CITY OF GRESHAM 1333 N.W. Eastman Parkway | Gresham, OR 97030 | 503-618-2525

October 31, 2018

Pablo Martos, Municipal Stormwater Permit Coordinator
Environmental Solutions Division
Oregon Department of Environmental Quality
700 NE Multnomah St.
Suite 600
Portland, Oregon 97232

RE: Gresham/Fairview NPDES Stormwater Permit #101315
Permit Year 23, 2018 Annual Report

Dear Mr.Martos:

I am pleased to submit a copy of the twentieth-third National Pollutant Discharge Elimination System (NPDES) Annual Report for the City of Gresham, and the City of Fairview, under Permit No. 101315, File No. 108013, expiration date December 29, 2015.

As required in Schedule B. 5. A. through B.5. j., the report contains a summary of the environmental monitoring program and raw data that is applicable for Gresham and Fairview, and a section (3 & 4, respectively) that describes each city's implementation of its respective stormwater management plan. The goals of the annual report are to: 1) document progress on the implementation of best management practices for pollution prevention, reduction and removal; 2) evaluate program results for continuous improvement; and 3) share this information with municipal decision makers and the public.

If you have any questions regarding this report or would like an additional copy, please contact Keri Handaly at (503) 618-2657. For questions specific to the City of Fairview's activities, please contact Allan Berry at (503) 674-6235.

Sincerely,

Keri M. Handaly
NPDES MS4 Permit Coordinator
Department of Environmental Services

cc: Allan Berry, City of Fairview
Steve Fancher, Department of Environmental Services Director
Enclosures: (1) hard copy
(1) cd Rom

National Pollutant Discharge Elimination System
Permit No. 101315
EPA Reference No. ORS108013
Permit Year 23 Annual Report
City of Gresham and City of Fairview

"We the undersigned, certify under penalty of law that this document and all attachments were prepared under our direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on inquiry of the persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of our knowledge and belief, true, accurate and complete. We are aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment from knowing violations."

Steve Fancher
Director, Department of Environmental Services
City of Gresham

Allan Berry
Director, Public Works
City of Fairview

For additional information regarding this report, please contact:

Torrey Lindbo
Manager, Water Sciences Program
City of Gresham
1333 NW Eastman Parkway
Gresham, OR 97030
(503) 618-2405
www.greshamoregon.gov

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Preface

The Cities of Gresham and Fairview submit this report in accordance with requirements of the National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Permit # 101315. This report is intended to provide a brief summary of the activities conducted by these agencies to prevent the entry of pollutants into their stormwater, and surface water conveyance systems.

This report 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 (SWMP) implementation status reports for the City of Gresham and the City of Fairview, respectively. Additional supporting documentation for Section 3 is provided in Appendices A through E for Gresham.

Section One--Overview of Required Elements

A. 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.

The Cities of Gresham and Fairview, and Multnomah County submitted a permit renewal package (for the period September 1, 2000 through August 31, 2005) as co-permittees to DEQ in March 2000. Gresham submitted an update to its portion of that package in December 2001. On March 1, 2004, DEQ issued a renewed permit. However, several interest groups requested a petition for reconsideration on the renewed permit. On May 17, 2004, DEQ granted this request and a revised permit was reissued by DEQ on July 28, 2005, subsequently followed by submittal and approval of an updated Stormwater Monitoring Plan and Stormwater Management Plans (SWMP) for Gresham and co-permittees. These documents were approved by DEQ in July 2006 (PY 12).

On August 1, 2008, Gresham and Co-permittees submitted a permit renewal package that included the required elements as stated in Schedule B 2) c) of the permit, including an updated joint Monitoring Plan and individual Stormwater Management Plans.

On December 12, 2010 DEQ issued a renewed permit with the City of Gresham and the City of Fairview as Co-Permittees and issued a separate renewed permit to Multnomah County. DEQ authorized permittees to make minor changes to their SWMPs in order to be consistent with the final permit language by April 1, 2011. This annual report is based upon the City of Gresham and Fairview's respective final SWMPs dated April 1, 2011.

The City of Gresham and Fairview's permits expired on December 29, 2015. To date, DEQ staff have been in the process of renewing the NPDES Phase II permits and therefore, have placed the Phase I renewal on administrative extension until the Phase II permits are completed. The timeframe for a renewed permit and updated SWMP for each city's program is unknown.

B. Reporting Requirements

This section summarizes the requirements for the annual report as described in Schedule B 5) Reporting Requirements of the permit and provides a reference to the location of each element within this report. As noted in the permit, this Annual report is provided to DEQ by November 1 of each year in electronic and hard copy format and is also posted on Gresham's website and cross-linked from the City of Fairview's website.

SWMP Implementation Status

The status of the SWMP best management practices implementation and measurable goals for Gresham and Fairview is described in **Section 2** Environmental Monitoring Program and in **Sections 3** and **4**, respectively.

Proposed Changes, Adaptive Management & New BMPs

The detailed description of the adaptive management process was submitted with the permit year 16 annual report which is available on the City's website at www.greshamoregon.gov/watershed in the stormwater documents section. For purposes of brevity, the ongoing annual review process consists of data intake from various staff who are responsible for the implementation of a particular best management practice (BMP). Factors examined as part of the data intake process include but are not limited to:

*Was the BMP measurable goal attained? If not, why? How will progress be made towards future attainment?
*For multi-year BMPs, were milestones or timelines met?
*Does the BMP need to be refined or improved?
*Are staffing/financial resources available to support such a BMP improvement or refinement? Proposed changes, adaptive management or addition of BMPs for Gresham and Fairview, if applicable, are described in **Section 2** Environmental Monitoring Program and in **Sections 3**, and **4**, respectively.

Summary of Fiscal Year Expenditures and Projected Annual Budgets

Previous and projected budgets for Gresham are included in **Table 3-10** and in **Section 4** for Fairview.

Summary of Monitoring Program Results/Data

Gresham and Fairview's monitoring data and summary of assessments or evaluations and any proposed changes to the monitoring plan are reported in **Section 2 Environmental Monitoring Program** and its subsequent **Tables and Figures.**

Summary of Inspections & Enforcement, Public Education Programs, and Dry Weather Screening

These annual reporting program components as described in Gresham and Fairview's approved SWMPs and are reported in **Sections 3, and 4,** respectively.

Overview of Urban Growth Boundary (UGB) Expansion Areas

A summary of activities that apply for the City of Gresham is included in **Appendix B**: UGB Summary. This requirement does not apply to the City of Fairview whose permitted area does not contain any UGB expansion area.

Legal Authority

See **Appendix A**: Adequate Legal Authority for documentation of legal authority for the Cities of Gresham and Fairview.

Permit Boundary and Map of Major Watersheds

On the following page **Figure 1-1** depicts the permit boundary of Gresham and Fairview and a map of the major watersheds within the permit area with associated acres. Minor errors in GIS calculations can cause acres to fluctuate and are not not considered precise.

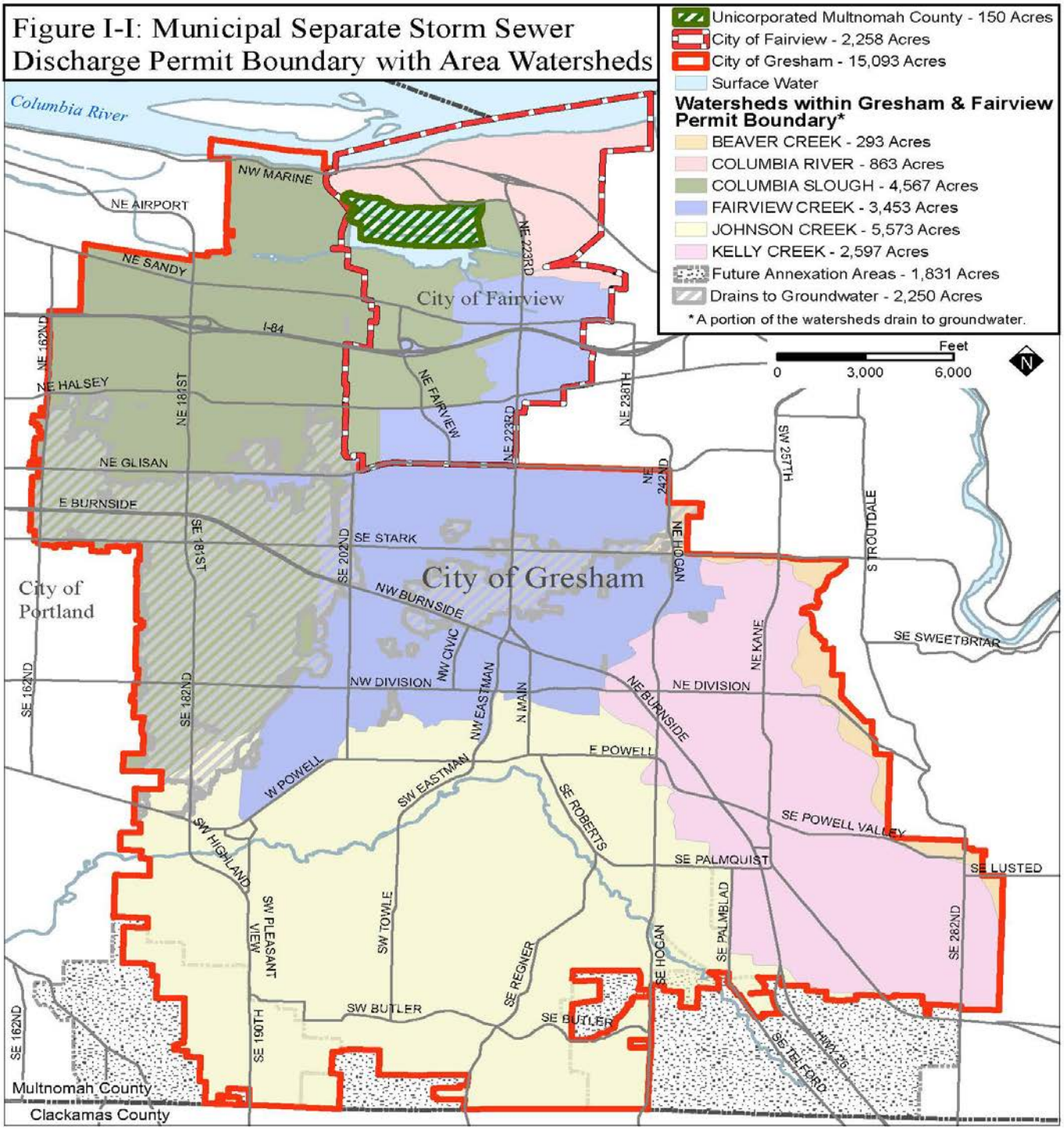
Figure I-I: Municipal Separate Storm Sewer Discharge Permit Boundary with Area Watersheds
Unicorporated Multnomah County - 150 Acres
City of Fairview - 2,258 Acres
City of Gresham - 15,093 Acres
Surface Water
Watersheds within Gresham & Fairview Permit Boundary*
BEAVER CREEK - 293 Acres
COLUMBIA RIVER - 863 Acres
COLUMBIA SLOUGH - 4,567 Acres
FAIRVIEW CREEK - 3,453 Acres
JOHNSON CREEK - 5,573 Acres
KELLY CREEK - 2,597 Acres
Future Annexation Areas - 1,831 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 FAIRVIEW
NE 223RD
NE 238TH
NE GLISAN
E BURNSIDE
SE 181ST
SE 202ND
SE STARK
City of Gresham
City of Portland
NW BURNSIDE
NW CIVIC
NW DIVISION
NW EASTMAN
N MAIN
NE HOGAN
NE 242ND
SW 257TH
S TROUTDALE
SE SWEETBRIAR
NE KANE
NE DIVISION
NE BURNSIDE
SE 162ND
SE 182ND
E POWELL
W POWELL
SW EASTMAN
SE ROBERTS
SW HIGHLAND
SE POWELL VALLEY
SE PALMQUIST
SE LUSTED
SW PLEASANT VIEW
SW TOWLE
SE REGNER
SE PALMBLAD
SE 262ND
SW BUTLER
SE BUTLER
SE 190TH
SE HOGAN
SE TELFORD
HWY 26
Multnomah County
Clackamas County

Section Two:

Cities of Gresham & Fairview Environmental Monitoring Program Annual Report

A. History

Background

The data reported in this Annual Report reflects the Cities of Gresham and Fairview's implementation of the Environmental Monitoring Plan that was approved by DEQ and became effective July 1, 2011. The City submitted an updated Environmental Monitoring Plan to DEQ in November, 2015. No objections to the updated plan were received within the 30 day waiting period, and it was implemented on July 1, 2016.

The City of Gresham collects data for Multnomah County under an Interjurisdictional Agreement and that data is included in this report.

B. Required Elements

This section of the Annual Compliance Report summarizes the Environmental Monitoring Plan implementation and permit requirements contained in the Stormwater permit. Schedule B) 5. states: the annual report must include:

f. A summary of monitoring program results, including monitoring data that are accumulated throughout the reporting year and/or assessments or evaluations.

g. Any proposed modifications to the monitoring plan that are necessary to ensure that adequate data and information are collected to conduct stormwater program assessments.

The environmental monitoring requirements specified in Table B-1 of the NPDES permit are summarized below in **Table 2-1**. Elements required by the permit are *italicized* text.

Table 2-1 Environmental Monitoring Requirements Summary

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) *Two (2) sites in the Sandy River basin:* 1. Kelly Creek @ Mt. Hood Community College Pond (KCI1) 2. Kelly Creek @ Detention Pond (KCI4) *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); 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.
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 gage does not collect temperature. City of Gresham periodically collects summer temperature at Glisan location, as well as other locations throughout city.

Monitoring Type	Monitoring Location(s)	Monitoring Frequency	Pollutant Parameter Analyte(s)	Notes
Stormwater Monitoring - Storm Event	*Three (3) sites.* Monitored 10 random and spatially balanced stormwater locations.	*Three (3) events/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; pesticides*	The permit requirements as described by Schedule B)2)e)ii) would result in 9 data points annually. The City's approved monitoring approach results in 10 data points (5 fixed sites and 5 randomly selected rotating 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 same week as instream water quality data collection occurred in summer.
	One (1) site in the Sandy River basin: 1. Kelly Creek @ Mt. Hood Community College Pond (KCI1) 2. Kelly Creek @ Detention Pond (KCI4)			
	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)			
Structural BMP Monitoring	*One (1) site - inlet and outlet:* 1. Columbia Slough Water Quality Facility 2. Brookside Regional Facility 3. Hayden's Meadows filtration stormwater planters 4. Kane Road pervious pavement	*Two (2) events/year through Dec. 31, 2013.* Monitored 1 event at all facilities, and 2 events at Brookside stormwater	*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)*	

C. Summary of Monitoring Program Results

The raw data collected in PY 23 are described and illustrated in **Tables 2-1 thru 2-6 and Figures 2-1 thru 2-4** of the monitoring report. The in-stream data have been compared to the relevant DEQ water quality criteria. Values that do not meet the water quality standards are highlighted. Data from Stormwater (wet weather sampling) and Structural BMP 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 thru 2-4.**

The raw data from the City's Illicit Discharge and Detection program monitoring is included in **Table 3-5**. A map showing the sampling site locations for fixed and rotating sites are shown **Figure 3-6** and the discussion of the findings is included in **Section 3 BMP ILL 2&3.**

Instream Monitoring

Instream monitoring results are generally within expected ranges. Stream pH results during summer sampling was slightly below the standard of 6.5 at two sites (on Johnson and Kelley Creeks), and slightly above the standard of 8.5 at another site (Fairview Lake). The high pH in Fairview Lake was likely related to photoshynthesis from the abundant algae visible in the lake. It is unclear whether the low pH readings in the creeks indicate a water quality issue or are related to measurement issues with our monitoring equipment (YSI Meter). On the morning on that sampling event the TSI meter was having trouble calibrating pH and at the first several sites during the event (which includes those with low recorded pH) the meter was uncharacteristically drifting while measuring pH values. This may be an issue related to low ionic strength in the streams. Solutions for improving pH measurement reliability are being investigated.

Stream temperature was above the 18°C salmon rearing standard in most streams in the summer. The City continues to focus efforts on increasing shade along streams, identifying other sources of heat (such as inline ponds), and working to reduce the impacts from those sources.

One site on Fairview Creek exceeded the 406 colony forming units (CFU/100ml) *E. coli* standard. *E. coli* levels this year were generally lower than previous years, which may indicate success of some of the City's actions aimed at reducing this bacterium, illicit discharge detection and elimination, and increasing public awareness of the issue.

In the summer and fall Fairview Lake exceeded both the chlorophyll-a standard and the Columbia Slough TMDL level for total phosphorus. High phosphorus levels have been noted at this location before, particularly during the summer when planktonic algae is common throughout the water column in the Lake. Cyanobacteria (a.k.a. blue-green algae) has frequently been noted in the lake in mid to late summer but below the Oregon Health Authority's toxicity limits, including this year, when the presence of phosphorus and their ability to fix nitrogen allow them to thrive in the warm lake water.

Both Johnson Creek sites exceeded the chronic water quality criterion for DDT multiple times. This legacy pesticide is thought to enter the creek through erosion of contaminated soil and resuspend during disturbances such as storm events. The City continues to implement a rigorous Erosion Prevention and Sediment Control Program for development to reduce soil erosion, but naturally occurring bare soil will always exist and therefore, erosion is not completely preventable.

Continuous Instream Monitoring

The City of Gresham collected continuous instream temperature data at several sites within the city and collaborated with other jurisdictions to collect data at several sites upstream and downstream of the city and are shown in **Table 2-2**. Together with USGS, Multnomah County, and East Multnomah Soil and Water Conservation District continuous temperature data was collected at 39 stream sites, representing Beaver, Kelly, Fairview, and Johnson Creek basins. A summary of the number of days that the maximum daily temperature at each continuous temperature monitoring station exceeded the salmon rearing temperature standard (18°C), as well as the highest temperature reached at each station, is included in **Table 2-3.**

Very few sites had no exceedances (highlighted in blue), while many streams had sites where the 7-day average of the daily maximum (7DADM) was >18°C for 100 days or more (highlighted in red). Most sites with no exceedances were near forest headwaters of streams such as in the South Fork of Beaver Creek, the North Fork of Johnson Creek, and the headwaters of Kelley Creek; the exception is a site where the majority of summer flow comes from groundwater pumped out of a gravel pit in Fairview Creek. Many of the sites with >100 days of exceedances were close to the outlet of an instream pond. The City is aware of the impact in-line ponds can have on temperature - Fujitsu Pond is a highly ranked Natural Resource CIP project (the site in Fairview Creek downstream of these ponds had the highest number of days of exceedances in the City at 141 days), and the City is also studying ways to reduce temperature loading from public and private ponds on Butler and Hogan Creeks. These results are shown in **Figure 2-1.**

Stormwater Monitoring

Stormwater raw data is included in **Table 2-4** and site locations are shown in **Figure 2-4.** Similar to previous years, stormwater monitoring data revealed that higher traffic sites (>1000 vehicle trips per day) have higher pollutant concentrations for many pollutants in comparison to residential streets (<1000 trips/day), especially for heavy metals and PAHs. Also similar to previous years, relatively high levels of several heavy metals (including mercury, copper, and especially zinc) were found at several sites. Cars are likely a major source of these pollutants. The City has conducted a special monitoring study which indicated that tires, including outdoor storage of used tires, likely represent a major source of heavy metals in stormwater.

One site had very high E. coli levels >24,000 MPN. An investigation revealed a pile of sediment along the curb immediately upstream of that sampling location. The pile was growing vegetation and collecting litter, which may have been a source of bacteria. Follow up sampling investigations indicated that the vegetation had likely captured pet waste which lead to the high E. coli levels in our sample.

Structural BMP Monitoring

The structural BMP monitoring consisted of monitoring **one storm** at four facilities. **See Figure 2-3 for locations.**

Staff monitored **Hayden's Meadow neighborhood street-side filtration planter**s which had been constructed one year prior to this event. Planters were constructed with two different amended soil blends to study the potential benefits of one versus the other and to study the general effectiveness of this common stormwater BMP in our City. This was the third year of monitoring at those facilities. To date, the data indicate that both soil blends exported several pollutants during a rain event immediately after placement including nutrients, heavy metals, and suspended solids. However, after the initial export, the facilities are effectively reducing most pollutants, especially heavy metals, suspended solids, and phthalates. Part-way through this permit year we became aware of phthalates as a group of pollutants that we want to understand better, especially in relation to BMPs. As such, the city added phthalates to our list of BMP analytes in November. Differences in pollutant removal between the soil blends have not yet been detected. Staff plan to monitor these same facilities for at least five years, as resources allow, to study trends in pollutant removal through time.

Staff also monitored the **Mt. Hood Community College Parking Lot stormwater retrofit project** where the large parking lots will be retrofit with stormwater planters, rain gardens, and UICs during summer 2018. Staff are comparing parking lots which will receive these retrofits to similarly-sized parking lots which will not receive retrofits to quantify the pollution reduction benefits. This year was pre-retrofit baseline data collection to establish existing differences between the sites. Staff found that the parking lots which will receive the retrofit had runoff that contained higher concentrations of many pollutants than the control lots. This was expected because the parking lots which will receive treatment were targeted because they receive more use and heavier traffic than the other lots.
Staff collected data from the Fairview Creek Regional Water Quality Facility (FCWQF) which had been sampled every year since it was built in 2007 until 2013. Data reveals that the facility continues to reduce pollutants at a similar capacity as the first six years of data. The pollutant removal capacity of this facility over the last decade is consistent and is improving water quality for runoff from hundreds of acres of residential areas.

Staff collected data at the Columbia Slough Regional Water Quality Facility which has been monitored every year since 2011, shortly after it was built. The facility initially was not performing as well in pollutant removal as the FCWQF. Factors that may contribute to lower pollutant removal include: 1) lack of emergent vegetation in portions of the facility because of design variations and 2) lower pollutant levels coming into the facility as compared to the FCWQF. However, the performance of this facility has increased over the past several years such that it is now generally removing pollutants at a similar rate to the FCWQF. Management actions taken by staff to improve vegetation establishment may be improving facility performance. Additionally, beavers have migrated into the facility and are being monitored to understand how they impact the facility's performance. Our observation is that their dams appear to increase water filtration during low and moderate flow events and that they are having an overall positive impact on the facility.

Macroinvertebrate Sampling

Macroinvertebrates were collected at all of the instream monitoring locations, except Fairview Lake and KCI3 (see Macroinvertebrate data in **Table 2-6** and illustrated in **Figure 2-2**. Results are similar to previous years, with the Kelley Creek location (KI2) showing the least amount of impairment (i.e., the greatest abundance and highest number of sensitive species). This site is predominantly surrounded by an undeveloped forested area. All of the other locations have biological communities that indicate moderate or severe impairment according to the statewide Benthic Index of Biological Integrity (B-IBI). Data trends will be assessed in PY25. Although some sites have switched categories over the years from Moderate Impairment to Severe Impairment or vice versa, the preliminary trend analysis conducted last year showed that substantial variations have occurred at all sites such that only one significant trend was detected: lower Kelly Creek had a significant increase in B-IBI scores over the sampling period.

D. Adaptive Management

No adaptive management changes are proposed.

Section 2 - Gresham and Fairview Program Raw Data

Table 2-1: Water Quality Monitoring Site Locations & Criteria

Instream-Longterm & Macroinvertebrate Site Locations (See Fig. 2-2)	
FCI0	Fairview Creek @ West of Blue Lake Rd in Trailer Park
FCI1	Fairview Creek @ Conifer Park Subdivision, N of Stark
FVL1	Fairview Lake @ Public Dock on NE 217th
JCI1	Johnson Creek @ 174th Ave (Jenne Rd)
JCI2	Johnson Creek @ 252nd Ave. (Palmblad)
KI1	Kelley Creek @ Foster Rd. (tributary of JC)
KI2	Kelley Creek @ Rodlun Rd (tributary of JC)
KCI1	Kelly Creek @ Mt. Hood Community College Pond Outflow
KCI3	Kelly Creek @ Detention Pond Outflow
KCI4	Kelly Creek @ Detention Pond Inflow
BCI1	Beaver Creek @ Lower Bridge (Monitored on behalf of Multnomah County, not shown on Gresham Map of Instream Sites)
BCI2	Beaver Creek @ Division X Troutdale Rd. (Monitored on behalf of Multnomah County, not shown on Gresham Map of Instream Sites)
Stormwater Monitoring Site Locations (See Fig. 2-4)	
Fixed locations	5 sites monitored every year
Panel 8	5 randomly selected rotating sites monitored in PY23

Structural BMP Evaluation Monitoring Locations (See Fig. 2-3)	
CSWQF-1	Columbia Slough Water Quality Facility - Stormdrain Creek
CSWQF-2	Columbia Slough Water Quality Facility - East Inlet
CSWQF-3	Columbia Slough Water Quality Facility - Outlet
CSI	Columbia Slough Water Quality Facility - outfall of cells 1 and 2
CSUSB-1	Columbia Slough Water Quality Facility - upstream of beaver dam
CSDSB-1	Columbia Slough Water Quality Facility - downstream of beaver dam
BrookBub-1	Street runoff at Brookside
BRF1-1	Brookside Regional Facility - Inlet
BRF2-1	Brookside Regional Facility - Outlet
HMPB121-1	Hayden's Meadow rain garden B12 Portland blend - Inlet
HMPB122-1	Hayden's Meadow rain garden B12 Portland blend - Outlet
HMGA71	Hayden's Meadow rain garden A7 Gresham blend - Inlet
HMPA21	Hayden's Meadow rain garden A2 Portland blend - Inlet
HMGA72	Hayden's Meadow rain garden A7 Gresham blend - Outlet
HMPA22	Hayden's Meadow rain garden A2 Portland blend - Outlet
HMGB112	Hayden's Meadow rain garden B11 Gresham blend - Outlet
HMGB111	Hayden's Meadow rain garden B11 Gresham blend - Inlet
HMPB121-2	Hayden's Meadow rain garden B12 Portland blend - Inlet
HMGB151	Hayden's Meadow rain garden B15 Gresham blend - Inlet
HMPB122-2	Hayden's Meadow rain garden B12 Portland blend - Outlet
HMGB152	Hayden's Meadow rain garden B15 Gresham blend - Outlet
KanePP_1	Kane Road Full Pervious
KanePO_1	Kane Road Pervious Overlay
KaneIP_1	Kane Road Impervious
KaneIC_1	Kane Road Impervious with Contech filter cartridges
KanePP_2	Kane Road Full Pervious
KanePO_2	Kane Road Pervious Overlay
KaneIP_2	Kane Road Impervious
KaneIC_2	Kane Road Impervious with Contech filter cartridges
KanePP_3	Kane Road Full Pervious
KanePO_3	Kane Road Pervious Overlay
KaneIP_3	Kane Road Impervious
KaneIC_3	Kane Road Impervious with Contech filter cartridges
MHCC_EH	Mt. Hood Community College Retrofit
MHCC_QU	Mt. Hood Community College Control

TMDL Constituent	**Water Quality Criteria**
Fairview Creek & Lake	
Temperature	No designated salmon and steelhead spawning use. Rearing: 18 degrees Celsius
E. coli	406 organisms/100mL (OAR 340-41)
Phosphorus	0.1549 mg/L (Columbia Slough 1998 TMDL)
Mercury	Aquatic life: 2.4 ug/L acute; 0.012 ug/L chronic. MCL: 2 ug/L
Johnson Creek (including Kelley Creek tributary in Portland)	
Temperature	Spawning: 13 degrees Celsius (55.4 F) - October 15 to May 15. Rearing: 18 degrees Celsius
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	Acute 2.4 ug/L, Chronic 0.012 ug/L (per Table 30)

Kelly Creek (in Gresham)	
Temperature	Spawning: 13 degrees Celsius (55.4 F) - October 15 to May 15. Rearing: 18 degrees Celsius
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	Acute 2.4 ug/L, Chronic 0.012 ug/L (per Table 30)

Non-TMDL WQ Constituents from OAR 340-41 Table 30	
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 averages. Cold water aquatic life; spawning: 11 mg/L; nonspawning 8.0 mg/L

Analysis Coding for the Reported Data

Bold = < than detection value or an Estimated value for bacteria

NA = constituents not sampled due to equipment failure or other extenuating circumstance

NM= not measured

ND= not detected

Dup = Duplicate Sample

MRL = method reporting limits are included at the top of each data set where they are constant. For parameters were no MRL is included, this means they vary by sample.

FD = Field Duplicate Sample

Blank = Deionized Water Sample

Exceedance of TMDL or other water quality criteria

Chronic exceedance of metal (Table 30)

Acute exceedance of metal (Table 30)

Table 2-2 Longterm Instream Data

Sample ID	Site ID	Date	Time	24-hr Rainfall	Field DO	Field pH	Field Temp	Conductivity	Turbidity	BOD5	DOC	TSS	NH3-N	Chloro-phyll-a	NO3-N	O-PO4	TKN	Total-P	Hardness	Hg-Total	Cu-Total	Pb-Total	Zn-Total
				inches	mg/L		C	µS/cm	NTUs	mg/L	mg/L	mg/L	µg/L	mg/M3	µg/L	µg/L	µg/L	µg/L	mg CaCO3/L	µg/L	µg/L	µg/L	µg/L
Test Method										SM 5210B	SM 5310B	SM 2540D	EPA 300.0	SM 10200H	EPA 300.0	EPA 365.1	EPA 351.2	EPA 365.4	SM 2340B CAL	EPA 200.8	EPA 200.8	EPA 200.8	EPA 200.8
Method Reporting Limit										2	1	2	20	2	100	20	20	30	1	0.001	0.2	0.1	0.5
W17G185-01	FCI0	7/25/2017	14:16	0.00	4.6	7.33	22.5	155.8	3	**2**	2.66	5	27	4	760	69	490	79	61	0.00177	3.59	0.572	5.4
W17G185-02	FCI1	7/25/2017	14:42	0.00	6.84	7.1	15.2	135.3	2.87	**2**	**1**	**3**	**20**	**2**	2800	82	**200**	76	59.6	**0.00100**	0.356	0.228	3.0
W17G186	FVL1	7/25/2017	13:57	0.00	3.95	8.81	25.5	190.8	110	>22	7.18	82	40	388	**100**	192	7.26	742	60.1	0.00192	2.21	0.532	2.7
W17G185-03	JCI1	7/25/2017	8:55	0.00	7.5	6.02	20.9	160.5	7.21	**2**	3.84	8	22	26	380	30	720	64	43.1	0.00209	1.78	0.208	4.7
W17G185-04	JCI2	7/25/2017	10:10	0.00	8.42	7.08	18.1	119.9	8.42	**2**	3.67	4	21	**2**	1100	50	460	51	34.7	0.00228	1.52	0.226	2.4
W17G185-05	KCI1	7/25/2017	11:41	0.00	4.15	7.11	22.1	206.8	3.25	**2**	4.04	12	**20**	2	150	36	390	36	76.8	0.00106	1.41	0.116	6.4
W17G185-06	KCI3	7/25/2017	10:35	0.00	2.65	6.75	17.3	178.9	4.34	**2**	6.8	**3**	**20**	6	**100**	20	600	33	83.6	0.00100	0.965	**0.1**	4.5
W17G185-07	KCI4	7/25/2017	10:50	0.00	5.9	7.17	17	158	4.34	**2**	3.39	8	45	5	570	**26**	460	36	69.1	0.00163	1.28	0.121	5.8
W17G185-08	KI1	7/25/2017	9:14	0.00	5.5	6.09	17.5	157.2	11.8	**2**	3.84	10	102	**2**	400	158	490	209	71.3	0.00183	1.38	0.337	2.6
W17G185-09	KI2	7/25/2017	9:35	0.00	10.75	6.51	13.8	128.7	11.6	**2**	2.3	48	**20**	2	500	20	270	32	68.2	0.00405	1.46	0.695	20.7
W17G185-10	BCI1	7/25/2017	13:20	0.00	5.03	6.99	21.4	204.8	1.72	**2**	1.89	3	**20**	**2**	1600	75	210	64	81.7	0.00242	1.35	0.321	6.9
W17G185-11	BCI2	7/25/2017	11:15	0.00	5.67	6.6	17.8	131.2	4.67	**2**	4.7	8	70	**2**	670	52	530	85	51.2	0.00199	2.02	0.1	1.4
W17G185-12	FD-KI2	7/25/2017		0.00						**2**	1.83	46	**20**	**2**	500	22	**200**	33	67.2	0.00227	0.887	0.369	10.9
W17J225-01	FCI0	10/30/2017	14:01	0.00	7.47	7.08	11.4	111.9	5.47	**2**	2.77	5	**20**	**2**	900	54	320	57	57	0.00105	1.14	0.316	5.8
W17J225-02	FCI1	10/30/2017	14:23	0.00	6.96	7.24	13.3	130.3	2.34	**2**	**1**	7	**20**	**2**	2700	78	250	75	59.3	**0.00100**	0.628	0.509	7.8
W17J226	FVL1	10/30/2017	13:43	0.00	7.51	7.11	11	127.2	72.5	4	2.97	116	250	26	450	44	1440	164	72.8	0.00642	3.99	2.24	16.5
W17J225-03	JCI1	10/30/2017	9:37	0.00	10.33	6.98	10.3	70.2	23.8	**2**	2.54	9	**20**	**2**	2400	22	350	52	31.7	0.00269	1.84	0.422	6.1
W17J225-04	JCI2	10/30/2017	10:39	0.00	15.02	7.39	9.6	59.8	7.22	**2**	1.91	**3**	**20**	2.4	3200	**20**	310	**25**	23.6	0.00139	0.684	0.114	1.5
W17J225-05	KCI1	10/30/2017	12:34	0.00	7.13	7.15	11.1	118.4	7.63	**2**	4.04	**3**	64	**2**	2500	29	560	55	61.1	0.00152	1.52	0.21	11.0
W17J225-06	KCI3	10/30/2017	11:17	0.00	6.12	6.92	10.4	111.6	1.9	**2**	3.53	**3**	30	**2**	950	**20**	350	**25**	57	**0.00100**	1.18	**0.1**	13.3
W17J225-07	KCI4	10/30/2017	11:28	0.00	8.28	6.97	11	115.3	2.85	**2**	3.48	8	**20**	**2**	1000	**20**	270	48	59.1	**0.00100**	0.968	**0.1**	6.1
W17J225-08	KI1	10/30/2017	9:54	0.00	5.8	7.33	10.7	119.4	10.5	**2**	5.85	**3**	**20**	**2**	660	87	570	114	57.8	0.00222	1.73	0.283	3.7
W17J225-09	KI2	10/30/2017	10:12	0.00	10.98	7.44	9.6	133.4	3.47	**2**	1.91	**3**	**20**	**2**	280	**20**	**200**	**25**	75.8	**0.00100**	0.405	**0.1**	1.4
W17J225-10	BCI1	10/30/2017	13:13	0.00	8.58	7.09	10.7	121.2	4.38	**2**	2.86	**3**	**20**	**2**	3000	44	380	40	59.8	0.00116	9.41	**0.1**	3.8
W17J225-11	BCI2	10/30/2017	11:45	0.00	8.04	6.73	9.3	88.8	6.5	**2**	4.18	**3**	59	**2**	3900	34	740	37	41.8	0.00170	21.3	**0.1**	5.2
W17J225-12	FD-BCI1	10/30/2017		0.00						**2**	2.77	**3**	**20**	**2**	3000	43	310	39	58.4	0.00135	9.31	**0.1**	3.9
W18A243-01	FCI0	1/30/2018	12:56	0.58	5.17	7.14	9.1	65.9	10.7	**2**	2.03	8	**20**		1100	42	300	65	42.3	0.00230	1.69	0.556	11.8
W18A243-02	FCI1	1/30/2018	13:13	0.58	5.68	7.1	9.8	52.5	4.26	**2**	1.04	**3**	**20**		1200	43	**200**	48	31.2	0.00114	1.15	0.225	19.5
W18A244	FVL1	1/30/2018	12:40	0.00	6.26	7.1	9.2	85.3	18	**2**	2.61	13	128		710	36	700	77	59	0.00252	2.42	0.393	11.5
W18A243-03	JCI1	1/30/2018	8:49	0.58	12.61	7.07	8.3	37.5	41.5	**2**	1.82	28	24		1800	**20**	360	75	22	0.00499	2.21	0.968	16.4
W18A243-04	JCI2	1/30/2018	10:00	0.58	9.57	7.06	8.2	35.2	48.8	**2**	1.48	27	**20**		2100	**20**	350	64	19.4	0.00378	1.56	0.698	6.6
W18A243-05	KCI1	1/30/2018	11:13	0.58	5.12	7.12	8.5	44	42.9	**2**	203	10	30		1100	20	280	88	29.1	0.00477	2.58	0.793	28.6
W18A243-06	KCI3	1/30/2018	10:22	0.58	8.72	6.88	8	54.3	33.1	**2**	2.05	3	21		2000	25	280	67	35.7	0.00274	1.6	0.374	8.8
W18A243-07	KCI4	1/30/2018	10:32	0.58	9.23	6.97	8.1	56.8	32.4	**2**	2.29	16	**20**		2100	21	390	79	37.4	0.00298	1.83	0.433	8.7
W18A243-08	KI1	1/30/2018	9:18	0.58	10.63	6.6	7.9	41.5	18.2	**2**	2.73	5	24		830	29	360	49	23.8	0.00358	1.63	0.354	8.4
W18A243-09	KI2	1/30/2018	9:36	0.58	11.32	7.11	8.1	37.1	12.1	**2**	1.12	5	**20**		1700	**20**	200	**25**	21.8	0.00199	0.671	0.217	8.2
W18A243-10	BCI1	1/30/2018	12:07	0.58	6.21	7.14	8.7	47.7	48.3	**2**	1.99	23	20		2200	20	340	104	31.3	0.00465	2.12	0.711	13.2
W18A243-11	BCI2	1/30/2018	10:54	0.58	6.46	6.95	8.2	45.8	56.2	**2**	1.57	27	24		2900	**20**	450	96	28	0.00461	2.11	0.739	7.1
W18A243-12	FD-BCI2	1/30/2018		0.58						**2**	1.52	29	**20**		2800	**20**	410	101	28.7	0.00476	2.15	0.742	7.5
W18D217-01	FCI0	4/24/2018	14:31	0.00	7.28	7.39	15.5	86.5	4.73	**2**	2.2	**3**	**20**		1000	49	320	52	52.1	0.00111	1.09	0.2	4.3
W18D217-02	FCI1	4/24/2018	15:06	0.00	6.91	6.55	13.1	86.8	1.53	**2**	1.04	**3**	**20**		2300	85	**200**	79	53.6	0.00111	0.598	0.215	6.5
W18D218	FVL1	4/24/2018	14:07	0.00	7.86	7.93	16.3	104.3	22.2	3	2.5	30	20		210	**20**	780	108	69.4	0.00210	1.68	0.66	4.98
W18D217-03	JCI1	4/24/2018	9:47	0.00	8.62	7.43	11.5	46.6	8.1	**2**	1.42	**3**	**20**		1600	26	280	31	26.7	0.00129	0.833	0.204	4.3
W18D217-04	JCI2	4/24/2018	10:53	0.00	11.32	7.66	11.3	36.3	9.34	**2**	1.18	4	**20**		2100	**20**	340	21	20.1	0.00111	0.658	0.2	2.1
W18D217-05	KCI1	4/24/2018	12:14	0.00	9.51	7.49	13	83	6.51	**2**	2.92	3	**20**		960	46	490	233	53.2	0.00636	4.02	1.7	117.0
W18D217-06	KCI3	4/24/2018	11:15	0.00	10.92	7.54	11	71.3	14.3	**2**	2.83	4	**20**		780	26	360	46	46.8	0.00166	2.93	0.328	5.9
W18D217-07	KCI4	4/24/2018	11:34	0.00	9.85	7.26	11.9	67.2	11.4	**2**	2.29	4	**20**		740	**20**	330	27	43.7	0.00111	0.767	0.2	4.5
W18D217-08	KI1	4/24/2018	10:08	0.00	9.57	7.21	10.8	55.7	7.54	**2**	2.07	4	20		360	39	310	51	35.3	0.00128	1.49	0.2	3.2
W18D217-09	KI2	4/24/2018	10:29	0.00	12.4	7.59	10.2	47.7	13.7	**2**	1	4	**20**		990	**20**	220	20	35.3	0.00117	0.499	0.2	3.6
W18D217-10	BCI1	4/24/2018	13:16	0.00	7.25	7.55	13.8	71.1	5.13	**2**	2.28	3	**20**		1500	28	320	35	43.7	0.00111	1.01	0.2	4.1
W18D217-11	BCI2	4/24/2018	11:54	0.00	10.13	7.3	12.3	45.8	6.92	**2**	1.9	4	**20**		2100	**20**	330	37	26.8	0.00213	1.08	0.2	4.3
W18D217-12	FD-FCI1	4/24/2018		0.00						**2**	1	3	**20**		2300	76	**200**	79	52.2	0.00111	0.497	0.2	6.2

Analysis Coding for the Reported Data

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Exceedance of TMDL or other water quality criteria

Chronic exceedance of metal (Table 30)

Acute exceedance of metal (Table 30)

Exceedance of City WPCF Permit action level

Table 2-2 Longterm Instream Data

Sample ID	Site ID	Date	Cu-Diss	Pb-Diss	Zn-Diss	E. coli	4,4'-DDD	4,4'-DDE	4,4'-DDT	Aldrin	alpha-BHC	Alpha-BHC	beta-BHC	gamma-BHC	delta-BHC	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan Sulfate	Endrin	Endrin Aldehyde
			µg/L	µg/L	µg/L	MPN/100ml	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L
Test Method			EPA 200.8	EPA 200.8	EPA 200.8	SM 9223B	EPA 8081	EPA 8081	EPA 8081	EPA 8081	EPA 8081	EPA 8081	EPA 8081	EPA 8081	EPA 8081	EPA 8081	EPA 8081	EPA 8081	EPA 8081	EPA 8081	EPA 8081
Method Reporting Limit			0.2	0.1	0.5	10	0.5-various	0.5-various	0.5-various	0.5-various	0.5-various	1.0-various	0.5-various	0.5-various	0.5-various	0.5-various	0.5-various	0.5-various	0.5-various	0.5-various	0.5-various
W17G185-01	FCI0	7/25/2017	2.47	**0.102**	1.71	63															
W17G185-02	FCI1	7/25/2017	0.234	**0.102**	2.31	84															
W17G186	FVL1	7/25/2017	1.33	**0.10**	**0.50**	**10**															
W17G185-03	JCI1	7/25/2017	1.38	**0.102**	1.62	370	0.52	0.54	**1.1**	**1.1**	**1.1**	**1.1**	**1.1**	**1.1**	**1.1**	1.5	**1.1**	0.77	**1.3**	**1.1**	**1.9**
W17G185-04	JCI2	7/25/2017	1.19	**0.102**	0.967	52	**1.1**	0.68	**1.1**	**1.1**	**1.1**	**1.1**	**1.1**	0.36	**1.1**	2.6	**1.1**	**1.1**	**1.1**	**1.1**	**1.1**
W17G185-05	KCI1	7/25/2017	1.1	**0.102**	2.68	98															
W17G185-06	KCI3	7/25/2017	0.722	**0.102**	1.56	10															
W17G185-07	KCI4	7/25/2017	0.949	**0.102**	2.86	120															
W17G185-08	KI1	7/25/2017	0.931	**0.102**	0.753	310															
W17G185-09	KI2	7/25/2017	0.319	**0.102**	0.787	120															
W17G185-10	BCI1	7/25/2017	0.661	**0.102**	0.966	20															
W17G185-11	BCI2	7/25/2017	1.71	**0.102**	1.28	84															
W17G185-12	FD-KI2	7/25/2017	0.31	**0.102**	0.867	120															
W17J225-01	FCI0	10/30/2017	0.768	**0.102**	2.98	74															
W17J225-02	FCI1	10/30/2017	0.319	**0.102**	5.44	150															
W17J226	FVL1	10/30/2017	0.779	**0.10**	0.50	63															
W17J225-03	JCI1	10/30/2017	0.98	**0.102**	2.86	31	**0.99**	1.1	2.2	**0.99**	**0.99**	**1.1**	**1.4**	**0.99**	0.92	3.3	**6.3**	**0.99**	**0.99**	**0.99**	**0.99**
W17J225-04	JCI2	10/30/2017	0.614	**0.102**	3.44	41	**0.99**	**1.2**	1.5	**0.99**	**0.99**	**0.99**	**1.6**	**0.99**	**0.99**	3.6	**2**	**0.99**	3	**0.99**	**0.99**
W17J225-05	KCI1	10/30/2017	1.27	**0.102**	7.72	10															
W17J225-06	KCI3	10/30/2017	1.17	**0.102**	12.2	41															
W17J225-07	KCI4	10/30/2017	0.886	**0.102**	5.09	31															
W17J225-08	KI1	10/30/2017	1.4	**0.102**	1.57	20															
W17J225-09	KI2	10/30/2017	0.365	**0.102**	0.722	260															
W17J225-10	BCI1	10/30/2017	8.76	**0.102**	3.41	**10**															
W17J225-11	BCI2	10/30/2017	20.3	**0.102**	4.66	85															
W17J225-12	FD-BCI1	10/30/2017	9.01	**0.102**	3.03	10															
W18A243-01	FCI0	1/30/2018	1.04	**0.102**	7.03	20															
W18A243-02	FCI1	1/30/2018	0.824	**0.102**	17.1	210															
W18A244	FVL1	1/30/2018	1.5	**0.10**	7.55	260															
W18A243-03	JCI1	1/30/2018	0.96	**0.102**	7.68	170	**1.1**	3	**3.6**	**1.1**	**1.1**	**1.1**	**1.1**	**1.1**	**1.1**	4.4	**1.1**	**1.1**	**1.1**	**1.1**	**1.1**
W18A243-04	JCI2	1/30/2018	0.714	**0.102**	2.84	120	**1.1**	2.4	**2.6**	**1.1**	**1.1**	**1.1**	**1.1**	**1.1**	**1.1**	4.8	**1.1**	**1.1**	**1.1**	**1.1**	**1.1**
W18A243-05	KCI1	1/30/2018	1.19	**0.102**	15.4	260															
W18A243-06	KCI3	1/30/2018	1	**0.102**	5.86	180															
W18A243-07	KCI4	1/30/2018	0.994	**0.102**	4.12	370															
W18A243-08	KI1	1/30/2018	1.1	**0.102**	4	200															
W18A243-09	KI2	1/30/2018	0.428	**0.102**	5.62	20															
W18A243-10	BCI1	1/30/2018	1	**0.102**	4.21	84															
W18A243-11	BCI2	1/30/2018	0.798	**0.102**	1.3	97															
W18A243-12	FD-BCI2	1/30/2018	0.829	**0.102**	1.35	74															
W18D217-01	FCI0	4/24/2018	0.751	**0.105**	2.7	710															
W18D217-02	FCI1	4/24/2018	0.331	**0.105**	5.46	**10**															
W18D218	FVL1	4/24/2018	0.686	**0.11**	**0.527**	41															
W18D217-03	JCI1	4/24/2018	0.554	**0.105**	2.42	41															
W18D217-04	JCI2	4/24/2018	0.381	0.12	0.971	52															
W18D217-05	KCI1	4/24/2018	0.876	**0.105**	8.48	20															
W18D217-06	KCI3	4/24/2018	2	**0.105**	4.12	180															
W18D217-07	KCI4	4/24/2018	1.2	**0.105**	5.25	110															
W18D217-08	KI1	4/24/2018	0.573	**0.105**	2.47	140															
W18D217-09	KI2	4/24/2018	0.268	**0.105**	1.68	**10**															
W18D217-10	BCI1	4/24/2018	0.733	**0.105**	1.8	10															
W18D217-11	BCI2	4/24/2018	0.684	**0.105**	0.875	130															
W18D217-12	FD-FCI1	4/24/2018	0.299	**0.105**	5.22	**10**															

Analysis Coding for the Reported Data

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NM= not measured **ND**= not detected

Dup = Duplicate Sample

FD = Field Duplicate Sample

MRL= method reporting limits are inclued at the top of each data set where they are constant. For parameters where no MRL is included, they vary by sample.

Exceedance of TMDL or other water quality criteria

Chronic exceedance of metal (Table 30)

Acute exceedance of metal (Table 30)

Exceedance of City WPCF Permit action level

Table 2-2 Longterm Instream Data

Sample ID	Site ID	Date	Endrin Ketone	gamma-Chlordane	Heptachlor	Heptachlor Epoxide	Methoxychlor	Toxaphene
			ng/L	ng/L	ng/L	ng/L	ng/L	ng/L
Test Method			EPA 8081	EPA 8081	EPA 8081	EPA 8081	EPA 8081	EPA 8081
Method Reporting Limit			0.5-various	1.0-various	0.5-various	1.0-various	0.5-various	50-various
W17G185-01	FCI0	7/25/2017						
W17G185-02	FCI1	7/25/2017						
W17G186	FVL1	7/25/2017						
W17G185-03	JCI1	7/25/2017	**1.1**	**1.1**	**1.1**	**1.1**	**1.1**	**84**
W17G185-04	JCI2	7/25/2017	**1.1**	**1.1**	**1.1**	**1.1**	**1.1**	**53**
W17G185-05	KCI1	7/25/2017						
W17G185-06	KCI3	7/25/2017						
W17G185-07	KCI4	7/25/2017						
W17G185-08	KI1	7/25/2017						
W17G185-09	KI2	7/25/2017						
W17G185-10	BCI1	7/25/2017						
W17G185-11	BCI2	7/25/2017						
W17G185-12	FD-KI2	7/25/2017						
W17J225-01	FCI0	10/30/2017						
W17J225-02	FCI1	10/30/2017						
W17J226	FVL1	10/30/2017						
W17J225-03	JCI1	10/30/2017	**13**	**0.99**	**0.99**	**0.99**	**0.99**	**54**
W17J225-04	JCI2	10/30/2017	**13**	**0.99**	**1.2**	**0.99**	**0.99**	**50**
W17J225-05	KCI1	10/30/2017						
W17J225-06	KCI3	10/30/2017						
W17J225-07	KCI4	10/30/2017						
W17J225-08	KI1	10/30/2017						
W17J225-09	KI2	10/30/2017						
W17J225-10	BCI1	10/30/2017						
W17J225-11	BCI2	10/30/2017						
W17J225-12	FD-BCI1	10/30/2017						
W18A243-01	FCI0	1/30/2018						
W18A243-02	FCI1	1/30/2018						
W18A244	FVL1	1/30/2018						
W18A243-03	JCI1	1/30/2018	**1.1**	**1.1**	**1.1**	**1.1**	**1.1**	**1.1**
W18A243-04	JCI2	1/30/2018	**1.1**	**1.1**	**1.1**	**1.1**	**1.1**	**1.1**
W18A243-05	KCI1	1/30/2018						
W18A243-06	KCI3	1/30/2018						
W18A243-07	KCI4	1/30/2018						
W18A243-08	KI1	1/30/2018						
W18A243-09	KI2	1/30/2018						
W18A243-10	BCI1	1/30/2018						
W18A243-11	BCI2	1/30/2018						
W18A243-12	FD-BCI2	1/30/2018						
W18D217-01	FCI0	4/24/2018						
W18D217-02	FCI1	4/24/2018						
W18D218	FVL1	4/24/2018						
W18D217-03	JCI1	4/24/2018						
W18D217-04	JCI2	4/24/2018						
W18D217-05	KCI1	4/24/2018						
W18D217-06	KCI3	4/24/2018						
W18D217-07	KCI4	4/24/2018						
W18D217-08	KI1	4/24/2018						
W18D217-09	KI2	4/24/2018						
W18D217-10	BCI1	4/24/2018						
W18D217-11	BCI2	4/24/2018						
W18D217-12	FD-FCI1	4/24/2018						

Analysis Coding for the Reported Data

Bold = < than detection value or an Estimated value for bacteria

NA = constituents not sampled due to equipment failure or other extenuating circumstance

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Dup = Duplicate Sample

FD = Field Duplicate Sample

MRL= method reporting limits are inclued at the top of each data set where they are constant. For parameters where no MRL is included, they vary by sample.

Exceedance of TMDL or other water quality criteria

Chronic exceedance of metal (Table 30)

Acute exceedance of metal (Table 30)

Exceedance of City WPCF Permit action level

Table 2-3 Continuous Temperature Monitoring

ID Number	Site	Basin	Stream	Max 7DADM (*C)	days 7DADM >18*C
1	Beaver_btwn_footbridges	Beaver	Beaver	20.3	69
2	Beaver_Division_Troutdale_Triangle	Beaver	Beaver	21.2	85
3	Beaver_DS_Kelly_confluence	Beaver	Beaver	24.3	108
4	Beaver_GlenOtto	Beaver	Beaver	22.9	109
5	Beaver_US_Kelly_confluence	Beaver	Beaver	20.4	83
6	Cory	Beaver	Beaver	22.2	89
7	Burlingame@Hogan	Beaver	Burlingame	22.3	94
8	Kelly@Ironwood (KCI3 US of KCDP)	Beaver	Kelly	21.4	74
9	Kelly_DS_MHCC_pond	Beaver	Kelly	25.1	113
10	Kelly_US_golf_course	Beaver	Kelly	20.4	37
11	Kelly_US_MHCC_pond	Beaver	Kelly	22.0	100
12	S Fk Beaver at 302nd	Beaver	S Fork Beaver	18.9	0
13	Fairview@223_(FCI0)	Fairview	Fairview	22.8	109
14	Fairview@Birdsdale	Fairview	Fairview	18.8	31
15	Fairview@Glisan	Fairview	Fairview	28.3	141
16	Fairview@Stark (FCI1 Conifer Park)	Fairview	Fairview	16.3	0
17	Fairview_Division	Fairview	Fairview	22.2	68
18	Brigman US Metro ponds	Johnson	Brigman	21.8	86
19	BUC1(Butler_US_Willowbrook)	Johnson	Butler	20.0	36
20	BUC2(Butler_US_Mawcrest)	Johnson	Butler	20.9	64
21	BUC3(Butler_US_Binford)	Johnson	Butler	22.6	92
22	BUC4(Butler_DS_Binford)	Johnson	Butler	22.2	85
23	EMSWCD mainstem Johnson @ Cottre	Johnson	Johnson	24.1	90
24	Johnson@Milwaukie	Johnson	Johnson	21.6	102
25	Johnson@Palmblad(JCI2)	Johnson	Johnson	23.3	97
26	Johnson@Regner	Johnson	Johnson	24.6	102
27	Johnson@Sycamore	Johnson	Johnson	25.1	106
28	Johnson_72_@_Pleasant_View	Johnson	Johnson	24.3	107
29	Johnson_DS_Palmblad_beaver_dam	Johnson	Johnson	23.4	97
30	Johnson_US_Palmblad beaver dam	Johnson	Johnson	23.2	96
31	Kelley forest edge	Johnson	Kelley	19.3	19
32	Kelley@159th	Johnson	Kelley	21.2	84
33	Kelley@190th	Johnson	Kelley	20.0	53
34	Kelley@PleasantValleyGrange	Johnson	Kelley	21.0	84
35	Kelley_US_Brookside	Johnson	Kelley	20.3	51
36	KI2 (Kelley@Rodlun)	Johnson	Kelley	17.8	0
37	EMSWCD headwaters farm N Fk Johns	Johnson	North Fork Johnson	17.4	0
38	EMSWCD N Fk Johnson @ 282nd	Johnson	North Fork Johnson	22.5	93
39	N_Fork_Johnson_mouth_Telford	Johnson	North Fork Johnson	19.6	39

Coding for Reported Data
Red = temperature exceedances for more than 100 days
Blue = no temperature exceedances

Temperature is not a pollutant associated with stormwater runoff since the rainy season does not coincide with summer temperatures. This data is provided to help the reader understand the general condition and impacts to streams in Gresham and Fairview. The City has a temperature TMDL plan that restores public land in an effort to provide shade and reduce streams temperatures over time. These activities are reported in **Table 3-3.**

Figure 2-1 Stream Temperature Monitoring

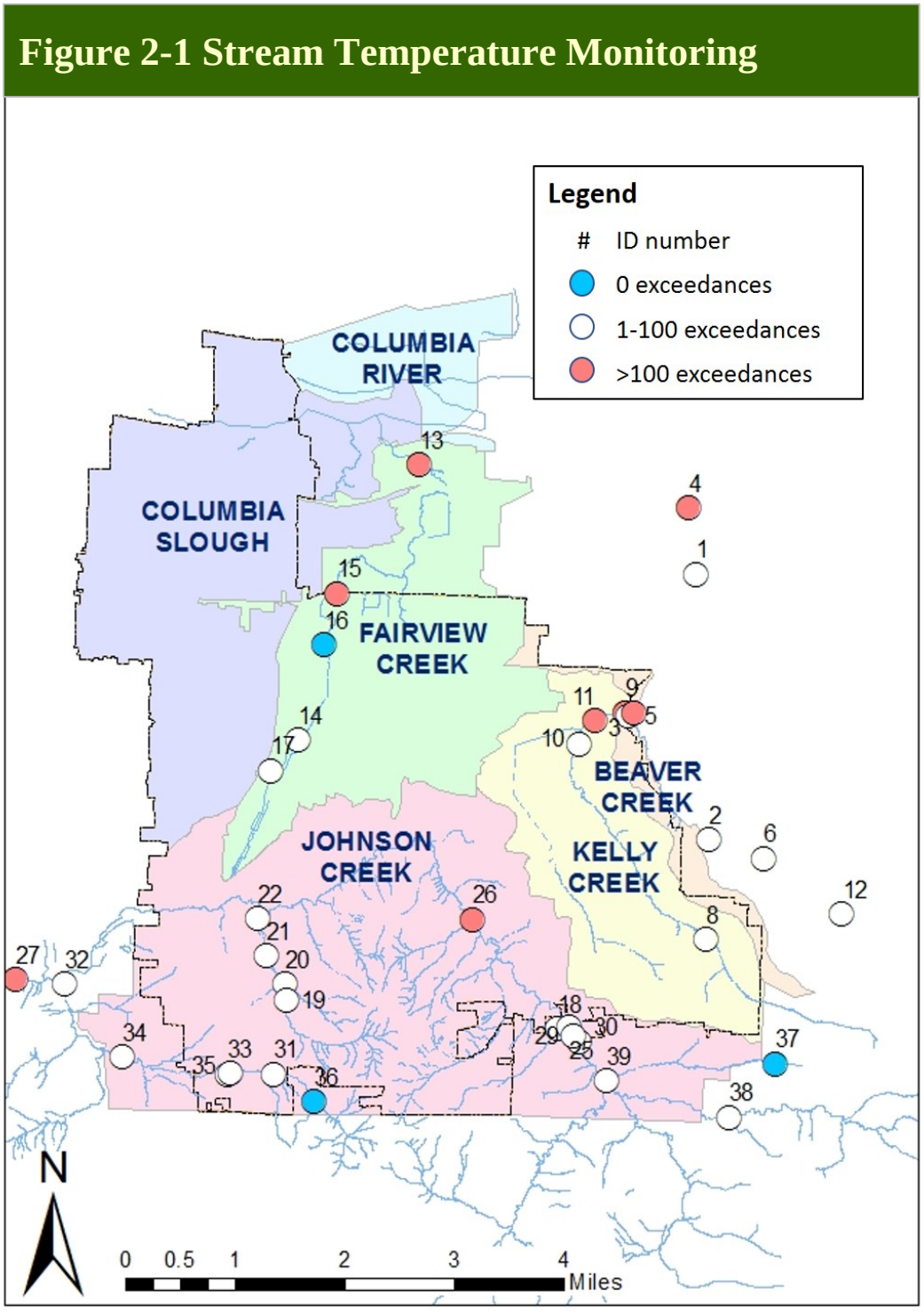

Table 2-4 Stormwater Sampling

Lab ID	System_ID	Trips per Day	Land Use	Functional Class	Date	Time	Rainfall Previous	DO	pH	Temp	Conduc-tivity	Turbi-dity	E. coli	BOD	DOC	TSS	Ammonia	Nitrate	ortho-P	Total Kjeldahl Nitrogen	T-Phos	Hardness	Total Antimony	Total Cadmium	Total Copper	Total Lead	Total Mercury	Total Zinc	Dissolved Copper	Dissolved Lead	Diss Zinc
Method Reporting Limit							**inches/24 hrs**	**mg/l**		**°C**	**µS/cm**	**NTU**	**MPN /100 mL**	**2 mg/L**	**1 mg/L**	**2 mg/L**	**10 ug/L**	**100 ug/L**	**20 ug/L**	**200 ug/L**	**30 ug/L**	**mg/L CaCO3**	**0.100 ug/L**	**0.100 ug/L**	**0.200 ug/L**	**0.100 ug/L**	**0.00200 ug/L**	**0.500 ug/L**	**0.200 ug/L**	**0.100 ug/L**	**0.500 ug/L**
Analytical Method													**SM 9223 B**	**SM 5210 B**	**SM 5310B**	**SM 2540D**	**EPA 300.0**	**EPA 300.0**	**EPA 365.1**	**EPA 351.2**	**EPA 365.4**	**SM 2340B CAL**	**EPA 200.8**	**EPA 200.8**	**EPA 200.8**	**EPA 200.8**	**EPA 200.8**	**EPA 200.8**	**EPA 200.8**	**EPA 200.8**	**EPA 200.8**
W17J147-01	3148-W-014	>1000	Residential	Community	10/19/2017	9:57	0.49	10.8	7.39	12.1	9.6	40.2	640	15	9.51	6	167	120	92	670	81	5.01	0.862	**0.1**	8.25	2.01	0.00789	48.4	3.700	0.126	24
W17J147-02	3151-F-064	>1000	Commercial	Collector	10/19/2017	6:53	0.19	10.3	8.35	13.3	93.9	65.4	1500	6	5.49	31	490	130	31	900	108	13.2	1.780	**0.1**	14.3	2.94	0.0113	68.5	5.190	0.158	26
W17J147-04	3047-W-016	>1000	Commercial	Minor arterial	10/19/2017	10:30	0.49	8.72	7.55	12.5	21.3	70.6	>2400	9	7.54	51	871	140	56	1750	171	11.7	2.160	**0.1**	20.1	5.65	0.0084	130	7.110	0.394	51.6
W17J147-06	3048-W-097	>1000	Residential	Community	10/19/2017	10:55	0.61	11.3	7.42	12.6	9	21.6	320	2	2.38	10	113	**100**	**20**	370	43	5.07	0.500	**0.1**	3.86	0.584	0.00255	20.2	1.770	**0.102**	10.1
W17J147-07	3053-F-022	>1000	Commercial	Minor Arterial	10/19/2017	8:05	0.27	9.83	7.95	12.4	39.7	59.2	440	5	3.66	30	181	120	26	530	76	31.9	0.874	**0.1**	9.12	1.22	0.00595	32.3	3.750	**0.102**	8.85
W17J147-03	3251-F-013	<1000	Residential	Residential	10/19/2017	8:36	0.27	11.7	7.71	12.1	15	5.96	400	10	7.66	3	42	**100**	120	510	136	8.91	0.137	**0.1**	10.8	0.147	0.00626	74.2	7.250	**0.102**	62
W17J147-05	3251-F-015	<1000	Residential	Residential	10/19/2017	9:04	0.39	9.98	7.7	12.4	12.5	6.53	130	5	6.05	9	30	**100**	74	410	82	6.4	0.184	**0.1**	6.5	0.288	0.00588	61.5	5.210	**0.102**	55.1
W17J147-08	3150-F-030	<1000	Residential	Residential	10/19/2017	7:22	0.19	10	8.1	12.5	20.1	10.8	430	>22	38.4	30	474	**100**	66	2080	106	7.02	0.664	0.141	15.2	3.68	0.0177	109	7.910	0.14	60.8
W17J147-09	3153-F-040	<1000	Residential	Residential	10/19/2017	8:10	0.27	10.6	7.67	12	12.4	8.27	20	2	2.82	5	100	**100**	29	270	43	7.8	0.252	**0.1**	5.31	0.322	0.00908	8.52	3.730	**0.102**	4.81
W17J147-10	3349-W-050	<1000	Residential	Residential	10/19/2017	9:30	0.39	11.1	7.48	12.3	9.6	10.6	3800	3	2.49	7	102	**100**	53	280	62	5.51	0.266	**0.1**	3.03	0.748	0.00333	14.2	1.390	**0.102**	5.85
W17J147-11	FD												360	>22	37.8	23	447	**100**	72	1730	109	6.73	0.453	**0.1**	10.2	1.03	0.00954	73.5	8.030	0.154	61.3

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FD = Field Duplicate Sample

Table 2-4 Stormwater Sampling

Lab ID	System_ID	Trips per Day	Land Use	Functional Class	Date	Time	Acenaph-thene	Acenaph-thylene	Anthra-cene	Benzo-(a)-anthra cene	Benzo-(a)-pyrene	Benzo(b)-fluoran-thene	Benzo(ghi)-perylene	Benzo(k) fluoran-thene	Chrysene	Dibenzo-(a,h)-anthra-cene	Fluoran-thene	Fluorene	Indeno-(1,2,3-cd)-pyrene	Naphthalene	Phenan-threne	Pyrene	Butyl benzyl phthalate	Di-n-butyl phthalate	Diethyl phthalate	Dimethyl phthalate	Di-n-octyl phthalate
Method Reporting Limit							**0.02 ug/L**	**MPN/100.02 ml**	**0.02 ug/L**	**0.01 ug/L**	**0.01 ug/L**	**0.01 ug/L**	**0.01 ug/L**	**0.01 ug/L**	**0.01 ug/L**	**0.01 ug/L**	**0.01 ug/L**	**0.02 ug/L**	**0.01 ug/L**	**0.04 ug/L**	**0.02 ug/L**	**0.01 ug/L**	**1 ug/L**	**1 ug/L**	**1 ug/L**	**1 ug/L**	**1 ug/L**
Analytical Method							**EPA 8270-SIM**	**EPA 8270-SIM**	**EPA 8270-SIM**	**EPA 8270-SIM**	**EPA 8270-SIM**	**EPA 8270-SIM**	**EPA 8270-SIM**	**EPA 8270-SIM**	**EPA 8270-SIM**	**EPA 8270-SIM**	**EPA 8270-SIM**	**EPA 8270-SIM**	**EPA 8270-SIM**	**EPA 8270-SIM**	**EPA 8270-SIM**	**EPA 8270-SIM**	**EPA 8270-SIM**	**EPA 8270-SIM**	**EPA 8270-SIM**	**EPA 8270-SIM**	**EPA 8270-SIM**
W17J147-01	3148-W-014	>1000	Residential	Community	10/19/2017	9:57	**0.020**	**0.020**	**0.020**	**0.010**	**0.010**	**0.010**	0.028	**0.01**	**0.01**	**0.010**	0.021	**0.020**	**0.010**	**0.04**	**0.020**	0.057	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**
W17J147-02	3151-F-064	>1000	Commercial	Collector	10/19/2017	6:53	**0.020**	**0.020**	**0.020**	0.013	0.017	0.034	0.073	**0.010**	0.027	**0.010**	0.073	**0.020**	0.019	**0.04**	0.059	0.150	**1.0**	**1.0**	**1.0**	**1.0**	0.6
W17J147-04	3047-W-016	>1000	Commercial	Minor arterial	10/19/2017	10:30	**0.020**	0.023	**0.020**	0.030	0.033	0.058	0.140	0.019	0.053	**0.010**	0.140	**0.020**	0.031	0.13	0.130	0.270	**1.0**	**1.0**	**1.0**	**1.0**	1.1
W17J147-06	3048-W-097	>1000	Residential	Community	10/19/2017	10:55	**0.020**	**0.020**	**0.020**	**0.010**	**0.010**	**0.010**	0.017	**0.010**	**0.010**	**0.010**	0.018	**0.020**	**0.010**	**0.04**	**0.020**	0.031	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**
W17J147-07	3053-F-022	>1000	Commercial	Minor Arterial	10/19/2017	8:05	**0.020**	**0.020**	**0.020**	0.014	0.013	0.021	0.050	**0.010**	0.017	**0.010**	0.040	**0.020**	0.014	**0.04**	0.048	0.072	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**
W17J147-03	3251-F-013	<1000	Residential	Residential	10/19/2017	8:36	**0.020**	**0.020**	**0.020**	**0.010**	**0.010**	**0.010**	**0.010**	**0.010**	**0.010**	**0.010**	**0.010**	**0.020**	**0.010**	**0.04**	**0.020**	**0.010**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**
W17J147-05	3251-F-015	<1000	Residential	Residential	10/19/2017	9:04	**0.020**	**0.020**	**0.020**	**0.010**	**0.010**	**0.010**	**0.010**	**0.010**	**0.010**	**0.010**	**0.010**	**0.020**	**0.010**	**0.04**	**0.020**	**0.010**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**
W17J147-08	3150-F-030	<1000	Residential	Residential	10/19/2017	7:22	**0.020**	**0.020**	**0.020**	**0.010**	**0.010**	**0.010**	**0.010**	**0.010**	**0.010**	**0.010**	**0.010**	**0.020**	**0.010**	**0.04**	**0.020**	0.014	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**
W17J147-09	3153-F-040	<1000	Residential	Residential	10/19/2017	8:10	**0.020**	**0.020**	**0.020**	**0.010**	**0.010**	**0.010**	**0.010**	**0.010**	**0.010**	**0.010**	**0.010**	**0.020**	**0.010**	**0.04**	**0.020**	0.014	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**
W17J147-10	3349-W-050	<1000	Residential	Residential	10/19/2017	9:30	**0.020**	**0.020**	**0.020**	0.068	0.030	0.063	0.089	0.021	0.069	**0.010**	0.069	**0.020**	0.028	**0.04**	0.082	0.120	**1.0**	**1.0**	**1.0**	**1.0**	1.1
W17J147-11	FD						**0.020**	**0.020**	**0.020**	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	**0.020**	**0.010**	**0.04**	**0.020**	0.014	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**

Analysis Coding for the Reported Data

Bold = < than detection value or an Estimated value for bacteria

NA = constituents not sampled due to equipment failure or other extenuating circumstance

NM= not measured **ND**= not detected

Dup = Duplicate Sample

MRL = method reporting limits are included at the top of each data set where they are constant. For parameters were no MRL is included, this means they vary by sample due to properties of the sample, such as conductivity. Results below the MRL are estimates of detections as reported by the laboratory.

FD = Field Duplicate Sample

Table 2-4 Stormwater Sampling

Stormwater Sampling

Lab ID	System_ID	Trips per Day	Land Use	Functional Class	Date	Time	Bis(2-ethylhexyl) phthalate	Acifluorfen	Bentazon	2,4-D	2,4-DB	Dicamba	3,5-Dichloro-benzoic acid	Dichlorprop	Dinoseb	Penta-chloro-phenol	Picloram	2,4,5-T	2,4,5-TP (Silvex)	Triclopyr
Method Reporting Limit							**1 ug/L**	**0.2 ug/L**	**0.4 ug/L**	**0.02 ug/L**	**0.4 ug/L**	**0.2 ug/L**	**0.2 ug/L**	**0.4 ug/L**	**0.4 ug/L**	**0.02 ug/L**	**0.2 ug/L**	**0.1 ug/L**	**0.011 ug/L**	**0.040 ug/L**
Analytical Method							**EPA 8270-SIM**	**EPA 515.4 mod**	**EPA 515.4 mod**	**EPA 515.4 mod**	**EPA 515.4 mod**	**EPA 515.4 mod**	**EPA 515.4 mod**	**EPA 515.4 mod**	**EPA 515.4 mod**	**EPA 515.4 mod**	**EPA 515.4 mod**	**EPA 515.4 mod**	**EPA 515.4 mod**	
W17J147-01	3148-W-014	>1000	Residential	Community	10/19/2017	9:57	1.0	**0.2**	**0.4**	**0.02**	**0.4**	**0.2**	**0.2**	**0.4**	**0.4**	0.070	**0.2**	**0.1**	**0.011**	0.14
W17J147-02	3151-F-064	>1000	Commercial	Collector	10/19/2017	6:53	1.7	**0.2**	**0.4**	**0.02**	**0.4**	**0.2**	**0.2**	**0.4**	**0.4**	0.368	**0.2**	**0.1**	**0.011**	<0.080
W17J147-04	3047-W-016	>1000	Commercial	Minor arterial	10/19/2017	10:30	10.0	**0.2**	**0.4**	1.1	**0.4**	0.125	**0.2**	**0.4**	**0.4**	7.76	**0.2**	**0.1**	**0.011**	0.25
W17J147-06	3048-W-097	>1000	Residential	Community	10/19/2017	10:55	9.4	**0.2**	**0.4**	**0.02**	**0.4**	**0.2**	**0.2**	**0.4**	**0.4**	0.104	**0.2**	**0.1**	**0.011**	<0.080
W17J147-07	3053-F-022	>1000	Commercial	Minor Arterial	10/19/2017	8:05	1.5	**0.2**	**0.4**	**0.02**	**0.4**	**0.2**	**0.2**	**0.4**	**0.4**	1.140	**0.2**	**0.1**	**0.011**	<0.080
W17J147-03	3251-F-013	<1000	Residential	Residential	10/19/2017	8:36	3.9	**0.2**	**0.4**	**0.02**	**0.4**	**0.2**	**0.2**	**0.4**	**0.4**	0.027	**0.2**	**0.1**	**0.011**	<0.080
W17J147-05	3251-F-015	<1000	Residential	Residential	10/19/2017	9:04	**1.0**	**0.2**	**0.4**	1.4	**0.4**	0.22	**0.2**	**0.4**	**0.4**	0.028	**0.2**	**0.1**	**0.011**	<0.080
W17J147-08	3150-F-030	<1000	Residential	Residential	10/19/2017	7:22	1.0	**0.2**	**0.4**	**0.02**	**0.4**	**0.2**	**0.2**	**0.4**	**0.4**	0.195	**0.2**	**0.1**	**0.011**	0.092
W17J147-09	3153-F-040	<1000	Residential	Residential	10/19/2017	8:10	**1.1**	**0.2**	**0.4**	**0.02**	**0.4**	**0.2**	**0.2**	**0.4**	**0.4**	0.038	**0.2**	**0.1**	**0.011**	<0.080
W17J147-10	3349-W-050	<1000	Residential	Residential	10/19/2017	9:30	1.0	**0.2**	**0.4**	1.04	**0.4**	0.12	**0.2**	**0.4**	**0.4**	0.054	**0.2**	**0.1**	**0.011**	<0.080
W17J147-11	FD						2.8	**0.2**	**0.4**	**0.02**	**0.4**	**0.2**	**0.2**	**0.4**	**0.4**	0.182	**0.2**	**0.1**	**0.011**	<0.080

Analysis Coding for the Reported Data

Bold = < than detection value or an Estimated value for bacteria

NA = constituents not sampled due to equipment failure or other extenuating circumstance

NM= not measured **ND=** not detected

Dup = Duplicate Sample

MRL = method reporting limits are included at the top of each data set where they are constant. For parameters were no MRL is included, this means they vary by sample due to properties of the sample, such as conductivity. Results below the MRL are estimates of detections as reported by the laboratory.

FD = Field Duplicate Sample

Table 2-5 Stormwater Green Infrastructure Monitoring Data

Sample ID	Site ID	Point Code	Date	Time	Storm	24-hr Rainfall	Field DO	Field pH	Field Temp	Conduc-tivity	Turbi-dity	NH3-N	BOD5	NO3-N	O-PO4	TKN	Total-P	TSS	Hardness
						inches	mg/L		C	uS/cm	NTUs	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg CaCO3/L
											0.01	EPA 300.0 20	SM 5210B 2	EPA 300.0 100	EPA 365.1 20	EPA 351.2 100	EPA 365.4 25	SM 2540D 2	SM 2340B CAL 1
W17I111-01	Hayden's Meadow rain garden B12 Portland blend inlet	HMPB121-1	9/18/2017	9:44	1	0.72	6.96	6.15	13.1	19.6	1712	163	3	**100**	51	1820	1020	208	66.6
W17I111-02	Hayden's Meadow rain garden B12 Portland blend outlet	HMPB122-1	9/18/2017	10:03	1	0.8	6.41	6.51	16.9	76.2	305	22	9	**100**	136	1170	332	72	66.2
W17I118-01	Hayden's Meadow rain garden A2 Portland blend inlet	HMPA21	9/18/2017	14:06	1	1.14	6.19	6.15	15.2	37.1	39.9	**20**	8	180	370	1160	511	18	218
W17I118-02	Hayden's Meadow rain garden A2 Portland blend outlet	HMPA22	9/18/2017	14:17	1	1.14	6.29	6.05	15.2	47.5	26.4	**20**	8	**100**	210	**940**	278	7	34.5
W17I118-03	Hayden's Meadow rain garden B15 Gresham blend inlet	HMGB151	9/18/2017	15:05	1	1.16	5.85	6.65	15.6	21.6	112	205	9	260	61	1420	184	58	40.3
W17I118-04	Hayden's Meadow rain garden B15 Gresham blend outlet	HMGB152	9/18/2017	15:31	1	1.16	5.58	6.57	16.4	60.2	57.9	44	10	260	131	1260	264	21	47.1
W17I118-05	Hayden's Meadow rain garden A7 Gresham blend inlet	HMGA71	9/18/2017	15:11	1	1.16	6.33	6.71	15.8	25	55.4	161	3	**100**	46	760	103	43	22.8
W17I118-06	Hayden's Meadow rain garden A7 Gresham blend outlet	HMGA72	9/18/2017	15:35	1	1.16	5.7	6.68	17.1	63.9	23.8	**20**	7	120	251	1320	317	8	47.7
W17I118-07	Hayden's Meadow rain garden B12 Portland blend inlet	HMPB121-2	9/18/2017	16:20	1	1.18	5.9	6.85	15.4	25.6	154	136	4	**100**	76	460	266	102	31.8
W17I118-08	Hayden's Meadow rain garden B12 Portland blend outlet	HMPB122-2	9/18/2017	16:30	1	1.18	4.84	6.59	17.5	62.5	107	**20**	8	**100**	170	1040	288	33	48.6
W17I118-09	Hayden's Meadow rain garden B11 Gresham blend inlet	HMGB111	9/18/2017	16:50	1	1.18	6.01	7.02	16.7	43.3	147	143	2	**100**	53	800	150	129	37.3
W17I118-10	Hayden's Meadow rain garden B11 Gresham blend outlet	HMGB112	9/18/2017	16:55	1	1.18	5.94	6.91	16.4	92.2	42.5	**20**	4	**100**	184	870	248	16	73.2
W17K149-02	FCWQF inlet	FCWQF1-1	########	7:41	2	0.09	11.69	7.33*	11.1	26.7	13.5	80	7	**100**	68	450	109	10	9.41
W17K149-03	FCWQF inlet	FCWQF1-2	########	11:55	2	0.43	13.4	7.62*	9.5	10.5	15.8	46	4	**100**	34	320	67	23	4.81
W17K154-03	FCWQF inlet	FCWQF1-3	########	17:52	2	0.99	14.15	6.44*	9.1	20	12.7	99	3	200	48	500	86	5	9.31
W17K149-01	FCWQF outlet	FCWQF2-1	########	9:15	2	0.16	7.25	7.58*	9.8	39.2	10.1	67	**2**	200	64	540	112	7	18.2
W17K154-04	FCWQF outlet	FCWQF2-2	########	18:16	2	1	9.63	6.71*	8.9	13.5	9.14	**20**	**2**	**100**	35	240	49	4	6.92
W17K154-05	FCWQF outlet	FCWQF2-3	########	8:56	2	0.93	8.51	7.17*	10.4	25.7	6.4	30	**2**	260	35	340	57	**3**	12.5
W17K149-04	Mt Hood Comm Coll, parking lots E-H	MHCC_EH-1	########	8:09	3	0.13	13.07	7.35*	9.6	12.5	30.7	**20**	10	**100**	151	500	201	24	5.99
W17K149-06	Mt Hood Comm Coll, parking lots E-H	MHCC_EH-2	########	12:28	3	0.43	11.98	7.71*	9.4	6.1	29.9	**20**	4	**100**	70	460	134	38	4.19
W17K154-02	Mt Hood Comm Coll, parking lots E-H	MHCC_EH-3	########	17:22	3	0.99	12.06	6.1*	8.7	14	14.4	**20**	3	**100**	108	290	148	8	7.53
W17K149-07	Mt Hood Comm Coll, parking lots Q-U	MHCC_QU-1	########	8:46	3	0.13	11.95	7.49*	9.6	13.8	9.69	**20**	3	**100**	57	290	76	6	7.08
W17K149-05	Mt Hood Comm Coll, parking lots Q-U	MHCC_QU-2	########	12:50	3	0.43	11.9	7.18*	9.5	6.6	9.39	**20**	2	**100**	40	220	66	8	3.36
W17K154-01	Mt Hood Comm Coll, parking lots Q-U	MHCC_QU-3	########	17:02	3	0.99	13.14	6.82*	9.4	19.4	11.1	**20**	**2**	**100**	56	**200**	69	**3**	10.7
W18D044-01	CSWQF Stormdrain Creek	CSWQF1-1	4/5/2018	10:36	4	0.13	10.67	5.65	11.7	57	53.2	142	7	540	31	660	139	46	24.9
W18D055-01	CSWQF Stormdrain Creek	CSWQF1-2	4/5/2018	15:08	4	0.31	7.34	7.07	13.2	50.9	65.7	90	4	400	33	490	109	26	21.7
W18D055-02	CSWQF Stormdrain Creek	CSWQF1-3	4/5/2018	17:01	4	0.44	6.16	7.17	13.6	22.3	97.2	55	7	120	**20**	600	165	70	12.4
W18D044-02	CSWQF East Inlet	CSWQF2-1	4/5/2018	10:50	4	0.13	11.52	5.75	11.9	79.2	53.7	152	5	630	44	840	181	30	41.7
W18D055-03	CSWQF East Inlet	CSWQF2-2	4/5/2018	15:21	4	0.31	8.34	6.82	13.2	81.7	35	48	4	500	43	380	106	10	41.4
W18D055-04	CSWQF East Inlet	CSWQF2-3	4/5/2018	17:12	4	0.44	7.29	6.99	13.6	30.8	55.5	46	3	140	25	390	116	26	15.8
W18D044-03	CSWQF Outlet	CSWQF3-1	4/5/2018	11:31	4	0.13	10.04	6.33	11.8	147.3	5.19	**20**	**2**	980	46	250	72	12	75.1
W18D055-05	CSWQF Outlet	CSWQF3-2	4/5/2018	17:27	4	0.49	8.23	6.86	12.9	62.3	48	**20**	4	400	30	340	90	12	29.9
W18D067	CSWQF Outlet	CSWQF3-3	4/6/2018	9:28	4	0.53	5.48	7.34	12.4	84.3	7.56	**20**	**2**	580	29	**200**	0.044	**3**	42.1

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FD = Field Duplicate Sample

Table 2-5 Stormwater Green Infrastructure Monitoring Data

Sample ID	Site ID	Point Code	Date	Time	Storm	24-hr Rainfall	Field DO	Field pH	Ca	Mg	Hg-Total	DOC	Cu-Dissolved	Pb-Dissolved	Zn-Dissolved	Cu-Total	Pb-Total	Zn-Total	E. coli
						inches	mg/L		mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L EPA	ug/L EPA	ug/L EPA	MPN/100m
									EPA 200.7 0.5	EPA 200.7 0.5	EPA 200.8 0.001	SM 5310B 1	EPA 200.8 0.2	EPA 200.8 0.1	EPA 200.8 0.5	200.8 0.2	200.8 0.1	200.8 0.5	SM 9223B 10
W17I111-01	Hayden's Meadow rain garden B12 Portland blend inlet	HMPB121-1	9/18/2017	9:44	1	0.72	6.96	6.15	14.2	7.57	0.0654	5.81	1.36	0.235	5.71	29.4	24.1	100	200
W17I111-02	Hayden's Meadow rain garden B12 Portland blend outlet	HMPB122-1	9/18/2017	10:03	1	0.8	6.41	6.51	18.8	4.68	0.0106	23.4	6.58	0.124	4.47	13.2	3.34	28.7	220
W17I118-01	Hayden's Meadow rain garden A2 Portland blend inlet	HMPA21	9/18/2017	14:06	1	1.14	6.19	6.15	6.17	1.55	0.00435	15.5	14.3	**0.102**	6.47	18.1	0.681	11.6	2500
W17I118-02	Hayden's Meadow rain garden A2 Portland blend outlet	HMPA22	9/18/2017	14:17	1	1.14	6.29	6.05	10.4	2.05	0.00487	15.6	9.99	0.127	3.52	11.8	0.736	6.98	330
W17I118-03	Hayden's Meadow rain garden B15 Gresham blend inlet	HMGB151	9/18/2017	15:05	1	1.16	5.85	6.65	12.5	2.22	0.00806	11.7	17.6	0.104	8.58	14.6	3.42	60.3	350
W17I118-04	Hayden's Meadow rain garden B15 Gresham blend outlet	HMGB152	9/18/2017	15:31	1	1.16	5.58	6.57	13.6	3.21	0.00539	19.8	9.55	**0.102**	4.5	10.9	0.993	14.8	130
W17I118-05	Hayden's Meadow rain garden A7 Gresham blend inlet	HMGA71	9/18/2017	15:11	1	1.16	6.33	6.71	7.79	0.815	0.00753	10.2	3.46	0.13	5.53	6.31	1.48	26.3	10
W17I118-06	Hayden's Meadow rain garden A7 Gresham blend outlet	HMGA72	9/18/2017	15:35	1	1.16	5.7	6.68	14.7	2.7	0.00708	24.3	7.45	0.135	4.16	8.83	0.676	7.79	63
W17I118-07	Hayden's Meadow rain garden B12 Portland blend inlet	HMPB121-2	9/18/2017	16:20	1	1.18	5.9	6.85	9.94	1.71	0.00866	7.94	3.99	**0.102**	3.51	12	2.95	40.8	52
W17I118-08	Hayden's Meadow rain garden B12 Portland blend outlet	HMPB122-2	9/18/2017	16:30	1	1.18	4.84	6.59	14.1	3.24	0.0059	19.5	6.92	0.152	6.13	9.74	1.76	21	84
W17I118-09	Hayden's Meadow rain garden B11 Gresham blend inlet	HMGB111	9/18/2017	16:50	1	1.18	6.01	7.02	12.5	1.46	0.00727	11.2	3.06	**0.102**	6.96	6.22	1.57	29.7	200
W17I118-10	Hayden's Meadow rain garden B11 Gresham blend outlet	HMGB112	9/18/2017	16:55	1	1.18	5.94	6.91	22.8	3.93	0.00443	16.6	6.92	**0.102**	2.71	8.21	0.496	5.71	160
W17K149-02	FCWQF inlet	FCWQF1-1	########	7:41	2	0.09	11.69	7.33*	2.99	0.47	0.00319	7.06	3.39	0.228	39.4	6.21	1.41	58.9	1400
W17K149-03	FCWQF inlet	FCWQF1-2	########	11:55	2	0.43	13.4	7.62*	1.5	0.259	0.00243	2.75	1.51	0.144	19.8	3.61	1.47	33.9	990
W17K154-03	FCWQF inlet	FCWQF1-3	########	17:52	2	0.99	14.15	6.44*	2.78	0.574	0.00234	6.39	2.22	0.124	34.1	3.47	0.515	42.7	1400
W17K149-01	FCWQF outlet	FCWQF2-1	########	9:15	2	0.16	7.25	7.58*	5.07	1.34	0.002	4.75	2.86	0.192	63.8	4.16	0.664	75.1	170
W17K154-04	FCWQF outlet	FCWQF2-2	########	18:16	2	1	9.63	6.71*	2.06	0.43	0.00184	4.78	1.67	0.121	32.5	2.4	0.516	36.4	17
W17K154-05	FCWQF outlet	FCWQF2-3	########	8:56	2	0.93	8.51	7.17*	3.67	0.818	0.00165	6.71	2	0.126	43.4	2.8	0.359	51.1	250
W17K149-04	Mt Hood Comm Coll, parking lots E-H	MHCC_EH-1	########	8:09	3	0.13	13.07	7.35*	1.63	0.468	0.00335	7.1	2.13	**0.13**	18.4	4.72	1.4	37.9	150
W17K149-06	Mt Hood Comm Coll, parking lots E-H	MHCC_EH-2	########	12:28	3	0.43	11.98	7.71*	1.16	0.316	0.00309	1.04	1.18	**0.102**	9.07	4.09	1.98	29.3	98
W17K154-02	Mt Hood Comm Coll, parking lots E-H	MHCC_EH-3	########	17:22	3	0.99	12.06	6.1*	2.18	0.504	0.00291	6.27	1.34	0.108	14	3.92	1.08	42.7	20
W17K149-07	Mt Hood Comm Coll, parking lots Q-U	MHCC_QU-1	########	8:46	3	0.13	11.95	7.49*	2	0.505	0.00324	1.4	1.25	**0.102**	6.07	1.8	0.701	9.33	31
W17K149-05	Mt Hood Comm Coll, parking lots Q-U	MHCC_QU-2	########	12:50	3	0.43	11.9	7.18*	0.935	0.249	0.00217	2.27	0.713	**0.102**	3.94	1.32	0.785	7.91	63
W17K154-01	Mt Hood Comm Coll, parking lots Q-U	MHCC_QU-3	########	17:02	3	0.99	13.14	6.82*	3	0.785	0.00298	6.15	1.14	0.106	6.24	1.6	0.66	8.4	52
W18D044-01	CSWQF Stormdrain Creek	CSWQF1-1	4/5/2018	10:36	4	0.13	10.67	5.65	6.61	2.05	0.00913	6.58	3.29	**0.105**	28.2	10.8	4.02	83.5	**10**
W18D055-01	CSWQF Stormdrain Creek	CSWQF1-2	4/5/2018	15:08	4	0.31	7.34	7.07	5.96	1.66	0.0096	5.74	5	**0.105**	35.7	8.68	2.24	73	
W18D055-02	CSWQF Stormdrain Creek	CSWQF1-3	4/5/2018	17:01	4	0.44	6.16	7.17	3.6	0.824	0.0101	4.3	3.21	**0.105**	24.8	11.9	4.06	104	930
W18D044-02	CSWQF East Inlet	CSWQF2-1	4/5/2018	10:50	4	0.13	11.52	5.75	10.6	3.71	0.0209	8.22	4.51	0.122	46.6	13.4	2.5	105	86
W18D055-03	CSWQF East Inlet	CSWQF2-2	4/5/2018	15:21	4	0.31	8.34	6.82	10.5	3.71	0.0128	5.39	3.56	**0.105**	28.8	5.57	1.06	51.2	340
W18D055-04	CSWQF East Inlet	CSWQF2-3	4/5/2018	17:12	4	0.44	7.29	6.99	4.32	1.22	0.00703	2.86	2.59	**0.105**	22.3	6.74	1.98	54.8	960
W18D044-03	CSWQF Outlet	CSWQF3-1	4/5/2018	11:31	4	0.13	10.04	6.33	18.2	7.21	0.00162	1.5	0.878	**0.105**	12.3	1.8	0.583	20	230
W18D055-05	CSWQF Outlet	CSWQF3-2	4/5/2018	17:27	4	0.49	8.23	6.86	2.57	2.57	0.00773	5.4	3.34	**0.105**	17.6	5.1	1.04	33.4	290
W18D067	CSWQF Outlet	CSWQF3-3	4/6/2018	9:28	4	0.53	5.48	7.34	10.9	3.65	0.00163	1.93	1.45	**0.105**	18.9	1.87	0.267	21.9	140

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FD = Field Duplicate Sample

Table 2-5 Stormwater Green Infrastructure Monitoring Data

Sample ID	Site ID	Point Code	Date	Time	Storm	24-hr Rainfall	Field DO	Field pH	2,4,5-T	2,4-D	2,4-DB	2,4,5-TP (Silvex)	Acifluor-fen	Bentazon	Dicamba	Picloram	Dichlorprop	Dinoseb	Penta-chloro-phenol
						inches	mg/L		ug/L	ug/L	ug/L	ug/L	ug/L EPA 515.3 0.2	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
									EPA 515.3 0.1	EPA 515.3 0.2	EPA 515.3 0.4	EPA 515.3 0.1		EPA 515.3 0.4	EPA 515.3 0.2	EPA 515.3 0.2	EPA 515.3 0.4	EPA 515.3 0.4	EPA 515.3 0.04
W17I111-01	Hayden's Meadow rain garden B12 Portland blend inlet	HMPB121-1	9/18/2017	9:44	1	0.72	6.96	6.15	**0.1**	**0.2**	**0.4**	**0.1**	**0.2**	**0.4**	**0.2**	**0.2**	**0.4**	**0.4**	**0.04**
W17I111-02	Hayden's Meadow rain garden B12 Portland blend outlet	HMPB122-1	9/18/2017	10:03	1	0.8	6.41	6.51	**0.1**	**0.2**	**0.4**	**0.1**	**0.2**	**0.4**	**0.2**	**0.2**	**0.4**	**0.4**	**0.04**
W17I118-01	Hayden's Meadow rain garden A2 Portland blend inlet	HMPA21	9/18/2017	14:06	1	1.14	6.19	6.15	**0.1**	13.5	**0.4**	**0.1**	**0.2**	**0.4**	**0.2**	**0.2**	**0.4**	**0.4**	**0.04**
W17I118-02	Hayden's Meadow rain garden A2 Portland blend outlet	HMPA22	9/18/2017	14:17	1	1.14	6.29	6.05	**0.1**	4	**0.4**	**0.1**	**0.2**	**0.4**	**0.2**	**0.2**	**0.4**	**0.4**	**0.04**
W17I118-03	Hayden's Meadow rain garden B15 Gresham blend inlet	HMGB151	9/18/2017	15:05	1	1.16	5.85	6.65	**0.1**	**0.2**	**0.4**	**0.1**	**0.2**	**0.4**	**0.2**	**0.2**	**0.4**	**0.4**	**0.04**
W17I118-04	Hayden's Meadow rain garden B15 Gresham blend outlet	HMGB152	9/18/2017	15:31	1	1.16	5.58	6.57	**0.1**	**0.2**	**0.4**	**0.1**	**0.2**	**0.4**	**0.2**	**0.2**	**0.4**	**0.4**	**0.04**
W17I118-05	Hayden's Meadow rain garden A7 Gresham blend inlet	HMGA71	9/18/2017	15:11	1	1.16	6.33	6.71	**0.1**	**0.2**	**0.4**	**0.1**	**0.2**	**0.4**	**0.2**	**0.2**	**0.4**	**0.4**	**0.04**
W17I118-06	Hayden's Meadow rain garden A7 Gresham blend outlet	HMGA72	9/18/2017	15:35	1	1.16	5.7	6.68	**0.1**	**0.2**	**0.4**	**0.1**	**0.2**	**0.4**	**0.2**	**0.2**	**0.4**	**0.4**	**0.04**
W17I118-07	Hayden's Meadow rain garden B12 Portland blend inlet	HMPB121-2	9/18/2017	16:20	1	1.18	5.9	6.85	**0.1**	**0.2**	**0.4**	**0.1**	**0.2**	**0.4**	**0.2**	**0.2**	**0.4**	**0.4**	**0.04**
W17I118-08	Hayden's Meadow rain garden B12 Portland blend outlet	HMPB122-2	9/18/2017	16:30	1	1.18	4.84	6.59	**0.1**	**0.2**	**0.4**	**0.1**	**0.2**	**0.4**	**0.2**	**0.2**	**0.4**	**0.4**	**0.04**
W17I118-09	Hayden's Meadow rain garden B11 Gresham blend inlet	HMGB111	9/18/2017	16:50	1	1.18	6.01	7.02	**0.1**	**0.2**	**0.4**	**0.1**	**0.2**	**0.4**	**0.2**	**0.2**	**0.4**	**0.4**	**0.04**
W17I118-10	Hayden's Meadow rain garden B11 Gresham blend outlet	HMGB112	9/18/2017	16:55	1	1.18	5.94	6.91	**0.1**	**0.2**	**0.4**	**0.1**	**0.2**	**0.4**	**0.2**	**0.2**	**0.4**	**0.4**	**0.04**
W17K149-02	FCWQF inlet	FCWQF1-1	########	7:41	2	0.09	11.69	7.33*	**0.1**	**0.2**	**0.4**	**0.1**	**0.2**	**0.4**	**0.2**	**0.2**	**0.4**	**0.4**	0.13
W17K149-03	FCWQF inlet	FCWQF1-2	########	11:55	2	0.43	13.4	7.62*	**0.1**	**0.2**	**0.4**	**0.1**	**0.2**	**0.4**	**0.2**	**0.2**	**0.4**	**0.4**	0.107
W17K154-03	FCWQF inlet	FCWQF1-3	########	17:52	2	0.99	14.15	6.44*	**0.1**	**0.2**	**0.4**	**0.1**	**0.2**	**0.4**	**0.2**	**0.2**	**0.4**	**0.4**	0.056
W17K149-01	FCWQF outlet	FCWQF2-1	########	9:15	2	0.16	7.25	7.58*	**0.1**	**0.2**	**0.4**	**0.1**	**0.2**	**0.4**	**0.2**	**0.2**	**0.4**	**0.4**	0.048
W17K154-04	FCWQF outlet	FCWQF2-2	########	18:16	2	1	9.63	6.71*	**0.1**	**0.2**	**0.4**	**0.1**	**0.2**	**0.4**	**0.2**	**0.2**	**0.4**	**0.4**	0.08
W17K154-05	FCWQF outlet	FCWQF2-3	########	8:56	2	0.93	8.51	7.17*	**0.1**	**0.2**	**0.4**	**0.1**	**0.2**	**0.4**	**0.2**	**0.2**	**0.4**	**0.4**	0.054
W17K149-04	Mt Hood Comm Coll, parking lots E-H	MHCC_EH-1	########	8:09	3	0.13	13.07	7.35*	**0.1**	**0.2**	**0.4**	**0.1**	**0.2**	**0.4**	**0.2**	**0.2**	**0.4**	**0.4**	**0.04**
W17K149-06	Mt Hood Comm Coll, parking lots E-H	MHCC_EH-2	########	12:28	3	0.43	11.98	7.71*	**0.1**	**0.2**	**0.4**	**0.1**	**0.2**	**0.4**	**0.2**	**0.2**	**0.4**	**0.4**	**0.04**
W17K154-02	Mt Hood Comm Coll, parking lots E-H	MHCC_EH-3	########	17:22	3	0.99	12.06	6.1*	**0.1**	**0.2**	**0.4**	**0.1**	**0.2**	**0.4**	**0.2**	**0.2**	**0.4**	**0.4**	**0.04**
W17K149-07	Mt Hood Comm Coll, parking lots Q-U	MHCC_QU-1	########	8:46	3	0.13	11.95	7.49*	**0.1**	**0.2**	**0.4**	**0.1**	**0.2**	**0.4**	**0.2**	**0.2**	**0.4**	**0.4**	**0.04**
W17K149-05	Mt Hood Comm Coll, parking lots Q-U	MHCC_QU-2	########	12:50	3	0.43	11.9	7.18*	**0.1**	**0.2**	**0.4**	**0.1**	**0.2**	**0.4**	**0.2**	**0.2**	**0.4**	**0.4**	**0.04**
W17K154-01	Mt Hood Comm Coll, parking lots Q-U	MHCC_QU-3	########	17:02	3	0.99	13.14	6.82*	**0.1**	**0.2**	**0.4**	**0.1**	**0.2**	**0.4**	**0.2**	**0.2**	**0.4**	**0.4**	**0.04**
W18D044-01	CSWQF Stormdrain Creek	CSWQF1-1	4/5/2018	10:36	4	0.13	10.67	5.65	**0.1**	0.234	**0.4**	**0.1**	**0.2**	**0.4**	**0.2**	**0.2**	**0.4**	**0.4**	0.129
W18D055-01	CSWQF Stormdrain Creek	CSWQF1-2	4/5/2018	15:08	4	0.31	7.34	7.07	**0.1**	0.402	**0.4**	**0.1**	**0.2**	**0.4**	**0.2**	**0.2**	**0.4**	**0.4**	0.218
W18D055-02	CSWQF Stormdrain Creek	CSWQF1-3	4/5/2018	17:01	4	0.44	6.16	7.17	**0.1**	0.408	**0.4**	**0.1**	**0.2**	**0.4**	**0.2**	**0.2**	**0.4**	**0.4**	0.264
W18D044-02	CSWQF East Inlet	CSWQF2-1	4/5/2018	10:50	4	0.13	11.52	5.75	**0.1**	0.495	**0.4**	**0.1**	**0.2**	**0.4**	**0.2**	**0.2**	**0.4**	**0.4**	**0.04**
W18D055-03	CSWQF East Inlet	CSWQF2-2	4/5/2018	15:21	4	0.31	8.34	6.82	**0.1**	0.225	**0.4**	**0.1**	**0.2**	**0.4**	**0.2**	**0.2**	**0.4**	**0.4**	**0.04**
W18D055-04	CSWQF East Inlet	CSWQF2-3	4/5/2018	17:12	4	0.44	7.29	6.99	**0.1**	0.231	**0.4**	**0.1**	**0.2**	**0.4**	**0.2**	**0.2**	**0.4**	**0.4**	0.041
W18D044-03	CSWQF Outlet	CSWQF3-1	4/5/2018	11:31	4	0.13	10.04	6.33	**0.1**	**0.2**	**0.4**	**0.1**	**0.2**	**0.4**	**0.2**	**0.2**	**0.4**	**0.4**	**0.04**
W18D055-05	CSWQF Outlet	CSWQF3-2	4/5/2018	17:27	4	0.49	8.23	6.86	**0.1**	0.299	**0.4**	**0.1**	**0.2**	**0.4**	**0.2**	**0.2**	**0.4**	**0.4**	0.115
W18D067	CSWQF Outlet	CSWQF3-3	4/6/2018	9:28	4	0.53	5.48	7.34	**0.1**	0.37	**0.4**	**0.1**	**0.2**	**0.4**	**0.2**	**0.2**	**0.4**	**0.4**	0.055

Analysis Coding for the Reported Data

Bold = < than detection value or an Estimated value for bacteria
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NM= not measured
ND= not detected
Dup = Duplicate Sample
MRL = method reporting limits are included at the top of each data set where they are constant. For parameters were no MRL is included, this means they vary by sample.
FD = Field Duplicate Sample

Table 2-5 Stormwater Green Infrastructure Monitoring Data

Sample ID	Site ID	Point Code	Date	Time	Storm	24-hr Rainfall	Field DO	Field pH	3,5-Dichloro-benzoic acid	Acenaphthene	Acenaph-thylene	Anthracene	Benzo-(a)-anthracene	Benzo-(a)-pyrene	Benzo-(b)-fluoran-thene	Benzo-(ghi)-perylene
						inches	mg/L		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
									EPA 515.3 0.2	EPA 8270-SIM 0.02	EPA 8270-SIM 0.02	EPA 8270-SIM 0.02	EPA 8270-SIM 0.01	EPA 8270-SIM 0.01	EPA 8270-SIM 0.01	EPA 8270-SIM 0.01
W17I111-01	Hayden's Meadow rain garden B12 Portland blend inlet	HMPB121-1	9/18/2017	9:44	1	0.72	6.96	6.15	**0.2**							
W17I111-02	Hayden's Meadow rain garden B12 Portland blend outlet	HMPB122-1	9/18/2017	10:03	1	0.8	6.41	6.51	**0.2**							
W17I118-01	Hayden's Meadow rain garden A2 Portland blend inlet	HMPA21	9/18/2017	14:06	1	1.14	6.19	6.15	**0.2**							
W17I118-02	Hayden's Meadow rain garden A2 Portland blend outlet	HMPA22	9/18/2017	14:17	1	1.14	6.29	6.05	**0.2**							
W17I118-03	Hayden's Meadow rain garden B15 Gresham blend inlet	HMGB151	9/18/2017	15:05	1	1.16	5.85	6.65	**0.2**							
W17I118-04	Hayden's Meadow rain garden B15 Gresham blend outlet	HMGB152	9/18/2017	15:31	1	1.16	5.58	6.57	**0.2**							
W17I118-05	Hayden's Meadow rain garden A7 Gresham blend inlet	HMGA71	9/18/2017	15:11	1	1.16	6.33	6.71	**0.2**							
W17I118-06	Hayden's Meadow rain garden A7 Gresham blend outlet	HMGA72	9/18/2017	15:35	1	1.16	5.7	6.68	**0.2**							
W17I118-07	Hayden's Meadow rain garden B12 Portland blend inlet	HMPB121-2	9/18/2017	16:20	1	1.18	5.9	6.85	**0.2**							
W17I118-08	Hayden's Meadow rain garden B12 Portland blend outlet	HMPB122-2	9/18/2017	16:30	1	1.18	4.84	6.59	**0.2**							
W17I118-09	Hayden's Meadow rain garden B11 Gresham blend inlet	HMGB111	9/18/2017	16:50	1	1.18	6.01	7.02	**0.2**							
W17I118-10	Hayden's Meadow rain garden B11 Gresham blend outlet	HMGB112	9/18/2017	16:55	1	1.18	5.94	6.91	**0.2**							
W17K149-02	FCWQF inlet	FCWQF1-1	########	7:41	2	0.09	11.69	7.33*	**0.2**	**0.02**	**0.02**	**0.02**	0.01	**0.01**	0.018	0.023
W17K149-03	FCWQF inlet	FCWQF1-2	########	11:55	2	0.43	13.4	7.62*	**0.2**	**0.02**	**0.02**	**0.02**	**0.01**	**0.01**	0.014	0.021
W17K154-03	FCWQF inlet	FCWQF1-3	########	17:52	2	0.99	14.15	6.44*	**0.2**	**0.02**	**0.02**	**0.02**	**0.01**	**0.01**	**0.01**	**0.01**
W17K149-01	FCWQF outlet	FCWQF2-1	########	9:15	2	0.16	7.25	7.58*	**0.2**	**0.02**	**0.02**	**0.02**	**0.01**	**0.01**	**0.01**	**0.01**
W17K154-04	FCWQF outlet	FCWQF2-2	########	18:16	2	1	9.63	6.71*	**0.2**	**0.02**	**0.02**	**0.02**	**0.01**	**0.01**	**0.01**	**0.01**
W17K154-05	FCWQF outlet	FCWQF2-3	########	8:56	2	0.93	8.51	7.17*	**0.2**	**0.02**	**0.02**	**0.02**	**0.01**	**0.01**	**0.01**	**0.01**
W17K149-04	Mt Hood Comm Coll, parking lots E-H	MHCC_EH-1	########	8:09	3	0.13	13.07	7.35*	**0.2**	**0.02**	**0.02**	**0.02**	**0.01**	**0.01**	0.022	**0.047**
W17K149-06	Mt Hood Comm Coll, parking lots E-H	MHCC_EH-2	########	12:28	3	0.43	11.98	7.71*	**0.2**	**0.02**	**0.02**	**0.02**	**0.01**	**0.01**	0.019	**0.034**
W17K154-02	Mt Hood Comm Coll, parking lots E-H	MHCC_EH-3	########	17:22	3	0.99	12.06	6.1*	**0.2**	**0.02**	**0.02**	**0.02**	**0.01**	**0.01**	**0.01**	0.013
W17K149-07	Mt Hood Comm Coll, parking lots Q-U	MHCC_QU-1	########	8:46	3	0.13	11.95	7.49*	**0.2**	**0.02**	**0.02**	**0.02**	**0.01**	**0.01**	**0.01**	**0.01**
W17K149-05	Mt Hood Comm Coll, parking lots Q-U	MHCC_QU-2	########	12:50	3	0.43	11.9	7.18*	**0.2**	**0.02**	**0.02**	**0.02**	**0.01**	**0.01**	**0.01**	**0.01**
W17K154-01	Mt Hood Comm Coll, parking lots Q-U	MHCC_QU-3	########	17:02	3	0.99	13.14	6.82*	**0.2**	**0.02**	**0.02**	**0.02**	**0.01**	**0.01**	**0.01**	**0.01**
W18D044-01	CSWQF Stormdrain Creek	CSWQF1-1	4/5/2018	10:36	4	0.13	10.67	5.65	**0.2**	**0.02**	**0.02**	**0.02**	0.017	0.017	0.031	0.043
W18D055-01	CSWQF Stormdrain Creek	CSWQF1-2	4/5/2018	15:08	4	0.31	7.34	7.07	**0.2**	**0.02**	**0.02**	**0.02**	0.017	0.012	0.022	0.035
W18D055-02	CSWQF Stormdrain Creek	CSWQF1-3	4/5/2018	17:01	4	0.44	6.16	7.17	**0.2**	**0.02**	**0.02**	**0.02**	0.035	0.039	0.078	0.11
W18D044-02	CSWQF East Inlet	CSWQF2-1	4/5/2018	10:50	4	0.13	11.52	5.75	**0.2**	**0.02**	**0.02**	0.02	0.046	0.025	**0.04**	0.062
W18D055-03	CSWQF East Inlet	CSWQF2-2	4/5/2018	15:21	4	0.31	8.34	6.82	**0.2**	**0.02**	**0.02**	**0.02**	**0.01**	**0.01**	0.011	0.021
W18D055-04	CSWQF East Inlet	CSWQF2-3	4/5/2018	17:12	4	0.44	7.29	6.99	**0.2**	**0.02**	**0.02**	**0.02**	0.013	0.012	0.025	0.041
W18D044-03	CSWQF Outlet	CSWQF3-1	4/5/2018	11:31	4	0.13	10.04	6.33	**0.2**	**0.02**	**0.02**	**0.02**	**0.01**	**0.01**	**0.01**	0.01
W18D055-05	CSWQF Outlet	CSWQF3-2	4/5/2018	17:27	4	0.49	8.23	6.86	**0.2**	**0.02**	**0.02**	**0.02**	**0.01**	**0.01**	0.013	0.017
W18D067	CSWQF Outlet	CSWQF3-3	4/6/2018	9:28	4	0.53	5.48	7.34	**0.2**	**0.02**	**0.02**	**0.02**	**0.01**	**0.01**	**0.01**	**0.01**

Analysis Coding for the Reported Data

Bold = < than detection value or an Estimated value for bacteria
NA = constituents not sampled due to equipment failure or other extenuating circumstance
NM= not measured
ND= not detected
Dup = Duplicate Sample
MRL = method reporting limits are included at the top of each data set where they are constant. For parameters were no MRL is included, this means they vary by sample.
FD = Field Duplicate Sample

Table 2-5 Stormwater Green Infrastructure Monitoring Data

Sample ID	Site ID	Point Code	Date	Time	Storm	24-hr Rainfall	Field DO	Field pH	Benzo-(k)-fluoranthene	Chrysene	Dibenzo-(a,h)-anthracene	Fluoranthene	Fluorene	Indeno-(1,2,3-cd)-pyrene	Naphthalene
						inches	mg/L		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
									EPA 8270-SIM 0.01	EPA 8270-SIM 0.01	EPA 8270-SIM 0.01	EPA 8270-SIM 0.01	EPA 8270-SIM 0.02	EPA 8270-SIM 0.01	EPA 8270-SIM 0.04
W17I111-01	Hayden's Meadow rain garden B12 Portland blend inlet	HMPB121-1	9/18/2017	9:44	1	0.72	6.96	6.15							
W17I111-02	Hayden's Meadow rain garden B12 Portland blend outlet	HMPB122-1	9/18/2017	10:03	1	0.8	6.41	6.51							
W17I118-01	Hayden's Meadow rain garden A2 Portland blend inlet	HMPA21	9/18/2017	14:06	1	1.14	6.19	6.15							
W17I118-02	Hayden's Meadow rain garden A2 Portland blend outlet	HMPA22	9/18/2017	14:17	1	1.14	6.29	6.05							
W17I118-03	Hayden's Meadow rain garden B15 Gresham blend inlet	HMGB151	9/18/2017	15:05	1	1.16	5.85	6.65							
W17I118-04	Hayden's Meadow rain garden B15 Gresham blend outlet	HMGB152	9/18/2017	15:31	1	1.16	5.58	6.57							
W17I118-05	Hayden's Meadow rain garden A7 Gresham blend inlet	HMGA71	9/18/2017	15:11	1	1.16	6.33	6.71							
W17I118-06	Hayden's Meadow rain garden A7 Gresham blend outlet	HMGA72	9/18/2017	15:35	1	1.16	5.7	6.68							
W17I118-07	Hayden's Meadow rain garden B12 Portland blend inlet	HMPB121-2	9/18/2017	16:20	1	1.18	5.9	6.85							
W17I118-08	Hayden's Meadow rain garden B12 Portland blend outlet	HMPB122-2	9/18/2017	16:30	1	1.18	4.84	6.59							
W17I118-09	Hayden's Meadow rain garden B11 Gresham blend inlet	HMGB111	9/18/2017	16:50	1	1.18	6.01	7.02							
W17I118-10	Hayden's Meadow rain garden B11 Gresham blend outlet	HMGB112	9/18/2017	16:55	1	1.18	5.94	6.91							
W17K149-02	FCWQF inlet	FCWQF1-1	########	7:41	2	0.09	11.69	7.33*	**0.01**	0.011	**0.01**	0.042	**0.02**	0.011	**0.04**
W17K149-03	FCWQF inlet	FCWQF1-2	########	11:55	2	0.43	13.4	7.62*	**0.01**	0.012	**0.01**	0.029	**0.02**	0.01	**0.04**
W17K154-03	FCWQF inlet	FCWQF1-3	########	17:52	2	0.99	14.15	6.44*	**0.01**	**0.01**	**0.01**	**0.01**	**0.02**	**0.01**	**0.04**
W17K149-01	FCWQF outlet	FCWQF2-1	########	9:15	2	0.16	7.25	7.58*	**0.01**	**0.01**	**0.01**	**0.01**	**0.02**	**0.01**	**0.04**
W17K154-04	FCWQF outlet	FCWQF2-2	########	18:16	2	1	9.63	6.71*	**0.01**	**0.01**	**0.01**	0.015	**0.02**	**0.01**	**0.04**
W17K154-05	FCWQF outlet	FCWQF2-3	########	8:56	2	0.93	8.51	7.17*	**0.01**	**0.01**	**0.01**	**0.01**	**0.02**	**0.01**	**0.04**
W17K149-04	Mt Hood Comm Coll, parking lots E-H	MHCC_EH-1	########	8:09	3	0.13	13.07	7.35*	**0.01**	**0.014**	**0.01**	**0.037**	**0.02**	0.015	**0.04**
W17K149-06	Mt Hood Comm Coll, parking lots E-H	MHCC_EH-2	########	12:28	3	0.43	11.98	7.71*	**0.01**	**0.013**	**0.01**	**0.027**	**0.02**	0.013	**0.041**
W17K154-02	Mt Hood Comm Coll, parking lots E-H	MHCC_EH-3	########	17:22	3	0.99	12.06	6.1*	**0.01**	**0.01**	**0.01**	**0.01**	**0.02**	**0.01**	**0.04**
W17K149-07	Mt Hood Comm Coll, parking lots Q-U	MHCC_QU-1	########	8:46	3	0.13	11.95	7.49*	**0.01**	**0.01**	**0.01**	**0.01**	**0.02**	**0.01**	**0.04**
W17K149-05	Mt Hood Comm Coll, parking lots Q-U	MHCC_QU-2	########	12:50	3	0.43	11.9	7.18*	**0.01**	**0.01**	**0.01**	**0.01**	**0.02**	**0.01**	**0.04**
W17K154-01	Mt Hood Comm Coll, parking lots Q-U	MHCC_QU-3	########	17:02	3	0.99	13.14	6.82*	**0.01**	**0.01**	**0.01**	**0.01**	**0.02**	**0.01**	**0.04**
W18D044-01	CSWQF Stormdrain Creek	CSWQF1-1	4/5/2018	10:36	4	0.13	10.67	5.65	**0.01**	0.027	**0.01**	0.045	**0.02**	0.017	**0.04**
W18D055-01	CSWQF Stormdrain Creek	CSWQF1-2	4/5/2018	15:08	4	0.31	7.34	7.07	**0.01**	0.025	**0.01**	0.04	**0.02**	0.012	**0.04**
W18D055-02	CSWQF Stormdrain Creek	CSWQF1-3	4/5/2018	17:01	4	0.44	6.16	7.17	0.022	0.059	0.012	0.12	**0.02**	0.033	**0.04**
W18D044-02	CSWQF East Inlet	CSWQF2-1	4/5/2018	10:50	4	0.13	11.52	5.75	**0.01**	0.05	**0.01**	0.075	**0.02**	0.016	**0.04**
W18D055-03	CSWQF East Inlet	CSWQF2-2	4/5/2018	15:21	4	0.31	8.34	6.82	**0.01**	0.01	**0.01**	0.022	**0.02**	**0.01**	**0.04**
W18D055-04	CSWQF East Inlet	CSWQF2-3	4/5/2018	17:12	4	0.44	7.29	6.99	**0.01**	0.018	**0.01**	0.04	**0.02**	0.013	**0.04**
W18D044-03	CSWQF Outlet	CSWQF3-1	4/5/2018	11:31	4	0.13	10.04	6.33	**0.01**	**0.01**	**0.01**	**0.01**	**0.02**	**0.01**	**0.04**
W18D055-05	CSWQF Outlet	CSWQF3-2	4/5/2018	17:27	4	0.49	8.23	6.86	**0.01**	0.012	**0.01**	0.02	**0.02**	**0.01**	**0.04**
W18D067	CSWQF Outlet	CSWQF3-3	4/6/2018	9:28	4	0.53	5.48	7.34	**0.01**	**0.01**	**0.01**	**0.01**	**0.02**	**0.01**	**0.04**

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Table 2-5 Stormwater Green Infrastructure Monitoring Data

Sample ID	Site ID	Point Code	Date	Time	Storm	24-hr Rainfall	Field DO	Field pH	Phenanthrene	Pyrene	Butyl benzyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	Diethyl phthalate	Dimethyl phthalate
						inches	mg/L		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
									EPA 8270-SIM 0.02	EPA 8270-SIM 0.01	EPA 8270-SIM 1	EPA 8270-SIM 1	EPA 8270-SIM 1	EPA 8270-SIM 1	EPA 8270-SIM 1
W17I111-01	Hayden's Meadow rain garden B12 Portland blend inlet	HMPB121-1	9/18/2017	9:44	1	0.72	6.96	6.15							
W17I111-02	Hayden's Meadow rain garden B12 Portland blend outlet	HMPB122-1	9/18/2017	10:03	1	0.8	6.41	6.51							
W17I118-01	Hayden's Meadow rain garden A2 Portland blend inlet	HMPA21	9/18/2017	14:06	1	1.14	6.19	6.15							
W17I118-02	Hayden's Meadow rain garden A2 Portland blend outlet	HMPA22	9/18/2017	14:17	1	1.14	6.29	6.05							
W17I118-03	Hayden's Meadow rain garden B15 Gresham blend inlet	HMGB151	9/18/2017	15:05	1	1.16	5.85	6.65							
W17I118-04	Hayden's Meadow rain garden B15 Gresham blend outlet	HMGB152	9/18/2017	15:31	1	1.16	5.58	6.57							
W17I118-05	Hayden's Meadow rain garden A7 Gresham blend inlet	HMGA71	9/18/2017	15:11	1	1.16	6.33	6.71							
W17I118-06	Hayden's Meadow rain garden A7 Gresham blend outlet	HMGA72	9/18/2017	15:35	1	1.16	5.7	6.68							
W17I118-07	Hayden's Meadow rain garden B12 Portland blend inlet	HMPB121-2	9/18/2017	16:20	1	1.18	5.9	6.85							
W17I118-08	Hayden's Meadow rain garden B12 Portland blend outlet	HMPB122-2	9/18/2017	16:30	1	1.18	4.84	6.59							
W17I118-09	Hayden's Meadow rain garden B11 Gresham blend inlet	HMGB111	9/18/2017	16:50	1	1.18	6.01	7.02							
W17I118-10	Hayden's Meadow rain garden B11 Gresham blend outlet	HMGB112	9/18/2017	16:55	1	1.18	5.94	6.91							
W17K149-02	FCWQF inlet	FCWQF1-1	########	7:41	2	0.09	11.69	7.33*	0.029	0.056	**1**	**1**	**1**	**1**	**1**
W17K149-03	FCWQF inlet	FCWQF1-2	########	11:55	2	0.43	13.4	7.62*	0.027	0.043	**1**	**1**	**1**	**1**	**1**
W17K154-03	FCWQF inlet	FCWQF1-3	########	17:52	2	0.99	14.15	6.44*	**0.02**	0.016	**1**	**1**	**1**	**1**	**1**
W17K149-01	FCWQF outlet	FCWQF2-1	########	9:15	2	0.16	7.25	7.58*	**0.02**	0.011	**1**	**1**	**1**	**1**	**1**
W17K154-04	FCWQF outlet	FCWQF2-2	########	18:16	2	1	9.63	6.71*	**0.02**	0.019	**1**	**1**	**1**	**1**	**1**
W17K154-05	FCWQF outlet	FCWQF2-3	########	8:56	2	0.93	8.51	7.17*	**0.02**	0.01	**1**	**1**	**1**	**1**	**1**
W17K149-04	Mt Hood Comm Coll, parking lots E-H	MHCC_EH-1	########	8:09	3	0.13	13.07	7.35*	0.029	0.084	**1**	**1**	**1**	**1**	**1**
W17K149-06	Mt Hood Comm Coll, parking lots E-H	MHCC_EH-2	########	12:28	3	0.43	11.98	7.71*	0.023	0.058	**1**	**1**	**1**	**1**	**1**
W17K154-02	Mt Hood Comm Coll, parking lots E-H	MHCC_EH-3	########	17:22	3	0.99	12.06	6.1*	**0.02**	0.021	**1**	**1**	**1**	**1**	**1**
W17K149-07	Mt Hood Comm Coll, parking lots Q-U	MHCC_QU-1	########	8:46	3	0.13	11.95	7.49*	**0.02**	0.01	**1**	**1**	**1**	**1**	**1**
W17K149-05	Mt Hood Comm Coll, parking lots Q-U	MHCC_QU-2	########	12:50	3	0.43	11.9	7.18*	**0.02**	0.013	**1**	**1**	**1**	**1**	**1**
W17K154-01	Mt Hood Comm Coll, parking lots Q-U	MHCC_QU-3	########	17:02	3	0.99	13.14	6.82*	**0.02**	**0.01**	**1**	**1**	**1**	**1**	**1**
W18D044-01	CSWQF Stormdrain Creek	CSWQF1-1	4/5/2018	10:36	4	0.13	10.67	5.65	0.046	0.078	**1**	**1**	**1**	**1**	**1**
W18D055-01	CSWQF Stormdrain Creek	CSWQF1-2	4/5/2018	15:08	4	0.31	7.34	7.07	0.043	0.09	**1**	**1**	**1**	**1**	**1**
W18D055-02	CSWQF Stormdrain Creek	CSWQF1-3	4/5/2018	17:01	4	0.44	6.16	7.17	0.079	0.21	**1**	**1**	**1**	**1**	**1**
W18D044-02	CSWQF East Inlet	CSWQF2-1	4/5/2018	10:50	4	0.13	11.52	5.75	0.065	0.14	**1**	**1**	2.6	**1**	**1**
W18D055-03	CSWQF East Inlet	CSWQF2-2	4/5/2018	15:21	4	0.31	8.34	6.82	0.022	0.045	**1**	**1**	**1**	**1**	**1**
W18D055-04	CSWQF East Inlet	CSWQF2-3	4/5/2018	17:12	4	0.44	7.29	6.99	0.031	0.074	**1**	**1**	**1**	**1**	**1**
W18D044-03	CSWQF Outlet	CSWQF3-1	4/5/2018	11:31	4	0.13	10.04	6.33	**0.02**	0.011	**1**	**1**	**1**	**1**	**1**
W18D055-05	CSWQF Outlet	CSWQF3-2	4/5/2018	17:27	4	0.49	8.23	6.86	**0.02**	0.037	**1**	**1**	**1**	**1**	**1**
W18D067	CSWQF Outlet	CSWQF3-3	4/6/2018	9:28	4	0.53	5.48	7.34	**0.02**	**0.01**	**1**	**1**	**1**	**1**	**1**

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Sample ID	Site ID	Point Code	Date	Time	Storm	24-hr Rainfall	Field DO	Field pH	Bis(2-ethylhexyl) phthalate
						inches	mg/L		ug/L
									EPA 8270-SIM
W17I111-01	Hayden's Meadow rain garden B12 Portland blend inlet	HMPB121-1	9/18/2017	9:44	1	0.72	6.96	6.15	
W17I111-02	Hayden's Meadow rain garden B12 Portland blend outlet	HMPB122-1	9/18/2017	10:03	1	0.8	6.41	6.51	
W17I118-01	Hayden's Meadow rain garden A2 Portland blend inlet	HMPA21	9/18/2017	14:06	1	1.14	6.19	6.15	
W17I118-02	Hayden's Meadow rain garden A2 Portland blend outlet	HMPA22	9/18/2017	14:17	1	1.14	6.29	6.05	
W17I118-03	Hayden's Meadow rain garden B15 Gresham blend inlet	HMGB151	9/18/2017	15:05	1	1.16	5.85	6.65	
W17I118-04	Hayden's Meadow rain garden B15 Gresham blend outlet	HMGB152	9/18/2017	15:31	1	1.16	5.58	6.57	
W17I118-05	Hayden's Meadow rain garden A7 Gresham blend inlet	HMGA71	9/18/2017	15:11	1	1.16	6.33	6.71	
W17I118-06	Hayden's Meadow rain garden A7 Gresham blend outlet	HMGA72	9/18/2017	15:35	1	1.16	5.7	6.68	
W17I118-07	Hayden's Meadow rain garden B12 Portland blend inlet	HMPB121-2	9/18/2017	16:20	1	1.18	5.9	6.85	
W17I118-08	Hayden's Meadow rain garden B12 Portland blend outlet	HMPB122-2	9/18/2017	16:30	1	1.18	4.84	6.59	
W17I118-09	Hayden's Meadow rain garden B11 Gresham blend inlet	HMGB111	9/18/2017	16:50	1	1.18	6.01	7.02	
W17I118-10	Hayden's Meadow rain garden B11 Gresham blend outlet	HMGB112	9/18/2017	16:55	1	1.18	5.94	6.91	
W17K149-02	FCWQF inlet	FCWQF1-1	########	7:41	2	0.09	11.69	7.33*	1.4
W17K149-03	FCWQF inlet	FCWQF1-2	########	11:55	2	0.43	13.4	7.62*	1.2
W17K154-03	FCWQF inlet	FCWQF1-3	########	17:52	2	0.99	14.15	6.44*	**1**
W17K149-01	FCWQF outlet	FCWQF2-1	########	9:15	2	0.16	7.25	7.58*	**1**
W17K154-04	FCWQF outlet	FCWQF2-2	########	18:16	2	1	9.63	6.71*	**1**
W17K154-05	FCWQF outlet	FCWQF2-3	########	8:56	2	0.93	8.51	7.17*	**1**
W17K149-04	Mt Hood Comm Coll, parking lots E-H	MHCC_EH-1	########	8:09	3	0.13	13.07	7.35*	1.9
W17K149-06	Mt Hood Comm Coll, parking lots E-H	MHCC_EH-2	########	12:28	3	0.43	11.98	7.71*	3.2
W17K154-02	Mt Hood Comm Coll, parking lots E-H	MHCC_EH-3	########	17:22	3	0.99	12.06	6.1*	1.1
W17K149-07	Mt Hood Comm Coll, parking lots Q-U	MHCC_QU-1	########	8:46	3	0.13	11.95	7.49*	**1**
W17K149-05	Mt Hood Comm Coll, parking lots Q-U	MHCC_QU-2	########	12:50	3	0.43	11.9	7.18*	**1**
W17K154-01	Mt Hood Comm Coll, parking lots Q-U	MHCC_QU-3	########	17:02	3	0.99	13.14	6.82*	**1**
W18D044-01	CSWQF Stormdrain Creek	CSWQF1-1	4/5/2018	10:36	4	0.13	10.67	5.65	1.9
W18D055-01	CSWQF Stormdrain Creek	CSWQF1-2	4/5/2018	15:08	4	0.31	7.34	7.07	1.7
W18D055-02	CSWQF Stormdrain Creek	CSWQF1-3	4/5/2018	17:01	4	0.44	6.16	7.17	4.6
W18D044-02	CSWQF East Inlet	CSWQF2-1	4/5/2018	10:50	4	0.13	11.52	5.75	2.5
W18D055-03	CSWQF East Inlet	CSWQF2-2	4/5/2018	15:21	4	0.31	8.34	6.82	1.7
W18D055-04	CSWQF East Inlet	CSWQF2-3	4/5/2018	17:12	4	0.44	7.29	6.99	2.2
W18D044-03	CSWQF Outlet	CSWQF3-1	4/5/2018	11:31	4	0.13	10.04	6.33	**1**
W18D055-05	CSWQF Outlet	CSWQF3-2	4/5/2018	17:27	4	0.49	8.23	6.86	**1**
W18D067	CSWQF Outlet	CSWQF3-3	4/6/2018	9:28	4	0.53	5.48	7.34	**1**

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Table 2-6 Macroinvertebrate Sampling

Order	Family	Genus	Species	Life stage	Sediment Sensitive/ Tolerant	Pollution Sensitive/ Tolerant	BCI1	BCI2	FCI0	FCI1	JCI1	JCI2	FD (JCI2)	KCI1	KCI4	KI1	KI2	LD (KI2)
Units in the columns are individuals of a species found and identified																		
	Planorbidae	Helisoma																
		Menetus																2
		Alotanypus													1			
		Diplocladius																
		Parochlus									2							
		Xenochironomus									2							
		Neoplasta		larva			1	1	3			1	1	2				
		Neoplasta		pupa			2											
		Trichoclinocera																
		Psychoda																
Diptera															1			2
		Gyraulus			tolerant	sensitive												
	Margaritiferidae	Margaritifera	falcata	juv.		sensitive						1						
	Heptageniidae	Cinygma				sensitive							1					
Plecoptera	Capniidae			imm.		sensitive												
	Leuctridae	Despaxia				sensitive											12	11
		Heterotrissocladius marcidus grp				sensitive				1								
		Synorthocladius				sensitive	2		2	1	1					4	1	1
	Pelecorhynidae	Glutops				sensitive											1	1
Mollusca	Ancylidae	Ferrissia			tolerant	tolerant	3	9	5	1	24	6	2	1		5		
	Corbiculidae	Corbicula			tolerant	tolerant			23		16							
	Lymnaeidae				tolerant	tolerant		1	1						1			
	Pleuroceridae	Juga			tolerant	tolerant	20	354	20	216	32	49	142	9		48	18	14
Oligochaeta					tolerant	tolerant	30	20	35	64	68	21	19	2	37	42	7	4
		Limonia			tolerant	tolerant									5		1	
Hirudinea						tolerant		1			1			1	40	1		
Hydra						tolerant									2			
Isopoda	Asellidae	Caecidotea				tolerant	1			3								
	Hydrobiidae	Fluminicola				tolerant	15		179		5					1		
	Physidae	Physa				tolerant									1			
		Centroptilum				tolerant					2							
		Optioservus		larva		tolerant		1	44		3	33	39				5	3
		Optioservus		adult		tolerant			8		2	4	6					
		Zaitzevia		larva		tolerant						6	19				2	1
				adult		tolerant						1	4				1	
Lepidoptera	Pyralidae					tolerant											1	
Megaloptera		Sialis				tolerant				1		1	1			1	2	2
		Aesha				tolerant										1		
		Coenagrion/Enallagma				tolerant								1				
		Argia				tolerant								1				
	Hydroptilidae	Hydroptila		imm.		tolerant	36		12	1								
		Cheumatopysyche				tolerant	101	1	23		51	78	28	11		5		
		Hydropsyche				tolerant						1	1				7	10
		Ablabesmyia				tolerant										1		
		Chironomus				tolerant												
		Cryptochironomus				tolerant			1									
		Limnophyes				tolerant			1								4	
		Paralauterborniella				tolerant					1							

Table 2-6 Macroinvertebrate Sampling

Order	Family	Genus	Species	Life stage	Sediment Sensitive/ Tolerant	Pollution Sensitive/ Tolerant	BCI1	BCI2	FCI0	FCI1	JCI1	JCI2	FD (JCI2)	KCI1	KCI4	KI1	KI2	LD (KI2)
						Units in the columns are individuals of a species found and identified												
		Paratendipes				tolerant					1				7			
		Procladius				tolerant										3		
		Zavrelimyia				tolerant											3	4
	Tabaninae					tolerant											1	
	Glossosomatidae	Glossosoma		larva	sensitive												15	13
	Philopotamidae	Wormaldia			sensitive						1	41	27					
				pupa	sensitive								1					
	Tipulidae	Antocha			tolerant		24					3						
		Antocha		pupa	tolerant								3					
		Dicranota			tolerant							2	3				9	4
		Hexatoma			tolerant								1				2	2
		Limnophila			tolerant						1						1	
		Pedicia			tolerant													
		Tipula			tolerant			1							1		1	
Acari	Trombidiformes						7	8	6	3	1	3	3	3	3	16	5	7
Amphipoda				imm.					34		2	1						
		Crangonyx					12			19			10	67	119	18		
Decopoda	Astacidae	Pacifastacus							2	1	3	4	1			1		
	Sphaeriidae							6	16	33	1		1		8	200	8	6
Nematoda							3	5	9	3	3	6	2	3		2	1	1
Ostracoda																	1	
Turbellaria	Planariidae	Trepaxonemata					5	4		1	2	1		1	27		2	
Ephemeroptera	Baetidae			imm						1								
		Acentrella		imm.			1											
		Baetis	tricaudatus				104	16	42	24	5	105	107	44		12	11	11
		Baetis	flavistriga								2	10	6					
		Diphetor	hageni					1			3	41	38				4	4
		Pseudocloeon														2		
		Epeorus albertae										1	4					
		Ironodes															3	3
	Leptophlebiidae	Paraleptophlebia					2	4			159	27	43			44	15	12
	Chloroperlidae	Sweltsa															66	57
	Perlodidae	Skwala															18	11
	Pteronarcyidae	Pteronarcella																2
	Nemouridae	Malenka															9	5
		Soyedina															8	7
		Zapada	cinctipes									8	18				139	129
Coleoptera	Elmidae			imm.														
		Lara		imm.					4	5		1				6		
	Hydrophilidae			larva				1	1									
Odonata				imm.														1
		Cordulegaster																
	Zygoptera																	
Trichoptera				pupa								2						
	Brachycentridae	Micrasema		larva												2		1
	Hydroptilidae			pupa			1									2		
	Hydropsychidae			pupa			1		1	4		2	1					
		Parapsyche															1	
	Lepidostomatidae	Lepidostoma		larva					2							2	13	11
		Lepidostoma		pupa														
	Limnephilidae	Dicosmoecus														1		
		Onocosmoecus																
		Psychoglypha															2	
	Rhyacophilidae			imm.													4	12
				pupa													2	2
		Rhyacophila	betteni									1					9	6
		Rhyacophila	narvae														13	16
	Uenoidae	Neophylax															7	4
	Ceratopogoninae														12		5	5

Table 2-6 Macroinvertebrate Sampling

Order	Family	Genus	Species	Life stage	Sediment Sensitive/ Tolerant	Pollution Sensitive/ Tolerant	BCI1	BCI2	FCI0	FCI1	JCI1	JCI2	FD (JCI2)	KCI1	KCI4	KI1	KI2	LD (KI2)
Units in the columns are individuals of a species found and identified																		
	Forcipomyinae		Atrichopogon	larva					1					1			25	20
				pupa													1	
	Chironomidae																	
		Brillia					1	1		1		1				2	11	10
		Brundiniella															7	7
		Cardiocladius					1											
		Corynoneura					1		1	1			2				2	
		Cricotopus							1									
		Cricotopus bicinctus group					25											
		Cricotopus trifascia grp					4											
		Eukiefferiella brehmi group																
		Eukiefferiella claripennis group					8		1					2				4
		Eukiefferiella devonica group					1											
		Eukiefferiella pseudomontana grp					12				1	9	3					
		Micropsectra					8	82	4	32				50	4	9	9	19
		Nanocladius									1							
		Nilotanypus								1	1		3					
		Orthocladius complex									1							
		Orthocladius (Symposiocladius)																
		Parametriocnemus						1	5	14	1	5	2	5		2	8	8
		Paratanytarsus					5											
		Phaenospectra					1	3		2	3					8		
		Polypedilum					26	3	4	4	9	11	6	182	15	27	1	
		Prodiamesa								1					4	1		
		Psilometriocnemus																1
		Rheocricotopus					1	2					2			7		1
		Rheotanytarsus					18		7		4	5	5	41				
		Stempellinella							3		1					4	1	
		Stenochironomus																
		Tanytarsus						2	6		11	11	8		221	1		
		Thienemanniella																
		Thienemannimyia complex					7	19	6	19	11	3	3	45	10	60		
		Tvetenia bavarica group					13		2	58		6	4				5	6
	Dixidae			pupa				1										
		Dixa						1									25	29
		Dixella						1										
		Meringodixa															2	
	Empididae			imm.						1				1				1
				pupa										1				
		Clinocera		larva						1					1			
		Clinocera		pupa				1										
		Hemerodromia		larva					1					1				
	Ephydridae			larva			1		1						1	1		
				pupa			1	1							1			
	Psychodidae	Pericoma													1			1
		Maruina											1	1				
	Ptychopteridae	Ptychoptera															1	1
	Sciomyzidae			larva				1										
	Simuliidae			imm.						5							2	5
				pupa								1	1				1	1
		Simulium					32	2	5			26	12	32				
	Thaumaleidae																1	4
Benthic Index of Biological Integrity (B-IBI)					**Score**		**20**	**12**	**18**	**14**	**22**	**26**	**22**	**18**	**18**	**20**	**40**	**40**
Stream Condition as Level of Impairment from B-IBI							**moderate**	**severe**	**severe**	**severe**	**moderate**	**moderate**	**moderate**	**severe**	**severe**	**moderate**	**none**	**none**

Macroinvertebrate analysis protocol is from the Oregon Water Quality Monitoring Technical Guide Book: https://www.oregon.gov/OWEB/docs/pubs/wq_mon_guide.pdf
Score >39= no impairment, 30-39: slight impairment, 20-29: moderate impairment, <20 severe impairment

Figure 2-2 Longterm Instream Monitoring Site Locations

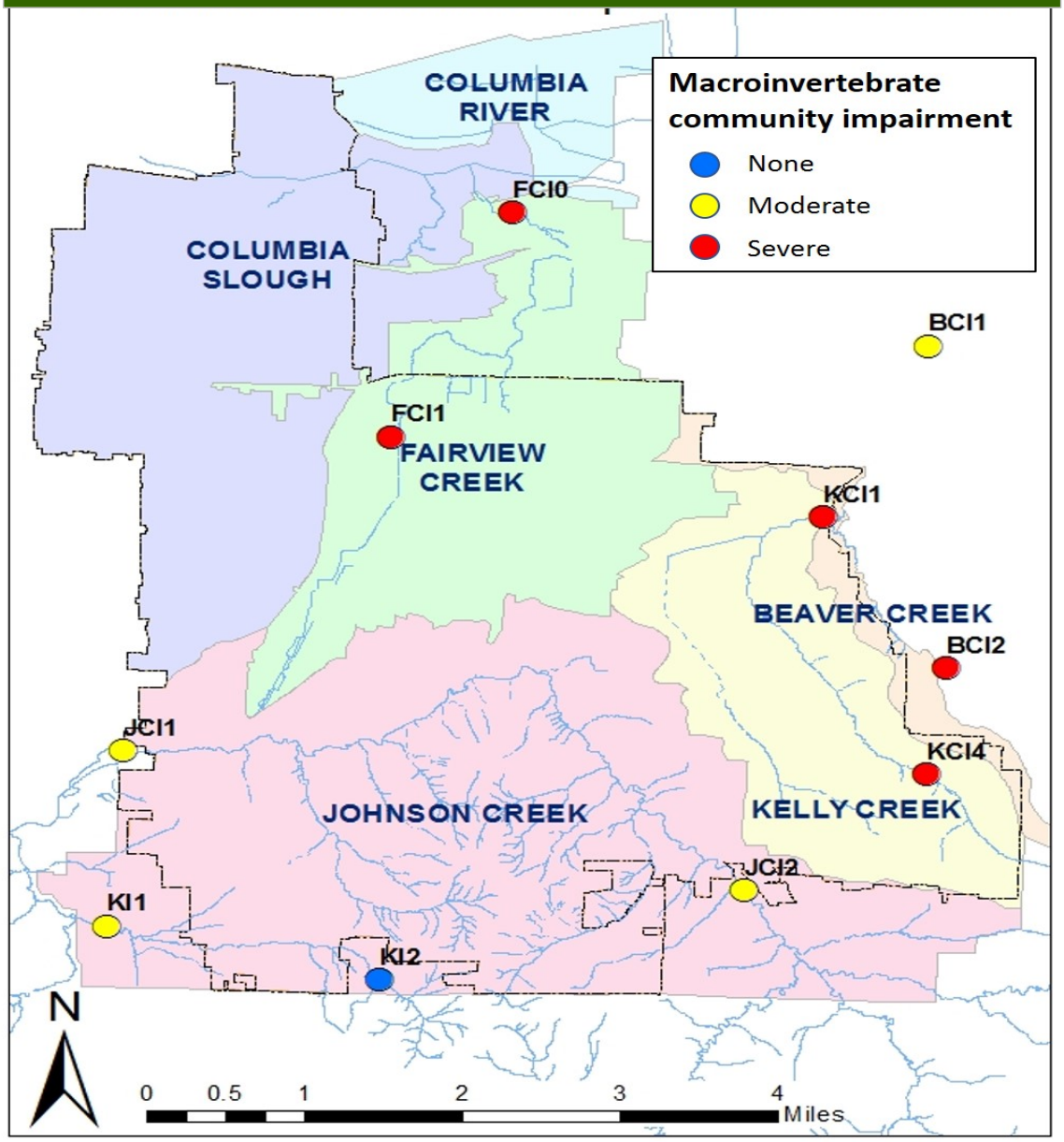


Figure 2-3 Stormwater Green Infrastructure Monitoring Site Locations

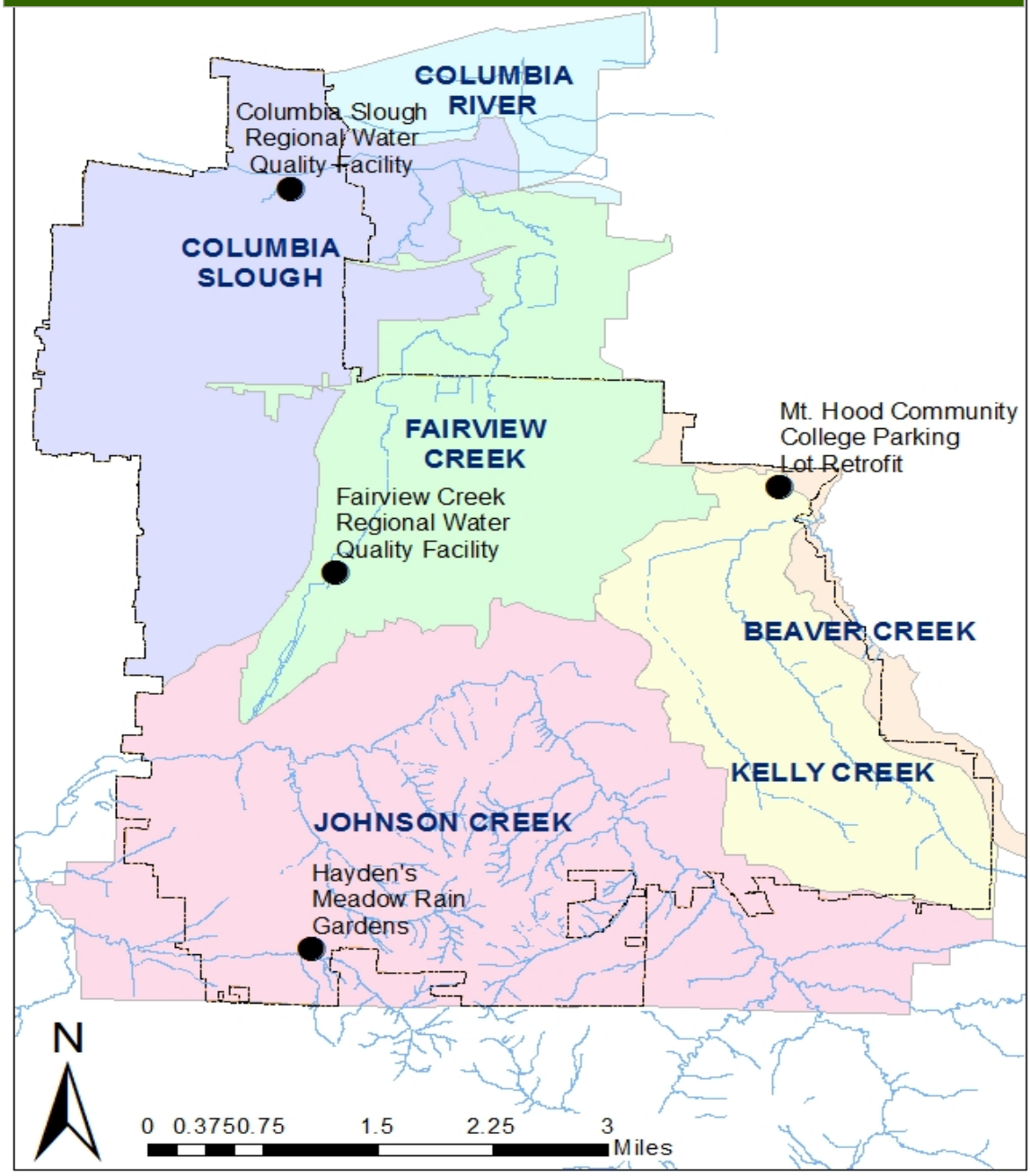
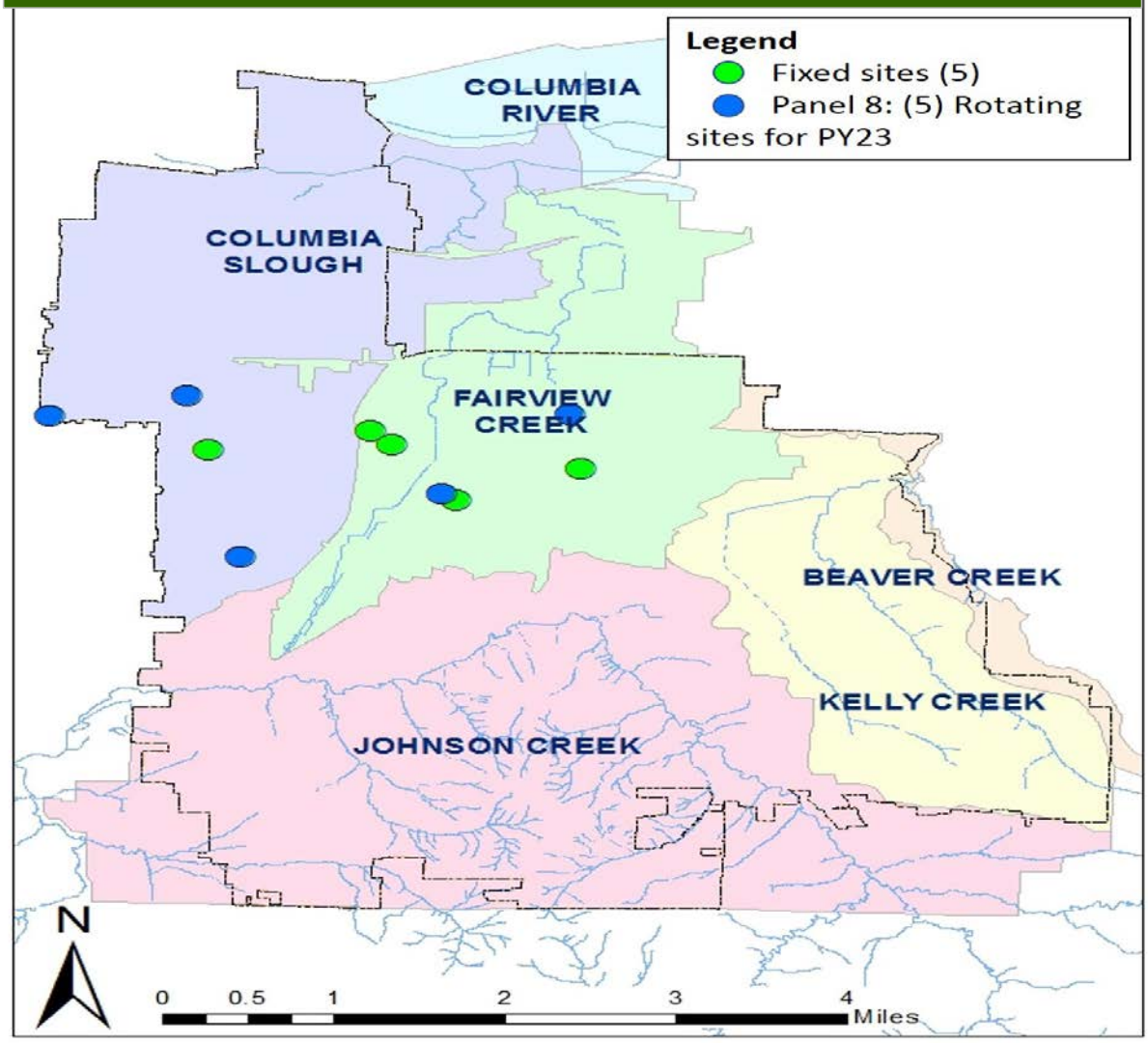


Figure 2-4 Stormwater Fixed and Rotating Monitoring Site Locations



Section 3:
City of Gresham Stormwater Management Plan Summary

City of Gresham NPDES Annual Stormwater Compliance Report

Section Three: Stormwater Management Plan Summary

BMP Name	Compliance Date	BMP Description	Measurable Goals	Reporting Elements	2017-2018	Summary and Date of Any Proposed Adaptive Management Modifications
RC 1 Stormwater System Maintenance Plan						
A. Pipe Cleaning	Ongoing	Maintain stormwater system pipes to ensure proper function and limit impacts to water resources.	Clean and inspect 15-20 miles of pipe per year.	Number of pipe miles cleaned. Volume of debris collected.	6.1 miles cleaned and 1.75 yds of debris removed and 11.5 miles were inspected. CCTV inspection of pipes includes the total miles from both routine and new development inspections. If the CCTV footage reveals roots or other concerns, the staff will be given a work order to go and repair and/or clean the area of concern. By inspecting more pipe each year, the city is more efficient with its resources and the purchase of new equipment has enabled work to be conducted in a more efficient manner.	A request was submitted to DEQ in fall 2012 to reduce the miles of pipe cleaned to 5, in favor of conducting other higher priority maintenance activities. Staff met with former DEQ staff to discuss the proposal. DEQ requested additional data from the City. In 2014, DEQ hired a new permit coordinator. DEQ was unable to put the request out for public comment prior to the permit's expiration. Oregon Administrative Statute prohibits altering a permit that has been administratively extended, therefore, the City's request is on hold until the permit is reissued. There is no current projected timeline for permit reissuance.
B. Catch Basin Cleaning	Ongoing	Maintain stormwater system catch basins to ensure proper function and limit impacts to water resources.	Clean or inspect 100% of publicly-owned catch basins that drain to surface water annually.	Number of catch basins cleaned. Volume of debris collected.	6,296 residential cbs cleaned. 148 cy of debris removed. 1390 arterial cbs cleaned. 79 cy of debris removed. 3600 hours of grey infrastructure cleaning (includes cbs, pipes, sedimentation manholes and detention pipes).	None
C. Maintain Public Water Quality Facilities	Ongoing	Maintain publicly-owned water quality facilities to ensure proper function and limit impacts to water resources.	Maintain an average 20-25 facilities per year over the permit term. (Annual totals may vary).	Number and type of facilities inspected. Number and type cleaned. Type of maintenance conducted. Volume of debris removed.	Inspected 304 ROW rain gardens and 41 publicly maintained detention ponds and swales. Routine maintenance was conducted all ROW rain gardens and publicly maintained detention ponds and swales. Staff removed 265 cy of debris from ponds, 20.75 cy from raingardens and swales and 83 cy from ditches. ~3500 of staff hours utilized for green infrastructure maintenance. Inspected 128/128 stormwater proprietary systems (vaults), replaced 378 cartridges removing 12.5 cy of debris from 107 structures.	None
D. System Repair and Maintenance	Ongoing	Maintain and repair pipes, ditches, culverts, inlets, off-road systems, etc. in order to ensure proper function and limit impacts to water resources.	Maintain and repair the stormwater infrastructure as needed.	Number of hours dedicated to R&M activities.	~17,700 hours were allocated to he repair and maintenance of pipes, catch basins, manholes, laterals, outfalls, conducting utility locates, significant rain event infrastructure inspections and emergency response, shop and equipment maintenance, gis mapping corrections of infrastructure, program administration, and public facility inspections including the use of the CCTV camera.	None

BMP Name	Compliance Date	BMP Description	Measurable Goals	Reporting Elements	2017-2018	Summary and Date of Any Proposed Adaptive Management Modifications
E. Manhole/Detention Line Cleaning	Ongoing	Maintain manhole and detention line structures to ensure proper function and limit impacts to water resources.	Inspect 75% of manhole structures annually, as appropriate; clean detention lines only as needed based on inspections.	Track number of structures cleaned/repaired. Report volume of debris removed.	Inspected 388/388 sedimentation manholes removing 33 cy of debris from 34 structures. Inspected 204/204 flow control manholes removing 15 cy from 16 structures. Inspected 231/231 detention lines removing 3.8 cy of debris from 11 lines.	None
F. Ensure Proper Debris Disposal	On going	City staff decant water to the wastewater system, dry debris & test debris to ensure that it meets disposal requirements.	Ensure that the city utilizes environmentally sound disposal practices and services.	Keep records of annual disposal services utilized. Keep annual debris testing data.	The City contracts with Water Truck Services (purchased by NRC Environmental Services in 2015), a DEQ permitted entity, to recycle the city's leaves and other debris from the maintenance of streets and structures.	None
G. Underground Injection Controls (UIC's) Maint. & Cleaning	As required by UIC Permit	Ensure that the city complies with the required elements of the WPCF permit in order to limit stormwater impacts to groundwater.	Under the City's UIC WPFC permit, report all maintenance and cleaning activities as required.	Keep records of annual maintenance locations and cleaning activities. Reporting not part of the MS4 Annual Report requirements.	Keep records of annual maintenance locations and cleaning activities. Reporting not part of the MS4 Annual Report requirements. Staff cleaned 13 UICs and removed 19.5 cy of material.	None
RC 2 Planning Procedures						
A. Water Quality Manual for New and Re-Development	Ongoing	Ensure that the water quality best management practices as described in the city's *Water Quality Manual/Green Development Practices Manual* are implemented by the development community to reduce impacts to local streams from stormwater pollutants.	Implement the *Manual* and bi-annually determine whether updates to the document are necessary. Conduct training to users of the *Manual* if it is updated significantly.	Track #, location, acreage & land use of new and redevelopment projects. Track # and type of private water quality facilities installed to comply with new development stds. Delineate and GIS map the drainage areas of the private facilities installed to comply w/new dev. standards. Track training activities.	See **Table 3.1**. Staff work with GIS staff to continually ensure a robust and high quality data set of stormwater system assets. As facilities are built, their type and area treated are recorded to aid the City in CIP and retrofit planning and design decisions as needed. This mapping also aids the City's pollutant reduction modeling that is required during the permit renewal submittal. Staff continued to take the updated draft Stormwater Manual out to various internal and external stakeholders for public input. The manual is expected to be presented and approved by City Council during PY 24. Staff also are supporting the Planning Departments update of the Habitat Conservation Area code to make it easier for the public to understand and comply.	None
B. Promote Low Impact Development (LID) Practices	Ongoing	Utilize city *Water Quality/Green Development Practices Manuals* to incorporate low impact development practices into new and redevelopment projects where applicable.	Implement practices or programs that promote the use of low impact development techniques.	Track location, drainage area & type of LID practices that are implemented.	See **Tables 3.1 and 3.2**.	None.

BMP Name	Compliance Date	BMP Description	Measurable Goals	Reporting Elements	2017-2018	Summary and Date of Any Proposed Adaptive Management Modifications
C. Private Water Quality Facility Maint. Program	PY 16 and Ongoing	Continue implementing tracking procedures for the installation of privately-owned water quality facilities and policies that ensure that private owners understand their maintenance responsibilities.	Collect and record maintenance agreements for privately-owned facilities that legal code allows. Develop a program to ensure facilities are being adequately maintained.	Track #, type, year installed, & watershed location for all private water quality facilities. Report progress on program dev. related to private facility maintenance annually in PY 16 and ongoing.	There are approximately 207 private stormwater facility locations, some with multiple owners and some with multiple facility types (About 260 vegetated and 65 proprietary underground devices). City's code is utilized to ensure that private owners have legal responsibility for maintaining their facilities and are educated and assisted with regard to facility maintenance. Staff inspects 20-30 facilities per year and works with owners to ensure they are properly maintained. Additionally, there are newly constructed lot-level stormwater management facilities located on private lots in new developments in Pleasant Valley. Stormwater management facilities installed include filtration rain gardens, drywells or soakage trenches with overflows. These facilities were inspected when constructed and staff also conducts ongoing outreach to the homes to ensure they understand proper care, maintenance and function of the facilities. During PY23, staff completed 31 inspections of 31 private multi-owner underground vaults and determined that no proprietary filters needed to be replaced. During PY23, documentation from approximately 46 private single-owner commercial vault owners was collected to verify that proprietary filter maintenance had been completed.	None.
D. Master Plan Update	Ongoing	Develop and update, as appropriate, Stormwater Master Plans for the city.	Include water quality goals in the city's master plans. Complete the Natural Resource Master Plan by PY 11-12.	Report on updates to Master Plans. Master plan project implementation w/water quality benefits are reported in BMP RC4: Water Quality Retrofits.	The Burlingame Creek master plan was completed. The city is now working on a city-wide stormwater master plan. During the next permit year, staff will work with a consultant to obtain and QA/QC stormwater system data to begin a modeling process.	None.

BMP Name	Compliance Date	BMP Description	Measurable Goals	Reporting Elements	2017-2018	Summary and Date of Any Proposed Adaptive Management Modifications
E. Urban Canopy Initiatives	Ongoing	Protect and enhance the urban canopy as part of the city's overall stormwater management strategy.	Create and implement an Urban Forestry Management Plan. Utilize Code Enforcement to ensure that urban canopy objectives are supported. Collect fines from tree removal violations that may be used for tree replacement efforts.	1) Report on progress of creating Urban Forestry Mgmt. Plan (UFMP) & annually report on status of Plan's implementation; 2) Report number of code compliance investigations & outcomes related to tree protection objectives; 3) Report outcomes that result from the collection of tree removal fines; 4) Report code changes, as applicable. See MON 2: Legal Authority and Code Review; 5) Report type/number of outreach activities conducted & estimated persons reached. See EDU 1: Stormwater Education Program.	The elements implemented under the UFMP included: *Gresham is a partner on a Multnomah County three year grant funded project (2017-2019). The project is titled Green Gresham-Healthy Gresham and is focused in the Rockwood, Wilkes East, and N. Gresham neighborhoods. The project is surveying private and street trees, planting trees, pruning trees and culminating in a Trees and Healthy Symposium in fall of 2019. *Hosted four Arbor Day events with Friends of Trees planting 124 trees in various parks, and residential yards and street trees. The city's code allows a resident to cut three trees per year on their property with a permit. Fines are typically not issued, rather permits are retroactively issued. There were ~19 violations in 17-18.	None
RC 3 Maintain Public Streets						
A. Street Sweeping	Ongoing	Continue street sweeping activities to prevent litter and debris from entering the public stormwater system.	Provide 8-10 sweeps of the city per year.	Track & report the number of sweeps per year, total miles swept and total debris collected.	Transportation's contractor conducted 11 residential and 12 arterial sweeps resulting in 6,276 miles and 1,363 cy of materials disposed. 952 hours of additional sweeps were conducted with the COG sweeper removing 360 cy of debris (including sanding rock during winter ice/snow events). ~300 hours were conducted for fall leaf removal resulting in 460 cy of debris.	None
B. Deicing	Ongoing	Continue to implement standard operating procedures to limit impacts to the environment from sand, gravel, and deicing product application.	Implement deicing practices in a manner that limits impacts to water quality.	Track & report an estimate of sand/gravel & deicing product applied to Gresham roads. Track miles of road to which sand/gravel or deicing products are applied.	3,500 gallons of Magnesium Chloride were applied to 233 miles of anti/deiced roads, plus 15 fifty lb. bags of Freeze Gard pellets. 134 cy of sanding rock applied. 126 hours were used to remove sanding debris.	None
C. Standard Operating Procedures for Road Maint. Activities	PY 16 and Ongoing	Continue utilizing ODOT's maintenance standard operating procedures, as well as the City's manual titled Standard Operating Procedures for Wetland, Waterway and Habitat Protection in order to guide city staff and contractors in resource protection efforts when working near jurisdictional resources.	Implement a road maintenance program that will limit impacts to water quality. Biennially train appropriate staff. Monitor program implementation and adaptively manage based on feedback and results.	Track & report implementation of training activities. Report changes to SOP's annually, if updated.	Continue to implement road maintenance SOPs for the protection of waterways.	None

BMP Name	Compliance Date	BMP Description	Measurable Goals	Reporting Elements	2017-2018	Summary and Date of Any Proposed Adaptive Management Modifications
RC 4 Retrofit & Restore System for Water Quality						
A. Water Quality Retrofits	Ongoing	The Watershed Engineering group will continue to implement the Stormwater Capital Improvement Projects that include water quality enhancement and pollution reduction elements.	Implement a CIP program that will help mimic the natural hydrologic cycle, treat stormwater, and promote stream protection and enhancement.	Track number, type, watershed location & total drainage area of CIPs constructed for water quality.	**Table 3.1** includes CIPs implemented by departments other than the Watershed Division that include water quality treatment. **Table 3.2** includes projects undertaken as a result of the Watershed and Natural Resource CIP list.	None
B. Enhance Riparian Areas	Ongoing	Continue conducting riparian restoration activities to remove invasive species, restore and enhance buffers and encourage multi-story native plant communities, channel stabilization and support of critical habitat.	Continue to seek partnerships/grants to implement riparian enhancement projects that will limit the introduction of stormwater pollutants into streams.	Track and describe riparian enhancement activities by location. Estimate number of volunteers/partners involved, where applicable. Estimate of acreage enhanced and total plans installed or invasives removed.	See **Table 3.3**.	None
RC 5 Monitor Pollutant Sources from Closed or Operating Municipal Waste Facilities						
Pollutant Source Evaluation	Ongoing	The City has reviewed historic records and current operating businesses to determine that, as of the 2010 permit application approval, no pollutant source exists from an operating or closed treatment, storage, or disposal facility for municipal waste. The City conducted an assessment of a closed facility during PY 12 and determined that no threat to stormwater existed from the facility. This report is available upon request.	Ensure that new municipal waste facilities within the City's permitted area are appropriately permitted and designed to limit the potential for pollutants to enter stormwater.	Review business permits annually. (Conducted under the IND 1 & 2 BMP A. Business Inspection Program). Report any new facilities and assessment results.	There are currently no operating treatment, storage or disposal facilities for municipal waste within the city. However, Gresham Sanitary Services who is a solid waste hauler, holds a UIC permit #13410 and is not connected to the City's stormwater system. They also have a DEQ Transfer Permit #1392 for reloading waste. The reloading area is entirely sealed and wastewater is discharged to the sanitary sewer via a licensed contractor. The EcoBiz program visited Gresham Sanitary in December 2017 and found some storage and spill hazards related to onsite storage of oil totes, fueling area, secondary containment and batteries. These issues have been corrected and improved via technical assistance.	None
RC 6 Reduce Pollutants from Pesticides, Herbicides and Fertilizers						
Integrated Pest Mgmt. Program	Ongoing	Limit the introduction of pesticides and fertilizers from city operations by implementing an integrated pest management plan.	Review and implement the IPM Plan biennially and, at a minimum, update at least once per permit cycle. Conduct training. Annually review the list of city approved pesticides.	Track frequency of staff trainings & number of staff trained. Report updates of the plan. Track quantities and types of pesticide, herbicides and fertilizer applications.	See **Table 3-4** of Pesticide/Fertilizer Application Records. Staff applicators follow Oregon education certification requirements to retain their licensure, as applicable. See also EDU 1--Staff/Stakeholder Trainings	None
ILL. 1 Non-Stormwater Discharge Controls						
A. Control Releases from Fire Training Activities	Ongoing	Limit pollutants to stormwater from fire training activities by implementing standard operating procedures.	Ensure Fire Training is overseen by staff familiar with the SOP for stormwater protection.	Document fire training protocols for stormwater protection and train staff.	SOP is on file and Fire Training staff are familiar with protocol.	None

BMP Name	Compliance Date	BMP Description	Measurable Goals	Reporting Elements	2017-2018	Summary and Date of Any Proposed Adaptive Management Modifications
B. Water Line Flushing	Ongoing	Minimize impacts to the stormwater system from water line flushing activities by implementing standard operating procedures.	Ensure Water Line Flushing is overseen by staff familiar with the SOP for stormwater protection.	Train employees on standard operating procedure to minimize impacts to local streams. Annually report gallons flushed.	4.2M gallons flushed using SOP. Flushing SOP is reviewed at staff meetings prior to work and for the benefit of new staff.	None
ILL. 2 & 3 Illicit Discharges Elimination Program						
A. Field Screening and Investigation	Ongoing	Conduct dry weather screening at high priority outfalls, at a minimum of once per calendar year. When appropriate conduct follow up investigation to identify the source (responsible party). If a responsible party is identified work to eliminate the illicit discharge.	Conduct annual dry weather screening at high priority outfalls. Document the procedures the city will follow when an illicit discharge investigation identifies a responsible party.	Track number & location of outfalls inspected. Track number & location of illicit discharges and/or connections identified. Include documentation in 2011 Annual Report. Describe follow-up actions for identified illicit discharges and/or connections in Monitoring Plan.	Staff inspected 30 sites. This was the second year of switching from a fixed thirty sites (at large outfalls), to screening 8 fixed sites every year, and 22 new rotating sites. See map of locations in Section 2. The 8 fixed sites were selected based on size and land use of contributing area, and on past illicit discharge issues. The 22 new sites are selected based on size of outfall, starting with the largest. Three of the fixed sites had turbidity and ammonia levels slightly above our IDDE action levels requiring additional investigation (15 NTU and 0.5 mg/L, respectively). One of the three sites also had conductivity levels above the action level of 300 uS/cm. All three of these sites have shown similar levels in past years and follow-up investigations did not identify any new sources in the homes and businesses which drain to the sites. Past investigations indicated that upstream areas contain low-priority abandoned landfills which are likely contributing to these levels. One new rotating site had very high turbidity well above our action level, as well as ammonia levels at our action level. This site drains the City of Gresham's Operations & Maintenance yard. An investigation revealed that the discharge was originating from a trench drain near a wash bay which was designed to prevent run-on rainwater from entering the wash bay but was capturing some runoff from the wash bay, if washing occurred near the edge of the wash bay.	None
					During FY 17-18, staff evaluated options for preventing turbid water from entering the ribbon drain but determined the best pollution reduction solution is to construct a stormwater vegetated facility retrofit for the entire Operations yard impervious area, including rooftops. This will address not only this discharge but will also improve water quality for all of the runoff from the heavy equipment in our Operations Yard. The design for this retrofit is complete and construction is expected to be completed by the end of 2018 and is project is included in **Table 3-2**.	

BMP Name	Compliance Date	BMP Description	Measurable Goals	Reporting Elements	2017-2018	Summary and Date of Any Proposed Adaptive Management Modifications
B. CCTV New Development Stormwater Pipes	Ongoing	Conduct closed-circuit television (CCTV) inspections of new stormwater pipe installations during development projects to eliminate cross-connections.	CCTV at least 80% of all new pipes installed in the city.	Track number of stormwater pipe miles inspected as a percentage of the total stormwater pipes installed.	100% of new development inspected. All CCTV activity is tracked as one number, i.e., in total miles. The amount, in miles, of new development pipe is not specifically known, but is a fraction (~1-2 miles) of the total 11.5 miles, as reported in the pipe cleaning BMP.	None

BMP Name	Compliance Date	BMP Description	Measurable Goals	Reporting Elements	2017-2018	Summary and Date of Any Proposed Adaptive Management Modifications
ILL. 4 Spill Response Program						
A. Spill Response	Ongoing	Respond to reports of spills or illegal dumping using the city's spill response protocol for hazardous and non-hazardous substances.	Implement the city's spill response protocol and conduct periodic review of the document to ensure efficacy.	Track number, type & location of spills that occur & the approx. quantity of material spilled. Track the response activities. Does not include traffic accidents, unless additional assistance is requested from the Watershed Operations staff.	See **Table 3-7**.	None
B. Spill Prevention (Hazardous Waste Mgmt. - City)	Ongoing	Continue to carefully manage hazardous materials to prevent spills on City-owned property from city practices.	1) Ensure safe handling, storage and disposal of hazardous fluids in order to prevent spills and limit pollutant sources to stormwater by training staff appropriately. 2) Provide periodic review of City contractor's safety and environmental violations and disposal permits, where applicable, to help ensure environmental compliance of contractors handling the City's waste products.	Report quantities of hazardous materials disposed annually. Report number of spill incidents and outcomes annually. Request & review contractor's permits, where applicable, at least annually and biennially review appropriate regulatory agency databases for safety and environmental violations.	Quantities of hazardous materials disposed: Used oil filters: (1) 55 gal drum Used oil: 976 gal and (2) 55 gal drums of diesel Used Antifreeze: 35 gal Used Tires: 250 (Tire disposal & Recycling) and 145 (Goodyear) Used batteries are returned to the vendor for recycling. (Battery Systems, Advance Auto Parts, and Auto Plus. All other recyclable commodities are recycled. Vendors utilized: Thermo Fluids.	None
C. Maintain Public Vehicles	Ongoing	Continue to maintain city vehicles and equipment to limit the contribution of stormwater pollutants from leaks and runoff, etc.	1) Maintain City-owned vehicles & equipment and ensure proper handling & disposal of fluids to reduce the likelihood of leaks or spills being released into the MS4 system or the environment. Meet DEQ Permit 1700 A deminimis discharge or seek a permit and/or waiver.	Report annual disposal quantities of all fluids and vendors utilized. Report status of deminimis discharges or Vehicle Wash Water permit implementation and/or waiver.	Quantities included in the BMP: Spill Prevention (Hazardous Waste Mgmt. - City) above. DEQ is currently not issuing Vehicle Wash Water permits. The Fire Department washes less than 8 vehicles per week per fire station and does not use heated water, does not wash the engine, transmission or undercarriages, but does use a phosphate-free soap on the vehicle exterior.	None
ILL. 5 Facilitate Public Reporting						
Facilitate Public Reporting & Respond to Citizen Concerns	Ongoing	Continue to provide an outlet for public concerns regarding stormwater pollutant issues such as illegal dumping, erosion, plugged drains, invasive plants, etc.	Include information about how to report concerns of illegal discharges in various city publications.	Track number of calls/letter received, the issue of the call, and the response to the call.	See **Table 3-8**.	None

BMP Name	Compliance Date	BMP Description	Measurable Goals	Reporting Elements	2017-2018	Summary and Date of Any Proposed Adaptive Management Modifications
ILL. 6 Facilitate Proper Management Disposal of Used Oil & Toxics						
Facilitate the Proper Mgmt. & Disposal of Used Oil & Toxics	Ongoing	The City uses a variety of approaches to encourage proper solid waste, recycling, and hazardous waste management practices including: GREAT Business Education Program, Special Collection Events for the Public, and Curbside Recycling of Oil.	Continue to offer disposal, recycling, and/or collection programs that facilitate the proper management of solid and hazardous waste in the business and residential sectors.	Track quantities of used oil and toxics collected. Estimate the number of persons and/or households reached.	City contracted haulers estimated 40 tons of curbside oil collected and ~6,700 tons of yard debris. At this year's Earth Day event 37,620 lbs. of material including electronics, computers, appliances, fluorescent lights, and other accepted items by Green Century (the contractor). 40 cy of mixed rigid plastics, cardboard, and plastic film were collected. 120 cy of Styrofoam was collected. Over 1300 cars/households attended.	None
ILL. 7 Limit Sanitary Sewer Discharges						
Limit Sanitary Sewer Discharges	Ongoing	The City's Wastewater Treatment Plant operates under its own NPDES discharge permit. Its programs include a pretreatment inspection program and implementation of Capital Improvement Projects that overall assist the City in meeting the NPDES MS4 Stormwater Discharge Permit objectives.	Continue to implement operations and maintenance programs for the wastewater pipe system that limits the introduction of sanitary sewer waste into the stormwater system.	Track sanitary discharge to the stormwater system, including estimated volume and location. Track follow-up responses to the identification of any sanitary discharges to the stormwater system. Track implementation of the CIP to connect currently unsewered properties to the sanitary sewer system.	City records in the utility billing system shows 24,803 active accounts. 24,131 accounts are billed for wastewater and 24,245 have stormwater rates. The county sanitarian records show that 9 private septic tanks were decommissioned and connected to the wastewater treatment plant. One additional property was decommissioned just outside the city boundary in unicorporated multnomah county. No public sanitary system upsets occurred during the PY. ~75 miles of pipe were cleaned and ~37 miles were inspected for damage or leaks. 50 miles of main pipe was patched and 4 miles were open trench repaired and 5 miles of lateral pipe patch repair and 16 miles of lateral open trench repair. 4 manhole repairs. 36 blockage investigations.City Attorney's office continues to work on the civil penalty legal issues related to two properties refusing to hook up to the city sewer.	None
IND. 1 & 2 Industrial Inspection & Monitoring						
A. Business Inspection Program	Ongoing	The City's Stormwater Business Inspection Program consists of a variety of approaches including: business license review and technical assistance; prioritized business inspections; review of business classification codes to determine those that may need 1200Z or 1200-COLS permits to submit to DEQ and collaboration with DEQ to ensure 1200Z permit data is adequately reviewed; cross training with the Wastewater Pretreatment and Fats Oils and Grease Inspectors to look for potential stormwater concerns, and a business education program that is implemented by the Solid Waste & Recycling Division staff.	Continue to implement business license review, business inspections and business education efforts to help prevent and reduce the introduction of pollutants into stormwater from business practices.	1) Track number & location of stormwater related issues identified during the business license review and follow-up. 2a) Report status of ongoing program development.	(1) 314 new business licenses came into the city. New licenses are monitored by the business inspection staff and placed on a list for follow up if they are auto or restaurant related or located within the city wellhead protection area.	None
A. Business Inspection Program				2a) Report status of ongoing program development.	2a) Stormwater business inspections are conducted in partnership with the Water and Wastewater Division inspections. The program will continue to look for stormwater concerns by conducting 1200Z/COLS/Wellfield/Pretreatment inspections and a portion of new and highest risk automotive businesses every other year (ones known for poor housekeeping). In PY 24, staff will focus some time on working with businesses with broken oil water separator elbows to require repairs and focus on food services with grease containers in poor condition to reduce pollution sources from these structures.	None

BMP Name	Compliance Date	BMP Description	Measurable Goals	Reporting Elements	2017-2018	Summary and Date of Any Proposed Adaptive Management Modifications
A. Business Inspection Program				2b) Notify DEQ of businesses that may need a 1200-Z or 1200-COLS permit and report actions promised by businesses with which the City is working.	(2b) Staff reviewed the business license applications and did not identify any businesses needing a DEQ 1200-Z or COLS permit. Staff inquiry to DEQ revealed a new 1200COLS permit issued to Portland Specialty Baking and Arnprior Aerospace. See **Table 3-10** for a list of 1200Z permits within the city.	None
A. Business Inspection Program				2c) Track business inspections, including businesses location, outcome and follow-up. Estimate the number and type of businesses to be inspected for the next year. 2d) Report stormwater concerns identified by the wastewater pretreatment program and resolution. 3) Track GREAT business program environmental audits and certification annually. (Reported in Public Education--Table 3-8).	(2c) 62 auto related businesses inspected finding that 17 were out of business and 15 were office only work. Eleven had stormwater violations which were corrected. Staff completed 54 inspections, including follow ups for compliance within the wellfield protection area. , four of which required corrections and voluntarily complied. 15 Pretreatment Inspections were conducted. One stormwater violation for outdoor housekeeping was corrected. Projections for PY 24, include 35-40 Wellfield/1200Z/Pretreatment Inspections and 20-30 automotive businesses. (2d) Staff inspected 6 permitted industrial 1200Z/COLSsites, minor corrections were requested and made. Staff and DEQ plan to coordinate on at least one 1200Z inspection during 18-19.	None
B. Industrial Monitoring Program	Ongoing	Coordinate with DEQ to ensure adequate notification of potential 1200Z and 1200-COLS permits and review of data submitted by permit holders.	Continue annual inventory of 1200-Z and 1200 COLS businesses within the city's boundaries and review monitoring results submitted to DEQ on an annual basis, if DEQ has not already done so. Report exceedances to DEQ, if applicable.	Track NPDES 1200Z/1200COLS permits issues in Gresham. Track number of violations reported.	Based upon a review of city records and correspondence with DEQ, there are currently 14 permitted facilities within Gresham's jurisdiction. Gresham staff inspected 6/14 industries to ensure wellfield protection area code implementation. Some corrective measures were requested. These are listed in **Table 3-10**.	None
CON. 1 & 2 Construction Site Planning & Controls						
Erosion Prevention & Sediment Control Manual	Ongoing	Continue to update the City's *EPSC Manual* when necessary to reflect current available and accepted technologies and City code and implement the Manual in order to limit impacts to local streams from stormwater.	Implement the EPSC Manual in order to limit stormwater pollutants from construction and development. Review and evaluate the manual biennially to assess changes needed, if any. At a minimum, at least once	Track updates to the Manual.	The EPSC Standard Operating Details and Manual are being issued and implemented. The EPSC manual was reviewed and updated related to best practices. The updated manual is being moved into the City's Stormwater Manual for new and redevelopment (was formerly housed within the Public Works standards). The updated manual is slated for city council approval during PY 24.	None

BMP Name	Compliance Date	BMP Description	Measurable Goals	Reporting Elements	2017-2018	Summary and Date of Any Proposed Adaptive Management Modifications
CON. 3 Construction Site Inspection & Enforcement						
Construction Site Inspection & Enforcement	Ongoing	Continue to implement an EPSC inspection program to ensure adherence to EPSC Manual requirements and 1200-C permit requirements, where applicable.	1) Implement the EPSC inspection program to enforce the EPSC Manual. 2)Ensure proper staff training. 3) Examine tracking parameters such as types of violations, number of active sites and total associated acreage.	Track the number of sites inspected annually. Track training sessions conducted for staff. Report parameters assessed and program adaptive management that result, if applicable.	A total of 231 sites were inspected: 219 with residential or commercial building permits and 12 sites with grading permits. There were 14 disapproved inspections affecting 12 sites. Correction notices were related to installing/maintaining perimeter control, providing adequate cover for denuded soil, protecting stockpiles, improving construction entrances, and sweeping streets. During PY23, Stormwater staff attended the Mid-Willamette Erosion Control and Stormwater Management Summit (1/30/18) and the Managing Stormwater in Oregon conference (6/21/18).	None
Stormwater Education Program	Ongoing	Provide notice to construction site operators concerning where education and training to meet EPSC requirements can be obtained.	Ensure developers and construction permit holders are adequately informed of the city's EPSC Manual BMPs and requirements to limit impacts to streams from stormwater.	Report training and communication efforts to the construction community.	See **Appendix D**: Wet Weather Notification Letter Notice to Contractors.	None
EDU. 1 Stormwater Education Program						
A. Ensure Staff/Stakeholder Training	Ongoing	Continue to train new or existing employees as appropriate on all documents that regulate stormwater pollutant control activities such as: IPM Plan, Water Quality Manual, EPSC Manual, and Spill Response Protocol, etc.	Continue to train new personnel and existing personnel, as appropriate on stormwater regulatory documents and conduct trainings for stakeholders, when applicable.	Track the number of personnel & contractors who receive training by topic.	A variety of staff across operations & maintenance, inspections, and policy positions attended trainings in the following areas: ODOT Training Pesticide applicators licensing updates APWA Short School NASSCO-National Association for Sewer Service Companies Standard Operating Procedures for new employees Annual review of Spill Response Procedures EPSC Training HazMat First Responder Awareness Confined space entry	None
B. Educate Residents	Ongoing	Continue to create and deliver programs and/or messages to educate the public regarding non-point sources of pollutants of concern.	Continue to educate the public regarding their personal contributions to stormwater pollutant sources and impacts to water bodies, as well as the steps or actions they can take to reduce pollutants.	Track programs/messages delivered, type of communication piece and, where appropriate/known, the number of people affected and measured behavior changes. Annually report the Public Education program priorities and plans for the following year.	See **Table 3-9**. For PY 23, staff will continue to support the implementation of the Backyard Habitat Conservation Program, an ACWA/Regional Coalition coordinated effort for media advertising and promotion of local water education events hosted by various partners, collaboration with watershed councils and SWCDs, business outreach, individualized customer response, and neighborhood illegal discharge notifications and education.	None
C. Educate Businesses	Ongoing	Continue to create and deliver programs and/or messages to educate businesses regarding non-point sources of pollutants of concern.	Continue to educate the public regarding their personal contributions to stormwater pollutant sources and impacts to water bodies, as well as the steps or actions they can take to reduce pollutants.	Track programs/messages delivered, type of communication piece and, where appropriate/known, the number of people affected and measured behavior changes. Annually report the Public Education program priorities and plans for the following year.	See **Table 3-9**. For PY 24, staff will continue to support the implementation of the GREAT Business Program, the EcoBiz Program, the SCAP program, the EPSC contractor outreach and will continue technical assistance to restaurants and automotive sectors. During PY 23, interns documented restaurant garbage, recycling and grease containment for future pollution reduction work.	None

BMP Name	Compliance Date	BMP Description	Measurable Goals	Reporting Elements	2017-2018	Summary and Date of Any Proposed Adaptive Management Modifications
Program Management & Monitoring						
MON 1 Annual Report Writing	Ongoing	Coordinate across the city to review program commitments, gather data, and where appropriate, assist with program evaluation and additional goal setting or BMP enhancements.	Submit the Annual Report to DEQ on behalf of Gresham and Co-Permittee, as required by the permit.	Each year provide a report that includes the following components: * a description of the public comment notice method; *status of the SWMP implementation and SWMP program elements, progress in meeting the measurable goals; *status and/or results of any public education program effectiveness evaluation conducted during the reporting year and a summary of how the results were or will be used for adaptive management.; *a summary of the adaptive management. process during the report year, including any proposed changes to the SWMP identified through implementation of the adaptive mgmt. process; *proposed changes to SWMP elements designed to reduce TMDL pollutants to the MEP; *a summary of total stormwater program expenditures and funding sources over the reporting fiscal year	This year's Annual Report included a public comment period from October 15-28, 2018. Notices ran in the Oregonian and on Oregonlive.com. The City placed a notice on its website and also issued a press release to all media. A notice was also published in the City's e-newsletter which is emailed to ~900 households. A notice was emailed to the local active Watershed Councils and East Multnomah Soil and Water Conservation District. The status of the SWMP implementation and progress meeting measurable goals is described throughout this report. The Adaptive Management Process is described in Section 1 and a summary of the adaptive management process and resulting proposed changes may be found in the Summary and Date of Proposed Adaptive Management Column for the respective BMPs effected. A summary of total expenditures is included as **Table 3-11**.	None
				*a summary of monitoring program results, including monitoring data that are accumulated throughout the reporting year and/or assessments or evaluations; *any proposed modifications to the monitoring plan that are necessary to ensure that adequate data and information are collected to conduct stormwater program assessments;	A summary of the Environmental Monitoring Plan implementation for Gresham and Fairview is included as Section 2 of this report with a separate Appendix A, B & C of supporting raw data collected during PY 23.	None

BMP Name	Compliance Date	BMP Description	Measurable Goals	Reporting Elements	2017-2018	Summary and Date of Any Proposed Adaptive Management Modifications
				*a summary describing the number & nature of enforcement actions; inspections & public education programs, including the results of ongoing field screening and follow-up activities related to illicit discharges; *an overview, as related to MS4 discharges, of concept planning, land use changes and new development activities that occurred within the UGB expansion areas during the previous year, and those forecast for the following year, including the number of new post-construction permits issued, and the estimate of total new or replaced impervious surface area related to new development and redevelopment projects commenced during the report year; *Annual Report 2014 must also include: TMDL Pollutant Load Reduction Evaluation; Wasteload Allocation Attainment Assessment; 303 (d) Evaluation; Hydromodification Assessment; Retrofit Plan.	A summary of the Illicit Discharge Detection & Elimination Program (Dry Weather Screening and Spill Response) may be found in **Tables 3-5 and Figure 3-6**. A summary of concept planning, land use changes and new development activities for UGB expansion areas may be found in **Appendix B**. A summary of development permits issued within the City of Gresham is included in **Table 3-1**.	None
MON 2 Legal Authority and Code Review	Ongoing	Review existing code to ensure that the city maintains adequate legal authority and other requirements as stated in the NPDES MS4 permit.	Maintain adequate legal authority, as required by the permit.	Maintain adequate legal authority through ordinance(s), interagency agreements or other means to implement and enforce the provisions of the NPDES MS4 Permit #101315. Track enhancements or improvements to existing City code.	See **Appendix A.**	None
MON 3 Program Evaluation/Monitoring	PY 17 or as otherwise dated in the permit.	Review the 303(d) list to determine whether there is a reasonable likelihood of stormwater from the MS4 to cause or contribute to water quality degradation of receiving waters. Utilize the city's GIS mapping staff to enhance program evaluation efforts.	Conduct a 303 (d) pollutant evaluation, as required by the permit.	Submit a report summarizing the results of the 303(d) list review and evaluation and any proposed SWMP modification or updates necessary to reduce applicable 303(d) pollutants to the MEP: Submit a Waste Load Attainment Assessment; Submit a TMDL Pollutant Load Reduction Evaluation; Track significant mapping efforts that help evaluate, enhance or support the SWMP BMPs.	Significant mapping projects included: * GIS layers reviewed and updated to support Stormwater Master Plan project * Dry weather screening site location map * Operations and Maintenance system inspection and cleaning route maps * Public Education maps of participants by zip code for watershed councils and Big Float collaboration, as well as Backyard Habitat Participants * Business Inspection Maps of wellfield, 1200Z, pretreatment, and automotive locations. * UIC maps for WPCF permit reporting * Stormwater infrastructure maps for Mult Co. Vector Control	None

BMP Name	Compliance Date	BMP Description	Measurable Goals	Reporting Elements	2017-2018	Summary and Date of Any Proposed Adaptive Management Modifications
MON 4 Public Involvement	Ongoing	Conduct public involvement activities as required by the permit, such as annual reports, retrofit strategy, and Permit Renewal Submittal elements.	Conduct public involvement activities and report outcomes.	Report the number of people reached during public involvement activities.	The Annual Report is also released for public comment which is described in MON 1: Annual Report Writing. Below is a summary of potential reach utilizing the typical methods for making public announcements. Gresham's population is about 105,000 (2010 U.S. Census). The Oregonian daily readership in the Portland-Metro area is about 200,000, and Oregonlive.com receives 9M unique visitors annually. The City's Website Home Page receives ~13,000 visits per month. The City's Watershed Division web page, where public comment documents are housed electronically, receives ~1,300 views annually. City Newsletter mailed quarterly to 48,000 households.	None
MON 5 Permit Renewal Submittal	PY 17-18 or as appropriate to meet permit deadlines.	At least 180 days prior to permit expiration, prepare and submit the Permit Renewal Submittal package to DEQ.	Submit the Permit Renewal Package to DEQ.	Submittal includes as required by permit but is not limited to: Proposed modifications, including additions and removals of MBPs and measurable goals; Information allowing the Dept. to make an independent assessment that the SWMP proposed meets the requirements of the permit to the MEP; Updated pollutant loads for TMDL pollutants and BOD5, COD, nitrate, total phosphorus, dissolved phosphorus, cadmium, copper, lead & zinc; Establishment of TMDL Pollutant Reduction Benchmarks, if not achieving the WLA; A proposed monitoring program; A description of service area expansions; A fiscal evaluation summarizing expenditures for the current and next permit cycle; Updated MS4 maps.	The City of Gresham submitted its permit renewal package to DEQ on December 15, 2015. This included an updated Stormwater Management Plan and Monitoring Plan that went out for public comment on Nov 30 thru Dec 13, 2015. No comments were received. The City's permit expired on December 29, 2015 and was administratively extended by DEQ in a letter dated February 25, 2016. The City, therefore, is following the SWMP dated April 2011 and adaptively managed in April 2013. The City's permit allows for the Monitoring Plan to be adaptively managed by reporting changes in the annual report to DEQ. As such, the City's current Monitoring Plan was last updated in November 2015. All documents are located at GreshamOregon.gov Watershed Documents.	None

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
Big Eddy Industrial Development	GI	Industrial	1905 NE Riverside Pkwy	StormTech Chambers and Contech StormFilters	Private	Columbia Slough	7.7	6.6	86%
Yamhill Firs Apartments	RTC	Multi-Family Housing	19025 SE Yamhill Ave	Pervious asphalt and pervious concrete	Private	Fairview Creek	1.4	1.4	100%
Atiyeh Commercial Center	NC	Commercial	1404 SE 182nd Ave	ROW Rain Gardens	Public	Kelly Creek	1.1	0.8	72%
Homestead Subdivision	LDR-5	Residential	2462 SW 41st Street	ROW Rain Gardens	Public	Johnson Creek	8.6	2.4	28%
Gresham Business Park - Lot 9	GI	Industrial	198 SE 223rd Ave	Vegetated Bio-swale, Contech StormFilters.	Private	Columbia Slough	37.4	31.6	85%
Glisan Corporate Park	GI	Industrial	NE Glisan Ave	Vegetated Bioswales and ROW Rain Gardens	Private/Public	Columbia Slough	26.0	23.8	91%
Admiralty Pointe Senior Living Center	DTM	Commercial	1241 NE 6th Street	Stormwater Planter	Private	Fairview Creek	0.6	0.5	79%
Boys and Girls Club	MC	Commercial	16519 SE Stark Street	Stormwater Planter, Vegetated	Private	Columbia Slough	1.3	1.1	87%
Farmington Square Senior Living Center	LDR-5	Commercial	1655 NE 18th Street	Stormwater Planter, Vegetated	Private	Kelly Creek	2.8	0.9	31%
Welch Woods Subdivision	LDR-5	Residential	SE Orient Drive	Detention Pond, Contech Stormwater	Public	Kelly Creek	5.5	4.0	72%
Rodgers Subdivision	LDR-5	Residential	1750 NE Cleveland Ave	ROW Rain Gardens	Public	Fairview Creek	1.3	0.8	63%
Total Disturbed Acreage								**73.8**	

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

Table 3-2 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
Private/Public Partnership Projects				
City of Gresham Operations & Maintenance Yard Swale Retrofit	Johnson Creek	Designed and bid. Construction to be completed during the next reporting year.	The retrofit will capture 2.5 additional untreated impervious surface from the operations yard.	Watershed CIP retrofit fund
Kane Road Culvert Repair	Kelly Creek	Designed and bid. Construction to be completed during the next reporting year.	This is the permanent replacement of road and the 12' wide non-fish passable culvert from the 2015 flood that caused the road to wash out with a 34' wide fish passable culvert and natural stream bed.	Watershed CIP fund
Mt. Hood Community College Salmon Safe Campus	Kelly Creek	Designed and bid. Construction of rain gardens to be completed during the next reporting year. Additional projects have been identified to pursue over a five-year period.	The city partnered with EMSWCD, Sandy River Watershed Council, and Metro to 'green' the college campus by improving water quality and improving habitat by the reduction of impervious surfaces and the installation of rain gardens and native plants.	Watershed Operating Fund
Riparian and Upland planting	Fairview Creek, Johnson Creek, Kelly Creek, Butler Creek, and Chastain Creek.	Restoration is occurring along Johnson Creek main stem (6 sites), Jenne Creek (1 site), Kelly Creek (1 site), Butler Creek (1 site), Chastain Creek (1 site) and Fairview Creek (3 sites). Each of these sites are under active management for invasive species control. A subset of these sites will be selected for additional native plantings including Johnson Creek (4 sites), Jenne Creek (1 site), and Kelly Creek (1 site). The Natural Resource program also started its Upper Butler Creek CIP project and will be implementing the baseline report and restoration plan in Fall 2019 and continue through Fall 2022.	Water quality, stream shade, invasive control, forest health, stream function, wetland function, and habitat improvements.	Natural Resources Operating Funds
Invasive Weed Survey & Control	All	Active, ongoing invasive control. EDRR weeds are addressed as they are reported, anywhere in the city. Routine riparian weed treatment areas are detailed in Table 3.3. Where manual methods aren't used, only licensed herbicide applicators are used for chemical treatment.	Spot treatment for controlling aggressive invasives that lead to bank failures, including Japanese knotweed, Himalayan blackberry, purple loosestrife, and yellow flag iris.	Natural Resources Operating Funds
Fairview Creek Wetland Mitigation Bank	Fairview Creek/Columbia Slough	Latest cost estimate by Port puts project projection at $9M, so we sought an additional funding partner, and are currently in negotiations with the Cowlitz Tribe. As the project site is within their traditional tribal lands area, they are investigating the project lead with the proposal to use Port funding to complete the project. City remains site owner and project sponsor.	Water quality, stream function, wetland function, and habitat improvements.	Stormwater CIP and external partner funding (Port of Portland and Cowlitz Tribe)
Environmental Overlay Project (ongoing)	All	In partnership with Planning and Development Engineering, embarked on buffer code update to simplify and clarify code requirements, mitigation standards, and floodplain rules to enhance compliance and improve performance over existing code which has been found to be extremely complex in interpreting and applying. City will ensure changes still meet intent of state Goal 5 & 7 and Metro Title 3 and 13. The project also provides more accurate resource mapping	Water quality, tree preservation, stream shade, erosion control	Natural Resources CIP funding

Project Name/Watershed	Watershed	Project Status	Stormwater Mitigation Measures/Area Treated	Funding Mechanism
Slope stabilization projects	1st and 2nd order streams on east buttes	Working with environmental engineers, geomorphologists and modelers to identify and rank at-risk drainages where we have most significant signs of likely bank instability. This will result in new CIP project where we will address proactively (ideally, prior to failure) the prioritized list of bank stabilization needs.	Water quality, riparian function erosion control	Stormwater CIP funding

Table 3-3: Restoration Activities

Project Site	Project Partners	Volunteer Hours	Invasive Removal Acreage	Planting Acreage	Plants Installed	Notes
Gresham Woods at 14th Street Bridge (Johnson Creek and Chastain Creek)	JCWC, FOT, NYC	425	14.0	4.0	2,500	Planted area includes 4 acres along Johnson Creek at two separate locations. Intensive invasive weed removal and spraying this past year was completed by the City and FOTs for Yellow-flag iris, lesser celandine, Himalayan blackberry, and Japanese knotweed throughout the 14 acre area of Gresham woods and Chastain Creek.
SW 14th Street (Johnson Creek)	JCWC	0	1.7	1.7	4,058	Johnson Creek watershed Council in partnership with City of Gresham continued the work of FOTs on this site. They used a grant from EMSWCD and a City match to complete the work on the site. It included invasive species control and planting of trees/shrubs.
Butler Creek Corridor	AC, NYC	145	21.0	0.0	0	Two sites are currently active restoration. The area includes the first mile of the creek. These two areas have been under active restoration since 2015. Restoration work includes invasive removal. Weed control used amix of hand pulling and spraying. Sites are located starting at 14th street, up to Marpol Pond.
Ochioto (Johnson Creek)	AC, NYC, STHS, JCWC, volunteers	545	9.0	3.4	3,800	Multiple sites within the area are under active restoration. A total of 3 sites were planted with a mix of shrubs and trees and live stakes. An area cleared of blackberry was seeded with a native mix as well. Intensive weed removal via hand pulling and spraying occurred throughout the project site with a focus on jewel weed, Himalayan blackberry, and other weedy species. Site is located at end of Liberty Avenue and is on the south bank of Johnson Creek. Area included in JCWC Watershed Wide event. Springwater Trail High used the site for Volunteer Day.

Project Site	Project Partners	Volunteer Hours	Invasive Removal Acreage	Planting Acreage	Plants Installed	Notes
Wisteria Way at Dowsett (Johnson Creek)	AC, NYC, STHS, JCWC, Citizen volunteers	415	1.2	1.2	1,400	First year restoration site along Johnson Creek. Site was previously a wisteria and blackberry monoculture. First 1600 months used to control invasives. Planted winter 2018. Site was planted with a mixture of bare root trees/shrubs and live stakings along the bank. Site was used for Watershed Wide and other citizen events.
Fairview Creek Headwater Wetlands	AC, RLA, NYC	158	3.0	3.0	1,000	Ongoing test site for reed canary grass control methods and restoration of headwater wetlands. Turtle habitat restoration adjacent to Wolf Property included weed control and seeding of the area. Live staking and invasive species control occurred at RLA work area off Sandlewood Loop that included 1000 live stakes this year.
Fujitsu Wetland Mitigation on Birdsdale	AC, NYC	88	4.0	0.0	0	Site is currently under maintenance activities which include weed control using hand pulling and spraying activities.

Project Site	Project Partners	Volunteer Hours	Invasive Removal Acreage	Planting Acreage	Plants Installed	Notes
7th Street Bridge (Johnson Creek)	AC, NWYC	267	1.5	1.5	1,400	First year restoration site along Johnson Creek. Site was previously a blackberry monoculture. First 1600 months used to control invasives. Planted winter 2018. Site was planted with a mixture of bare root trees/shrubs and live stakings along the bank. Site was used for Watershed Wide and other citizen events.
Border Way (Jenne Creek)	AC, NYC, JCWC, Citizen volunteers	177	5.0	0.0	0	Site had limited spraying this year. Site will undergo infrastructure development in 2018 with a wastewater pipeline going in. Used citizens to salvage plants along the alignment. A total of 100 plants were salvaged from pipeline corridor. To be planted in 2019. Included in JCWC Watershed Wide event.
Brookside (Kelley Creek)	AC, NYC	212	4.0	4.0	3,400	Restoration work includes invasive removal a through hand pulling and spraying and native plantings. Site is inundated with weedy species including Canada thistle, scotch broom, Himalayan blackberry, and other weedy species. Native plantings included a mix of shrubs and trees. After a couple years of spraying and testing species a big planting occurred 2017-18 winter.
Jenne Butte	AC, NYC, Metro	286	20.0	0.0	0	Included extensive work on removal of garlic mustard through a series of hand pulling events and spraying. Impacted area was not planted this year. Site will continue to receive garlic mustard treatment until it is under control.
Gabbert Butte	AC, NYC	60	1.5	1.5	0	Oak savannah restoration in the lower meadow. Included extensive invasive weed removal effort.
Total		**2,778**	**86**	**20**	**17,558**	

CSWC =	Columbia Slough		
FOT =	Friends of Trees	STHS =	Springwater Trail High
GHS =	Gresham High School	NYC =	Northwest Youth Corp
JCWC =	Johnson Creek Watershed	RLA =	Reynolds Learning
AC =	AmeriCorps		

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

Table 3-4 City of Gresham Pesticide/Fertilizer Applications

Department	Product Utilized	Quantity
Facilities Maintenance		
	Ranger Pro (isopropylamine salt of glyphosate)	275 oz.
	Speedzone (2-Methyl-4-chlorophenoxyacetic acid, 2-ethylhexyl ester, 3,6-Dichloro-o-anisic acid (Dicamba), Carfentrazone-ethyl, R(+)2(2-Methl-4-chlorophenoxy propionic acid (MCPP)	20.5 oz.
	Surflan (oryzalin)	9 oz.
	Garlon 3A (triclopyr)	60 oz.
	Trimec (amine salt of MCPA, 2,4-D, and Dicamba)	38 oz.
	SureGuard (flumioxazin)	10 grams
	Sedgehammer (halosulfuron)	6 grams
	Ornamec (fluazifop-P-butyl)	10 oz.
	Tzone (Triclopyr, Sulfentrazone, 2,4-D, and Dicamba	12 oz.
	Aquamaster (glyphosate)	18 oz.
	Horsepower (amine salts of MCPA, Triclopyr, and Dicamb	45 oz.
	Scythe (pelargonic acid)	48 oz.
	Weed and Feed (2,4-D and glyphosate)	570 lbs
	Specticle G (indaziflam)	165 lbs.
	Snapshot (isoxaben and trifluralin)	30 lbs.
Transportation	Crossbow (2,4-D/Triclopyr, Kerosene)	128 oz.
	Roundup (glyphosate)	8 oz.
	SureGuard (flumioxazin)	52 oz.
	Esplanade EZ (indaziflam, diquat dibromide, glyphosate isopropylamine salt)	14 oz.
Wastewater	none	NA
Watershed	Rodeo (isopropylamine salt of glyphosate)	338 oz.
	Milestone VM Plus (Triclopyr)	4 oz.
	Garlon 3A (triclopyr)	47 oz.
Natural Resource Program	Agridex (surfactant)	122 oz.
	Rodeo (isopropylamine salt of glyphosate)	687 oz.
	Milestone VM Plus (Triclopyr)	51 oz.
	Element 3A (triclopyr)	1586 oz.
	Habitat (isopropylene salt of imazapyr)	41 oz.
Water	Roundup (glyphosate)	444 oz.
	Crossbow (2,4-D/Triclopyr, Kerosene)	128 oz.
	SureGuard (flumioxazin)	6.5 oz.
Parks	Roundup (glyphosate)	1,154 oz.
	Crossbow (2,4-D/Triclopyr, Kerosene)	327 oz.
	Casoron (dichlobenil)	293 lbs.
	Weed and Feed (glyphosate and 2,4-D)	1,800 lbs.
	Element 3A (triclopyr)	48 oz.
	Milestone VM Plus (triclopyr)	41 oz.
	Glystar (isopropylamine salt of glyphosate)	305 oz.
	liquid totals	**6067 oz.**
	dry totals	**2858 lbs. and 16 g.**

Table 3-5: Illicit Discharge Detection & Elimination--Dry Weather Screening Results and Follow-up

Basin	Site Code	Flow	Odor	Color	Clarity	Float-ables	Deposits/ Stains	Veg Cond	Structural Cond	Biolo-gical	Last Rain	DO (mg/L)	pH	Temp (*C)	Conduc-tivity (µS/cm)	Turbidity (NTU)	Total Chlorine (mg/L)	Ammonia Nitrogen (mg/L)	Observations and Outcome
Pollutant Parameter Action Levels (Table 15 of the Gresham/Fairview Monitoring Plan)												**NA**	**<6.5 , >8.5**	**NA**	**>300 µS/cm**	**>15 NTU**	**>0.5 mg/L**	**>0.5 mg/L**	
Kelly Creek	3156-K-649	No									3-6 Days								
Kelly Creek	3557-K-614	No									3-6 Days								
Kelly Creek	3558-K-606	No									3-6 Days								
Kelly Creek	3568-K-634	No									3-6 Days								
Kelly Creek	3656-K-608	No									3-6 Days								
Johnson Creek	3452-J-640	No									3-6 Days								
Johnson Creek	3550-J-610	No									3-6 Days								
Johnson Creek	3654-J-721	No									3-6 Days								
Johnson Creek	3452-J-699	Yes	None	Clear	Clear	None	None	NA	Normal	NA	3-6 Days								Flow too low to collect sample.
Kelly Creek	3457-K-847	Yes	None	Clear	Clear	None	None	NA	Normal	NA	3-6 Days	8.02	7.72	17.9	159.4	0.45	0	0	Flow sampled from Elementary school coolant system discharge at Kelly Creek outfall.
Kelly Creek	3558-K-605	Yes	None	Clear	Clear	None	None	NA	Normal	NA	3-6 Days	7.76	7.85	18.5	167.3	3.3	0	0	
Kelly Creek	3156-K-678	Yes	None	Clear	Clear	None	None	NA	Normal	NA	3-6 Days	6.58	7.70	20.8	181.2	3.23	0	0	
Kelly Creek	3356-K-659	Yes	None	Clear	Clear	None	None	NA	Normal	NA	3-6 Days	6.35	7.68	22.3	194.2	10.9	0.2	0	Due to the slight amount of chlorine, pipeshed was investigated upstream to determine if there was any active watering contributing to the flow. Found indication of lawn watering in the neighborhood that may be contributing residential water to the system.
Kelly Creek	3457-K-613	Yes	None	Clear	Clear	None	None	NA	Normal	NA	3-6 Days	5.69	7.22	24.8	191.8	1.77	0	0.1	
Johnson Creek	3853-J-606	Yes	None	Clear	Clear	None	None	NA	Normal	NA	3-6 Days	10.73	7.68	14.3	94.9	3.94	0	0	
Johnson Creek	3451-J-685	Yes	None	Yellow	Clear	None	Iron Bacte	NA	Normal	NA	3-6 Days	8.34	7.56	17.2	200.9	39.8	0	1.0	Turbidity and ammonia are high here every year, past investigations have shown that this is from leachate from an abandoned landfill.
Johnson Creek	3353-J-601	Yes	None	Clear	Clear	None	None	NA	Normal	NA	3-6 Days	7.47	7.44	16.9	194.3	11.5	0	0	
Johnson Creek	3549-J-605	Yes	None	Clear	Clear	None	None	NA	Normal	NA	3-6 Days	7.44	7.85	20.1	128.2	3.05	0	0	
Johnson Creek	3850-J-620	Yes	None	Clear	Clear	None	None	NA	Normal	NA	3-6 Days	7.22	7.22	21.0	212.6	3.49	0	0	
Johnson Creek	3550-J-611	Yes	None	Clear	Clear	None	None	NA	Normal	NA	3-6 Days	7.14	7.82	20.8	163.5	3.08	0	0	
Johnson Creek	3453-J-698	Yes	None	Clear	Clear	None	None	NA	Normal	NA	3-6 Days	6.78	6.73	17.9	319.0	19.4	0	1.0	Turbidity and ammonia are high here every year, past investigations have shown that this is from leachate from an abandoned landfill.
Johnson Creek	3453-J-621	Yes	None	Yellow	Cloudy	Other	None	NA	Normal	NA	3-6 Days	6.66	6.83	17.6	259.0	20.8	0	0.5	Turbidity and ammonia are high here every year, past investigations have shown that this is from leachate from an abandoned landfill.
Johnson Creek	3549-J-606	Yes	None	Clear	Clear	None	None	NA	Normal	NA	3-6 Days	6.38	7.94	21.7	145.3	2.86	0	0	
Johnson Creek	3654-J-718	Yes	None	Brown	Cloudy	None	None	NA	Normal	NA	3-6 Days	6.35	7.74	24.0	269.1	267	0.2	0.5	Very high turbidity and high ammonia were found running off of the City of Gresham's maintenance yard. A retrofit has been initiated to address this issue.
Fairview Creek	3250-F-004	Yes	None	Clear	Clear	None	None	NA	Normal	NA	3-6 Days	8.30	8.15	17.9	182.2	1.33	0	0	Took sample at outlet to water quality finger.
Columbia Slough	2749-W-64	Yes	None	Clear	Clear	None	None	NA	Normal	NA	3-6 Days	10.41	8.01	17.6	169.2	2.03	0	0	
Columbia Slough	2750-W-06	Yes	None	Clear	Clear	None	None	NA	Normal	NA	3-6 Days	9.22	8.10	17.5	196.5	1.94	0	0	CSWQF in bypass mode, heavy flow in pipe due to flow control.
Columbia Slough	2850-W-66	Yes	None	Clear	Clear	None	None	NA	Normal	NA	3-6 Days	7.77	7.75	19.2	176.2	0.72	0	0	
Columbia Slough	2748-W-00	Yes	None	Clear	Clear	None	None	NA	Normal	NA	3-6 Days	7.66	7.68	19.3	191.0	9.3	0	0	
Columbia Slough	2850-W-66	Yes	None	Clear	Clear	None	None	NA	Normal	NA	3-6 Days	6.37	7.35	18.7	189.7	1.93	0	0	

Key: Shaded cells are above the action level and staff conducts additional upstream investigation.

NTU=Nephelometric Turbidity Units Clean drinking water is 1NTU or less. 50 NTU would be slightly cloudy.
DO=Dissolved Oxygen Stormwater is typically >5 mg/L which rarely poses a direct threat to instream conditions. This measurement is taken in order to collect pH and conductivity.

Temperature is not associated with stormwater as a pollutant, because typically rain fall does not occur in summer months. However, temperature is measured because release of heated water is a violation of City Code. In general, summer flow in pipes is either associated with high groundwater, incidental releases of potable water such as irrigation runoff which is allowed by DEQ, or is indicative of illegal discharges.

Fig. 3-6

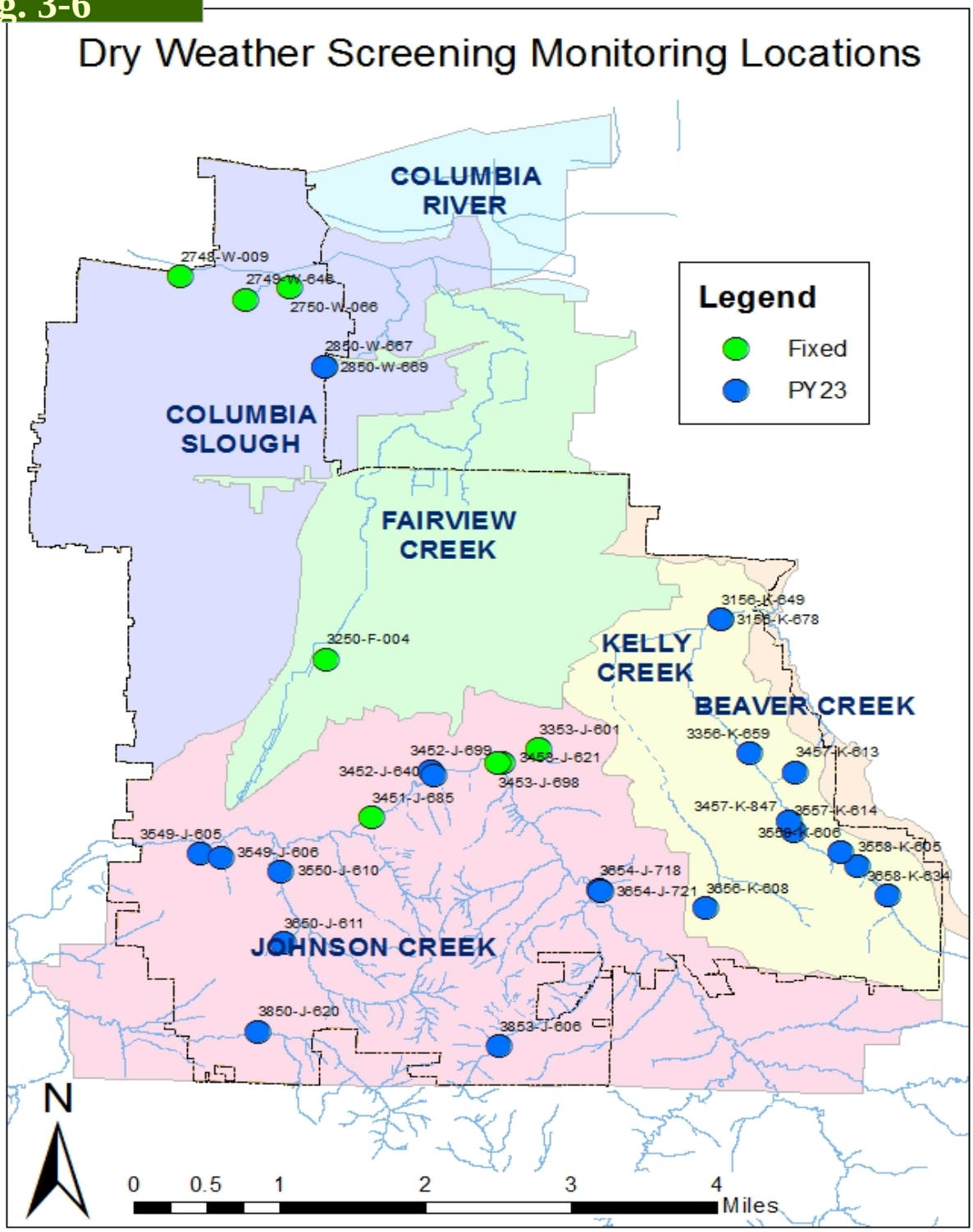

Dry Weather Screening Monitoring Locations
COLUMBIA RIVER
COLUMBIA SLOUGH
FAIRVIEW CREEK
KELLY CREEK
BEAVER CREEK
JOHNSON CREEK
Legend
Fixed
PY23
2748-W-009
2749-W-648
2750-W-066
2850-W-667
2850-W-669
3250-F-004
3156-K-649
3156-K-678
3353-J-601
3452-J-699
3453-J-621
3452-J-640
3453-J-698
3451-J-685
3356-K-659
3457-K-613
3457-K-847
3557-K-614
3558-K-606
3558-K-605
3658-K-634
3549-J-605
3549-J-606
3550-J-610
3654-J-718
3654-J-721
3656-K-608
3650-J-611
3850-J-620
3853-J-606
N
0
0.5
1
2
3
4
Miles

Table 3-8: Spill and Illicit Discharge Response

Category	Type	Watershed	Action	Resolution
Sanitary discharge	Business	Johnson Creek	Possible sewage overflow to street	Wastewater staff cleared a blocked line at the point of service from the City's main line and the concrete was cleaned. No fluids entered the storm system.
Soap/detergents	Business	Johnson Creek	Ponded water in private business lot suspected to be from outdoor washing.	Staff denied washing outside. Said drain was clogged. City assisted with pipe and drain information and asked the owner to get the private side drain and pipe cleaned.
Restaurant greases	Business	Johnson Creek	Recycling collection container causing stormwater pollution.	City recycling staff contacted Gresham Sanitary to have the food waste dumpster replaced. Provided spill pads and instructions for clean up. Business signed up for SCAP to have the drains cleaned.
Restaurant greases	Business	Johnson Creek	Large grease stain/contamination in private garbage area/parking lot.	Staff required pavement to be cleaned by a professional company with storm drain protection in place to remove residual grease.
Paint	Residential	Kelly Creek	Neighbor reported paint being poured into storm drain.	CCTV found <1/8 gallon of paint in CB and residue in storm pipe. Did not continue to outfall.
Auto fluids	Transporting vehicle	Johnson Creek	Caller to City Hall reported Waste Management truck leaking hydraulic fluid.	Waste Management hired contracted vac truck to clean up.
Sediment	Residential	Columbia Slough	Excessive amounts of dirt coming from private lot onto public sidewalk and street from landscaping.	Staff sent a letter requesting resident to sweep the sidewalk and street. Staff cleared drains of debris. Compliance obtained.

Table 3-8: Spill and Illicit Discharge Response

Category	Type	Watershed	Action	Resolution
Oil spill	Transporting vehicle	Columbia Slough	Employee of Knife River saw a dumped drum with some leaking on the street on the way to work and contacted the city.	Transportation and Stormwater crew worked to clean the street and the catch basin with absorbent and vac truck. No Responsible party found.
Sediment	Residential	Columbia Slough	Neighbor reported that fencing post bases were installed at this address and the concrete refuse was washed into the street possibly entering the storm drain.	Educational letter was mailed to the residents. City staff cleaned the street.
Auto fluids	Residential	Kelly Creek	Reported that the owner of this property operates an auto repair business nights and weekends from his garage and runs auto fluids down the driveway to the street.	Staff did not find evidence of illegal work or stormwater pollution during inspection.

Table 3-8: Spill and Illicit Discharge Response

Category	Type	Watershed	Action	Resolution
Restaurant greases	Business	Kelly Creek	Stormwater pollution source from grease container.	Staff delivered grease absorbent pads and directed site to clean up the recycling enclosure and dispose of a decommissioned fryer laying outside. Compliance obtained.
Sanitary discharge	Residential	Kelly Creek	Neighbor reported discharge in the yard from apparent broken water pipe may be blackwater	City building inspector verified leak. Code staff contacted the owner, sent permit info and did the follow up inspection to ensure pipe was repaired.
Auto fluids	Residential	Johnson Creek	Neighbor reported a chronically leaking vehicle.	Staff photographed extensive staining on the street and placed absorbent pads. Homeowner states it's his daughter's car and he's not responsible. Notice of violation sent. Staff reinspected a couple of times to ensure no active leaking vehicles on the street.
Oil spill	Transporting vehicle	Columbia Slough	multiple drums dumped, oil from 185th and Sandy to 223rd. Fairview and County rd.	City staff assisted with investigation of street and drain contamination. Clean up primarily overseen by Mult Co using NRC. City staff also cleaned catch basins on Sandy Blvd. No evidence of oil reaching the Columbia Slough Water Quality Facility. No responsible party found.
Auto fluids	Transporting vehicle	Johnson Creek	Truck with expired tags parks overnight in front of my home. Maroon truck with lawn mowers on it.	Staff investigated in the late evening around 8pm and did not find a matching vehicle. Transportation placed absorbent pads on the stained area, but it was deminimus because of evaporation and/or into asphalt.
Restaurant greases	Business	Fairview Creek	Staff observation of leaking fluids from grease and garbage containers.	Safeway worked with haulers for container replacement and also cleaned the drain and pavement.

Table 3-8: Spill and Illicit Discharge Response

Category	Type	Watershed	Action	Resolution
Restaurant greases	Business	Columbia Slough	Staff observed the garbage enclosure at the restaurant was in poor condition and the grease container was contaminated with drips and grease on the pavement.	Staff ordered the owner to clean the pavement and drains and the enclosure. Compliance obtained.
Unknown discharge	Unknown	Fairview Creek	Evidence of some kind of washwater dumping into drain. Debris dried onto pavement.	Letter requesting drain to be cleaned was sent to Condo Association. Compliance obtained.
Paint	Residential	Johnson Creek	Neighbor reported paint in a drain and provided security camera images of someone from 2919 SE Liberty walking to the drain and apparently dumping into it. Civil Penalty Waring notice sent to responsible party. City cleaned the drain.	COG staff found paint in the drain and conducted cleanup.
Hydraulic Fluid	Business	Fairview Creek	Leak from transporting vehicle, possible hydraulic fluid.	City used absorbent and sweeper to clean the street.
Unknown discharge	Business	Columbia Slough	City staff noticed foul smell near an outfall and contacted the monitoring staff for field investigation.	A sampling and CCTV investigation revealed an underground fuel tank on an old farm. DEQ's fuel tank program is following up to complete clean up.
Oil spill	Residential	Johnson Creek	City staff discovered about 5 quarts of what appears to be used motor oil in the swale.	Staff placed absorbent booms. Because of the amount of oil and uncertainty about the exact nature of the contaminant, city contracted NRC to complete the cleanup. Staff plugged the inlet to keep the swale empty during cleanup.

Table 3-8: Spill and Illicit Discharge Response

Category	Type	Watershed	Action	Resolution
Oil spill	Residential	Fairview Creek	Apartments parking lot has oil sheen from dripping cars.	Staff inspected and did not find sheens present. Spoke to the owner who had not seen any issues at the site. Staff asked him to require residents with leaking vehicles to use drip pans, as needed. He noted that he had no problem doing so if future issues arise.
Soap/detergents	Residential	Kelly Creek	Contractor working and allowing discolored water to flow down curb line in front of their house.	OPS crews responded to call and installed bio-bags and CB insert bag to protect public system. Contractor was told to stop work and clean up liquids along the curb. Code enforcement followed up with Home owner & contractor.
Auto fluids	Business	Fairview Creek	Customer reported oil sheen in parking lot of a business.	Staff inspected and found sheen on pavement. The business had placed kitty litter onto sheen. Staff instructed them to sweep and place in trash. Sheen was entering a well-maintained oil and water separator.
Misc.	Residential	Johnson Creek	Contractor plugged a water pipe to repair a manhole (routine), but caused a large flow chlorinated water to surcharge and enter a drain which led to a stormwater facility.	Staff oversaw water dechlorination and sampled the stormwater facility to verify that chlorination was at very low (no impact) levels.
Auto fluids	Transporting vehicle	Fairview Creek	Car accident caused fluids to enter the city's drain.	Stormwater assisted the fire dept responding to an accident where coolant entered the stormdrain. Ops staff cleaned the coolant.
Unknown discharge	Unknown	Fairview Creek	Staff observation of unknown fluid in the street. HazMat responded--identified as a solvent.	Transportation crew cleaned the road with absorbent and Vac Truck.

Table 3-8: Spill and Illicit Discharge Response

Category	Type	Watershed	Action	Resolution
Auto fluids	Residential	Fairview Creek	COG staff photographed staining on the street in front of the house, apparently from a leaking vehicle.	Courtesy notice letter with recommendations for cleanup and use of drip pans and appropriate repairs. Staff reinspected and did not find any active leaks.
Auto fluids	Residential	Kelly Creek	Hydraulic fluid leaked from a delivery truck onto a residential driveway. It entered the residential ribbon drain, but not the public system.	RP hired NRC to clean it up. Staff inspected.
Auto fluids	Residential	Columbia Slough	Staff observation of leaking vehicle.	Staff contacted Rockwood Plaza Management Co about a leaking vehicle. Provided absorbent pads to absorb fluids. Vehicle is no longer there.
Sanitary discharge	Residential	Columbia Slough	Neighbor complained about potential illegal dumping into drain on the street from RV	City staff cleaned the catch basin and an educational letter was send to surrounding homes.

Table 3-9: Citizen Complaints*	
Issue and Resolution	
MyGresham App	An application that allows for phone, computer, or voice recorded complaints or concerns to come into the city and be tracked by topic. During 17-18 over 7,000 inquiries and follow ups were in the system. 24 were assigned as water, stormwater, sewer and drainage problems. These issues range from potential illegal dumping or spills, to minor home flooding, neighbor to neighbor drainage, street manhole lids ajar, etc. Other complaints addressed that protect stormwater include piling debris in the right of way, and various improper outdoor storage or garbage/refuse stockpiling.
Fee Reduction	Staff inspect properties and process requests for stormwater fee reductions based upon on-site stormwater management, typically from a resident having a private drywell or disconnected downspout from the city's infrastructure. 16 applications were processed in PY 23.
Pesticide application/water quality/stormwater management concerns	Typical issues that staff assist with include questions about invasive plant control, onsite stormwater management techniques, pesticide safety questions, etc.
Private Facility Maintenance	Staff spend time providing research documents to residents about who owns a particular facility and providing guidance for facility maintenance. When residents have a concern about the condition of a public facility, staff are sent to inspect and respond accordingly.
Minor Drainage	13 reports of concerns over drainage investigated by staff. 2 were private property issues. 5 were placed on the CIP priority list for remedy. 1 was repaired by Operations and 1 was repaired by Engineering. 3 were referred to Code Compliance and 1 did not have an identifiable issue.
*Many citizen calls are also reported in the illicit discharge categories. These combined tables provide a representation of the nature of issues addressed by the stormwater program staff.	

Table 3-10 Examples of Water Quality Education Efforts*

Program/Event and Partners	Watershed of Focus	Number of Contacts	Educational Focus
For Residents			
Backyard Wildlife Habitat home visits	All	30 homes	Consultation visits with homeowners regarding qualifying for "Backyard Wildlife Habitat" status thru a partnership with Audubon/Columbia Land Trust Includes stormwater management, pesticide reduction, and tree education elements among others. This represents about 9 acres of habitat enhancement.
Public Workshops	All	Typical attendance 15-40	City staff partner with Audubon, EMSWCD, JCWC, CSWC, Outgrowing Hunger to offer workshops on wildlife, weeds, rain gardens, native plants, natural gardening, Backyard Habitat program, native pollinators, and mason bee homes. The city collaborated on publicity for 7 spring workshops that reached over 200 people.
JCWC E-bulletin, monthly	Johnson	JCWC e-list to over 700 Gresham contacts, list goes to over 3,000	General watershed education, city public comment meetings/open houses, city natural resource workshops/events.
WMD Fish-Friendly Car Wash program	All	Kits continue to be used at various Gresham certified sites. Total number of contacts unknown.	Soap, grease and heavy metal pollution prevention. Education on use of professional car washes as an environmentally friendly alternative.
JCWC Restoration events in Gresham: Butler Creek, Springwater Woods, Watershed Wide Event, Jenne Creek, and Chastain Creek supported by City of Gresham staff and Gresham's AmeriCorps volunteers and EMSWCD grant funds to restore private parcels.	Johnson	15 properties total. 14 were private. 12 acres, 1.2 miles of stream front.	Riparian buffer function for stream protection. More than ~13,400 trees and shrubs planted using support from grant funds. Additionally, events helped plant 2,700 plants, mulch 800 trees, 125 live stakes with over 260 volunteers or students.

Table 3-10 Examples of Water Quality Education Efforts*

Program/Event and Partners	Watershed of Focus	Number of Contacts	Educational Focus
JCWC Beaver, Salmon, and Lamprey surveys across Gresham reaches	Johnson	56 volunteers	Stream and stormwater heath education. 37 dams recorded in Gresham and 1 salmon (prob Coho) spotted. 1 Brook lamprey and 6 Brook lamprey redds.
Gresham Arbor Day Tree Planting Events (four locations)	All	Stakeholders and ~10 community members per event	Education on the value of trees ~125 trees planted.
Columbia Slough Watershed Council--Gresham and Fairview support of Slough School program	Fairview/Columbia Slough	90 programs were delivered to ~2300 students in the Gresham Barlow and Reynolds School Districts serving Gresham and Fairview students.	General education of watershed protection, native plants, ecosystems, wildlife and pollutant prevention measures.
Columbia Slough Watershed Council--*Explorando de Slough* event for Latinos	Fairview/Columbia Slough	Over 500 attendees.	General education of watershed protection and pollutant prevention measures.
City of Gresham and Regional partners with KOIN TV--"Do the Right Thing" ad campaign and website	All	Aired 11 stormwater pollution reduction PSAs 385 times. 7.8M adult impressions from TV/Web/Facebook ads. ~ 4,000 web page visits.	Topics: plant natives, lawn care, safe snow/ice removal, fall lawn care, wildlife friendly yards, avoid pesticides, remove invasives, RV and Spa/Pool disposal, car washing

Table 3-10 Examples of Water Quality Education Efforts*

Program/Event and Partners	Watershed of Focus	Number of Contacts	Educational Focus
City of Gresham e-newsletter, City newsletter, DES News to Reuse, social media, and website: greshamoregon.gov/watershed This represents the variety of approaches that Gresham uses for environmental education messaging to the public	All	e-newsletter: ~900 monthly City news (print): 52,000 biennially Facebook: ~9,400 fans Instagram: ~ Twitter: ~2,300 MyGresham: ~1,700 GoCart:~ 950 Entire city website: ~420,000 annually Web Watershed page: ~ 1,000 annually Utility bill stuffer 22,000 print Y.O.U. digital utility bill ~4,493 Next Door: ~12,250	Pesticide and fertilizer reduction, naturescaping, recycling, sustainability, and private on lot stormwater management education information.
Interpretive panels and public rain gardens, COG Watershed Division	Johnson/Fairview/ Columbia Slough	Total contacts unknown	All residents: City oversees volunteer stewardship of public demonstration gardens at Vance Garden, Main City Park, Nadaka Park, Hollydale Elementary, St. Henry's Church, Covenant Baptist Church, West Gresham Elementary, Snowcap Charities and Gresham High School.
Rain garden education and outreach to Pleasant Valley on-lot rain garden owners	Johnson	Mailed to ~165 residents	Lot-level rain garden education
Gresham Green and Clean Summer Event	Johnson	~200 volunteers	Removal of litter and invasive species from Main City Park and Johnson Creek banks, planting and mulching.

Table 3-10 Examples of Water Quality Education Efforts*

Program/Event and Partners	Watershed of Focus	Number of Contacts	Educational Focus
For Businesses			
City of Gresham GREAT Business E-Newsletter	All	22 issues/yr. (1260 subscribers and 160 newly opened businesses)	Stormdrain Cleaning Assistance Program, General Best Practices, Sustainability
City of Gresham Stormdrain Cleaning Assistance Program (SCAP)--offered to City of Fairview businesses as well (spring and fall)	All	343 Businesses, ~1340 drains cleaned	Pollution prevention via removal of sediment and debris.
Gresham Automotive shops--Certified EcoBiz Ad in *Outlook (print and web)*	All	35,000 impressions	Ad explained to the public the benefits of using a local certified automotive shop
EcoBiz program partnership	All	24 Businesses	Technical assistance in the areas of recycling, energy, waste reduction, and stormwater management for landscaping, automotive, and manufacturing businesses. Training and coordination for Gresham staff. One new business with two locations (Washman Carwash) became certified.
City of Gresham GREAT Business technical assistance visits	All	~223 Outreach assistance related to stormwater/water concern	7 new certifications and 5 recertifications -80 total GREAT businesses. Supported 38 other businesses with the recertification process. Marked 18 stormdrains. Visits include: education on good housekeeping to limit stormwater pollutants; SCAP drain cleaning referrals; recommendations to fix broken elbows on oil/water separators; maintenance of stormwater facilities; follow spill response procedures; label storm drains; use native plants in landscaping, and reduce pollution from dumpsters.

Table 3-10 Examples of Water Quality Education Efforts*

Program/Event and Partners	Watershed of Focus	Number of Contacts	Educational Focus
Summerworks intern restaurant garbage & recycling area best practice inventory	All	200 properties	Inventory revealed 90 with housekeeping issues for follow up outreach

Table 3-11
(1200-COLS & 1200-Z) in Gresham's Jurisdiction

Facility Legal Name	Street Address	City	Zip	DEQ WQ File Number	Permit Type	DEQ Permit Expiration Date	Gresham/DEQ Inspections
Arnprior Aerospace Portland	17383 NE Sacramento	Portland	97230	125726	Gen. 1200-COLS	Issued July 2018	WFPP: Inspect in 2018/2019
Portland Specialty Baking	3423 NE 172nd Place	Portland	97230	125551	Gen. 1200-COLS	Issued Jan 2018	WFPP: Inspected on 5/18/18, in compliance.
Albertsons (ABS OR-O DC LLC)	17505 NE San Rafael St	Portland	97230	104374	Gen. 1200-COLS	Issued Aug 2017	WFPP: Inspected in 2018, in compliance.
Denton Plastics Inc.	18811 NE San Rafael	Portland	97230	113915	Gen. 1200-COLS	Issued Aug 2017	WFPP: Inspect in 2018/2019
Pella Vinyl Northwest Inc.	18600 NE Wilkes Rd	Portland	97230	120478	Gen. 1200-COLS	Issued Aug 2017	WFPP: in compliance, now in monitored status. Inspect in 18/19
McDonald & Wetle Inc.	2020 NE 194th Ave	Portland	97230	119535	Gen. 1200-COLS	Issued Aug 2017	WFPP: DEQ required an updated SWCP Plan in Jan 2018. Inspect in 2018/2019
Owens Corning Foam Insulation, LLC	18456 NE Wilkes Rd	Portland	97230	113153	Gen. 1200-COLS	Issued Aug 2017	WFPP: Inspect in 2018/2019
Cascade Corporation	2201 NE 201st Ave	Fairview	97024	100491	Gen. 1200-COLS	Issued Aug 2017	WFPP: Inspected in fall 2017. In compliance. Inspect in 2018/2019
The Boeing Company	19000 NE Sandy Blvd.	Portland	97230	9269	Gen. 1200-COLS	Issued Aug 2017	WFPP: Inspected in fall 2017; minor corrections, in compliance.

Facility Legal Name	Street Address	City	Zip	DEQ WQ File Number	Permit Type	DEQ Permit Expiration Date	Gresham/DEQ Inspections
Rolling Frito Lay Sales LP	4300 NE 189th Ave	Portland	97230	113285	Gen. 1200-COLS	Issued Aug 2017	WFPP: Inspected in 2018, floor coatings completed, in compliance.
International Paper Company	1601 NE 192nd Ave	Portland	97230	107744	Gen. 1200-COLS	Issued Aug 2017	WFPP: Business working to complete paving of on-site transit route. Transit route work was completed and they are working to pave the entire site.
Northwest Retreaders	19004 NE San Rafael	Portland	97230	111262	Gen. 1200-COLS	Issued Aug 2017	WFPP: Conducted site visit in fall 2017 resulting in four storm drains being cleaned and one of the drains being repaired for a broken elbow. DEQ inspected in winter 2018 and required corrections of covering outdoor stored materials, better control of tire shreds, staff training and update of SWPC Plan. WFPP to inspect in 2018/2019
First Student, Inc.	1625 SE Hogan Rd	Gresham	97080	112646	Gen. 1200Z	Issued Aug 2017	DEQ & Gresham inspected in fall 2017. Correction letter issued related to berming fuel area or covering it, maintaining catch basins. Required to begin monitoring.
Mutual Materials Company	2300 SE Hogan Rd	Gresham	97080	108092	Gen.1200Z	Issued Aug 2017	Gresham staff required cleaning of catch basins in fall 2017.
Scenic Fruit Company	7510 SE Altman Rd.	Unincorporated Multnomah County	97080	78990	Gen. 1200Z	Issued Aug 2017	Outside of Gresham permit boundary. DEQ inspected in 2018.

Facility Legal Name	Street Address	City	Zip	DEQ WQ File Number	Permit Type	DEQ Permit Expiration Date	Gresham/DEQ Inspections
Pioneer Sheet Metal	19591 NE San Rafael St.	Portland	97230	120503	Gen. 1200-COLS	Issued Aug 2017	DEQ required an updated SWCP Plan in Jan 2018. Inspection planned for 18/19
Wellfield Protection Program (WFPP)	Where noted, these businesses lie within the City's designated wellfield areas and have additional required pollution protection controls to protect future drinking water sources.						

Table 3-12: City of Gresham Water Resource Division--Stormwater Budget Allocation (including staff and operating)

Program Area	PY 23*	PY 24 Budget
	FY 17-18 (actual)	FY 18-19 (projected)
Water Quality: Policy Development Stormwater/Erosion Manual Oversight Permit Compliance Monitoring and Analysis Spill Response Public Education & Outreach Private Water Quality Facility Program Inspection & Enforcement Erosion Control Inspection & Enforcement TMDL Compliance Stormwater Assets Management Training	$ 868,715	$ 1,245,922
Natural Resources: Restoration Capital Improvements Master Plan Updates Invasive Species Control TMDL Compliance Green Space Acquisition	$ 370,396	$ 452,525
Engineering: Capital Improvements Minor Drainage/Flood Control Public Works Standards Stormwater Manual Oversight Master Plan updates Mapping Stormwater Assets Management Training	$420,576 $1.8M CIP	$504,132 $13M CIP
Operations & Maintenance: Systems Maintenance & Repair Equipment Repair & Replacement Spill Response Inspection IMP implementation Mapping Training	$ 2,199,715	$ 2,786,365
Infrastructure Development (Development Engineering, Surveying, Public Works Inspections, Commercial Erosion Control Inspections)	$ 375,900	$ 423,500
City Admin Support, GIS Support, Management, Overhead	$ 2,432,932	$ 2,750,469
Total	**$6.3M Operating/Salary $1.8M CIP**	**$7.5M Operating/Salary $13M CIP**

*The following header labeling errors occurred in past reports: FY 16-17 was incorrectly reported as PY 20 rather than PY 22. FY 17-18 was incorrectly reported as PY 21 rather than PY 23.

Section Four – City of Fairview Summary of Program Monitoring

Municipal National Pollutant Discharge Elimination System Annual Report for Permit Year 23, Permit #101315, November 1, 2018

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 December 30, 2010 requiring the City to modify the SWMP to reflect the new permit conditions. The City's 2011 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 modified on December 29, 2015 in accordance with Schedule B.6.a of the City's NPDES MS4 permit requirement for updates.

This Permit Year (PY) 23 Annual Report documents implementation activities from July 1, 2017 through June 30, 2018 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 BMP's and adaptive management are summarized in the table that follows. Table 4-2 (Prioritization Criteria) summarizes the time period July 1, 2017 to June 30, 2018 implementing the 2011 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

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 23.

Stormwater Management Program Budget

City of Fairview Stormwater Management program costs for Permit Year 23 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 22 and provides the anticipated budget for Permit Year 23.

Table 4-1	2017-18	2018-2019
Program Area	PY 23 Expenditures	PY 24 Anticipated Budget
Stormwater Fund	$514,919	$1,014,630
Street Fund	$452,551	$915,793

Section Four: City of Fairview Stormwater Management Plan Summary

BMP Name	Compliance Date	BMP Description	Measurable Goals	Tracking Measures	Status 2017-2018 (PY 23)	Summary and Date of Proposed Adaptive Management Modifications	Responsible Party
SWMP Element #1- Illicit Discharge Detection and Elimination							
Illicit Discharge Enforcement	Ongoing	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 are (3) total illicit discharge investigations, enforcements and clean up implemented this PY 23; are as follows: 1. 5501 NE 223rd, Fairview, OR (By Chinook Landing, Portland Metro) 2. 21861 NE Park lane, Fairview, OR (Construction site) 3. 23033 NE Townsend Way, Fairview, OR (Fuel pump station) The enforcement details are as follows: 1. 5501 NE 223rd, Fairview, Oregon (Portland Metro) - A call was received from the City of Gresham concerning a leaking white plastic tank located about 250 ft. north of Marine Drive and on the east side of NE 223rd. The tank has cracked and leaking some type of white granulated substance. The tank is on an embankment in close proximity to a temporary pond. There was no evidence of the substance that reached any storm drain system. Lt. Freyer, E74 "C" shift with the Gresham Fire Department was on site. He coordinated the containment, collection, clean-up and disposal with the Hazmat team. 2. 21816 NE Park lane, Fairview, OR - City staff witnessed a landscape contractor working on a newly constructed residential home. One of the worker intentionally washes and flushes sediments of soil materials directly into the downstream catch basin without any insert silt bags or bio-bags. All of the turbid water runoff flushes directly into the catch basin. Notified and instructed the supervisor to contain the sediments and turbid water onsite by sweeping off the soil and install a berm of bio-bags around the catch basin and install an insert bag for best management practices. He was also instructed to extract the accumulated sediments inside the catch basin. 3. 23033 NE Townsend Way, Fairview, OR-A diesel pump was left running filling up their interceptor and overflowing to the lot and into the drainage ditch. The spill was cleaned up by Kinght's contracted company. Former Engineerin associate sent BMP regulations for Knight to follow. Knight ultimately decided to have the Fueling station decomissioned.	No modification	Engineering Associate Engineering Technician
Illicit Discharge Field Screening Procedures	Ongoing	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.	Violations for - Containment - Chemical Storage - storm runoff - Enforcement in progress. The City of Fairview has identified and mapped a total of 38 outfalls; 9 of which are categorized as high priority outfalls. The 38 total outfalls (100%) were inspected for structural integrity and cleaned for maintenance capacity, this PY 23. The City of Fairview has recently updated and refined the stormwater GIS data on Structural Stormwater Facility Maps reflecting public facilities (BMP 8.1_Structural Public Stormwater Facilities) including outfall facilities.	No modification	Storm Lead Worker Map Tech
Illicit Discharge Investigation Procedures	1-Jul-12	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.	Develop revised procedures by July 1, 2012. Until procedures are revised, investigate problems reported within 2 weeks of the initial report.	Track number and type of problems reported, and track problem resolutions. Track status of revisions to procedures.	See BMP 1:1 (Illicit Discharge Detection and Elimination_Enforcement). There are (4) total of IDDE investigations conducted this PY 23, which resulted to enforcement actions. There were no samples taken from all the (4) incidents.	No modification	Engineering Associate

Section Four: City of Fairview Stormwater Management Plan Summary

BMP Name	Compliance Date	BMP Description	Measurable Goals	Tracking Measures	Status 2017-2018 (PY 23)	Summary and Date of Proposed Adaptive Management Modifications	Responsible Party
Spill Prevention	Ongoing	**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.	Once during the permit term, conduct inspections of all businesses with regulated quantities in the well field.	Track the number of inspections conducted.	City of Fairview with 3.5 square miles geographic area 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). There were a total of (8) total of regulated industrial/commercial facilities that were inspected during PY 23. Updated and most recent Hazardous Material Inventory Report (HMIR) and Site Plan were required in the notification letters that were sent to both regulated and monitored facilities last October, 2017 with January 31, 2017 deadline. The reporting is a tool used to evaluate and assess the classification of facilities; either an upgrade or downgrade of being regulated or monitored facilities. The 8 inspected regulated facilities are as follows: • All Storage PH. II - 20918 NE Sandy Blvd., Fairview • Northbrook Village 180-Unit Apartment - 22022 NE Halsey, FV • Fairview Woods 49-Unit Apartment - NE 205th St., Fairview • New Fairview Elementary School - NE Main St., Fairview • Reynolds School District Maintenance Yard - NE Glisan St. FV • Townsend Farms - NE Townsend Way, Fairview, OR • Allwood Recyclers, Inc.- 23001 NE Marine Dr, Fairview, OR • Dirt and Aggregate Interchange, Inc - NE 217th Ave, Fairview OR	No modification	Engineering Associate Engineering Technician City of Gresham (IGA)
		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.			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. The Columbia South Shore Wellfield Protection Program Reference Manual was recently updated back in PY 22 by the City of Portland under the supervision of Doug Wise in 2017.		
		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.			There were no reported and recorded spill incident events that took place this PY 23 within the City of Fairview jurisdiction.		
Spill Clean-up	Ongoing	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.	There are a total of (2) reported spills with in the City of Fairview reported during this PY 23. They are: 1. 223rd Ave Spill (North of Marine Dr. on 223rd Ave Fairview, OR). 2.21990 NE Chinook Way The spill details are as follows: 1. 223rd Ave Spill - City of Fairview staff notified Multnomah County roads of the spill along with the Chief of Police. The spill was due to the illegal dumping of (5) 50 gallon drums. NE 223rd Ave is maintained and considered the responsibility of Multnomah County. Multnomah County handled coordination of clean-up and testing with NRC. OERs was notified of the spill and investigation of responsible party was handled by DEQ. 2. 21990 NE Chinook Way - City of Fairview staff responded to a residents phone call of a leaking gas tank on the street. The source of the leak was a hole in the gas tank of a residents car. Immediately public works staff applied a spill kit to the gasoline and called the City of Gresham fire department for further response. Estimated 10 gallons of gasoline leaked from the car. The gasoline did not enter the storm system. The City of Fairview was able to finally contact the owner of the car and containment of the leak was addressed. The car was removed from the street and River City Environmental was called to the site of the spill and handled further cleanup.	No modification	Gresham Fire Engineering Associate PW Superintendent

Section Four: City of Fairview Stormwater Management Plan Summary

BMP Name	Compliance Date	BMP Description	Measurable Goals	Tracking Measures	Status 2017-2018 (PY 23)	Summary and Date of Proposed Adaptive Management Modifications	Responsible Party
		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.			None, see above report.		
Municipal vehicle monitoring and maintenance	Ongoing	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 4-month schedule.	Track status of municipal vehicle maintenance.	All City fleet vehicles (Public Works, Administration and Police departments) were regularly maintained and serviced as scheduled (every 3 months) with auto service providers. No vehicular leaks were detected.	No modification	PW Superintendent Police Dept.
Water Line Flushing	Ongoing	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	No chlorine detected.	No modification	Water Lead Worker

Section Four: City of Fairview Stormwater Management Plan Summary

BMP Name	Compliance Date	BMP Description	Measurable Goals	Tracking Measures	Status 2017-2018 (PY 23)	Summary and Date of Proposed Adaptive Management Modifications	Responsible Party
SWMP Element #2- Industrial and Commercial Facilities							
Industrial and Commercial Facility Inspections	Ongoing	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 one week (40 hours) implementing commercial and industrial inspection procedures.	Track number of facility inspections and follow-up.	There were (3) total of inspected regulated industrial/commercial facilities during this PY 23. 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. See BMP 1.4_Spill Prevention. A total of 18.00 inspection hours (pre-documentation, inspection / photos, final documentation and follow up) were spent this PY 23, which did not meet the recommended 40 hours of inspection requirements. This was done in large part due to the just a few existing facilities that had any activities that called for attention. There was no record of logged inspection hours. The inspection hours were estimated.	No modification	Engineering Associate Engineering Technician
Screen Industries/Businesses and Track NPDES Stormwater Permits	Annually	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. All 1200-C General Stormwater Construction, 5-yr. permit term expired last November 30, 2015. Permit renewals are required for all current permit holders for the next 5 year term (November, 2020). There were nine (9) total of developments with active 1200-C permits during this PY 23 and are as follows: • Northbrook Village 180-Unit Apartment - 22022 NE Halsey, FV • Fairview Woods 49-Unit Apartment - NE 205th St., Fairview • New Fairview Elementary School - NE Main St., Fairview • Reynolds School District Maintenance Yard - NE Glisan St. FV • Townsend Farms - NE Townsend Way, Fairview, OR • Allwood Recyclers, Inc.- 23001 NE Marine Dr, Fairview, OR • All-Stor Phase ll - 20918 NE Marine Dr., Fairview OR • Dirt and Aggregate Interchange, Inc.- NE 212th Ave, Fairview OR • Fairview Heights - NE Sandy Blvd, Fairview, OR	No modification	Engineering Associate Engineering Technician
SWMP Element #3 - Construction Site Runoff Control							
Erosion Control Activities	Ongoing	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	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. Review development sites required to meet City erosion control requirements.	Track the number of erosion control permits issued annually.	Resolution 49-2013 approved compliance order agreement with Environmental Protection Agency to implement reporting requirements and standards associated with the NPDES stormwater permit which includes adoption of the Erosion Prevention and Sediment Control (EPSC) Manual from the City of Gresham (Ordinance 2-2014). The City developed a standard operating procedures for implementation of Erosion and Sediment Control Standards. Total of 8 (1< 1 acre; 7> 1 acre, with 1200-C SW Construction permits) erosion and sediment control permits were issued and inspected during PY 23. Site developments of these 12 permits were less than an acre (43,560 ft.^2) of disturbed earth. Seven sites disturbed of greater than an acre were required to obtain a 1200-C General SW Construction permits from DEQ during the Planning Development Review Process.	No modification	Permit Tech Engineering Associate
Erosion Control Program Training	Ongoing	The 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 provided with the erosion control permit applications during the planning development review process.	No modification	Permit Tech Engineering Associate Engineering Technician

Section Four: City of Fairview Stormwater Management Plan Summary

BMP Name	Compliance Date	BMP Description	Measurable Goals	Tracking Measures	Status 2017-2018 (PY 23)	Summary and Date of Proposed Adaptive Management Modifications	Responsible Party
Construction Site Inspections	1-Jan-14	The City currently reviews plans and inspects construction sites required to meet the City's erosion control standards using the following procedures: 1. Phone call before inspection to make sure BMPs are in place. 2. 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. Audit or review existing codes to ensure legal and escalation clauses exist for site design, source control, stormwater treatment BMPs, and post-construction BMPs by January 1, 2014.	Track the number of sites that were permitted and inspected. Report the number and type of enforcement actions.	Total of 19 Erosion Prevention & Sediment Control issued permits were inspected during PY 23. All were in total compliance with the City's Erosion Prevention & Sediment Control (EPSC) standards. No enforcement actions were taken. Total of 8 EPSC with 1200-C renewed permits inspections were conducted for PY 23. Current permit holders for 1200-C site developments are monitored during 1/2 an inch. rainfall precipitation. All 1200-C General SW Construction Permits expired last November 30, 2015 and all permit holders were requested to submit a renewed 1200-C permit from DEQ for the next 5-yr. term.	No modification	Permit Tech Engineering Associate Engineering Technician
SWMP Element #4 - Education and Outreach							
Educational Activities	Ongoing	The City supports community programs, publishes articles in the City newsletter and coordinates with the City of Gresham where appropriate. 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). The City also supports the following programs: • Programs with local area schools • Programs with volunteer groups • Columbia Slough Watershed Council activities • Business Assistance Program – Private Catch Basin Cleaning • Spring Clean-up • Metro Hazardous Waste Clean-up • Informational kiosks at City events and City Hall • Doggy Don't waste bag	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.	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. Campaign messages are as follows: • Water Do Your Part • Hot Tub • Fall Lawn Care • Native Plants • Be Rain Ready • Pesticides • Pet Waste • Invasive • RV Waste • Metro Garden • Wildlife Garden • Washing • Cigarette • Hiatus Local Outreach Effort: City of Fairview Public Works staff maintained a booth annually at the "Fairview On The Green" event during the month of September. The booth displays Groundwater/Aquifers, Rainfall/Water Cycle and Surface Water Models and distributes brochures on stormwater education, healthy streams, low impact development programs, use of pesticides, natural lawn care/gardening techniques, erosion control best management practices and other stormwater related educational subjects. City of Fairview is currently active with the Storm drain Cleaning Assistance Program (SCAP) (schools, apartments, industrial/commercial facilities) and the Backyard Habitat that is 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.	No modification	Engineering Associate Engineering Technician Development Analyst Event Coordinator
					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 Flooding of Fairview Streets Spring Clean Up 3. Water Quality Healthy Streams 4. Illegal Dumping Prevent		
Report Illegal Dumping and Illegal Connections	Ongoing	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.	Track the number of reports/complaints received, and the follow-up actions conducted (including the timing of the follow-up action).	There were no reported events and/or complaints from citizens reflecting illegal dumping and illegal connection events during this PY 23.	No modification	Engineering Associate PW Superintendent Code Compliance

Section Four: City of Fairview Stormwater Management Plan Summary

BMP Name	Compliance Date	BMP Description	Measurable Goals	Tracking Measures	Status 2017-2018 (PY 23)	Summary and Date of Proposed Adaptive Management Modifications	Responsible Party
Illegal Dumping and Illegal Connections, Public Education	Ongoing	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 education 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. City's website posted contact information as well about reporting illegal dumping and illegal connections (BMP 4.3). Also, staff tracks public complaints, reporting, and inquiry regarding illegal dumping, connections and other issues about harmful effects into our storm drainage system and any receiving water bodies. There are 4 total news letter articles published during PY 23 about educational outreach on healthy environment.	No modification	PW Assistant Metro Recycling
Participate in a Public Education Effectiveness Evaluation	Ongoing	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.	Coordinate with other local jurisdictions in providing/compiling information regarding a public education effectiveness evaluation by November 1, 2014.		City of Fairview recently submitted "Public Education Effectiveness Evaluation" report (Schedule A.4, NPDES Permit Term 2010-2015) to DEQ last, November 1, 2015. The City has a current IGA with the City of Gresham regarding participation in the ACWA public education effectiveness evaluation. This coordinated effort involves compilation of existing educational survey information and development of conclusions to inform how public education efforts result in behavioral change. DHM Consulting prepared a report in compliance to meet DEQ's intended requirements that pertained to general and targeted findings about evaluation on education effectiveness to public. These targeted findings are focused on pet care, car care, lawn and garden care, and home care which are distinct municipal stormwater pollutant sources where source control activities (like public education) are generally a preferred treatment approach.	No modification	Engineering Associate
Staff Education and Training	Ongoing	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.		The responsible reporting party (Civil Engineering Technician) has attended a total of 6 committee meetings, trainings (actual and on-line), seminars, workshops and trainings during PY 23 (July 1, 2017 to June 30, 2018, which are as follows: 1. 11/8/2017 - ACWA Monthly Committee Meeting (Salem, OR) 2.11/8/2017 - Clean Rivers Coalition (Salem, OR) 3.11/9/2017 - Annual Well Field Training 4.12/5/2017 - Conflict Resolution Training 5. 12/13/2017 - ACWA Stormwater Meeting 6. 3/1/2018 - ADS Stormwater Seminar	No modification	Engineering Associate PW Superintendent Development Analyst
SWMP Element #5 - Public Involvement and Participation							
Provide for Public Participation with the annual report, SWMP and Benchmark Submittals	Annually by November 1	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.	N/A	Public review and comments were solicited for public participation through publication on the City's website, Oregonian Newspaper and Oregon Live Media on NPDES MS4 annual compliance report during PY 23. City of Fairview has published the (updated 2015) Stormwater Management Plan (SWMP) and the Pollutant Load Reduction Benchmarks (PLRB) in the City's website, Oregonian Newspaper and Oregon Live Media for public review and comments, last PY 20.	No modification	Engineering Associate
SWMP Element #6 - Post-Construction Site Runoff							

Section Four: City of Fairview Stormwater Management Plan Summary

BMP Name	Compliance Date	BMP Description	Measurable Goals	Tracking Measures	Status 2017-2018 (PY 23)	Summary and Date of Proposed Adaptive Management Modifications	Responsible Party
Development Review for Private Projects	Ongoing	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 **8** total development reviews for private stormwater management facilities and 0 development reviews for agency stormwater management facilities conducted this PY 23. Private Stormwater Management Facilities: • Industrial building and Outdoor Vehicle Storage, (22820 NE Sandy Blvd.) • Winterbrook, (223rd & Sandy) • Allwood Recyclers, Inc.. Office building, truck weight scale and storage • Fairway Properties-48 unit, (20922 NE Sandy Blvd) • Subdivision of 12 duplex, 17 townhomes, 2 commercial lot • 3-story mixed-use Ground floor commercial and 8 apartments • Mixed-use Commercial, townhouse and duplex, (20935 & 20939) NE Halsey • Mixed-use 71 residential units and commercial space, (Village & Market Dr.) There were no development reviews for Agency Stormwater Management Facilities for this PY23 The City has recently updated both municipal and private stormwater facilities on GIS mapping. New polygon layers were created for both municipal and private stormwater facilities and sub-basins. New identified and updated facilities and their attributes were integrated in the City's GIS system, last PY 20.	No modification	Permit Tech Engineering Associate Map Tech
					City of Fairview is currently using the 2016 City of Portland's Stormwater Management Manual as a reference for CIP projects, developers, consulting firms and builders. In the future the City is planning to adopt the City of Gresham's SW Management Manual as a reference for guidelines implementation. City of Fairview's Standard Specifications, Standard Drawings and Design Standards (1) document has been updated by Consultant. Fairview's Stormwater Management Plan was updated last 2015 by Consultant as well. City of Fairview's Resolution 49-2013 approved compliance order agreement with Environmental Protection Agency (EPA) to implement reporting requirements and standards associated with the NPDES MS4 stormwater permit which includes adoption of the Erosion Prevention and Sediment Control (EPSC) Plan from the City of Gresham. The Erosion Control Plan Review, Inspection and Enforcement Standard Operating Procedures describe the roles and responsibilities of Public Works Inspectors, acting as the lead Erosion Control Inspector with respect to erosion control-related plan review, inspections, documentation, and enforcement and serves as the City of Fairview's Standard Operating Procedure (SOP). Low Impact Development (LID) design methodology and the post-construction stormwater design standards will be addressed in the newly updated SW Design Standards which conforms to the provisions of our current public works development code.		

Section Four: City of Fairview Stormwater Management Plan Summary

BMP Name	Compliance Date	BMP Description	Measurable Goals	Tracking Measures	Status 2017-2018 (PY 23)	Summary and Date of Proposed Adaptive Management Modifications	Responsible Party
Review Applicable Code and Development Standards related to Stormwater Management	1-Jan-14		Review and the City's current stormwater treatment standards for compliance with new MS4 NPDES permit language by January 1, 2014. Review the City's current public works development code provisions to ensure that applicable barriers related to the use of Low Impact Development techniques are minimized and eliminated where practicable by January 1, 2014. If necessary, update the City's post-construction stormwater design standards and code language.	Track progress related to the review of the City's code and development standards per provisions in the MS4 NPDES permit.	City of Fairview's Resolution 49-2013 approved compliance order agreement with Environmental Protection Agency (EPA) to implement reporting requirements and standards associated with the NPDES MS4 stormwater permit which includes adoption of the Erosion Prevention and Sediment Control (EPSC) Plan from the City of Gresham. The Erosion Control Plan Review, Inspection and Enforcement Standard Operating Procedures describe the roles and responsibilities of Public Works Inspectors, acting as the lead Erosion Control Inspector with respect to erosion control-related plan review, inspections, documentation, and enforcement and serves as the City of Fairview's Standard Operating Procedure (SOP).	No modification	Engineering Associate Development Analyst
			Document the City's post-construction inspection and enforcement response procedures by January 1, 2014		Low Impact Development (LID) design methodology and the post-construction stormwater design standards will be addressed in the newly updated SW Design Standards which conforms to the provisions of our current public works development code.		
Design Standards for Public Projects	Ongoing	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.	The City of Fairview completed some of the proposed CIP projects in the Consolidated Stormwater Master Plan, which are as follows: The following CIP stormwater related projects are identified in the project list of the Consolidated SW Master Plan (CSMP) and were designed/constructed this PY 23; are as follows: • GN-4, Hydraulic System Modeling: City of Fairview has awarded the professional services to Cardno for the SW modeling (PY 22). • NE 7th St. (Main to Cedar) Sidewalk, Storm, Street Improvement Project: Grant proceeds from Community Development Block Grant (CDBG). Release order of $66,282.00 was awarded to Fairview as the CDBG funding for this PY 22. The project close-out was last May, 2017 (PY 22). • NE 7th St. (Main to Depot) Right-of-Way Improvement Project: All County Surveyors (Consultant) has completed the design and construction began on November 7th, 2018 PY 23. • Interlachen Sanitary Pipe assessment and evaluation: Pre-design milestone was achieved and construction is anticipated on PY 23. • NE Lincoln St. (7th to 6th) R-O-W Improvement Project: All County Surveyors (Consultant) has completed the design of the project and it will be next in line for the CDBG funding application.	No modification	Engineering Associate Engineering Technician
					Pavement Surface Treatment Maintenance - One Crack Seal and one Slurry Seal projects were completed this PY 22. Pavement preventive maintenance will not only preserve the City's street capital asset but to mitigate storm run-off pollutants in the streets preventing infiltration into ground waters. The above projects contribute to address collection, conveyance, detention, treatment and disposal of surface storm run-off. The destination/disposal standard is classified under direct on-site infiltration and off-site storm-only pipe system flow conveyance. Also, the sanitary sewer project addresses environmental regulatory complain preventing Infiltration and Inflow (I & I) into sewer piping system.		
SWMP Element #7 - Pollution Prevention for Municipal Operations							

Section Four: City of Fairview Stormwater Management Plan Summary

BMP Name	Compliance Date	BMP Description	Measurable Goals	Tracking Measures	Status 2017-2018 (PY 23)	Summary and Date of Proposed Adaptive Management Modifications	Responsible Party
O&M Plan	1-Nov-13	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	City of Fairview's O&M Manual along with the Standard Operating Procedures were recently incorporated in our SW mobile GIS tablets and are implemented during the annual maintenance schedule in monitoring and inspecting stormwater facilities for maintenance activities. O&M staff uses the manual as a guideline in performing proper routine maintenance on stormwater facilities for the intended purpose of maximizing water quality benefits as well as maintaining flood capacity. Responsible reporting party conducted staff education and training to O & M staff on how to utilize the mobile tablet as a new tool in relation to the Standard Operating Procedures, updated inspection forms and actual application in the maintenance of storm water facilities.	No modification	Engineering Associate PW Superintendent Storm Lead Worker
Right of way–O&M	Ongoing	The City contracts with Multnomah County for road maintenance that includes street sweeping, roadside mowing and 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.		City of Fairview maintains an IGA with Multnomah County for road maintenance activities. Road maintenance activities performed at county roads this PY 23, are as follows: • Catch basins cleaning - two times: September and October. • Roadside mowing - As needed • Roadside brushing - Once or twice a year • Route sweeping - 5 times: Aug, Oct, Dec, Jan and April • Misc. sweeping (snow gravel pick up) • Crack Sealing Pavement Preventive Maintenance - None this PY 22, due to severe weather conditions. • Pavement Marking Restoration - None this PY 23	No modification	PW Superintendent
Street Sweeping	Ongoing	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 5 street sweeping this PY 23. Please see details above, Right of Way operation and maintenance.	No modification	PW Superintendent
De-icing and Yard Debris Activities	Ongoing	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.	As weather permits, remove gravel when it is no longer needed.	Track processes conducted for sand and gravel removal.		No modification	PW Superintendent
Native Vegetation	Ongoing	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.	Applicants for riparian buffer permits were encouraged to use native vegetation that is self sustainable without the need for pesticides or herbicides and to be in compliance with FMC chapter 19.106. This is implemented during the Natural Resources Land Use permitting process. There were (1) dock and (6) riparian buffer permits issued.	No modification	Associate Planner
Integrated Pest Management	Ongoing	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.	Use Portland Parks and Recreation approved chemicals. Incorporate native plants in City planting projects to reduce chemical and fertilizer usage, as well as maintenance requirements.	Track City planting projects that incorporate native plants.	There were total of 27 City of Fairview neighborhood parks and recreation (Total of 443.56 acres) that were treated with approved Portland Parks and Recreation pesticides, this PY 23. In addition, there are 4 Metro parks and 3 Reynolds School District parks. Most of these parks were only treated with a mixture of herbicides as needed for evasive or unwanted native vegetation. Planting native vegetation were also incorporated in the City planting projects and during maintenance activities. Our Parks & Recreation Lead worker had been in total compliance in renewing his chemical applicator license bi-ennially. Also, he attends seminars and trainings related to Parks and Recreation Pest Management presentations.	No modification	Parks Lead Worker
Chemical Applicator Licensing	Ongoing	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	City of Fairview's Park Lead Worker is a certified Oregon Department of Agriculture (ODA) chemical applicator who updates his certification on biennial renewal period. All events involving chemical applications are supervised by the Park Lead Worker.	No modification	Parks Lead Worker

Section Four: City of Fairview Stormwater Management Plan Summary

BMP Name	Compliance Date	BMP Description	Measurable Goals	Tracking Measures	Status 2017-2018 (PY 23)	Summary and Date of Proposed Adaptive Management Modifications	Responsible Party
Track Municipal Facilities	Ongoing	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.		N/A	Public Works crew regularly monitored our Corporation Yard Dumpster facility known as the Crestwood Shop. Collected waste from municipal litter receptacles is collected and stored in this covered dumpster and collected by City's garbage hauler on a weekly basis. Storm run-off from the site is treated with Oil-Water separator / Concrete Structural Containment Vault (filter cartridges by Contech) / Bio-swale Retention Pond. Also, stockpile of construction materials needed for maintenance activities are covered and bermed to protect migration from run-off and wind erosion.	No modification	Engineering Associate
Litter Receptacles	Ongoing	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.	City of Fairview conducts public outreach through Fairview Outlook monthly magazine on healthy watershed campaign. One of the topics is about "Dog Waste Scooping" and dog waste bag receptacles are provided in every City Park. There are 43 litter receptacles that are maintained and collected once a week and after significant events.	No modification	Parks Lead Worker
Sanitary Sewer System Program	Ongoing	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.	We had 1 pump station failure or but no sanitary problem issues this PY 23. The pump station was demolished. A high profile sanitary sewer rehabilitation project is under pre-design milestone by a Qualification Based Selected Consultant. It is the Interlachen Sanitary Sewer Pipe Rehabilitation, which is about 50-yr old sewer piping system. Project completion is forecasted on PY 23.	No modification	Engineering Associate Engineering Technician
Consolidated Stormwater Master Plan (CSMP)	Ongoing	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.	Track the number, type and watershed location of projects that are completed.	City of Fairview has updated the Consolidated Stormwater Master Plan (CSMP), CIP project list by Brown and Caldwell last August 9, 2016. The following CIP projects are identified in the project list of the Consolidated SW Master Plan (CSMP) and were designed/constructed this PY 22; are as follows: • GN-4, Hydraulic System Modeling: City of Fairview has awarded the professional services to Cardno for the SW modeling this PY 22. • NE 7th St. (Main to Cedar) Sidewalk, Storm, Street Improvement Project: Grant proceeds from Community Development Block Grant (CDBG). Release order of $66,282.00 was awarded to Fairview as the CDBG funding for this PY 22. The project close-out was last May, 2017 (PY 22). • NE 7th St. (Main to Depot) Right-of-Way Improvement Project: All County Surveyors (Consultant) has completed the design and construction is also anticipated this PY 22. • Interlachen Sanitary Pipe assessment and evaluation: Pre-design milestone was achieved and construction is anticipated on PY 23. • NE Lincoln St. (7th to 6th) R-O-W Improvement Project: All County Surveyors (Consultant) has completed the design of the project and it will be next in line for the CDBG funding application.	No modification	Engineering Associate PW Superintendent
SWMP Element #8 -Structural Stormwater Facility Operations and Maintenance							

Section Four: City of Fairview Stormwater Management Plan Summary

BMP Name	Compliance Date	BMP Description	Measurable Goals	Tracking Measures	Status 2017-2018 (PY 23)	Summary and Date of Proposed Adaptive Management Modifications	Responsible Party
Inspect and Maintain Public Storm Facilities	Ongoing	Perform inspection and required maintenance as stated in the O&M Plan–clean catch basins and storm pipe, sedimentation manholes, channels and stormwater detention basins in areas where sediment and/or debris tend to accumulate.	Inspect 50 percent of detention lines, ponds, swales and outfalls. Inspect natural stream channels from bridge and road crossing. 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.	The following are City of Fairview's stormwater quality facilities that are structurally inspected and operationally maintained annually: • Catch Basins: A total of 490 and are divided into 3 zones for maintenance purposes. Zone 1 (189 CBs), Zone 2 (176 CBs) and Zone 3 (125 CBs). Each zone is inspected and maintained annually. Zone 1 was inspected by city staff and cleaned by Multnomah County crew, this PY 23. City of Fairview has an Inter-Governmental Agency (IGA) with Multnomah County with respect to catch basin cleaning; however, inspection and monitoring is done by Fairview O & M staff. City of Fairview's O & M crew started using mobile tablet / I-pad for field inspection and monitoring and has completed the structural and maintenance inspections of the following stormwater facilities last PY 22: • Outfalls: 38 total (9 High Priority Outfalls) • Underground Injection Control Facilities (UICs) / Sumps and Sedimentation Manholes: 3 total • Rain Gardens: 4 total • Detention Ponds: 4 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 • Natural Streams • Bio-filtration Swales • Detention Pipelines	No modification	Engineering Associate Storm Lead Worker PW Superintendent Map Tech
Private Water Quality Facilities Inspection and Maintenance	Ongoing	Require plans conforming to the requirements of City of Fairview Standard Specifications for Public Works Construction and City of Portland 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.	Track number of inspections conducted and inspection results.	City of Fairview engineering staff participates during pre-application and engineering review routing process for permit acquisition on new private and public agency development and re-development. The reporting staff manages review, comments and feedbacks on plans, specifications, stormwater report and calculations during the review process. It is one of the requirements from the consultants and project owners to include submittal of Operation and Maintenance Agreement (to be permitted with Multnomah County) on stormwater facilities maintenance activities at post-construction period. There are 1 total of new private developments conducted for permitting process this PY 23: are as follows: • All Wood Recycling - Recycling There was one total of private regulated stormwater business facilities inspected during PY 23; are as follows: • Knight Transportation	No modification	Engineering Associate

Appendix A—Legal Authority

CITY OF
GRESHAM

1333 N.W. Eastman Parkway | Gresham, OR 97030

October 15, 2018

Oregon Department of Environmental Quality
Water Division
811 S.W. 6th Ave.
Portland, OR 97204

RE: Adequate Legal Authority – 40 CFR 122.26(d)(2)(i)

To Whom It May Concern:

I am a Senior Assistant City Attorney for the City of Gresham and provide legal counsel to the Department of Environmental Services, which includes the Watershed Management Division. In that capacity, I am familiar with the provisions of the Gresham Revised Code that address stormwater issues, including but not limited to GRC Articles 3.20 to 3.60. These code provisions can be accessed at www.greshamoregon.gov/code.

I have reviewed these code provisions and have determined that the provisions provide the City of Gresham with adequate legal authority as required in 40 CFR 122.26(d)(2)(i). Enclosed please find the table that summarizes these requirements and the applicable Gresham Revised Code provisions.

Please feel free to contact me if you have any questions.

Sincerely,

David J. Ross
Senior Assistant City Attorney

Enclosures

c: Keri Handaly

Adequate Legal Authority		
Permit Reference	**Requirement**	**Code Authority**
Schedule A. 1. Prohibit Non-Stormwater Discharges	…effectively *prohibit non-stormwater discharges* into the MS4 unless such discharges are otherwise permitted under Subsection A.4.a.xii., another NPDES permit or other applicable state or federal permit, or are otherwise exempted or authorized by the Department.	GRC Articles 3.23.010-030 contain the Discharge Regulations which prohibit non-stormwater discharges except as exempted per the City's permit.
Schedule A. 4. A. i.	*Prohibit* through ordinance or other regulatory mechanism, *illicit discharges* into the permittee's MS4. [Illicit discharges are any release/spill not composed entirely of stormwater.]	GRC Articles 3.23.010-030 contain the Discharge Regulations which prohibit illicit connections and illicit discharges.
Schedule A. 4. A. ii.	Include documentation in an enforcement response plan or similar document… *describing the enforcement procedures* the permittee will implement when an illicit discharge investigation identifies a responsible party.	GRC Article 3.99 Council Resolution 3041 and Stormwater Pollution Prevention for Business Standard Operating Procedures
Schedule A. 4. C. i.	Include ordinances or other enforceable regulatory mechanisms that *require erosion prevention and sediment controls be designed, implemented and maintained* to prevent adverse impacts to water quality and minimize the transport of construction-related contaminants to waters of the State. …the regulatory mechanism must apply to construction activities that result in land *disturbance of 1,000 square feet or greater.*	GRC Articles 3.28.010-015 contain the requirements for erosion control compliance with the City's Erosion Prevention and Sediment Control (EPSC) Manual and authority to inspect for compliance. The City's EPSC Manual contains the threshold for the implementation of erosion control practices.
Schedule A. 4. C. ii.	Require construction site operators to *develop erosion prevention and sediment control site plans, and to implement and to maintain* effective erosion prevention and sediment control best management practices.	GRC Article 3.22.020 Stormwater Manuals
Schedule A. 4. C. iii.	Require construction site operators to *prevent or control non-stormwater waste* that may cause adverse impacts to water quality such as discarded building materials, concrete truck washout, chemicals, litter and sanitary waste.	GRC Article 3.22.020 Stormwater Manuals
Schedule A. 4. C. vi.	Describe… the *enforcement response procedures* the permittee will implement. The enforcement response *procedures must*	GRC Article 3.22.020 Stormwater Manuals

	ensure construction activities are in compliance with ordinances or other regulatory mechanisms.	
Schedule A. 4. F. iii	…co-permittees must develop or reference an enforceable post-construction stormwater quality management manual…	GRC Article 3.22.020 Stormwater Manuals
Schedule A. 4. F. v.	Where a new or redevelopment project site is characterized by factors limiting the use of on-site stormwater management methods to achieve the post construction site runoff standards… the Post-Construction Stormwater Management Program must require equivalent pollutant reduction measures, such as off-site stormwater quality management.	GRC Article 3.22.020 Stormwater Manuals
	Control through ordinance, permit contract, order or similar means, the contribution of pollutants to the municipal storm sewer by storm water *discharges associated with industrial activity* and the quality of storm water discharged from sites of industrial activity.	GRC Article 3.23.025 Waste Disposal Prohibitions (2) and GRC Article 3.24.010 Requires compliance with Industrial NPDES and WPCF permits
Schedule A. 4. H. 1.	Legal authority to inspect and require effective operation and maintenance [of stormwater structural facilities]	GRC Article 3.20.035 Policy. (2) Requires stormwater facilities to comply with the City's development standards and stormwater manual. It further requires that these facilities be located on private properties and shall be owned and maintained by the benefited property, as applicable. GRC 3.20.055 Describes Private Responsibilities for stormwater facility maintenance. GRC 3.24.050 Provides the City's right to inspect and require maintenance.
Code of Federal Regulations 122.26 (A)	Control through ordinance, permit, contract or similar means, the contribution of pollutants to the municipal storm sewer by stormwater discharges associated with industrial activity and the quality of storm water discharged from sites of industrial activity.	GRC Article 3.30 requires a Stormwater User Permit. Includes new connections and the alteration, modification or increase in discharge from existing development. GRC Article 3.24 requires

		compliance with NPDES permits, and requires notification of spills, elimination of illicit connections, remediation of pollution and restoration of property and the monitoring, analysis, and reporting to demonstrate compliance. GRC Article 3.23 regulates discharges from all sites.
(B)	Prohibit through ordinance, order or similar means, illicit discharges to the municipal separate storm sewer.	GRC 3.23.020 prohibits illicit connections and illicit discharges. GRC 3.23.025 specifically prohibits certain waste disposal. GRC 3.23.030 adds general discharge prohibitions.
(C)	Control through ordinance, order or similar means the discharge to municipal separate storm sewer of spills, dumping or disposal of materials other than storm water.	GRC 3.23.010 generally prohibits non-stormwater discharge and GRC 3.23.025 specifically prohibits certain waste disposal. GRC 3.24.021 requires certain discharges to develop an Accidental Spill Prevention Plan.
(D)	Control through interagency agreements among the co-permittees the contribution of pollutants form one portion of the municipal system to another portion of the municipal system.	A cooperative monitoring and stormwater management program exists between the Cities of Gresham and Fairview, and Gresham and Multnomah County, based on historical arrangements that were formalized in June 2004.
(E)	Require compliance with conditions in ordinances, permits, contracts or orders; and	GRC 3.26.030 and 3.26.035 provide for enforcement of stormwater provisions pursuant to GRC Article 7.50.
(F)	Carry out all *inspection, surveillance and monitoring* procedures necessary to determine compliance and noncompliance with permit conditions including the prohibition on illicit discharges to the municipal separate storm sewer.	GRC Article 3.26 establishes authority for inspection and monitoring to enforce provisions of the stormwater code.

Beery Elsner & Hammond LLP

ATTORNEYS AT LAW

MEMORANDUM

TO: Allan Berry, Public Works Director, City of Fairview

FROM: Heather R. Martin, City Attorney's Office HRM

SUBJECT: Legal Authority to Implement and Enforce NPDES MS4 Permit

DATE: July 20, 2017

Fairview's National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) permit requires it to "maintain adequate legal authority through ordinance(s), interagency agreement(s) or other means to effectively implement and enforce" the permit's provisions. See NPDES MS4 Permit No. 101315 at Schedule D(1).

For the reasons listed in the attached memo from our office dated October 12, 2015 (Exhibit A), the City has maintained and currently possesses legal authority to implement and enforce the NPDES MS4 permit. None of the Fairview Municipal Code (FMC) provisions cited in Exhibit A have changed or been deleted. They are all still in effect as is the intergovernmental agreement the City has with Gresham.

I believe, given that information, the City continues to possess adequate legal authority required by its NPDES MS4 permit.

Please let me know if you have any questions.

503.226.7191
503.226.2348
info@aov-law.com
1750 SW Harbor Way Suite 380
Portland OR 97201-5106
www.aov-law.com

Beery Elsner & Hammond LLP

MEMORANDUM

TO: Allan Berry, Public Works Director, City of Fairview

FROM: David F. Doughman, City Attorney's Office

SUBJECT: Legal Authority to implement and enforce NPDES MS4 permit

DATE: October 12, 2015

Fairview's National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) permit requires it to "maintain adequate legal authority, through ordinance(s), interagency agreement(s) or other means, to effectively implement and enforce" the permit's provisions. *See* NPDES MS4 Permit No. 101315 at Schedule D(1). You asked our office to confirm that Fairview is maintaining such authority.

As outlined below, we are confident that Fairview has maintained and currently possesses adequate legal authority to implement and enforce the NPDES MS4 permit.

The legal authority must enable the City to:

(a) *Control through ordinance, permit, contract, order or similar means, the contribution of pollutants to the municipal storm sewer by storm water discharges associated with industrial activity and the quality of storm water discharged from sites of industrial activity.*

In 2004, the City adopted a comprehensive ordinance to control non-stormwater discharge into its storm sewer system, codified at Fairview Municipal Code (FMC or Code) Chapter 13.40. It applies to "all water entering the city of Fairview storm drain system and generated on any developed and undeveloped property unless specifically exempted." FMC 13.40.020.

The Code, at FMC 13.40.070, regulates industrial discharges into the storm sewer system. It requires an industrial discharger to prove it is complying with any NPDES permit it may possess for industrial discharges and allows the Fairview public works department to inspect a discharger's facility. It grants the public works department the authority to install monitoring devices at a facility to control the quality of storm water discharged from the site and provides for penalties for dischargers who fail to comply with FMC 13.40.070's terms.

For industrial dischargers that are not required to possess a NPDES permit, the City is able to require a reporting form and establish a schedule of monitoring discharges from such facilities.

(b) *Prohibit through ordinance, order or similar means, illicit discharges to the municipal separate storm sewer.*

The Code specifically prohibits illicit discharges to the system at FMC 13.40.040. Any materials that are not "stormwater" – defined as rain runoff, snowmelt runoff, and surface water and drainage – are not allowed to be discharged into the system, subject to certain exceptions. Penalties may be imposed upon persons illicitly discharging prohibited materials, including fines and suspending access to the system, among others. *See* FMC 13.40.060 and 13.40.110.

(c) *Control through ordinance, order or similar means the discharge to a municipal separate storm sewer of spills, dumping or disposal of materials other than storm water.*

In addition to explicitly prohibiting non-stormwater discharges into the system as discussed above, the Code controls the discharge of materials other than stormwater by utilizing best management practices (BMPs) identified in Fairview's Stormwater Management Plan. *See* FMC 13.40.080. Further, the Code allows for monitoring of discharges at the public works department's discretion. *See* FMC 13.40.070.

The Code also requires dischargers to immediately report spills or disposal of materials other than stormwater and provides for penalties for those who may fail to report such spills. *See* FMC 13.40.100 and 13.40.110.

Other Code sections control the discharge of materials other than stormwater. FMC 19.106.040(B) prohibits alterations to wetlands that would appreciably diminish the values or functions of the water body or wetland. FMC 19.106.040(C)(9) requires construction sites adjacent to wetlands to install erosion/sedimentation control devices between the land area to be disturbed and any wetlands. The devices must conform to the specifications and procedures of the City's erosion control standards

FMC 19.106.040(C)(10) requires developments with significant impervious surface areas adjacent to wetlands to have storm water detention and filtration facilities as part of their approved design. The design of such facilities must conform to the BMPs described in the City's standard specifications for public facilities and related ordinances and technical/guidance manuals.

(d) *Control through interagency agreements among co-applicants the contribution of pollutants from one portion of the municipal system to another portion of the municipal system.*

The City has an intergovernmental agreement (IGA) with Gresham, a co-permittee for the duration of the permit term. The jurisdictions agree to minimize their contribution of

pollutants to each others' stormwater systems to the maximum extent practicable through implementation of an approved Stormwater Management Plan. In addition, each jurisdiction may provide services related to water quality protection to the other upon mutual agreement, at full cost.

(e) *Require compliance with conditions in ordinances, permits, contracts or orders.*

All of Fairview's ordinances are subject to enforcement actions, either specific to a given ordinance (e.g. FMC 13.40.110) or generally through a violation citation in municipal court. Land use/development permits routinely condition approval upon satisfying various Code criteria and such permits may similarly be enforced in court. Naturally, if a contract pertaining to stormwater management is breached the City has the right to enforce the contract in court.

(f) *Carry out all inspections, surveillance, and monitoring procedures necessary to determine compliance and non-compliance with permit conditions including the prohibition on illicit discharges to the municipal separate storm sewer.*

Fairview's comprehensive ordinance controlling non-stormwater discharges into its system explicitly:

- Permits the public works director to prohibit a discharger from engaging in activities that are, were or may be a significant source of non-stormwater discharge. FMC 13.40.040(B)(2).

- Prohibits illicit discharges into the system and illicit connections to the system. FMC 13.40.040(A).

- Permits the public works department to suspend MS4 discharge access if necessary to prevent an actual or threatened discharge that will harm the public, the system or the environment. FMC 13.40.060(A).

- Permits the public works department to enter and inspect a discharger's facilities, establish monitoring of the discharge, and require regular reporting to the City. *See* FMC 13.40.070.

For all of the above reasons, we believe the City continues to possess the adequate legal authority required by its NPDES MS4 permit. Please let me know if you have any questions.

Appendix B—Summary of Urban Growth Boundary Activities

July 2017 - June 2018 Planning Permits

File Type	File No.	Date Filed	Project Description & Location	Final Action	Action Date	Comments
EXT	18-315		Renaissance Homes 9-lot Planned Development Subdivision with Tree Removal; 6925 SE Hogan	APPD	8/14/18	9-lot PD Subdivision approved SD/PD/TR 16-106 Springwater **EXTENSION APPROVED FOR FINAL PLAT SUBMITTAL AND APPROVAL**
FP	17-299	8/8/17	Clearwater Homes – Big Oak Subdivision, 42 lots; future street plan	APPD	6/12/18	42 lot single-family subdivision – Pleasant Valley SD/FS 16-309 **Final Plat Approved**
FP	17-298	8/7/17	Jim Leeper Homestead at Pleasant Valley – 54 lots; SW Rodlun & Butler	APPD	2/22/18	54 lots approved – Pleasant Valley SD 16/341 **Final Plat Approved**
FP	17-274	7/26/17	Brickworks Village swc SE Fleming & Palmquist; 187-lot subdivision – 93 for single-family attached units	APPD	1/9/18	187 lots approved – 93 for SFA SD/DRD/VR2 16-315 Phasing plan approved for development in 3 phases 4/19/17 (MIS 17-043) - Springwater **Final Plat Approved**
AX	17-023	1/21/17	Telford Properties LLC annexation into City of Gresham – 6842 SE Telford Rd.	APPD	11/2017	**Annexation approved – Springwater (18.73 acres)**
AX	17-321	8/21/17	Harry Henke/Regner Heights annexation; 8377 SE Regner Rd.	APPD	1/16/18	**Annexation approved – Kelley Creek Headwaters (approx. 11.03 acres)**
SD	17-397	10/17/17	JKR Construction 15-lot subdivision w/Tract A; 18637 SE Giese Rd.	AWC	2/2/18	**Subdivision approved; final plat pending** **Pleasant Valley**

File Type	File No.	Date Filed	Project Description & Location	Final Action	Action Date	Comments
AX	18-107	3/9/18	Scott & Carol Schaeffer annexation; 6628 SE Hogan Road	APPD	July 2018	**Annexation approved; not yet filed with Secretary of State – to be effective when that occurs (expected within a week or so)**
SD/TR	18-149	4/19/18	Sycamore Vista phased 23-lot subdivision; 6540 SE 182nd			**In review; decision pending** **Pleasant Valley**
SD/DRD/ TR	18-265	7/13/18	Sunset Village phased 332-lot subdivision; SE 190th & Richey Rd.			**In review; decision pending** **Pleasant Valley**

Appendix C—City of Gresham Supporting Education & Outreach Program Documents

CityNews

A weekly at-a-glance summary of important City projects and news impacting your employment

A look at the diverse work we do

Geoff LaCoste got his start at the City in 2015 as a seasonal employee in Transportation. Now he serves as a Public Utility Worker in the Code Compliance Division and handles graffiti, overgrown vegetation and illegal dump violations. Geoff says, "I grew up in Gresham, and knowing that I'm out in the community making a difference is why I enjoy working here!"

May 2018 City of Gresham News

Success stories

Community pride shines bright at Green & Clean event

The 5th Annual Green & Clean event was held this past Saturday at Main City Park, with approximately 180 volunteers from the community coming together to help beautify our City's signature park and the surrounding trails.

Working alongside members of Council were community members, families, individuals, City employees and groups of volunteers from organizations including: the LDS congregation, Gresham-Ebetsu Sister City Association, Gresham Early Risers Kiwanis Club, Gresham Rotarians, Boys and Girls Club, US World Class Taekwondo kids, local area schools, Janus Youth Programs and the City's Youth Advisory Council.

Despite the heavy rain forecasted, the weather held up beautifully, and at the end of the event, all who volunteered were treated to entertainment by a Taiko drumming group and Japanese dancers, as well as a wonderful lunch buffet provided by local small businesses.

The saying that many hands make light work was especially evident on this day. A big thank you to all who helped make this event so successful!



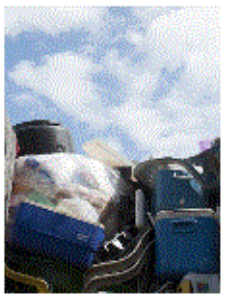
Earth Day event breaks all-time record

The Recycling & Solid Waste team would like to thank City staff who participated in our 20th Annual Earth Day event or supported the planning process. The event keeps tons of recyclable and reusable materials from the landfill, and it was a huge success thanks to your hard work and dedication to our community. Special thanks to the Communications team for helping to promote the event.

What did we keep out of the landfill? Here are the (preliminary) numbers:

- Three large box trucks of e-waste and fluorescent lamps
- Three 40-yard drop boxes of Styrofoam
- One 40-yard drop box of plastics
- 20,000 lbs. of paper shredded
- 1,320 cars served - *this is an all-time record!*
- 2 vans of reusable materials went to Birch Community Services and the Habitat Restore
- Zero injuries
- Wait times under 10 minutes for most of the day

Congrats to all involved on a job well done!




Gresham Spring 2018 Nature Events

Pollinator Workshop
Mt. Hood Community College
Wed. Feb 21st; 6:00-8:30 pm
Register at www.EMSWCD.org

Beaver Creek Planting
Glenn Otto Park
Sat. February 24th; 10:00 am-1:00 pm
Learn more at www.Sandyriver.org

Benefits of Native Plants Workshop
Gresham City Hall Council Chambers
Sun. February 25th; 1:00-3:30 pm
Register at www.EMSWCD.org

Weed Workshop
Mt. Hood Community College
Wed. February 28th; 6:00-8:30 pm
Register at www.EMSWDC.org

East Gresham Planting
East Gresham Park
Sat. March 3rd; 9:00am-12:00pm
Come plant the park

Community Plant Swap
Nadaka Nature Park
Sat. March 10th; 10:00 am-12:00 pm
Stop by to drop off and pick up plants

Welcome back Vulture Day
Nadaka Nature Park
Sat. March 17th; 12:00-3:00 pm
Stop by to celebrate with Audubon

Beaver Creek: The Watershed Beneath Our Feet

Beaver Creek starts as a spring near Dodge Park Boulevard and flows into the Sandy River near Glenn Otto Park. The Beaver Creek Watershed is the 13.5 square mile area of land where rain water flows toward the creek.
Access the Greenway Trail at Kiku City Park in Troutdale!

Who Lives Here?

Beaver Creek is home to **Coho and Chinook salmon, rainbow trout, beaver,** the rare **Oregon Slender Salamander,** and **65,000 people**.

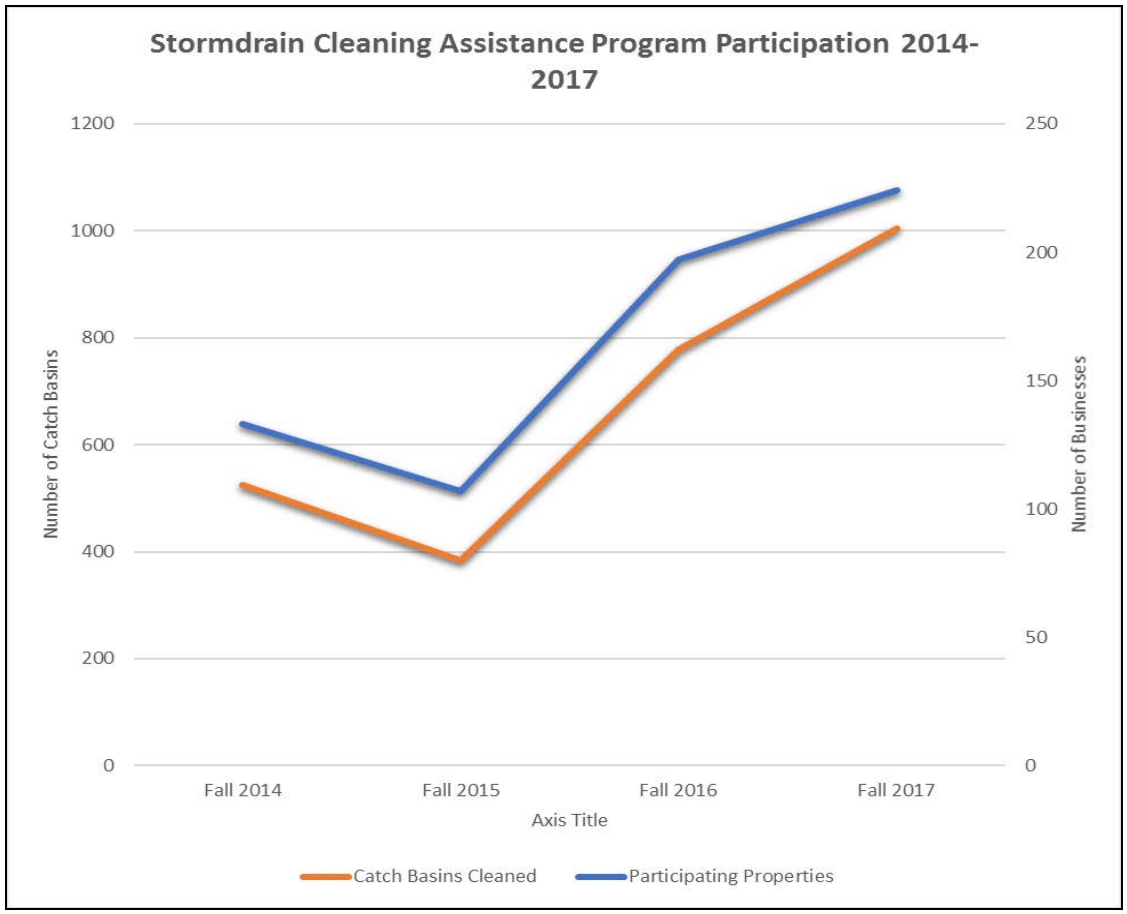
Concerns

In summer, the **water is too warm** for many fish. **Pollutants from lawn care products and cars** wash into the creek when it rains. Many **road crossings block salmon** from returning to spawning areas.

What You Can Do

- **Pick up after pets** - keep bacteria out of the creek.
- **Plant native plants and trees**. Find more information at **EMSWCD.org**
- **Create wildlife habitat in your yard**! Learn more at **backyardhabitats.org**
- **Volunteer** with the Sandy River Basin Watershed Council: **sandyriver.org**
- Find **fish-friendly lawn and garden products** at **growsmartgrowsafe.org**

Educational Booklet mailed to all Beaver Creek residents in partnership with Sandy River Watershed Council, Multnomah County, and East Multnomah Soil and Water Conservation District.



Analysis of Gresham Stormdrain Cleaning Assistance Program for Businesses


Does your Auto Shop protect the Environment?
Since 1997, local Auto Repair, Body Shops, and Car washes have received EcoBiz Certification to prove they go above and beyond.
visit
ecobiz.org/chinook
to find certified businesses
EcoBiz is sponsored by local government agencies committed to protecting the environment
certified business
ECOBIZ
ecobiz.org
Clean Water Services
CITY OF GRESHAM
Clackamas River Water Providers
Water Environment Services
Environmental Services City of Portland
working for clean rivers


Does your Landscaper protect the Environment?
EcoBiz Certified Landscapers help customers to reduce pesticides, save water, and find the right plant for the right place.
visit
ecobiz.org/chinook
to find certified landscapers
EcoBiz is sponsored by local government agencies committed to protecting the environment
certified business
ECOBIZ
ecobiz.org
Clean Water Services
CITY OF GRESHAM
Clackamas River Water Providers
Water Environment Services
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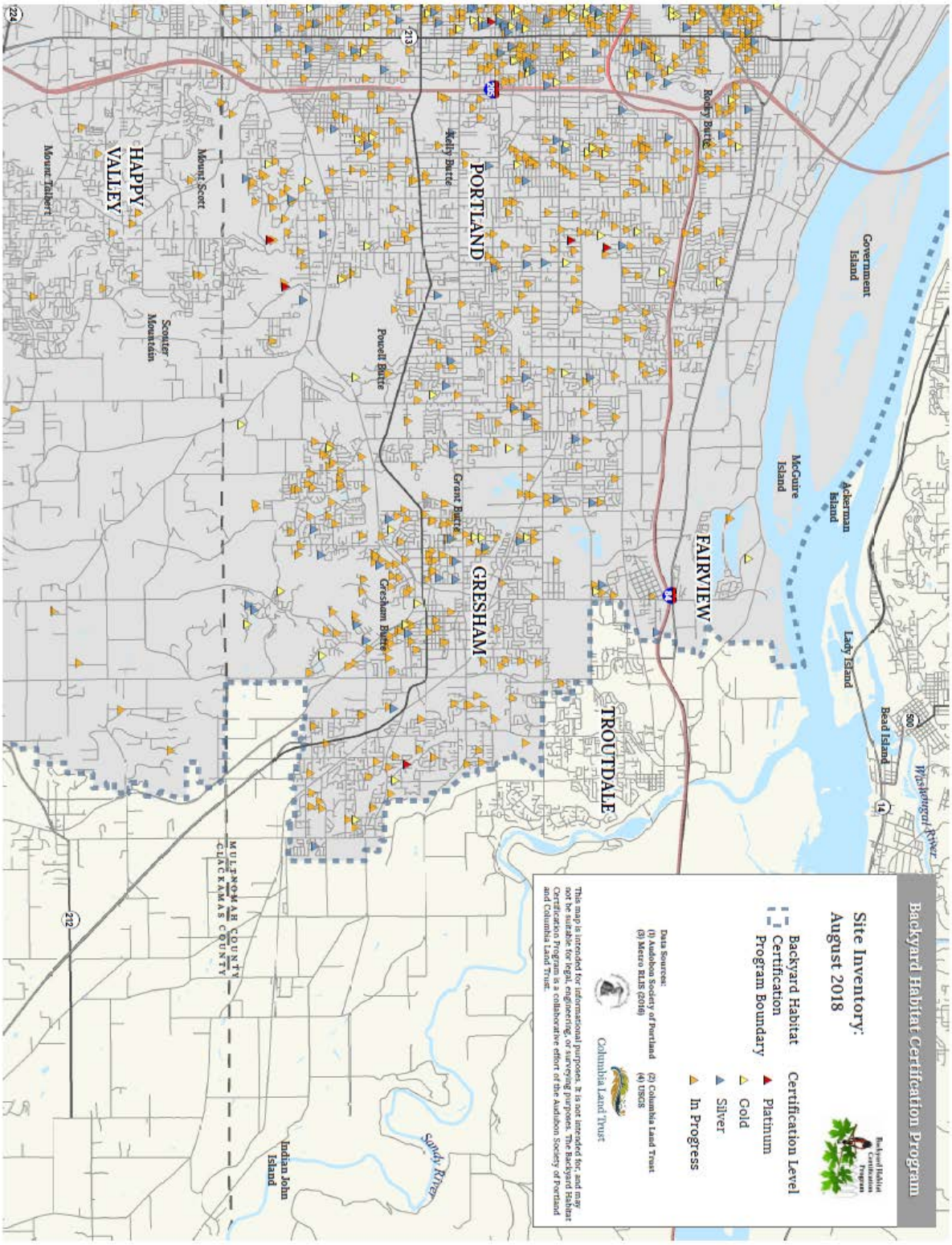

Gresham & Fairview homes in the Backyard Habitat Certification Program

City of Gresham (Official Government)
June 10 ·

Last week, students created artistic murals in downtown Gresham to tell the story about water runoff, stormdrains and where the water goes. The Outlook did a nice article: https://bit.ly/2xROi4F

You, Felicia Carpenter and 87 others

4 Comments 8 Shares

Like Comment Share

Appendix D—Erosion Prevention Sediment Control Program Wet Weather Notice to Contractors

Attention Builders and Contractors

Wet Weather Construction Season is October 1st – May 31st

The City of Gresham conducts frequent inspections of construction sites during the wet weather season to ensure that soil remains on site and erosion protection is properly installed and maintained. Contractors with failing erosion control are liable for civil penalties.

IT IS YOUR RESPONSIBILITY TO:

- Properly install perimeter protection (fiber roll/wattle or silt fence) to keep soil on site.

- Tarp stockpiles and protect exposed soil with straw or hydroseed to prevent runoff.

- Prevent sediment tracking into street with rocked construction entrance and protect catch basins with inserts.

- Maintain a clean construction site:
  - Sweep dirt and debris from streets
  - Do not stockpile dirt or materials in the street
  - Keep trash contained

Thank you for building responsibly and helping to protect Gresham's water resources by minimizing erosion.

More information about erosion prevention and sediment control can be found online at: http://greshamoregon.gov/publicworksstandards/

Questions about Gresham's erosion protection requirements?

Please call Karen Bromley at 503-618-2289 or email karen.bromley@greshamoregon.gov

Appendix E—City of Gresham TMDL Report

Table 4. TMDL Implementation Plan Commitments

						Pollutant										Watershed					Regulatory Program					
NONPOINT SOURCE TMDL IMPLEMENTATION PLANS																										
Best Management Practice or Activity	**Commitment**	**Performance Measure**	**Status and Additional Goals, TMDL Year July 2016 through June 2017**	**Status and Additional Goals, TMDL Year July 2017 through June 2018**	**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 New and Redevelopment Requirement	**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 24,262 active and inactive wastewater accounts, an addition of 248 accounts. City code requires hook up to the city system if one exists within 300 feet.	City billing records show 24,803 active and inactive wastewater accounts, an addition of 541 accounts. City code requires hook up to the city system if one exists within 300 feet.	None proposed.	ó	ó									P	P	P	P	P		X				
NPB-2 Require Failed Systems to Connect to Public System	**Program Commitment:** Ensure that failing onsite systems are replaced by connection to City system, where City system is available.	Number of onsite properties that connect to public system	County sanitarian records show that 14 tanks were decommissioned in Gresham during 16-17. Some of these were previously abandoned and therefore some buildings were already connected to the city system.	The county sanitarian records show that 9 private septic tanks were decommissioned and connected to the wastewater treatment plant. Some of these were previously abandoned and therefore some buildings were already connected to the city system.	None proposed.	ó	ó									P	P	P	P	P		X				
NPB-3 Ensure Spills from Private Piped Systems are Resolved	**Program Commitment:** Respond to reports of private system spills to ensure prompt cleanup and repair	Number of failures reported, and outcome	There was one private sewage upset during 16-17 from grease in a private manhole causing an upset of apartment system. Staff worked with the owner to resolve and is monitoring the apartment thru the city's fats oil and grease program. See Table 3-6 of the NPDES report for other types of spills that were investigated and resolved. Staff continue to conduct proper RV waste dumping education and outreach as a measure of prevention.	There were three incidents of private sanitary waste overflows being investigated and remedied using the city's spill response and operations staff. See Table 3-8 of the NPDES report for the details. Staff continue to conduct proper RV waste dumping education and outreach as a measure of prevention.	None proposed.	ó	ó									P	P	P	P	P		X				
Temperature Management																										
NPT-1 Natural Resource CIP Implementation	**Program Commitment:** As CIP resources allow, implement Natural Resource Master Plan prioritized floodplain, wetland, stream and riparian projects, and strategically invest in land acquisition opportunities where there is an identified temperature benefit.	Land acquisition will be reported in new acres and linear stream feet holdings. Reporting will add detail on pre-project shade conditions and projected post-project shade targets, using OWEB stream shade classification categories of 1 (poor shade cover), 2 (moderate), or 3 (good shade cover).	See Table 3-2 of the NPDES report.	See Table 3-2 of the NPDES report.	None proposed.			ó								P	P	P	P	P		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	Details will include number of sites, volunteer hours, acres or linear feet of stream where concentrated invasive weed treatment occurred, and number of plants installed. Planting stats will include any fast growing shade trees planted in advance of the System Potential Vegetation to be installed. Acreage will be provided of pre-project shade conditions at individual sites and projected post-project shade targets, using OWEB stream shade classification categories of 1 (poor shade cover), 2 (moderate), or 3 (good shade cover).	See Table 3-2 of the NPDES report.	See Table 3-3 of the NPDES report.	None proposed.			ó								P	P	P	P	P		X				X
NPT-3 Monitoring and Reporting	**Program Commitment:** Annually report on implementation of projects; every 10 years provide an analysis of change in shade conditions based on aerial photo analysis.	Annually: number, type, and size of implemented projects, as specified under Performance Measures for NPT-1 and NPT-2. Every 10 years conduct an aerial photo analysis to assess changes (from the 2008 baseline) in near stream canopy cover using OWEB stream shade classifications of 1 (poor shade cover), 2 (moderate), or 3 (good shade cover). These statistics will be presented for city-wide riparian canopy cover, AND for individual planting project sites reported on under NPT-1 and NPT-2 where planting efforts were started at least 5 years prior to this aerial photo analysis.	See Table 3-3 of the NPDES report.	See Table 3-3 of the NPDES report.	None proposed.			ó								P	P	P	P	P		X				X