

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

Number of Connections	Less than 500	500-999	1,000-2,499	2,500-9,999	10,000-49,999	50,000 or more
Water Use Efficiency Measures	1	4	5	6	9	12

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**

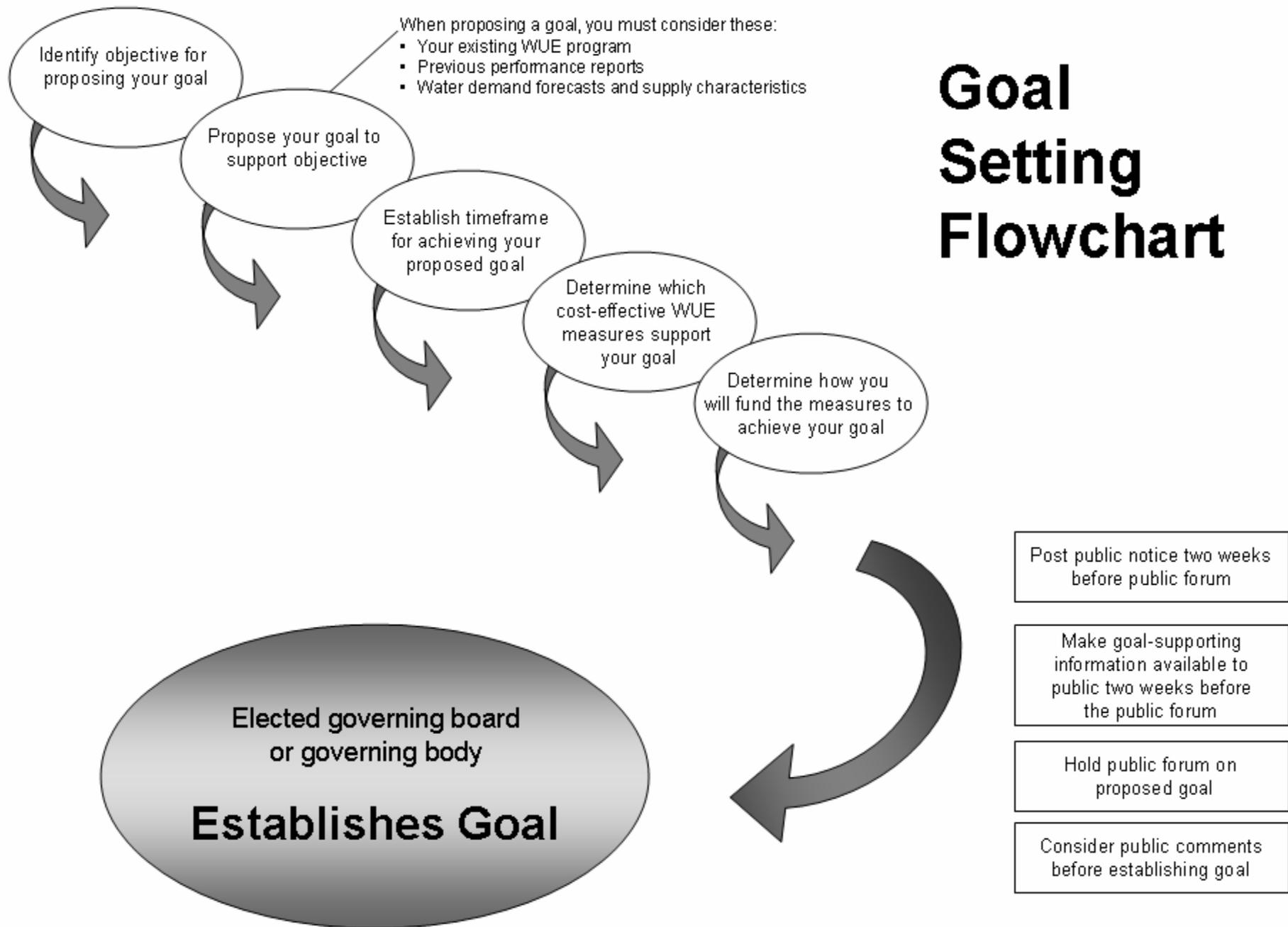
Goal Setting Requirement

- 💧 **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**

Goal Setting Flowchart



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

$$\text{Percent DSL} = [(TP - AC) / (TP)] \times 100$$

- 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%)**

Annual Performance Report

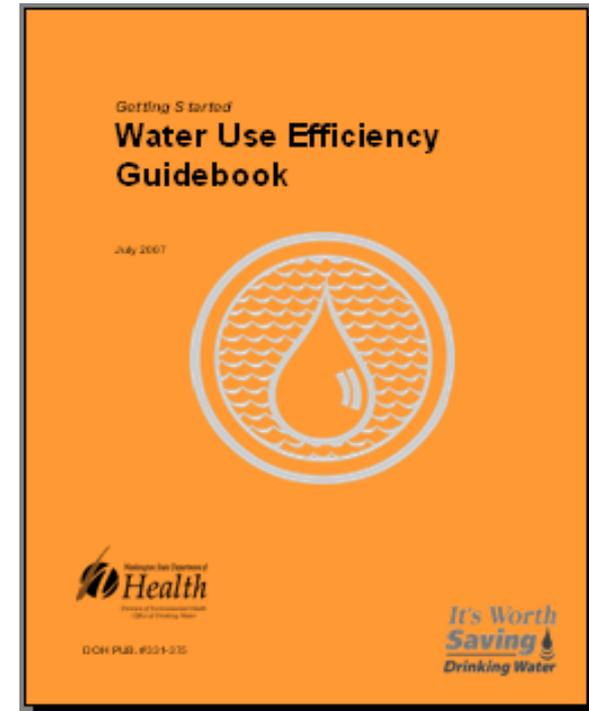
💧 **Must Include:**

- **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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💧 **[http://www.doh.wa.gov/ehp/dw/
programs/wue.htm](http://www.doh.wa.gov/ehp/dw/programs/wue.htm)**

Questions?

*It's Worth
Saving 
Drinking Water*