

Class A+ Reclaimed Water Demonstration Project

Unlocking Options for the Future of Water Recycling

Project Vision

First-ever Class A+ demonstration project in the state

LOTT Clean Water Alliance is excited to demonstrate how we can safely clean and recycle used water to drinking water quality. This is referred to as Class A+ reclaimed water - the highest quality of recycled water as designated by the Washington State Departments of Ecology and Health.

This demonstration project will add treatment steps for advanced purification of water treated at the Budd Inlet Treatment Plant. We plan to use and compare two alternative multi-step treatment approaches to maximize learning opportunities for our staff, industry peers, state regulators, and the broader community. The finished water will be drinking water quality. At public outreach events, the community will have the opportunity to learn about Class A+ reclaimed water and to sample it as beer, root beer, or other consumable products.

Why is this project important now? LOTT is continuously innovating and exploring new treatment technologies to best meet our community's evolving needs. Demonstrating how to recycle water to drinking water quality is the next step in innovation.

Our partner jurisdictions of Lacey, Olympia, Tumwater, and Thurston County each manage drinking water utilities. While they have adequate water supplies now, they see a point in the future when that will likely change. Exploring the possibilities of Class A+ reclaimed water and fostering excitement now will encourage community conversations about long-term management options, well ahead of any future water crisis.



Project Goals

- 1 Demonstrate how to safely clean used water to drinking water quality
- 2 Test and compare two different multi-step treatment methods
- 3 Foster curiosity and excitement about what is possible when it comes to water recycling
- 4 Encourage community conversations about the future of our precious water resources

Collaborative Effort

Coalition of local, state, tribal, and community partners

LOTT is leading the demonstration project in collaboration with our four jurisdictional partners – the cities of Lacey, Olympia, and Tumwater, and Thurston County. The Washington State Departments of Health and Ecology are actively involved, as well as the State Board of Health.

Other community partners, such as the Squaxin Island Tribe, are participating. Additional partners are anticipated to join the effort as the project progresses.

We are working with the consulting firm Hazen and Sawyer on this project. They have experience supporting similar small-scale demonstration projects and large-scale potable water recycling projects for communities around the country. While this type of project is new to Washington State, we can build on what has been done elsewhere to ensure the safe and reliable production of high quality Class A+ reclaimed water.

Key Project Steps

- 1 Identify advanced treatment options to recycle used water to drinking water quality
- 2 Install and operate two different multi-step treatment systems
- 3 Monitor and test the water to ensure it is safe and meets Class A+ standards
- 4 Engage local businesses to make beer and other products using the high quality water
- 5 Celebrate with the community and offer samples of Class A+ products at public events

Innovation

Pilot testing of two state-of-the-art treatment systems

This will be the first-ever Class A+ reclaimed water project in Washington State. This proof-of-concept demonstration is an opportunity for staff from a variety of fields and a variety of agencies – including LOTT, our partner jurisdictions, and utility peers – to see advanced water recycling technologies in action.



Benefits of this demonstration reach well beyond our local area as well. With increasing attention to residual chemicals in water, this pilot project offers a chance to test alternative treatment technologies that may be helpful in addressing chemical concerns and meeting future regulatory requirements. We plan to compare two multi-step treatment systems. Both utilize a combination of treatment technologies (individual unit processes) in a carefully engineered sequence. One system is centered on reverse osmosis filtration and the other system is based on carbon filtration.

This demonstration approach provides the opportunity to compare the two alternative treatment systems, as well as the potential to better understand the effectiveness of the individual unit processes in removing chemicals and pathogens. As the first such project in the state, it also gives regulators an opportunity to pilot test a permitting pathway for other Class A+ projects.

Experience

Leadership in cutting edge treatment for over 30 years

LOTT's existing Budd Inlet Treatment Plant was the first on Puget Sound to provide advanced secondary treatment with nutrient removal. LOTT was also among the first in the state to treat water to Class A reclaimed water standards and to foster water reuse in our community. Now we can take that innovation and expertise one step further, adding the "+" to the Class A reclaimed water we have been providing for nearly 20 years.

Timeline

Purified water by Summer 2026

The goal is to have Class A+ reclaimed water ready to share with the public as beer, root beer, or other products in the summer of 2026. Community outreach, education and engagement will be ongoing as our community begins to have conversations about water resource management options.

Summary

Water judged by its quality, not its history

LOTT and our community partners are excited to bring the first Class A+ reclaimed water demonstration project to Washington State. With our proven experience in high level water treatment and a broad collaboration of local, state, and tribal partners, we plan to demonstrate that water can be safely and reliably recycled to the highest standards. When water is judged by its quality, and not by its history, possibilities open up for how best to manage this precious resource for generations to come.

More Information

To learn more about the demonstration project, visit www.lottcleanwater.org.

