Every day, half a million people depend on the Tualatin River. Regardless of what we do or where we live, our personal wellness, economic prosperity and environmental health are tied directly to the water that flows from Oregon’s Coast Range to the Willamette River — through forests, farms and urban backyards. An incredible diversity of birds, fish and other wildlife depend on the river as well. The river and its tributaries weave us together.

Fifty years ago, the Tualatin River Basin was under tremendous pressure from agriculture, industry and population growth. River flows were reduced to a trickle, wetlands were drying up and wildlife habitat was disappearing. Water pollution was so severe that the state imposed a building moratorium. At risk was the well-being of everyone who called Washington County home.

The community responded with a resounding commitment to rescue the river, and an exciting restoration movement was born. Thanks to the combined and enduring efforts from communities across the region, Mother Nature is making a comeback and people are discovering ways to live, work and recreate in harmony with the Tualatin River.
Clean Water Services has been caring for the Tualatin River Watershed in Washington County, Oregon, since 1970. The first 30 years were all about the traditional use of pipes, pumps and plants to clean water. Over time, Clean Water Services expanded its mission to include watershed restoration and resource recovery. A commitment was made to strengthen the connections between a healthy river and a prosperous economy. Clean Water Services was the first water management utility in the nation to use streamside habitat restoration to address its regulatory obligations to maintain cool and clean water. More recently, Clean Water Services pioneered a resource recovery process that extracts nutrients and produces a high-value, slow-release fertilizer. In addition, Clean Water Services has developed innovative renewable energy and clean water treatment technologies.

With community partners, Clean Water Services is changing the conversation about what a healthy and productive watershed should be and how the community can be part of making that happen.

"Our relationship with Clean Water Services is a two-way street. We appreciate the capacity support they provide us with and they value the strengths we bring to each project."

Maureen Fisher, Executive Director, SOLVE, a non-profit organization
Fernhill Wetlands is a premier destination for birding enthusiasts and contributes to making Oregon the fifth richest state in avian diversity. As thousands of birds make their annual migration flight across the Pacific Flyway, this wetland complex, and its connectivity to other natural areas, is a wonderful place to view sandpipers, mergansers and Bald Eagles. Fernhill is also part of more than 700 hundred acres of land owned by Clean Water Services for the management of water resources. It is currently undergoing a massive engineering makeover and, when complete, it will have met strict federal regulations for clean water that flows into the Tualatin River.

Just as Fernhill is essential to birds, it is essential to Washington County residents. That is why Clean Water Services enlisted partners and nationally recognized experts to develop a master plan that addresses water quality, unique habitat needs for wildlife and special places for people. For example, instead of mechanized re-aeration, waterfalls were installed alongside artfully-placed footpaths, arched bridges, boulders and trees. Unlike conventional treatment facilities made of concrete and steel that require enormous energy and chemicals to replicate nature’s cleansing process, Fernhill is designed to guide water through thousands of native plants that absorb nutrients. When finished, Fernhill will offer productive new habitat for birds and save Washington County $13 million in grey infrastructure costs.

One highlight of the project is the creation of emerging wetland and shorebird habitat. These new features, and other riparian and urban stream restoration sites across the Tualatin Valley, will enhance avian habitat and provide new opportunities for education and recreation.

“Clean Water Services is part of the foundation that supports all of our needs in this area. One key need is for reliable and clean water. This important resource, along with parks and trails, is one of the economic tools we rely on to attract new companies that create jobs in Washington County.”

Pam Treece, Executive Director, Westside Economic Alliance
Adding standing snags and woody debris to streams and ponds slows the water and creates pools where fish can reproduce as they make their way to and from the Pacific Ocean. Birds can find places to nest and feed as they migrate from Alaska to Mexico and back.

A healthy native forest along streams and rivers serves as nature’s thermostat by maintaining cool and constant temperatures. Volunteers and work crews have planted five million trees and shrubs, shading urban and rural creeks that meander into the Tualatin River.

Large-scale watershed restoration has spurred a new, local industry. Native plant nurseries are thriving and seasonal forestry crews have become experts at riparian area restoration, which provides opportunities for year-round employment.
Wildlife-related activities contribute over $35 billion to the U.S. economy, and 15 million homeowners landscape with native plants. People support spending public dollars on habitat restoration projects and view this as a sound investment for future generations.

Integrating nature and science is a fun and practical way for teachers and students to learn about the importance of a healthy watershed. For some, it leads to a career in environmental science; for others, it leads to a life-long love of nature and stewardship.

The agricultural community is removing blackberries and other invasive plants along streams, and restoring these areas with native vegetation that enhances wildlife habitat and safeguards surface and ground water for people.
Creating and preserving healthy streams in urban areas where people live, work and recreate can be particularly challenging.

As development began to cover the once-broad floodplains of the Tualatin Watershed, small but important tributaries such as Fanno Creek became degraded. Ditches, pipes and culverts gradually replaced its natural flow. Non-native vegetation crowded its stream banks. The creek’s natural beauty — once rich with native trees, understory shrubs and animals — in large part disappeared.

To effectively manage the challenges of restoring watershed health in an urban setting, Clean Water Services partnered with the Tualatin Hills Parks & Recreation District, the cities of Beaverton and Tigard, Metro, SOLVE, Friends of Trees and many others to restore Fanno Creek. The first sizable project was in Englewood Park. The Fanno Creek floodplain wasn't suitable for development and had become a weedy mess of non-native reed canary grass, Himalayan blackberry and English Hawthorn. The creek bank was deeply incised with steep, bare soil. The summer flow of the stream was a trickle, giving little nourishment to local wildlife.

Through the hard work and collaborative spirit of the community, invasive vegetation was removed and replanted with thousands of native trees and shrubs. The creek was re-aligned to its natural meander and the site began to resemble pre-urban conditions. Native plants thrived and wildlife, including beavers, returned.

Over the past decade, this approach to urban restoration has proven successful. Results show that urban streams can be transformed to healthy and productive habitat. Individuals, organizations, school groups and local businesses have improved more than seven miles of this twelve-mile urban stream.

Take a walk along Fanno Creek today and you will experience a cool and shady place that is home to a diversity of native birds, fish and other wildlife. Pause for a few minutes along the trail and you may see a beaver dam, catch a glimpse of cutthroat trout or spy the quick movement of a yellow warbler.

Fanno Creek in 2005 and in 2011, before and after the community planted thousands of trees and shrubs.

"Beavers are a critical piece to the health of this ecosystem. Their dams create floodplains, resulting in good habitat for birds and for slowing down the water that runs through my property and into Fanno Creek."

Shoaib Tareen, Portland resident who has restored seven acres of wetland forest habitat alongside Vermont Creek, a tributary of Fanno Creek.

Forging Partnerships
Under the umbrella of the Tree for All Campaign and Conservation District Programs, farmers are offered incentives to restore native vegetation along streams, improve wildlife habitat, enhance irrigation efficiency and protect sensitive lands. Clean Water Services, the Tualatin Soil and Water Conservation District, the Farm Services Agency and the Natural Resources Conservation Service have collaborated to improve watershed health, and at the same time supported a vibrant agricultural community.

While crossing the wooden bridge over McKay Creek, the first thing you notice about Alfred Dinsdale’s farm is precisely planted rows of blueberries. Alfred participates in the rural lands incentive program. He works closely with staff from the Tualatin Soil and Water Conservation District, Natural Resources Conservation Service and Clean Water Services to develop the best farm practices available and optimize his operation.

“I am excited to apply water conservation techniques, streamside restoration methods and integrative pest management to my property and see the resulting economic, environmental and community benefits,” said Alfred. His connection to the land comes from growing up on his family’s dairy farm. His deeper level of environmental stewardship comes from wanting to make the land better for his children.

Like any savvy business owner, Alfred is mindful of the bottom line — production, labor, marketing costs and more. He has focused on building a family farm that is financially viable and enhances native wildlife habitat, pollinator activities and water quality. The re-vegetation project, managed by the Tualatin Soil and Water Conservation District, helps him do this. Alfred replaced ten acres of nursery stock with Oregon oak, red and yellow-twig dogwoods and willows to cool the creek, reduce sediment run off and expand habitat for birds and animals. Planting wildflowers and installing an assortment of bee boxes will help pollinator species flourish.

Remember those perfect rows of blueberry plants? Alfred reinvested in his farm by purchasing a GPS auto steer for his tractor. Now, those tiny blueberry plants are ideally positioned for growth and receive the optimal quantity of water from a state-of-the-art drip irrigation system. This new equipment and other technology, coupled with a holistic management plan for his farm, have given Alfred and many other landowners the tools they need to make a positive difference for their families and the community.

“Clean Water Services was instrumental in leading the effort to get the agricultural community to see the benefits from riparian plantings. Today, we are getting cleaner water, cooler water and curtailing erosion. Our watersheds and wildlife habitats are improving. We are extremely proud of what we’ve accomplished by working together.”

John McDonald, Farmer and Chair, Tualatin Soil and Water Conservation District
Investing for Growth

Forest and watershed restoration activities create considerable economic uplift and jobs. In Oregon, such restoration projects have the potential to generate over $2.1 million in total economic activity. Nature-based tourism, including bird and wildlife watching, can add revenue and full-time jobs to the local economy. Clean Water Services is proud to help implement community-based programs that contribute environmental, social and economic benefits to the region.

Clean Water Services and its partners have:

- **Leveraged** more than $10 million from local, state and federal agencies
- **Generated** jobs in the nursery industry through long-term contracts for growing native seedlings
- **Worked** closely with the agricultural community to restore their lands for shared habitat value
- **Developed** innovative restoration programs that meet or exceed regulatory requirements
- **Saved** ratepayers nearly $150 million in grey infrastructure costs
- **Built** a native plant nursery that provides seedlings for public and private restoration projects
- **100+ miles of river and streams** restored in urban neighborhoods and rural communities

Counting the Specifics

- **5 million** native trees and shrubs planted, supporting high quality fish and wildlife habitat
- **15,000+ acres** managed for watershed health
- **100+ miles of river and streams** restored in urban neighborhoods and rural communities
- **70 farmers** engaged in agricultural incentive programs, with 30 waiting to join
- In 2015 more than **2 million native plants** found a new home along the river, streams and wetlands in Washington County

The Next Decade

While much has been accomplished these last ten years, there is still more work to do. Unknown factors related to sustainable water supply, extreme weather events, stormwater runoff, aging facilities and population growth will challenge the economic and environmental health of people and areas in Washington County. Solutions lie in developing collaborative partnerships, creating innovative ideas and sharing resources for the common good. Strong stewardship, leadership and backing from all sectors of the economy are more important than ever if we are to safeguard our watershed, nourish the vitality of local farms and businesses, and create a healthy place for all residents to live, work and recreate.

The contract I have with Clean Water Services has been very helpful for my business. I remember being very happy when I got one contract eight years ago; and today I have 12.

Rosario Franco, Owner, R. Franco Restoration Company

“Investing for Growth”

The past decade has been a watershed moment for the community and was enabled through the many committed partners who are the stewards of our natural resources. We have made great progress and will need to continue this work to ensure vibrant agricultural and urban communities and a healthy watershed.

Bruce Roll, Department Director, Watershed Management