Washington State’s Municipal Water Law and Water Use Efficiency Rule

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Mission

To protect the health of the people of Washington State by ensuring safe and reliable drinking water.
The Municipal Water Law

- Passed in 2003 by state Legislature to meet growing needs for water
- Complex water law reform
- Water systems can use “inchoate water” for growth within service area
- Required Dept. of Health to adopt rules for efficient use of water
MWL Implications

- Effect on planning program
- With water system plan approval:
  - Gain additional connections
  - Expand service area
- Result in fewer small water systems
- Consistency between water system planning and local govt. planning
Water Use Efficiency Rule

- Effective Date: January 22, 2007

- Only applies to municipal water suppliers
  - Water systems with 15 or more residential service connections
  - Approximately 2,300 water systems statewide
What are the Water Efficiency Requirements?

- Planning requirements
- Set goals to use water efficiently
- Meter installation
- Leakage standard
- Annual performance report
WUE Environmental Benefits

- Efficient water use saves energy
- Water systems viewed as environmentally conscious
- Protect instream flows
- Preservation of water resources
WUE Monetary Benefits

- Leaky system = money lost
- Save on filtration/treatment costs
- Lower wastewater treatment costs
- Less expensive to implement WUE measures than develop new sources of supply
Planning Requirements

- Forecast water demand based on implementation of WUE measures
- Implement measures or evaluate for cost effectiveness
- Evaluate reclaimed water opportunities
- Implement customer measures (such as toilet rebates) to reach goal
# How Many Measures?

## Water Use Efficiency Measures Based on Total Number of Service Connections

<table>
<thead>
<tr>
<th>Number of Connections</th>
<th>Less than 500</th>
<th>500-999</th>
<th>1,000-2,499</th>
<th>2,500-9,999</th>
<th>10,000-49,999</th>
<th>50,000 or more</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water Use Efficiency Measures</td>
<td>1</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>9</td>
<td>12</td>
</tr>
</tbody>
</table>
Water Supply Characteristics

- Within a water system plan describe:
  - Source of water
  - Production capacity
  - Seasonal variations
  - Water right quantities
  - Legal constraints such as instream flow or senior water right holders
Goal Setting Requirement

- Establish a goal with:
  - measurable water savings
  - timeframe to achieve the goal
- Specific to each water system
- Use a public process to establish goal
- Designed to enhance the efficient use of water by the water system customers
Examples of Goals

- Reduce total production by 5% within six years

- Reduce single-family consumption to 175 gallons per connection per day within three years
When proposing a goal, you must consider these:
- Your existing WUE program
- Previous performance reports
- Water demand forecasts and supply characteristics

Identify objective for proposing your goal

Propose your goal to support objective

Establish timeframe for achieving your proposed goal

Determine which cost-effective WUE measures support your goal

Determine how you will fund the measures to achieve your goal

Post public notice two weeks before public forum
Make goal-supporting information available to public two weeks before the public forum
Hold public forum on proposed goal
Consider public comments before establishing goal

Elected governing board or governing body

Establishes Goal
Source and service meters

- Source meters required now
- Service meters required within 10 years (January 22, 2017)
- Meters must be calibrated, replaced and maintained according to manufacturer
Distribution System Leakage

- Leakage is not:
  - “Unaccounted for water”
  - “Non-revenue water”

- To understand leakage use:
  - Distribution system leakage
  - Authorized consumption
Leakage Includes

- Actual leaks
- Theft
- Meter inaccuracies
- Meter reading errors
- Data collection errors
- Calculation errors
- Water main breaks
Authorized Consumption
Includes

- Sales to customers
- Maintenance flushing
- Fire fighting
- Cleaning of tanks or reservoirs
- Street cleaning

- Unmetered uses **MUST BE** tracked and estimated
The Leakage Formula

Percent DSL = \[
\left(\frac{TP - AC}{TP}\right) \times 100
\]

- Where DSL = % of distribution system leakage
- TP = total water produced and purchased
- AC = authorized consumption
Alternative Methodology

Leakage can be calculated using a different formula

- Must be approved by DOH
- Must be published
- Must have numerical standards so compliance can be determined
Compliance With Leakage Standard

Four ways to be in compliance:

- 10% or less
- Numerical standard for the alternative methodology
- Develop and implement a water loss control action plan
- 20% or less if less than 500 connections
What is a Water Loss Control Action Plan?

- Documented effort to reduce leakage by implementing water loss control methods
- Timeframe for achieving the leakage standard
- Budget that will fund the plan
- Technical or economical concerns that prevent compliance
Higher Leakage Requires Greater Efforts to Reduce Leaks

- Assess data accuracy and collection methods (11-19%)
- Implement field activities (20-29%)
- Implement distribution system leakage control methods (above 30%)

Public Health - Always Working for a Safer and Healthier Washington
Annual Performance Report

- Must Include:
  - Annual production
  - Leakage (Volume and %)
  - Progress made in achieving goals
  - Progress made installing meters

- Report to DOH, customers and public
Achievements During 1st Year of Implementation (2007)

- Getting Started – WUE Guidebook
- Over 30 training events conducted statewide
- Statewide Public Forum Schedule
  - Post Notice of Goal Setting Meeting Online
Take Home Messages

- Establish at least 1 customer goal
  - Focus on cultural change in how customers use water

- Set an example of good stewardship at public forum

- If you can’t authorize it, consider it leakage

- Do not use “unaccounted for” water to describe leakage
For More Information

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Questions?

It's Worth Saving Drinking Water