

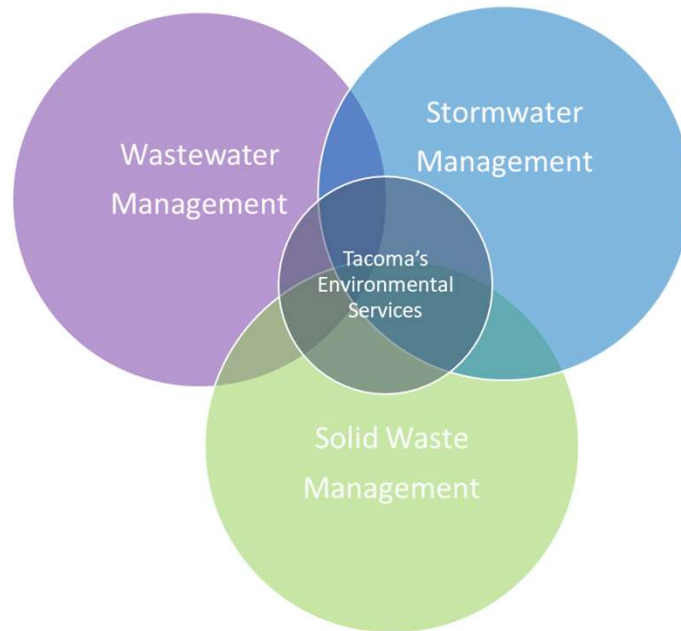
# Stormwater Utility

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.



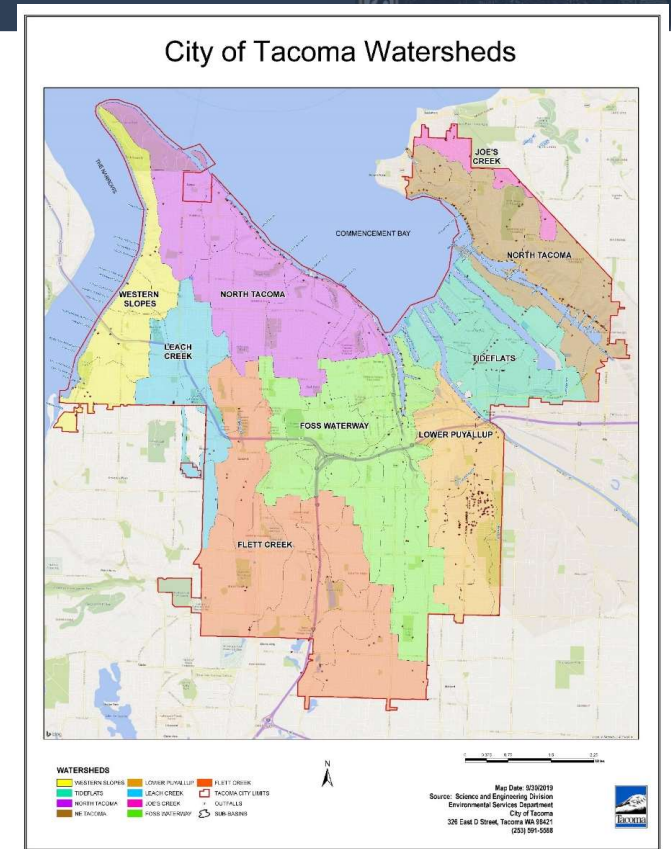
# Science & Engineering



- 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



# Stormwater Management



## 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 Vector 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.



# Asset Management

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



Pipe - red



Pipe - green





# 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

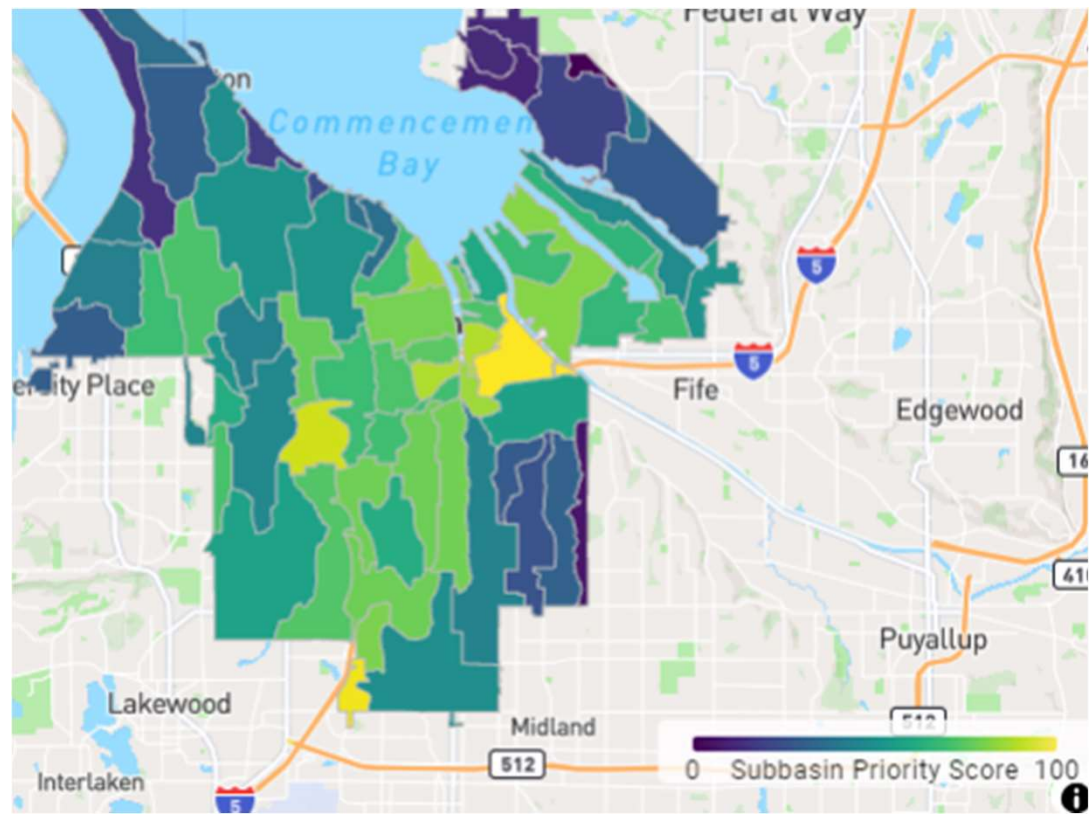
- 2.1 Target Urban Heat Islands

### 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

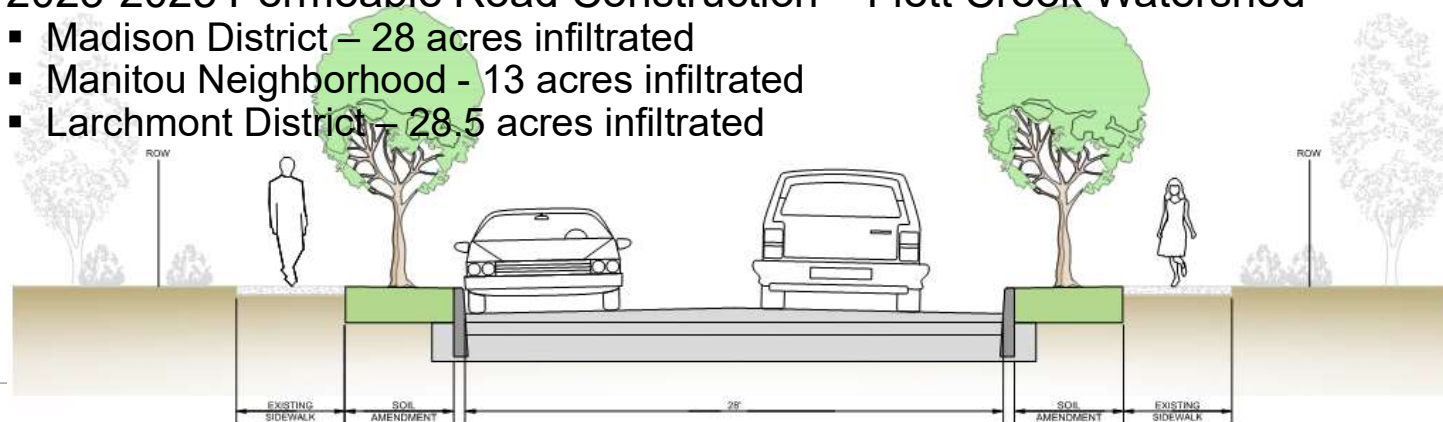
- Field installation & study funded by Ecology Grant

2018-to date Permeable Road Projects

- 40<sup>th</sup> 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 - Permeable Pavement with Traffic Curb



# Natural Systems Management

## 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





# 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

Green Tacoma Day (2<sup>nd</sup> 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



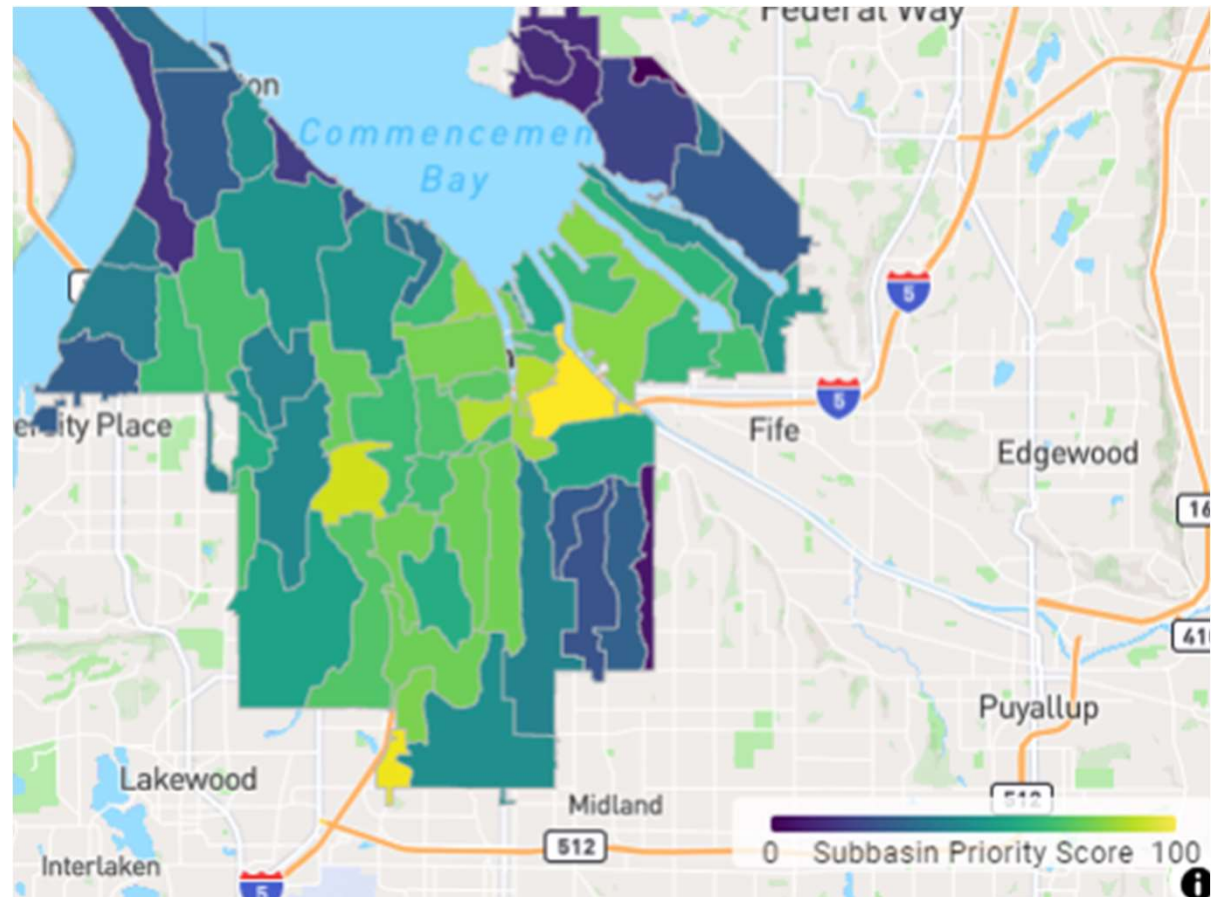
# Watershed Plan

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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

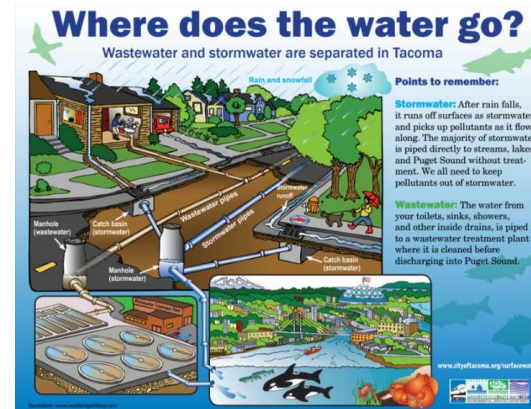


# Stormwater Education & Outreach



## 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

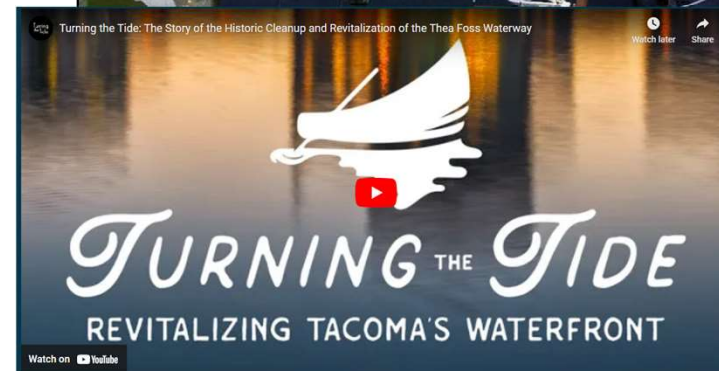
- 94% of trends, all decreasing
- Maintaining improvements

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



HEALTHY NEIGHBORHOODS  
+  
THRIVING PUGET SOUND  
=  
A BETTER TACOMA