

CITY OF MOSES LAKE

Water Use Efficiency Rule

December, 2007

In 2003, the Washington State Legislature passed HB1338, commonly known as the Municipal Water Law. The law established that all municipal water suppliers must use water more efficiently in exchange for water right certainty and flexibility to help them meet future demand. The Legislature directed the Department of Health (DOH) to adopt an enforceable Water Use Efficiency (WUE) program, which became effective on January 22, 2007.

The Office of Drinking Water considers using water efficiently an important part of the planning program. Since 1994, DOH has used Conservation Planning Requirements document (DOH Pub.# 331-008) to describe how water systems should incorporate water use efficiency into their planning process.

The City of Moses Lake is recognized as a Municipal Water Supplier and must comply with WAC 246-290-800, the Water Use Efficiency (WUE) Rule.

The WUE requirements support a common goal of ensuring safe and reliable drinking water. Using water efficiently can help meet future needs, operate successfully within financial, managerial and technical constraints, and continue to deliver safe and reliable drinking water. All efforts taken to conserve water and use it efficiently are encouraged.

The new requirements emphasize the importance of measuring water usage and evaluating the effectiveness of our WUE program. There are three fundamental elements to the WUE Program:

A PLANNING REQUIREMENTS

1. Data Collection
 - Source Meters - Meters are installed at all well sites
 - Monthly meter readings are taken through the telemetry system for each well.
2. Service meters - Meters are installed on all services.
 - Service meters are changed out when broken and/or leaks are discovered.
3. Main lines - Main lines throughout the system are maintained to ensure leaks are repaired when discovered.
4. Conservation Pricing - The City's water rate schedule promotes water conservation by charging extra for all water consumed over 500 cubic feet per month. The rates are increased annually by the City Council.

5. Customer Assistance - The City's billing software package identifies large fluctuations in a consumer's month to month water usage. If a large variation is detected, the City will read the meter again. If the reading is correct, the City will notify the customer that they may have a leak in their piping. Customers are required to repair leaks on their property. Compliance documents are in place to ensure repairs are made in a timely manner.
6. Consumer Education - Conservation tips are included in the Annual Water Report sent to customers and nearby neighborhoods. The City includes short messages that encourage water conservation on customer water bills.
7. Forecast demand - For forecasting future water needs, a 3.0 percent annual increase to demand was used, which is consistent with population growth projections for the Moses Lake Area.
8. Evaluate WUE measures - the evaluation is related to the cost-effectiveness of the measures. The City of Moses Lake must evaluate and/or implement 6 measures, based on the size of our water system.
9. Calculate Distribution System Leakage - Calculations to find out differences in water pumped, water billed, and water used for fire flows, flushing, etc. to find the amount of leakage.
10. Implement WUE Program to meet goal
11. Annually evaluate set goals and measures to make sure goals are being achieved or if changes need to be recommended.

B. DISTRIBUTION LEAKAGE STANDARD

Leaking water systems are costly. Significant revenue is lost through leaks

1. Service meters must be installed on all existing direct service connections [WAC 246-290-820(2)(a)]
2. Authorized consumption - is defined as the volume of water authorized for use by the water system. All unauthorized uses and any water that cannot be tracked is considered distribution system leakage (DSL).
3. Distribution System Leakage - the water lost from the distribution system and includes both apparent losses and real losses.
 - Apparent losses include; theft, meter inaccuracies, and data collection errors.
 - Real losses are physical losses from the distribution system and include such things as reservoir overflows and leaky water mains.
4. Transmission Line Leakage - leaks in main lines.
5. Calculating Distribution System Leakage - Report DSL in both percentage and volume.

C. GOAL SETTING AND PERFORMANCE REPORTING

Goals should be designed to use water more efficiently.

The process for establishing a goal:

1. Define objective for proposing the goal.
2. Propose measurable water saving goals that will support the objective.
3. Establish a time frame for achieving the proposed goal.
4. Determine the cost-effective WUE measures to support the goal.
5. Determine funding source for the WUE measures to achieve the goal.
6. Make information available to the public at least two weeks prior to the meeting.
7. Provide public notice two weeks prior to the goal setting public forum.
8. Hold a public forum and consider public comments.
9. Establish goals. Goals must be established by the elected governing board or the governing body of the water system. [WAC 246-290-830(1)].

See page 4 for samples of goals

Sample Goals:

Define Objective: Reduce water consumption by installing lake irrigation for all parks that have lake water availability.

Goal: Within the next six years (by 2015), complete a feasibility study for irrigating one of the following parks out of the lake:

- ◆ Larson Ballfields
- ◆ Cascade Park
- ◆ Montlake Park

Goal: Meter installation on Parks not currently being metered by July 2009:

- ◆ Gillette Park
- ◆ Pioneer/Hill landscaping

Define Objective: Educating consumers to understand why and how to use water more efficiently.

Goal: Increase education measures by:

Fair booth education

Expand the education area of the consumer confidence report annually.

Coordinate with schools to teach children the importance of using water efficiently.

Define Objective: Repairing leaks will help us save money and preserve water supplies for future growth.

Goal: Contract services to preform leak detection in a portion of the City of Moses Lake system annually. Strive to complete 18% of the water system each year.

Define Objective: Maintaining current water consumption levels per capita will result in an estimated 3% increase in production each per year.

Goal: Maintain the per capita use or reduce water consumption by 1%.