

# Thurston Climate Mitigation Collaborative Annual Retreat

Friday, September 19, 2025 | 1 – 5 PM

This meeting will be held in person at the ASHHO Cultural Community Center.

5757 Littlerock Road SW, Suite 4, Tumwater, WA 98512

## AGENDA

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1. Welcome
2. Lunch & Relationship Building Activity
3. TCMC Status and Implementation Update
4. Break
5. Community Implementation of Climate Actions
6. Final Reflection & Next Steps

## RESOURCES

### **City of Lacey Workplan:**

<https://thurstonclimatecollaborative.org/wp-content/uploads/2025/03/Lacey-2025-Climate-Work-Program.pdf>

### **City of Olympia Workplan:**

<https://thurstonclimatecollaborative.org/wp-content/uploads/2025/03/Olympia-2025-Climate-Work-Program.pdf>

### **City of Tumwater Workplan:**

<https://thurstonclimatecollaborative.org/wp-content/uploads/2025/03/Tumwater-2025-Climate-Work-Program.pdf>

### **Thurston County Workplan:**

<https://thurstonclimatecollaborative.org/wp-content/uploads/2025/03/Thurston-County-2025-Climate-Work-Program.pdf>

September 10, 2025; LOTT Clean Water Alliance

TCMC Actions update

## **B.2: Reduce energy use in existing commercial/industrial buildings**

B2.8 Performance Standard. Set energy efficiency performance standards for commercial buildings with gross floor areas smaller than 50,000 square feet.

The LOTT Clean Water Alliance was awarded a Clean Buildings Performance grant from the Department of Commerce on March 19, 2025, to separately meter the Regional Services Building (WET Center, administration and laboratory) to track electricity usage. This data will be used as a baseline to set future targets for electricity usage reductions.

## **B.5: Increase the production of local renewable energy**

B5.3 Municipal building solar. Install solar photovoltaics on all available and feasible municipal sites, including building rooftops, city hall, schools, police and fire stations, community centers, municipal water pump sites, and transit depots

LOTT added an 11,000 square foot solar array to the top of its Centrate Handling Facility during its 2024 rehabilitation. The array was commissioned on February 26, 2025, and is estimated to provide 179,412 to 195,335 kWh/yr in electricity depending on solar intensity.

## **T4: Increase the use of public transit**

T4.15 Promote transit benefits. Work with employers and transit agencies to develop ways to incentivize employee ridership.

LOTT increased its financial incentive for employees to use alternative transportation (walk, bike, bus, carpool) from \$1 to \$2.50 per one-way trip on September 1, 2024.

## **W1: Increase the efficiency of water infrastructure + wastewater**

W1.1 Municipal energy efficiency. Conduct efficiency improvements to municipal water and sewage treatment systems. Prioritize components that consume the most energy and have high GHG emissions.

From 2021-2023, the Biological Process Improvements project was under construction. It optimized the biological treatment process at LOTT by reconfiguring the existing first aeration and first anoxic basins and improving control of the nutrient removal process. The project reduced power consumption by approximately 12% by increasing the efficiency of mixing and blower technologies and reducing pumping.

## **W3: Reduce emissions from wastewater treatment operations**

W3.1 Nitrous oxide capture. Research and implement nitrous oxide mitigation strategies and strategies to avoid or reduce nitrous oxide emissions. Present findings and cost vs benefits analysis to policy makers to determine what changes should be made.

Nitrous oxide is notoriously difficult to measure and capture. LOTT is taking part in a Water Research Foundation (WRF) grant-funded research project, “Advancing the Understanding of Nitrous Oxide Emissions through Enhanced 5 Whole-Plant Monitoring and Quantification,” WRF #5251. The grant was awarded in 2024 to the consultant group Jacobs, which is working with several academics and utilities. The work is being conducted from 2025 – 2026. LOTT is one of the partner utilities for this work. LOTT has purchased, calibrated and installed nitrous oxide probes in specific areas of the aeration basins. This is the first step in understanding nitrous oxide emissions at LOTT.

## **W5: Generate energy from waste sources**

W5.2 Heat exchange. Research the feasibility of heat exchange potential of embedded energy in wastewater and/or reclaimed water and present to policy makers for consideration

Sewer heat recovery has been researched by LOTT and it may be viable for the effluent at the Budd Inlet Treatment Plant. Since LOTT’s biological process requires heat and our permit limits are so stringent, LOTT’s influent has not been deemed suitable for sewer heat recovery. Discussions about the potential for sewer heat recovery using effluent leaving the plant are ongoing.



## Implementing the Thurston Climate Mitigation Plan

October 2024-September 2025

### EDUCATION

**TCD has held workshops, tours, volunteer events and trainings on topics highlighted in the TCMP. These events share the best available science and resources with the community, empowering them to adopt climate smart practices. Overall, 252 people participated in these programs highlighted below.**

#### A1.2 Nutrient Management

Manure Feasibility Study Workshop was a listening session engaging manure producers and users to identify barriers and opportunities to broaden use of composted manure as a local nutrient source for farms and gardens.



#### A2.1 Regenerative Agriculture

TCD hosted six separate events focused on regenerative practices. Topics included hedgerow information and installation, no-till drill seeder demonstration, irrigation demonstration at Piece by Piece farm, farm tours at Helsing Junction and Oyster Bay Farm featuring regenerative practices.

Hedgerows (as seen at left) have many co-benefits including carbon sequestration and creating wildlife habitat in small spaces.

#### Other:

TCD partnered with Mason Conservation to host a *Forestry Cost Share* workshop for small forest landowners featuring programs that provide incentives to prevent development and/or land use change of Thurston County forest land.

TCD's South Sound GREEN program partnered with the Nisqually River Education Project and Chehalis Basin Education Consortium to host a Summer Institute for Teachers titled *Climate Resilience: Ecology & Community in South Puget Sound*. Teachers gained knowledge on how climate change is affecting Thurston County's ecosystems and how they can help their students become more resilient.



68 teachers attended Summer Institute in June 2025





## RESTORATION

**TCD's restoration efforts provided more carbon sequestration opportunities contributing to the "offset emissions from other activities" as identified in the TCMP.**



### **A2: Support Ag Practices that Sequester Carbon**

Between October 2024 and September 2025, TCD installed 15,050 native trees and shrubs on 27.5 total acres

4,000 native trees and shrubs were installed along the Skookumchuck River (see left)

## AGRICULTURE BEST MANAGEMENT PRACTICES

**Funding from the Sustainable Farms and Fields program, Voluntary Stewardship Program, and the Climate Commitment Act, allowed TCD to implement the following climate smart Ag BMP's throughout the county:**

### **A1.2 Nutrient Management**

- 3 Manure storage structures installed (Code 313)
- 1 Denitrifying Bioreactor installed (Code 605)
- Equipment Rental: Manure spreader was rented 6 times over 26.22 total acres



A Denitrifying Bioreactor (above) uses carbon to manage nitrogen

### **A21. Regenerative Ag**

- Irrigation Efficiencies: 2 Irrigation Water Management Plans were written; two Irrigation Pipelines were installed (Code 430)
- Grazing Management: 2 Livestock structures installed (Code 576 ); 1,400 feet of Cross Fencing installed (Code 382); Temporary Fencing (Code 64)
- Energy Conservation: Livestock Pipeline (Code 516)
- Equipment Rental: The No Till Drill was rented two times over 4 total acres
- Soil Testing Program: 204 soil and nutrient tests completed; 178 soil reports completed with recommendations (124 organic, 48 conventional, 7 both organic and conventional)