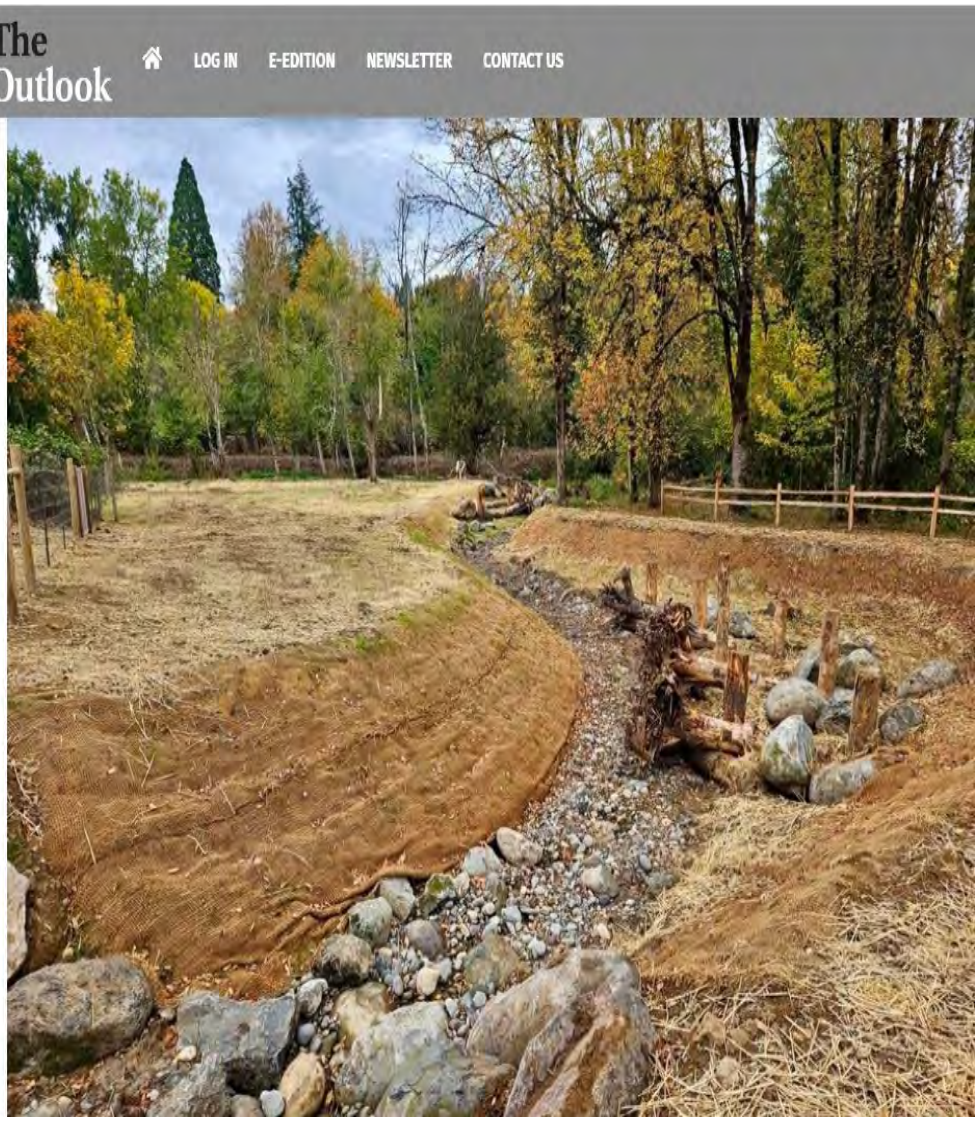

Above right: Gresham's Natural Resource Program restores Meadow Creek, a tributary to Johnson Creek that will support returning juvenile salmon in a few years. Photo credit Christopher Keizer Gresham Outlook TheOutlookOnline.com Oct 15,2024.

Above left: Grassy swale retrofit with trees in partnership with the Twelve Mile Apartment's owner that is capturing and treating stormwater from a major arterial. Photo credit City of Gresham.

Left: Juvenile rainbow trout and coho salmon found in 2014 in a fish survey just downstream from the newly restored Meadow Creek. Photo credit Multnomah County,

GRESHAM AND FAIRVIEW NPDES ANNUAL REPORT 2024 - PERMIT YEAR 29

MS4 DISCHARGE PERMIT NO. 101315 EPA REF. NO. ORS 108013

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PREFACE

This Stormwater Management Program report contains a summary of the City's activities to comply with NPDES (National Pollutant Discharge Elimination System) MS4 Permit #101315 renewed on October 1, 2021, and has four major sections. Section 1, Overview, provides the historical background, location of required elements within the report, and a description of Gresham and Co-permittee's watersheds. Section 2, Environmental Monitoring Program, is the summary of the City of Gresham's data collection efforts conducted on behalf of the Co-permittees and includes corresponding Tables and Figures and Sections 3 through 4 consist of the Stormwater Management Plan document (SWMP) implementation status reports for the City of Gresham and the City of Fairview, respectively.

SECTION 1: OVERVIEW

This section describes Gresham's portion of the permit area and changes that occurred since the first NPDES MS4 permit was issued in 1995, watershed boundaries within the permit area, and the history of the co-permittees.

I. Gresham Permit Area & Watersheds

Permit & Reporting History

In accordance with Clean Water Act (CWA) requirements, the Oregon Department of Environmental Quality (DEQ) issued a National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer (MS4) Permit on September 7, 1995, to the City of Gresham and co-permittees: the City of Fairview, Multnomah County, and the Oregon Department of Transportation. This permit (101315) expired on August 31, 2000. The Oregon Department of Transportation (ODOT) sought separation from their multiple joint NPDES MS4 permits and obtained approval from DEQ to implement their own statewide permit.

In 2010, Multnomah County separated as a co-permittee and Gresham and Fairview's Stormwater Management Plan/Programs were approved as co-permittees. The 2010 permit expired on December 29, 2015, but was administratively extended until the renewal in October 2021. In July 2022, Gresham submitted its updated Stormwater Management Program document approved by DEQ and implemented as of November 1, 2022.

Permit Boundary

The NPDES MS4 permit area for Gresham includes the incorporated areas (the city limits) of the City of Gresham except the portions of the City's stormwater system that drain to Underground Injection Control (UIC) systems. UICs drain to groundwater and are subject to a Water Pollution Control Facility (WPCF) permit. The Best Management Practices (BMPs) described within this Stormwater Management Program (SWMP) document are applied throughout the entire city urban services boundary, including the areas draining to groundwater.

Metro's urban growth boundary in the Gresham area was adjusted in 1998 and 2002 to include the areas known as Pleasant Valley, Kelley Creek Headwaters and Springwater Plan Areas. Gresham's city limits were adjusted in 2003 to exclude area that was de-annexed to the City of Troutdale within the Beaver Creek watershed. As acres are annexed into the city and develop, the City's Stormwater Management Manual standards are applied that require all new impervious areas created greater than 1,000 square feet to be treated by stormwater facilities. All new UGB permitted development is reported in the City's Annual Report Appendix A. Much of the almost 2,000 UGB acres are farmland and heavily degraded riparian buffers, so the restoration of buffers, the halting of broad

use of pesticides on farmland, and the treatment of stormwater runoff is likely to improve overall stream condition over the next twenty years.

Another change occurred related to jurisdiction of roads within the permit boundary. Effective January 1, 2006, the jurisdiction of Multnomah County's arterial roads within Gresham were transferred to Gresham, along with the UICs that manage the street runoff.

The City of Gresham area *excluding* Pleasant Valley and Springwater is about 15,171 acres or about 23.7 square miles. The area *including* the urban growth boundary of Pleasant Valley and Springwater represents almost 17,000 acres or approximately 26.5 square miles. As described in Schedule A 1. a. of the permit, "The *co-permittees are responsible for compliance within their respective jurisdictions as identified in this permit and are not responsible for compliance outside of its jurisdiction."* Therefore, the contents of the SWMP are specific to the City of Gresham and do not apply to its co-permittee, City of Fairview, and vice versa. The City assists Fairview with some compliance elements such as monitoring and education & outreach, per an intergovernmental agreement (IGA).

II. Water Protection Areas

Gresham has four main watersheds as shown in Fig 1.1 Map of Gresham MS4 Boundary with Area Watersheds: Fairview Creek, Johnson Creek, Kelly Creek, and the Columbia Slough. All these watersheds cross multiple jurisdictions, such as Fairview, Wood Village, Troutdale, Portland, and the management area of the newly named Urban Flood Safety & Water Quality District (UFSWQD), formerly Multnomah County Drainage District. Gresham communicates with its neighbors and the local watershed councils to ensure efficient outcomes and activities regarding water protection. The City's streams drain to either the Willamette River, the Columbia Slough (which drains to the Willamette) or the Sandy River. All these waterbodies are within the Columbia River basin.

Kelly Creek & Beaver Creek

The Kelly Creek watershed within Gresham encompasses about 2,597 acres (4.1 square miles) and is tributary to Beaver Creek in the Sandy River watershed. In addition to the Kelly Creek watershed, there is an additional 293 acres (0.5 square miles) of Gresham that flows directly into Beaver Creek. As described above, the urban service boundary was adjusted in 2003 to exclude a 48-acre parcel of protected Metro open space within the Beaver Creek canyon area at Mount Hood Community College. Notably, juvenile salmon have been found in this reach of Beaver Creek. Kelly Creek originates east of Gresham and enters the city limits east of SE 282nd Avenue and north of SE Dodge Park Boulevard. It flows northwest until its confluence with Burlingame Creek; its main

tributary lies northwest of NE Kane Road and NE 18th Court. The confluence of Kelly Creek and Beaver Creek is on the Mount Hood Community College campus. Most of east Gresham drains to Kelly Creek.

Johnson Creek

The entire Johnson Creek watershed encompasses 54 square miles and is a tributary of the Willamette River, which enters in the Milwaukie/Portland area. About 5,651 acres (8.6 square miles) lie within Gresham's permit area. Although Johnson Creek does not originate in Gresham, some of the creek's upper reaches flow through the City of Gresham. Presently, Johnson Creek enters the Gresham city limits at SE 252nd Avenue and SE Telford Road, flows in a northwesterly direction to Powell Boulevard and Main Avenue, then generally westward until it leaves the city limits near SE 174th Avenue. Butler Creek, a tributary of Johnson Creek in Gresham, enters Johnson Creek a few hundred yards east of SW Pleasant View Drive. The largest tributary to Johnson Creek that is within Gresham is Kelley Creek. Kelley Creek begins on the buttes in south-central Gresham and flows west through Pleasant Valley to join Johnson Creek just downstream of where it leaves Gresham. Much of south Gresham, including the downtown area, is in the Johnson Creek watershed. Notably, Johnson Creek is the longest free flowing urban stream in Multnomah County that still hosts returning oceanic salmon.

Figure 1-1. Note: This map includes both the portions of the City of Gresham that drain to surface waters subject to the NPDES MS4 permit (~12,921 acres) and the Underground Injection Control Facility areas draining to groundwater (~2,250 acres) that are covered under the City's WPCF Permit. The city runs its programs and services consistently across both areas to ensure environmental protection goals are met. The City and surrounding agencies also collaborate to create and update an interjurisdictional map that illustrates inlets, pipe, and other asset ownership so that agencies can coordinate cleanup management for spills. This map is housed as an ARC GIS (Geographic Information Systems) tool on the Multnomah County website: Urban Drainage System Map of Multnomah County (arcgis.com) (hyperlink inserted).

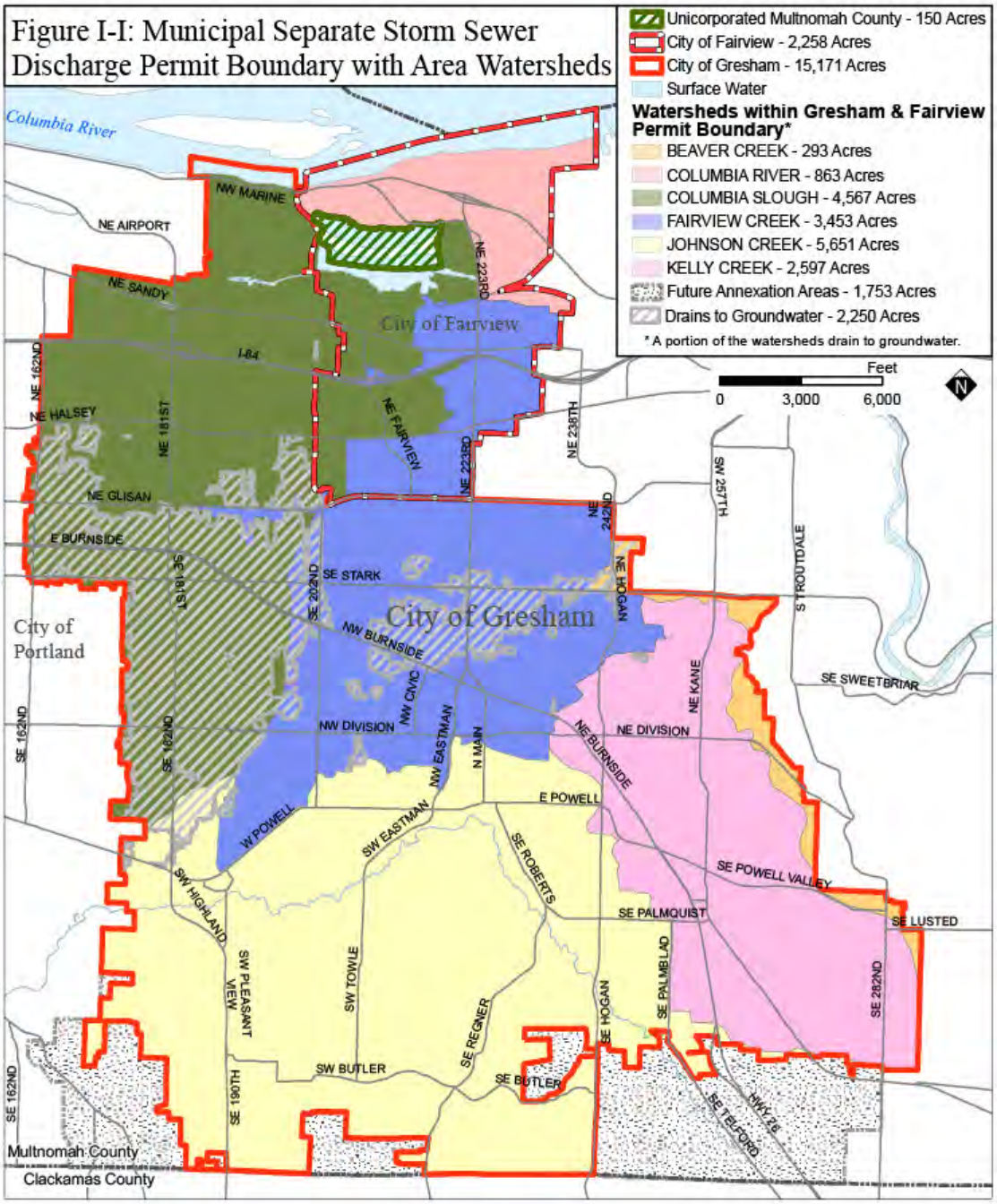


Figure I-I: Municipal Separate Storm Sewer Discharge Permit Boundary with Area Watersheds
Unicorporated Multnomah County - 150 Acres
City of Fairview - 2,258 Acres
City of Gresham - 15,171 Acres
Surface Water
Watersheds within Gresham & Fairview Permit Boundary*
BEAVER CREEK - 293 Acres
COLUMBIA RIVER - 863 Acres
COLUMBIA SLOUGH - 4,567 Acres
FAIRVIEW CREEK - 3,453 Acres
JOHNSON CREEK - 5,651 Acres
KELLY CREEK - 2,597 Acres
Future Annexation Areas - 1,753 Acres
Drains to Groundwater - 2,250 Acres
* A portion of the watersheds drain to groundwater.
Feet
0
3,000
6,000
N
Columbia River
NW MARINE
NE AIRPORT
NE SANDY
City of Fairview
I-84
NE 162ND
NE HALSEY
NE 181ST
NE GLISAN
E BURNSIDE
NE FAIRVIEW
NE 223RD
NE 238TH
NE 242ND
SW 257TH
S TROUTDALE
SE STARK
SE 181ST
SE 202ND
City of Gresham
NE HOGAN
City of Portland
NW BURNSIDE
NW CIVIC
NW DIVISION
NW EASTMAN
N MAIN
NE KANE
SE SWEETBRIAR
NE DIVISION
NE BURNSIDE
SE 162ND
E POWELL
W POWELL
SW EASTMAN
SE ROBERTS
SE POWELL VALLEY
SW HIGHLAND
SE PALMQUIST
SE LUSTED
SW PLEASANT VIEW
SW TOWLE
SE PALMBLAD
SE 282ND
SE REGNER
SE HOGAN
SW BUTLER
SE BUTLER
SE 190TH
SE TELFORD
HWY 26
Multnomah County
Clackamas County

Fairview Creek

The Fairview Creek watershed encompasses about 3,453 acres (5.4 square miles) and is a tributary to Fairview Lake. About 4.3 square miles of Fairview Creek lie within Gresham's permit areas. Fairview Creek is also recognized as the headwaters of the Columbia Slough. The creek originates within Gresham city limits near West Powell Boulevard and SE 182nd Avenue. The creek flows in a northeasterly direction though Gresham and enters the City of Fairview just west of 223rd Avenue at NE Glisan Street and remains within the City of Fairview's jurisdiction for its remaining length. The Fairview Creek watershed encompasses roughly half of the City of Fairview and the north-central part of Gresham.

Columbia Slough

The entire Columbia Slough watershed encompasses approximately 62 square miles, of which about 4,567 acres lie within the Cities of Gresham and Fairview. About 6 square miles are within Gresham's permit area and is in northwest Gresham. The headwaters of the slough begin with Fairview Creek in the City of Gresham, flowing north to Fairview Lake in the City of Fairview, then paralleling the Columbia River west from the lake to its confluence with the Willamette River. While there are several major piped stormwater outfalls within west Gresham that drain to the slough, most of west Gresham's drainage is served by drywells, also known as underground injection controls, that drain to groundwater.

Groundwater

Discharges to groundwater are not subject to the requirements of the NPDES MS4 permit. As shown in **Figure 1.0,** there are approximately 2,250 acres within the city that drain to groundwater. The City implements a groundwater protection program for industrial and commercial businesses that use and/or store hazardous chemicals, which includes the Business Inspection Program in the SWMP document. All the BMPs described within the SWMP document are applied across the city, irrespective of the above or below-ground nature of the receiving water body. The City's Water Pollution Control Facilities (WPCF) Permit was issued on December 10, 2012, and is expected to be renewed soon. Adjustments will be made to the SWMP document and Environmental Monitoring Program, as needed for compliance.

III. Total Maximum Daily Loads (TMDLs)

The City of Gresham is subject to TMDL requirements that set Wasteload Allocations (WLAs) for certain pollutants that are found in area waterbodies. Sources are evaluated for each TMDL pollutant, and the WLA is

set so that each contributing source knows the reduction needed to bring the stream back into compliance with water quality standards set to protect various beneficial uses. The Willamette River basin has TMDLs that apply to Gresham and Fairview for mercury, E. coli, and DDT (legacy pesticide in Johnson Creek for Gresham only). The Columbia Slough has TMDLs that apply to Gresham and Fairview for E. coli, DDT, dieldrin, polychlorinated biphenyls (PCBs), dioxin, lead, dissolved oxygen, chlorophyll a/pH. Parameters used as a proxy for these pollutants include total suspended solids (for DDT, dieldrin, PCBs, and dioxin), biochemical oxygen demand (for dissolved oxygen), and total phosphorus (for chlorophyll a and pH). The Sandy River basin has a TMDL for E. coli that applies to Gresham.

The SWMP document outlines the Best Management Practices (BMPs) that are conducted to help the city meet its TMDL pollutant reduction requirements. Although DEQ and the regulated communities acknowledge that it will take years or even decades to reduce pollutant levels to desired levels. This is primarily due to decades of cities developing without regard for how to best protect our waterways and not developing stormwater regulatory programs until the late 90s. Further, investments to add/upgrade pollution control facilities across an entire city could cost 100s of millions of dollars, so must be planned and spread-out to be affordable when considering all a community's needs.

IV. Description of Co-permittee Coordination Efforts

Regarding NPDES MS4 permit co-permittees, the City of Gresham was the lead permit applicant for the Gresham NPDES MS4 submittal in 1993, 1995, 2000, 2006, 2008, and 2015. However, as of the 2010 NPDES MS4 permit reissuance, Multnomah County was issued its own permit and is no longer a co-permittee of the City of Gresham or the City of Fairview. A complete overview of the permit history may be found in **Section 1.0 of the City's SWMP document.** Although Gresham is the lead permit applicant, the co-permittees are responsible for development, implementation, and tracking of their jurisdictions' BMPs as well as submitting their respective annual reports to be collated with Gresham's annual compliance report and then submitted to DEQ. Gresham's responsibility is coordination of the program, communication with DEQ, and submittal of the annual report from each co-permittee. Costs associated with the implementation of the Environmental Monitoring Plan are shared to meet watershed science & outreach objectives with Multnomah County and the City of Fairview using intergovernmental agreements (IGAs).

V. Table 1.1 Reporting Requirements Summary

1. Submit an annual report for July 1 to June 30 of the previous year's activities in paper and electronic format. When DEQ Online submission becomes available, paper will be eliminated as a requirement.
2. Post the annual reports to the City's website.
    a. Available at GreshamOregon.gov/Watershed-Documents-and-Forms
3. Implementation summary for the SWMP document metrics, tracking, and assessment of the required elements in Schedule A.3 (Public Outreach, Public Involvement, Illicit Discharge Detection & Elimination, Erosion Control, Development Stormwater Controls, Pollution Prevention/Good Housekeeping, Business Inspection, Hydromodification & Retrofit Strategy, Mercury Minimization Assessment)
4. Summary of Adaptive Management
5. Summary of proposed changes designed to reduce TMDL pollutants
6. Summary of Education & Outreach & Public Involvement activities
7. Summary of Illicit Discharge screening, inspections, enforcement, and outreach
8. A list of entities referred to DEQ for possible 1200-Z NPDES coverage, list of facilities inspected, and an overview of the results
9. A summary of stormwater program expenditures, funding sources for the reporting year, and those projected for the next fiscal year
10. A summary of monitoring program results, including submission of data into the DEQ template and any evaluations of the data conducted by the permittee or consultant.
11. Proposed modifications to the monitoring plan
12. An overview of concept planning, land use changes, and new development that occurred in the Urban Growth Boundary (UGB) expansion area
13. The details of corrective actions in Schedule A. 1. B. iii (Water Quality Standards)

VI. Legal Authority

The City has maintained its authority to implement the permit requirements since the earliest years of its program. Gresham has adequate legal authority to implement the requirements of the October 2021 renewed permit.

SECTION 2: Cities of Gresham & Fairview Environmental Monitoring Program Summary

I. History

The City of Gresham has continued to adaptively manage its Environmental Monitoring Program (EMP) document every few years based upon the addition of parameters and scientific inquiries to answer questions about green infrastructure pollution reduction performance. The City of Gresham submitted a revised EMP document to DEQ in July 2022, approved in August 2022. This report reflects the first year of monitoring under that document.

II. Table 2.1 Program Commitments (Fiscal Year 23-24, Permit Year 29)

Monitoring Type	Monitoring Location(s)	Monitoring Frequency	Pollutant Parameter Analyte(s)	Notes
Instream Monitoring	**Three (3) sites in the Columbia Slough basin:** 1. Fairview Lake @ Lake Shore Park (FVL1) 2. Fairview Creek @ mobile estates (FCI0) 3. Fairview Creek @ Stark (FCI1)	Four (4) events/year	*DO, pH, temperature, conductivity, turbidity, E. coli, hardness, BOD, TSS, Chlorophyll-a (May-Oct); nutrients (nitrate, ammonia, Total P, ortho-phosporus); Total recoverable and dissolved metals (copper, lead, and zinc); total mercury; legacy pesticides (JC only)*	The City of Portland collects data on the entire Columbia Slough, but based on their probabilistic sampling design, locations monitored any permit year will be reported to DEQ by Portland. Fairview Lake and lower Fairview Creek (FCI0) sites are monitored via IGA with City of Fairview.
Instream Monitoring	**At least two (2) sites in the Sandy river basin:** 1. Kelly Creek @ Mt. Hood Community College Pond (KCI1) 2. Kelly Creek downstream of Detention Pond (KCI3)	Four (4) events/year	DO, pH, temperature, conductivity, turbidity, E. coli, hardness, BOD, TSS, Chlorophyll-a (May-Oct); nutrients (nitrate, ammonia, Total P, ortho-phosporus); Total recoverable and dissolved metals (copper, lead and zinc); total	Beaver Creek sites are monitored via an IGA with Multnomah County to meet their permit requirements.

Monitoring Type	Monitoring Location(s)	Monitoring Frequency	Pollutant Parameter Analyte(s)	Notes
	3. Kelly Creek upstream of Detention Pond (KCI4) 4. Beaver Creek at canyon footbridge (BCI1) 5. Beaver Creek at Division St. triangle (BCI2)		mercury; legacy pesticides (JC only)	
Instream Monitoring	***Four (4) sites in the Johnson Creek subbasin:*** 1. Johnson Creek @ Jenne Rd (JCI1) 2. Johnson Creek @ Palmblad (JCI2) 3. Kelley Creek @ Pleasant Valley Grange (KI1) 4. Kelley Creek @ Rodlun Rd (KI2)	Four (4) events/year	*DO, pH, temperature, conductivity, turbidity, E. coli, hardness, BOD, TSS, Chlorophyll-a (May-Oct); nutrients (nitrate, ammonia, Total P, ortho-phosporus); Total recoverable and dissolved metals (copper, lead, and zinc); total mercury; legacy pesticides (JC only)*	

Monitoring Type	Monitoring Location(s)	Monitoring Frequency	Pollutant Parameter Analyte(s)	Notes
Continuous Instream Monitoring	*Two (2) continuous monitoring stations:* 1. Johnson Creek @ Regner 2. Fairview Creek @ Glisan*	*Ongoing* 15-minute interval	*Temperature and flow*	Flow data collected by USGS through Joint Funding Agreement #3225. *Fairview gauge does not collect temperature. Gresham periodically collects summer temperatures at Glisan location and other locations throughout the city.
Stormwater Monitoring - Storm Event	*Ten (10) sites.* Monitored 10 random and spatially balanced stormwater locations.	*One (1) event/year* Monitored 1 event at each location (totaling 10)	*DO, pH, temperature, conductivity, turbidity, E. coli, hardness, BOD, TSS; nutrients (nitrate, ammonia, Total P, ortho-phosphorus); Total recoverable and dissolved copper, lead, and zinc; total mercury, pesticides*	The City's approved monitoring plan results in 10 data points.(5 fixed sites and 5 randomly selected sites).
Macro-Invertebrate Monitoring	*One (1) site in the Columbia Slough basin:* 1. Fairview Creek @ mobile estates (FCI0) 2. Fairview Creek @ Stark (FCI1)	One (1) event/year during summer/low flow conditions	*Macroinvertebrates*	Collected during the same week as the summer instream water quality data collection.

Monitoring Type	Monitoring Location(s)	Monitoring Frequency	Pollutant Parameter Analyte(s)	Notes
	One (1) site in the Sandy River basin: 1. Kelly Creek @ Mt. Hood Community College Pond (KCI1) 2. Kelly Creek downstream of Detention Pond (KCI3) 3. Kelly Creek upstream of Detention Pond (KCI3) 4. Beaver Creek at Canyon Footbridge (BCI1) 5. Beaver Creek at Division St. Triangle (BCI2)			Beaver Creek sites are collected through an IGA with Multnomah County to meet their permit requirements. Additional sites are collected as part of the Johnson Creek Inter-Jurisdictional Committee and the Beaver Creek Conservation Partnership.
	Two (2) sites in the Johnson Creek subbasin: 1. Johnson Creek @ Jenne Rd (JCI1) 2. Johnson Creek @ Palmblad (JCI2) 3. Kelley Creek @ Pleasant Valley Grange (KI1) 4. Kelley Creek @ Rodlun Rd (KI2)			

Monitoring Type	Monitoring Location(s)	Monitoring Frequency	Pollutant Parameter Analyte(s)	Notes
Structural BMP Monitoring	*Two (2) sites - inlet and outlet:* 1. Panza Constructed Wetland 2. Madeline Place Constructed Wetland 3. Kane Rd. pervious pavement	*One (1) event/year* Monitored 1 event at 3 facilities	*DO, pH, temperature, conductivity, turbidity, E. coli, hardness, BOD, TSS; nutrients (nitrate, ammonia, Total P, ortho-phosphorus); Total recoverable and dissolved metals (copper, lead, and zinc); total mercury*	
Special Projects	*Two (2) sites:* 1. CSWQ Facility 2. Turf sports field	*One (1) event/year*	*Sampled for 6PPD-quinone in PY29/*	

III. Monitoring Program Summary

The raw data collected from July 1, 2023 through June 30, 2024 (Permit Year 29) are summarized below and have been submitted through DEQ's Ambient Water Quality Management System (AWQMS) database. The instream data have been compared to the relevant DEQ water quality criteria, and values that do not meet the water quality standards are discussed below in Section A Instream Monitoring. However, data from Stormwater (wet weather sampling) and Structural BMP (green infrastructure) Monitoring have not been compared to water quality standards because of the mixing that occurs in-stream. Sampling locations are shown in **Figures 2-1 through 2-6.**

A. Instream Monitoring

Twelve long-term instream monitoring sites were sampled in July, November, February, and May during the reporting term at locations shown in **Figure 2.1**. The results were compared to the relevant water quality standards shown in **Table 2.1**. The November sampling event had 0.8" of rainfall in the previous 24 hours and the

February sample had 0.52”in the previous 24 hours. This means there was more stormwater runoff in the stream as compared to the two events sampled during dry days.

Instream monitoring results were typically within expected ranges. There were some exceedances of water quality standards for temperature, pH, total phosphorous, chlorophyll-a, mercury, *E. coli*, and DDT, which are discussed below. Several related water quality standards were exceeded in Fairview Lake, and they are discussed separately. The rest of the sites are in flowing streams, and exceedances are discussed together and listed by water quality parameter.

Figure 2.1 Long-Term Instream Monitoring Locations

Note: BCI1 and BCI2 are monitoring for Multnomah County via IGA.

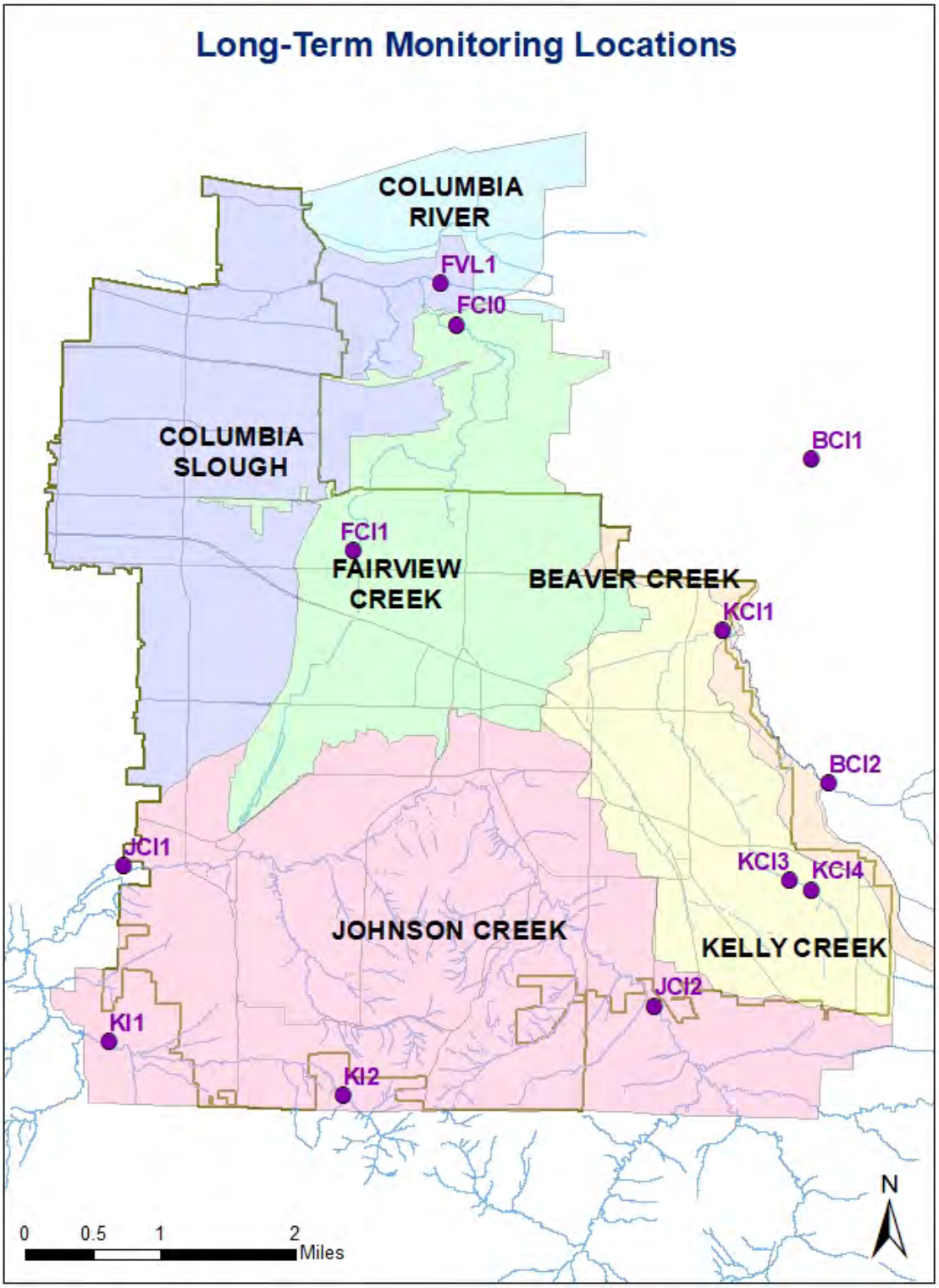


Table 2.1 Relevant Instream Water Quality Standards

TMDL Water Quality Constituents		
Water Body	**Constituent**	**Water Quality Criteria**
Fairview Creek	Temperature	No designated salmon and steelhead spawning use. Rearing: <18 *C
	E. coli	<406 organisms/100mL (OAR 340-41)
	Phosphorus	0.1549 mg/L (Columbia Slough 1998 TMDL)
	Mercury	0.14 ng/L
Johnson Creek, including Kelley Creek tributary	Temperature	Spawning: <13 *C (55.4 *F) - October 15 to May 15. Rearing: 18 *C.
	E. coli	406 organisms/100mL (OAR 340-41)
	PCBs	Acute 2.0 ug/L, Chronic 0.014 ug/L (per Table 30)
	PAHs	Not included in Table 40 or 41. Table 30 only lists saltwater acute level of 300 ug/L
	Dieldrin	Acute <0.24 ug/L, Chronic <0.056 ug/L (per Table 30)
	DDT	Acute <1.1 ug/L, Chronic <0.001 ug/L (per Table 30)
	Mercury	<0.14 ng/L
Kelly Creek	Temperature	Spawning: <13 *C (55.4 *F) - October 15 to May 15. Rearing: <18 *C.
	E. coli	406 organisms/100mL (OAR 340-41)
Columbia Slough	Temperature	No designated salmon and steelhead spawning use. Rearing: 18 degrees Celsius
	E. coli	406 organisms/100mL (OAR 340-41)
	pH	between pH 6.5 - 8.5
	DO	No spawning; 6.5 mg/L: cool-water aquatic life (avg); 4.0 mg/L: absolute minimum (Columbia Slough TMDL); 5.5 mg/L: warm-water aquatic life
	Phosphorus	0.1549 mg/L (Columbia Slough 1998 TMDL)
	Chlorophyll-*a*	15 mg/m^3
	Pb	Based on hardness. Table 30 has formula

	PCBs	Acute 2.0 ug/L, Chronic 0.014 ug/L (per Table 30)
	Dieldrin	Acute 0.24 ug/L, Chronic 0.056 ug/L (per Table 30)
	DDT/DDE	Acute 1.1 ug/L, Chronic 0.001 ug/L (per Table 30)
	Dioxins	Fish tissue 0.07 ng/kg (Columbia Slough 1998 TMDL)
	Mercury	0.14 ng/L
Non-TMDL WQ Constituents from OAR 340-41 Table 30		
	Constituent	**Criteria**
	Metals	Based on hardness, formula in Table 30
	pH	Between 6.5-8.5: same for all watersheds in the permit area (OAR 340-41)
	DO	Not evaluated since the criteria are for average values. Cold water aquatic life; spawning: >11 mg/L; nonspawning >8.0 mg/L

Fairview Lake

During the July sampling event Fairview Lake exceeded water quality standards for pH (standard: 6.5-8.5, value: 9.4), temperature (standard: <18*C, value: 26.9 *C), chlorophyll-a (standard: < 15 mg/m^3, value: 60.1 mg/m^3), and total phosphorus (standard: <154.9 ug/L, value: 235 ug/L). It also exceeded the temperature standard in May (19.2 *C), and all samples were above the total mercury target (target <0.14 ng/L, values: 0.99-2.4 ng/L).

This large, shallow lake is ringed by houses with lawns and has little shade. These conditions lead to the lake being warm in the summer with high nutrient levels, leading to algal blooms and high pH values. Gresham and Fairview participate in the Regional River Starts Here campaign which serves Multnomah County residents with lawn care tips for healthy water.

Stream temperature

Six out of eleven stream sites exceeded the water quality standard of <18 ºC for fish rearing during the July sampling event, with temperatures ranging from 19.0-21.3 ºC. There is further discussion of temperature exceedances in the continuous monitoring section below. The City continues to concentrate efforts on reducing stream temperatures including riparian restoration, consideration of future in-channel pond projects, and protection and enhancement of riparian buffers and of wetlands adjacent to streams, as access and cooperation allows.

Stream pH and Dissolved Oxygen

Dissolved oxygen ranged from 5.25-12.42 mg/L. These grab samples are not typically compared to the water quality standard for dissolved oxygen because the standard is developed for average values over time. pH values ranged from 6.44-7.92, with one sample being below the water quality standard range of 6.5-8.5. The low pH sample was in Fairview Creek at FCI1 in the May event. It was noted that the creek was dry ~0.25 miles upstream of this site, and that the flow in this site seemed to be entirely groundwater and/or hyporheic flow during the event, which may account for the low pH value.

Metals

No samples exceeded the standards for zinc or copper. All samples exceeded the instream water quality target established by the 2019 TMDL of 0.14 ng/L for total mercury with values ranging 0.46-7.89 ng/L. The major sources of mercury in general are atmospheric deposition from natural sources (ocean and volcanoes) and anthropogenic sources like industrial emissions, coal combustion and mining. The primary contribution of mercury in Gresham streams is understood to be atmospheric deposition carried to the streams in runoff. Mercury is highly correlated with total suspended solids due to its affinity with organic matter. The City continues to prioritize stormwater treatment BMPs which remove suspended sediment and implement our erosion control program.

E. Coli Bacteria

Seven sites exceeded the *E. coli* water quality standard of 406 MPN/100 ml at some point during the year, with about half of the exceedances during events with stormwater runoff. No samples were above our action level of 5,000 MPN/100 ml and all exceedances were within typical ranges (460-3,100 MPN/100 ml). Past follow-up monitoring indicates that they are likely due to wildlife use and/or biofilms. The City continues to implement doggie bag stations across its parks to reinforce the norm of picking up after your pet.

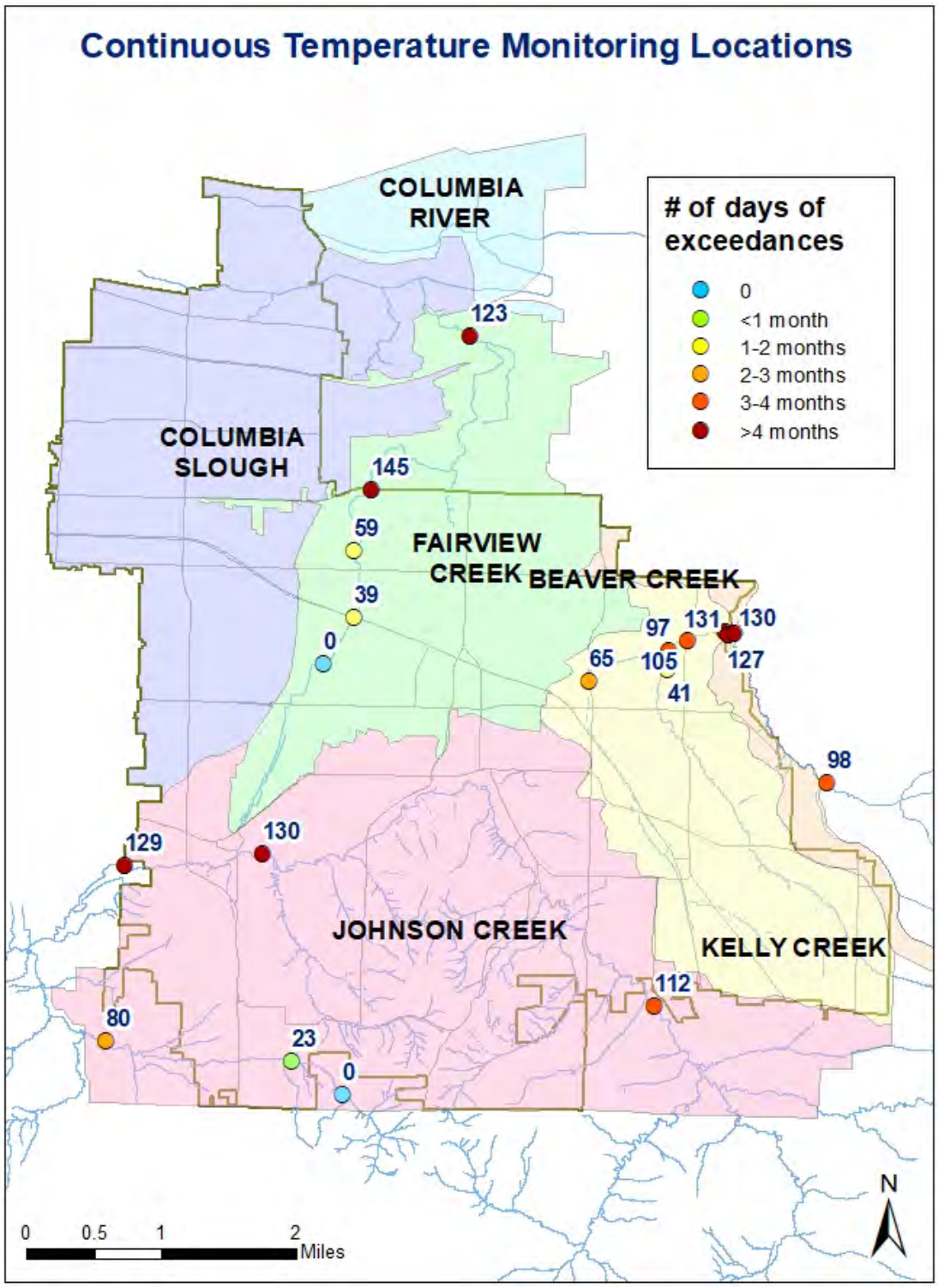
DDT Legacy Pesticide

The two sites on Johnson Creek were sampled for DDT and its degradates with no sample exceeding the acute water quality criterion of 1.1 ug/L. However, the method detection limits of 1.0-10 ng/L were often above the chronic water quality criterion of 1.0 ng/L. The City continues to prioritize stormwater treatment BMPs which remove suspended sediment and implement our erosion control program.

B. Continuous Temperature Instream Monitoring

Continuous hourly temperature was measured at 20 sites from May – October 2023 by the City (Figure 2.2). A summary of the maximum values and exceedances is found below in Table 2.2. Similar to past years, most sites exceeded the temperature standard of 18 *C for the 7-day average of the daily maximum (7DADM) at some point during the summer.

Figure 2.2 Continuous Instream Monitoring Site Locations



Only two sites never exceeded the standard: the forested headwaters of Kelley Creek at Rodlun Road (KI2), and a groundwater-fed section of Fairview Creek (FCI1).

Several sites exceeded the temperature standard for more than three months: all sites on Fairview Creek downstream of Fujitsu Ponds, all sites on Beaver Creek, all sites on Kelly Creek downstream of Gresham Golf Course, and all sites on the mainstem of Johnson Creek. The hottest sites were generally downstream of large inline ponds. The City is aware of the impact in-line ponds can have on temperature – Fujitsu Pond is a highly ranked Natural Resource CIP (Capital Improvement Program) project and will be implemented when funding is available, and the City is also studying ways to reduce temperature loading from public and private ponds on Butler and Hogan Creeks.

Table 2.2 Summary of Temperature Exceedances by Location

Sites with no exceedances are shown in **blue** text and those with more than three months of exceedances are shown in red text. Within the Location column, "US" means upstream, and "DS" means downstream.

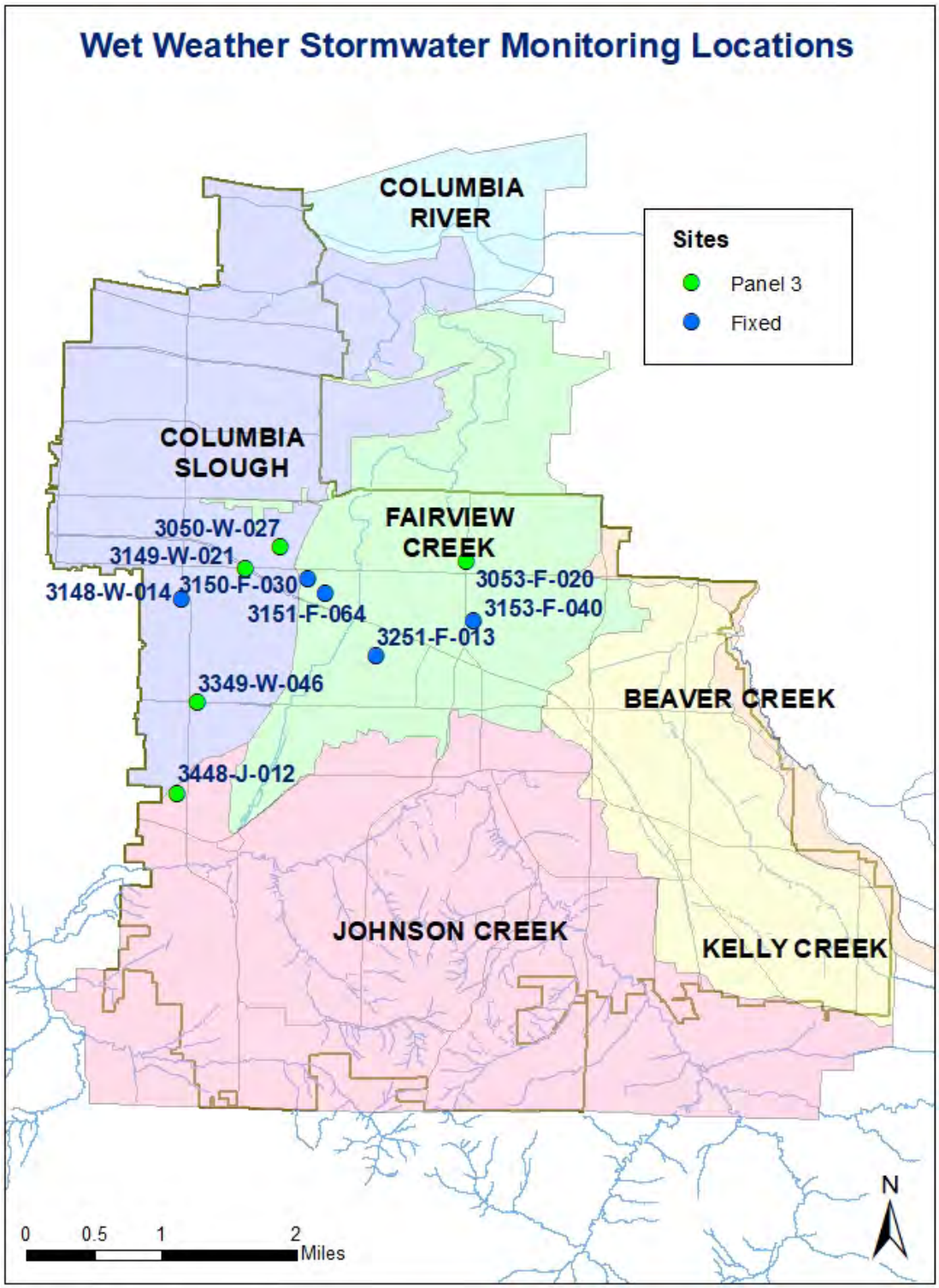
Watershed	Creek	Location	Max 7DADM temp (*C)	Exceedances (# of days)
Beaver Creek	Beaver Creek	Division/Troutdale Roads	21.3	98
Beaver Creek	Beaver Creek	US of Kelly Creek	25.0	127
Beaver Creek	Beaver Creek	DS of Kelly Creek	26.4	131
Beaver Creek	Beaver Creek	Glen Otto park	24.5	127
Beaver Creek	Burlingame Creek	Culvert at Hogan Road	19.6	65
Beaver Creek	Burlingame Creek	Gresham Golf Course	22.2	97
Beaver Creek	Kelly Creek	US of Gresham Golf Course	20.6	41
Beaver Creek	Kelly Creek	US of dam on MHCC campus	23.0	105
Beaver Creek	Kelly Creek	DS of dam on MHCC campus	24.5	130
Fairview Creek	Fairview Creek	Birdsdale Road	17.3	0
Fairview Creek	Fairview Creek	Burnside Road	19.7	39
Fairview Creek	Fairview Creek	Stark Street	19.3	59
Fairview Creek	Fairview Creek	Glisan Road	28.6	145
Fairview Creek	Fairview Creek	Mouth near Fairview Lake	22.6	123
Johnson Creek	Johnson Creek	Palmblad Road	23.8	112
Johnson Creek	Johnson Creek	Powell Loop	24.6	130

Johnson Creek	Johnson Creek	Jenne Road	25.5	129
Johnson Creek	Kelley Creek	Rodlun Road	17.5	0
Johnson Creek	Kelley Creek	US of 190th at forest edge	20.0	23
Johnson Creek	Kelley Creek	Pleasant Valley Grange	21.5	80

C. Stormwater Monitoring

Wet Weather Stormwater sampling was conducted at ten sites with small drainages to assess land use (Figure 2-3). Five of these sites are long-terms sites (Fixed) which are sampled every year and five are rotating sites (Panel 3) which are selected based on watershed and stratified for traffic volume such that half of the samples drain roads with >1,000 vehicle trips per day.

Figure 2-3 Stormwater Monitoring Site Locations



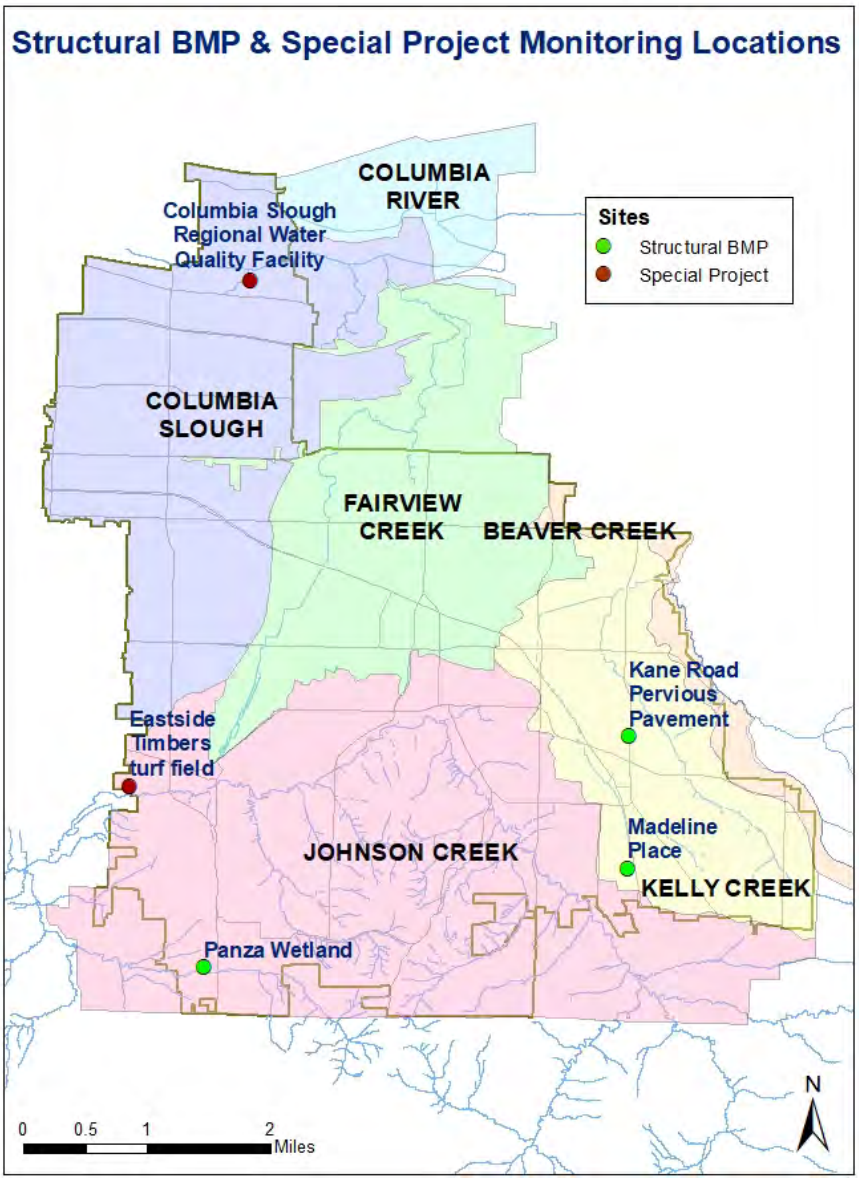
Similar to previous years, stormwater monitoring data revealed that higher traffic sites (>1,000 vehicle trips per day) have higher pollutant concentrations for many pollutants in comparison to residential streets (<1,000 vehicle

trips per day). This was especially true for turbidity, *E. coli*, nitrogen, antimony, lead, and PAHs. Also similar to previous years, relatively elevated levels of several heavy metals, including lead and zinc, were found at some sites. Cars are known to be major sources of these metals.

D. Structural Stormwater Facility Monitoring

Storm samples were collected at structural stormwater BMP facilities in addition to special project sampling described below.

Figure 2-4 Stormwater Structural Facility Monitoring Sites



Structural Stormwater Facilities

Storm samples were collected at the inlets and outlets of two water quality facilities (Panza and Madeline Place) and one pervious pavement installation (Kane Road). The two water quality facilities are constructed wetlands in new developments and the monitoring aimed to inform stormwater management requirements for upcoming developments. The facilities are located in the quickly growing Pleasant Valley and Springwater areas. Both facilities are medium-sized neighborhood detention ponds with water quality aspects which receive runoff from several dozen homes and the corresponding neighborhood streets. The Madeline Place pond was constructed in 2019 and follows Gresham's current design standards for neighborhood detention ponds. The Panza pond was constructed in 2022 as a trial of a submerged gravel wetland where there is a layer of gravel with an underdrain beneath the vegetated surface. The gravel layer is designed to always be inundated. In practice, the pond itself always holds a few inches of water because of shallow groundwater in this area.

The outflow of the Madeline Place pond generally had low concentrations of pollutants of concern, similar to other neighborhood ponds measured in Gresham. However, pollutant removal percentages were generally low to moderate because inlet concentrations were also low, indicating that this low-traffic neighborhood generally has low pollutant loads in its runoff.

This is the second year that the Panza pond was monitored. In the first year, results were similar to the first year of many bioretention facilities, where pollutant removal was moderate for TSS, total phase metals, and PAHs, but there was also some export of nutrients. In the second year of sampling the Panza pond had moderate to high removal of most pollutants of concern and no export. Of particular note, it demonstrated removal of dissolved phase metals at a higher rate than any other facility we have monitored. This is likely because the stormwater is filtering through soil before it enters the underdrain. This is encouraging, and we will continue to monitor this facility, as well as one additional test facility of this type. However, maintenance of this type of facility is a concern because clogging may occur due to the nature of the underground perforated pipes.

The Kane Road pervious pavement installation was sampled for the fifth time since 2016 and included the full suite of parameters listed in Table 2.1. The results were similar to past years with impressive reductions seen with both full-depth porous pavement and a porous overlay. Reductions were particularly high for TSS, total phase metals, total N and P, PAHs, and the tire chemical 6PPD-quinone (6PPD-q). The results were recently published in the journal Sustainability: https://www.mdpi.com/2071-1050/16/17/7506. Gresham continues to work to promote the use of pervious pavement where appropriate to increase water quality.

Special Projects

The Monitoring Plan adopted in August 2022 allowed for monitoring up to two events for special projects instead of structural BMPs. The sampling for Special Projects in PY29 focused on the tire chemical 6PPD-quinone, which is derived from tire wear particles. Samples were taken during storms at a turf soccer field with a shredded tire base and at the Columbia Slough Regional Water Quality Facility.

The samples at the crumb rubber turf field were collected at the outlet of an underdrain during a storm. It was the second year that this location was sampled. All samples had measurable 6PPD-q, but they were generally lower than in runoff from a typical road and below the LC_{50} for coho of 95 ng/L (samples were 7.6-10.4 ng/L). This points to the importance of continued study and the likely treatment of runoff from artificial turf fields containing crumb rubber, while continuing to focus on large roads as the priority for 6PPD-q reduction.

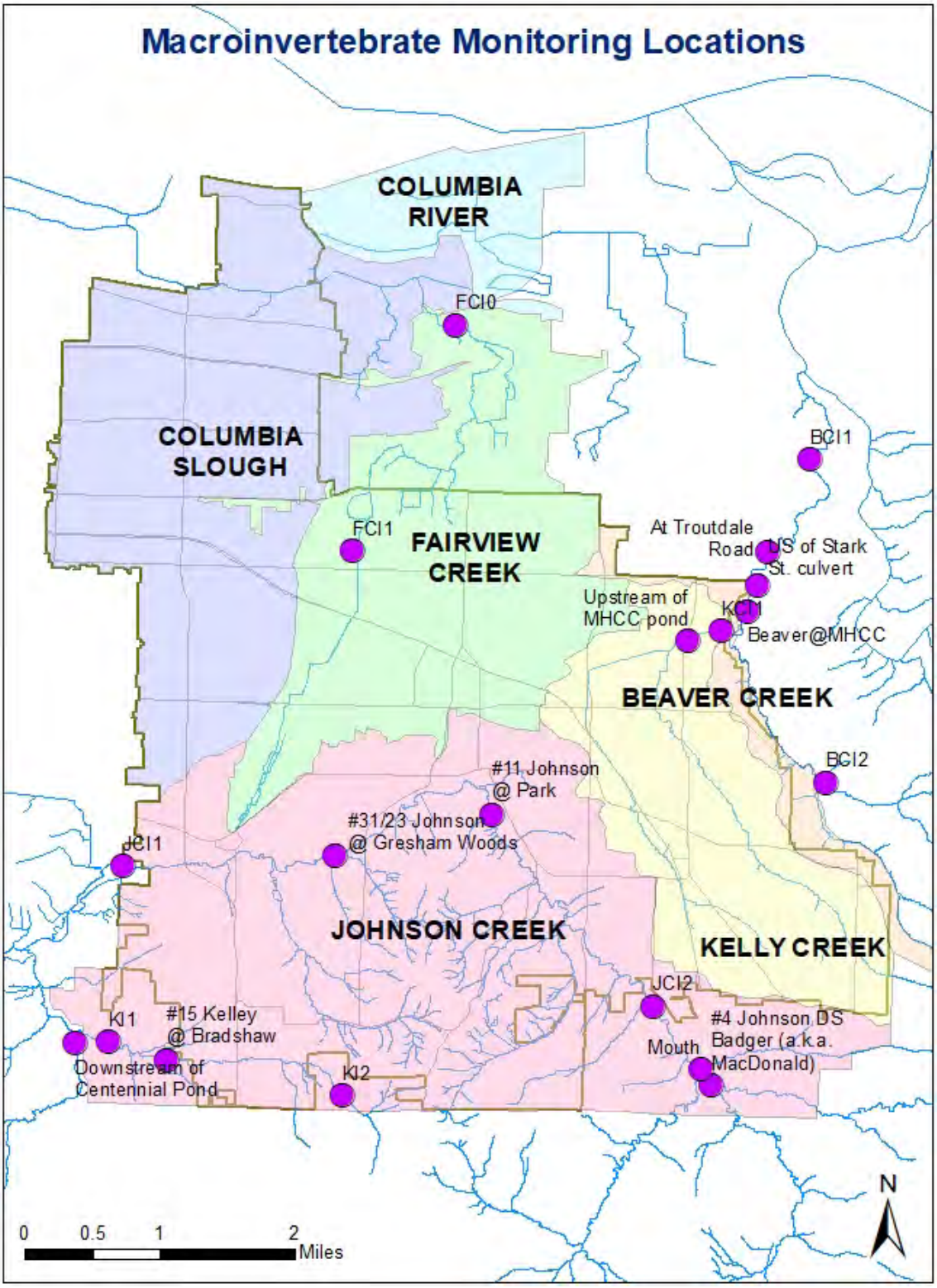
The samples at the Columbia Slough Regional Water Quality Facility indicated that the facility substantially reduced 6PPD-q by ~50%, often to levels which may be protective of coho. This facility is a retrofit which drains ~1,000 acres of largely industrial and commercial land use and treats it through a 9-acre constructed wetland with active beaver dams. The inlet samples were all above the coho LC_{50} of 95 ng/L (136-143 ng/L), while the outlet samples were near or below that level (42.2-98.3 ng/L). The results are encouraging and consistent with results of other green infrastructure, indicating that there is the ability to reduce the concentration of this chemical.

E. Macroinvertebrate Sampling

Macroinvertebrate samples were collected in July and August at long-term stream monitoring sites as well as several locations of interest throughout the Johnson Creek and Beaver Creek watersheds in conjunction with the Johnson Creek Inter-Jurisdictional Committee and the Beaver Creek Conservation Partnership (Figure 2.5). Sites BCI1 and BCI2 were monitored for Multnomah County through an IGA.

Previously, macroinvertebrate results were compared across sites and years using a Benthic-Index of Biotic Integrity (B-IBI). Since 2020, data has been received in a format which is compatible for upload to DEQ's AWQMS software system and is not easily indexed with the B-IBI. Therefore, Gresham is contracting with a professional aquatic entomologist in PY30 to categorize and assess macroinvertebrate data across sites and years. Previous assessments had generally shown slow improvement in community diversity over time.

Figure 2-5 Macroinvertebrate Monitoring Locations



IV. Illicit Discharge Detection & Elimination program

A. Dry Weather Screening Summary

A total of 30 outfalls were assessed during dry weather screening monitoring: 8 long-term high priority sites and 22 rotating sites. Flow was present at 11 sites, and the screening parameter results for those sites are presented below in Table 2.3. The only parameters which exceeded action levels were turbidity (three sites) and ammonia (one of those sites). Investigations of the drainage areas did not reveal any illicit discharges. These sites have had comparable results each year of the screening. They are known to drain areas with old landfills: Main City Park and Chastain Creek. The latter of these sites is currently in the planning stages of a project to remove the pipe from the landfill so that cleaner water can pass downstream.

The City's illicit discharge enforcement response procedures are described in Section 7 of the Environmental Monitoring Plan on the City's website at: www.greshamoregon.gov/watershed

Figure 2-6 Dry Weather Screening Monitoring Locations

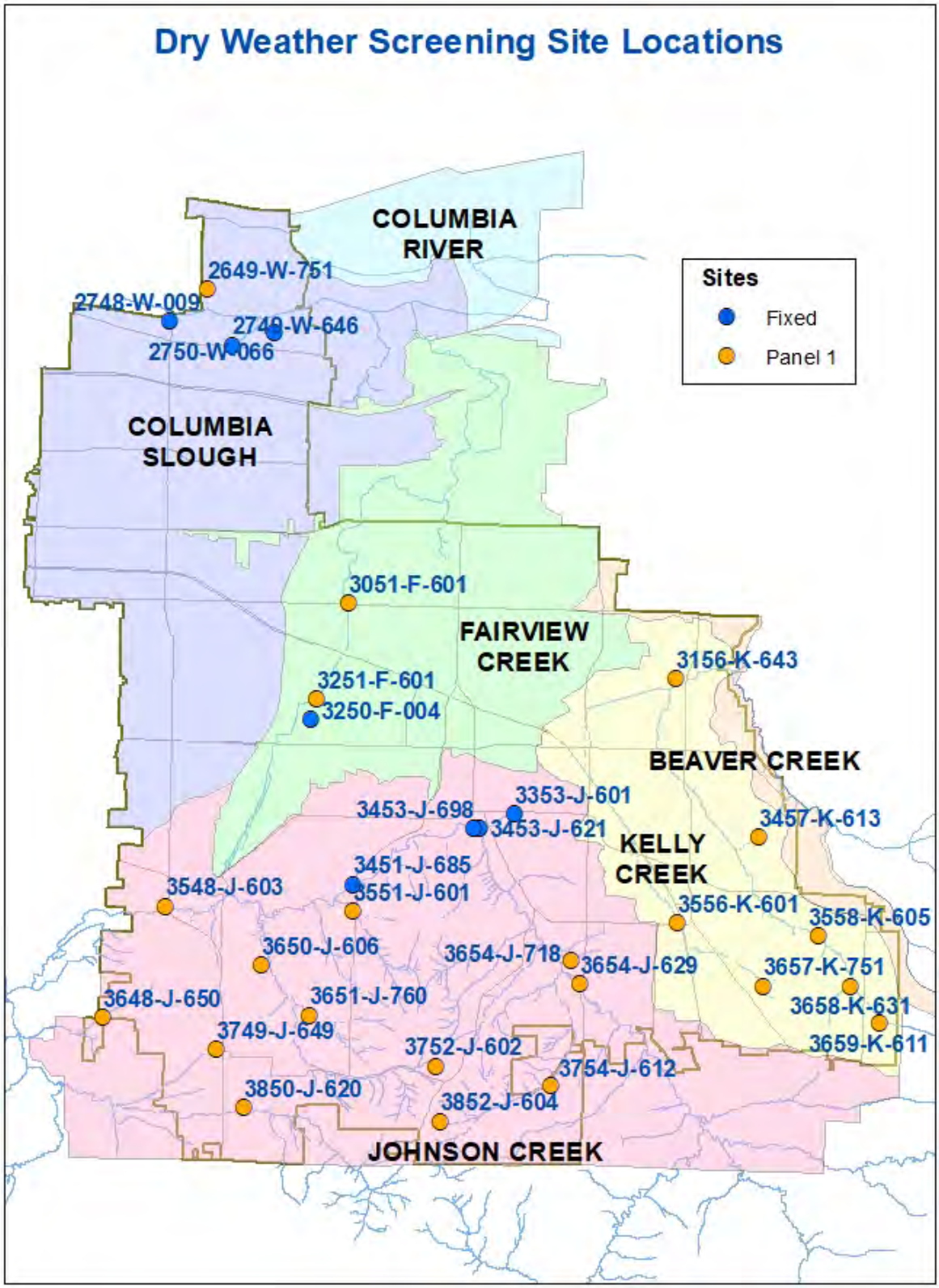


Table 2.3 Dry Weather Screening Flow Sampling Results

Note: Action level exceedances are shown in red text.

Site Code	Date	Chlorine (mg/L)	Ammonia (mg/L)	pH	Temp (*C)	Conductivity (uS/cm^3)	Turbidity (NTU)
2749-W-646	8/29/2023	0	0	8.06	17.7	187.8	1.4
2750-W-066	8/29/2023	0	0.25	8.28	17.8	190.9	1.31
3250-F-004	8/29/2023	0	0.25	7.9	17.2	124	9.22
3353-J-601	8/29/2023	0.45	0.25	7.43	18.8	188.6	6.56
3451-J-685	8/30/2023	0	1.0	7.71	16.9	182.7	16.6
3453-J-621	8/29/2023	0	0.5	7.55	18.2	214.9	24.4
3453-J-698	8/29/2023	0	0.5	7.03	18.5	333.4	24.6
3452-J-699	8/30/2023	0	0.4	7.63	18	156.1	2.01
3452-J-713	8/30/2023	0	0.25	7.33	18	170.3	12.4
3752-J-605	8/29/2023	0	0.25	7.18	17.5	147.3	8.42
3853-J-606	8/29/2023	0	0.25	7.92	13.3	82.1	4.17

B. Environmental Monitoring Plan Adaptive Management

No adaptive management changes are proposed.

SECTION 3: Stormwater Best Management Practices Summary

I. Overview

A. Requirement to Reduce Discharge of Pollutants

The pollutants described in Section 2 are addressed by the overall Stormwater Management Program and the Best Management Practices outlined in the narrative and the Tables in this section. Pollution reduction actions in the program fall into six categories: 1) Prevention 2) Absorption/Adsorption processes 3) Infiltration 4) Phytoremediation (uptake from plants) 5) flow reduction and 6) restoration, stabilization & shading of streams.

City code and inspection procedures prevent pollution that might otherwise occur like businesses washing or repairing vehicles outside of bays that drain to the wastewater treatment plant or offering public collection events for products that might get dumped on the ground or in the stormwater system. Some processes such as removing sediment and leaves from streets and stormwater facilities will remove pollutants that adsorb to soil particles and changing cartridges inside proprietary devices capture pollutants absorbed and adsorbed.

Having a Stormwater Management Manual for development is preventative and requires stormwater facilities to capture and infiltrate water using low impact development approaches and vegetated facilities to replicate the natural hydrologic cycle to the maximum extent practicable. This infiltration prevents dissolved pollutants from reaching streams, and the vegetation provides uptake of pollutants (phytoremediation) in plant matter and the evapotranspiration of water. By capturing, infiltrating, and slowly releasing stormwater to streams (flow reduction) helps prevent erosion and downcutting, also called hydromodification. Further, reducing high velocity flows helps keep from stirring up pollutants attached and resting in the stream bed, such as legacy pesticides like DDT and bacteria. The City's Natural Resource Program and Education & Outreach Program conducts restoration on public land and encourages the enhancement of private land that collectively works to restore, stabilize, and shade streams.

B. Water Quality Standards

In accordance with the goal of Schedule A 1.b., the City outlined its investigative procedure in the Environmental Monitoring Plan if there is a water quality exceedance caused or contributed to by stormwater. Historically, the City has maintained an illegal discharge and spills investigation procedure that often addresses this permit section. However, it is possible, as outlined in the procedure, that if a laboratory result is unusually high for a stream sample there may be a pollutant source from upstream activities that are identifiable but would not have otherwise

come to our attention. The procedure is being utilized as of Fiscal Year 22-23. Investigations will be recorded in the City's Spill Response database and reported in the Instream Monitoring narrative.

C. Allowable Non-Stormwater Discharges

Gresham Revised Code 3.23.010 (2) complies with Schedule A. 1. d. Best management practices are described in Table 3.2 for the city's activities such as water line flushing and firefighting training that are taken to protect the stormwater system. The City's Education & Outreach program directs the public to drain pools and hot tubs to sanitary sewer clean outs at their home or their landscape to prevent spa chemicals from entering the stormwater system. See Table 3.1 and Appendix A for examples of outreach.

D. Stormwater Management Program Control Measures

Public Education and Outreach

The City directly implements and/or partners with watershed councils and other agencies & nonprofits to deliver a wide variety of focus areas which include but are not limited to: K-12 youth, single family home outdoor maintenance practices, dog owners, DIY (Do It Yourself) auto maintainers, businesses (green certification), general community education with workshops, community science, restoration/storm drain marking volunteering, etc. Whenever possible, information is translated into Spanish and Russian. The City also offers translation services which are available via phone for real-time conversations.

Recently, the City hired a diversity, equity, and inclusion program coordinator and a committee has been formed to examine internal culture, hiring, and external facing programs for its residents. The committee's work will include an examination of external facing programs, documents, and language needs related to the City's ability to serve those people living with disabilities, low incomes, and the historically excluded or marginalized populations. This work was ongoing during Permit Year 29 and will continue.

Another huge lift for the City in terms of public engagement and outreach included the development and passage of the City's Climate Action Plan which has a number of focus areas including reducing the energy needs buildings, and improving transportation options (bus, biking, walking, use of pervious pavement), reducing solid waste, making sustainable and less toxic purchases, improving community health and economic opportunities thru planning and other investments like the urban canopy to reduce urban heat islands and enhance air quality. Learn more: https://www.greshamoregon.gov/government/climate-action/

The City maintains residential and business program information related to stormwater on its website. Examples of information the City provides includes a Downspout Disconnection Manual and Rain Garden Installation Manual, as well as cross links to Metro's Yard and Garden pages which are comprehensive and do not need duplication. During PY 28 and 29, the City (via its collaboration with the Clean Rivers Coalition) assisted with obtaining two consecutive EPA grants that funded a collaboration between Metro, and OSU Extension to create a lawn care video series that focused on reducing the use of weed and feed. (www.whatsyourlawnstyle.org) In year one, the videos were shared via a broad digital ad campaign called What's Your Lawn Style? OSU Ext was selected as the authoritative voice of the campaign because research showed that OSU is highly respected across Oregon and received better messages from local government.

During the second EPA grant (PY 29), additional research helped tease out two types of psychographic profiles of users, which were named "Anxious Minis" and "Maxis". Anxious minis are those who are less lawn obsessed but want to conform with their neighborhood. Maxis want the best lawn in the neighborhood. Two distinct tag lines were developed for the second phase of the lawn care campaign, "Level Up Your Lawn" for the Anxious Minis and "Go Pro-Ditch the Weed and Feed" for the Maxis. Because additional pre and post evaluation of the campaign recipients was desired a new website called www.LevelUpLawn.org was created as the landing site aside from What's Your Lawn Style because we needed full control of the site, which was limited due to OSU ownership. The full project evaluation is underway and will be reported in PY 30.

The City's staffing is small, therefore, its strategy is to provide grants to watershed councils to assist with outreach, as well as recurring use of interns and temporary project-based staff. Additionally, the City participates in three collaborations at the state and regional levels to conduct advertising to residents in a variety of communication channels that can vary over time depending on the campaign. Watershed staff sit on both The Regional Coalition for Clean Rivers and Streams and The Clean Rivers Coalition steering committees and participate in a sponsorship agreement with KPTV Fox 12 and Fox 12 Plus to highlight the work of "the Clean Water Partners with Public Service Announcements (PSAs) delivered by Mark Nelson, the station's primary meteorologist. These committees have committed to building relationships with Native American Tribes and other historically excluded or marginalized groups to amplify their voices related to natural resource outdoor activities, protection and enhancement and are committed to sharing their cultural values and celebrations. Outreach examples provided in Table 3.1.

Stewardship Opportunities & Restoration

The City's stewardship efforts related to restoration on public land are overseen by staff in the Natural Resources Program which also has a small staff, and as such, partners with local watershed councils to help deliver

community events. Stormwater staff have historically worked with private property owners on a variety of former streamside projects but are currently contracting to deliver the Backyard Habitat Certification Program, which is cost-shared with Natural Resources. See also Table 3.4 for details of the Stewardship Opportunities provided.

Table 3.1 Stormwater Program Education & Outreach Examples[1]

Program/Event and Partners	Watershed of Focus	Number of Contacts	Educational Focus
For Residents			
Backyard Wildlife Habitat home visits	All	**31 site visits in Gresham and 2 in Fairview** **14 Total Multifamily Sites** **3 Total School Sites** **350 Total Single-Family Sites** E-news: 11,000 gardeners Facebook: 12K followers	Consultation visits with homeowners regarding qualifying for "Backyard Wildlife Habitat" status through a partnership with Bird Alliance of Oregon/Columbia Land Trust includes stormwater management, pesticide reduction, and tree education elements among others and ongoing education with E-news and social media
Johnson Creek Watershed Council Partnership	Johnson	Supports outreach: JCWC e-list to over 700 Gresham contacts; list goes to over 6,000 residents Social media: ~3,400 followers City supported 14 events that involved **180 adults and ~250 youth and 300 planting volunteers.**	Assisted city with 7 acres, 6,300 linear feet of stream restored, >14,000 trees and shrub planted and almost 3 acres of invasive plant removal Nature science events included Dragonfly Days, Wildlife in Gresham talk, and Amphibian egg mass surveys.

[1] This table includes a summary of major activities but is not necessarily comprehensive.

Program/Event and Partners	Watershed of Focus	Number of Contacts	Educational Focus
Columbia Slough Watershed Council-Gresham and Fairview support of Slough School program	Fairview & Columbia Slough	30 classroom lessons and 6 field trips to the Columbia Slough Stormwater Facility, Wastewater Treatment Plant, Salish Ponds, and Southwest Community park for Reynolds School Districts youth serving Gresham and Fairview Grade 4-5 students. (`180 youth)	General education of watershed protection, native plants, ecosystems, wildlife, water quality sampling for science, and stormwater pollutant treatment with vegetated facilities.
Regional Coalition for Clean Rivers and Streams Metro area water health campaign	All	Digital marketing campaign: **924K Metro region adults and youth** (student video contest) reached via Facebook and Instagram Facebook: 2600 followers Instagram: 1000 Student Outreach: promoted the Honoring Our River Anthology relaunch by Clearing Magazine Campaign expenditure: $32K	This year, reach grew significantly (from 200K to 900K) because of our intentionally branded student advertising campaign featuring a different monthly video with more than 76K video views. Overall, our work is primarily digital advertising and organic posts that promote the work of local watershed councils and community volunteer events, as well as tips and news articles that inform the public about actions they can take to reduce pollution. The River Starts Here purchased "What's Your Lawn Style" Lawn Care How to Video ads for the Metro Region adult population and achieved 920 video views and engagement of ~65,000 people.

City of Gresham and Regional partners with KPTV--"It's Our Water" campaign	All	Clean Water Partners Campaign: https://www.kptv.com/water/Page was visited ~2,900 times 12 months of residential water protection messages that aired 560 times over the year. Resulting in the **engagement of ~43Kadults in the Metro region** (video views, click through, social engagement reach/likes, etc.) **Total impressions: 13.3M** (TV, social, web)	Topics: variety of lawn care messages, car washing, fall leaf disposal, pressure washing, safe deicing at home, planting a tree

Follow the Water – Connect the Drops and *What's Your Lawn Style (WYLS)*- a statewide collaboration campaign with OSU EXT for building water protection culture and encouraging water safe behaviors: https://extension.oregonstate.edu/collection/whats-your-lawn-style	All	Follow the Water stats: Website visits 46K Social media reach ~300K River Connection video views 1.4K (54 hours) WYLS stats: Commercial Ad Clicks: 25.4K Lawn How-To videos: 74K views OSU Ext website: 1.2K visits Campaign expenditures $184K, including ~$80K for year two of the Columbia River Basin Toxic Reduction Grant from EPA	During FY 23-24 the CRC utilized the $350K EPA Grant to pilot test a Spanish language training series of videos and workshops for small lawn care business who were primarily Latine owned. 84 landscapers attended workshops in Gresham and Clackamas and videos can be found at CRC's partner website of Northwest Center for Alternatives to Pesticides. https://www.pesticide.org/espanol The EPA phase II grant built off of the WYLS videos and created a new website called **LevelUpLawn.org**. This project was pilot tested to understand its impact and will be available to Gresham and other Oregon NPDES Permittees in PY 24-25.
Play Grow Learn (PGL), People of Color Outdoors (POCO), and Columbia Slough Watershed Council	Columbia Slough/Johnson Creek (some years)	Youth paddle and bird walk outing with Slough School 17 youth.	The Watershed Outreach budget supports youth in nature outings.

Public Involvement: City Website & Stormwater pages	All	Entire city website: ~100,000 annually Dept of Environmental Services Resources page: ~ 1,000 annually, Water Resources: ~600 (drinking water, stormwater, wastewater landing page) Watershed/Stormwater page: 400+	Most popular Water Resources webpages: Stormwater documents: ~1,100 Stormwater residential program ~200 Backyard Habitat Page: ~300, Stormdrain Cleaning Program: ~700 Reporting Spills/Illegal Dumping: ~200 Natural Resources: ~200 Groundwater Protection ~300
Doggie Bag Distribution	All	Unknown	Social science survey data reveals that it is a social norm to pick up after your pet. The number one reason for not doing so is forgetting a bag. To overcome this barrier, the City has installed doggie bag dispensers broadly across parks where trash service is available. We have found that without a trashcan, people will leave doggie bags on the ground as litter.
Gresham Arts Festival	All	~100 Adults and Youth	Featured information about Gresham's streams, wildlife, Backyard Habitat Program, and Lawn Care Videos
For Businesses			

City of Gresham Green Business E-Newsletter		9 issues/yr**. ~1200 subscribers**	Stormdrain Cleaning Assistance Program, General Best Practices, Haz Waste Training, Sustainability
City of Gresham Stormdrain Cleaning Assistance Program (SCAP)--offered to City of Fairview businesses as well (spring and fall)	All	441 **Businesses** participated~2421 drains cleaned. Estimated ~100K lbs of debris removed	Business Outreach was direct mailed to ~1,800 and emailed to ~1,000. Notices were also promoted in City's E-news, Print News, Green Biz E-news, and Economic Development. Pollution prevention via removal of sediment and debris.
Green Biz Technical Assistance	All	**548 total assisted** 220 businesses are composting food waste 7 new evaluations 1 recertification	70+ businesses were assisted with leaks, spills, pollution prevention, stormwater protection & drain maintenance, grease, & green cleaners Watershed & Green Biz collaborated with Metro to promote Green Cleaners* to the Latine community and their cultural grocery stores in Eng/Spanish. *Awarded the EPA Safer Choice Partner of the Year.

Drug take program (National and Local)	All	There are more than 20 locations within <3 miles from Gresham, Fairview, Wood Village and Troutdale for prescription drug safe disposal. This national effort prevents harmful chemicals from passing thru the wastewater treatment plants into waterways, including mercury. The Gresham Police Department hosts an event on most years.	https://www.greshamoregon.gov/residents/community-services/prescription-drug-disposal/
EcoBiz program partnership	All	**Provided outreach to 14 Auto Businesses** 3 were not interested, 11 businesses received spill kits, 1 recertified (Gresham Ford), 1 certified (First Latina owed Landscape firm) Paint spray efficiency workshop to 13 businesses in Eng/Spanish (auto & house painting)	Technical assistance in recycling, energy, waste reduction, and stormwater management for landscaping, automotive, and manufacturing businesses. Will focus on 9 businesses who need recertification next year.
Mobile Carpet Cleaner Business Letter	All	**100+ firms in the Metro Region**	Gresham staff led an effort to create a regional letter with area cities to inform firms that no dumping of wash water may occur. Legal options for waste are outlined. See Appendix A.

Urban Growth Boundary Permits and Forecasting

In FY 23-24 (all Pleasant Valley, except as noted):

- We have been processing (since the end of 2020) on SE 190th Ave (across from SE Richey Rd) a 180-lot (the number has varied) subdivision (Veranda) in Pleasant Valley and expect that to be decided upon during this fiscal year.
- The Sycamore Vista Subdivision (SE 182nd Ave, north of SE Giese Rd – recorded as Highlands @ Pleasant Valley) was approved in 2018 and is expected to be constructed during this fiscal year (now slated for Middle Housing, but not yet under construction and start date is still quite uncertain).
- Brookside Townhomes (SE 190th Ave) was approved and constructed FY 21-22 and has been constructed – the homes are under construction.
- Construction of the last phase of Sunset Village.
- Review and construction of homes in Sunset Village and Brookside North continue.
- Construction of homes in the Telford Estates Subdivision (Springwater) continues.
- Construction of Terrace @ Pleasant Valley (Giese Rd), maybe beginning home construction.
- Construction of Butler Creek Subdivision (Pleasant Valley adjacent – Middle Housing).
- Completion of the Pleasant Valley Concept Plan "relook," with expected Code Revisions.
- Potential start to take a "relook" at the Springwater Concept Plan.
- Starting Phase 2 of the Environmental Overlay Project, with likely impacts on the environmental overlay intensive areas of both Pleasant Valley and Springwater.

No pre-applications were received for annexations into the City, so development is forecasted to be unlikely for FY 24-25.

F. Stormwater Program Adaptive Management

There are no proposed changes to adaptively manage the best management practices outlined in the Stormwater Management Plan document.

G. Total Maximum Daily Load (TMDL) Plan Summary

In November 2023, the City updated its existing TMDL Plan to include an assessment of BMPs that might be needed to address mercury reduction goals. No additional BMPs were added. The City determined its SWMP document contained adequate tools, strategies, programs, and ordinances to address the movement of soil, which is the primary source of mercury movement related to stormwater.

The City has two nonpoint source plans for bacteria and temperature which are located on the City's website at: https://www.greshamoregon.gov/environmental-services/water-services/watershed-documents-and-forms/ Additional Bacteria and Temperature reporting is included in Tables 3.10 and 3.11, respectively.

Efforts and strategy with regard to septic tank owner outreach were considered in PY 29 and discussed with leadership. However, no decisions were made due to staffing turnover and workload. This may be considered again in coming years when staff positions are filled and trained.

For temperature, the public lands management strategy is to produce additional shading of stream corridors over time to meet temperature reduction goals. Stormwater is not connected to temperature issues as rain is cold and there is little to no rain during warm months.

Table 3.2 City of Gresham Stormwater Management Program Summary (2022-2026)

Stormwater Assets Maintenance Program (SMP) A-L. BMP Owner: Stormwater Operations & Maintenance Group, supported by GIS and Stormwater Science & Policy & Engineering				
Pollutants addressed	Actions from these BMPs remove sediment and total phase pollutants, but do little to address dissolved pollutants. Pollutants that attach to sediment include bacteria & other pathogens, nitrogen, phosphorus, organic compounds, legacy pesticides, polycyclic aromatic hydrocarbons, and total phase metals. While removal of total metals is important, since benthic organisms are found in stream sediments, dissolved metals can still impact aquatic organisms. Metals that are in dissolved form *and* known to be acutely toxic to fish include cadmium, copper, lead, mercury, silver and zinc. Control of sediment also reduces turbidity; clearer water creates better conditions for fish to hunt, breathe, and lay eggs. Controlling sediment also helps reduce nutrients, particularly phosphorus, which can cause excess algae growth impacting both dissolved oxygen, pH, and other water quality parameters.			
Activity Name	**Description**	**Measurable Goal**	**Timeframe**	**Reporting Metrics FY 23-24**
A. Pipe Cleaning	The City's stormwater system currently consists of approximately 231 miles of pipes that drain to both surface and groundwater. The City inspects a portion of its existing pipes each year for assets management that record the condition and repair needs in the near and long term. Pipes are cleaned to remove excessive buildup, if the SOP threshold for cleaning is met.	Inspect 10 to 15 miles, clean if SOP threshold is met	Inspect: annually/ongoing Cleaning projected to be an average of 1-5 miles over permit cycle	17 yds of debris removed. 14.5 miles inspected (some existing pipe and new development), 5 miles cleaned.
B. CCTV Pipes (new/existing)	Inspect new development pipe systems to ensure proper connections. CCTV inspect existing city pipes for repair, cleaning, asset management rating, resident concerns, illicit discharge investigation. This serves as part of the City's asset management program and also as a proactive measure to ensure there are no cross connections from new development, and also finds can find cross connections as efforts to inspect and clean pipes move about the city.	CCTV 100% of new pipe (reported metric also contains cctv miles for existing pipe as miles are not tracked separately)	annually/ongoing	CCTV: 2,239 hours 14.5 miles (includes new development and existing pipes which are not tracked separately, investigations, paving, CIP requests)
C. Storm Drain Cleaning	The City's stormwater system currently consists of approximately 8,100 stormdrains that drain to both surface and groundwater. Arterial drains are priority due to higher pollutant loads than lower traffic streets and residential are also a priority due to potential for clogging and minor flooding. Inspection of all drains is a goal, but due to parked cars (even after notices are given) 100% is not attainable. Note that drain inventory has historically grown by 50-100/yr. Studies have shown that drains tend to remobilize trapped sediment once 2/3 or more full, and at this time is the City's SOP cleaning threshold. Typically, the City cleans all drains regardless of reaching the threshold, which is a higher performance standard. The range quoted allows flexibility in work load shifting to address other significant water quality facility rehabilitation activities in the future, as needed, while still meeting objectives over the permit cycle.	Inspect 90% of all drains, at a minimum clean if SOP threshold is met. Sediment removal from 5,000 to 8,000 drains/yr.	annually/ongoing	Residential 6,778 drains cleaned, 204 Yds debris removed. Arterial 1,451 drains cleaned 92 yds debris removed.

Table 3.2 City of Gresham Stormwater Management Program Summary (2022-2026)

D. Maintain Green Infrastructure	Inspect and maintain vegetated facilities. Staff inspects and maintains as needed publicly owned: ~50 detention ponds & swales, ~650 rain gardens, plus private multiple owner facilities: 30 detention ponds & swales. Maintenance activities include control of noxious weeds that are threats to public land and sediment removal. Plant removal over time is beneficial, as some plants uptake pollutants in their roots and leaves (phytoremediation). The smaller neighborhood ponds require sediment removal based on capacity for accumulation (varies from 5-12 year lifecycle). Staff maintains larger regional facilities designed with forebays to capture large amounts of sediment annually. There are ~650 rain gardens/swales and 15 miles of ditches. All ditches were reshaped for conveyance during the last permit cycle. The staff can now use the vactor truck to remove sediment build up and prevent fill in. The inventory of rain gardens has grown significantly and represent the highest work load because they are managed three times/year (vegetation, overflow drain & scupper cleaning). Lastly, a smaller portion of annual hours are utilized for misc. stream vegetation/woody debris support work, off road system management, culvert checks/maintenance after storms is important for street safety and flood prevention.	Inspect pond facilities, rehab/remove sediment based on facility capacity. Maintain regional facilities and remove forebay sediment. Inspect 100% rain gardens/swales/ditches. Maintain vegetation and control weeds using Integrated Pest Management techniques. Remove sediment build up per SOP.	Sediment removal projected to be annually for rain gardens, and most swales and ditches. Annually/ongoing Sediment removal from approx. 2-5 ponds annually	Inspected all ditches and collected 45 cu yds from ditch cleaning Inspected and conducted routine maintenance at 773 right-of-way stormwater planters (rain gardens). 4 cy of inlet & veg waste removed. Inspected 73 publicly maintained detention ponds and swales. Routine vegetation maintenance was completed at 65 of 73. Major maintenance was completed at 6 of these. 300 cy of sediment removed. Repairs/Maint: 4,241 hours (staff) Repairs/Maint: 5,460 hours (contractors)
E. Maintain Grey Infrastructure	Inspect and maintain underground (grey) structures. There are 500+ sedimentation manholes which are very cost effective for capture and removal of sediment. The inventory for these structures has grown significantly. There are 212 Flow Control Manholes (FCMH) inspected annually. There are 231 Detention lines that vary from 30' to 96' long. All were cleaned during this past permit cycle and most will not require cleaning for many years. There are 204 Detention manholes, which have minimal sumped areas and are of less water quality benefit. Follow SOP thresholds for determining sediment removal.	Inspect 100% of sedimentation/inlet MH Clean per SOP criteria Inspect 100% FCMH Clean per SOP criteria Inspect 50% Detention lines Clean per SOP criteria Inspect 50% Detention MH Clean per SOP criteria	Annual inspection; cleaning typically results in: Sediment removal from approx. 50-60 Sedimentation MH 25-35 FCMH over permit cycle Detention lines, if meets threshold 1-5 Detention MH annually	5936 Total hours Sedimentation manholes: removed 38 cu yds of debris from 90/520 structures. Inspected 100%. Flow control manholes: removed 20 cu yds of debris from 40/219 structures. Inspected 100%. Detention line cleaning 1 cu yd of debris removed from 5/238 structures. Inspected 100%. Detention manholes 15 cu yds of debris from 23/206 structures.

Table 3.2 City of Gresham Stormwater Management Program Summary (2022-2026)

Stormwater Assets Maintenance Program (SMP) A-L. BMP Owner: Stormwater Operations & Maintenance Group, supported by GIS and Stormwater Science & Policy & Engineering				
Activity Name	**Description**	**Measurable Goal**	**Timeframe**	**Reporting Metrics**
F. Proprietary Devices (grey)	There are 133 Proprietary Devices with multiple filter cartridges (varies 1-12 per device) which are maintained at the frequency recommended by the manufacturer.	Inspect 100% of Proprietary Devices Clean based on Manufacturers threshold rec. (about 150-300 cartridges replaced/yr.)	Annual inspection, cleaning typically includes Sediment removal from about 50-60 proprietary devices annually	A portion of the 5,233 hours for grey infrastructure 289 cartridges replaced from 136/136 Debris not captured within the cartridges is estimated to be an additional 23 cu yds.
G. System Repair & Maintenance	Maintain and repair pipes, ditches, culverts, inlets, off road systems, etc. to ensure proper function and limit impacts to surface water, as well as underground injection control devices and appurtenances that drain to groundwater.	Maintain and repair based upon SOP criteria.	annually/ongoing	Inspection of new construction/customer concern calls hours: 1069 Mapping Updates 108 hours Trouble Loop: 950 hours Repairs & Maintenance: 2,567 hours Utility Locates: 1,745 hours
H. Spills, Illicit Discharge Investigation, Emergency Response	Respond to community reports of spills or illegal dumping & emergency flood concerns. Investigate and/or assist with spill response, illicit discharge concerns, emergency stormwater controls for other department assistance, natural disaster response (flooding, downed trees, etc.)	Follow City Spill Response and Illicit Discharge Investigation procedures Conduct Spill Response all Department training and procedure review twice during the permit cycle	annually/ongoing	Emergency Response: 220 hours Every time the staff CCTV's a pipe this includes an opportunity to identify cross connections. * Conducted a DES Dept wide spill response training

Table 3.2 City of Gresham Stormwater Management Program Summary (2022-2026)

I. Construction Inspections and Plan Review, Resident Concerns (O&M)	O&M staff plan review and construction site inspections of connections to the public system.	Conduct reviews and inspections to ensure compliance with Code	annually/ongoing	General administration time includes staff time spent reviewing construction plan reviews and conducting new facility inspections 25 MyGresham online reports of drainage, flooding, vegetation, irrigation, and stormwater facility concerns were addressed in addition to spill/dumping response. 5,200 hours* *Also includes staff meetings, supervisory duties, and budgeting, taking equipment for repair or maintenance. Does not include assistance from Outreach, Enforcement, Parks, Water, or Transportation staff whom also support some investigations.
J. Good Housekeeping: O&M Yard	Manage the Operation yard, shop, and equipment in cooperation with other city departments to clean up spills, keep sediment from entering drains. The yard has a covered decant station and equipment wash area to prevent pollutants from entering the stormwater system. Runoff from the yard also enters a stormwater facility prior to release to the stream.	Follow City best practices for storage, repair, dumping, washing, etc.	annually/ongoing	Shop duties: 220 hours
K. Underground Injection Controls (UICs) Maintenance & Cleaning	Maintain the City's active UICs to ensure function and comply with the WPCF permit requirements.	Document and report maintenance and cleaning.	annually/ongoing	Number of hours for UIC maintenance or cleaning 7 UICs inspected, 7/1005 cleaned 16 cu yds of debris removed

Table 3.2 City of Gresham Stormwater Management Program Summary (2022-2026)

L. Proper Waste Disposal (O&M)	Ensure the debris collected from City O&M activities are handled and disposed of in a safe and responsible manner. The City has three locations that it can stockpile facility maintenance debris: Powell Loop, Hogan Building (Operations yard), and the Wastewater Treatment Plant. All debris is stored in a manner to prevent erosion and to dry out the debris to make the hauling more cost effective. Composite samples of debris from all types of activities are tested and are classified as "special waste" but not "hazardous." There are two facilities in the region approved to take special waste: Waste Management in Hillsboro and the Wasco County landfill in the Dalles. The City is currently contracted with Dietrich trucking to haul its debris to these facilities.	Follow City best practices for handling, storing, and disposing of O&M generated debris. Retain debris testing results per file retention standards	annually/ongoing	Debris is tested annually Dietrich trucking hauls to Wasco disposal facility Quantities disposed are reported per maintenance activity

Table 3.2 City of Gresham Stormwater Management Program Summary (2022-2026)

Public Land Management (PLM A-E) **BMP Owner: Water Resources Division**				
Pollutants addressed	The BMPs within this section address both sediment control via soil stabilization restoration and also dissolved pollutants of concern via aiding infiltration, uptake, and evapotranspiration. These aid pollutant removal such as CO2 and sulfur compounds generated by vehicles and dissolving in water that can change pH. Pollutants of concern improved by infiltration include E.coli, mercury, copper and zinc. Some current use pesticides widely available for residential use such as glyphosate, dicamba, MCPP and 2,4-D readily dissolve in water and also benefit from landscape buffers and infiltration.			
Activity Name	**Description**	**Measurable Goal**	**Timeframe**	**Reporting Metrics**
A. Master Plan Update	In 2022, the City completed a City-wide Stormwater Master Plan that focused on pipe capacity limitations. The projects identified will become CIP expenditures over this permit cycle. It is unlikely that smaller basin Master Plans will be updated during this permit cycle.	Plan, design, and build CIPs.	annually/ongoing	No activities to report.

Table 3.2 City of Gresham Stormwater Management Program Summary (2022-2026)

B. Water Quality Projects	Stormwater infiltration or treatment is a component of City funded projects are required by the Stormwater Manual. Occasionally, the City also conducts projects in partnership with private development and/or grant funding. This BMP reports retrofit projects.	Implement Stormwater Manual requirements.	annually/ongoing	See Table 3.3 for CIPs See Table 3.4 Stewardship Activities
C. Integrated Pest Management	Limit the number of pesticides and fertilizers from city operations by implementing an Integrated Pest Management Plan to manage public land.	Update the Plan at least once during the permit cycle. At least biennially discuss land management strategies with staff. Applicators are licensed and complete licensure renewal schedule.	Update goal: FY23-24	Facilities contracts with Relay Resources to manage City Building Properties Transportation has 1 applicator Wastewater has no applicators Stormwater has 6 applicators Water has 1 applicator Parks has 4 applicators Natural Resources has 2 applicators, but generally contracts these services See Table 3.5

Table 3.2 City of Gresham Stormwater Management Program Summary (2022-2026)

Public Land Management (PLM A-E) **BMP Owner: Multiple (As included in the Activity Description)**				
Activity Name	**Description**	**Measurable Goal**	**Timeframe**	**Reporting Metrics**
D. Urban Canopy Program	This BMP is supported by Parks Planning staff and coordinated with other departments as needed. Enhance the urban canopy relative to Parks properties and street trees to support the City's Climate Action Plan.	Code enforcement of tree removal violations Annual replacement of dead/dying street trees Urban Forestry Committee (public participation)	annually/ongoing	During FY 23-24 almost $13 million was secured for urban forestry efforts in East County with $4.6 million in Gresham alone: * Inflation Reduction Act: $4 million for urban forestry equity planning projects (tree code, tree list, etc.); new and pruned street trees * EPA Gov to Gov: $80,000 for street trees *FEMA Rockwood Heat Island Mitigation Tree Wells: $380,000 for 50 trees/structural soil and install *DEQ SRF Loan: $121,575 for 30-40 tree wells on Powell Blvd 173 new street trees planted All Things Trees --Climate Action Outreach Event Tree Code review started by Planning Dept. https://engagegresham.org/gresham-tree-code Tree code violations were issued for 25 properties. $3,000 in penalties were issued. 36 trees were planted as mitigation.
E. Natural Resource Program	The Water Resource Division's Natural Resource Program focuses on enhancing & preserving the health of public lands which are undeveloped (not Parks) totaling just over 800 acres, this includes implementing projects identified in the NR Master Plan and ongoing restoration, monitoring of flora and fauna health, and community engagement.	Implement NR CIPs Actively manage and restore on average ~100 acres/yr. Track volunteers and community organizations engaged.	annually/ongoing	See Table 3.3 for CIPs See Table 3.4 Stewardship Activities

Table 3.2 City of Gresham Stormwater Management Program Summary (2022-2026)

Pollution Prevention from City Activities (PPCA A-F) **BMP Owner: Multiple as described in each Activity Description**				
Activity Name	**Description**	**Measurable Goal**	**Timeframe**	**Reporting Metrics**
A. O&M for Public Roads, bridges: sweeping	The City's Transportation Division oversees street sweeping and winter road safety measures and manages some of the vegetated right of ways following the Integrated Pest Management Plan. For road maintenance, staff follow ODOT's Standard Operating Procedure for Road Maintenance to limit impacts to stormwater and buffers.	Prioritize sweeping of arterial roads Conduct 8-10 sweeps/yr.	annually/ongoing	10 residential sweeps 12 arterial sweeps 5,933 miles swept City additional routine/emergency sweeps and leafy season included 1937 hours 2218 tons of debris collected & disposed at Wasco landfill (city/contractor combined)
B. O&M for Public Roads, bridges: deicing	The Transportation Division oversees the application of winter road safety chemicals follows the City's Winter Road Plan to minimize risk to the environment while achieving safe driving conditions. The Winter Road Operating Plan is available on the City's website GreshamOregon.gov Transportation page	Remove winter road traction materials, as soon as practical post storm	annually/ongoing	~13,300 gallons of Magnesium Chloride used for anti/deicing on priority roads 310 cy of 1/4-10 sanding rock used 1 winter event 940 hours of staff response time

Table 3.2 City of Gresham Stormwater Management Program Summary (2022-2026)

C. Limit Releases from Fire Training Activities	The Fire Department Training Center follows a procedure to implement storm drain protection during training activities that may result in runoff. The Stormwater staff support ongoing informational check-ins to update Fire on stormwater technology and research, as applicable.	Deploy storm drain protection techniques during training that cause runoff	annually/ongoing	Fire follows SOPs related to protecting the stormwater system at the training center.
D. Water Line Flushing	The Water Operations Division is responsible for minimizing impacts to the stormwater system by implementing an SOP for water line flushing, which involves using a dechlorination injector and applicable treatment chemicals. Staff deploy sweeping or drain protection to limit debris from entering the nearest stormdrains because of flushing.	Use of dechlorination	annually/ongoing	Staff conducted hydrant flushing of 22,122 ccf of water using the dechlorination SOP.
E. Limit Wastewater Pipe Seepage	The Wastewater Group is responsible for overseeing the system maintenance. This includes ongoing asset management with a CIP that repairs aging pipes that are more prone to seepage.	Implement wastewater pipe repairs as approved by the City budget.	annually/ongoing	Main line pipe replaced ~1006 lineal feet Laterals replaced ~12 Manhole grouting NA

Table 3.2 City of Gresham Stormwater Management Program Summary (2022-2026)

Pollution Prevention from City Activities (PPCA A-F) **BMP Owner: Multiple Departments (O&M Yard Housekeeping overseen by Operations & Maintenance Department Managers)**				
Activity Name	**Description**	**Measurable Goal**	**Timeframe**	**Reporting Metrics**
F. Staff Training	DEQ requests to understand how staff are trained or continue ongoing training as needed to oversee and/or conduct the work of their program areas. The City of Gresham provides a variety of professional development and industry specific training opportunities for staff to ensure safe and effective delivery of programs and services for the public's benefit. This includes internal and external trainings, as well as new staff orientation of programs, policies, and procedures. In many cases, staff are trained on equipment and procedures by senior staff where specific professional trainings are not readily available, such as business inspections.	Document staff trainings in required program areas for permit compliance. Train new staff on all good housekeeping procedures, chemical storage, stormdrain protection procedures for outdoor work and management of the Operations yard within six months of hire.	annually/ongoing	Operations Safety Officer inspected the pesticide storage room to ensure proper labeling and containment of chemicals. The Water Dept hired a new Operations Manager and Watershed staff plan to review and finalize the updated Flushing and Emergency Response procedure during PY 30 (FY 24-25). Transportation: 2 new staff trained on the sweeper truck and pesticide licensure edu credits: 1 staff Training of New staff on Housekeeping by Dept: Parks: 2 Transportation: 2 Stormwater: 3 Water: 5 Wastewater: 1

Table 3.2 City of Gresham Stormwater Management Program Summary (2022-2026)

Public Reporting, Engagement, Outreach & Behavior Change (PREOB A-F) **BMP Owner: Multiple (As listed in each Activity Description)**				
A. Spills & Illicit Discharges & Public Reporting	Coordination and oversight for this BMP is conducted by the Stormwater Science & Policy group. The City typically receives information about spills or unusual discharges in the following ways: phone calls to City Hall or Operations Dept, Code Enforcement voicemail hotline, email, or the My Gresham App (~7,000 concerns per year reported across all departments). Staff on or off duty may also report observations. Calls to Police Non-Emergency line are connected to the On-call after hours O&M staff, as applicable. For concerns that constitute threats to human health, welfare, or the environment, staff must respond within 24 hours or as soon as possible upon becoming aware (if delayed because of voicemail, weekend report, etc.) For all other types or concerns, respond within 1-4 days (average 2).	Document spill and illicit discharge reports and investigations and outcomes in City's database.	annually/ongoing	28 Incidences reported, 16 were residential or traffic related incidents. 7 incidences resulted in no threat/nothing found/nothing to resolve 8 incidences included educational instructions to the RP regarding future expectations 8 incidences were cleaned up by the City with no RP or assisted the RP 10 incidents were taken care of by the RP or billed to the Responsible Party by the City for its cleanup work 3 incidences resulted in known releases to the stream. The Operations staff uses booms to absorb pollutants from streams or stormwater facilities to the maximum extent practicable. ~30 other concerns were reported thru MyGresham or calls to Operations Center that were primarily concerns about street drainage or blockage of inlets addressed by Operations staff or assisted by Outreach staff if related to a private property investigation and communication.
B. Litter/Hazardous Waste Control (Residents)	The City's Solid Waste & Sustainability Division offers special collections events that vary by type and quantity over the permit cycle. The Division also oversees residential garbage, recycling, and yard debris hauling and used oil is collected at curbside and reported to the City. Examples include bulky waste, Styrofoam, or hazardous materials. The program also support permitted events occurring related to recycling collection such as the Farmer's Market and City Festivals.	Document events offered and supported. Track residential used oil collected by haulers	annually/ongoing	50,000 lbs of electronic waste collected at Spring event. Free geek repair, reuse, recycler oversees best use and final disposal, as needed. The bulky waste pilot project ended, so total removed was not tracked. However, collection was continued for TVs and refrigerators and other misc. items and recycled, when possible. Haulers reported collecting about 41 tons of used oil.

C. Business Outreach	The Solid Waste & Sustainability Division offers outreach to businesses and apartments with services that help reduce litter and illegal dumping (includes stormdrain marking) and increase the recycling of materials and composting of food waste. The City also collaborates with EcoBiz to offer technical assistance to the Automotive sector to implement more sustainable and environmentally protective actions. Staff also conduct direct outreach via fact sheets, posters, and direct mail to specific key sectors periodically.	Document businesses and apartments served.	annually/ongoing	See Table 3.1
D. Schools and youth outreach	The Stormwater & Natural Resource programs do not have enough staff to offer formal (planned/ongoing) curriculum to classrooms. However, staff occasionally teach classrooms or lead field trips, support camps or events, etc. and also partner with local watershed councils to deliver some services to Gresham youth. Staff believe that exposing youth to natural systems, science, local water resources and wildlife has the potential to have a lasting impact on their perception of the importance of pollution reduction actions they can take within their lives.	Document staff and partner activities to deliver water protection, nature & wildlife education & experiences to youth.	annually/ongoing	See Table 3.1

Table 3.2 City of Gresham Stormwater Management Program Summary (2022-2026)

Public Reporting, Engagement, Outreach & Behavior Change (PREOB A-F) **BMP Owner: Stormwater Science & Policy Group & City Communications Department**				
Activity Name	**Description**	**Measurable Goal**	**Timeframe**	**Reporting Metrics**
E. Regional adult outreach	Because outreach is very labor intensive and advertising is so financially expensive, the Stormwater Program's approach is to invest a large portion of the budget and effort to leverage dollars and staffing using collaborative approaches to deliver stormwater pollutant reduction and water protection messaging to adults. Examples include a $60K-$70Kannual Public Service Announcement campaign on television cost shared by 15+ agencies. Other campaign work includes the Metro area Regional Coalition for Clean Rivers and Streams, the Statewide Clean Rivers Coalition's "Follow the Water" and directed support of watershed council work to engage the public.	Educate key adult audiences as described in the E&O strategy with key pollutant reduction messages and positive actions they can take within their lives. Prioritize behavior change methods. Measure and evaluation, when possible.	annually/ongoing	See Table 3.1.
F. Public Involvement & Participation: City outreach	The City uses a variety of communication channels to reach its residents which includes notification of public comment opportunities for City Plans, Budgets, Rates, Capital Projects, Events, etc. Examples include its website, print and electronic newsletter, social media, earned media etc. Staff also conduct outreach via direct mail to specific key audiences periodically (e.g., dog waste, RV dumping letters).	Utilize City channels to deliver 3-5 messages to residents	annually/ongoing	Facebook: 15.3K followers Instagram 5.4K followers Twitter: 3.2K followers YouTube: 1.5K followers E-news (digital): 1,435 subscribers (12X/yr) Gresham News (print): 54,000 homes and businesses quarterly Next Door: 29,000 members See also Table 3.1
Control Impacts from Development and Business Activities (CIDBA A-G) **BMP Owner: Stormwater Science & Policy Group**				
A. Stormwater Management Manual (SWMM)	This manual contains the regulatory development thresholds that necessitate stormwater controls, the prioritization of green infrastructure, the design standards, plan review process, and long term maintenance requirements.	Review SWMM at least once within the permit cycle. Update, if necessary	Goal for review FY23-24	During the past year, staff made major revisions to the SWMM. “Major revisions” are anything that significantly changes the space or cost required by developers to meet the standards and must be approved by city council. Following a few rounds of internal reviews, the draft was released for public comment in late summer 2024. Staff will work on addressing concerns and discussing with city leadership, with review and adoption by city council expected in early 2025.

Table 3.2 City of Gresham Stormwater Management Program Summary (2022-2026)

B. Private Stormwater Facilities Tracking & Inspection	The Stormwater group ensures proper installation, planting, and GIS mapping of private stormwater facilities required by the SWMM. The types of facilities installed and the catchment areas that drain to them are recorded for future pollutant reduction modeling and also to ensure the long-term maintenance and function as required by Gresham Code. Private facility owners are recorded in the City's database and property owners are made aware of their ownership and maintenance requirements. The City has a Private Stormwater Facility Handbook which is available on its website and is utilized to support private maintenance technical assistance. Staff have inspected all private facilities and required maintenance, as needed, historically. In the past few years, staff have categorized and prioritized the private inspection program based on available staffing time and overall potential impact to the public stormwater system from the facility based on adaptive management feedback loops on how long a facility's lifecycle has been observed over time. Facilities that treat stormwater prior to draining to groundwater or that infiltrate and don't flow the to the City's public system are not part of the inspection program. Additionally, one Gresham neighborhood was built with on lot rain gardens with single family homes. These rain gardens are not inspected, but residents are given direct mail outreach on rain garden maintenance, at least once per permit cycle. Therefore, after the facility determination the criteria for inclusion is as follows: larger detention ponds are a higher priority (annual inspection) and other smaller facilities that have moderate potential for negative impacts will be inspected at least once every five years. The current inventory is one larger private facility inspected annually (not including the 30 multiowner facilities already included in the City's public maintenance annual program) and 33 smaller ponds & smaller vegetated facilities and 60 proprietary device locations. Proprietary device owners must submit documentation that their devices are maintained or still clean every two years on a 50% inventory rotating basis.	Document and inspect new private stormwater facilities and associated treatment areas. Conduct QA/QC of GIS recording of these facilities at least once per year Inspect major structural controls Oversee proprietary device maintenance	annually/ongoing	Gresham has 60 commercial or multi-family sites with proprietary underground vaults that are required to provide biennial documentation of inspection and maintenance. During FY23-24 there were 38 sites that provided the required inspection and maintenance documentation.
C. Erosion Prevention & Sediment Control (EPSC) Plan	The City's EPSC Manual was reviewed as part of the process for the updated SWMP. The Manual functions well for the EPSC Plan Review and Inspection Program needs. Staff attend industry specific trainings and stay attune to new technology developments that may provide additional program requirement updates or further the pollution reduction efficacy.	Review EPSC Manual at least once within the permit cycle. Update, if necessary	Goal for review FY 25-26	During the past year, some updates to the EPSC Manual were made as part of the Stormwater Management Manual (SWMM) update. Review and adoption are expected in 2025 on the same timeline as the SWMM adoption process.

Table 3.2 City of Gresham Stormwater Management Program Summary (2022-2026)

D. EPSC Inspection Program & New (Post Construction) Stormwater Facility Inspections	Stormwater Science & Policy staff coordinate with the City's Permit & Business Licensing Department staff for this BMP. Ensure development permitted within the City obtains a DEQ's 1200-C permit, when applicable and apply the City's EPSC Manual requirements to sites to ensure sediment laden runoff is not entering the City's stormwater system or waterways. The EPSC manual is provided to contractors during the permitting process. Contractors provide information to the City about which EPSC bmps will be utilized and the specific site locations for BMPs, as required. This information is available at all times to Public Works Inspectors and the Stormwater Science & Policy oversight group via a digital software permit system. At construction project final, staff inspect the site to ensure that all vegetated facilities are properly planted or hydroseeded, per SWMM requirements. Sites are checked to ensure underground facilities do not contain construction sediment and that bare soil is covered before protective storm drain filters can be removed.	Conduct active site inspections and QA/QC oversight as described in the SOP. Ensure large sites obtain a DEQ 1200-C permit Assist DEQ with inspections if requested	annually/ongoing	A total of 271 construction sites were inspected. 246 single family sites, 4 commercial construction projects, 17 grading projects, and 4 multi-family sites 25 total acres were disturbed for development Three erosion control inspections are completed per site: a pre-construction inspection, and interim erosion control inspection, and a final erosion control inspection at the end of the project. There was an approximate 16% noncompliance rate, with 42 disapproved erosion control inspections requiring corrections for deficiencies such as installing/maintaining perimeter control, providing adequate cover for denuded soil, protecting stockpiles, improving construction entrances, and sweeping streets. ~20.5 acres of impervious are treated by stormwater facilities See Table 3.6 for facilities installed and inspected. A wet weather notice is provided at active fall construction sites as a reminder to prepare their site for fall rains. See Appendix A.

Table 3.2 City of Gresham Stormwater Management Program Summary (2022-2026)

Control Impacts from Development and Business Activities (CIDBA A-F) **BMP Owner: Stormwater Science & Policy Group**				
Activity Name	**Description**	**Measurable Goal**	**Timeframe**	**Reporting Metrics**
E. Business Screening & Inspection Program	Implement the Business Inspection Program to address sectors that have high potential to contribute to stormwater pollution in runoff from their site. This program also includes the implementation of the Wellfield Protection Program and the Wastewater Fats, Oils, Grease (FOG) program. The City's Business Inspection program focuses on businesses with hazardous waste, manufacturing, outdoor storage that can cause stormwater pollution. Issue Notice of Violation if time frames for corrections are not met and enforce as needed to gain compliance.	Conduct routine and follow up inspections as described in the SOP, typically projected to be 100-200/year Conduct screen of City's businesses for DEQ 1200Z permit evaluation, based upon industry types included by that permit Review the City's new business list to determine additions to the program	Screen all businesses for potential 1200-Z permit referral at least annually Screen new businesses at least quarterly	*Total inspections/screenings/revisits: ~900, including 20 removed from the data because they were discovered as closed either at inspection or revisit. *251 Auto, manuf, industrial, and food related businesses were inspected at least once. 48 locations had one or more compliance issues. Some are Wellfield related that are not stormwater risks usually involving a missed report or the need to add a floor coating. The most common stormwater concerns are needing to post an Emergency Spill Sign with phone numbers, needing to clean or maintain a storm drain, and needing secondary containment. The businesses inspected are included in **Table 3.7.**

Table 3.2 City of Gresham Stormwater Management Program Summary (2022-2026)

F. Private Storm Drain Maintenance Program	The City created and has managed and reported efforts related to this program since 2004. Drain cleaning is an effective way to control stormwater pollution. Originally, it was strictly a voluntary outreach program called the Stormdrain Cleaning Assistance Program (SCAP), which resulted in cleaning 200-400 drains per year. During the last permit cycle, the Water Science staff began a focused effort with summer interns to update the City's private storm drain inventory in the GIS system. Drain conditions and levels of sediment were also recorded. This effort led to staff launching a mandatory drain cleaning notice for the drains full of debris as noted by the interns. This effort will continue during this permit cycle. Due to limited staffing levels related to this effort, staff will methodically select small portions of the city each year to request drain cleaning compliance documentation, in addition to continuing the SCAP program, which functions to lower the cost for cleaning to affordable rates for small businesses to participate.	Implement the SCAP program Select additive portions of the City's business areas to request drain cleaning documentation.	Offer SCAP annually Document drain cleaning for 10-20 non-SCAP participating businesses annually	441 businesses participated in SCAP ~2415 drains cleaned 96,460 lbs of debris removed by one vendor and 155 cy of debris removed by another See Appendix A for Outreach example. We randomly selected 21 businesses who had not recently/never participated in SCAP and send requests for drain cleaning information. All locations had compliant drain. One notice of violation was sent to an apartment due to customer complaint of flooding and this complex was brought into compliance.
G. Retrofit/Hydromodification Assessment Update	City will provide an assessment of how the reports previously provided have been considered, updated, or implemented, remaining gaps of knowledge, if applicable, new goals, tools, priorities for future improvement.	Provide DEQ an assessment with outcomes related to the creation of the original reports.	Third year of the permit term (FY 22-23)	Submitted in PY 28 Report Appendix B.

Table 3-3 Examples of City of Gresham Watershed/Natural Resource Program Projects with Water Quality Benefits

Project Name/Watershed	Watershed	Project Status	Stormwater Mitigation Measures/Area Treated	Funding Mechanism
The City's Capital Projects Plan website: https://www.greshamoregon.gov/environmental-services/public-works/capital-improvement-program/				
Mt. Hood Community College Salmon Safe Campus	Kelly Creek	Additional work completed resulted in a tree trench with 50 new trees installed. The partners received a Metro Nature in Neighborhoods grant which will fund a pervious pavement installation in 2025. The partners also secured funding for designing dam removal of MHCC's earthen fill dam on Kelly Creek. $75,000 City contribution	In 2017, the city partnered with EMSWCD ($150K total annual contribution), former Sandy River Watershed Council, and Metro to begin creating a "Salmon Safe" certified campus by improving water quality and improving habitat by the reduction of impervious surfaces and the installation of rain gardens, tree trenches, and native plants.	Watershed Operating Fund
McKinley Wastewater Trunk Line Construction Project	Jenne Creek (Willamette River Watershed)	Construction was completed in Fall 2019. Site is in year 5 of 5 for vegetation management that includes wetland restoration, riparian buffer shade enhancement, and forest revegetation. Total expense in 2023/2024 was 5K. Expenditures include plant purchase and installation and spot spraying herbicide treatment.	Reduces possibility of overflow discharge of sewage to Jenne Creek headwater wetland and associated stream. Restore riparian, wetland, and upland forested area within the project area.	Wastewater CIP
Palmquist Road Culvert Replacement Project	Burlingame Creek (Sandy River Watershed)	Construction was completed in Fall 2020. Site is in 4 of 5 for vegetation management targeting stream side shading of the riparian buffer. Total expense in 2023/2024 was 5K. Expenditures include plant purchase and installation and spot spraying herbicide treatment for invasive weeds.	Replaced road and 4' wide non-fish passable culvert with a 12' wide fish passable culvert and natural stream bed. Introduced treatment to .35 acres of previously untreated arterial roadway surface. Restore riparian area adjacent to creek in the project area.	Watershed CIP fund
Riparian and Upland planting	Willamette River Watershed: Johnson Creek, Butler Creek, Jenne Creek, and Kelley Creek: Sandy River Watershed: Kelly Creek and Burlingame Creek; Columbia River Watershed: Fairview Creek and Columbia Slough	Restoration of the riparian, wetland and upland areas adjacent to city creeks, floodplains, and wetlands. City is currently working in all 3 of its watershed basins (Willamette River, Sandy River, and Columbia River). Willamette River Watershed: Johnson Creek (5 sites), Jenne Creek (1 site), Kelly Creek (3 site), Butler Creek (3 site). Sandy River Watershed: Kelly Creek (3 sites) and Burlingame Creek (1 site). Columbia River Watershed: Fairview Creek (2 sites) and Columbia Slough (1 site). Yearly budget for this program is $135K.	Water quality, stream shade, invasive control, forest health, stream function, wetland function, and habitat improvements.	Natural Resources Operating Funds
Invasive Weed Survey & Control	Willamette River Watershed: Johnson Creek and Jenne Butte	Active, ongoing invasive control. Early detection rapid response (EDRR) categorized or other invasive weeds are addressed as they are reported or discovered that could harm our infrastructure or customers. Annual Budget of $62.5K.	Spot treatment for controlling aggressive invasive plant species that lead to bank failures, loss of native vegetation, reduce water quality and/or put our public at risk. Species including Japanese knotweed, Himalayan blackberry, purple loosestrife, English holly, English ivy, garlic mustard, hogweed, and yellow flag iris are some of the species addressed. See Gresham Invasive Species list for more information.	Operating Funds from multiple dept (Parks, Transportation, Stormwater, Wastewater, and Water) for control of invasive weeds.

Project Name/Watershed	Watershed	Project Status	Stormwater Mitigation Measures/Area Treated	Funding Mechanism
In-stream and near-stream slope stabilization projects	Johnson	Within the Johnson Creek Watershed, staff efforts were focused on (1) Investigation and legal response to 200 cubic yards of illegal fill in lower Meadow Creek, reporting violation of Essential Salmonid Habitat and floodplain to Oregon Department of State Lands, Oregon Fish & Wildlife, US Army Corps of Engineers, and National Marine Fisheries Services. Extensive participation in rectification agreements between landowner and DSL resulted in Gresham accepted land donation of 0.37 acres containing Lower Meadow Creek in exchange for accepting state rectification requirements through a Consent Order Transfer, signed in April 2024. Design of rectification and further improvements through June 30, 2024. (2) Emergency repair on West Fork Hogan Creek culvert collapse reported last permit year was replaced, and area replanted. (3) Following a private heating oil spill from Gresham Funeral Home via wetland swale on public land and into Johnson Creek, Gresham Watershed accepted remediation responsibility as restoration work on city land was required. Design and permitting for wetland swale restoration plus addition of wetland alcove for red legged frog habitat was submitted to DSL and approved, slated for Fall 2024 construction.	Water quality, riparian function, erosion control/preventing hydromodification	Watershed CIP funding for all listed projects
Local Roads Repair	All	The Transportation Division has embarked upon a deferred maintenance repair project that will last several years. The Utility Departments are collaborating to ensure pipes are inspected and repaired, if needed, prior to repaving work. This is protection of the rate payer's investment in infrastructure. This past year our work included: 50 lineal feet of stormwater pipe replaced 60 lineal feet of pipe was cured in place $62,000	Stormwater conveyance system updated	Watershed Repair and Rehab CIP
Pervious Pavement Pilot Project	Columbia Slough	Partnered with Transportation to install pervious asphalt in undeveloped portion of roadway on SE 177th. Construction was completed September 25th, and will be monitored for durability and functionality over time as an example that may be used on other local streets for treating and infiltrating stormwater. Cost contributed by Watershed was $75,000, total project cost was $143,500.	Paving roadway with pervious pavement will treat and retain stormwater falling or flowing onto the project footprint within road section.	Watershed CIP/Transportation CIP
Rockwood Stormwater Tree Wells Retrofit	Groundwater recharge area	Design phase. Construction planned for Summer 2025	Retrofit water quality treatment of arterial and local streets, with primary goal of providing shade to reduce urban heat. Exact treatment area TBD as design progresses.	FEMA grant for construction costs.
Powell Blvd. Stormwater Tree Wells Retrofit	Johnson Creek Basin	Pre-design phase. Construction planned for Summer 2026	Retrofit water quality treatment of arterial streets. Exact treatment area TBD as design progresses.	DEQ forgivable SRF loan ($235,00) and EPA Program OSG grant awarded by DEQ ($200,000)

Project Name/Watershed	Watershed	Project Status	Stormwater Mitigation Measures/Area Treated	Funding Mechanism
Fairview Creek Water Quality Facility Improvements	Fairview Creek	Completed design Summer 2024, planned for construction Summer 2025. Current engineer cost estimate with internal costs applied is $686,000.	Retrofit of regional water quality facility to meet ODOT standards for two roadway projects (Division Street Widening and Cleveland Street Improvements). Facility currently treats approximately 85 acres to outdated standards.	Watershed CIP
Kelley Creek Watershed Master Plan	Kelley Creek Basin	Consultant hired and project is underway. Goal is to develop a draft plan by February 2025.	Project will develop a watershed-scale plan for regional stormwater facilities and in-stream enhancement, including culvert replacement. Will also assess stream sensitivity to development and the effectiveness of existing stormwater requirements,	Watershed CIP, with some Transportation funds for the culvert assessment component.
SE 16th & Ironwood	Kelly Creek	Design phase.	Improve maintenance access to swale that has approx. 18 residential acres draining to it. Add pre-treatment sedimentation manhole for flow from 16 acres. Remove or replace failing culvert.	Watershed CIP
Palmblad Storm Extension	Kelly Creek	Extended the NE Palmblad Drive storm system to SE 1st Street to address ponding and drainage issues on SE 1st Street, no water quality component to this project. $166,448.00	Capture roadway runoff before it flows onto the Bull Run condos property.	Watershed Localized Drainage Improvements CIP
Chastain Creek Concept Plan	Johnson Creek Basin	Study is under way. A land survey, geophysical survey, and water quality sampling have been completed. Results will inform next steps. Budget for study is$150,000, total spent to date is $39,535.	Preliminary study is to identify the extent and potential impacts from a historical landfill in the area of Chastain Creek. Follow up project will be informed by information obtained in this study.	Watershed CIP
Meadow Creek Rectification and Improvements	Johnson Creek Basin	Fill removal and culvert outfall and streambed improvements. $125,000	Creek realignment with log habitat structures	Watershed Riparian and Wetland Improvements CIP
2023 UIC Retrofit Project	Groundwater recharge area	UIC Retrofits at five locations $574,220	UICs were converted into Sedimentation Manholes	Watershed CIP

Table 3-4: Restoration Activities

Project Site	Creek Name	NRMP Reach	Project Partners	Volunteer Hours	Invasive Removal Acreage	Planting Acreage	Linear Stream (feet)	Plants Installed	Notes
Willamette River Basin									
Ochioto Site	Johnson Creek	CIP 913900; NRMP - JC14/15	Professional contractor and city staff	0	10.2	1.2	1,720	2,225	Site is in year 8 of a multi-year and multi-unit restoration. Site has several restoration units in different phases of restoration. This past years work focused on site maintenance including herbicide treatments of invasive weeds and interplanting of trees/shrubs.
Springwater Woods	Johnson Creek Watershed Council	CIP 913900; NRMP - JC14/15	Professional contractor and city staff	0	5.9	5.9	2,045	1,620	Site is in year 1 of a multi-year and multi-unit restoration. Site has several restoration units. This past years primary work was focused on removal of 2.0 acres of Himalayan blackberry and 1.5 acre of reed canary grass. The rest of the site had herbicide treatments of invasive weeds. Area within 100 feet of the stream were planted with a mixture of bare root and container plants.
Wisteria Site	Johnson Creek	CIP 913400; NRMP JC12/13	Professional contractor and city staff	0	1.2	0	370	0	Year 7 of a multi-year restoration along Johnson Creek. Site was previously a wisteria and Himalayan blackberry monoculture. Work done this past year included maintenance spraying of a broad list of invasive plant species.
7th Street Bridge/Walters Site	Johnson Creek	CIP 913200; NRMP JC08/JC09	Professional contractor, city staff, and volunteers from JCWC and community	114	11.5	5.6	3,405	8,625	Site is in year 5 of a multi-year and multi-unit restoration. Site has several (5) restoration units in different phases of restoration. Site conditions prior to restoration was predominantly a monoculture of Himalayan blackberry. This past year work included herbicide treatment over the entirety of the 11.5 acres ; removal of 2.6 acres of Himalayan blackberry; and planting of native shrubs and trees over 3.4 acres. Volunteer work was done in partnership with JCWC. A total of 3 events were held this past year at the site. It included a planting, live staking and a mulching event. A total of 38 volunteers worked 114 hours.
Main City Park Site	Johnson Creek	CIP 9JC009; NRMP JC09	Professional contractor and City staff	110	2.1	0.25	3,125	100	Site is in its 3rd year of a multi-unit and multi-year restoration. Site has several restoration units in different phases of restoration. Baseline conditions was a mixture of degraded riparian area and monocultures of Himalayan blackberry and English ivy. Work this past year included herbicide treatment of a broad list of invasives over the 2.1 acres; and native plantings, over 0.25 acres, of trees and shrubs and emergent wetland species. We held 2 volunteer/education events at Main City. Two different elementary school groups came and planted an area with native shrubs.
Miller Creek Site	Miller Creek	NRMP - MIL01	Professional contractor and city staff	0	10.3	2.5	2,150	850	Site is in 5th year of restoration. Baseline conditions prior to restoration was a good overstory of big leaf maple with spots of Himalayan blackberry, English ivy, English holly, and reed canary grass. This past years work included maintenance herbicide treatments for a broad list of invasive species and native planting of evergreen trees. Native plantings were concentrated next to Miller Creek.
7th Street Bridge Site (Grant Funded)	Johnson Creek	CIP 913200; NRMP JC08/JC09	Professional contractors, city staff , volunteers and JCWC staff	36	1.6	1.6	1,152	2,800	JCWC in partnership with City of Gresham started work on this site in 2021. They used a grant from EPA and a City match (10K) to complete the work on the site (year 3).Site conditions prior to restoration was a monoculture of Himalayan blackberry and reed canary grass. This past years work focused on herbicide treatments of a broad list of invasive weeds and native plants of trees and shrubs. A single volunteer/education event was done through JCWC where they installed live stakes of willow species along the creek.
Butler Creek Corridor Site	Butler Creek	NRMP - BC01, BC02, BC03	Professional contractor and city staff	0	18.1	0	3,550	0	Site is in its first year of a multi-year maintenance restoration. Creek corridor is in good health with pockets of invasive vegetation and tree dieback. This past years work focused on riparian and forest area herbicide treatments for a broad list of invasive weeds through the 18.1 acres.

Project Site	Creek Name	NRMP Reach	Project Partners	Volunteer Hours	Invasive Removal Acreage	Planting Acreage	Linear Stream (feet)	Plants Installed	Notes
Jenne Butte (Johnson Creek) Site	Johnson Creek	NRMP - JC01	Professional contractor and city staff and MHCC Ecology students	82	81	0	0	0	Site is in year 3 of a multi-year treatment of garlic mustard. This past year the site had herbicide treatment to control garlic mustard over the 31 acres. English holly treatments is in year 1 of a multi-year project. Holly is a prevalent invasive weed we have in the city open space because of past agriculture practices. Many of the buttes in Gresham had holly farms that were abandoned. City provide outreach to students at Mount Hood Community College, Ecology class. Activities included a nature walk on Jenne Butte and removal of garlic mustard by hand. A total of 40 students spent 2 days learning about plants and more specially about the invasive weed garlic mustard. As part of this outreach students hand pulled garlic mustard around the butte.
Gresham Woods Site	Johnson Creek	NRMP - JC04	Professional contractor and city staff	0	41	0	3,450	2,630	Site is in year 4 of a multi-year and multi-unit restoration. Site has several restoration units in different phases of restoration. Gresham Woods (38 acres on north bank over 3 parcels) is a series of large parcels along the north bank of Johnson Creek. Site was initially restored 20+ years ago. Site conditions require additional restoration efforts. Baseline conditions include several large areas of red alder die off; extremely dense evergreen forest stands; large patches of dense English holly, English ivy, Himalayan blackberry and reed canary grass. This past years effort included herbicide treatments for a broad list of invasive weeds over the 41 acres and planting of 2630 bare root native plants.
McKinley Trunk Project Site; Jenne Creek headwaters	Jenne Creek	CIP PVJE01; NRMP - JE01	Professional contractor and city staff	0	12	0	1,170	0	Site underwent infrastructure development in 2018-2019 with a wastewater pipeline being installed within the area. A new wastewater pipe was installed that resulted in the impact of 4.0 acres of riparian and upland forest and emergent and scrub/shrub wetland area. Site is in the 5th year of a 5 year restoration plan. Site has stabilized and native vegetation has grown significantly in the restoration areas. This past years work included herbicide treatments for a broad list of invasive species. An Additional 8 acres of wetland adjacent to the wastewater pipeline alignment is in long-term invasive weed species maintenance and utilizes NR operating funds.
Brookside Development Site	Kelley Creek	CIP KCHKE07; NRMP - KE07	Professional contractor and city staff	0	4.5	0	1,150	0	Site is in its 7th year of a multi-unit and multi-year restoration. Funding for this project is supported by Development Permit fees for mitigation of Natural Resource Overlay impact area. Two separate units are under restoration. The first unit is in year 7 and has entered the maintenance phase for invasive weed species. The second unit is in its 3nd year of restoration. Work in this unit included herbicide treatments for a broad list of invasive weeds. No plantings were completed.
Meadow Creek Headwater Area	Meadow Creek	NRMP - CH05, CH03, GB-01	Professional contractor and city staff	0	8.2	8.2	725	625	The project is in year 3 of a multi-year restoration of the Meadow Creek headwater area. This area had a large die-off of red alder that resulted in the formation of a monoculture of Himalayan blackberry. Work completed at this site included an additional 3 acre cut of blackberry, herbicide treatments for a broad list of invasive weeds and planting of native shrubs and trees.
Chastain Creek Headwater Area	Chastain Creek	NRMP - CH05, CH03, GB-01	Professional contractor and city staff	0	7	7	620	400	The project is in year 3 of a multi-year restoration of the Chastain Creek headwater area. This area had a large die-off of red alder that resulted in the formation of a monoculture of Himalayan blackberry. Work completed at this site included an additional 3 acre cut of blackberry, herbicide treatments for a broad list of invasive weeds and planting of native shrubs and trees.

Project Site	Creek Name	NRMP Reach	Project Partners	Volunteer Hours	Invasive Removal Acreage	Planting Acreage	Linear Stream (feet)	Plants Installed	Notes
Hogan Butte Nature Park - Volunteer Events	NA	NA	City staff and student volunteers	588	8	1	0	185	School outreach this past year included Powell Valley Elementary and Springwater Trail High School. The city hosted 1 day of outdoor classroom activities for a 5th grade classroom's (46 students; 9 adults) from Powell Valley. Activities at the park included an nature education walk around the butte, cutting and planting live stakes, stormwater facility education, weeding, and laying mulch. Springwater Trail High School (147 students; 14 staff members) have been doing an annual volunteer day with the city for 5 years. This year's event was held at Hogan Butte Nature Park. Activities included a nature education walk, planting of native plants, potting native plants, and weeding and mulching.
Columbia Slough Basin									
Columbia Slough Water Quality Facility	Columbia Slough	NRMP - CS08	Professional contractor and city staff	0	14.8	0	155	0	Site is a regional water quality facility. Site maintenance is ongoing for invasive weeds. Invasive weed control in facility will help water quality treatment and overall site conditions.
Columbia Slough Wastewater Parcel	Columbia Slough	NRMP - CS06	Professional crew, CSWC, PGE Project Zero Interns	0	12.5	1.8	1,090	2,125	Site is in its 3rd year of a multi-year restoration. Baseline condition was a mowed agriculture area along the south bank of the Columbia Slough. City is restoring a 50-foot corridor next to the Columbia Slough. Work this past year included herbicide treatments for a broad list of invasive species and native planting of shrubs and trees. Additional spraying was completed on the north side of the Columbia slough to control Himalayan blackberry.
Fairview Creek Regional Water Quality Facility	Fairview Creek	NRMP - FC05	Professional contractor and city staff	0	9	0	0	0	Site is a regional water quality facility. Site maintenance is ongoing for invasive weeds. Invasive weed control in facility will help water quality treatment and overall site conditions.
Birdsdale Mitigation Site	Fairview Creek	NRMP - FC05	Professional contractor and city staff	0	8.5	0	1,470	0	Site maintenance of invasive weeds on a compensatory wetland mitigation site. Species sprayed for a broad list of invasive species .
Fairview Creek Headwater Wetlands	Fairview Creek	CIP 9FC006; NRMP FC06	Professional contractors, city staff, RLA students	555	6.3	2.2	1,050	3,050	Site is part of an ongoing restoration of a 40 acre wetland complex. Restoration maintenance has been ongoing since 2006 following a $750K floodplain wetland improvement project. Site work consists of spreading clean leaf mulch and live staking through it to reduce reed canary grass growth. A total of 1450 live stakes. Site work also includes spot spraying of a broad list of invasive plants to promote nesting of Western painted turtle. Large portion of work is done with partnership with Reynold's Learning Academy which provides a work program for high school students. The grant funding to RLA is $5600. Work they did included mulching, planting of live stakes, cutting blackberry and reed canary grass, and placement of tree protection. Work this past year also included the installation of 1600 bare root plants.
Clear Creek Middle School	Clear Creek	NRMP CC1	Natural Resource staff, student and teacher volunteers, PGE volunteers and CSWC	110	3	1	620	150	Clear Creek Middle School in partnership with the City of Gresham, PGE, and Columbia Slough Watershed council is restoring a compensatory wetland mitigation site on its campus. Work this past year included nature education for students, planting of native shrubs and trees, mulching, and invasive species removal using hand tools. City provides funding to the school in the form of a $1000 grant.
Sandy River Basin									
Ironwood/Salquist Site	Kelly Creek	NRMP - KC15	Professional contractor and city staff	0	19.9	6.8	1,825	6,875	Site is in its 4th year of a multi-year restoration of 7.5 acres of riparian and upland forest and emergent wetland. Site has several restoration units in different phases of restoration. This past years work focused on riparian and forest area plantings of native shrubs and trees; removal of 3.2 acre of Himalayan blackberry by mechanical means; and herbicide treatments of invasive weeds.

Project Site	Creek Name	NRMP Reach	Project Partners	Volunteer Hours	Invasive Removal Acreage	Planting Acreage	Linear Stream (feet)	Plants Installed	Notes
Palmquist Culvert Site	Burlin-game Creek	NRMP-BUR04	Professional contractor and city staff	0	1	1	685	550	Restoration activity at this location resulted from a CIP transportation/stormwater project to replace existing culvert in 2020. Site is in its 4th year of restoration. Work this past year included herbicide treatment for a broad list of invasive plant species and native planting of shrubs and trees.
Kelly Creek Water Quality Facility	Kelly Creek	NRMP - KC12	Professional contractor and city staff	0	9	0	750	0	Site maintenance is ongoing on invasive weeds at this regional water quality facility. Invasive weed control in facility will help water quality treatment and overall site conditions.
Total				**1,595**	**307**	**46**	**32,277**	**32,810**	

CIP =	Capital Improvement Program
CSWC =	Columbia Slough Watershed Council
EMSWCD =	East Multnomah Soil & Water Conservation District
RLA =	Reynold's Learning Academy
JCWC =	Johnson Creek Watershed Council

**All spraying was completed by a hired (licensed) City contractor and not included in volunteer hours.

**All spraying was completed by a hired (licensed) City contractor and not included in

Table 3-5 City of Gresham Integrated Pest Management Program Pesticide/Fertilizer Applications

Department	Product Utilized	Quantity	
Facilities Maintenance			
	Ranger Pro (isopropylamine salt of glyphosate)	42	oz.
	Spray-Rite (water safe adjuvant)	2	oz.
	Spray-Wet (nonionic adjuvant)	19	oz.
	Weed Zap (clove oil, cinnamon oil)	345	oz.
	Scythe (pelargonic acid)	111	oz.
	Crew (dithiopyr, isoxaben)	27	lbs.
	Spray Fast (water safe adjuvant)	2	oz.
	T-Zone (dicamba, sulfentrazone, triclopyr and 2,4-D)	1.5	oz.
	Spray 007 (nonionic surfactant adjuvant)	40	oz.
	Speedzone (carfentrazone-ethyl, mecoprop-p, dicamba, 2,4-D)	23.4	oz.
	Barricade DG Pro pre-emergent (prodiamine)	150	lbs.
Transportation	Gallery (isoxaben)	41.75	oz.
	Roundup	16	oz.
	Dimension	33	oz.
Wastewater	none	0	oz.
Watershed	Rodeo (Glyphosate [isopropylamine salt]) (PY 28 application)	236	oz.
	Rodeo (Glyphosate [isopropylamine salt]) (PY 29 application)	75	oz.
	Garlon 3A (Triclopyr [triethylamine salt]) (PY 29)	43	
	Snapshot (isoxaben, trifluralin) (PY 28)	20	lbs.
Natural Resource Program	Roundup Custom (Aquatic Glyphosate with no surfactant)	712	oz.
	Aquaneat (Glyphosate [isopropylamine salt] [aquatic])	2221	oz.
	Transline (Clopyralid [monoethanolamine salt])	16	oz.
	Rodeo (Glyphosate [isopropylamine salt])	198	oz.
	GlyStar Plus (Glyphosate [isopropylamine salt])	125	oz.
	Bronc Max -adjuvant (ammonium sulfate, citric acid)	0	oz.
	Imitator Aquatic (Glyphosate [isopropylamine salt])	0	oz.
	Milestone (Aminopyralid)	0	oz.
	Element 3A (Triclopyr [triethylamine salt])	1050	oz.
	Vastlan (Triclopyr [choline salt])	2817	oz.
	Garlon 3A (Triclopyr [triethylamine salt])	396	oz.
	Agridex -surfactant (petroleum distillates/hydrotreated light paraffinic	1583	oz.
	Competitor (surfactant)	1633	oz.
	Super Spread MSO (surfactant)	0	oz.
	Hi-Light (blue dye)	1442	oz.
Water	Crossbow (2,4-D/Triclopyr, Kerosene)	12	oz.
	Roundup pro (isopropylamine salt of glyphosate and ethoxylated tallowamine)	26	oz.
	SureGuard (flumioxazin)	2.5	oz.
Parks	Roundup Power Max (glyphosate)	94	oz.
	Site Pro Weed and Feed with Surge (2,4-D, mecoprop-p, dicamba, sulfentrazone)	700	lbs.

*Due to a production error, the Watershed Dept PY 28 quantities of chemicals failed to appear in the final copy formatting. That report has now been corrected and the quantities have been included in this report to bring this inadvertent omission forward.

PY 29 liquid totals	**11857 oz (95.4 gallons)**
	(wo adjuvants or dye)
PY 29 dry totals	**877 lbs**

Table 3-1: Total New and Redevelopment Acreage

Project Name	Land Use Type	Development Type	Location	WQ Treatment	Ownership*	System	Project Size/Area Treated (acres)	Construction Disturbance (acres)	Percent Impervious
Blue Pearl Phase 1	Transition Residential	Single Family Residential	282nd & Lusted	20 Streetside Stormwater Planters and 1 Detention Pond	Public	Kelly Creek	5.40	7.10	76%
Hogan Road Widening CIP Project	Transportation Corridor	Right of Way	Burnside/ Hogan Intersection	52 Stormwater Tree Wells	Public	Kelly Creek	1.35	1.35	100%
Pape Ditch Witch	General Industrial	Commercial	17217 NE Sandy Blvd	2 Streetside Stormwater Planters & StormTech Chambers	Private and Public	Columbia Slough	3.50	4.00	88%
Highlands at Pleasant Valley	Low Density Residential	Single Family Residential	SE 182nd Avenue	1 Detention Facility and 11 Streetside Stormwater Planters	Public	Johnson Creek	3.71	4.75	78%
Terrace at Pleasant Valley	Moderate Density Residential	Single Family Residential	SE Giese Road	1 Detention Facility and 17 Streetside Stormwater Planters	Public	Johnson Creek	6.25	7.90	79%
Total Disturbed Acreage								**25.10**	

*Public ownership is City of Gresham only. Private refers to all projects owned by entities other than City of Gresham.

Table 3.7 List of Businesses Inspected by Type

Automotive Businesses	Industrial/Manufacturing	Food Service Businesses
76 Station	Albertsons Distribution Center #8252	Mi Ranchito JAL
Akira Automotive	American Direct Procurement IN	162nd Glisan Market
Alignment 50	Andersen Electric Inc	2nd St Bar
Butte Motors	AQ Specialty Automotive	3 Reyes Restaurant
Chance's ARCO	AutoZone #3755	7 Eleven Store #35340A
Chevron Food Mart #1143	Britton Excavating LLC	Albertina Kerr - 162nd
Chevron Station #1001	Brownstone International Inc	Albertsons Food Center #564
Classic Collision	Cameo Cleaners	Asian Thai Bistro
Cleveland Auto Repair	Cardinal Health at Home	Blue Pine Sports Bar
Eastco Automotive Machine	Cascade Corporation	Bocelli's Ristorante
ELLIOTT AUTO SUPPLY CO., INC. DBA Facto	Choi's Kimchi LLC	Brookdale Mount Hood Senior Center
Fire Station 72 - Kane Drive	Christenson Electric Inc	Chang's Mongolian Grill
Fire Station 73 - Pleasant View	Coast Aluminum	Clear Creek Middle School
Fire Station 74 - Halsey	Cod Meat Inc	Cleary's Sports
Fix 4 Less addition	Crash Champions, LLC	Courtyard Fountains
Fix 4 Less Auto Repair	Dateline Exports Inc	Dominos Pizza
Fred Meyer FM Fuel #127	Eastside Paving Inc	Dominos Pizza #7224
FUEL MART, LLC â€¢ SPACE AGE	Eclectic Institute Inc	Dutch Bros - Stark
General Freight	Element Ergo, LLC	El Taco Rico
Goin Straight Wheel Alignment	Eoff Electric Supply Co Inc	Eve's Deli
Gresham AM/PM	Ferguson Fire & Fabrication	Felony Pizza Gresham
Gresham Autobody Pros	Formation Inc	Frenzi Frozen Yogurt
GRESHAM BUMPER & FENDER REPAIR	Geary Pacific Corporation	Gen Sushi
Gresham Chrysler Dodge Inc	Gonyea's Automotive	Giuseppe's Italian Restaurant
Gresham Ford	Gresham Glass Inc	Gresham Food Carts
Jiffy Lube #2527	Gresham Sanitary Service	GYRO HOUSE GRESHAM, LLC
Jiffy Lube of Gresham	GTO TIRES LLC	Harmony Montessori School
Jose's Road Service LLC	Guild Golf Carts	HEALTHY ACTIVE NUTRITION
JR's Autocraft	HAWTHORN HYDROPONICS, LLC	Izobilie Euro Foods LLC
Juston Olesen's Competition Paint LLC	HK Motorsports	Jackpot Bistro
Leathers Oil Co	I5 RV SALES LLC	Josephs Swirl Sandwiches
Leathers Shell #12	Icon Foods, Inc	Joy Teriyaki - 181st
Leathers Shell #18	Ideal Steel Inc	Joy Teriyaki - Highland
LOMELI AUTO REPAIR & SALES INC	Imperial Brown Manufacturing	Kelly Creek Superette
Lomeli Auto Repair Inc	IMPERIAL CABINETS & MILLWORK, INC	Kelly Gardens Residential Care
Lomeli Gresham Radiator	International Paper Company	Kuya Fred's Cuisine, LLC
Loop Hi-Way Towing	JL Industries Inc	La Herradura Mexican Restaurant
Magic City Garage	John's Affordable Auto Repair	La Tia Juana
Mago's Auto Sales LLC	Jose's Road Service LLC	Lee's Garden Chinese Restaurant
Midas Muffler Shop	JW Underground	Legacy Coffee
Northwest Wreath Company	Kelly Spicers	Legal Addiction Espresso
O'Reilly Auto Parts #2514	Knife River Corp Northwest	Lighthouse Deli - 182nd
O'Reilly Auto Parts #3542	Lipman-Portland LLC	Lucky 7
Petrocard	Logistics Insight Inc DBA Universal Truckload S	Mariscos El Malecon II
PNW Motors LLC	LOOPT WORKS	McMenamins Highland Pub
Portland Food Mart LLC.	Marathon Printing Inc	Mi Pueblo
R.S. Davis Metal Recycling	McDonald and Wetle Inc	Milton's Coffee Co
Safeway Fuel Station #1070	Medline Industries Inc	Mr. Chen's Chinese Kitchen
SP Petroleum PDX LLC	Merchants Metals	My Bar
Space Age #9 (AKV Mart)	Microchip Technology Inc	Nicks Pizza and Sports Bar
Sprinterpost	Midas Muffler Shop	Papa Murphy Pizza
T O C	Moen Machinery Co	Papa Murphys
The Offroad Shop and Automotive Service	Mt Hood Medical Center	Papa Murphys Take and Bake Pizza
Valvoline Instant Oil Change	Mutual Materials Co Inc	Pause Coffee
Washman 3 Minute Carwash	Northwest Handling Systems	PHO CHANG THAI, LLC
West Coast Metals	Omni Logistics, LLC	Pub 181
Xpress Tire & Auto Service	ONSEMI	Rivera Mansions

Zoom Transportation	Operations Center - City of Gresham	Rockin' Crab & Boiling Pot
	Operations Center-Parks Red Barn	SABOR AZTECA
	OPERATIONS MGMT INT'L INC	SABOR CONTRACHO, LLC
	OREGON AUTO AND TIRE SHOP LLC	Safeway #430
	Owens Corning Foam	Sam Barlow High School
	OXARC	Sapphire at Liberty Point
	Pacific Northwest Street Rods	Shari's of Halsey Crossing
	PacWest Machinery	Shari's Restaurant #227
	Pape Machinery Inc	Starbucks #69081
	Penske Truck Leasing Co LP	Starbucks Coffee #14043
	Performance Food Group Inc	Subway - Glisan
	Plexus Corporation	Subway - Stark
	Portland General Electric	Subway #14914 - 182nd
	Portland Star Plumbing LLC	Subway #36856 - 181st
	Prink Technologies	SUSHI EDO GRESHAM INC
	R2M2 REBAR & STRESSING INC	Sushi Village
	Racers Automotive	Taco Bell
	Revolucion Autobody LLC	Taco Bell #340
	Rob's Auto Repair LLC	Taco Time #6670
	Rock Haven	Thai Curry
	Rockwood Solid Waste Inc	The Hangout Sportsbar and Grill
	Royal Bearing	The Low Road
	Sanders Mobile Truck Repair, Inc.	Tienda San Miguel
	SANTANA AUTO REPAIR	Time Out Bar & Grill
	SCANDIA USA MIDWEST LLC	Tin Tin Buffet
	Shamrock Foods Company	Village Manor
	Sinclair and Rush INC	VN Fusion Bar N Grill
	SKYLINE AUTO GROUP LLC	Wichita Puffs Pub
	Solvita	Wingstop - Highland
	Staples Contract & Commercial	Wynwood Mt Hood Senior Living
	Sunset Motorsports	Safeway #430
	Superior Tape & Label	Harmony Montessori School
	TERZO ENTERPRISES, INC	The Hangout Sportsbar and Grill
	Thomas Cellars Inc	GYRO HOUSE GRESHAM, LLC
	Thomas Electric	Jackpot Bistro
	Tire Factory Inc	Rivera Mansions
	Total Rental Center	2nd St Bar
	Trailblazer Food Products	Legacy Coffee
	Tri Coat Painting Inc	3 Reyes Restaurant
	Trimet Ruby Junction Rail Maintenance Facilit	Kelly Gardens Residential Care
	United Rental	Sushi Village
	Vetsource	
	Yeon Building Mult Co	
	W B Painting & Decorating Inc	
	Wellington House Inc	
	Westech Construction Inc	
	WESTSIDE POWERSPORTS	
	Xpo Logistics Supply Chain, Inc	

List of 1200Z Permitted Businesses within Gresham Bolded if Inspected by DEQ or Gresham		
Albertsons Distribution Center #8252	2023 DEQ enforcement for monitoring violation	
Denton Plastics Inc		
Pella Vinyl Northwest Inc.	Monitoring waiver approved April 2023	
McDonald and Wetle Inc	Monitoring waiver approved April 2023	
Owens Corning Foam Insulation LLC	2023 DEQ enforcement for monitoring violation	
Cascade Corporation		
The Boeing Company	Monitoring waiver approved in 2021	
Rolling Frito Lay	2023 DEQ enforcement for monitoring violation	
International Paper Company		
Purcell Tire	2023 Enforcement for monitoring violation	
First Student Inc.	Monitoring waiver approved Feb 2022	

Columbia Brick/Mutual Materials		
Teeny Foods	Monitoring waiver approved Nov 22	
Pioneer Sheet Metal	Jan 2023 NOV issued by DEQ for improper storage of materials outside	
Trimet Maintenance Facility		
Gresham Wastewater Treatment Plant		
Cedarsource Manufacturing	Applied for a DEQ permit, status pending	
Shamrock Foods	Asserts private drainage to groundwater without backup, status under DEQ enforcement	
On Semi	Attained No Exposure Certification	
Hawthorne Hydroponics		
Performance Food Service		

Table 3.8 List of Potential 1200Z Permit Businesses Referred to DEQ

Business Name	Address	Classification
Merchant Metals	17090 NE San Rafael St	Fencing Supply Store
Restoration & Reproduction	17100 NE San Rafael St	Antique Vehicle Restoration & Fabrication
Refrigeration Contractors Unlimited	17170 NE SAN RAFAEL ST	Specialty Contractor
FFE Transportation Services Inc	17600 NE SAN RAFAEL ST	Process, Physical Distribution, Logistics Services
Money Saver Mini Storage	2118 SE HOGAN RD	Mini warehouse & Storage
Christensen Electric	17201 NE Sacramento St	Electrical Supply Company
Subaru Distribution	3700-3734 NE 242nd Dr	Automotive Parts Distribution Center
PGE Operations yard	1705 NE Burnside Rd	Electrical Supply Operations Yard
Graphic Packaging, Int'l INC	18683 NE SANDY BLVD	Manufacturing
Subzero Scientific	710 NE CLEVELAND AVE	Construction Machinery Manuf
Image and Graphics & Litho Inc.	4544 NE 190TH LN	Commercial Printing
Sheet Metal Training Fund	2379 NE 178TH AVE	Fabricated Metal Product Manuf
National Glass Ind Inc.	18659 NE SANDY BLVD	Goods Merchant Wholesaler
Precise Gresham, Inc.	2271 NE 194TH AVE	Warehousing Storage
Wellington House Inc.	19520 NE SAN RAFAEL ST	Goods Merchant Wholesaler
Sinclair & Rush, Inc.	2136 NE 194TH AVE	Manufacturing
U-Haul Co. of Oregon	704 NE HOGAN DR	General Freight Trucking
Irby Utilities	3019 NE 170TH PL	Electrical Apparatus & Equip, Wiring Supplies
Act Gas, LLC	2206 NW BIRDSDALE AVE	Petroleum Products Merchant Wholesaler
Terzo Enterprises	23680 NE GLISAN ST	Wood Container/Pallet Manuf
Excel, Inc (DHL Supply Chain)	23800 NE GLISAN ST	Freight Transportation
Heritage-Crystal Clean, LLC	17186 NE SANDY BLVD	Hazardous Waste Collection
OXARC LLC	19310 NE SAN RAFAEL ST	Industrial Machinery & Equip Merchant Wholesaler
Century Construction LLC	530 NE LIBERTY AVE	Roofing Contractor
Pape D.W., Inc.	17217 NE SANDY BLVD	Comm & Industrial Machinery Equipment
S&H Leasing Co	20016 NE SANDY BLVD	General Freight Trucking
ATLAS COPCO COMPRESSORS, LLC	3009 NE 172ND PL	Industrial Machinery & Equip Merchant Wholesaler

Table 3-9: City of Gresham Water Resource Division--Stormwater Budget Allocation (including staff and operating)

Program Area	PY 28 Budget FY 23-24 (Actual)	PY 29 Budget FY 24-25 (Projected)
Water Quality: **Policy Development** **Stormwater/Erosion Manual Oversight** **Permit Compliance** **Monitoring and Analysis** **Spill Response** **Public Education & Outreach** **Private Water Quality Facility Program** **Business Inspection & Enforcement** **Erosion Control Inspection & Enforcement** **TMDL Compliance** **Data QA/QC** **Training**	$ 1,157,708	$ 1,238,305
Natural Resources: **Restoration** **Encroachment Response** **Streambank Failure Response** **Capital Improvements** **Master Plan Updates** **Invasive Species Control** **TMDL Compliance** **Green Space Acquisition**	$ 700,851	$ 854,942
Engineering: **Capital Improvements** **Minor Drainage/Flood Control** **Public Works Standards** **Stormwater Manual Oversight** **Master Plan updates** **Mapping** **Stormwater Assets Management** **Training**	$633,176 $1.63M CIP	$887,262 $12.11M CIP*
Operations & Maintenance: **Systems Maintenance & Repair** **Equipment Repair & Replacement** **Spill Response** **Inspection** **IMP implementation** **Mapping** **Training**	$ 4,142,300	$ 4,945,551
Infrastructure Development (Development Engineering, Surveying, Public Works Inspections, Commercial Erosion Control Inspections)	$ 425,000	$ 453,500
City Admin Support, GIS Support, Management, Overhead	$ 2,736,686	$ 3,050,856
Total	**$9.80M Operating/Salary** **$1.63M CIP**	**$11.43M Operating/Salary** **$12.11M CIP (includes $8.41M for FY23/24 projects still in progress)**

Table 3.10 TMDL Implementation Plan BACTERIA

NONPOINT SOURCE TMDL IMPLEMENTATION PLAN

An "X" in the pollutant, watershed, or regulatory program box indicates what pollutant is targeted by this activity, in which watershed, and by which regulatory driver(s).

					Pollutant										Watershed						Regulatory Program					
Updated Best Management Practices (2023-2028)	**Commitment**	**Performance Measure**	**Status and Additional Goals, TMDL Year July 2023 through June 2024**	**Proposed Adaptive Management**	*Nutrient Related**	*Bacteria*	*Temperature*	*DDT/DDE*	*Dieldrin*	*Dioxin*	*PAHs*	*Mercury*	*Lead*	*PCBs*	*Johnson Creek*	*Fairview Creek*	*Columbia Slough*	*Sandy River*	*Columbia River*	*NPDES--MS4*	*Nonpoint Source*	*UIC (drywells)*	*NPDES--WWTP*	*Limit 10*	*Goal 5/Title 13*	
Private Sanitary Waste Systems																										
NPB-1 Mid -County Sewerage Project	**Program Commitment:** Report the connection of the final two hold out homes.	Annual as progress happens, until complete.	The final two properties have connected.	This BMP will not be reported in the future since it has been completed.	X	X									X	X	X	X	X		X					
NPB-2 Development Code Implementation	**Program Commitment:** Ensure that new and redevelopment connect to the public sanitary system.	Number of new connections to the City system	City billing records show 26,069 total active location accounts. 25,619 are wastewater accounts. An addition of 798 wastewater accounts. City code requires hookup to the city system when septic systems fail (for historically operating septic tanks) if a city wastewater pipe is located within 300 feet.	None proposed.	X	X									X	X	X	X	X		X					
NPB-3 Utility Billing Survey; Connect failing septic systems	**Program Commitment:** Ensure that failing onsite systems are replaced and/or connected to the City's wastewater pipe, if available per code.	Number of onsite properties that connect to public system	County sanitarian data shows that 12 septic tanks were decommissioned in Gresham.	None proposed.	X	X									X	X	X	X	X		X					
	Program Commitment: Respond to reports of private system spills to ensure prompt cleanup and repair	Number of failures reported, and outcome	One suspected residential cross connection was reported by resident. Wastewater used a camera to verify no sanitary cross connection to stormwater. Retirement home found to have a cross connection that overflowed up to 40 gallons of greywater/sanitary from kitchen to stormwater curb. The cross connection was repaired. No Public Wastewater System Discharges occurred.	None proposed.	X	X									X	X	X	X	X		X					
NPB-4 Houselessness Impacts to Water and Natural Areas	**Program Commitment:** Address environmental impacts from camping conducted by the unhoused, as resources allow.	Report efforts to aid the unhoused community. Report efforts to conduct litter cleanups and restore vegetation.	The City's office of Homeless Services provided assistance to 250 individuals living outside and provided preventative assistance to 72 households experiencing rent or job insecurity likely to cause eviction. Contractors assist with camp cleanups but total debris removed is not tracked.	None proposed.	X	X									X	X	X	X	X		X					

Table 3.11 TMDL Implementation Plan TEMPERATURE

NONPOINT SOURCE TMDL IMPLEMENTATION PLAN				Pollutant											Watershed				Regulatory Program				
Best Management Practice or Activity	**Commitment**	**Performance Measure**	**2024 Status**	Nutrient Related*	Bacteria	Temperature	DDT/DD E	Dieldrin	Dioxin	PAHs	Mercury	Lead	PCBs	Johnson Creek	Fairview Creek	Columbia Slough	Sandy River	Columbia R.	NPDES--MS4 Nonpoint Source	UIC	NPDES WWTP (Flows)	Goal 5/Title 13
Temperature Management																							
NPT-1 Natural Resource CIP Implementation	Pursue implementation of floodplain, wetland, and riparian projects with an identified temperature benefit, based upon the Natural Resources Master Plan (NRMP) and available Capital Improvement Program funding	Update System Development Charges to help fund green infrastructure, land & riparian easement acquisitions and mitigation Update Natural Resource Master Plan (NRMP) Report benefits by watershed and include: 1. scale in stream feet or riparian acreage (restoration, improvements, acquisition, easements 2. annual project costs 3. shade class effected, if applicable	Introduced new collaborative efforts with other groups within Gresham to leverage funding opportunities through partnerships to realize riparian improvements through Public Works Improvements outside of Watershed. This included: * Drafting new DES policy that CIP projects conducted within riparian corridors must restore not only project impact area but also a portion of abutting public riparian area to ensure adjacent weedy growth will not overwhelm newly restored area. This policy is being vetted Winter 24/25, with possible adoption Spring 2025. * Drafting a proposal for City-wide contributions to fund a new Natural Areas Management Plan that would begin to address overall forest health and protection of public trees on public land by reducing risk of damage from natural hazards (climate change, wildfire, extreme storms).			X				X			X	X	X	X	X		X			X
			City funds will be used as match to secure external funds to begin inventory, prioritization, and implementation on forest health measures across over 1000 acres of public land.																			

			NRMP Riparian and Stream Improvements: SW * 23rd culvert replacement and riparian planting completed * Meadow Creek confluence improvements: design, permitting, and land transfer completed. Construction and planting to be implemented in next permit year. * Main City Park wetland swale: design, permitting, and easement completed. Construction and planting to be implemented next permit year																				
		Develop subbasin watershed master plans focused on wide, resilient stream and floodplain corridors by combining goals of Stormwater Master Plan, Natural Resource Master Plan, and City's Hydromodification Strategy to identify large-scale riparian investments that serve multiple purposes and direct stormwater infrastructure System Development Charges to stream corridor investments	**Kelley Creek Watershed Master Plan:** first project under this initiative was started, including flow modeling and going out to bid for consultant support. Identified projects, final report, and cost estimate integration into Stormwater SDCs slated for completion in 2025.			X				X													
		Develop local wetland mitigation bank opportunities within 5th/6th field HUCs in order to maintain existing hydrologic function within DEQ-regulated basins. The only wetland mitigation bank approved in the region is in a different 4th field HUC and is hydrologically disconnected from all of Gresham's regulated waterways, thus use of this existing bank would allow export of high value wetland functions out of the Johnson Creek watershed.	**Pleasant Valley mitigation opportunities** are being re-explored, with new Watershed management agreement to find mitigation opportunities for private as well as public impacts in order to keep ecological function mitigation within City's subwatersheds.			X				X													

NPT-2 Riparian Planting	**Program Commitment:** Work with contractors, community, volunteers, and private landowners to install a native riparian canopy in identified shade target areas. Fast growing pioneer species may precede System Potential Vegetation species, depending on site conditions, in initial phases of restoration projects	Report benefits by watershed including: 1. acreage/linear feet of project 2. acres of noxious weeds treated 2. total annual budget 3. #stems planted 4. statement of existing shade classification within project sites 5. partners/volunteers involved	Restoration efforts continued at the same scale as prior years. Table 3-4 provides details on individual sites. The distribution of projects among watersheds were: Sandy Basin: Kelly Creek (3 sites) Burlingame Creek (1 site) Willamette Basin Johnson Creek main stem (5 sites) Jenne Creek (1 site) Meadow Creek headwaters (1 site) Fairview Creek (2 sites) Columbia Slough (1 site)			X				X			X	X	X	X	X		X			X
NPT-3 Monitoring and Reporting	**Program Commitment:** Annually report on implementation of projects; every 5 years report on density, species, survival statistics; every 10 years provide an analysis of change in shade conditions.	Every 5 years: stems installed; partners/volunteers involved Every 10 years: change in shade classification conditions and metrics related to Natural Resources Master Plan update. Non-repeating projects like the a forest health assessment findings will be reported using acreage to denote the extent of areas declining or improving.	In this permit year the City identified funding to increase staff levels in the Natural Resources Program from 3 FTE to 4 FTE, adding a new field ecologist who will be creating geospatial referenced photo tracking, using 360 photo methods, of all restoration sites.			X				X			X	X	X	X	X		X			X

NPT-4	**Program Commitment:** Annually report on Development Code implementation (Urban Dev & Planning Dept), particularly the Natural Resource Overlay (NRO) and other related ordinances to preserve riparian canopy and minimize soil disturbance	Annually report on: 1) Any updates to Comp Plan Vols 1-3 related to protections for riparian areas, improving shade conditions, and prevention of Hg discharge 2) # of land use applications issues for projects with NRO impacts, including acreage impacted and mitigated 3) enforcement actions related to riparian areas	No updates to Comp Plan or Development Code in 2024, but both are anticipated in 2025, related to Floodplain protections for Endangered Species, and code clarifications in the riparian buffer-related overlay (NRO) There were 5 land use permits with NRO impacts issued this permit year, with a total of 3168 sq ft of riparian impacts, and a total of 5,888 sq ft of restoration/mitigation required for those impacts. There were 3 code enforcement cases opened involving riparian areas on Fairview Creek, Butler Creek, and Meadow Creek. Resolution and impacted stream feet or riparian square footage will be reported in next permit year as resolutions are completed.			X				X			X	X	X	X	X					

Section Four – City of Fairview Summary of Program Monitoring

Municipal National Pollutant Discharge Elimination System Annual Report for Permit Year 29, Permit #101315, November 1, 2023

Executive Summary

The City of Fairview (City) manages the stormwater system with the goal of reducing pollutants to the maximum extent practicable, preventing flooding and enhancing natural resources. The City is a co-permittee with the City of Gresham on the National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Permit (#101315).

DEQ reissued the Permit on October 1, 2021 requiring the City to modify the SWMP to reflect the new permit conditions. The City's 2022 SWMP incorporates the new Permit conditions and includes best management practices (BMPs) and other elements intended to reduce the introduction of pollutants to the maximum extent practicable (MEP). The Stormwater Management Plan (SWMP) was last modified on December 29, 2015 in accordance with Schedule B.4.a of the City's NPDES MS4 permit requirement for updates.

This Permit Year (PY) 29 Annual Report documents implementation activities from July 1, 2023 through June 30, 2024 within the city limits of Fairview. Activities include, but are not limited to, the Best Management Practices (BMP) contained within the Stormwater Management Plan (SWMP). The status of the BMPs and adaptive management are summarized in the table that follows. Table 4-2 (Prioritization Criteria) summarizes the time period July 1, 2023 to June 30, 2024 implementing the 2022 SWMP. Section 2 of this report summarizes the Environmental Monitoring Program that is conducted by the City of Gresham on behalf of the City of Fairview.

As part of the annual adaptive management process, data and feedback were collected from staff responsible for implementing/reporting on each BMP. Factors considered include but are not limited to: Was the BMP measurable goal attained? If not, describe circumstances why, and how progress will be made toward future attainment. For multi-year BMPs, were milestones or timelines met? Can we feasibly refine or improve the BMP to gain efficiency or effectiveness in removing stormwater pollutants? In addition to assessing the implementation of each BMP, staff weighed resource availability and needs related to the overall stormwater program, including consideration of budget/funding, training needs, new technology and available equipment. The annual adaptive management process will inform any alterations to the stormwater program or future modifications to the SWMP.

There are no Urban Growth Boundary expansion areas contiguous to the City of Fairview. Consequently there are no associated concept planning, significant land use changes or significant development activities to report for PY 29.

Stormwater Management Program Budget

City of Fairview Stormwater Management program costs for Permit Year 29 are primarily associated with the Department of Public Works.

Stormwater fund expenditures and anticipated budget allocations incorporate wages and benefits, operating materials, equipment repair/maintenance, water testing (NPDES compliance), storm water disposal (NPDES permitting), improvements, and general administration.

Street fund expenditures and anticipated budget allocations incorporate wages and benefits, operating materials, maintenance services (including IGA with Multnomah County), equipment repair/maintenance, improvements, traffic calming, footpaths and bike trails, and general administration.

The table below outlines fund expenditures for PY 29 and provides the anticipated budget for Permit Year 30.

Table 4-1	2023-2024	2024-2025
Program Area	PY 29 Expenditures	PY 30 Anticipated Budget
Stormwater Fund	$612,288	$2,398,687
Street Fund	$678,373	$2,124,367

Stormwater Assets Maintenance Program (SMP) A-C.

Activity Name	Description	Measurable Goal	Tracking Measures	Reporting Metrics
A. CC/TV/Pipe Cleaning	The City's stormwater system currently consists of approximately 13.6 miles of pipes that drain to both surface and groundwater. The City inspects a portion of its existing pipes each year for assets management that record the condition and repair needs in the near and long term. Pipes are cleaned to remove excessive buildup, if the SOP threshold for cleaning is met.	Inspect 1 - 2 miles, clean if SOP threshold is met	Inspect: annually/ongoing Cleaning projected to be an average of 1-2 miles over permit cycle	annually/ongoing
B. Storm Drain Cleaning	The City's stormwater system currently consists of approximately 490 stormdrains that drain to both surface and groundwater. Arterial drains are priority due to higher pollutant loads than lower traffic streets and residential are also a priority due to potential for clogging and minor flooding. Inspection of all drains is a goal, but due to parked cars (even after notices are given) 100% is not attainable. Studies have shown that drains tend to remobilize trapped sediment once 2/3 or more full, and at this time is the City's SOP cleaning threshold. Typically, the City cleans all drains regardless of reaching the threshold, which is a higher performance standard. The range quoted allows flexibility in work load shifting to address other significant water quality facility rehabilitation activities in the future, as needed, while still meeting objectives over the permit cycle. • Outfalls: 38 total (9 High Priority Outfalls) • Underground Injection Control Facilities (UICs) / Sumps and Sedimentation Manholes: 3 total • Flow Control Manholes: 4 total • Vortex Manholes: 3 total • Trash Racks: 3 total • Weir: 1 total • Oil Water Separator: 1 total • Storm Cartridges/Filters: 2 total • Detention Pipelines	Inspect 50 percent of outfalls. Clean catch basins and inspect adjacent pipes in one third of the City annually. Clean all water quality manholes (5). Update maps of City Structural Stormwater Facilities.	Track facilities inspected and maintained. Track number of catch basins cleaned. Estimate quantity of sediment removed from catch basins and water quality manholes.	Total tracking of facilities inspected and maintained the following: • 27 out of 39 (69%) Outfalls were inspected. City was unable to gain access for the remaining 12 Outfalls. • No catch basins were cleaned in the year 2023 due to County's fleet needing shop maintenance. • Same status for the all the BMP's below. Vactor fleet were not available to perform maintenance on the all structure list below. • Underground Injection Control Facilities (UICs) / Sumps and Sedimentation Manholes: 3 total • Flow Control Manholes: 4 total • Vortex Manholes: 3 total • Trash Racks: 3 total • Weir: 1 total • Storm Cartridges/Filters: 2 total • Detention Pipelines Crestwood's Oil Water Separator is in need of maintenance. The City has had a hard time getting Contech (supplier) to respond. River City Environmental will be the second contact for maintenance and goal is to have maintenance before Winter of 2023. Updating GIS map of City Structural Stormwater is Ongoing Annually.
C. Maintain Green Infrastructure	Inspect and maintain vegetated facilities. It is important to note that vegetated facilities require the control of noxious weeds as well as thinning, pruning, plant replacement, in addition to sediment removal. Plant removal over time is beneficial, as some plants uptake pollutants in their roots and leaves. There are 5 neighborhood ponds that require sediment removal based on capacity for accumulation (varies from 5-12 year lifecycle). Perform inspection and required maintenance as stated in the O&M Plan–clean stormwater detention basins in areas where sediment and/or debris tend to accumulate. Lastly, a smaller portion of annual hours are utilized for bio-filtration swales. stream vegetation/woody debris support work. • Rain Gardens: 4 total • Detention Ponds: 5 total • Natural Streams • Bio-filtration Swales	Inspect 50 percent of ponds, swales and ditches. Inspect natural stream channels from bridge and road crossing. Maintain vegetation and control weeds using Integrated Pest Management techniques. Update maps of City Structural Stormwater Facilities.	Track facilities inspected and maintained. Estimate quantity of sediment removed from pond, swales and ditches. Annually/ongoing	All facilities were maintained. All facilities were checked off on a form. Sediment was not removed this year, only maintenance of vegetation. GIS map updates on City structural stormwater facilities are ongoing.

Stormwater Assets Maintenance Program (SMP) A-I.

Activity Name	Description	Measurable Goal	Tracking Measures	Reporting Metrics
A. Proprietary Devices (grey)	There are 1 Proprietary Devices with multiple filter cartridges (varies 1-12 per device) which are maintained at the frequency recommended by the manufacturer.	Inspect 100% of Proprietary Devices Clean based on Manufacturers threshold recommendation.	Annual inspection, cleaning typically includes Sediment removal from about 1 proprietary devices annually	Crestwood Shop is in progress
B. Spills, Illicit Discharge Investigation, Emergency Response	Investigate and/or assist with spill response, illicit discharge concerns, emergency stormwater controls for other department assistance, natural disaster response (flooding, downed trees, etc.)	Follow City Spill Response and Illicit Discharge Investigation procedures Conduct Spill Response all Department training and procedure review twice during the permit cycle	annually/ongoing	annually/ongoing
C. Illicit Discharge Enforcement	Implement City code sections 13.40.050 and 13.40.110: • City code section 13.40.050 prohibits constructing, using, maintaining, or continuing an illicit connection to the storm drain system. • City code section 13.40.110 discusses enforcement actions for failing to comply with control of non-stormwater discharge. The penalty for a first violation is $250. A penalty of $1,000 may be imposed for each subsequent failure to comply and each day of a continuing violation shall constitute a separate offense. The City may order compliance by written notice that includes performance of monitoring, analysis, and reporting; elimination of illicit connections or discharges; abatement or remediation; payment of fines; and implementation of source control or treatment BMPs. The public works director may also exercise authority to enforce a construction permit or NPDES permit through a stop work order if necessary.	For identified illicit discharges conduct appropriate enforcement actions.	Track number, location and resolution of enforcement actions.	There were 2 illicit discharges enforcements this permit year.
D. Illicit Discharge Field Screening Procedures	Conduct dry weather inspections of accessible outfalls following the procedure in the Stormwater Operation and Maintenance (O&M) Manual to search for, detect, and prevent illegal dumping of pollutants and illicit connections (including connections from sanitary sewers and commercial and/or industrial wastewater sewers) to the storm sewer system. Any dry weather flows identified will be reported to the public works department. Annually update maps as necessary to indicate field screening locations.	Inspect accessible outfalls annually. Maintain maps of outfall inspection locations.	Track number and percent of outfalls inspected.	The City of Fairview has reviewed its outfall inventory and identified a total of 38 outfalls; 8 of which are categorized as high priority outfalls. Inspected 27 out of 38 outfalls (71%) this PY 29 Records are maintained in paper and electronic form. The City will continue to update its GIS map as needed.
E. Illicit Discharge Investigation Procedures	Implement follow-up actions on a prioritized basis when problems are reported to the public works department. Follow up actions may include sampling for pH, dissolved oxygen, temperature, conductivity, ammonia, and total chlorine. If elevated results or poor water quality are detected, additional samples could be collected for lab analysis. If screening results indicate a potential problem, staff will conduct upstream investigations. The City will revise and document standard operating procedures to address new permit requirements and to document and update the details of the illicit discharge field screening and investigation procedures by June 30, 2012.	Annually review and update Illicit Discharge and Investigation Procedures related to mapping, enforcement response and pollutant parameter action levels. Respond to illicit discharges within 5 days of source identification..	Track number and type of problems reported, and track problem resolutions. Track status of revisions to procedures.	1. Sediment Runoff City noticed sediment runoff entering nearby storm drain caused by a homeowner trenching their yard. Homeowner was informed of the violation and homeowner addressed and resolved the issue. 2. Catch basin at Intersection of Hancock and NE 227th Ave On July 21, 2023 there was complaint of oil and antifreeze entering nearby catch basin. This was caused by perpetrator performing maintenance on a car on the street. There were numerous attempts to catch the perpetrator in action to file a code enforcement on him. The catch basin was cleaned and tested by River City Environmental. Tests showed no sign of contamination in catch basin. The violation by perpetrator stopped soon after.

Stormwater Assets Maintenance Program (SMP) A-I.

Activity Name	Description	Measurable Goal	Tracking Measures	Reporting Metrics
F. Spill Prevention	**Wellhead Protection Program.** The wellhead protection program serves to prevent spills and illegal dumping. The City will work to maintain its existing agreement with the City of Gresham for wellhead inspection in the Columbia South Shore Well Field Wellhead Protection Area and continue to implement wellhead protection throughout Fairview for the protection of groundwater. This program is included here because of its residual benefits to stormwater. **Wellhead Protection - Intergovernmental Agreement.** The City of Gresham and the City of Portland entered into an intergovernmental agreement for the Implementation of the Columbia South Shore Well Field Wellhead Protection Program in 2003 (City of Gresham contract number 1609). This agreement provides protection of the Columbia South Shore Well Field Wellhead Protection Area lying within Gresham and Fairview from contamination by hazardous substances generated at industrial and commercial facilities.	Coordinate with the City of Gresham to conduct inspections once during the permit term of all businesses with regulated quantities of hazardous materials in the well field.	Track the number of inspections conducted.	City of Fairview encompasses and area of 3.5 square miles and is located in the Columbia South Shore Wellfield Protection Area. City of Fairview maintains the existing Intergovernmental Agreement with the City of Gresham established in 2003 for inspection of the regulated and monitored industrial/commercial facilities in the Columbia South Shore Wellfield Protection Program, (Zone 1). This Permit Year 29, Gresham Businesses were inspected. Fairview will be inspected in PY 30. "The Columbia South Shore Well Field Protection Program Committee meets quarterly to discuss any changes to code provisions and updates of the Wellhead Protection Program Reference Manual."
	Fairview has adopted Ordinance #12-2002 to protect the Columbia South Shore Well Field Wellhead Protection Area from contamination by hazardous substances by establishing an inspection and enforcement program governing the utilization, storage and transportation of hazardous materials in Fairview's portion of the Columbia South Shore Well Field Wellhead Protection Area. A wellhead inspection is performed at commercial and industrial facilities by the City of Gresham. The entire city, except for a residential area, high school and park, is included in the wellhead protection program. Fairview, Gresham and Portland Staff meet at least annually to discuss any changes to code provisions and any rules promulgated thereunder by either party. Wellhead Protection - City Code and Reference Manual.			
	Wellhead protection is discussed in City code chapter 16.10. A wellhead protection program reference manual has been developed that establishes the wellhead protection boundaries. The code also includes requirements for reporting, standards, and inspections related to the storage, handling, use and transportation of hazardous materials; penalties for violations and enforcement actions; compliance requirements; building and site permit review and approval requirements; and inspection fees.			
G. Spill Clean-up	Maintain agreement with the City of Gresham Fire Department for clean-up after structural fires and vehicular accidents to prevent pollutants and debris from being washed into the storm drain system. When there is a hazardous spill or a spill of any other substance that: • Is hazardous in any quantity • Is non-hazardous and greater than 42 gallons on the ground • Or is any quantity that has entered a waterway or a dry well. The City of Gresham Fire Department staff notifies the Oregon Emergency Response System (OERS). OERS then notifies the Oregon Department of Environmental Quality (DEQ) and other state and local agencies that may be affected. The responsible party, if identified, is required to contact an environmental clean-up company and pay for clean-up costs. Examples could include spillage of a 55-gallon-drum of restaurant grease or sanitary sewer overflows on private property, resulting in or having the risk of resulting in, discharges to the public stormwater system. DEQ remains the enforcement authority in these cases. DEQ may choose to enforce against the responsible party under the following conditions: 1) the party has acted maliciously; 2) the party is a repeat offender; or 3) the party has failed to report the incident to DEQ.	Maintain agreement with City of Gresham Fire Department. Investigate spills and provide emergency containment and clean-up as necessary.	Track spill locations, type of materials and response activities.	1. October 20, 2023: There was a minor fuel spill caused from a pump's nozzle in Chevron that had maintenance issues. Fairview was notified by Gresham and by then, Clay was already taking care of it. Clay sent an email the next day confirming the maintenance issue had been addressed and spill was cleaned up.
	Non-Hazardous Substances Public Works staff will investigate and provide emergency containment and clean-up as necessary. If the responsible party can be identified, he or she is directed to provide containment and site clean-up. If the spill is an imminent threat to waters of the state, the City reserves the right to provide clean-up and bill the responsible party for the work. The responsible party will be invoiced for any response and clean-up provided by the City. Examples include spills or dumping of paint, auto fluids, carpet cleaning wastes or concrete, etc. into catch basins or onto the street. In non-emergency situations, such as dumping of debris on private property near a stream bank, Public Works staff will notify the responsible party, verbally and in writing, and specify a timeframe for clean-up. Staff will refer the incident to Code Enforcement if the responsible party does not respond within the specified time frame. Code enforcement has the authority to issue Abatement Procedures, Violations or Civil Actions.			
	Releases from Traffic Accidents If there is a spill of automotive fluids resulting from a traffic accident, the Gresham Fire Department will spread an absorbent compound (usually clay) and specialized absorbent pads on automotive fluids. Buckets are placed underneath dripping fluids. The road is swept and cleaned and, when necessary, additional protection is placed around the catch basins. Large leaking spills from commercial vehicles or semi-trucks are captured using a children's plastic pool. From a legal standpoint, the generator of the spill is responsible; therefore the waste materials are bagged and placed inside the wrecked vehicle or given to the tow truck driver for disposal. The City will perform the clean-up or utilize private clean-up contractors in order to continue the spill response program, when no responsible party can be identified.			

Activity Name	Description	Measurable Goal	Tracking Measures	Reporting Metrics
H. Construction Site Inspections	The City currently reviews plans and inspects construction sites required to meet the City's erosion control standards using the following procedures: 1. Visit every site over 1 acre after the first significant rainfall event and periodically thereafter. If time is limited, the City prioritizes inspections by visiting problem sites first, then visiting facilities that would have the highest environmental effect if the erosion control failed.	Inspect all construction sites required to meet City erosion control standards. Make the Erosion Prevention & Sediment Control (EPSC) manual available online. Annually review code provisions.	Track the number of sites that were permitted and inspected. Report the number and type of enforcement actions.	A total of 9 sites were required to meet erosion control standards There were 14 enforcements made during the construction inspections out of +80 inspections. They include re-establishing downed sediment fence, sweeping dirt tracking, compromised berms, unclogging catch basins and covering bare soil surfaces. Sites with active 1200-C Permits were inspected following 1/2" of precipitation. The municipal code is reviewed for compliance with stormwater requirements on an annual/ongoing basis.
I. Good Housekeeping: O&M Yard	The City has one facility that includes the treatment, storage or transport of municipal waste. This facility is the Corporation Yard Dumpster. Collection of waste from municipal litter receptacles is collected and stored in a dumpster at this site until the City's garbage hauler collects the waste on a weekly basis. The dumpster has a cover on it and runoff from the site is treated by a structural stormwater filter. No additional stormwater management practices are deemed necessary for this site. Update SWPPPs for two municipal facilities and conduct annual inspections.	Annually inspect two municipal facilities (Crestwood and Public Works Shop)	annually/ongoing	annually/ongoing inspections of these two sites were performed this permit year.

Public Land Management (PLM A-E)

Activity Name	Description	Measurable Goal	Tracking Measures	Reporting Metrics
A. Consolidated Stormwater Master Plan (CSMP)	The Consolidated Stormwater Master Plan (CSMP) adopted in 2007 combines infrastructure improvements including retrofit opportunities with federal and state water quality requirements. Projects were developed to address water quantity and quality issues, utilizing hydrologic and hydraulic modeling as well as information from the TMDL regulatory program and the NPDES stormwater discharge permit.	Continue to make progress in the implementation of the CSMP. Update CSMP within one year of permit issuance.	Track the number, type and watershed location of projects that are completed.	The Consolidated Stormwater Master Plan (CSMP), CIP project list was updated by the City of Fairview and Brown and Caldwell in 2016. There were no projects related to the Consolidated SW Master Plan (CSMP) designed/constructed this PY 29
B. Integrated Pest Management	The City encourages use of the Portland Parks and Recreation Pest Management Guide. This guide emphasizes controlling pests that are harmful to the health or aesthetic value of park plantings in a manner that is cost-effective, safe, and environmentally responsible. It is an approach that uses multi-faceted strategies that minimize negative impacts on the environment and on human health. The controls used in this program include manual, mechanical, cultural, biological and chemical methods. Often a combination of methods is used. Examples of Integrated Pest Management include: • Timing of chemical applications to avoid runoff. • Mowing high grass and brush to reduce weed seed crops in rough areas. • Pruning of trees and shrubs to increase air circulation to reduce susceptibility to disease and insect problems. • Appropriate fertilizing to encourage plant health and resistance to pests (i.e., weeds, insects and disease). • Using plants with natural resistance to pests. • Combining turf aeration and over-seeding along with any application of broadleaf weed control to eliminate the cause of the problem, and therefore the need for repeated applications.		Track City planting projects that incorporate native plants.	There was no planting projects performed this year. Well 10 project coming down the pipe line (1 year) includes de-weeding Fairview creek's bank and planting scope of work. Design to be completed end of Fall of 2024 and construction to start by Winter of 2024
C. Chemical Applicator Licensing	Maintain staff certification in public pesticide application and follow Oregon Department of Agriculture (ODA) requirements related to herbicide application.	All chemical applications will be supervised by an ODA Certified Applicator.	N/A	3 City employees have Chemical applicator licensing.
D. Native Vegetation	Encourage the use of native vegetation in riparian areas on private and public property to reduce the need for fertilizers, pesticides, and herbicides. Planting and landscape policies for riparian buffer areas encourage use of vegetation (indigenous or imported) that is self-sustainable without the need for pesticides or herbicides. Riparian buffer permits are issued for alterations to the landscape within 50 feet of Fairview Creek, Fairview Lake, the Columbia Slough and their tributaries (City code chapter 19.106).	Review planting plans associated with riparian buffer permits.	Track number of riparian buffer permits.	0 riparian buffer and 1 dock permits were reviewed this year.

E. Design Standards for Public Projects	Follow the Standard Specifications for Public Works Construction which requires treatment of stormwater runoff through the use of BMPs. Maintain database of BMPs that are implemented.	Ensure that public works stormwater related projects address treatment of runoff as appropriate.	Number and type of public stormwater quality BMPs built.	No public stormwater quality facilities were built this permit year.

Pollution Prevention from City Activities (PPCA A-I)

Activity Name	Description	Measurable Goal	Tracking Measures	Reporting Metrics
A. O&M for Public Roads, bridges: sweeping	The City contracts with Multnomah County for street sweeping (approximately 6 times per year). The frequency is based on weather conditions, road conditions and funding.	Maintain contract with Multnomah County.	Track frequency of sweepings.	Multnomah County conducted a total of 14 street sweepings this PY 29. Please see details above, Right of Way operation and maintenance. March: 3 October: 4 November: 3 December: 1 August: 3
B. O&M for Public Roads, bridges: deicing	Sand and gravel are applied to roadway surfaces to assist with traction during inclement weather. The sand is removed and recycled as soon as possible after the snow or ice event. Yard debris is picked up from residents weekly by the City's solid waste provider. The Winter Road Operating Plan is available on the City's website.	As weather permits, remove gravel when it is no longer needed.	Track processes conducted for sand and gravel removal.	3-4 yards of sand/gravel was applied to 15 County/City intersections only. Only snow plows took place along streets. Once weather permitted, County sweepers cleared intersections free of sand/gravel
C. Right of Way – O&M	The City contracts with Multnomah County for road maintenance that includes roadside mowing, brushing and pavement maintenance. The maintenance program is substantially similar to, and at least as protective as, the ODOT Routine Road Maintenance program approved under the current 4(d) limit.	Maintain contract with Multnomah County for road maintenance.	N/A	City of Fairview maintains an IGA with Multnomah County for road maintenance activities. Road maintenance activities performed at county roads this PY 29, are as follows: • Catch basins cleaning - 0 times this year • Roadside mowing - As needed • Route sweeping - 14 times • Misc. sweeping (snow gravel pick up) • Crack Sealing Pavement Preventive Maintenance - None this PY • County has repaired some potholes in Fairview. • Pavement Marking Restoration - None performed this PY
D. Water Line Flushing	The City periodically flushes all public water lines to ensure the reliability and quality of the domestic water system. To minimize impacts to the storm system, discharges are dechlorinated with the use of ascorbic acid (vitamin C). The flushing crew periodically tests the chlorine levels of the discharge prior to entering the storm system.	Dechlorinate waterline flushing with vitamin C.	NA	All lines flushed according to procedures. No chlorine detected.
E. Sanitary Sewer System Program	Limit wastewater infiltration through the operation, maintenance and construction of the sanitary sewer infrastructure based on existing conditions and projected sanitary flows.	Respond to pump station failures. Perform cleaning of the problem areas of the City's sanitary sewer system. Construct pipe restoration projects to replace defective pipe and reduce inflow and infiltration.	Track identified sanitary problems and resolutions related to the storm system each year.	No sanitary problems occurred this year.
F. Municipal vehicle monitoring and maintenance	Ensure that materials from municipal vehicles do not leak, spill, or otherwise release contaminants onto roadways or open spaces where they may be washed into storm drains or waterways. Municipal vehicles are inspected by the driver during loading and unloading. If any leaks are observed between the regular maintenance the vehicles are repaired immediately.	Maintain vehicles on a 6-month schedule.	Track status of municipal vehicle maintenance.	All City fleet vehicles (Public Works and Administration) were regularly maintained and serviced as scheduled (every 6 months) with auto service providers. Vehicles maintenance had no issues.
G. O&M Plan	Use the O&M Plan as a guide for designing and maintaining public storm facilities in order to maximize water quality benefits while maintaining flood capacity. The O&M Plan is intended to help locate and eliminate pollutants and provides a framework for maintaining field inspections records.	Implement the procedures in the O&M Plan. Review the O&M Plan by November 1, 2013, and update as necessary to maximize water quality benefits while maintaining flood capacity.	Track annual changes made to the O&M Plan	Changes to the O&M plan are ongoing.
H. Litter Receptacles	Provide, collect, and maintain litter receptacles in strategic public areas and during major public events to provide disposal of pet waste bags and prevent trash from entering the stormwater system.	Maintain at least one litter receptacle at all public parks greater than 1 acre. Provide collection a minimum of once per week.	Track number of litter receptacles.	40 receptacles are maintained/provided collection at least one day of every week.
I. Staff Education and Training	Conduct training for new employees and contract employees on stormwater requirements and train existing employees when there is a significant update to the documents used by the City that regulates stormwater pollution control activities.	Provide annual training to personnel involved in stormwater management.	Track personnel receiving training annually and document the trainings received.	There was a staff training for this permit year on June 19, 2024. In the future, staff training will occur right after new years as to avoid Winter workload and avoid inclement weather impact to staff training schedule.

Public Reporting, Engagement, Outreach & Behavior Change (PREOB A-E)				
Activity Name	**Description**	**Measurable Goal**	**Tracking Measures**	**Reporting Metrics**
A. Report Illegal Dumping and Illegal Connections	Continue to facilitate efforts by the public to report illegal dumping, illicit connections, and other incidents. Implement public reporting program as described in the Stormwater Operation and Maintenance (O&M) Manual.	Respond to reports and/or complaints from citizens regarding observed water quality problems within 24hrs or the next business day if report is made during the weekend.	Track the number of reports/complaints received, and the follow-up actions conducted (including the timing of the follow-up action).	There were 2 reports/complaints received this year.
B. Illegal Dumping and Illegal Connections, Public Education	Educate the public about the harmful effects of dumping oil, antifreeze, pesticides, paints, solvents, and other potentially harmful chemicals into storm sewers or drainage channels.	Support recycling and disposal programs; programs that provide convenient means to dispose of materials, existing solid waste management programs. Educate the public regarding the stormwater pollution that results from dumping and illegal connections.	Track the number of public recycling and disposal programs conducted annually.	The Fairview Point contains outreach articles educating the public about harmful effects of dumping hazardous materials and waste into storm sewers or drainage channels as well as public recycling and disposal information. The City's website posted contact information as well about reporting illegal dumping and illegal connections (BMP 4.3). Staff also track public complaints, reports, and inquiries regarding illegal dumping, connections. There is a Fairview website page that contains informational links in regards to proper electronics, hazardous material, and appropriate sorting disposal. There were 5 news letter articles published during PY 29 about educational outreach on healthy environment.
C. City outreach	The City uses a variety of communication channels to reach its residents. Examples include its website, print newsletter, social media, earned media etc. Current City public education programs that are related to stormwater include educational programs on stormwater quality and the use of nonpolluting alternative garden products, including low-volume uses of pesticides, herbicides, and fertilizers (e.g., household uses).	Publish stormwater related articles in the City newsletter. Support local education programs.	Track newsletter articles produced annually. Track activities conducted to support local education programs.	Educational Outreach Articles: The City of Fairview utilizes the local monthly newsletter "Fairview Point" to provide educational materials related to stormwater. Applicable articles are as follows: 1. Fairview on the Green 2. Prevent Clogging of Catch Basins 3. Preventing Leaks into Catch Basins Local Outreach Effort: City of Fairview Public Works staff maintained a booth at the "Fairview On The Green" event during the month of July. The booth displayed Rainfall/Water Cycle and Surface Water Models and distributed brochures on stormwater education, healthy streams, low impact development programs, use of pesticides, natural lawn care/gardening techniques, erosion control best management practices, water conservation kits and other stormwater related educational subjects. City of Fairview is currently participating in the Storm drain Cleaning Assistance Program (SCAP) (schools, apartments, industrial/commercial facilities) and the Backyard Habitat Program hosted by the Audubon Society through the City of Gresham. Other agencies that are affiliated with this program are: City of Wood Village and City of Troutdale Large scale public education campaigns: • City of Fairview participated in Public Service Announcement (Do the right thing campaign through an IGA with the City of Gresham) with KOIN 6 TV for broadcast to provide public education services on stormwater quality program.
D. Provide for Public Participation with the annual report, SWMP and Benchmark Submittals	Co-permittees must submit an annual report for the portion applicable to its jurisdiction by November 1 of each year. SWMP revisions and pollutant load reduction benchmarks are required for submittal to DEQ at the permit renewal submittal (180 days prior to permit expiration). Prior to submittal of these items, the City will provide the public with an opportunity to comment on the annual report, revisions to the SWMP and proposed pollutant load reduction benchmarks. The documents will be made available on the City's website or through web links. Comments on the documents will be collected and considered and a response to comments will be provided.	Provide for public participation with the annual report, SWMP and pollutant load reduction benchmarks prior to the permit renewal application deadline.	Annually by November 1	The City will post the new permit's report once the monitoring report is compiled with this matrix for 15 business days.

E. Participate in a Public Education Effectiveness Evaluation	By November 1, 2014, the City of Fairview will coordinate with other local, Phase I jurisdictions to provide information related to an effectiveness evaluation. The effectiveness evaluation information will focus on assessing changes in targeted behaviors and will allow for additional information that can be used in adaptive management of the City's education and outreach strategy. This is where effective evaluation reports will be found as they are submitted.	Coordinate with other local jurisdictions in providing/compiling information regarding a public education effectiveness evaluation by November 1, 2014.	Ongoing	City of Fairview submitted "Public Education Effectiveness Evaluation" report (Schedule A.4, NPDES Permit Term 2010-2015) to DEQ on November 1, 2015.

Control Impacts from Development and Business Activities (CIDBA A-I)				
Activity Name	**Description**	**Measurable Goal**	**Tracking Measures**	**Reporting Metrics**
A. Stormwater Management Manual (SWMM)	This manual contains the regulatory development thresholds that necessitate stormwater controls, the prioritization of green infrastructure, the design standards, plan review process, and long term maintenance requirements.	Review SWMM at least once within the permit cycle. Update, if necessary	Goal for review FY23-24	Ongoing review, a review occurred this PY 29 and no changes were deemed necessary.
B. Private Water Quality Facilities Inspection and Maintenance	Require plans conforming to the requirements of City of Fairview Standard Specifications for Public Works Construction and City of Gresham Stormwater Management Manual at the time of permitting for stormwater facilities related to new private development and redevelopment/retrofitting. Include recording of operations and maintenance plans for stormwater quality facilities.	Ensure new private stormwater facility plans conform to City requirements. Inspect new facilities for conformance to approved O&M plans. Develop a private facility maintenance Standard Operating Procedure within one year of permit issuance.	Track number of inspections conducted and inspection results.	There were two site inspections performed with the following results below: **AGC Heat:** Underwent inspection simultaneously along with industrial/commercial inspection. The swale and storm systems were working as intended. Inspection passed for stormwater management. **Truck Depot:** Inspection was performed and confirmed pond was working per the plans.
C. Erosion Control Activities	Ordinance 3-1993 adopts an erosion control plan. The ordinance includes an Erosion Control Technical Guidance Handbook (Technical Guidance) that describes regulations, standards and provisions for erosion control as well as fees and penalties for violation. The City enforces the erosion control requirements through a permitting process required for sites disturbing 500 ft^2 or more as discussed under the BMP, Development Review. The Technical Guidance prescribes the following four steps to consider in planning for erosion control: Step 1: Identify Site Characteristics Step 2: Lay Out Preconstruction Plan and Proposed Base Measure Step 3: Measures During Construction Step 4: Post Construction Measures The Technical Guidance also has requirements for single-family homes and duplexes on existing lots of record, private developments construction, private construction in public rights-of-way, public works construction, erosion control measures, inspections and enforcements, and penalties. Non-stormwater wastes on construction sites are also addressed through the City's nuisance ordinance in Chapter 8 of the municipal code.	Inform all construction site owners that have 1 acre or more of disturbed land that they are required to obtain a 1200-C permit from DEQ. Projects that disturb more than 500 ft^2 are required to obtain a City erosion control permit. Review development sites required to meet City erosion control requirements.	Track the number of erosion control permits issued annually.	A total of zero (3) 1200-C Construction General NPDES Stormwater permits were issued by DEQ during PY 29 for sites disturbing more than 1 acre. A total of four (3) erosion and sediment control permits were issued for sites disturbing less than 1 acre or not qualifying for 1200C requirements.
D. Erosion Control Program Training	The Erosion Prevention & Sediment Control Technical Guidance describes regulations, standards and provisions for erosion control as well as fees and penalties for violation.	Provide a copy of the Technical Guidance to all developers and contractors.	N/A	Erosion Prevention and Sediment Control (EPSC) manuals are made available with the erosion control permit applications during the planning development review process.
E. Development Review for Private Projects	Implement and enforce regulations which give legal authority to: 1) require site-drainage designs and systems which address water quality; and/or 2) minimize the total volume of runoff and the peak rate of runoff, where local conditions permit. The City implements these regulations through its Community Development Department and Public Works Department. New development and redevelopment projects are reviewed for conformance to the following existing City regulations: • Fairview Comprehensive Plan, June 2004 – provides the guiding direction to protect the natural environment and ensure that long-term growth does not adversely affect the natural resources. • Community Development Department–Land Use and Building Permits; Land Use Code Enforcement. • Title 19, Development Code–requires accommodation and treatment of stormwater runoff and system installation conforming to standards and specifications adopted by the City. • City of Fairview Standard Specifications for Public Works Construction	Review development plans for conformance with standards. Maintain map of private water quality facilities	Track acreage of new and re-development activities requiring stormwater treatment annually. Track the number and type of private water quality BMPs built.	There were 2 development reviews for private stormwater management facilities and no development reviews for public stormwater management facilities in PY 29. Private Stormwater Management Facilities Below Were Reviewed in PY28 But Erroneously Not Included: 1. Blue Lake Park (2.68 Acres): 3 Swales

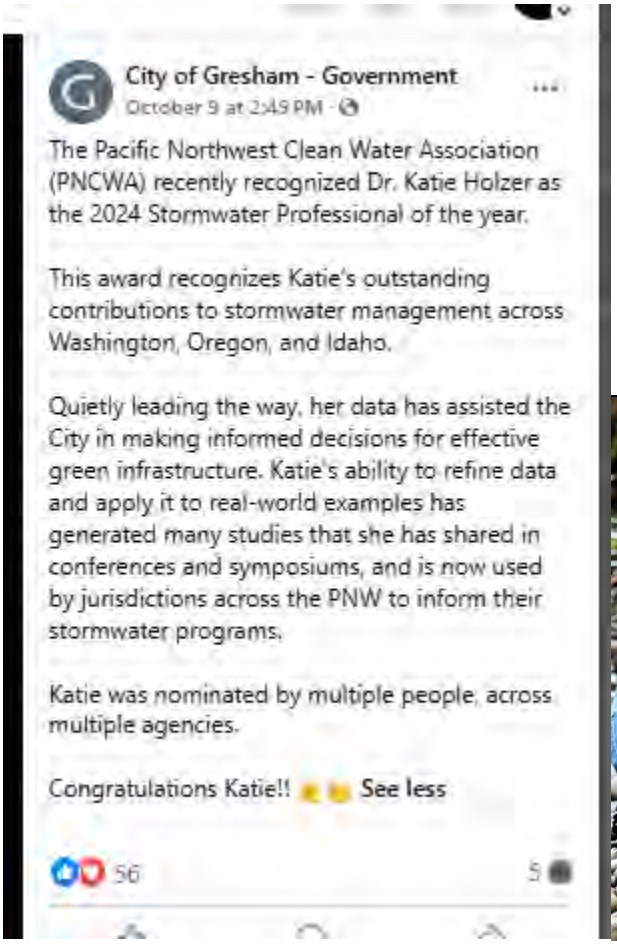
Control Impacts from Development and Business Activities (CIDBA A-I)				
Activity Name	**Description**	**Measurable Goal**	**Tracking Measures**	**Reporting Metrics**
F. Review Applicable Code and Development Standards related to Stormwater Management	Review and the City's current stormwater treatment standards for compliance with new MS4 NPDES permit language by January 1, 2014. Update the City's post-construction stormwater design standards and code language. Document the City's post-construction inspection and enforcement response procedures by January 1, 2014	Update the municipal code, design standards and enforcement procedures to eliminate barriers to LID and to implement stormwater management requirements.	Track progress related to the review of the City's code and development standards per provisions in the MS4 NPDES permit.	This requirement has been completed. The City is currently undergoing review and updating its code and development standards as needed to meet the requirements of the permit.
G. Screen Industries/Bussi-nesses and Track NPDES Stormwater Permits	Annually, the City will review their business license inventory to determine whether any new facilities would be subject to an industrial stormwater NPDES permit. This determination will occur based on a review of the applicable SIC codes related to the 1200-series NPDES permit. If a facility is identified that would be subject to an industrial stormwater NPDES permit, the facility and DEQ will be notified within 30 days. During industrial and commercial inspections staff will obtain a copy of the facility's permit or work with the facility to either obtain a permit, or eliminate the potential for contact of pollutants with stormwater, thereby eliminating the need for a permit. In cases where discharges appear contaminated, the City will send a copy of the inspection report to DEQ.	Annually notify DEQ of any existing or new industrial facilities within the City's jurisdiction that may potentially be subject to an industrial stormwater NPDES permit.	Track number and type of new facilities identified as needing permits.	Screening process of applicable Industrial/Commercial SIC codes reflecting the 1200-series NPDES permit is being conducted during pre-application review process of land use permit. There were no new developments requiring 1200-Z permits during this PY 29. Fairview will follow up with DEQ on few businesses on DEQ online showing no results for 1200z permit. Results for the follow up resulted in the following businesses as needing 1200Z permits. • Environmental Works • South Yard Outdoor Storage • Wildish Standard Paving • Peak Thermo King • Dirt & Aggregate Interchange • Moor Excavating
H. Industrial and Commercial Facility Inspections	Implement the City's Industrial and Commercial Facility Inspection procedure that is included in the Stormwater Operation and Maintenance Manual to control the discharge of pollutants in stormwater from industrial and commercial facilities to the municipal separate storm sewer system.	Spend 40 hours implementing commercial and industrial inspection procedures. Review and/or inspect all applicable facilities once during the permit term.	Track number of facility inspections and follow-up.	The City inspected one (1) regulated industrial/commercial facilities during this PY 28. Inspection procedures were in conformance and compliance with the City of Fairview's Stormwater Operation and Maintenance Manual and the Columbia South Shore Wellfield Protection Program Reference Manual. A total of 20 inspection hours (pre-documentation, inspection / photos, final documentation and follow up) were spent this PY 29. At first AGC Heat was not regulated, but is now going to be regulated due to its metal works operations.
I. Retrofit/Hydromodification Assessment Update	City will provide an assessment of how the reports previously provided have been considered, updated, or implemented, remaining gaps of knowledge, if applicable, new goals, tools, priorities for future improvement. Submit report as Appendix to Annual Report.	Provide DEQ an assessment with outcomes related to the creation of the original reports.	Third year of the permit term (FY 22-23)	Appendix A was provided in PY 28. This table will be kept as is until new permit cycle calls for another assessment.

				Previous Year 2022-2023
E. Sanitary Sewer System Program	Limit wastewater infiltration through the operation, maintenance and construction of the sanitary sewer infrastructure based on existing conditions and projected sanitary flows.	Respond to pump station failures. Perform cleaning of the problem areas of the City's sanitary sewer system. Construct pipe restoration projects to replace defective pipe and reduce inflow and infiltration.	Track identified sanitary problems and resolutions related to the storm system each year.	
F. Municipal vehicle monitoring and maintenance	Ensure that materials from municipal vehicles do not leak, spill, or otherwise release contaminants onto roadways or open spaces where they may be washed into storm drains or waterways. Municipal vehicles are inspected by the driver during loading and unloading. If any leaks are observed between the regular maintenance the vehicles are repaired immediately.	Maintain vehicles on a 6-month schedule.	Track status of municipal vehicle maintenance.	All City fleet vehicles (Public Works and Administration) were regularly maintained and serviced as scheduled (every 6 months) with auto service providers. Vehicles maintenance had no issues.
H. Litter Receptacles	Provide, collect, and maintain litter receptacles in strategic public areas and during major public events to provide disposal of pet waste bags and prevent trash from entering the stormwater system.	Maintain at least one litter receptacle at all public parks greater than 1 acre. Provide collection a minimum of once per week.	Track number of litter receptacles.	40 receptacles are maintained/provided collection at least one day of every week.
B. Integrated Pest Management	The City encourages use of the Portland Parks and Recreation Pest Management Guide. This guide emphasizes controlling pests that are harmful to the health or aesthetic value of park plantings in a manner that is cost-effective, safe, and environmentally responsible. It is an approach that uses multi-faceted strategies that minimize negative impacts on the environment and on human health. The controls used in this program include manual, mechanical, cultural, biological and chemical methods. Often a combination of methods is used. Examples of Integrated Pest Management include: • Timing of chemical applications to avoid runoff. • Mowing high grass and brush to reduce weed seed crops in rough areas. • Pruning of trees and shrubs to increase air circulation to reduce susceptibility to disease and insect problems. • Appropriate fertilizing to encourage plant health and resistance to pests (i.e., weeds, insects and disease). • Using plants with natural resistance to pests. • Combining turf aeration and over-seeding along with any application of broadleaf weed control to eliminate the cause of the problem, and therefore the need for repeated applications.		Track City planting projects that incorporate native plants.	
C. Chemical Applicator Licensing	Maintain staff certification in public pesticide application and follow Oregon Department of Agriculture (ODA) requirements related to herbicide application.	All chemical applications will be supervised by an ODA Certified Applicator.	N/A	3 City employees have Chemical applicator licensing

APPENDIX A

Education and Outreach Examples

Social Media Examples



Backyard Habitat Certification Program
October 15 at 1:00 PM ·

Rebecca lives the SW Gresham area and has been working on her garden for about 2 years and there is quite a change. Two large trees were removed along with grass. She has planted around the entire back perimeter with a wide area of all natives. She has focused on the backyard and plans to do more grass removal with native plantings. Future plans may include the addition of a rain garden and a large tree to add more shade. She gets much pleasure from working in her garden.

So... See more

Rob Emanuel and 64 others 3 comments

City of Gresham - Government
October 24 at 11:16 AM ·

Teachers—did you know you can take your students on a field trip to the Gresham Wastewater Treatment Plant and the Columbia Slough Stormwater Treatment natural area next door? Learn more ➡ ➡ https://www.greshamoregon.gov/Volunteer-and-Educational.../

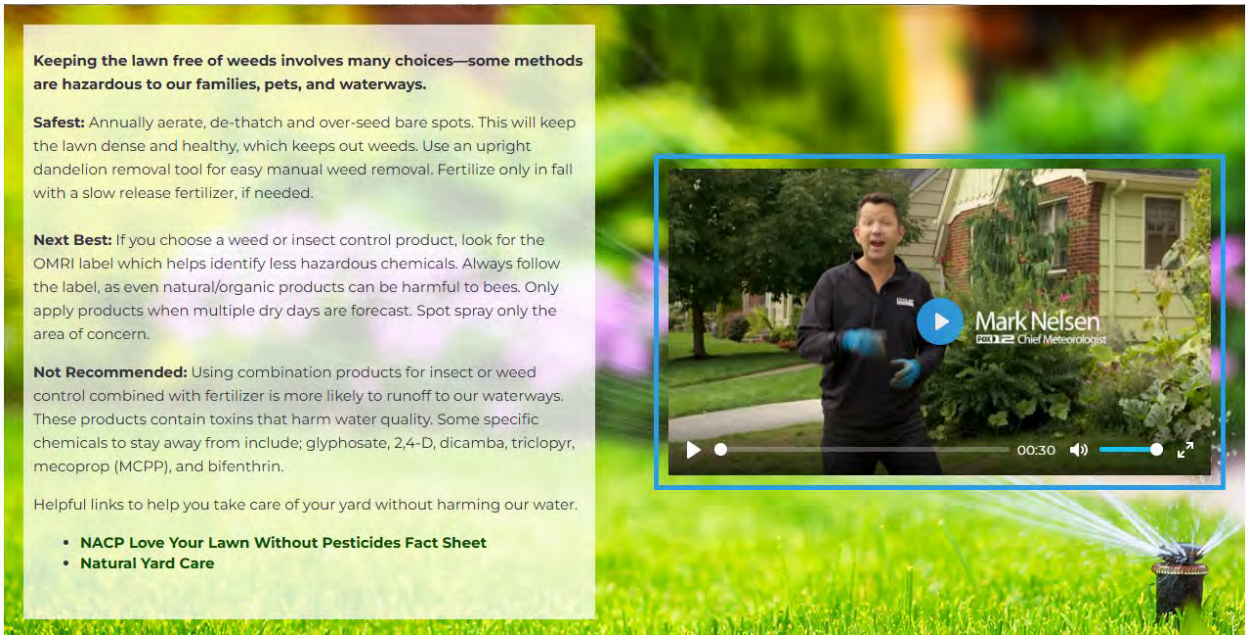
Michelle Kimble and 32 others 2 comments 2 shares

The River Starts Here
Published by Bridger Wineman
· September 16 ·

Have you checked out OSU's Solve Pest Problems tool? The university has compiled a science-based pest management guide for homeowners, landscapers, and gardeners in the Pacific Northwest. Their solutions are effective and low-risk. Check it out!
https://solvepestproblems.oregonstate.edu/

The River Starts Here
Connecting people to our local waterways and empowering them with positive actions to protect water.

KPTV Clean Water Partners Campaign with Mark Nelson, Meteorologist



The Clean Rivers Coalition Annual Report Summary 2023–2024

From 2023-2024, we ran four campaigns...

follow the water

followthewater.info

Clean Rivers Coalition launched Follow the Water in April 2022. The campaign aims to connect people to their rivers, promote actions that protect water, and build a culture of appreciation and knowledge of local water resources. The campaign included the award-winning Follow the Water video series, a robust social media campaign, and a website. In FY 23-24, we focused on increasing our followers on social media platforms through boosting organically popular posts and conducting engagement campaigns aimed at our followers.

Annual Results

Social Media Reach
277K

Social Media Engagement
17K

Social Media Followers
3.8K

Follower Growth
340%

What's Your Lawn Style?

Oregon State University Extension Service

whatsyourlawnstyle.org

Follow the Water created the What's Your Lawn Style? video campaign in partnership with OSU Extension to share sustainable lawn care information with homeowners in Oregon and Southwest Washington. The instructional videos help people manage their lawns with little to no chemicals. We also produced short video ads and a Google Ads campaign to lead viewers to the videos. In FY 23-24, we leveraged the existing instructional video library from this campaign to build the new Level Up Lawn campaign.

Annual Results

Google Ads Impressions
3M

Google Ads Clicks
25.4K

Landing Pages Views
27K

Youtube Views
74K

LEVEL UP YOUR LAWN

leveluplawn.org

Level Up Your Lawn is a Community Based Social Marketing (CBSM) lawn care campaign. It launched in March 2024. The campaign targeted lawn owners in Eugene, Salem, and Clackamas County. It was designed to promote behavior change around unsafe lawn care practices and reduce the use of weed and feed. Collateral for this project includes two short videos and an interactive questionnaire, leading to one of five different pages of lawn care resources relevant to the user's responses.

Annual Results

Google Ads Impressions
339K

Google Ads Clicks
13.8K

Landscaper Pilot Project

Northwest Center for Alternatives to Pesticides

pesticide.org/espanol

CRC worked with Clackamas and Multnomah County Metro, as well as the Northwest Center for Alternatives to Pesticides, to conduct a pilot project aimed at Spanish-speaking lawn care professionals. The project consisted of a three video series (produced by SOMOS Media) on lawncare best practices and four in-person workshops (two in Clackamas county, two in Multnomah). This work is ongoing with more extensive results from its first year in operation forthcoming.

Results So Far

Videos Produced
3

Workshops Held
4

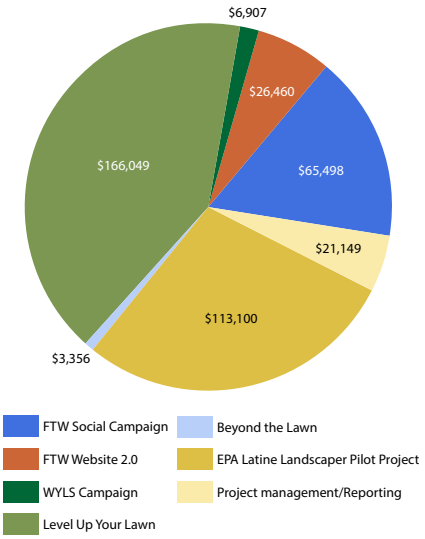
Total Workshop Attendees
84

Total Youtube Views
205

The Clean Rivers Coalition is comprised of local, state and federal agencies, watershed councils, soil and water conservation districts, and water-related nonprofits.

We deliver water awareness and behavior change campaigns that reach and benefit diverse populations. We are funded through contributions from our partners as well as federal grants.

2023 Annual Spending



Total Expenditure: **$402,519**

What's Coming

We are building on our success and continuing Follow the Water, What's Your Lawn Style, and Level Up Your Lawn.

We're also working on a **Beyond The Lawn Eco-Lawn Video Series** for households who are contemplating eco-lawns, gardens, meadow-scaping, and other lawn alternatives. This project is made in partnership with SWCDs. Pre-production is underway with filming slated for 2026.

REGIONAL STORMWATER REGULATIONS FOR MOBILE CARPET CLEANERS
DO NOT DISCHARGE WASH WATER TO STORM DRAINS

Many storm drains flow directly to a river or stream. Chemicals, soaps, and other pollutants in wash water can harm fish and other aquatic life.

It is against the law to allow anything other than rainwater to enter the storm sewer system.

Draining wash water to the street or a storm drain is subject to enforcement and fines. Businesses are responsible for the actions of their employees. Train employees and have a disposal plan for each job site.

ACCEPTABLE WASH WATER DISPOSAL OPTIONS:

- ✓ **Bathtubs and utility sinks** inside the building you are cleaning are connected to the sanitary sewer and are the best place to dispose of wash water. Use a filter to avoid clogging the drain.
- ✓ The building you are cleaning may have a **wastewater cleanout connected to the sanitary sewer outside.** You may dispose of wash water in the cleanout if you can verify it is connected to the sanitary sewer.
- ✓ Collect wash water in a **tank on your vehicle** and drain it into a sink or wastewater cleanout connected to the sanitary sewer at your home or business.
- ✓ Check **sanidumps.com** for disposal locations that may accept commercial waste.

DO NOT:

- ✗ Dump wash water on the ground, into an outdoor drain, or into the street.
- ✗ Drain wash water into a street planter, rain garden, or other stormwater management facility.
- ✗ Discharge wash water with chemicals into a home septic system.

For questions or assistance, call 503-618-2522 or email WaterResources@GreshamOregon.gov

These agencies enforce stormwater pollution laws:

City of Camas
Clackamas County
Clark County
City of Fairview
City of Gresham
City of Lake Oswego
City of Milwaukie
Multnomah County
Oak Lodge Water Service
City of Oregon City
City of Portland
City of Troutdale
City of Vancouver
City of Wilsonville
City of Wood Village

NORTHWEST CENTER FOR ALTERNATIVES TO PESTICIDES

ECOBIZ

GRESHAM GREEN BUSINESS

OFERTA DEL DÍA DE LA TIERRA: PUBLICIDAD GRATUITA PARA NEGOCIOS DE PAISAJISMO

¿QUE ES?

El Centro Noroeste para Alternativas a los Pesticidas en conjunto con EcoBiz y el Program de Negocios Verdeso de la Ciudad de Gresham están ayudando a las empresas a proteger a los trabajadores, los clientes, y las vías fluviales locales y ahorrar dinero. Las empresas que se registren en Ecobiz recibirán asistencia, capacitación y equipo gratuitos.

¿POR QUÉ CERTIFICARSE?

Además de ayudar a proteger el medio ambiente, convertirse en un negocio ecológico es bueno para sus objetivos. EcoBiz ayudará a su empresa a encontrar recursos, como obsequios de productos, que puedan compensar el costo de las actualizaciones ecológicas y generar ahorros futuros. Regístrese antes del 30 abril y también será elegible para recibir campañas publicitarias en línea, materiales publicitarios y acceso a redes respaldadas por la ciudad, ¡todo gratis!

¿COMO FUNCIONA?

Llame al 206-352-2050 ext.109 para aprender más. Podrás recibir una visita gratuita de un experto de Ecobiz. **LLAME ANTES DEL 30 DE ABRIL PARA OBTENER LA OFERTA ESPECIAL DEL DÍA DE LA TIERRA**

¿PREGUNTAS? 206-352-2050 ext.109 or avickers@pprc.org | en español al correo acontrerascruz@pprc.org

CITY OF GRESHAM

ECOBIZ

GRESHAM GREEN BUSINESS

EARTH DAY OFFER: FREE ADVERTISING FOR AUTOMOTIVE BUSINESSES

WHAT IS IT?

The City of Gresham's Green Business Program is partnering with EcoBiz to help your business conserve resources, protect local waterways, and save money. Businesses that complete certain green upgrades can be certified by both EcoBiz and the Green Business Program, and those that sign up by February 7 are eligible to receive free advertising!

WHY GET CERTIFIED?

In addition to helping protect the environment, becoming a Green Business is good for your bottom line! EcoBiz will help your business find resources like product giveaways, Energy Trust rebates, and utility savings that can offset the cost of green upgrades and yield future savings. Sign up by February 7 and you're also eligible to receive online advertising campaigns, publicity materials, and access to City-supported networking—all for free!

HOW DOES IT WORK?

Call 206-352-2050 ext.109 to make an appointment for a free, 45-minute, no-obligation assessment with an EcoBiz specialist. **CALL BY FEBRUARY 7 TO GET THE SPECIAL EARTH DAY OFFER.**

QUESTIONS? 206-352-2050 ext.109 or avickers@pprc.org

L: Planting near 7th St. Bridge; R: Science Learning with Hollydale Elementary

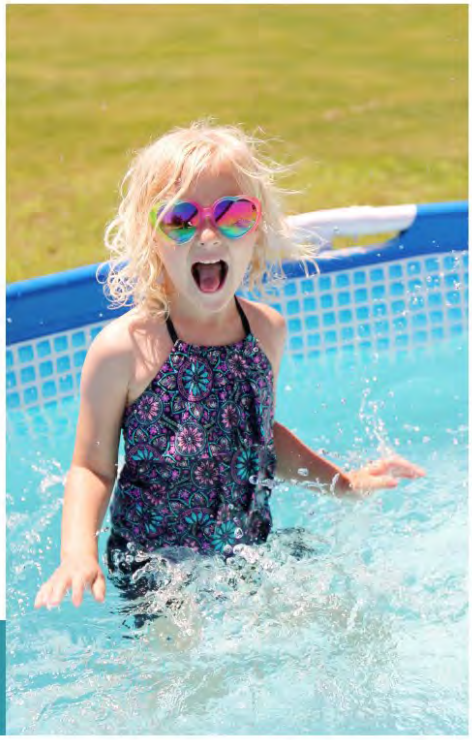
MANAGE POOLS SAFELY TO PROTECT GRESHAM'S STREAMS

Never drain pool or hot tub water to storm drains. It's harmful to fish and it's against the law! Instead:

- Dechlorinate water, then drain it to your lawn or landscaping, letting the water soak into the ground, or
- Drain slowly to a sewer cleanout pipe or an indoor tub or sink, controlling the flow to avoid sewer overflows.

Learn more: GreshamOregon.gov/Watershed-Residential-Programs

CITY OF GRESHAM



Visit LevelUpLawn.org for tailored tips from turf experts

CITY OF GRESHAM

Oregon State University Extension Service

Introducing two social channels and websites-
because water needs us:

follow the water

Followthewater.info
@followthewaterPNW
FB, IG, YouTube

THE RIVER STARTS HERE

Theriverstartshere.org
@TheRiverStartsHere
FB, IG, YouTube

Got Lawn Goals?

We've partnered with OSU Extension to bring you tailored solutions.

LevelUpLawn.org

Take our short quiz to learn whether you are a Turf Tamer or Weed Warrior!

Backyard Habitat Certification Program

Learn how to invite more of nature into your yard.

Backyardhabitats.org

pprc

DEPARTMENT OF ECOLOGY
State of Washington

SCAN TO REGISTER

SPRAY PAINTING EFFICIENCY

BENEFITS:

- Improve efficiency by 25%+
- Save on materials: an industrial facility can save as much as $40,000 or more annually!
- Reduce hazardous waste generation
- Lower permit costs *(depending on location)*
- Reduce health impacts
- Reduce environmental liabilities and impacts
- **5 Year 6H NESHAP Certification**

TRAINING PROVIDED FREE

Training is provided with a state-of-the-art Virtual Reality (VR) system. Painters use VR to measure their painting efficiency prior to and after training. See how scores improve!

GRESHAM, OR TRAINING | MARCH 22ND | 4:30 PM - 8:30 PM | LOCATION: ROCKWOOD CDC. 18445 E BURNSIDE ST, PORTLAND, OR 97233

COLLABORATORS

EAST COUNTY BUSINESS BRIDGE

CITY OF GRESHAM

NATA
NW Automotive Trades Association
benefits + networking + outreach

Certified Business
EcoBiz

Tree Planting Kick Off

In memory of the lives lost in the heat dome of 2021

March 16, 2024 | 9am-1pm

Nadaka Nature Park

17615 NE Glisan St, Portland, Oregon 97230

The 72 lives lost in the June 2021 Heat Dome event are irreplaceable. Join us to commemorate the people who we've lost, and kick off a series of tree plantings that will help to reduce temperatures, provide shade and cleaner air in areas with low tree canopy.

TO VOLUNTEER SIGN UP

MADE POSSIBLE BY

Friends of Trees

City of Gresham

Multnomah County

www.friendsoftrees.org | (503) 282-8846

Top: Depaving, Bottom: Planting, both at Trinity Lutheran Church

Gresham partnered with the Johnson Creek Watershed Council to create a DIY retrofitted parking lot with three rain gardens that allow water to soak back into the ground rather than runoff to the stream

Gresham Watershed Scientist Staff, Dr. Katie Holzer has been conducting ongoing monitoring to assess the effectiveness of pervious pavement in removing stormwater pollution. She recently had her work published.

sustainability

MDPI

Article

Reduction of Runoff Pollutants from Major Arterial Roads Using Porous Pavement

Katie Holzer [1,*] and Cara Poor [2]

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[2] Shiley School of Engineering, University of Portland, Portland, OR 97203, USA; poor@up.edu
* Correspondence: katie.holzer@greshamoregon.gov

Abstract: Stormwater runoff from large roads is a major source of pollutants to receiving waters, and reduction of these pollutants is important for sustainable water resources and transportation networks. Porous pavements have been shown to substantially reduce many of these pollutants, but studies are lacking on arterial roads. We sampled typical stormwater pollutants in runoff from sections of an arterial road 9–16 years after installation of three pavement types: control with conventional asphalt, porous asphalt overly, and full-depth porous asphalt. Both types of porous pavements substantially reduced most of the stormwater pollutants measured. Total suspended solids, turbidity, total lead, total copper, and 6PPD-quinone were all reduced by >75%. Total nitrogen, ammonia, total phosphorus, biochemical oxygen demand, total and dissolved copper, total mercury, total zinc, total polycyclic aromatic hydrocarbons, and di-2-ethylhexyl phthalate were all reduced by >50%. Reductions were lower or absent for nitrate, orthophosphate, *E. coli*, dissolved lead, and dissolved zinc. Most reductions were statistically significant. Many pollutants exceeded applicable water quality standards in the control samples but met them with both types of porous pavement. This study demonstrates that porous overlays and full-depth porous asphalt can provide substantial reductions of several priority stormwater pollutants on arterial roads for many years after installation. Porous pavements have the potential to substantially enhance water quality of urban waterways and provide ecological benefits on urban thoroughfares.

Keywords: porous pavements; porous overlay; pervious pavement; pervious friction course; water quality; stormwater treatment; sustainable transportation

Citation: Holzer, K.; Poor, C. Reduction of Runoff Pollutants from Major Arterial Roads Using Porous Pavement. *Sustainability* **2024**, *16*, 7506. https://doi.org/10.3390/su16177506

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Revised: 24 August 2024

1. Introduction

Urbanization has steadily increased since 1950; more than 50% of the global population currently lives in urban areas compared to 33% in the 1950s and is expected to increase to 66% by 2050 [1]. Urbanization is more pronounced in industrialized countries, where it is expected that 86% of the population will live in urban areas compared to 64% of the popu-

lation in developing countries by 2050 [2]. In the United States, 81% of the population lives