

Chapter 3: Water Conservation Element: OAR 690-086-0150

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Introduction:

As Tualatin continues to grow and develop, the demand for water resources increases, placing pressure on the existing water supply infrastructure. The purpose of this water Conservation Element is to establish a strategic framework that ensures the efficient and sustainable use of water resources in Tualatin.

This document is designed to guide the city’s efforts in reducing water waste, enhancing the efficiency of water use, and promoting long-term water sustainability. By working towards a set of conservation goals and measures, the City of Tualatin aims to balance the growing water needs and costs of the community with maintaining a reliable water supply and support broader environmental goals.

Basic Conservation Measures (OAR 690-086-0150):

Annual Water Audit (OAR 690-086-0150(4)(a)):

Steps for conducting an annual water audit and how it will be done.

OWRD defines a water audit as an analysis of the water system that includes a comparison of the water withdrawn or diverted with the amount of water sold, delivered, used or lost. Tualatin uses this to help identify leaks in the system and identify all authorized and unauthorized water uses. An annual audit is conducted using these guidelines to determine what our “water balance” and help detect if leaking is occurring in mains.

Five Year Benchmarks:

The City Will continue to conduct annual water audits to help reduce leaks and understand water loss occurring.

Full Metering System (OAR 690-086-0150(4)(b)):

The system is fully metered, including all customer connections, and meters are installed on all new connections.

Five Year Benchmarks:

The City will continue to maintain a fully metered system.

Meter Testing and Maintenance Program (OAR 690-086-0150(4)(c)):

Tualatin receives a monthly report from meter reading contractor that includes a meter repair list, for meters that are not responding and or broken. Staff members are dispatched to investigate the issue. Sometimes this investigation results in a meter replacement or repair of leaking connections. Other times, it results in an interaction with the customer to inform them of a potential leak on the private side of the meter, with recommendations for how to address the leak.

The City currently calibrates all customer meters 3” and larger twice annually (typically Spring and Fall). This ensures that the meters are reading accurately, and that all components are functioning correctly. If issues are found, the City makes prompt repairs.

Tualatin’s source meter is calibrated by the Portland Water Bureau.

Five Year Benchmarks:

The city will continue to implement calibration and testing of all metering over 3” twice annually, and repair or replace meters detected on meter repair list.

Rate Structure (OAR 690-086-0150(4)(d)):

Explanation of how Tualatin’s rate structure works and how it is based on a quantity of water metered.

The City of Tualatin currently uses a uniform rate structure that includes:

- Facilities Charge – fee based on meter size per month.
- Service Charge – Flat rate for all meters per month.
- Water Charge – Fee for hundred cubic feet (CCF) of water used per month.

OAR 86-690 requires all suppliers to have a rate structure that is based, at least in part, on quantity of water metered at the service connection. The City’s existing rate structure meets this requirement for all metered services.

Rates and structures are periodically reviewed by the City. The most recent review occurred in May of 2023 using an outside consultancy that identified future rates and measures for consideration.

Five Year Benchmarks:

The City will continue to bill customers monthly, in part based on quantity of water metered at service connection.

Leak Detection Program (OAR 690-086-0150(4)(e)):

The City currently measures water loss by comparing the water purchased from the City of Portland to the water sold to Tualatin customers, as well as accounting for water injected and recovered from the ASR. The water loss rate for 2022 was 5.54%. Further refinement of the water loss calculation should be done to ensure accuracy. Consideration for current best practices as well as water sold to River Grove customers, bulk water sales, and construction water should be included. This would likely further reduce our estimated water loss.

The City is in the process of upgrading its Supervisory Control and Data Acquisition (SCADA) system. By maintaining a modern and accurate SCADA system the City can better detect anomalies in the distribution system and identify and repair leaks.

The City encourages customers to find and repair leaks. The meter reading contractor flags accounts with excessive water use and a technician for utility billing looks for accounts appearing to use higher-than-normal amount of water once a month through meter reading contractors report. When an account is identified, the utility billing system generates a work order and a water crew from Operations Department visits the customer to inspect meters and or potential leak.

Most leaks are detected visually within the Tualatin water system. Known leaks are addressed

If a leak is suspected, but the source cannot be pinpointed, City staff can use listening devices to 'hear' where the leak may be located. Sometimes, the City partners with neighboring entities that own more robust leak detection equipment, to pinpoint the source of the leak. The City then performs the necessary repair.

Five Year Benchmarks:

The City will continue to monitor for leaks and take action to investigate any potential leaks and address any known leaks.

Public Education Program (OAR 690-086-0150(4)(f)):

Tualatin participates in multiple water conservation groups including the Regional Water Providers Consortium (RWPC), and the Backyard Habitat Certification Program (BHCP). The Regional Water Providers Consortium focuses on promoting a regional approach to water conservation through shared resources including water-saving tips, educational materials for children, and information on efficient water use both indoors and outdoors.

BHCP focus on community building and encouraging the conversion of yards or green space into a climate-resilient habitats made from drought resilient native plants that supports cleaner air and water.

Tualatin plans to create material that can be used for various events and groups to help promote water conservation that includes, messaging attached to monthly water utility bills, presentations at the chamber of commerce, art contests and school presentations.

The city provides a variety of educational materials to the public, including brochures, flyers, and digital content available on the city's website. Along with links to other web resources link the Regional Water Consortium, Clean Water Services landscaping tips, native plant finder (Oregon Flora).

Five Year Benchmarks:

The City will continue to develop and implement outreach efforts for water conservation, including utilize partner programs like the Regional Water Provider's Consortium and Backyard Habitat, developing print and online materials, supporting community organizations, and conducting outreach at community events.

Enhanced Conservation Measures (OAR 690-086-0150(5)):

The City serves a population greater than 7,500. As a result, Tualatin is required to provide activities and five-year goals related to the following additional measures:

- Technical and Financial Assistance Programs
- Retrofit/Replacement of Inefficient Fixtures
- Rate Structure/Billing Practices for Conservation
- Reuse, Recycling, Non-Potable Opportunities
- Other Proposed Conservation Measures

Technical and Financial Assistance Programs (OAR 690-086-0150(6)(b)):

The City has researched rebates being offered in the state and has concluded that they will not be a beneficial use of city funds, or a good fit for Tualatin. The City does offer bill assistance for qualifying customers.

Five Year Benchmarks:

The City will work to set a community standard for water conservation by offering educational material and assist in customers needs.

Retrofit/Replacement of Inefficient Fixtures (OAR 690-086-0150(6)(c)):

Tualatin is currently exploring the implementation of a conservation kit program that not only help save water through the retrofit and or replacement of inefficient fixtures but also are a great piece of customer service. These kits can include a range of items from informational material to replacement fixtures. These kits can be stored at city buildings like City Offices, City Services, and the library for residents of Tualatin to pick-up at no charge. The city can also add a small message at the bottom of customers utility bills mentioning how they can either pick up a complimentary kit or order one to their doors.

Five Year Benchmarks:

The City will start to implement a conservation kit program that will help residents and customers to retrofit or replace inefficient residential fixtures like showerheads and faucet nozzles.

Rate Structure/Billing Practices for Conservation (OAR 690-086-0150(6)(d)):

Tualatin reads meters and bills customers on a monthly basis, so that customers receive bills relatively close to the time the water was used.

Tualatin is currently exploring different rate structures that could be explored during the utilities next rate study. These rate structures include an inclining block rate structure (tiered rates), and a seasonal rate structure that are both recommended under OAR 690-86-0150(6) Enhanced Conservation Measures.

Five Year Benchmarks:

The City will conduct a study on a more water conservation focused rate structure like tiered rates or a seasonal rate structure.

The City will replace broken or damaged old-style meters with ones that are capable of an AMI/AMR retrofit. The City will also install only AMR/AMI retrofit capable meters in all new meter installations.

[Reuse, Recycling, Non-Potable Opportunities \(OAR 690-086-0150\(6\)\(e\)\):](#)

Clean Water Services of Washington County owns and operates the Durham Treatment Plant. In the past, water reuse and recycling uses have not been financially beneficial to Tualatin. The city is currently exploring the costs of expanding the Durham Treatment Plant's Purple Pipeline that would route cleaned stormwater to irrigate green spaces like, parks, school grounds and yards.

Five Year Benchmarks:

The City will explore opportunities to expand the Durham Treatment Plant's Purple Pipeline into the City.