

Annual Water Use Efficiency Performance Report Form

Please refer to the *Getting Started – Water Use Efficiency Guidebook*, DOH Pub. 331-375, for help in filling out this form.

General System Information:

System Name: City of Tumwater

System ID #: WA89700Q

County: Thurston

Your Name: Dan Smith

Your Title: Water Resources Program Manager

Your Phone Number: (360) 754-4140

Today's Date: June 25, 2008

Production and Distribution System Leakage Information:

12-Month Performance Reporting Period:

1 / 2007 to 12 / 2007 (Month/Year)

Distribution System Leakage Summary:	
Total Water Produced – Annual Volume	1,164 millions of gallons*
Total Water Purchased – Annual Volume	956 millions of gallons*
Distribution System Leakage – Total Volume	208 millions of gallons*
Distribution System Leakage – Percent	17.9 %

*Report volume in millions of gallons or gallons: 1 cubic foot = 7.48 gallons

<p>DSL = [(TP - AC) / TP] x 100</p> <p>Percent of Distribution System Leakage (DSL) Total Water Produced and Purchased (TP) Authorized Consumption (AC)</p>
--

Goal Setting Information:

Date of Public Forum: Initial Review (Public Works Committee): 1-4-2008
Second Review (City Council Hearing): 2-19-2008

Note: Goals must be established through a public process.

Has goal been changed since last performance report? Yes No

In the following section, provide a narrative on progress in reaching your goals. Include the following information:

1. Identify water savings goals.

The City of Tumwater and its existing residents and customers by the end of 2012 will strive to achieve a savings (compared to current usage) of 77,380 gallons of water a day on an average annual basis.

2. Identify the time schedule for achieving goals.

The City of Tumwater, in conjunction with the LOTT Alliance and its own programs, is already providing and will continue to provide through 2012, a mix of the following conservation measures:

- Providing education and outreach for efficient water use indoors; education and messaging for toilet leak detection and repair, decreased shower use, and eliminating partial clothes washer loads.
- Maintaining indoor water use programs, including clothes washer rebates (commercial and residential), composting toilet rebates, water efficient showerhead and water faucet aerators.
- Water Smart Technology Program – rebates for commercial, industrial and institutional users to replace and utilize water efficient technologies.
- Providing free flapper replacement valves to all customers who participated in the toilet exchange from 1997 through 2000.
- Providing free technical assistance to any customer interested in reducing water use.

The City of Tumwater, in conjunction with the LOTT Alliance and its own programs, will also provide through 2012 a mix of the following additional conservation measures:

- Direct install of HET (High Efficiency Toilets, 1.28 gallons per flush or less) fixtures for all users. Pilot project initiated in 2008.
- Development of incentive program for early retirement of residential and commercial non-ULFT toilets.
- Retrofit-Upon-Resale Incentives; evaluation and implementation of program designed to install water efficient fixtures upon the resale of existing residential homes.
- Water Efficient Hot Water Heaters
- Demonstration School Retrofits – one Tumwater School District facility to be completely retrofit with efficient water use fixtures.

- Development of a web-based data site to be used by area irrigators (residential and commercial) in determining accurate irrigation schedules.
- Review and implementation of Xeriscape landscaping educational program and soil amendment rebate program.

In addition to the programs offered by LOTT Alliance, the City of Tumwater is already providing and will continue to provide through 2012, a mix of the following conservation measures:

- Conservation-focused water rates – increasing block structure water rates.
- Educational program(s) for school-aged children.
- Ongoing education and outreach through varied media, messaging at various community events and forums for both indoor and outdoor water use.
- Maintaining a comprehensive guide to using water efficiently on the City’s website.
- Providing rebates for hardware associated with efficient water use deemed necessary through commercial and residential irrigation audits.
- Providing rebates for rain barrels.
- Providing free outdoor water use kits, including automatic hose timers, hose nozzles and rain gauges.

3. Describe progress made toward achieving goals, such as:

- **Estimate how much water you have saved.**
 - Indoor conservation savings are calculated by the LOTT Alliance. To date, our regional indoor conservation efforts have been credited for approximately 5,236 gallons per day.
 - Savings from the outdoor conservation program have not been quantified at this point. The City currently provides irrigation system audits for the utility’s largest irrigation customers, educational workshops for residential and commercial irrigation customers focused on proper maintenance, irrigation scheduling and use of drought-tolerant plants in the landscape, and hardware such as hose nozzles, timers and rain gauges to encourage conservation outdoors. The City also provides rebates for all utility customers to purchase and install rain barrels.
 - The City will be conducting an update to the Water System plan later this year. Through that process, a complete and thorough review of the conservation program will take place, updating the Conservation Plan with an appropriate conservation goal applicable to the City’s system.
- **Report progress toward meeting goals within your established timeframe.**
 - The City is on track towards meeting the conservation goal. The City will continue to be an active member in the regional conservation program headed by the LOTT Alliance, as well as maintaining the existing outdoor conservation program.
- **If you are not on track to reach your goals, identify any adjustments or changes to your WUE measures.**
 - No adjustments or changes are identified at this time.

- **Include any other information that helps you tell your story.**
 - The City continues to pursue conservation-focused retrofits, including the HET-fixture replacement program for commercial customers. Additional activities pursued in 2008 include efficient irrigation workshops for residential customers and irrigation audits for commercial sites. On-going educational information is regularly provided to all customers.

Note: If you cannot complete electronically, attach separate pages with general system information at the top.

Meter Installation Information:

Is your system fully metered? Yes No

If yes, 12 / 1927 (Month/Year)

If no, complete the rest of this section.

* All connections to the City utility have been fully metered since the formation of the utility in 1927. Meters are installed for all new connections prior to receiving occupancy and incurring new water consumption.

Date for completing installation on all existing connections and interties:

/ (Month/Year) Due by January 22, 2017

Describe your progress in metering and any efforts taken to minimize leakage:

Regarding the 17.9% Distribution System Leakage Value, City staff have identified a major malfunction with the telemetry system at the 1 million gallon reservoir; the level sensor serving the 350-zone reservoir was under-reporting the actual levels. This malfunction caused the system to interpret the volume reading in the reservoir as 94% full when the reservoir was actually completely full, causing the system to continue filling and discharging the excess water to the ground. We identified the issue in December 2007; however production records indicate this issue may have been on-going for a minimum of two months to a maximum of eight months.

As the total timeframe of this malfunction is not completely known, staff are unable to quantified the total amount of lost water. However, given that no other major sources of water loss have been identified, it is estimated that this malfunction may have caused upwards of 75-80% of the total loss for the year. The telemetry system problem was repaired in February 2008 and continues to operate correctly.

In addition to identifying the issue with the reservoir, a large irrigation customer was recently identified to have a faulty meter. This meter may not have accounted for water used during the 2008 irrigation system, amounting to an unknown quantity of water during the previous year. This issue is currently under investigation.

Ongoing leak detection actions include: (1) annual leak detection contracts investigate approximately 33% of the distribution system for leaks annually, completing the entire system every three years. (2) Digital meter readings assess customer usage during non-peak demand periods for potential leaks beyond the customer's service meter. When a potential leak is identified, the customers are notified and, if

necessary, repairs are made by the customer. (3) The third and final measure implemented to address and control leaks by the City of Tumwater is an internal “water audit”. Staff reviews production and consumption data regularly, usually on a monthly basis to reconcile the production and consumption data. Staff continues to review internal tracking opportunities with other departments to further refine the data tracking process to incorporate water used for new development, fire-related uses, main breaks, etc.

Note: If you cannot complete electronically, attach separate pages with general system information at the top.

Return this completed form to:

E-mail: wue@doh.wa.gov

Mail: WUE Program, Office of Drinking Water

PO Box 47822, Olympia, WA 98504-7822

FAX: (360) 236-2252

For more information, contact a regional planner:

Eastern Regional Office – Spokane – Main Office: 509-456-3115

Southwest Regional Office – Tumwater – Main Office: 360-236-3030

Northwest Regional Office – Kent – Main Office: 253-395-6750

The Department of Health is an equal opportunity agency. For persons with disabilities, this form is available on request in other formats. To submit a request, please call 1-800-525-0127 (TTY 1-800-833-6388).