Stormwater Utility

City of Tacoma | Environmental Services

Environmental Services Commission
August 10, 2023
Overview of Programs & Services
Environmental Services Department

Stormwater Utility
ESD Strategic Plan Focus

CUSTOMERS
Partner with our community on customer-valued services to meet the diverse needs of our neighborhoods

EMPLOYEES
Foster a safe culture built on trust, conversation and equity

OPERATIONS
Operate using best practices and innovation to meet changing environmental and community needs

HEALTHY NEIGHBORHOODS + THRIVING PUGET SOUND = A BETTER TACOMA
The Stormwater Utility Team

- **Science & Engineering**: provides engineering, planning, program management and laboratory services for all 3 utilities: collection system pipes, wastewater treatment plants, pump stations, regional drainage facilities, landfill facilities, grant programs, sampling and analyses, environmental cleanup projects, and regulatory compliance as a regulated and regulating entity.

- **Operations & Maintenance**: maintains equipment, pump stations and infrastructure for the stormwater utility. Provides street sweeping and line cleaning services.

- **Business Operations**: provides operational support for Environmental Services Divisions. Key points of focus include Customer Service, Environmental Compliance, and TAGRO, as well as Administrative and procedural support.

- **Rates & Budget**: manages the financial health of all 3 utilities.
Science & Engineering

- **Capital Delivery Group** - Design and Construction Services
- **ES Laboratory Services** - Accredited for numerous analyses
- **Asset Management** - Asset Management, GIS and Application Development Services
- **Administrative Services** - Contract Management, Budget and Purchases
- **Field Operations Services** - Construction Inspection, Survey and Collection System Work
- **Environmental Programs** - Stormwater NPDES / Superfund / Sampling / Natural Resource Management / Watershed Planning
- **Special Programs** – Support Services
- **Site Development** – Provided under the Planning and Development Services, Site and Building Division
• Nine Watersheds: 70% of the city drains to marine waters of Puget Sound in particular Commencement Bay, the Lower Puyallup River (a salt-wedge estuary) and the Narrows.

• Environmental Services oversees more than 66,000 stormwater accounts.

• The stormwater system consists of approx. 562 miles of public stormwater pipe, 18,840 catch basins, 13 pump stations, and 128 detention ponds/structures.

• The system was originally designed to prevent flooding and get the rainwater from lawns/streets to the Puget Sound.

• Approximately 10% of the stormwater is treated
NPDES Stormwater Phase 1 Permit Compliance

- Next permit cycle coming up (August 2024 effective date)
- Completed UIC well registration with Ecology
- Completed Stormwater Rate Study - Ecology WQ grant
- New City-wide Vactor contract for catch basin cleaning
- APWA accreditation
- Continuing to develop and improve coordination plans across City departments
- Developed web-based Stormwater Management Program Plan (SWMP)

Stormwater Comprehensive Plan Fall 2023 - 2024

- Assist City in its efforts to address the impacts of polluted stormwater runoff on natural receiving waters, impacts of local flooding & drainage problems, & NPDES permit compliance.
- Plan will be consistent with City Stormwater Design Manual & NPDES Phase I permit.
- Evaluate City resources relating to current & future needs for NPDES compliance, including staffing, equipment, & funding.
- Incorporate Watershed Planning Tool results & create a prioritized capital facilities list
- Develop actions for anticipated sea level rise, increased storm intensities & other issues related to climate change.
- Integrate findings into City development codes, emergency management and capital planning.
84% of pipes assessed (by length):
- 3% red
- 14% yellow
- 82% green

Work currently focused on:
- Pipe assessment for cleaning, repair, replacement &/or lining
- Basins that discharge to fish-bearing streams
- Sub-basins where some of the pipes have never been cleaned
Tacoma Watershed Prioritization Tool

Ranking priority neighborhoods based on watershed goals:

**Goal 1: Clean Water**
1.1 Prioritize high pollutant concentrations
1.2 Focus on areas with no stormwater treatment

**Goal 2: Climate Resilience**
2.1 Target Urban Heat Islands

**Goal 3: Sensitive Habitat Protection**
3.1 Presence of wetlands, streams, habitat areas

**Goal 4: Health Equity**
4.1 Apply Equity Index and Livability Criteria
4.2 Roadway Condition
Stormwater Facility Projects

Upper Buckley Regional Stormwater Treatment - completed by 2024

Leach Creek Holding Basin Improvements – Summer 2023

Flett Creek & Wetlands
- Holding Basin Capacity Improvements – 2024-2025
- Annually Washington Conservation Corps clears downstream flow path through wetland

South Tacoma Channel Feasibility Study
- Ecology Grant Funded, Regional Infiltration Study
- Seeking Grant funding for Design/Build

In-lieu of Construction Program
- Developers can purchase treatment/flow control capacity from new city-built regional treatment/flow control facilities in-lieu of constructing an on-site facility
Collection System Projects

- Jefferson & Hood St Interceptor Project
  - Completed in 2023. New outfall to Foss Waterway & rerouting some of the drainage area

- System rehab projects generated by Asset Management

- Participation in Prop 3 – storm extensions (ends in January 2026)

- Special Projects also works on maintaining systems
Green Infrastructure

Water Treatment Residual Media Treatment - partnership with UWT
- Field installation & study funded by Ecology Grant

2018-to date Permeable Road Projects
- 40th St Green Infrastructure - reduced urbanized flooding & treatment for 30 acres in First Creek
- Oakland Neighborhood – 18 acres infiltrated in the Flett Creek Watershed
- Bennett Street – 3 acre treated in North Tacoma
- Puget Sound Ave - 9 acres infiltrated in the Flett Creek Watershed

2023-2025 Permeable Road Construction – Flett Creek Watershed
- Madison District – 28 acres infiltrated
- Manitou Neighborhood - 13 acres infiltrated
- Larchmont District – 28.5 acres infiltrated

Proposed Roadway Section - Pervious Pavement with Traffic Curb
Objectives

- Implement Management Plans
- Some Restoration Volunteerism in communities
- Leverage Metro Parks Partnership
- Acquire properties – making progress
- Provide some Public Education
- Partner with OEPS/Urban Forestry program to meet climate goals
- Noxious weed complaints
Green Tacoma Day (2\textsuperscript{nd} Saturday in October)

ES Nursery at Tacoma Landfill
- Salvage plants from TPU watersheds to plant & recreate diversity in city habitats
- Propagate plants from seeds & cuttings

NSM Accomplishments
- 80 acres in active restoration & maintenance
- Manage 2 WCC crews
- Big challenges are Encampments & Labor

Landscape Management Plans
- Schuster Slope
  - Community interaction
- Mason Gulch
  - Major restoration complete
  - A few locations to be done
- Salmon Beach Slope
  - Monitoring phase
  - Restoration complete
Watershed Plan

Finalize environmental baseline conditions in 2023

2024 - identify priority locations for green stormwater projects that will prepare Tacoma to respond to:

- upcoming community/neighborhood needs,
- environmental regulations,
- climate change impacts like increasing storm intensities
NPDES Driven Programs:
- Envirochallenger
- Depave
- Make a Splash Grants
- Adopt A Drain
- Pet Waste Bag Station Program
- Curb Marking

Other Community Outreach Programs:
- “If it Hits the Ground, it Hits the Sound” Campaign
- Purple Bags (trash) for Encampments
Environmental Cleanups

Foss Waterway
Water quality discharges
- 94% of trends, all decreasing
- Maintaining improvements
Long Term Maintenance Plan Finalized in 2018
- Monitoring events: 2023 (Yr 17) & 2028
- 2028 a new LTMP will be developed
- Monitoring required in perpetuity

NRDA Consent Decree
CD closed out – all monitoring complete
Surface Water Utility

We believe everything we do supports healthy neighborhoods and a thriving Puget Sound, leaving a better Tacoma for all.

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