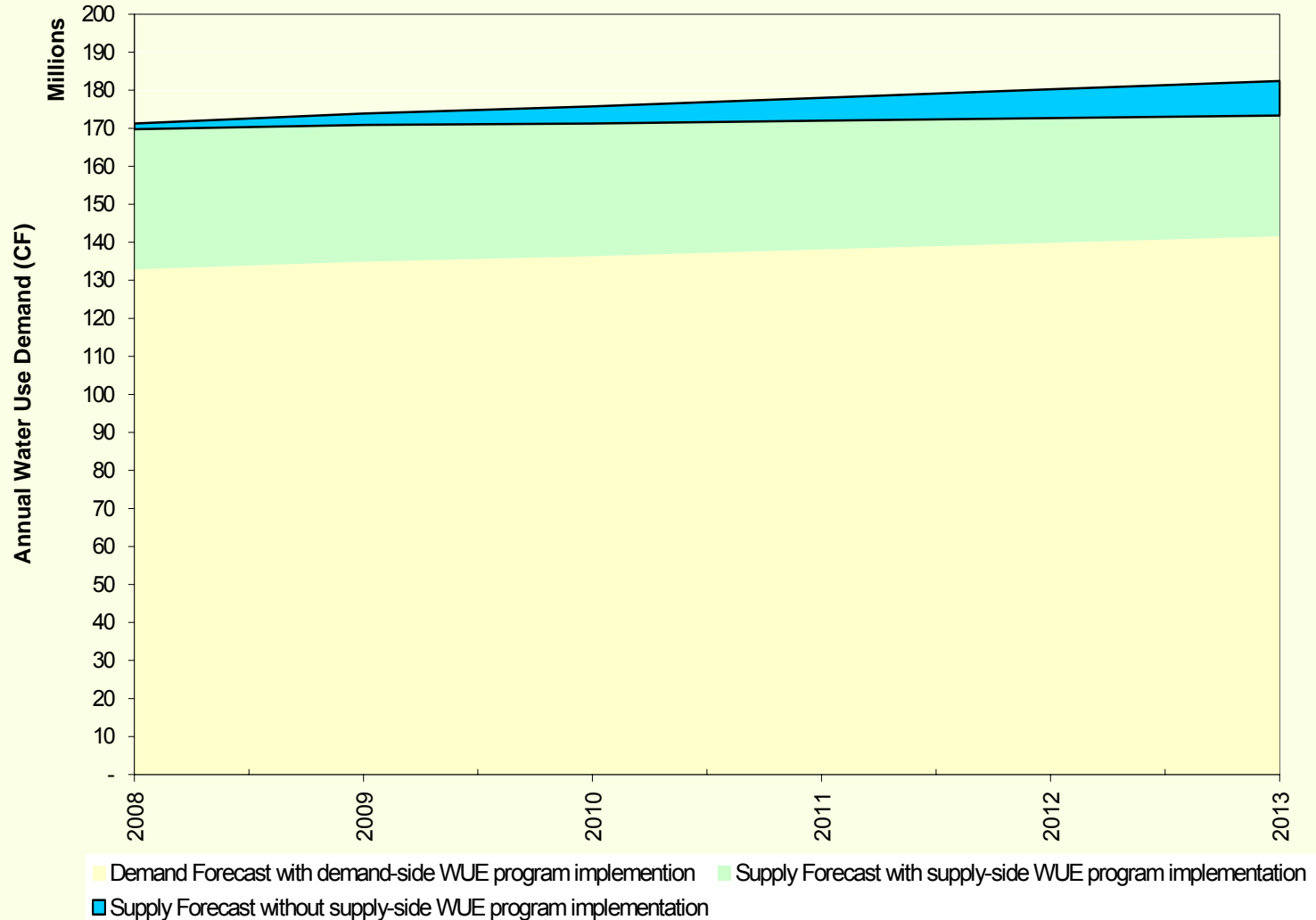
Commercial consumption – Reduction trend

Commercial Water Consumption Trend



Supply Forecast

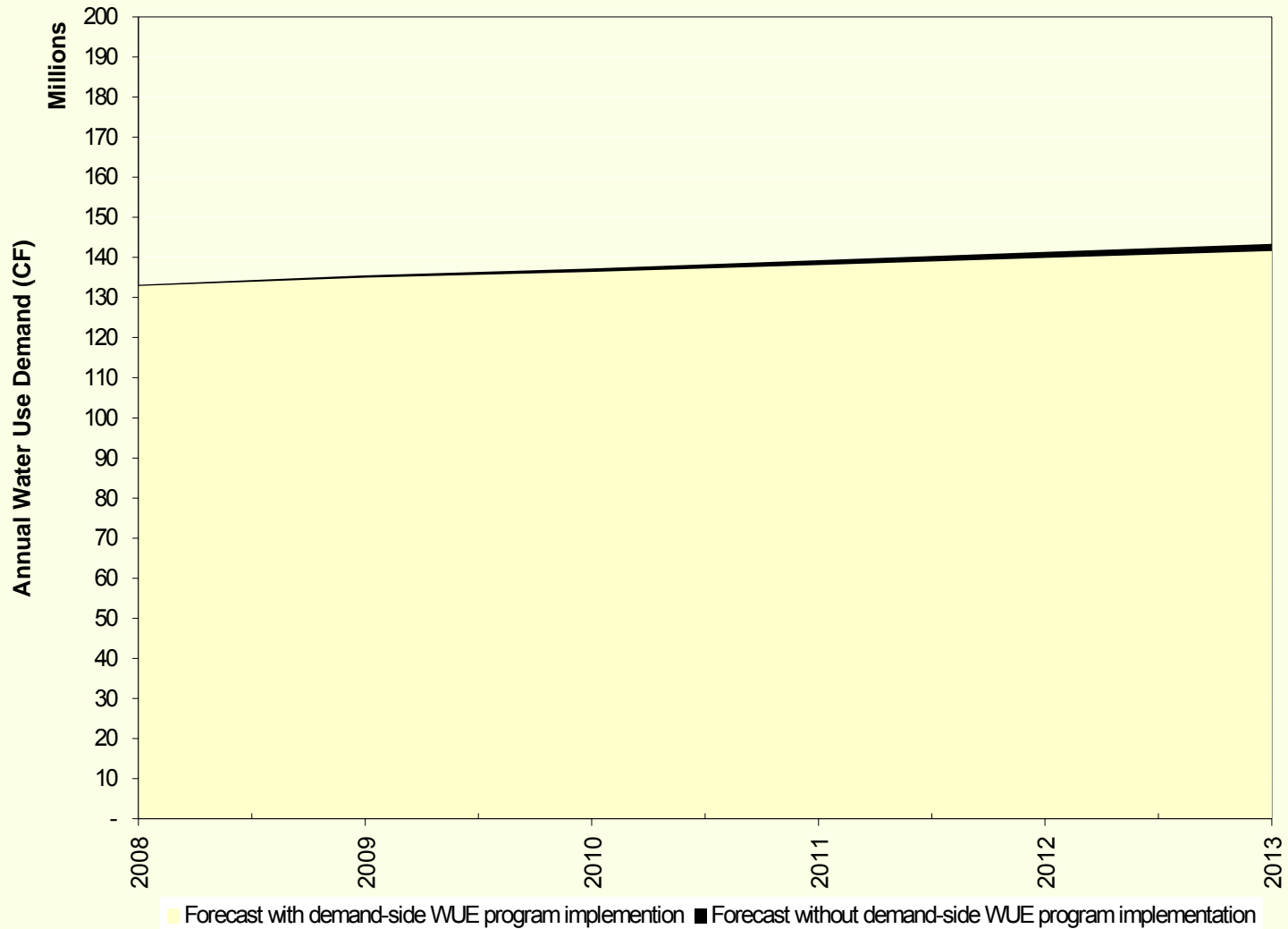
Projected Water Supply
January 2008-December 2013 Forecast



Demand Forecast

Projected Water Use Demand

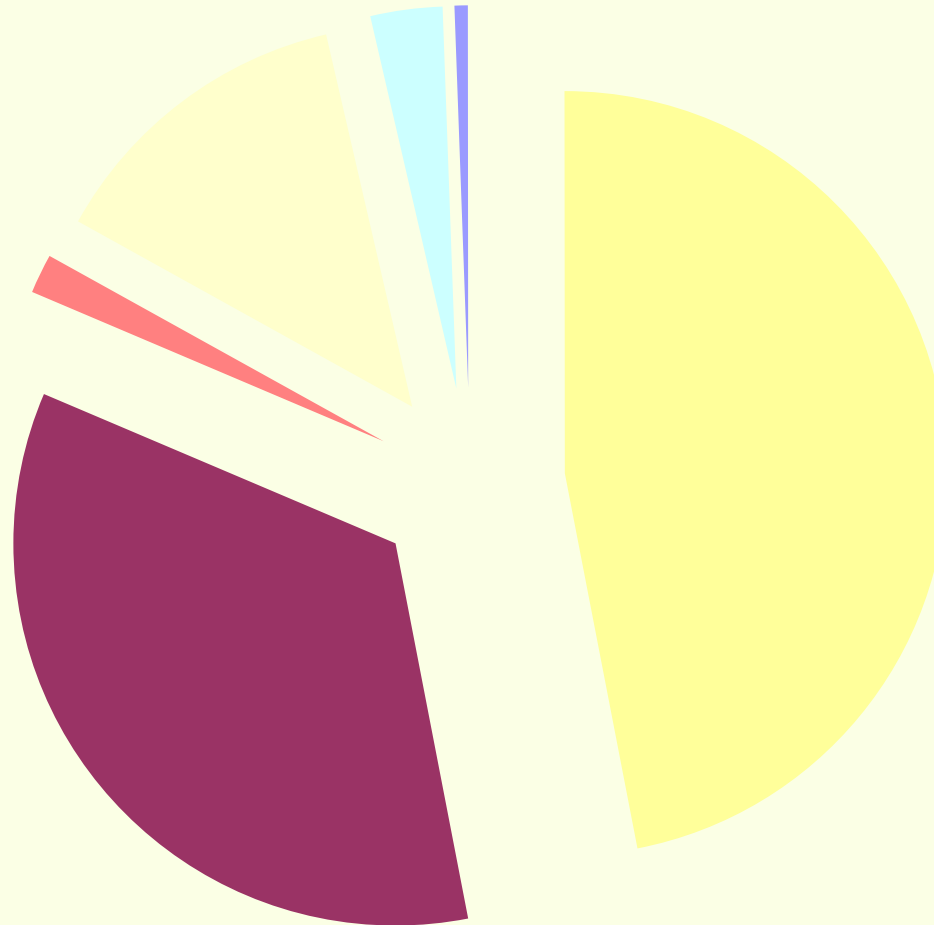
January 2008-December 2013 Forecast



Demand Forecast

Water Use Demand Breakdown

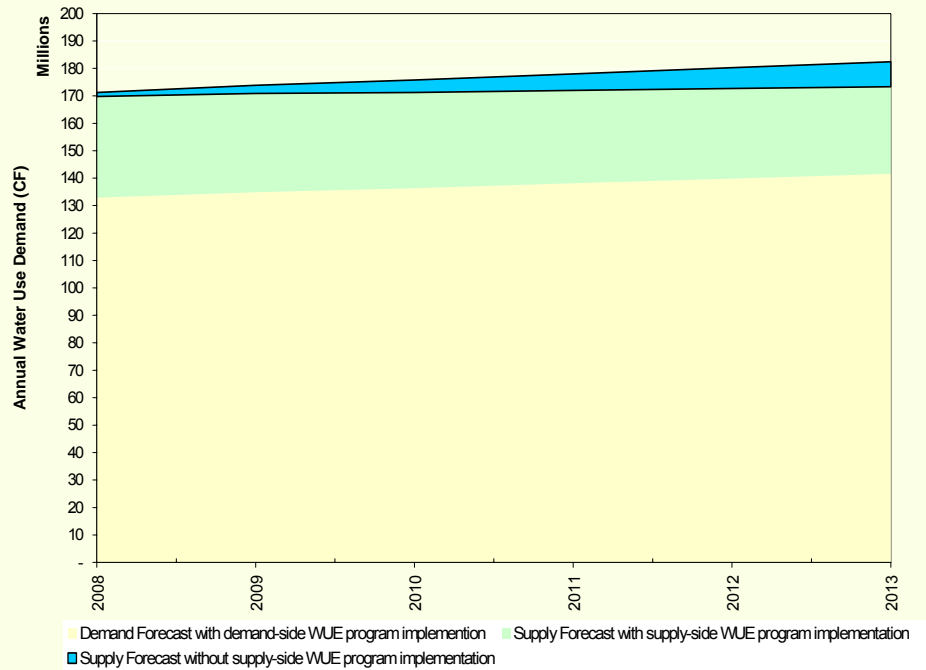
January 2008-December 2027 Forecast



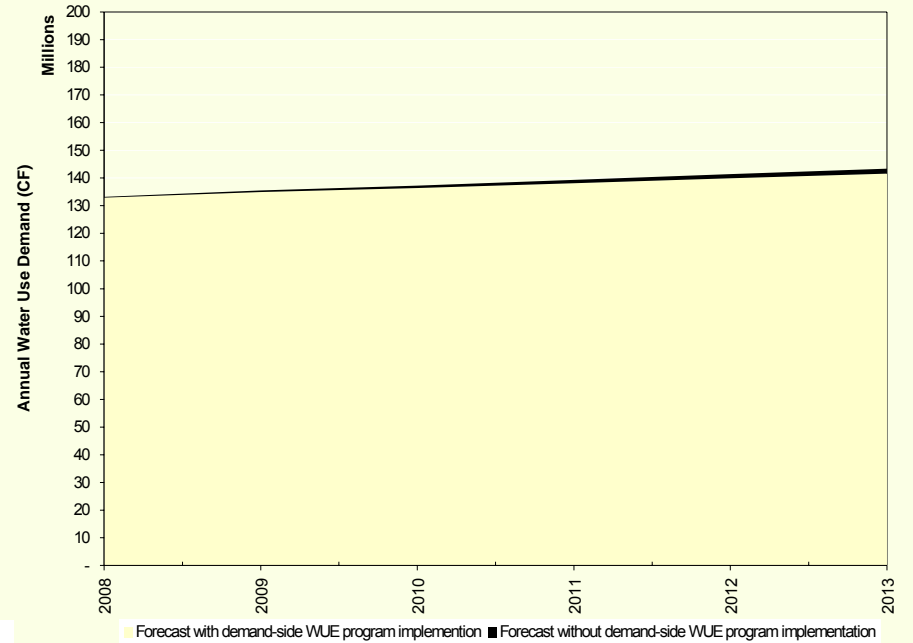
Residential Forecast 47%	Commercial Forecast 34.2%	Irrigation Forecast 1.8%
Wholesale Forecast 13.3%	Industrial Forecast 2.9%	Other Authorized Uses Forecast 0.6%

Forecast Summary

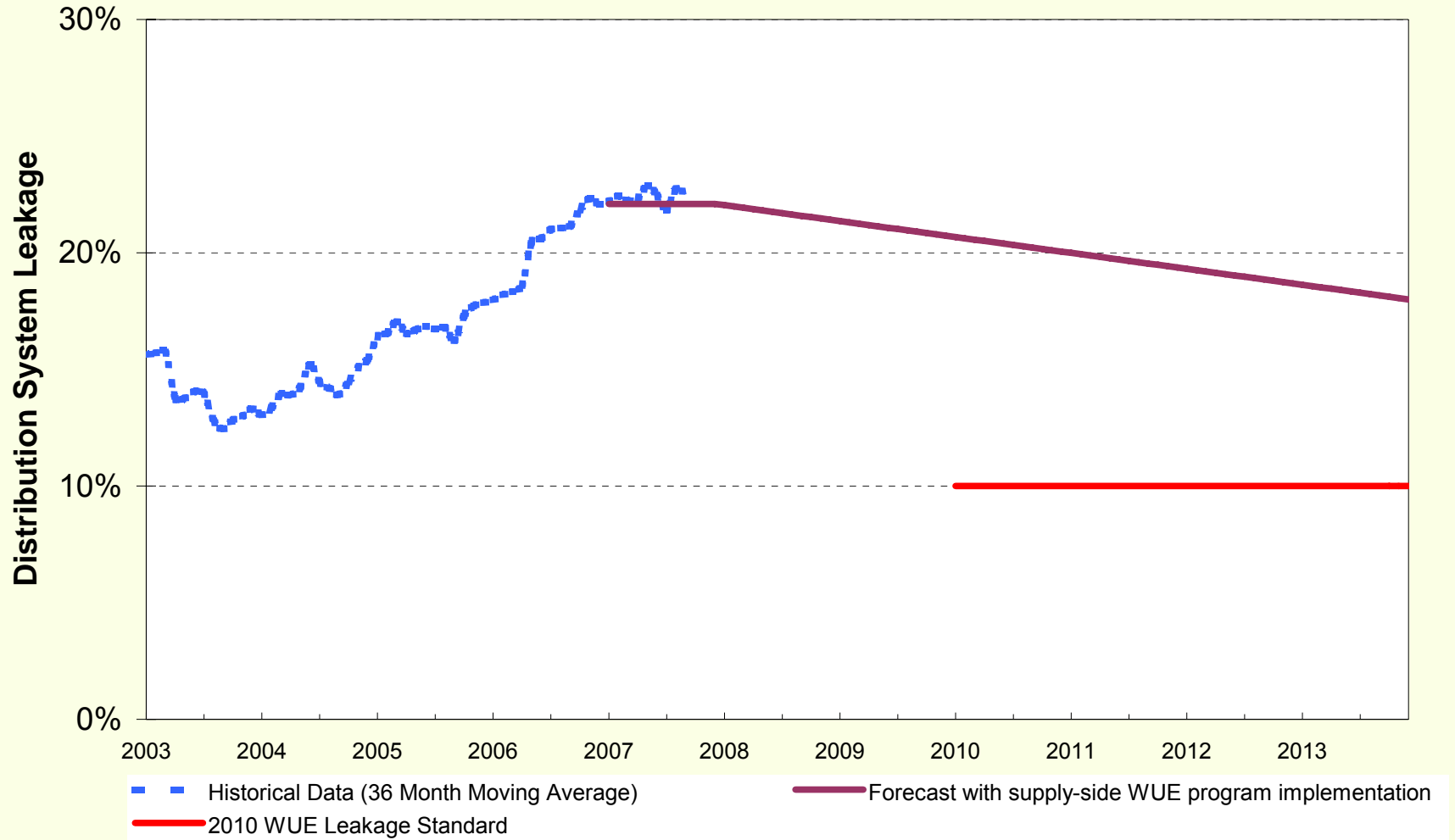
Projected Water Supply
January 2008-December 2013 Forecast

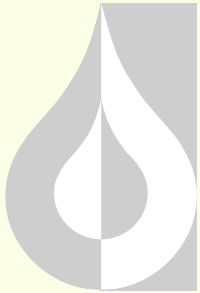


Projected Water Use Demand
January 2008-December 2013 Forecast



Leakage Forecast





Supply & Demand-Side Measures

- 22 measures Beyond Our WUE Requirements
 - Continuation of Annual Leak Detection Surveys
 - No prior leakage mandate
 - May Include Additional Transmission Metering
 - In Partnership with Electric Utility
 - Continuation of customer education.
 - Continuation of at least 6 demand-side measures.
-

Demand-Side Measures

Measures/Customer Classes	SF	MF	C	I
Conservation rate structure	-	-	-	-
Customer leak education	X	X	X	X
Utility bill showing consumption history	X	X	X	X
Displays at fairs and events	X	X	X	X
Annual consumer confidence report education	X	X	X	X
High efficiency shower heads	X	X	X	X
High efficiency faucet aerators	X	X	X	X
Clothes washer rebate	X	X	-	-
Dishwasher rebate	X	X	-	-
Totals	8	8	6	6

SF=Single-Family

MF=Multi-Family

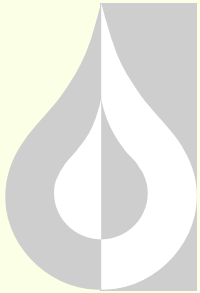
C=Commercial

I=Industrial

Demand-Side Measures

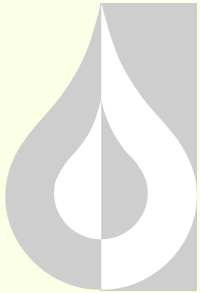
Description	Gallons Per Day	Reduction
USGC State domestic per capita	114	-
Clallam County domestic per capita	100	-12%
Port Angeles domestic per capita	72	-28%
WUE measure estimated savings	From 15 to 25	From 20% to 30%

Based on 2000 USGS Report & City consumption records



Supply & Demand-Side Measures

- May include annual night surveys
- May include capital facilities plan projects
- Continuation of meter replacement program and calibration of meters 2 inches and greater



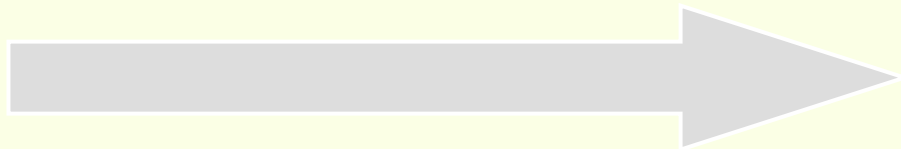
Supply & Demand-Side Measures

- Evaluation of reclaimed water opportunities
- Recording other authorized consumption
(e.g., main flushing, fire hydrant testing, fire flow, tank cleaning, street cleaning)



Proposed WUE Program Goals

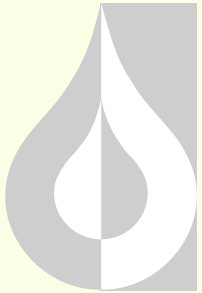
The City of Port Angeles Water Utility will embark on a program to achieve a one percent reduction in distribution system leakage per year for calendar years 2008-2013. The City will also promote water use efficiency by:





Proposed WUE Program Goals

- A. Identifying and reducing distribution system leakage through leak detection surveys.
 - B. Improving the accuracy and accountability of the system through meter replacement and calibration.
 - C. Implementing water use efficiency measures across the Utility's customer classes.
-



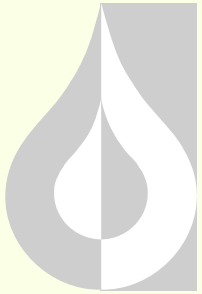
Proposed WUE Program Goals

To Achieve Program Goals:

- 1) Reducing existing leakage through leak detection surveys.

How?

Surveying includes customers, water utility crew, and private contractors to assist in locating leaks



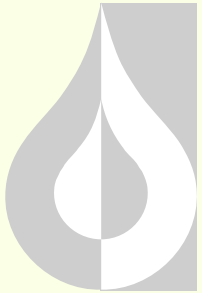
Proposed WUE Program Goals

To Achieve Program Goals:

- 2) Improving the accuracy and accountability of the system through meter replacement and calibration.

How?

Large meters to be recalibrated, New system meters installed to help track usage in our sub zones. Replacement of consumption meters that have lost their accuracy due to age.



Proposed WUE Program Goals

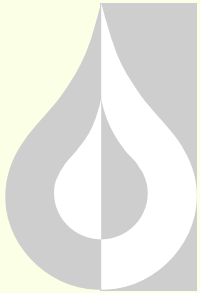
To Achieve Program Goals:

- 3) Providing water conservation devices and education across the Utility's customer classes.

How will we do these three things?

Continue to provide the conservation devices through our program at city hall.

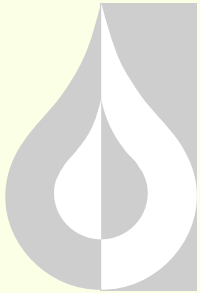
Continue to provide the brochures on conservation and education to the public.



WUE Program Goal Summary

Supply-Side Focus

- Distribution system leakage is approximately 22%.
 - Focus on reducing real and apparent distribution system leakage.
 - The Demand Forecast already demonstrates consumption reduction through:
 - Aging meters.
 - City water rates.
 - Water conservation program.
-



WUE Program Goals Schedule

November 13, 2007

Utility Advisory Committee approved schedule

TONIGHT - November 29, 2007

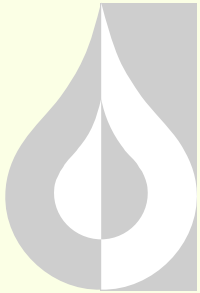
Public Forum for WUE goal(s)

December 11, 2007

Utility Advisory Committee review/refine goal(s)

December 18, 2007

City Council considers approving goal(s)



Public Forum Comments

You Are Invited.....

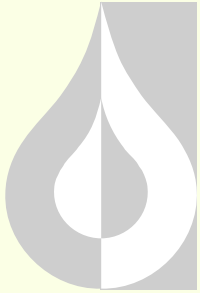
Please come to the presentation podium and state your name, address and if you are a City Resident.

Comments?

Concerns?

Questions?

Comments will be accepted until December 7th



Public Forum Comments

Comments will be accepted until December 7th

City of Port Angeles

P.O. Box 1150

Port Angeles, WA 98362

Or By Email:

Teresa Pierce

Executive Communications Coordinator

tpierce@cityofpa.us
