Clean Water Alliance

News Release

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LOTT's recent plant upgrade wins award and conservation grant

LOTT Clean Water Alliance (LOTT) was awarded a \$1.1 million conservation grant from Puget Sound Energy (PSE) to recognize energy savings resulting from a recent process improvements project at the Budd Inlet Treatment Plant. The project will also be recognized with a National Environmental Achievement Award for Operations and Performance from the National Association of Clean Water Agencies (NACWA). The award will be presented at the NACWA Winter Conference in February.

Since 1994, LOTT has employed biological nutrient removal as an added step to wastewater treatment, providing the highest level of treatment in the Puget Sound region. Now LOTT has completed a major construction project to make upgrades to the process. The Biological Process Improvements project, completed in 2023, reconfigured and consolidated the nutrient removal process, enhanced monitoring and controls, and replaced aging equipment with state-of-the-art technologies. The upgrades included energy-saving technologies and operational strategies estimated to significantly reduce overall plant electrical usage.

"Our commitment to carbon reduction while achieving the highest level of treatment on Puget Sound at monthly rates below the regional average provides a good value to our community," shared LOTT Clean Water Alliance Executive Director Matt Kennelly. "Funding like this from PSE greatly supports our efforts."

The project involved reconfiguring an existing treatment basin the size of a city block with a capacity of more than 10 million gallons. Previously, aerobic and anoxic biological processes occurred in separate basins on opposite sides of the plant, requiring extensive recycle pumping and high energy usage. The new technology enables nutrient removal to occur in a single basin. The system also features new large bubble mixing technology not previously used on the West Coast. The bubble mixer uses only 10 percent of the power of previous mixers. These innovative new treatment processes have increased efficiency and provided operational flexibility.

PSE's conservation grant offers incentives and engineering consultation for industrial projects not covered by regular commercial programs. LOTT's project resulted in an estimated energy savings of 2,458,000 kilowatt-hours per year. This is equivalent to a carbon offset of 1,143 tons and results in an annual energy cost savings of \$180,899. Thanks to the PSE incentive grant, the equipment payback period is only 13.5 years, making these investments in energy conservation more cost-effective.

The engineering firm Parametrix also played a key role in completing this project. Parametrix has worked with LOTT on several projects since the 1980s, and together, they have developed a team delivery process that has been instrumental in the success of complex projects at the treatment plant. They were skilled at leading the team through the recent process improvements project, keeping everything on track to ensure the project was completed on time and within budget. As a subconsultant to Parametrix, Cascade Energy provided the energy analysis and documentation to support LOTT's incentive application to PSE.

For more information about the project and LOTT's Budd Inlet Treatment Plant, please visit www.lottcleanwater.org.