City of Tumwater
Water Loss Control Action Plan (WLCAP)
2011

3 year rolling water loss average (2008-2010)
10.9% 115,125,904 gallons annually

3 year water loss average goal (Year end 2015)
< 10%

Summary
The City of Tumwater is actively working toward reducing Distribution System Leakage (DSL) to below the 10% 3-year rolling average that is a requirement of the Water Use Efficiency Rule. The goal of this plan is to reduce the 3-year system leakage to < 10% by the end of our current planning period, which ends in December, 2015.

Action Plan Methods
City staff, including engineering and operational personnel, has outlined the following methods/activities as a priority in determining real and apparent water losses:

- Production Meter/Reservoir Transducer Calibration
- Construction Flushing Protocol
- Fire Flow and Fire Fighting Protocol
- Theft Reduction Activities
- Leak Detection Program
- Accounting/Billing Evaluation

Method Discussion

Production Meter/Reservoir Transducer Calibration
All production meters for the water system, as well as reservoir transducers, will be professionally calibrated by the end of 2012. Proper calibration will insure accurate supply side data and deter accidental reservoir overflows. Upon the completion of system-wide calibration, production meters and reservoir transducers will be re-calibrated on a two year cycle.

Construction Flushing Protocol
Accounting for actual water usage associated with new water main flushing during construction activities has been identified as a potential source of apparent loss. Water

Resources staff will develop a simple reporting form for construction associated flushing activities. Completion and submittal of the form will be a requirement of all contractors and developers working within the confines of the water system. The completed forms will then be submitted to the Water Resources Specialist at the City for tracking by the Water Resources Department.

Fire Flow Protocol
Similar to construction flushing, the use of water for evaluating fire flow and for fire fighting activities is in need of updated tracking procedures. A form will be developed and distributed to the proper Departments (Building, Fire, Satellite Fire) for use during related activities. Use of the form for tracking water use will be a requirement. The Water Resources Specialist will be responsible for collection and tracking of the associated forms.

Theft Reduction Activities
The possibility of unauthorized water usage during construction and commercial maintenance activities has been identified as a potential source of water loss. Staff will work with Operations, Development and other City personnel to be aware and watchful of potential theft activities. A public outreach campaign will be established advising contractors and the public of the penalties associated with water theft. Police and Fire personnel will receive training regarding water theft recognition and reporting procedures.

Leak Detection Program
A program is already in progress that evaluates approximately 30-35% of the water distribution system annually. This program will continue, with an added emphasis on potential service line leakage.

Accounting/Billing Evaluation
An evaluation of accounting practices, including billing cycle synchronization and the way leakage credit is accounted for will be completed within the planning period. This dialog between the Water Resources Department and the Finance Department will ensure that proper accounting techniques with regard to water usage reporting are accurate within Utility Billing.

WLCAP Funding Process
It is anticipated that additional funding, beyond traditional water utility funding, will not be required for the implementation of this plan. Programmatic components of the plan such as protocol development, theft reduction activities and accounting evaluation will be funded as part of normal Water Resources activities, while the continued leak detection program and production meter calibration is funded through the Operations budget.