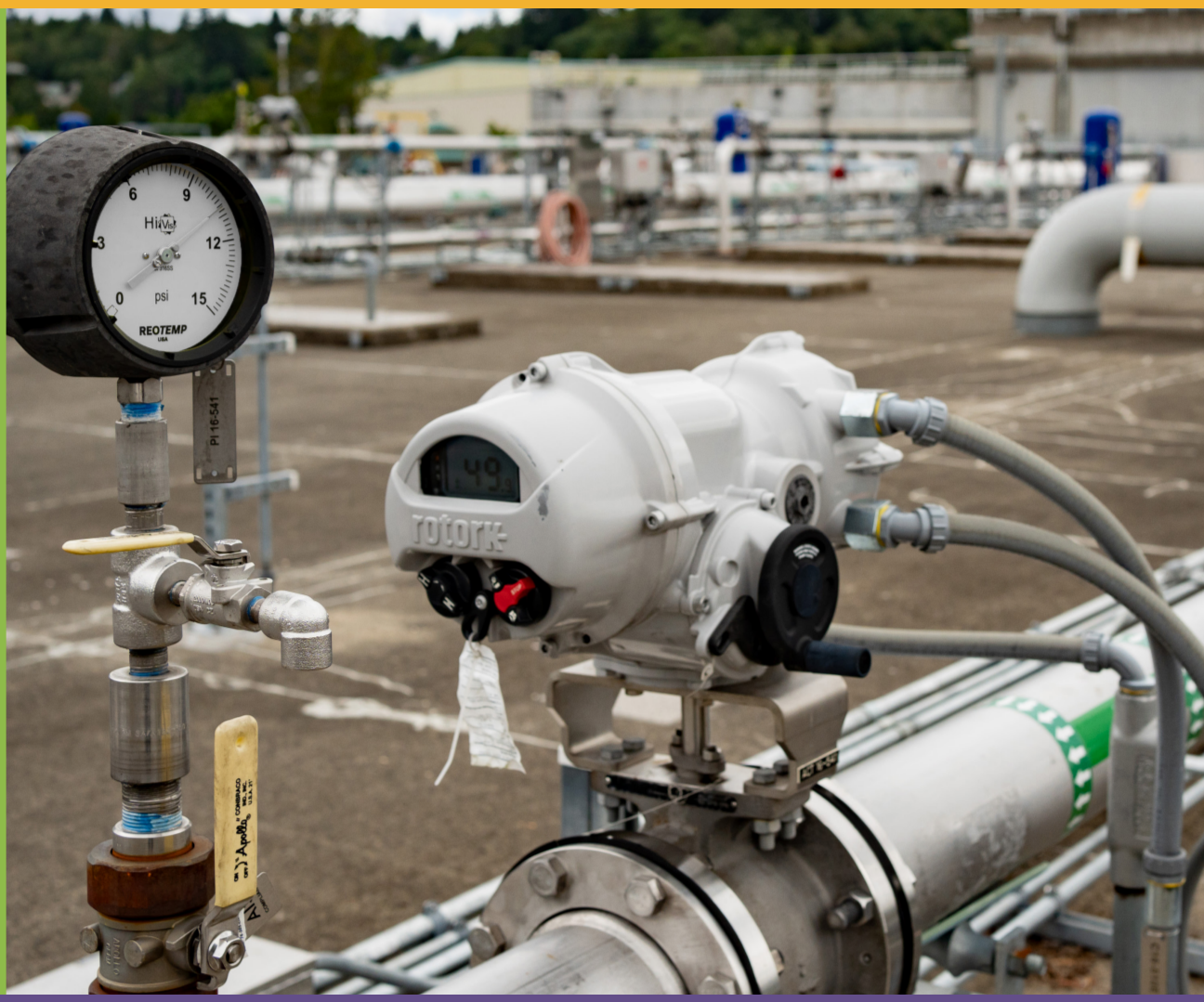


Annual Report 2024

Protect public health and the environment by cleaning water and recovering resources for our community.

LOTT Clean Water Alliance

LOTT's Performance in 2024

Each year, LOTT compares our performance with 10 key performance objectives and 20 priority activities identified in the Strategic Plan. The plan spanned the 2019-2024 planning period and can be found in full at www.lottcleanwater.org. For 2024, LOTT met nearly all performance objectives and concluded this planning cycle.

Objective 1 Achieve permit compliance

LOTT met 100% of all the water quality permit requirements for wastewater treatment at the Budd Inlet Treatment Plant. These requirements include strict discharge limits April through October for nutrients (nitrogen) and biochemical oxygen demand. LOTT is proud to report that there were no violations of these water quality permit requirements, which are measured two ways – average concentrations and total pounds discharged to Budd Inlet. LOTT also met all water quality permit requirements related to Class A reclaimed water production at the Budd Inlet Reclaimed Water Plant and the Martin Way Reclaimed Water Plant.

Permit compliance

Zero *instances where limits were exceeded for total amount of pollutant discharged to Budd Inlet*

Most other treatment plants that discharge to Puget Sound do not have strict discharge limits for nutrients. For LOTT, the permit specifies a discharge loading limit of 338,000 pounds of total inorganic nitrogen annually. In 2024, we measured a total of 145,448 pounds – only 43% of the annual load limit.

LOTT was recognized with a Silver Peak Performance award for the Martin Way Reclaimed Water Plant and Gold Peak Performance awards for the Budd Inlet Treatment Plant and Budd Inlet Reclaimed Water Plant from the National Association of Clean Water Agencies.

Permit Compliance

Budd Inlet Treatment Plant

Type	Discharge Limits*	Performance
Biochemical Oxygen Demand (BOD)	7 mg/L 671 lbs/day	3.91 mg/L 291 lbs/day
Total Suspended Solids (TSS)	30 mg/L 5,265 lbs/day	6.62 mg/L 486 lbs/day
Total Inorganic Nitrogen (TIN)	3 mg/L 288 lbs/day	2.10 mg/L 158 lbs/day
Fecal Coliform Bacteria	200/100 mL	6.75/100 mL

* Average monthly discharge limits for summer season June-September

Budd Inlet Reclaimed Water Plant

Type	Discharge Limits	Performance
Total Nitrate	10 mg/L	3.77 mg/L
Turbidity	2-5 NTU	0.36-0.88 NTU
Total Coliform Bacteria	< 23 MPN/ 100 mL	0 MPN/ 100 mL

Martin Way Reclaimed Water Plant

Type	Discharge Limits	Performance
Biochemical Oxygen Demand	20 mg/L	2 mg/L
Total Suspended Solids	30 mg/L	0.09 mg/L
Total Nitrogen	10 mg/L	2.26 mg/L
Turbidity	0.2-0.5 NTU	0.025-0.19 NTU
Total Coliform Bacteria	< 23 MPN/ 100 mL	< 0 MPN/ 100 mL

Abbreviation	Unit
mg/L	milligrams per liter
lbs/day	pounds per day
mL	milliliter
NTU	nephelometric turbidity unit
MPN	most probable number

Objective 2 — Avoid combined sewer overflows (CSOs) into Budd Inlet, with no more than one occurring annually

Combined sewer overflows
Zero
since 2009

This objective was successfully met. CSOs refer to discharge of wastewater from LOTT's emergency Fiddlehead outfall due to overloading of the treatment system during major rain events. There were no CSOs in 2024, even during high flow events. Operations reported two significant high flow events in 2024. The event in November brought 1.26 inches of rain and a peak flow rate of 48 million gallons a day. December's high flow event brought 2.17 inches of rain and a peak flow rate of 55 million gallons a day. Operations staff followed high flow protocols and successfully managed both events.

Volume of Wastewater Treated*

Budd Inlet Treatment Plant	2022	2023	2024
Daily Average Flow	12.30	11.77	12.2
Minimum Monthly Average	9.51	9.48	9.8
Maximum Monthly Average	18.64	15.18	16.5
Peak Flow	64.54	64.11	58.8

* Million gallons per day

Sanitary sewer overflows (SSOs) differ from CSOs; they are spills that occur in city collection systems occasionally throughout the year. Though these spills generally involve infrastructure that is not owned or managed by LOTT, reporting of SSOs is required under LOTT's discharge permit.

Objective 3 — Engage the community proactively through public education, outreach and involvement efforts

Education program
12,421
participants

Tours
2,986
attendees

LOTT connected with the public in a variety of ways in 2024. WET Center visitor numbers returned to pre-pandemic levels with an 8% increase from 2023, drawing over 9,000 walk-in visitors. LOTT's school program hosted 3,204 students as part of formal partnerships with our three local school districts – North Thurston Public Schools, Olympia School District and Tumwater School District.

In 2024, the Education program piloted a water resource career summer course in partnership with the Tumwater School District and City of Tumwater. The Water Resources Management Career and Technical Education course created an opportunity for high school students to spend five weeks exploring careers in wastewater, stormwater and drinking water management through hands-on learning.

Objective 4 — Manage and utilize wastewater as a source of renewable resources

Reclaimed water produced
over 163
million gallons

Biosolids generated
9,397
wet tons

Energy generated
over 2
million kilowatt hours

While the primary function of the Budd Inlet Treatment Plant is to treat and clean wastewater, it also recovers resources, including reclaimed water, biosolids and methane gas. Class B biosolids produced at the plant are trucked to eastern Washington for farmers to use as a soil amendment on fallow dryland wheat fields. The cogeneration system produces both heat energy and electricity from methane, helping to reduce energy costs at the treatment plant and support the neighboring Hands On Children's Museum.

In 2024, LOTT produced an average of 450,000 gallons of Class A reclaimed water each day. This reclaimed water was used for water features; irrigating parks, streetscapes and the Tumwater Valley Golf Course; and replenishing groundwater at LOTT's Hawks Prairie Recharge Basins and at the cities of Lacey and Olympia's Woodland Creek Groundwater Recharge Facility.

Objective 5 — Utilize a formal process to evaluate, optimize, prioritize and fund infrastructure needs

Formal process utilized **Yes**

With the completion of a multi-year planning effort, LOTT now has a long-range Capital Improvements Plan and a 2050 LOTT System Plan. These plans were developed based on a comprehensive assessment of processes and infrastructure and an evaluation of options to manage overall wastewater system capacity.

Objective 6 — Complete capital projects necessary to effectively and reliably sustain existing infrastructure, build new capacity and meet LOTT's mission

The Sludge Thickening System Improvements project was completed in 2024. This project rehabilitated the original dissolved air flotation thickeners with a new air entrainment system and replaced mechanical components inside all four tanks.

The Centrate Building Rehabilitation project is nearly complete. The tanks in this building were the original primary clarifiers that were constructed in the 1950s and converted to handle centrate in 2014. This project resurfaced the centrate tank and reconfigured equipment to allow the facility to be used for primary treatment during high flow events. It also replaced the HVAC system and roof, with the addition of solar panels that will generate 180,000 kWh annually, the equivalent of 490,463 electric car miles driven.

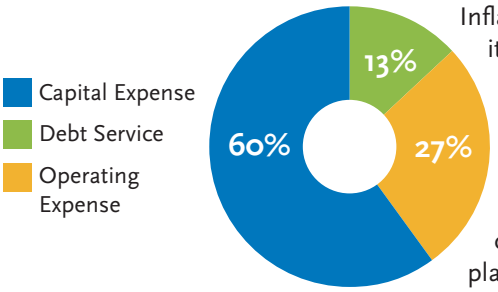
Major Capital Projects

Project	Status
Sludge Thickening System Improvements	100% Constructed
Centrate Building Rehabilitation	90% Constructed
Substation and Switchgear A/B Replacement	100% Designed
Digester System Improvements: Phase 2	100% Designed
Pumping and Emergency Power Improvements	10% Designed

The Digester System Improvements Phase 2 project design was completed, and a construction contract was awarded at the end of the year. This project will replace aged infrastructure and implement newer technology. The rehabilitated digester system is designed and will be able to meet capacity needs beyond our 2050 projections.

Objective 7 — Manage utility finances in an economical, responsible, efficient and sustainable manner

LOTT monthly rates
Below
regional average



Inflation returned to historic levels during 2024 for most items. However, insurance costs were still significantly higher than expected for the 2023-2024 biennium. We identified this issue early in 2023 and closely monitored the budget throughout 2023 and 2024. In an abundance of caution, the Board amended the operating budget to recognize the unexpected insurance increases and we implemented planned capital projects within budget. Due to the long-term nature of our rate planning and the six-year financial plan set by the Board, we were able to accommodate these unexpected costs.

Objective 8 — Achieve an annual state audit that is free of findings

LOTT's annual state audit was free of findings and has been since the utility became an independent entity in 2001. The Accountability Audit covered 2021 through 2023 and the Financial Statement Audit covered 2022 through 2023. 2022 marked our first year of reporting our financial statements using cash-basis accounting.

Objective 9 — Maintain an environment in which no more than 4% of staff voluntarily leave for similar work opportunities annually

Employee retention
2%
voluntary exits

LOTT's focus on innovation, professional development and employee wellness helps the organization remain a workplace of choice. We have maintained a very low employee turnover rate. This is in part due to our long-standing culture of excellence.

Objective 10 — Maintain a safe work environment, achieving a safety experience rating at or below the industry standard of 1.0

The Washington State Department of Labor and Industries experience rating defines the industry standard for safety. A utility's rating is calculated by comparing Workers' Compensation claims to the levels typical of our industry. LOTT's safety rating was 1.07 for 2024.

Workplace safety
1.07
experience rating

This elevated value was due to two incidents that involved time loss and also as a result of encouraging staff reporting of even minor safety incidents. We expect our experience rating to improve because of recent Safety Program enhancements. These include extensive safety trainings, completion of fall protection improvements, and safety procedure updates for the use of portable equipment in classified areas, confined space procedures and lockout/tagout. We are proud to share that 100% of staff participated in our safety program, with 80% actively engaging in our additional voluntary incentive program.

Work Plan Priorities 2019-2024

The 2019-2024 Strategic Plan includes an Internal Work Plan to guide organizational development, improve the way the utility does business and keep LOTT agile and prepared for the future. The work plan identified a list of actions related to six focus areas. The highest priority activities to be completed within the six-year planning period are included in the following table, along with a summary of their status. Additional information can be found in the 2019-2024 Strategic Plan at www.lottcleanwater.org.

Priority Activities	Status
Emergency Preparedness	
Establish a specific emergency response structure	**Done**
Assign staff to primary and back-up roles within the response structure	**Done**
Develop response plans for a variety of emergency scenarios	**Done**
Knowledge Management	
Complete succession planning for critical positions	**Done**
Establish a strategic training program for apprenticeships and operator advancement	**Done**
Complete organizational development work for the Control Systems work group	**Done**
Human Resources	
Complete a staffing and organizational assessment for the Operations work group	**Done**
Further develop LOTT's formal Human Resources program	**Done**
Continue to evaluate and optimize staffing resources	**Done**
Information Technology	
Conduct a network assessment	**Done**
Conduct a system security assessment	**Done**
Complete an IT disaster recovery plan	**Done**
Complete an assessment of LOTT's current MAX control system	**Done**
Address priority needs identified in the system assessments	**Done**

Priority Activities	Status

Capital Planning

Refine and update the new staffing model as a tool for projecting Capital Improvements Plan related staffing requirements . . . . . **Done**

Harness MainSaver data to prioritize asset management of Capital Improvements Plan projects . . . . . **Done**

Planning for Emerging Issues

Complete a master planning effort in two phases: the first to establish a long-range plan for the Budd Inlet Treatment Plant and the second to update LOTT's plan for overall system capacity . . . . . **Done**

Develop step-by-step procedures in coordination with the City of Olympia for responding to surface flooding that could convey floodwaters into the combined storm/sewer system . . . . . **Done**

Establish LOTT's baseline energy usage and greenhouse gas emissions for use in tracking future reductions . . . . . **Done**

Encourage community conversations on results of the Reclaimed Water Infiltration Study, future levels of treatment and uses of reclaimed water, and broader water management issues . . . . . **Done**

Reassess and adjust monthly service fees and connection fees for both residential and commercial customers as a result of the cost of service study findings, and propose associated updates to LOTT's Intergovernmental Agreement . . . . . **Done**

LOTT Board of Directors 2024

Carolyn Cox
City of Lacey

Dani Madrone
City of Olympia

Leatta Dahlhoff
City of Tumwater

Tye Menser
Thurston County

Your Wastewater Utility

The LOTT Clean Water Alliance is a non-profit corporation responsible for wastewater treatment in the urban areas of north Thurston County, Washington. L-O-T-T stands for the four government partners – the cities of Lacey, Olympia and Tumwater, and Thurston County – that formed and govern the regional utility.

In 2024, LOTT met nearly all our performance objectives for the year. Our dedicated staff worked hard to treat and clean the water you use every day and to plan for the future, ensuring we continue to protect water quality and public health for years to come.

139,848 people served

4.46 billion gallons of wastewater treated

163.25 million gallons of reclaimed water produced

91 staff members

3 treatment plants

23,275 laboratory tests

113 active contracts

5,593 work orders

157,826 therms recovered (biogas)

12,421 education program participants

LOTT's Mission

To protect public health and the environment by cleaning water and recovering resources for our community.

LOTT™ Clean Water Alliance

500 Adams Street NE, Olympia, WA 98501 • www.lottcleanwater.org