

# Tillamook's Fish-Friendly Drinking Water Alliance



prepared for the Drinking Water Providers Partnership's  
Source Water Protection Workshop  
December 12, 2018

## Water Operations Overview

- We supply water to City residents, the Port of Tillamook Bay and 11 rural water districts.
- The city's water consists of filtered surface water from Killam and Fawcett Creeks and groundwater from three wells
- Surface water is treated and delivered. Treated water is stored in 3 million gallons of on-site storage, providing adequate chlorine contact time and reserve capacity.
- In 1994, a 2-million-gallons-per-day package filtration plant was completed that allows the city to treat, disinfect and store the surface water prior to delivery
- The city takes great care to ensure high-quality water for its citizens, it's water is tested monthly for bacteria. Any time a water line breaks or is modified, the system is tested again to ensure that no contaminants have entered the system. The city files an annual reports.



## Water Operations History

- In 1999 the City of Tillamook took over management of the water system from the Tillamook Water Commission, which managed the system starting in 1905. The water system was private from 1895-1905
- Shortages in the 1950s prompted construction of Skookum Dam, finished in 1965.
- Historically, surface water has been the primary source of the city's water. Well water is used during the winter when surface water turbidity exceeds acceptable limits and during the summer, when peak demand exceeds surface supply capacity.
- In 2013 the City started development of its Water Master Plan, which identified and prioritized maintenance needs.

# Fawcett Creek & Skookum Lake

- Starting in 1895, wood stave pipe was used to transport water from Fawcett Creek to town. In the 1920s, diversion dams and 200,000-gallon impoundments were constructed at each intake. Wood stave pipes were replaced with steel between 1937 and 1959.
- Skookum Dam was constructed three miles upstream of the intake to supplement summer flows. With the completion of the new treatment plant and a new 24-inch iron main in 1994, Skookum was no longer needed, and dam safety meetings had raised serious concerns. In 2014 the reservoir was drained and the City developed a partnership to breach the dam.
- The City's Master Plan identified the need for a new, self-cleaning diversion structure at the Fawcett intake, including fish-friendly screens and a fish ladder.



# Stream Restoration as a Tool for Drinking Water Providers

- System upgrades trigger fish-passage and other requirements
- State and federal programs provide cost-share through a competitive grant-making process
- Watershed Councils and other conservation organizations bring assistance in project development, fundraising, project management and monitoring



# Fawcett Creek Fish Passage Project

The City of Tillamook needed to upgrade the water diversion facility on upper Fawcett Creek to improve human safety and fish passage. The TBWC was tapped to help build a partnership around the project. With major contributions of technical assistance and funding from state and federal partners, the partnership was successful in writing two grants to OWEB—one for design and one for construction.



The project was completed in 2013, with the final steps of project management taken on by the Tillamook Estuaries Partnership.



**Total spent: \$640,464.00**

**Cost to City of Tillamook: \$85,400.00**

# Skookum Dam Removal Project

Skookum Dam was a 700-acre-foot impoundment with a 37-foot-high earth-fill dam and a concrete spillway.

In July and August of 2017, TBWC hired LKE Corporation of Camas, Washington to breach Skookum Dam and restore the natural stream channel of Fawcett Creek. This removed a major liability for the City of Tillamook, and resulted in the reconnection of over 2 miles of spawning and rearing habitat for migratory fish in Tillamook's only natural lake system. All disturbed soils were replanted with native trees and shrubs during the winter of 2017-2018.



**Total project cost:                   \$350,000.00**

**Cost to City of Tillamook:         \$100,000.00**

# What does it take to deliver a successful restoration project?

- Partners, partners, partners
- Funding (see above)
- Technical Assistance
- Skilled Contractor(s)
- Project Management
- Maintenance, Monitoring , Reporting & Adaptive Management





# Benefits

- Holistic solutions that bring stakeholders together under a common goal
- Access to supplemental funding and support
- Permitting assistance
- Community effort & uplift



# Challenges

- 2-5 year cycle on average
- A higher bar – state and federal conservation measures
- Reporting and monitoring requirements

*Thank you for your time!*

