



# Annual Report 2020

*Cleaning and restoring water resources for our communities*

# LOTT's Performance in 2020

Each year, LOTT compares our performance with 10 key performance objectives and 20 priority activities identified in the Strategic Plan. The plan spans the 2019-2024 planning period, and can be found in full at [www.lottcleanwater.org](http://www.lottcleanwater.org). While 2020 was an unusual and challenging year, LOTT met all performance objectives and made steady progress on the six-year work plan.

## Objective 1

### Achieve permit compliance

LOTT met 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 both nitrogen and biochemical oxygen demand. LOTT is proud to report that there were no violations for these water quality permit requirements, which are measured two ways – average concentrations and total pounds discharged to Budd Inlet. Most other treatment plants that discharge to Puget Sound do not have strict limits for these pollutants.

#### Permit compliance

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

One reason for this excellent performance is that LOTT stopped accepting loads of commercial hauled waste at the Budd Inlet Treatment Plant in 2020. These loads of highly concentrated waste can disrupt the microbiology that is critical to treatment processes. By eliminating these loads, Plant Operators were better able to adjust the processes in response to other stressors, like temperature changes, to maintain effective treatment. Another reason for LOTT's high performance is our dedicated and highly skilled personnel. LOTT Operations, Maintenance, Control Systems, and Environmental Compliance staff managed to keep our facilities, equipment, and processes running properly in spite of challenges posed by the pandemic. Staffing was reduced to minimum levels as part of COVID-19 precautions at several points during the year, and supply and equipment deliveries were at times delayed. Staff rose to these challenges, upholding high performance standards and ensuring uninterrupted wastewater treatment services.

LOTT also met nearly 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. Out of thousands of required sampling, reporting, and water quality permit compliance points for 2020, LOTT's only violation was one total coliform exceedance.

## Permit Compliance

Budd Inlet Treatment Plant		
Type	Discharge Limits*	Performance
Biochemical Oxygen Demand (BOD)	7 mg/L 671 lbs/day	4.61 mg/L 308 lbs/day
Total Suspended Solids (TSS)	30 mg/L 5265 lbs/day	9.94 mg/L 676 lbs/day
Total Inorganic Nitrogen (TIN)	3 mg/L 288 lbs/day	2.19 mg/L 149 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	2.09 mg/L
Turbidity	2-5 NTU	0.39 - 0.84 NTU
Total Coliform Bacteria	< 23 MPN/ 100 mL	1.78 MPN/ 100 mL

Martin Way Reclaimed Water Plant		
Type	Discharge Limits	Performance
Biochemical Oxygen Demand	20 mg/L	2.09 mg/L
Total Suspended Solids	30 mg/L	0.06 mg/L
Total Nitrogen	10 mg/L	1.96 mg/L
Turbidity	0.2-0.5 NTU	0.05 - 0.09 NTU
Total Coliform Bacteria	< 23 MPN/ 100 mL	0.03 MPN/ 100 mL

Objective  
**2**

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

Combined sewer overflows  
**Zero**  
since 2009

CSOs refer to discharge of wastewater from LOTT's Fiddlehead emergency outfall due to overloading of the treatment system during major rain events. This objective was successfully met, even during a heavy rain storm in late December that dropped nearly 2 inches of rain in a 24-hour period and resulted in a peak flow rate of 60 million gallons per day for several hours. Staff followed high flow protocols and successfully managed the rain event by filling equalization storage basins and carefully metering the water back into the treatment process once the rains subsided.

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.

Volume of Wastewater Treated*			
<b>Budd Inlet Treatment Plant</b>			
Daily Average Flow	2018	2019	2020
Daily Average Flow	11.62	11.03	11.41
Minimum Monthly Average	8.89	9.28	9.14
Maximum Monthly Average	17.11	13.60	18.68
Peak Flow	27.94	40.59	32.72
Reclaimed Water Daily Average	0.57	0.56	0.50
<b>Martin Way Reclaimed Water Plant</b>			
Daily Average Flow	1.49	1.26	1.43
Reclaimed Water Daily Average	1.22	0.96	1.16

\* Million gallons per day

Objective  
**3**

## Engage the community proactively through public education, outreach, and involvement efforts

WET Science Center  
**3,516**  
total visitors

School program  
**1,630**  
attendees

Tours  
**214**  
attendees

As part of COVID-19 precautions, LOTT offices, the WET Science Center, and the East Bay Public Plaza were closed to the public beginning in mid-March. Our traditional metrics for WET Science Center visitors and field trip and tour attendees appear low for 2020, but our innovative education staff created new ways to engage the community. Over the summer, weekly educational activity packets were offered on a new Rediscovering Science webpage and at 14 volunteer-managed sites in our community. Two new virtual field trips were delivered to partner school district classes in the fall and winter, and activities supporting Next Generation Science Standards were made available online for students and educators. LOTT's websites and articles in ThurstonTalk were used to keep the public informed about engagement opportunities and COVID-related closures. Staff also completed a long-standing goal of developing a video tour of the Budd Inlet Treatment Plant to help fill the gap while in-person tours are on hold.



Administrative staff developed new processes to hold virtual public meetings, including monthly Board of Directors' meetings and an open house for the Biological Process Improvements project. Community engagement also included active participation in local planning efforts, such as sea level rise response, the Capitol Lake – Deschutes Estuary Long-Term Management project, and the Puget Sound Nutrient General Permit development process.



Objective

4

**Manage and utilize wastewater as a source of renewable resources**

While the primary function of the Budd Inlet Treatment Plant is to treat and clean wastewater, it also serves as a resource recovery facility. Class B Biosolids produced at the plant are trucked to eastern Washington to be used as a soil amendment on fallow dryland wheat fields. The cogeneration system produces both heat energy and electricity from methane, saving close to \$99,700 in energy costs last year. In 2020, LOTT produced an average of 1.66 million gallons of Class A Reclaimed Water each day. Reclaimed water is used for water features, streetscapes, irrigating parks and the Tumwater Valley Golf Course, and replenishing groundwater. LOTT also helped ratepayers conserve about 11,000 gallons of water a day through water conservation rebates.

Reclaimed water produced

**608**

million gallons

Biosolids generated

**7,563**

wet tons

Energy generated

**1.4**

million kilowatts

Objective

5

**Utilize a formal process to evaluate, optimize, prioritize, and fund infrastructure needs**

Through an alternative procurement process for the Biological Process Improvements project, staff worked diligently to establish and complete a rigorous contractor selection process in compliance with the Water Quality Joint Development Act (Chapter 70A.140 RCW). Notice to Proceed with construction was issued in late 2020, marking a major milestone for a key project that has been in development for nearly two decades. The project will reconfigure and optimize the biological nutrient removal process and significantly reduce plant energy use. Also in 2020, staff completed the first phase of a master planning update for the Budd Inlet Treatment Plant. The result is a comprehensive site map that outlines the general timeline and locations for future process improvements and expansions. The second phase of master planning is underway to assess options for meeting system-wide capacity needs, including where and when to expand reclaimed water production.

Formal process utilized **Yes**

Objective

6

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

Under the Asset Management program, LOTT completed the last in a series of condition inspections on its 21 miles of sewer interceptor pipelines. This comprehensive Collection System Management Program helped to identify a compromised section of the Hillside Drive interceptor that could have damaged the roadway along Henderson Boulevard had it not been quickly repaired. Demolition of the derelict building on the Washington Street property was an important step in preparing for major capital improvements within the treatment plant. The newly paved and fenced lot will be used for construction staging and contractor parking for Biological Process Improvements and other upcoming projects.

Major Capital Projects	
Project	Status
Ultraviolet Disinfection Upgrades	100% Constructed
Washington Street Property Improvements	100% Constructed
Manhole Rehabilitation	100% Constructed
Martin Way Reclaimed Water Plant Blower	100% Designed
Biological Process Improvements	Notice to Proceed Issued

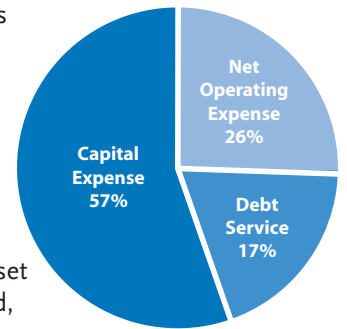


Objective  
**7**

**Manage utility finances in an economical, responsible, efficient, and sustainable manner**

**LOTT monthly rates**  
**Below**  
*regional average*

Due to the COVID-19 pandemic, Wastewater Service Charge (WSC) revenue growth has slowed. Growth in the number of Capacity Development Charge (CDC) connection fees remains modest. While the extent of these impacts is not yet clear, LOTT is taking a conservative approach to revenue forecasting and anticipates a decline in projected revenue of about \$7.5 million over the next five years. This estimate was factored into development of the 2021-2022 Budget and Capital Improvements Plan, which was approved in late 2020, along with WSC and CDC rates for the next two years. Routine cost control measures were ongoing, such as asset management, value engineering, and energy reduction efforts. To offset the pandemic's revenue impacts, additional cost control measures were implemented, including delaying several planned capital projects and staffing positions.



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. LOTT was awarded the Government Finance Officers Association Certificate of Achievement for Excellence in Financial Reporting for the 13th consecutive year for its 2019 annual financial report.

**Annual state audit**  
**Zero**  
*findings*

Objective  
**9**

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

**Employee retention**  
**Zero**  
*voluntary exits*

LOTT's focus on innovation, professional development, and employee wellness helps the organization remain a workplace of choice. During pandemic-related remote work, many staff were able to dedicate time to professional development. Industry associations offered virtual conferences at reduced rates, making these training events more cost-effective and accessible than usual. Organizational development work continued. One example is a new framework for senior Operations staff to develop expertise in specific areas of the plant. This expertise will be used to better inform related capital improvement projects and improve the quality of training for newer staff. Succession planning was also a focus, to ensure LOTT is prepared for pending retirements in critical technical and management positions.

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 & 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. The excellent rating indicates our proactive safety program is working. Protecting staff from COVID-19 was the top priority for 2020. Protocols to minimize risk of transmission were established and frequent staff communications helped keep everyone up-to-date. Precautionary measures included closing facilities to the public, limiting the number of staff members working onsite at any one time, requiring face coverings and social distancing, establishing enhanced cleaning practices, and much more. Our dedicated staff adjusted to these challenges, recognizing that protecting each other was integral to their continued ability to provide essential public services.

**Workplace safety**  
**0.7**  
*experience rating*

# 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 identifies 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](http://www.lottcleanwater.org).

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

Priority Activities	Status
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### Capital Planning

- Refine and update the new staffing model as a tool for projecting CIP related staffing requirements. . . . . **Ongoing**
- Harness MainSaver data to prioritize asset management CIP projects. . . . . **Ongoing**



### 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 . . . . . **Phase 2 Started**
- 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 . . . . . **Nearly Done**
- Establish LOTT's baseline energy usage and greenhouse gas emissions for use in tracking future reductions . . . . . **Nearly 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 . . . . . **Yet to Do**
- 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 . . . . . **Started**

## LOTT Board of Directors 2020



*Cynthia Pratt  
City of Lacey*



*Lisa Parshley  
City of Olympia*



*Pete Kmet  
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 2020, LOTT met all its performance objectives while dealing with the risks and challenges created by the COVID-19 pandemic. We are honored to provide essential public services to our communities, and wish everyone health and safety during this uncertain time.

116,250 people served

12.8 million gallons of wastewater treated per day

1.66 million gallons of reclaimed water produced per day

88 staff members

3 treatment plants

21,600 laboratory tests

83 active contracts

6,151 work orders

563 IT requests

4,207 education program participants

### LOTT's Mission

To preserve and protect public health and the environment by cleaning and restoring water resources for our communities.

