

# THE TRI-CITY WATER RESOURCE RECOVERY FACILITY: PROTECTING PUBLIC HEALTH AND THE ENVIRONMENT



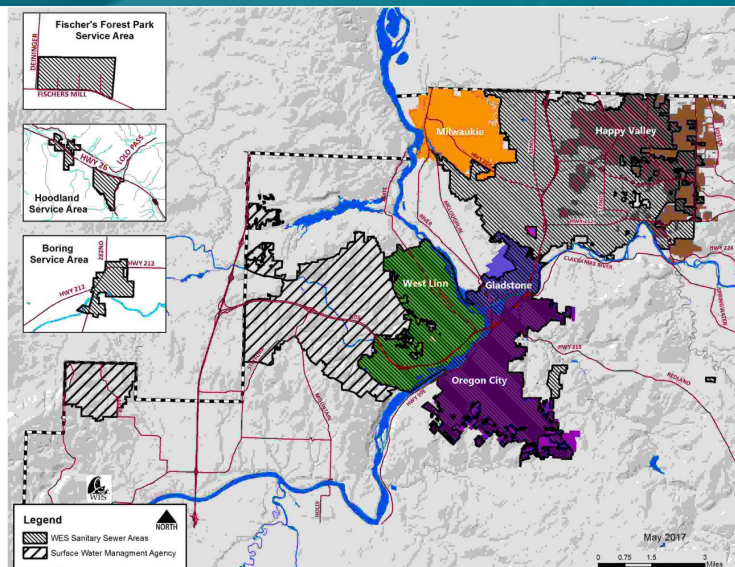
## Protecting public health and the environment

Clackamas County Water Environment Services (WES) provides dependable and affordable state-of-the-art wastewater treatment services for more than 165,000 customers. Our service area includes Boring, Fischer's Forest Park, Gladstone, Happy Valley, Hoodland, Johnson City, Milwaukie, Oregon City, West Linn and the communities of unincorporated Clackamas County.

In addition to our two largest treatment facilities - the Tri-City Water Resource Recovery Facility in Oregon City and the Kellogg Water Resource Recovery Facility in Milwaukie - WES also manages and operates facilities in Boring, Fischer's Forest Park and Hoodland.

Combined, our facilities clean more than six billion gallons of wastewater every year, which protects public health, the environment and future economic growth. Alone, the Tri-City facility cleans more than 11 million gallons of wastewater every day before it is released into the Willamette River.

In addition to utilizing wastewater to make energy that is used at Tri-City, WES also uses it to produce natural fertilizer, which is transported to non-food crops in Eastern Oregon.



*The Water Environment Services partnership service area.*

## Ensuring our ability to treat solids

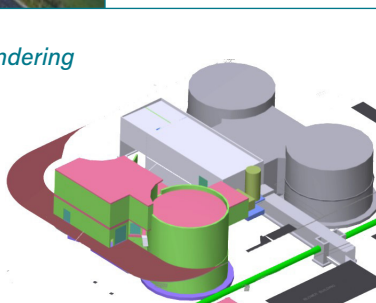
The Tri-City facility needs to expand its capacity to handle and treat solids, which is a byproduct of waste from homes and businesses. The doubling of the population in our service area over the past 30 years created the need for the additional capacity. To meet this demand, a third digester, which is a large tank-like structure crucial to the solids treatment process, will be built at the Tri-City campus. The new digester will serve our customers' needs through 2030. Construction of the new digester along with other upgrades on existing equipment will begin in Summer 2018, with completion expected by 2020.

Due to value engineering and a multi-phased approach, the cost of the project was reduced considerably from earlier estimates and will have a minimal impact on monthly bills, amounting to an approximate one dollar increase per customer.



*Location of where third digester will be built at Tri-City.*

*Artist rendering*





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## Testing water quality for safety

The Tri-City Water Quality Lab performs more than 20,000 analyses per year including hundreds of tests per month on samples collected from Tri-City. The goal is to ensure that the samples meet discharge requirements for the Willamette River and to provide information to optimize operations at Tri-City. In addition, samples are also analyzed from the other WES facilities and surface water programs.

## Practicing sustainability to minimize impact

WES is committed to responsible stewardship, recovery of resources and demonstrating leadership in sustainable business practices. Our employees are dedicated to following and promoting solid sustainability practices to reduce the environmental impacts of all our activities. WES is proud to have achieved certification in the county's Leaders in Sustainability program by conserving energy and water at our Tri-City facility and minimizing waste throughout our department.

The Membrane Bioreactor (MBR) at Tri-City has earned an industry-wide reputation for being a model of sustainability. It uses hollow-fiber membranes to separate particles from water. The MBR's compact footprint requires fewer components than pressurized systems and provides simple, trouble-free operation and maintenance. The MBR saves both energy and precious water resources.



*The Membrane Bioreactor has earned an industry-wide reputation for being a model of sustainability.*



## Conserving energy to benefit our customers and environment

WES has saved millions of kilowatt hours at our Tri-City facility by participating in Energy Trust of Oregon's Strategic Energy Management Program, which helps organizations train their employees to identify energy-saving opportunities. After signing up for the program, WES employees identified 104-energy saving possibilities at the Tri-City campus. Since then, WES has saved hundreds of thousands of dollars in energy costs, which benefits the environment and our customers. WES is now in the process of expanding the program's practices to more of our facilities.

**To learn more about WES and the Tri-City Water Resource Recovery Facility, visit [clackamas.us/wes](http://clackamas.us/wes)**