Eastern Washington Municipalities
Projected Water Demand Savings

Mike Dexel
Water Resources Policy Lead
2008 WUE Reporting Roundup

- Annual Reports Received
  - Before July 1 deadline = 45%
  - As of today = 90% submitted

- Leakage
  - State average = 10.1%
  - State median = 8.5%
Setting Goals: State Trends

- Goal must indicate:
  - Measurable water savings
  - Timeframe to achieve the goal

- Most set a supply side (optional) and demand side (mandatory) goal

- Goals more aggressive to reduce leaks
Why Are Goals More Aggressive to Reduce Leaks?

- Recovers lost revenue
- Target date for compliance
  - July 2010 = 3 year average
- Have more control over the ability to achieve the goal
  - Supply side management vs. demand side management (uncertainty on how customers will respond)
Over or Under the 10% Leakage Standard...Now What?

- If over the 10% leakage standard:
  - Develop and implement a water loss control action plan
  - Higher leakage % = more aggressive water loss plan needs to be

- Once under the 10% standard, DOH would like to see more focused effort on customers
Fixing Leaks Reduces Water Withdrawals/Diversions

- Affects the total production, not the customer demand
- Pasadena Park IR District (Spokane Co.)
  - Kathy Small - 2008 DOH “Operator of Year”
  - 75% leakage in Winter of 2001-02
  - Quickest and easiest fix is to turn lost water into money
  - Leakage rate went from 31 – 45% in 3 years, yet customer demand stayed the same
Eastern WA Communities: 2008 Trends in Water Efficiency

- Looked at 28 municipalities
- 15 set goals to reduce customer use
- The other 13:
  - Set one goal to reduce leaks
  - Maintain current customer consumption levels
  - Did not set a customer goal at all
- Driver’s for goal setting
  - Meet the state leakage standard
  - Meet the minimum regulatory criteria
Chosen Measures to Meet Supply Side Goals

- **Need to understand the data**
  - Leak detection surveys
  - Water audits
  - Replacing old meters w/ new technology
  - Testing/calibrating source meters
  - Addressing unmetered uses such as fire department use, IR of parks
Efforts Taken to Reduce Customer Use in Eastern WA Communities

- Overwhelmingly using education
  - School programs
  - Bill stuffers (conservation tips)
  - Booths at fairs, local events
- Non-hardware measures that are hard to quantify
- Easy to do and low-cost
- Who’s going to be the hero?
Why Less Emphasis on Reducing Customer Use?

- Need time to determine if current WUE program supports the established goal
- Hesitation to set the bar too high for fear of not reaching the goal
- Impact on revenue
  1. Evaluate the rates (demand management)
  2. Reduce cost to produce water by fixing leaks (supply management)
How to Reduce Customer Demand

📍 Rates
- 5 of 28 E. WA looking at changing rates
- Declining block to flat rate
- Flat rate to inclining block

📍 Outdoor IR
- Target highest users (affluent homes)
- IR messages can reduce use by 20% for these users
How to Reduce Customer Demand

- Are we asking to reduce/eliminate water use or just use it efficiently?
- You can have your grass and water it too!
  - Green space for fire protection
  - Use rain sensors
  - Soil moisture sensors
  - Convert some lawn to drip IR landscape
Demand Forecasts

- Identify future water needs within a Water System Plan

- To figure out demand:
  - Use historic consumption data
  - Current population and future projections from OFM or local planning agency
  - Impact of water rates on consumption patterns
  - Economic development and employment projections
  - Projected WUE savings
Projected Water Use Demand Example

- Projected demand without savings from WUE program
- Projected demand with savings from WUE program implementing three cost-effective measures
- Projected demand if all cost-effective measures were implemented
Columbia River Report due November 15, 2011

- **RCW 90.90.040**
  - Develop a Columbia river...long-term water supply and demand forecast
  - A list of conservation projects that have been implemented...and the amount of water conservation they have achieved
  - The department...shall complete the first Columbia river long-term water supply and demand forecast by November 15, 2006, and shall update the report every five years thereafter
How to Meet the 2011 Reporting Requirement

- What are the projects and how much have they saved?
- How might demand forecasts change with more aggressive conservation?
- How can the state encourage more than just the minimum?
  - Fund a study to see how water savings might be achieved
  - Develop pilot program for a proactive municipality
Promoting Water Efficiency in Eastern Washington

- Consider the water supply characteristics (mandatory when setting goals)
  - Communities with higher risks for drought, static water levels dropping, high summer peak demands

- Could ECY and DOH provide incentives?
  - Create a more cost-effective and aggressive conservation program
Criteria for Aggressive WUE Program

- What would it look like?
  - Focus on outdoor measures
  - Persistent customer education program: changing social behaviors/water use patterns
  - How to build/create a water efficient home (EPA’s WaterSense criteria)
  - Rebate programs (toilets, appliances)
  - Adopting a rate structure that sends a price signal to customers
  - Good data (i.e. annual meter testing) to support results
So What’s the Incentive?

- Successful completion of criteria results in “payback” from the state
  - Credit for
    - Every water efficient house
    - Every acre foot of water saved
    - Every square foot of lawn eliminated
Next Steps?

- Fund a study looking at how the state can incentivize conservation for a high risk community
- Create a pilot program
- Hire a consultant to
  - research E. WA municipal water efficiency possibilities
  - identify WUE measures that customers will respond to (demographics)
For More Information

Mike Dexel
360-236-3154
michael.dexel@doh.wa.gov

http://www.doh.wa.gov/ehp/dw/programs/wue.htm
Questions?

It's Worth Saving Drinking Water