Gresham and Fairview NPDES Annual Report

PERMIT YEAR 22

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

Summer 2016: student interns mapped and marked private storm drains in Gresham

City of Gresham
City of Fairview
November 2017

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

October 31, 2017

Mark Riedel-Bash, 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 22, 2017 Annual Report

Dear Mr. Riedel-Bash:

I am pleased to submit a copy of the twentieth-second 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 22 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:

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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 the monitoring data 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 **Appendices.**

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.

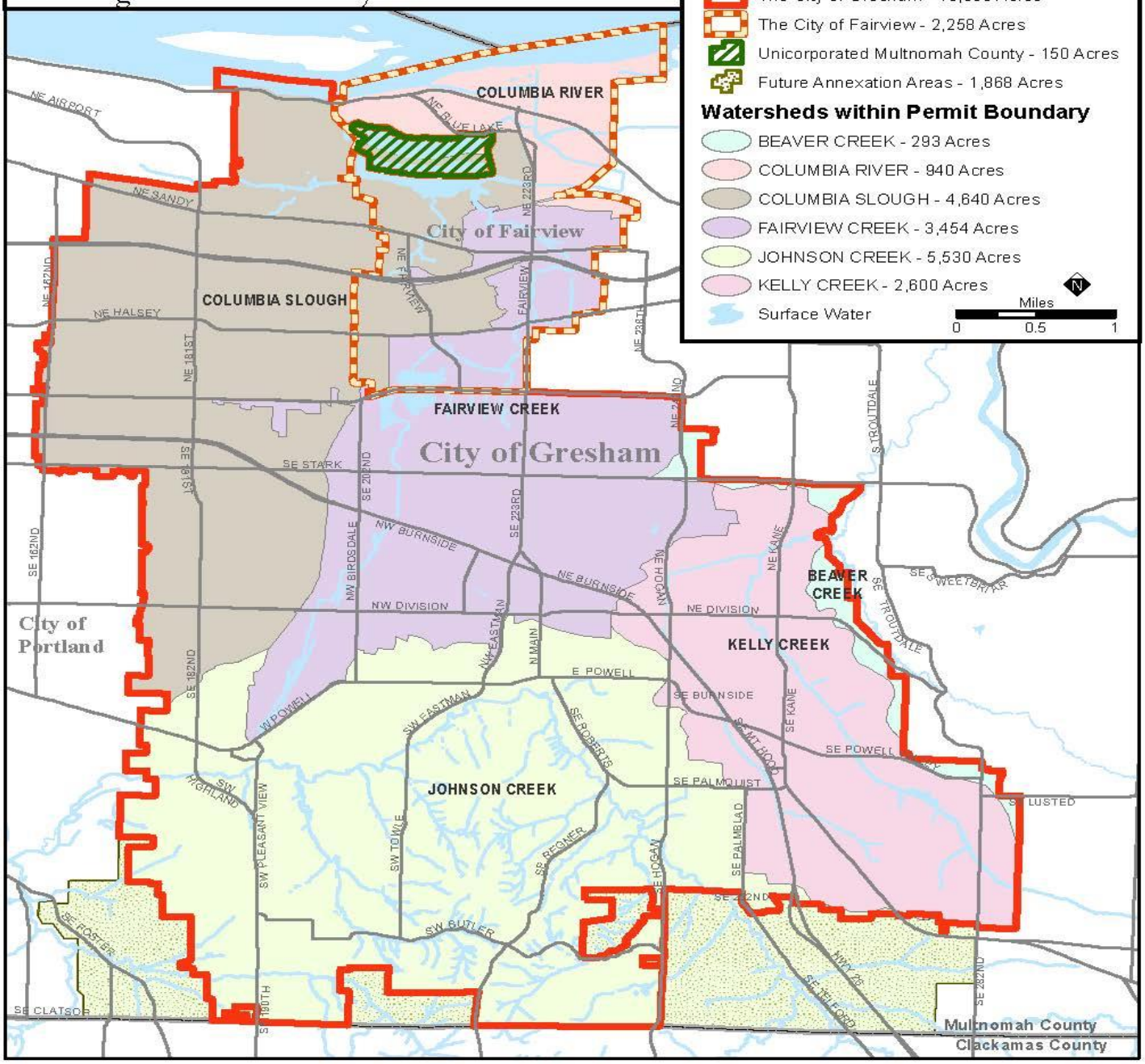
Legal Authority

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 and a map of the major watersheds within the permit area.

Figure 1-1: Municipal Separate Storm Sewer Discharge Permit Boundary with Area Watersheds



Section Two:
Cities of Gresham & Fairview Environmental Monitoring Program Annual Report

A. History

Background

The data reported in this PY 22 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 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)	*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.
	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)			
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.
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 data collected in PY 21 are provided in Appendix A 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 Appendix B and C.

Maps of dry weather screening fixed and rotating monitoring are shown in Appendix D. Results are discussed in Section 3 BMP: ILL 2&3 Illicit Discharge Detection and Elimination: Field Screening and Investigation and the locations and data is listed in Table 3-5.

Instream Monitoring

Instream monitoring results are generally within expected ranges. Stream pH was slightly below the standard of 6.5 in several streams in the winter and spring, and slightly above the 8.5 standard at one site in the summer. The low pH values were associated with rain events. Rainwater naturally has a low pH and likely contributed to these values. Stream temperature was above the 18°C salmon rearing standard in most streams in the summer. One site in Kelly Creek was above the 13˚C salmon spawning standard in the winter; this site is just downstream of the large, surface-release inline pond on Mt. Hood Community College campus that is known to contribute heat to the stream. To our knowledge the 13˚C standard in this stream was mistakenly applied and was originally intended for Kelley Creek in Johnson Creek. The City is working with ODFW to confirm and correct this possible error.

Two sites had exceedances above the standard of 406 *E. coli* colony forming units (CFU/100ml). *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 with our illicit discharge detection and elimination efforts, and by increasing public awareness of the issue. However, the quarterly sampling events during the wet season fell on days with little antecedent rainfall, which generally correlates with lower bacteria levels.

One summer sample in Fairview Lake exceeded the Columbia Slough TMDL level for total phosphorus. High phosphorus levels have been noted at this location before, particularly during the summer, when green algae have utilized all of the available nutrients and nitrogen becomes the limiting nutrient. Blue-green algae/cyanobacteria have frequently been noted in the lake in mid to late summer, when the presence of phosphorus and their ability to fix nitrogen allow them to thrive in the warm lake water.

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. Together with USGS, Multnomah County, and East Multnomah Soil and Water Conservation District we collected continuous temperature data at 39 stream sites. The 7-day average of the daily maximum (7DADM) for each continuous temperature monitoring station is listed in Table A3 along with the number of days that exceeded the 18°C standard.

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). All sites with no exceedances were near forested headwaters of streams. All but one of the sites with >100 days of exceedances were close to the outlet of an instream pond. Paired sites that were upstream and downstream of inline ponds showed temperature increases of 4-9°C during the heat of the summer. The City is aware of the impact in-line ponds can have on temperature - Fujitsu Pond is a highly ranked Natural Resource CIP project, and the City is also studying ways to reduce temperature loading from public and private ponds on Butler and Hogan Creeks.

Stormwater Monitoring

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). Also similar to previous years, relatively high levels of several heavy metals were found at several sites. Cars are likely a major source of these pollutants. The City plans to conduct special monitoring studies to examine heavy metal sources in stormwater and potential avenues for reductions.

Structural BMP Monitoring

The structural BMP monitoring consisted of monitoring two storms at each of two facilities, and one storm at each of two additional facilities. This year we switched from monitoring time-weighted composite samples to taking grab samples. This change in sampling scheme has allowed us to see patterns of pollutant concentrations throughout storms. One fairly consistent pattern that we have observed is that regional facilities, which are designed for both water quality and detention, often show high pollutant removal during small storms or at the beginning of large storms, but have reduced removal efficiency at the peak of large storms when the basins are full.

The Columbia Slough Regional Water Quality Facility, which has been monitored for several years, and has shown variations in pollutant removal performance. During a sampling event this year, we added monitoring sites upstream and downstream of a large beaver dam that was impounding water. The beaver dam appeared to provide moderate pollutant removal capacity during low to moderate flows. More data is needed to be more conslusive. Staff plans to monitor for at least one additional year.

One storm was monitored at sites along a major arterial street that had various treatments of pervious and standard pavement. The results showed that both full-depth pervious pavement with an underdrain, and a 3-inch pervious overlay effectively reduced levels of many pollutants.

Two storms were monitored at Brookside Regional Facility, which is a newly-built small detention pond with a low-flow water quality swale. We found that this facility is effectively reducing several pollutants, especially heavy metals, pesticides, nutrients, and TSS, particularly during low to moderate flows.

Two events were monitored in newly constructed filtration street-side stormwater planters with two different amended soil blends. The first event was sampled immediately after the soil was added in the fall, and second event was sampled in late spring after a winter of rain. The results showed that there was not a large difference in pollutant removal between the two soils blends. The first event showed export of most monitored pollutants, which demonstrates the new amended soil was initially leaching some pollutants into the stormwater. However, the performance of these facilities improved after the plants and soils had been in place for a season.

Macroinvertebrate Sampling

Macroinvertebrates were collected at all of the instream monitoring locations, except Fairview Lake and KCI3 (see Table 2-7). 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 assessed based on eight years of data did not yield trends, except site KC11, which had a significantly positive slope. Due to natural variations in field conditions, trends may be detectable at ten years and will be assessed again at that time.

D. Adaptive Management

No adaptive management changes are proposed.

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Figure 2-9 Map of Rotating Wet Weather Stormwater Monitoring Locations

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

Instream-Long term & Macroinvertebrate Site Locations	
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, shown on Gresham Map of Instream Sites)
BCI2	Beaver Creek @ Division X Troutdale Rd. (Monitored on behalf of Multnomah County, shown on Gresham Map of Instream Sites)
Structural BMP Evaluation Monitoring Locations	
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	Columbia Slough Water Quality Facility - upstream of beaver dam
CSDSB	Columbia Slough Water Quality Facility - downstream of beaver dam
BrookBub	Street runoff at Brookside
BRF1	Brookside Regional Facility - Inlet
BRF2	Brookside Regional Facility - Outlet
HMPB121	Hayden's Meadow rain garden B12 Portland blend - Inlet
HMPB122	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
HMGB151	Hayden's Meadow rain garden B15 Gresham blend - Inlet
HMGB152	Hayden's Meadow rain garden B15 Gresham blend - Outlet
KanePP	Kane Road Full Pervious
KanePO	Kane Road Pervious Overlay
KaneIP	Kane Road Impervious
KaneIC	Kane Road Impervious with Contech filter cartridges

Cities of Gresham and Fairview Environmental Monitoring Data

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 trib)	
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	
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*	0.015 mg/L
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;

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

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)

Cities of Gresham and Fairview Environmental Monitoring Data

Table 2-2 Instream-Long term Trend Sampling

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	Cu-Diss
				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	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	EPA 200.8
Method Reporting Limit										2	1	2	20	2	100	20	20	30	1	0.001	0.2	0.1	0.5	0.2
W16G239-01	FCI0	7/28/2016	14:29	0.00	4.44	7.81	22.4	102.1	2.33	3		2	22	5.6	580	87	310	118	83.2	0.00100	1.030	0.198	5.1	0.762
W16G239-02	FCI1	7/28/2016	14:40	0.00	5.03	7.66	19.2	122.9	2.23	2		2	20	2	1300	66	210	70	115.0	0.00100	0.935	0.363	2.9	0.639
W16G240-01	FVL1	7/28/2016	14:10	0.00	3.59	9.05	25.8	93.6	22.00	9		36	20	94.1	100	37	1250	252	70.2	0.00161	1.440	0.608	2.8	0.821
W16G239-03	JCI1	7/28/2016	9:22	0.00	5.06	7.85	21.0	60.4	4.43	2		4	54	2	370	49	440	70	42.5	0.00137	1.560	0.190	4.2	1.560
W16G239-04	JCI2	7/28/2016	10:43	0.00	8.38	7.63	18.8	56.4	10.50	2		6	20	2	700	43	360	68	36.5	0.00219	1.500	0.288	2.7	1.070
W16G239-05	KCI1	7/28/2016	13:02	0.00	4.25	7.52	22.5	66.4	1.44	2		6	20	2	270	41	470	56	47.3	0.00136	2.790	0.282	15.1	1.980
W16G239-06	KCI3	7/28/2016	11:20	0.00	2.09	7.10	18.2	72.6	7.09	10		6	20	2	100	43	480	49	54.3	0.00100	1.360	0.100	20.4	0.892
W16G239-07	KCI4	7/28/2016	11:39	0.00	6.34	7.57	17.9	75.9	4.47	2		2	20	2	1400	35	330	43	63.3	0.00100	1.450	0.100	10.4	1.270
W16G239-08	KI1	7/28/2016	10:15	0.00	9.35	7.27	15.3	74.7	3.33	2		5	487	2	1700	659	1030	779	77.2	0.00173	2.120	0.305	3.3	1.580
W16G239-09	KI2	7/28/2016	9:51	0.00	5.07	6.80	17.9	92.4	7.00	2		2	20	2	380	28	200	31	72.5	0.00315	0.653	0.117	4.3	0.474
W16G239-10	BCI1	7/28/2016	13:38	0.00	5.54	7.96	22.2	95.1	1.43	2		2	20	2	1200	68	310	98	75.0	0.00100	1.080	0.100	3.0	0.954
W16G239-11	BCI2	7/28/2016	12:05	0.00	8.19	7.58	19.5	67.5	5.20	2		10	21	24	1000	74	450	124	46.9	0.00154	2.140	0.150	2.7	1.930
W16G239-12	FD-KI1	7/28/2016	10:15							2		6	451	2	1700	665	930	785	73.7	0.00164	2.150	0.291	3.2	1.560
W16J207-01	FCI0	10/25/2016	14:12	0.10	5.46	7.23	13.6	65.6	2.80	2	2.72	5	20	2	760	56	390	80	52.1	0.00145	1.250	0.134	11.3	1.020
W16J207-02	FCI1	10/25/2016	14:35	0.10	4.86	7.18	13.6	102.7	1.40	2	1.62	2	20	2	1440	79	200	89	85.6	0.00100	0.774	0.235	7.0	0.597
W16J208-01	FVL1	10/25/2016	13:52	0.10	5.27	7.04	12.6	65.8	13.30	3	3	22	79	23.2	340	27	750	104	60.1	0.00276	1.38	0.461	4.97	0.845
W16J207-03	JCI1	10/25/2016	9:07	0.10	9.87	7.23	12.1	44.3	8.52	2	2.62	5	20	2	2220	24	320	53	29.9	0.00259	1.370	0.260	6.7	0.941
W16J207-04	JCI2	10/25/2016	10:55	0.10	11.41	6.60	11.9	37.4	7.34	2	2.06	3	20	2	2740	20	260	39	24.5	0.00233	0.909	0.164	3.2	0.653
W16J207-05	KCI1	10/25/2016	12:45	0.10	8.70	7.04	13.3	64.0	5.20	2	3.88	3	52	2	2230	30	470	67	48.2	0.00317	2.430	0.248	26.5	1.780
W16J207-06	KCI3	10/25/2016	11:27	0.10	7.08	6.42	12.4	73.2	3.37	2	3.25	2	20	2	4140	20	450	30	59.7	0.00132	1.110	0.100	10.1	0.978
W16J207-07	KCI4	10/25/2016	11:44	0.10	8.97	6.78	12.8	76.0	2.97	2	2.99	15	20	2	4590	20	450	40	58.6	0.00154	1.170	0.149	8.0	0.870
W16J207-08	KI1	10/25/2016	9:40	0.10	8.80	6.86	11.8	53.8	7.56	2	4.19	8	34	2	910	49	440	96	39.7	0.00335	1.600	0.184	19.4	1.250
W16J207-09	KI2	10/25/2016	10:17	0.10	11.17	6.85	11.4	50.5	8.39	2	1.96	5	20	2	1780	20	220	30	41.0	0.00187	0.521	0.112	3.4	0.428
W16J207-10	BCI1	10/25/2016	13:16	0.10	6.53	7.14	12.7	58.9	4.90	2	2.70	2	20	2	3400	34	500	60	46.4	0.00231	2.000	0.113	7.2	1.720
W16J207-11	BCI2	10/25/2016	12:01	0.10	10.65	6.95	12.2	53.0	5.50	2	2.22	12	20	2	4330	27	370	46	38.5	0.00217	3.740	0.171	2.8	3.440
W16J207-12	FD-FVL1	10/25/2016								2	2.99	20	72	8	330	30	660	89	57.6	0.00275	1.790	0.522	5.3	0.849
W17A228-01	FCI0	1/31/2017	14:04	0.04	NA	7.54	5.7	NA	NA	2	1.46	6	23		1.6	44	250	54	62.0	0.00160	1.190	0.546	8.9	0.554
W17A228-02	FCI1	1/31/2017	14:21	0.04	NA	6.92	10.4	NA	NA	2	1.00	2	20		2.7	79	200	79	57.2	0.00100	0.447	0.137	6.6	0.318
W17A229	FVL1	1/31/2017	13:49	0.04	NA	7.6	4.5	NA	NA	2	1.62	6	50		1000	25	370	53	86	0.00115	0.94	0.225	2.79	0.558
W17A228-03	JCI1	1/31/2017	9:36	0.00	NA	8.48	5.6	NA	NA	2	1.34	3	20		2.4	20	200	25	29.3	0.00149	0.619	0.147	4.5	0.430
W17A228-04	JCI2	1/31/2017	11:03	0.00	NA	7.59	5.4	NA	NA	2	1.00	3	20		2.9	20	220	25	20.9	0.00107	0.519	0.129	2.2	0.312
W17A228-05	KCI1	1/31/2017	12:45	0.02	NA	7.37	5.7	NA	NA	2	2.15	3	52		1.9	33	390	47	54.1	0.00200	1.360	0.369	16.9	0.801
W17A228-06	KCI3	1/31/2017	11:49	0.00	NA	7.41	5.1	NA	NA	2	2.00	2	24		2.1	20	270	25	42.8	0.00109	0.670	0.100	5.9	0.560
W17A228-07	KCI4	1/31/2017	12:05	0.02	NA	7.30	5.3	NA	NA	2	1.91	8	49		2.2	21	280	25	43.4	0.00148	0.776	0.128	4.7	0.516
W17A228-08	KI1	1/31/2017	10:11	0.00	NA	7.92	5.2	NA	NA	2	1.88	6	56		1	27	300	36	32.9	0.00172	0.836	0.190	3.6	0.575
W17A228-09	KI2	1/31/2017	10:34	0.00	NA	7.75	6.1	NA	NA	2	1.00	5	20		2	20	210	25	32.1	0.00149	0.459	0.143	4.1	0.236
W17A228-10	BCI1	1/31/2017	13:18	0.04	NA	7.59	5.4	NA	NA	2	1.64	2	20		2.6	25	250	26	43.2	0.00128	0.737	0.100	3.3	0.543
W17A228-11	BCI2	1/31/2017	12:23	0.02	NA	7.27	4.7	NA	NA	2	1.32	4	20		3.1	20	280	28	28.0	0.00135	0.632	0.117	2.6	0.400
W17A228-12	FD-JCI1	1/31/2017								2		3	20		2.4	20	250	25	28.1	0.00140	0.623	0.159	4.2	0.401
W17E014-01	FCI0	5/2/2017	14:37	0.03	4.76	7.12	11.0	95.9	5.88	2	1.74	8	24		1.4	46	480	50	55.5	0.00171	1.14	0.375	6.9	0.703
W17E014-02	FCI1	5/2/2017	14:57	0.03	5.39	6.48	12.4	97.6	0.84	2	1	3	20		2.7	80	200	74	55.9	0.00100	0.366	0.1	5.8	0.337
W17E015	FVL1	5/2/2017	14:20	0.03	4.15	7.78	15.3	106.5	15.90	4	2.32	21	32		540	20	1.05	77	66.1	0.00202	1.60	0.503	5.28	0.849
W17E014-03	JCI1	5/2/2017	9:54	0.03	11.50	5.30	10.8	46.8	8.29	2	1.36	4	20		1.7	20	290	25	25.5	0.00175	0.832	0.214	5.5	0.535
W17E014-04	JCI2	5/2/2017	11:02	0.03	9.60	7.05	10.8	38.7	7.76	2	1.1	4	20		2	20	390	35	19.8	0.00264	0.973	0.474	4.5	0.396
W17E014-05	KCI1	5/2/2017	13:06	0.03	5.97	6.66	11.6	80.1	4.83	2	2.43	3	20		1.2	34	420	27	47.2	0.00197	1.28	0.163	13.8	1.08
W17E014-06	KCI3	5/2/2017	11:34	0.03	7.53	6.64	10.8	70.0	4.25	2	2.22	3	20		1.3	22	350	25	45	0.00100	0.899	0.1	143.0	0.743
W17E014-07	KCI4	5/2/2017	11:47	0.03	7.48	6.75	10.8	70.1	4.28	2	2.14	3	27		1.4	22	300	25	42	0.00117	0.863	0.1	95.1	0.684
W17E014-08	KI1	5/2/2017	10:09	0.03	10.58	5.90	10.4	55.3	7.01	2	1.87	8	39		0.69	28	350	45	32.1	0.00211	0.899	0.258	4.7	0.649
W17E014-09	KI2	5/2/2017	10:29	0.03	10.63	6.15	9.7	44.0	8.75	2	1	7	20		1.5	20	220	25	25.4	0.00163	0.496	0.181	4.3	0.301
W17E014-10	BCI1	5/2/2017	13:47	0.03	5.22	7.20	12.3	70.8	4.55	2	1.77	3	20		1.8	26	320	25	39.8	0.00135	0.885	0.1	3.5	0.725
W17E014-11	BCI2	5/2/2017	12:10	0.03	8.76	6.64	11.5	49.2	6.82	2	1.43	5	20		2.2	20	290	25	26.1	0.00150	0.814	0.119	2.0	0.627
W17E014-12	FD-BCI2	5/2/2017								2	1.56	4	21		2.2	20	280	25	26.2	0.00147	0.806	0.13	2.4	0.624

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 included at the top of each data set where they are constant.

For parameters where no MRL is included, this means they vary by sample.

Exceedance of TMDL or other water quaity criteria

Chronic exceedance of metal (Table 30)

Acute exceedance of metal (Table 30)

Exceedance of City WPCF Permit action level

Table 2-2 Instream-Long term Trend Sampling

Sample ID	Site ID	Date	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	Endrin Ketone
			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	ng/L
Test Method			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	EPA 8081
Method Reporting Limit			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	0.5-various
W16G239-01	FCI0	7/28/2016	**0.1**	2.83	170																
W16G239-02	FCI1	7/28/2016	**0.1**	1.62	310																
W16G240-01	FVL1	7/28/2016	**0.1**	0.50	**10**																
W16G239-03	JCI1	7/28/2016	**0.1**	3.36	86	**1.1**	**1.1**	**1.1**	**1.1**	**1.2**	**1.1**	**2.9**	**1.1**	**2.2**	**1.9**	**4.2**	**1.1**	**1.1**	**1.1**	**3.7**	**1.1**
W16G239-04	JCI2	7/28/2016	**0.1**	1.08	74	**1.2**	**3.2**	**1.2**	**1.2**	**1.2**	**1.2**	1.2	**1.2**	**2.3**	**5.5**	**13**	**1.2**	**1.2**	**1.2**	**1.2**	**1.2**
W16G239-05	KCI1	7/28/2016	**0.1**	7.89	10																
W16G239-06	KCI3	7/28/2016	**0.1**	5.20	62																
W16G239-07	KCI4	7/28/2016	**0.1**	8.17	140																
W16G239-08	KI1	7/28/2016	**0.1**	1.02	670																
W16G239-09	KI2	7/28/2016	**0.1**	1.65	110																
W16G239-10	BCI1	7/28/2016	**0.1**	1.88	31																
W16G239-11	BCI2	7/28/2016	**0.1**	1.63	660																
W16G239-12	FD-KI1	7/28/2016	**0.1**	1.02	1000																
W16J207-01	FCI0	10/25/2016	**0.1**	4.31	20																
W16J207-02	FCI1	10/25/2016	**0.1**	6.45	75																
W16J208-01	FVL1	10/25/2016	**0.1**	1.57	85																
W16J207-03	JCI1	10/25/2016	**0.1**	4.08	180	**0.99**	**0.99**	**0.99**	**0.99**	**0.99**	**0.99**	**1.3**	**0.99**	**3.7**	7.9	**0.99**	**0.99**	**0.99**	**0.99**	**1.1**	**0.99**
W16J207-04	JCI2	10/25/2016	**0.1**	1.73	30	**0.97**	**0.97**	**0.97**	**0.97**	**0.97**	**0.97**	**0.97**	**0.97**	**0.97**	5.2	**0.97**	**0.97**	**0.97**	**0.97**	**0.97**	**0.97**
W16J207-05	KCI1	10/25/2016	**0.1**	18.70	94																
W16J207-06	KCI3	10/25/2016	**0.1**	7.82	41																
W16J207-07	KCI4	10/25/2016	**0.1**	6.07	140																
W16J207-08	KI1	10/25/2016	**0.1**	16.40	820																
W16J207-09	KI2	10/25/2016	**0.1**	2.10	20																
W16J207-10	BCI1	10/25/2016	**0.1**	4.65	57																
W16J207-11	BCI2	10/25/2016	**0.1**	1.50	120																
W16J207-12	FD-FVL1	10/25/2016	**0.1**	1.61	75																
W17A228-01	FCI0	1/31/2017	**0.1**	3.82	31																
W17A228-02	FCI1	1/31/2017	**0.1**	5.54	20																
W17A229	FVL1	1/31/2017	**0.1**	0.99	10																
W17A228-03	JCI1	1/31/2017	**0.1**	3.58	31	**1**	0.75	**1**	**1**	**1**	**1**	**1**	**1**	**1.5**	3.5	**1**	**1**	**1**	**1**	**1**	**1**
W17A228-04	JCI2	1/31/2017	**0.1**	1.29	52	**1.2**	0.72	**1.2**	**1.2**	**1.2**	**1.2**	**1.2**	**1.2**	**1.2**	4.4	**1.2**	**1.2**	**1.2**	**1.2**	**1.2**	**1.2**
W17A228-05	KCI1	1/31/2017	**0.1**	9.35	10																
W17A228-06	KCI3	1/31/2017	**0.1**	6.08	10																
W17A228-07	KCI4	1/31/2017	**0.1**	2.81	52																
W17A228-08	KI1	1/31/2017	**0.1**	3.16	110																
W17A228-09	KI2	1/31/2017	**0.1**	1.89	10																
W17A228-10	BCI1	1/31/2017	**0.1**	2.23	10																
W17A228-11	BCI2	1/31/2017	**0.1**	1.08	63																
W17A228-12	FD-JCI1	1/31/2017	**0.1**	3.11	42	**0.98**	0.96	**0.98**	**0.98**	**0.98**	**0.98**	**0.98**	**0.98**	**1.4**	3.1	**0.98**	**0.98**	**0.98**	**0.98**	**0.98**	**0.98**
W17E014-01	FCI0	5/2/2017	**0.1**	3.29	52																
W17E014-02	FCI1	5/2/2017	**0.1**	5.09	240																
W17E015	FVL1	5/2/2017	**0.10**	0.813	110																
W17E014-03	JCI1	5/2/2017	**0.1**	3.76	170	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	2.8	**1**	**1**	**1**	**1**	**1**	**1**
W17E014-04	JCI2	5/2/2017	**0.1**	1.25	85	**1.1**	**1.1**	**1.1**	**1.1**	**1.1**	**1.1**	**1.1**	**1.1**	**1.1**	3.5	**1.1**	**1.1**	**1.1**	**1.1**	**1.1**	**1.1**
W17E014-05	KCI1	5/2/2017	**0.1**	10	130																
W17E014-06	KCI3	5/2/2017	**0.1**	129	95																
W17E014-07	KCI4	5/2/2017	**0.1**	85.2	110																
W17E014-08	KI1	5/2/2017	**0.1**	3.31	810																
W17E014-09	KI2	5/2/2017	**0.1**	2.29	52																
W17E014-10	BCI1	5/2/2017	**0.1**	1.73	41																
W17E014-11	BCI2	5/2/2017	**0.1**	0.891	98																
W17E014-12	FD-BCI2	5/2/2017	**0.1**	1.42	97																

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Exceedance of TMDL or other water quaity criteria

Chronic exceedance of metal (Table 30)

Acute exceedance of metal (Table 30)

Exceedance of City WPCF Permit action level

Table 2-2 Instream-Long term Trend Sampling

Sample ID	Site ID	Date	gamma-Chlordane	Heptachlor	Heptachlor Epoxide	Methoxychlor	Toxaphene
			ng/L	ng/L	ng/L	ng/L	ng/L
Test Method			EPA 8081	EPA 8081	EPA 8081	EPA 8081	EPA 8081
Method Reporting Limit			1.0-various	0.5-various	1.0-various	0.5-various	50-various
W16G239-01	FCI0	7/28/2016					
W16G239-02	FCI1	7/28/2016					
W16G240-01	FVL1	7/28/2016					
W16G239-03	JCI1	7/28/2016	**1.1**	**1.1**	**1.1**	**1.1**	**480**
W16G239-04	JCI2	7/28/2016	**3.1**	**1.2**	**1.2**	**1.2**	**57**
W16G239-05	KCI1	7/28/2016					
W16G239-06	KCI3	7/28/2016					
W16G239-07	KCI4	7/28/2016					
W16G239-08	KI1	7/28/2016					
W16G239-09	KI2	7/28/2016					
W16G239-10	BCI1	7/28/2016					
W16G239-11	BCI2	7/28/2016					
W16G239-12	FD-KI1	7/28/2016					
W16J207-01	FCI0	10/25/2016					
W16J207-02	FCI1	10/25/2016					
W16J208-01	FVL1	10/25/2016					
W16J207-03	JCI1	10/25/2016	**0.99**	**0.99**	**0.99**	**0.99**	**50**
W16J207-04	JCI2	10/25/2016	**0.97**	**0.97**	**0.97**	**0.97**	**49**
W16J207-05	KCI1	10/25/2016					
W16J207-06	KCI3	10/25/2016					
W16J207-07	KCI4	10/25/2016					
W16J207-08	KI1	10/25/2016					
W16J207-09	KI2	10/25/2016					
W16J207-10	BCI1	10/25/2016					
W16J207-11	BCI2	10/25/2016					
W16J207-12	FD-FVL1	10/25/2016					
W17A228-01	FCI0	1/31/2017					
W17A228-02	FCI1	1/31/2017					
W17A229	FVL1	1/31/2017					
W17A228-03	JCI1	1/31/2017	**1**	**1**	**1**	**1**	**50**
W17A228-04	JCI2	1/31/2017	**1.2**	**1.2**	**1.2**	**1.2**	**58**
W17A228-05	KCI1	1/31/2017					
W17A228-06	KCI3	1/31/2017					
W17A228-07	KCI4	1/31/2017					
W17A228-08	KI1	1/31/2017					
W17A228-09	KI2	1/31/2017					
W17A228-10	BCI1	1/31/2017					
W17A228-11	BCI2	1/31/2017					
W17A228-12	FD-JCI1	1/31/2017	**0.98**	**0.98**	**0.98**	**0.98**	**49**
W17E014-01	FCI0	5/2/2017					
W17E014-02	FCI1	5/2/2017					
W17E015	FVL1	5/2/2017					
W17E014-03	JCI1	5/2/2017	**1**	**1**	**1**	**1**	**50**
W17E014-04	JCI2	5/2/2017	**1.1**	**1.1**	**1.1**	**1.1**	**51**
W17E014-05	KCI1	5/2/2017					
W17E014-06	KCI3	5/2/2017					
W17E014-07	KCI4	5/2/2017					
W17E014-08	KI1	5/2/2017					
W17E014-09	KI2	5/2/2017					
W17E014-10	BCI1	5/2/2017					
W17E014-11	BCI2	5/2/2017					
W17E014-12	FD-BCI2	5/2/2017					

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For parameters where no MRL is included, this means they vary by sample.

Exceedance of TMDL or other water quaity 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

Site	Basin	Stream	Max 7DADM (*C)	days 7DADM >18*C
Beaver_USKellyConfl	Beaver	Beaver	22.2	87
Beaver_GlenOtto	Beaver	Beaver	22.8	127
Beaver_DSKellyConfl	Beaver	Beaver	23.8	128
Beaver_302nd	Beaver	Beaver	20.9	55
Beaver_Corry	Beaver	Beaver	20.8	67
Beaver_SouthFork_302nd	Beaver	South Fork	17.1	0
Kelly_aboveMHCC_KCI2	Beaver	Kelly	21.8	83
Kelly_KCDPoutlet_KCI3	Beaver	Kelly	18.8	31
Kelly_USGolfCourse	Beaver	Kelly	18.9	16
KellyBelowMHCC_KCI1	Beaver	Kelly	24.0	142
Fairview_ConiferPark_FCI1	Fairview	Fairview	19.3	44
Fairview_Division	Fairview	Fairview	20.7	49
Fairview_Birdsdale	Fairview	Fairview	21.5	90
Fairview_223rd_FCI0	Fairview	Fairview	22.8	128
Fairview_Glisan	Fairview	Fairview	25.9	181
Brigman_DSInlinePonds	Johnson	Brigman	22.6	135
Brigman_USInlinePonds	Johnson	Brigman	23.5	87
BUC1	Johnson	Butler	19.9	33
BUC2	Johnson	Butler	20.5	55
BUC4	Johnson	Butler	21.1	79
BUC3	Johnson	Butler	23.2	96
Hogan_USGolfCourse	Johnson	Hogan	15.3	0
Hogan_USCedarLake	Johnson	Hogan	19.4	34
Hogan_DSGolfCourse	Johnson	Hogan	20.2	58
Hogan_DSCedarLake	Johnson	Hogan	24.6	159
Johnson_DSBrigman_53	Johnson	Johnson	21.0	62
Johnson_282nd	Johnson	Johnson	21.1	70
Johnson_RobertsPropUSBeaverDam	Johnson	Johnson	21.4	80
Johnson_RobertsPropDSBeaverDam	Johnson	Johnson	21.6	83
Johnson_Palmblad_JCI2	Johnson	Johnson	21.9	83
Johnson_USNechacokee	Johnson	Johnson	22.7	87
Johnson_USOcciotoBeaverDam	Johnson	Johnson	23.1	95
Johnson_Sycamore max	Johnson	Johnson	23.3	92
Johnson_Regner max	Johnson	Johnson	23.4	87
Johnson_DSHighland_41	Johnson	Johnson	23.5	103
Johnson_NorthFork_HeadwatersFarm	Johnson	North Fork	17.8	0
Kelley_190th	Johnson	Kelley	19.0	29
Kelley_USBrooksideOutfall	Johnson	Kelley	19.3	14
Kelley_PVG_KI1	Johnson	Kelley	20.0	52

7 Day Average of the Daily Maximum=7DADM

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.

Table 2-4 Stormwater Sampling

Lab ID	System_ID	Trips per Day	Land Use	Functional Class	Date	Time	Rainfall Previous	DO	pH	Temp	Conductivy	Turbidity	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
W16J115-01	2947-W-010	<1000	Residential	Residential	10/13/2016	15:00	1.36	9.02	7.18	13.3	26.5	15	910	7	5.96	9	**20**	**100**	275	490	365	2.39	0.274	**0.1**	2.91	0.311	0.00357	15.4	2.070	**0.1**	11.1
W16J115-02	3148-W-014	>1000	Residential	Community	10/13/2016	15:30	1.36	9.05	7.48	13.8	6.8	33	3300	3	2.29	16	66	**100**	**20**	380	69	2.89	0.628	**0.1**	6.17	1.65	0.004	29.6	1.970	**0.1**	11.7
W16J115-03	3249-W-055	>1000	Commercial	Minor Arterial	10/13/2016	10:50	0.99	10.41	8.13	12.6	14.5	173	1000	5	2.82	153	314	60	**20**	1280	346	13.1	2.040	0.16	26.9	10.2	0.00788	149	3.110	0.139	27.1
W16J115-04	3050-W-027	<1000	Residential	Residential	10/13/2016	14:40	1.32	8.74	6.34	13.8	12.2	14	86	**2**	2.32	4	**20**	**100**	22	230	43	6.42	0.142	**0.1**	3.23	0.175	0.00265	35.8	2.340	**0.1**	29.2
W16J115-05	3050-F-017	>1000	Vacant	Minor Arterial	10/13/2016	12:20	1.12	9.6	7.24	13.3	9.6	10	20	**2**	2.18	**2**	128	**100**	**20**	430	37	2.82	0.418	**0.1**	3.47	2.19	0.0022	21.6	1.790	0.175	13.9
W16J115-06	3150-F-030	<1000	Residential	Residential	10/13/2016	12:50	1.12	8.9	6.84	13	14.9	6	280	2	2.05	3	**20**	**100**	24	210	52	3.52	0.181	**0.1**	2.5	0.338	0.00259	22.4	1.900	**0.1**	19.5
W16J115-07	3151-F-064	>1000	Commercial	Collector	10/13/2016	11:40	1.06	8.76	6.34	12.8	11.4	23	86	3	2.38	13	160	**100**	25	370	65	5.98	0.919	**0.1**	7.01	1.17	0.00375	31.8	3.150	**0.1**	16.6
W16J115-08	3151-F-032	<1000	Residential	Residential	10/13/2016	14:20	1.32	8.6	6.34	13.9	9	51	240	5	3.48	4	**20**	**100**	55	1470	398	12.3	0.310	0.131	7.59	8.45	0.0164	45.8	1.460	**0.1**	4.8
W16J115-09	3251-F-013	<1000	Residential	Residential	10/13/2016	13:50	1.22	14.7	7.55	13.4	14.9	6	1200	2	4.33	2	**20**	80	42	360	90	6.16	0.100	**0.1**	5.16	0.12	0.00452	50.9	4.280	**0.1**	45
W16J115-10	3153-F-040	<1000	Residential	Residential	10/13/2016	9:57	0.84	8.84	7.92	12.7	34	8	110	2	1.27	12	**20**	**100**	26	270	68	3.5	0.178	**0.1**	4.44	1.2	0.0051	18.9	1.270	**0.1**	7.07
W16J115-11	FD												330	2	2.12	4	**20**	**100**	26	230	54	3.59	0.178	**0.1**	2.78	0.35	0.00258	22.7	1.620	**0.1**	17.7

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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	Anthr acene	Benzo-(a)-anthra cene	Benzo-(a)-pyrene	Benzo(b)-fluoran-thene	Benzo(ghi)-perylene	Benzo(k) fluoran-thene	Chrysene	Dibenzo (a,h)ant hracene	Fluoran thene	Fluore ne	Indeno-(1,2,3-cd)pyrene	Naphthalene	Phenan-threne	Pyrene	Butyl benzyl phthalate	Di-n-butyl phthalate	Diethyl phthalate	Dimethy l phthalat e	Di-n-octyl phthalat e	Di-(2-ethylhexyl)-phthalate
Method Reporting Limit							ug/L	MPN/100ml	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Analytical Method																												
W16J115-01	2947-W-010	<1000	Residential	Residential	10/13/2016	15:00	**0.020**	**0.020**	**0.020**	**0.010**	0.011	0.024	0.023	**0.100**	**0.010**	0.022	0.011	**0.020**	0.017	0.081	**0.020**	0.018	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	2.4
W16J115-02	3148-W-014	>1000	Residential	Community	10/13/2016	15:30	**0.020**	**0.020**	**0.020**	**0.010**	**0.010**	0.015	0.033	**0.100**	0.013	0.100	0.027	**0.020**	**0.010**	0.043	0.033	0.054	**1.0**	**1.0**	**1.0**	**1.0**	0.6	2.8
W16J115-03	3249-W-055	>1000	Commercial	Minor Arterial	10/13/2016	10:50	**0.020**	0.027	0.026	0.050	0.061	0.100	0.180	0.030	0.081	0.014	0.200	**0.020**	0.051	0.095	0.130	0.330	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	1.1
W16J115-04	3050-W-027	<1000	Residential	Residential	10/13/2016	14:40	**0.020**	**0.020**	**0.020**	**0.010**	**0.010**	0.015	0.014	**0.100**	**0.010**	**0.100**	**0.010**	**0.020**	0.011	**0.040**	**0.020**	0.012	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	1.0
W16J115-05	3050-F-017	>1000	Vacant	Minor Arterial	10/13/2016	12:20	**0.020**	**0.020**	**0.020**	**0.010**	**0.010**	0.017	0.022	**0.100**	**0.010**	**0.100**	0.019	**0.020**	**0.010**	0.230	0.026	0.030	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	4.2
W16J115-06	3150-F-030	<1000	Residential	Residential	10/13/2016	12:50	**0.020**	**0.020**	**0.020**	**0.010**	**0.010**	0.011	0.013	**0.100**	**0.010**	**0.100**	**0.010**	**0.020**	**0.010**	**0.040**	**0.020**	0.014	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	1.9
W16J115-07	3151-F-064	>1000	Commercial	Collector	10/13/2016	11:40	**0.020**	**0.020**	**0.020**	**0.010**	**0.010**	0.018	0.032	**0.100**	0.018	**0.100**	0.036	**0.020**	**0.010**	0.042	0.037	0.066	**1.0**	**1.0**	**1.0**	**1.0**	0.5	12.0
W16J115-08	3151-F-032	<1000	Residential	Residential	10/13/2016	14:20	**0.020**	**0.020**	**0.020**	**0.010**	**0.010**	**0.010**	**0.010**	**0.100**	**0.010**	**0.100**	**0.010**	**0.020**	**0.010**	**0.040**	**0.020**	**0.010**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	1.0
W16J115-09	3251-F-013	<1000	Residential	Residential	10/13/2016	13:50	**0.020**	**0.020**	**0.020**	**0.010**	**0.010**	**0.010**	**0.010**	**0.100**	**0.010**	**0.100**	**0.010**	**0.020**	**0.010**	**0.040**	**0.020**	**0.010**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	0.7
W16J115-10	3153-F-040	<1000	Residential	Residential	10/13/2016	9:57	**0.020**	**0.020**	**0.020**	**0.010**	**0.010**	0.015	0.023	**0.100**	**0.011**	**0.100**	0.019	**0.020**	**0.010**	**0.040**	**0.020**	0.031	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	0.9
W16J115-11	FD						**0.020**	**0.020**	**0.020**	**0.010**	**0.010**	**0.010**	**0.010**	**0.100**	**0.010**	**0.100**	**0.010**	**0.020**	**0.010**	**0.040**	**0.020**	0.012	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	1.3

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means they vary by sample. Results below the MRL are estimates of

FD = Field Duplicate Sample

Table 2-4 Stormwater Sampling

Stormwater Sampling

Lab ID	System_ID	Trips per Day	Land Use	Functional Class	Date	Time	2,4,5-T	2,4,5-TP (Silvex)	2,4-D	2,4-DB	Acifluorfen	Bentazon	3,5-Dichlorobenzoic acid	Dicamba	Dichlorprop	Dinoseb	Pentachlo-rophenol
Method Reporting Limit							**0.040 ug/L**	**0.040 ug/L**	**0.040 ug/L**	**0.040 ug/L**	**0.040 ug/L**	**0.040 ug/L**	**0.200 ug/L**	**0.040 ug/L**	**0.040 ug/L**	**0.040 ug/L**	**0.040 ug/L**
Analytical Method																	
W16J115-01	2947-W-010	<1000	Residential	Residential	10/13/2016	15:00	<0.100	<.0100	<.0200	<0.400	<0.200	<0.400	<0.200	<0.200	<0.400	<0.400	0.056
W16J115-02	3148-W-014	>1000	Residential	Community	10/13/2016	15:30	<0.100	<.0101	<.0201	<0.400	<0.200	<0.400	<0.200	<0.200	<0.400	<0.400	0.062
W16J115-03	3249-W-055	>1000	Commercial	Minor Arterial	10/13/2016	10:50	<0.100	<.0102	<.0202	<0.400	<0.200	<0.400	<0.200	<0.200	<0.400	<0.400	2.270
W16J115-04	3050-W-027	<1000	Residential	Residential	10/13/2016	14:40	<0.100	<.0103	<.0203	<0.400	<0.200	<0.400	<0.200	<0.200	<0.400	<0.400	0.030
W16J115-05	3050-F-017	>1000	Vacant	Minor Arterial	10/13/2016	12:20	<0.100	<.0104	<.0204	<0.400	<0.200	<0.400	<0.200	<0.200	<0.400	<0.400	3.570
W16J115-06	3150-F-030	<1000	Residential	Residential	10/13/2016	12:50	<0.100	<.0105	<.0205	<0.400	<0.200	<0.400	<0.200	<0.200	<0.400	<0.400	0.143
W16J115-07	3151-F-064	>1000	Commercial	Collector	10/13/2016	11:40	<0.100	<.0106	<.0206	<0.400	<0.200	<0.400	<0.200	<0.200	<0.400	<0.400	0.058
W16J115-08	3151-F-032	<1000	Residential	Residential	10/13/2016	14:20	<0.100	<.0107	<.0207	<0.400	<0.200	<0.400	<0.200	<0.200	<0.400	<0.400	0.024
W16J115-09	3251-F-013	<1000	Residential	Residential	10/13/2016	13:50	<0.100	<.0108	<.0208	<0.400	<0.200	<0.400	<0.200	<0.200	<0.400	<0.400	0.027
W16J115-10	3153-F-040	<1000	Residential	Residential	10/13/2016	9:57	<0.100	<.0109	<.0209	<0.400	<0.200	<0.400	<0.200	<0.200	<0.400	<0.400	0.040
W16J115-11	FD						<0.100	<.0110	<.0210	<0.400	<0.200	<0.400	<0.200	<0.200	<0.400	<0.400	0.131

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means they vary by sample. Results below the MRL are estimates of

FD = Field Duplicate Sample

Table 2-5 Stormwater BMP Monitoring Data

Sample ID	Site ID	Point Code	Date	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	Hard-ness mg CaCO3/L	Ca	Mg
					inches	mg/L		C°	uS/cm	NTUs	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L		mg/L	mg/L
											EPA 300.0	SM 5210B	EPA 300.0	EPA 365.1	EPA 351.2	EPA 365.4	SM 2540D	SM 2340B CAL	EPA 200.7	EPA 200.7
										0.01	20	2	100	20	100	25	2	1	0.5	0.5
W16I148-02	Brookside regional facility inlet	BRF1-1	9/17/2016	1	0.88	NA	NA	16.6	NA	58.8	467	21	360	115	2490	275	91	46	13.7	2.9
W16K129-01	Brookside regional facility inlet	BRF1-1	11/14/2016	3	0.63	9.24	6.97	13.8	32.5	48.2	20	**2**	570	80	500	159	9	31.3	7.82	2.86
W16I152-02	Brookside regional facility inlet	BRF1-2	9/17/2016	1	0.88	NA	NA	17.2	NA	26.7	21	4	270	63	780	130	14	26.6	6.83	2.32
W16K129-02	Brookside regional facility inlet	BRF1-2	11/14/2016	3	0.89	5.32	6.62	13.2	27.1	92.8	20	2	630	100	970	216	24	30.5	7.7	2.74
W16I152-05	Brookside regional facility inlet	BRF1-3	9/17/2016	1	0.88	NA	NA	17.6	NA	16.3	**20**	**2**	840	61	490	109	5	55.4	13.3	5.37
W16K129-03	Brookside regional facility inlet	BRF1-3	11/14/2016	3	1.23	4.65	6.98	13.1	26.9	153	22	2	690	149	900	371	48	27.8	6.85	2.6
W16I148-03	Brookside regional facility outlet	BRF2-1	9/17/2016	1	0.88	NA	NA	14.7	NA	1.52	**20**	**2**	140	108	670	128	**2**	105	21.8	12.2
W16K129-04	Brookside regional facility outlet	BRF2-1	11/14/2016	3	0.63	7.95	6.81	13.6	29.4	34.2	20	**2**	540	46	480	102	3	30.8	7.42	2.97
W16I152-03	Brookside regional facility outlet	BRF2-2	9/17/2016	1	0.88	NA	NA	16.9	NA	16.8	**20**	3	220	67	560	106	5	88.1	21.4	8.43
W16K129-05	Brookside regional facility outlet	BRF2-2	11/14/2016	3	0.89	4.21	6.83	13	26.8	79.7	20	**2**	820	77	700	161	12	28.5	6.95	2.7
W16I152-06	Brookside regional facility outlet	BRF2-3	9/17/2016	1	0.88	NA	NA	17	NA	11.6	**20**	**2**	430	53	540	96	5	41.4	10.3	3.81
W16K129-06	Brookside regional facility outlet	BRF2-3	11/14/2016	3	1.38	4.71	7.13	13.2	24.6	148	20	**2**	650	119	830	257	33	26.3	6.53	2.43
W16I148-01	Street runoff at Brookside	BrookBub-1	9/17/2016	1	0.88	NA	NA	15.1	NA	68.2	142	9	180	56	1150	207	38	22.7	7.4	1.02
W16I152-01	Street runoff at Brookside	BrookBub-2	9/17/2016	1	0.88	NA	NA	17.6	NA	7.95	20	3	740	53	620	92	6	28.6	7.99	2.11
W16I152-04	Street runoff at Brookside	BrookBub-3	9/17/2016	1	0.88	NA	NA	19	NA	10.7	**20**	2	1600	49	630	87	4	50.7	13	4.4
W16K062-05	CSWQF downstram of beaver dam at last rock terrace	CSDSB-1	11/5/2016	2	0.26	6.91	6.89	13.8	55.3	4.6	26	**2**	1800	63	340	90	4	58.3	14.9	5.12
W16K057-05	CSWQF downstram of beaver dam at last rock terrace	CSDSB-2	11/5/2016	2	0.81	2.56	6.45	14.2	26.5	27.4	**20**	3	160	46	480	140	19	12.6	3.48	0.96
W16K058-05	CSWQF downstram of beaver dam at last rock terrace	CSDSB-3	11/5/2016	2	1.14	2.6	6.29	14.2	14.7	17.4	21	2	220	60	320	132	5	14.1	3.84	1.1
W16K062-03	CSWQF Main outfall from cells 1 and 2	CSI-1	11/5/2016	2	0.25	7.2	6.9	14.3	17.2	24.7	**20**	7	340	75	640	150	22	16.1	4.56	1.14
W16K057-03	CSWQF Main outfall from cells 1 and 2	CSI-2	11/5/2016	2	0.67	7.75	7.02	14.5	7.9	32.4	**20**	5	110	53	470	135	117	9.29	2.7	0.619
W16K058-03	CSWQF Main outfall from cells 1 and 2	CSI-3	11/5/2016	2	1.14	2.42	6.8	13.6	8.9	14.8	21	2	160	34	270	69	80	9.59	2.79	0.635
W16K062-04	CSWQF upstram of beaver dam at first rock terrace	CSUSB-1	11/5/2016	2	0.26	6.69	6.83	14.2	45.5	14	41	5	1300	91	480	128	8	15.8	4.37	1.2
W16K057-04	CSWQF upstram of beaver dam at first rock terrace	CSUSB-2	11/5/2016	2	0.81	6.23	6.56	14.5	7.9	22.8	38	3	120	46	430	123	16	9.27	2.64	0.651
W16K058-04	CSWQF upstram of beaver dam at first rock terrace	CSUSB-3	11/5/2016	2	1.14	2.48	6.56	13.6	9.4	15.5	**20**	**2**	170	36	280	78	9	10.1	2.91	0.698
W16K062-01	CSWQF Stormdrain Creek	CSWQF1-1	11/5/2016	2	0.25	9.95	6.22	14.2	15.1	25.7	41	7	290	81	590	164	35	15.9	4.58	1.08
W16K057-01	CSWQF Stormdrain Creek	CSWQF1-2	11/5/2016	2	0.67	6.75	6.21	14.6	7.2	36.6	**20**	5	**100**	41	650	214	71	10	2.95	0.646
W16K058-01	CSWQF Stormdrain Creek	CSWQF1-3	11/5/2016	2	1.14	24	6.04	13.7	9.2	19.4	**20**	**2**	170	30	240	63	19	10.4	3.04	0.691
W16K062-06	CSWQF Outlet	CSWQF3-1	11/5/2016	2	0.26	5.59	6.68	13.7	51	8.5	**20**	2	1300	69	420	98	12	50.6	13.1	4.36
W16K057-06	CSWQF Outlet	CSWQF3-2	11/5/2016	2	0.81	3.35	6.02	14.3	18.1	23.5	**20**	3	120	43	330	108	19	10.6	2.97	0.77
W16K058-06	CSWQF Outlet	CSWQF3-3	11/5/2016	2	1.21	2.13	6.32	14.3	15.9	14.6	36	2	280	67	370	125	16	16	4.33	1.25
W16K129-09	Hayden's Meadow rain garden A7 Gresham blend inlet	HMGA71	11/14/2016	4	0.78	7.2	6.77	12.3	38.9	30.2	57	**2**	**100**	33	340	67	4	43	13.2	2.43
W17E090-03	Hayden's Meadow rain garden A7 Gresham blend inlet	HMGA71	5/11/2017	6	0.28	6.01	8.62	15.7	52.7	74.2	30	6	100	23	820	134	100	38.6	13.3	1.3
W16K129-11	Hayden's Meadow rain garden A7 Gresham blend outlet	HMGA72	11/14/2016	4	0.78	5.58	6.17	12.7	75.8	340	33	4	2300	618	2310	1050	57	66.5	18.3	5.04
W17E090-04	Hayden's Meadow rain garden A7 Gresham blend outlet	HMGA72	5/11/2017	6	0.28	6.29	7.64	14.1	113	34	21	3	**100**	127	740	194	17	57.5	18	3.07
W16K129-14	Hayden's Meadow rain garden B11 Gresham blend inlet	HMGB111	11/14/2016	4	0.98	4.28	7.02	12.6	9.2	455	20	5	**100**	**20**	2060	1670	2980	104	31.1	6.37
W16K129-13	Hayden's Meadow rain garden B11 Gresham blend outlet	HMGB112	11/14/2016	4	0.98	4.26	6.96	13	120.2	288	27	3	5400	187	2540	563	57	134	37.6	9.85
W16K129-16	Hayden's Meadow rain garden B15 Gresham blend inlet	HMGB151	11/14/2016	4	0.98	5.49	7.16	12.6	3.1	112	20	**2**	**100**	**20**	200	182	214	11.1	3.3	0.705
W17E090-07	Hayden's Meadow rain garden B15 Gresham blend inlet	HMGB151	5/11/2017	6	0.22	8.83	6.34	15.9	29.8	48.4	42	7	**100**	29	650	75	52	11.7	3.86	0.511
W16K129-18	Hayden's Meadow rain garden B15 Gresham blend outlet	HMGB152	11/14/2016	4	1.23	5.41	6.42	13.1	98.6	405	34	5	110	230	3040	880	97	108	27.6	9.5
W17E090-08	Hayden's Meadow rain garden B15 Gresham blend outlet	HMGB152	5/11/2017	6	0.23	8.95	6.59	12.9	95.4	40.9	20	4	230	105	820	162	38	46.4	13.3	3.2
W16K129-10	Hayden's Meadow rain garden A2 Portland blend inlet	HMPA21	11/14/2016	4	0.78	4.77	6.46	12.3	11.3	135	20	**2**	**100**	**20**	390	107	59	15.6	4.34	1.15
W17E090-05	Hayden's Meadow rain garden A2 Portland blend inlet	HMPA21	5/11/2017	6	0.28	6.36	8.67	14.2	85.4	222	63	**22**	120	46	1200	317	184	82.2	29.2	2.23
W16K129-12	Hayden's Meadow rain garden A2 Portland blend outlet	HMPA22	11/14/2016	4	0.89	5.05	6.74	12.5	42.9	4.75	20	5	440	339	1400	812	141	47.9	12.2	4.23
W17E090-06	Hayden's Meadow rain garden A2 Portland blend outlet	HMPA22	5/11/2017	6	0.28	5.9	7.91	14.3	168.1	86.2	80	6	150	45	1100	198	132	91.9	31.3	3.36
W16K129-07	Hayden's Meadow rain garden B12 Portland blend inlet	HMPB121-1	11/14/2016	4	0.68	8.25	7.34	12.5	6.4	174	20	**2**	**100**	**20**	390	173	187	17.3	4.98	1.17
W17E090-01	Hayden's Meadow rain garden B12 Portland blend inlet	HMPB121-1	5/11/2017	6	0.22	8.02	6.69	15.1	78.8	387	190	14	140	46	1400	364	160	55.2	18.5	2.21

Table 2-5 Stormwater BMP Monitoring Data

Sample ID	Site ID	Point Code	Date	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	Hard-ness mg CaCO3/L	Ca	Mg
					inches	mg/L		C°	uS/cm	NTUs	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L		mg/L	mg/L
											EPA 300.0	SM 5210B	EPA 300.0	EPA 365.1	EPA 351.2	EPA 365.4	SM 2540D	SM 2340B CAL	EPA 200.7	EPA 200.7
										0.01	20	2	100	20	100	25	2	1	0.5	0.5
W16K129-15	Hayden's Meadow rain garden B12 Portland blend inlet	HMPB121-2	11/14/2016	4	0.98	5.08	6.55	12.5	4.5	139	20	**2**	**100**	**20**	240	153	150	17.2	5.27	0.988
W16K129-08	Hayden's Meadow rain garden B12 Portland blend outlet	HMPB122-1	11/14/2016	4	0.68	7.33	6.67	13	34.9	145	20	**2**	630	85	750	281	33	40.9	10.8	3.38
W17E090-02	Hayden's Meadow rain garden B12 Portland blend outlet	HMPB122-1	5/11/2017	6	0.23	8.46	6.79	13.1	137.4	186	30	10	280	95	1020	287	71	76.1	23	4.55
W16K129-17	Hayden's Meadow rain garden B12 Portland blend outlet	HMPB122-2	11/14/2016	4	1.23	6.6	6.51	12.7	54.3	306	20	4	2300	144	1620	558	94	61.3	16.3	5.03
W17C047-04	Kane Road Impervious with Contect filter cartridges	KaneIC_1	3/7/2017	5	0.32	15.37	6.4	7.4	11.3	NA	264	7	**100**	**20**	1370	288	198	20.7	5.52	1.69
W17C047-08	Kane Road Impervious with Contect filter cartridges	KaneIC_2	3/7/2017	5	0.38	10.07	6.57	7.4	14.5	NA	230	3	**100**	**20**	750	127	67	19	5.35	1.38
W17C047-12	Kane Road Impervious with Contect filter cartridges	KaneIC_3	3/7/2017	5	0.48	6.23	6.65	7.6	11.1	NA	239	3	**100**	**20**	810	153	82	16.4	4.47	1.26
W17C047-03	Kane Road Impervious	KaneIP_1	3/7/2017	5	0.32	10.78	6.38	7.9	11	NA	221	4	100	**20**	940	238	186	17.5	4.5	1.52
W17C047-07	Kane Road Impervious	KaneIP_2	3/7/2017	5	0.38	6.89	7.06	8.2	14	NA	263	4	140	**20**	1060	208	114	20.5	5.3	1.76
W17C047-11	Kane Road Impervious	KaneIP_3	3/7/2017	5	0.59	6.54	6.67	7.9	10.2	NA	212	3	**100**	**20**	740	106	73	12.7	3.4	1.03
W17C047-02	Kane Road Pervious Overlay	KanePO_1	3/7/2017	5	0.26	13.4	6.55	8.5	23.2	NA	128	3	460	23	790	156	78	23.7	6.52	1.8
W17C047-06	Kane Road Pervious Overlay	KanePO_2	3/7/2017	5	0.32	12.88	6.58	7.5	20.3	NA	90	2	590	31	450	91	24	21.3	6.04	1.51
W17C047-10	Kane Road Pervious Overlay	KanePO_3	3/7/2017	5	0.48	6.64	6.54	7.6	19.3	NA	99	2	510	30	500	113	36	20.9	5.89	1.49
W17C047-01	Kane Road Full Pervious	KanePP_1	3/7/2017	5	0.32	11.65	6.12	8.5	19.9	NA	65	**2**	330	22	480	79	20	21.2	5.81	1.62
W17C047-05	Kane Road Full Pervious	KanePP_2	3/7/2017	5	0.38	9.75	6.55	8.1	23.5	NA	41	**2**	440	33	440	77	15	26	7.1	2.01
W17C047-09	Kane Road Full Pervious	KanePP_3	3/7/2017	5	0.48	5.54	6.49	7.9	18.1	NA	54	**2**	290	28	520	80	25	20.6	5.75	1.52

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

FD = Field 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.

Table 2-5 Stormwater BMP Monitoring Data

Sample ID	Site ID	Point Code	Date	Storm	24-hr Rainfall	Hg-Total	DOC	Cu-Dissolv.	Pb-Dissolv.	Zn-Dissolv.	Cu-Total	Pb-Total	Zn-Total	E. coli	2,4,5-T	2,4-D	2,4-DB	2,4,5-TP (Silvex)	Acifluor-fen
					inches	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	MPN/100ml	ug/L	ug/L	ug/L	ug/L	ug/L
						EPA 200.8	SM 5310B	EPA 200.8	EPA 200.8	EPA 200.8	EPA 200.8	EPA 200.8	EPA 200.8	SM 9223B	EPA 515.3	EPA 515.3	EPA 515.3	EPA 515.3	EPA 515.3
						0.001	1	0.2	0.1	0.5	0.2	0.1	0.5	10	0.1	0.2	0.4	0.1	0.2
W16I148-02	Brookside regional facility inlet	BRF1-1	9/17/2016	1	0.88	0.0128	23.9	21.1	0.1	57.6	18.4	1.33	133	3000	0.1	10.7	0.4	0.1	0.2
W16K129-01	Brookside regional facility inlet	BRF1-1	11/14/2016	3	0.63	0.00456	4.97	2.44	0.1	8.99	3.96	0.667	15.1	2900	0.1	0.2	0.4	0.1	0.2
W16I152-02	Brookside regional facility inlet	BRF1-2	9/17/2016	1	0.88	0.00396	8.77	5.48	0.1	15.7	7.45	0.456	27.7	1600	0.1	4.28	0.4	0.1	0.2
W16K129-02	Brookside regional facility inlet	BRF1-2	11/14/2016	3	0.89	0.00707	6.13	3.12	0.107	9.09	5.13	1.17	17.3	9200	0.1	0.475	0.4	0.1	0.2
W16I152-05	Brookside regional facility inlet	BRF1-3	9/17/2016	1	0.88	0.00281	5.53	3	0.1	9.86	3.99	0.182	14.1	3400	0.1	1.14	0.4	0.1	0.2
W16K129-03	Brookside regional facility inlet	BRF1-3	11/14/2016	3	1.23	0.0073	6.19	3.27	0.114	6.22	6.57	1.83	17.2	10000	0.1	0.795	0.4	0.1	0.2
W16I148-03	Brookside regional facility outlet	BRF2-1	9/17/2016	1	0.88	0.00132	5.76	1.07	0.1	8.37	1.2	0.1	9.75	170	0.1	0.2	0.4	0.1	0.2
W16K129-04	Brookside regional facility outlet	BRF2-1	11/14/2016	3	0.63	0.00348	4.5	2.21	0.1	10.6	3.08	0.431	13.9	1300	0.1	0.2	0.4	0.1	0.2
W16I152-03	Brookside regional facility outlet	BRF2-2	9/17/2016	1	0.88	0.00264	8.03	3.52	0.1	7.84	4.18	0.197	11	1700	0.1	2.37	0.4	0.1	0.2
W16K129-05	Brookside regional facility outlet	BRF2-2	11/14/2016	3	0.89	0.0053	5.48	2.74	0.113	7.43	3.93	0.874	13	4100	0.1	0.235	0.4	0.1	0.2
W16I152-06	Brookside regional facility outlet	BRF2-3	9/17/2016	1	0.88	0.00199	5.47	2.68	0.1	6.54	3.64	0.199	11.4	1600	0.1	2.22	0.4	0.1	0.2
W16K129-06	Brookside regional facility outlet	BRF2-3	11/14/2016	3	1.38	0.00736	6.08	2.91	0.1	5.44	5.91	1.62	17.6	9200	0.1	0.75	0.4	0.1	0.2
W16I148-01	Street runoff at Brookside	BrookBub-1	9/17/2016	1	0.88	0.0173	14.9	11.6	0.1	9.89	17.6	1.8	31.7	1600	0.1	0.428	0.4	0.1	0.2
W16I152-01	Street runoff at Brookside	BrookBub-2	9/17/2016	1	0.88	0.00333	8.71	4.47	0.1	4.44	4.52	0.131	7.12	860	0.1	0.2	0.4	0.1	0.2
W16I152-04	Street runoff at Brookside	BrookBub-3	9/17/2016	1	0.88	0.0027	6.65	3.96	0.1	2.87	4.67	0.1	4.08	1200	0.1	1.37	0.4	0.1	0.2
W16K062-05	CSWQF downstram of beaver dam at last rock terrace	CSDSB-1	11/5/2016	2	0.26	0.00121	2.06	0.863	0.1	19.3	1.24	0.213	23.1	710	0.1	0.2	0.4	0.1	0.2
W16K057-05	CSWQF downstram of beaver dam at last rock terrace	CSDSB-2	11/5/2016	2	0.81	0.0049	3.84	2.39	0.149	26.9	6.71	2.15	56.6	9200	0.1	0.2	0.4	0.1	0.2
W16K058-05	CSWQF downstram of beaver dam at last rock terrace	CSDSB-3	11/5/2016	2	1.14	0.00299	3.09	2.32	0.1	17.9	3.6	0.644	24.1	5500	0.1	0.2	0.4	0.1	0.2
W16K062-03	CSWQF Main outfall from cells 1 and 2	CSI-1	11/5/2016	2	0.25	0.00759	7.87	4.23	0.228	113	7.16	1.42	142	930	0.1	0.2	0.4	0.1	0.2
W16K057-03	CSWQF Main outfall from cells 1 and 2	CSI-2	11/5/2016	2	0.67	0.0126	4.52	2.2	0.2	28.4	21.7	11.6	205	20000	0.1	0.2	0.4	0.1	0.2
W16K058-03	CSWQF Main outfall from cells 1 and 2	CSI-3	11/5/2016	2	1.14	0.00216	2.07	1.58	0.1	19.4	2.73	0.79	28.1	4100	0.1	0.2	0.4	0.1	0.2
W16K062-04	CSWQF upstram of beaver dam at first rock terrace	CSUSB-1	11/5/2016	2	0.26	0.00643	6.96	3.43	0.187	45	5.24	0.935	59.7	420	0.1	0.2	0.4	0.1	0.2
W16K057-04	CSWQF upstram of beaver dam at first rock terrace	CSUSB-2	11/5/2016	2	0.81	0.00447	2.99	2.28	0.1	24.2	4.96	1.31	41.5	11000	0.1	0.2	0.4	0.1	0.2
W16K058-04	CSWQF upstram of beaver dam at first rock terrace	CSUSB-3	11/5/2016	2	1.14	0.00228	2.04	1.4	0.1	16.7	2.78	0.795	27.6	2500	0.1	0.2	0.4	0.1	0.2
W16K062-01	CSWQF Stormdrain Creek	CSWQF1-1	11/5/2016	2	0.25	0.0082	8.76	4.63	0.32	130	9.95	2.44	182	590	0.1	0.296	0.4	0.1	0.2
W16K057-01	CSWQF Stormdrain Creek	CSWQF1-2	11/5/2016	2	0.67	0.00589	3.7	2.51	0.192	31.5	11.1	3.74	90.3	13000	0.1	0.2	0.4	0.1	0.2
W16K058-01	CSWQF Stormdrain Creek	CSWQF1-3	11/5/2016	2	1.14	0.00229	2.02	1.68	0.1	21.4	3.3	0.978	34.3	2600	0.1	0.2	0.4	0.1	0.2
W16K062-06	CSWQF Outlet	CSWQF3-1	11/5/2016	2	0.26	0.00277	3.16	1.78	0.1	31.4	2.43	0.43	37.1	650	0.1	0.2	0.4	0.1	0.2
W16K057-06	CSWQF Outlet	CSWQF3-2	11/5/2016	2	0.81	0.00449	3.07	2.34	0.111	26.9	5.4	1.59	44.9	9200	0.1	0.2	0.4	0.1	0.2
W16K058-06	CSWQF Outlet	CSWQF3-3	11/5/2016	2	1.21	0.00345	3.81	2.3	0.102	19.7	3.63	0.722	27.1	4100					
W16K129-09	Hayden's Meadow rain garden A7 Gresham blend inlet	HMGA71	11/14/2016	4	0.78	0.00283	2.67	0.813	0.1	1.22	1.56	0.309	3.9	52	0.1	0.2	0.4	0.1	0.2
W17E090-03	Hayden's Meadow rain garden A7 Gresham blend inlet	HMGA71	5/11/2017	6	0.28	0.00834	9.05	2.56	0.1	1.23	10.1	4.14	66.6	10	0.1	0.2	0.4	0.1	0.2
W16K129-11	Hayden's Meadow rain garden A7 Gresham blend outlet	HMGA72	11/14/2016	4	0.78	0.024	18.3	4.75	0.387	6.73	11	9.21	32.5	86	0.1	0.2	0.4	0.1	0.2
W17E090-04	Hayden's Meadow rain garden A7 Gresham blend outlet	HMGA72	5/11/2017	6	0.28	0.0059	11	4.42	0.1	4.1	6.02	0.952	10.6	10	0.1	0.2	0.4	0.1	0.2
W16K129-14	Hayden's Meadow rain garden B11 Gresham blend inlet	HMGB111	11/14/2016	4	0.98	0.0557	1	0.449	0.1	1.3	44.7	19.8	150	10	0.1	0.2	0.4	0.1	0.2
W16K129-13	Hayden's Meadow rain garden B11 Gresham blend outlet	HMGB112	11/14/2016	4	0.98	0.0137	15.4	4.34	0.1	1.93	10.5	4.32	23.5	85	0.1	0.2	0.4	0.1	0.2
W16K129-16	Hayden's Meadow rain garden B15 Gresham blend inlet	HMGB151	11/14/2016	4	0.98	0.00652	1	0.2	0.1	1.08	5.25	2.69	35.9	20	0.1	0.2	0.4	0.1	0.2
W17E090-07	Hayden's Meadow rain garden B15 Gresham blend inlet	HMGB151	5/11/2017	6	0.22	0.00753	12.3	4.66	0.1	3.72	5.82	0.456	13.7	31	0.1	0.2	0.4	0.1	0.2
W16K129-18	Hayden's Meadow rain garden B15 Gresham blend outlet	HMGB152	11/14/2016	4	1.23	0.0304	18.4	5.6	0.355	3.74	15.5	14.8	40.2	310	0.1	0.2	0.4	0.1	0.2
W17E090-08	Hayden's Meadow rain garden B15 Gresham blend outlet	HMGB152	5/11/2017	6	0.23	0.00683	11.4	6.02	0.101	2.73	7.61	0.826	8.57	20	0.1	0.2	0.4	0.1	0.2
W16K129-10	Hayden's Meadow rain garden A2 Portland blend inlet	HMPA21	11/14/2016	4	0.78	0.00622	2.63	1.22	0.1	0.678	3.81	0.991	8.46	1200	0.1	0.2	0.4	0.1	0.2
W17E090-05	Hayden's Meadow rain garden A2 Portland blend inlet	HMPA21	5/11/2017	6	0.28	0.0182	20.8	18.4	0.1	1.7	38.9	6.77	61.1	10	0.1	0.2	0.4	0.1	0.2
W16K129-12	Hayden's Meadow rain garden A2 Portland blend outlet	HMPA22	11/14/2016	4	0.89	0.0306	11.8	5.2	0.435	4.37	14.3	10.9	37.1	3300	0.1	0.2	0.4	0.1	0.2
W17E090-06	Hayden's Meadow rain garden A2 Portland blend outlet	HMPA22	5/11/2017	6	0.28	0.00962	12.4	7.04	0.1	11.8	17.4	2.95	84.4	520	0.1	0.2	0.4	0.1	0.2
W16K129-07	Hayden's Meadow rain garden B12 Portland blend inlet	HMPB121-1	11/14/2016	4	0.68	0.00855	1.23	0.406	0.1	0.783	5.12	2.44	29.4	52	0.1	0.2	0.4	0.1	0.2
W17E090-01	Hayden's Meadow rain garden B12 Portland blend inlet	HMPB121-1	5/11/2017	6	0.22	0.0127	14.9	2.68	0.1	1.65	15.2	6.65	62.9	31	0.1	0.2	0.4	0.1	0.2

Table 2-5 Stormwater BMP Monitoring Data

Sample ID	Site ID	Point Code	Date	Storm	24-hr Rainfall	Hg-Total	DOC	Cu-Dissolv.	Pb-Dissolv.	Zn-Dissolv.	Cu-Total	Pb-Total	Zn-Total	E. coli	2,4,5-T	2,4-D	2,4-DB	2,4,5-TP (Silvex)	Acifluor-fen
					inches	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	MPN/100ml	ug/L	ug/L	ug/L	ug/L	ug/L
						EPA 200.8	SM 5310B	EPA 200.8	EPA 200.8	EPA 200.8	EPA 200.8	EPA 200.8	EPA 200.8	SM 9223B	EPA 515.3	EPA 515.3	EPA 515.3	EPA 515.3	EPA 515.3
						0.001	1	0.2	0.1	0.5	0.2	0.1	0.5	10	0.1	0.2	0.4	0.1	0.2
W16K129-15	Hayden's Meadow rain garden B12 Portland blend inlet	HMPB121-2	11/14/2016	4	0.98	0.00743	**1**	0.354	**0.1**	0.81	4.5	1.98	24.1	20	**0.1**	**0.2**	**0.4**	**0.1**	**0.2**
W16K129-08	Hayden's Meadow rain garden B12 Portland blend outlet	HMPB122-1	11/14/2016	4	0.68	0.00998	6.21	2.35	0.181	2.81	5.58	3.39	13.9	390	**0.1**	**0.2**	**0.4**	**0.1**	**0.2**
W17E090-02	Hayden's Meadow rain garden B12 Portland blend outlet	HMPB122-1	5/11/2017	6	0.23	0.0113	16.3	4	**0.1**	4.83	8.55	3.16	32.5	10	**0.1**	**0.2**	**0.4**	**0.1**	**0.2**
W16K129-17	Hayden's Meadow rain garden B12 Portland blend outlet	HMPB122-2	11/14/2016	4	1.23	0.0178	12.2	3.48	0.263	2.4	9.09	6.33	22.3	1200	**0.1**	**0.2**	**0.4**	**0.1**	**0.2**
W17C047-04	Kane Road Impervious with Contect filter cartridges	KaneIC_1	3/7/2017	5	0.32	0.00545	2.82	2.72	0.194	22.7	26.7	9.57	206	63					
W17C047-08	Kane Road Impervious with Contect filter cartridges	KaneIC_2	3/7/2017	5	0.38	0.00394	2.59	2.64	0.115	20.8	11.9	3.38	78.6	63					
W17C047-12	Kane Road Impervious with Contect filter cartridges	KaneIC_3	3/7/2017	5	0.48	0.00431	2.3	2.44	0.128	18.9	14	4.43	98.8	52					
W17C047-03	Kane Road Impervious	KaneIP_1	3/7/2017	5	0.32	0.00376	2.04	2.94	**0.1**	19.3	22.3	8.67	135	230					
W17C047-07	Kane Road Impervious	KaneIP_2	3/7/2017	5	0.38	0.00413	3.14	4.31	0.235	25.9	20	5.83	113	130					
W17C047-11	Kane Road Impervious	KaneIP_3	3/7/2017	5	0.59	0.00371	2.78	2.72	**0.1**	15.9	10.9	3.22	62.7	86					
W17C047-02	Kane Road Pervious Overlay	KanePO_1	3/7/2017	5	0.26	0.00516	1.89	2.24	**0.1**	57.7	12.8	4.09	142	52					
W17C047-06	Kane Road Pervious Overlay	KanePO_2	3/7/2017	5	0.32	0.00327	2.35	2.05	**0.1**	61.3	5.11	1.5	87.2	98					
W17C047-10	Kane Road Pervious Overlay	KanePO_3	3/7/2017	5	0.48	0.004	2.2	2.14	**0.1**	54.1	6.83	2.05	89.4	20					
W17C047-01	Kane Road Full Pervious	KanePP_1	3/7/2017	5	0.32	0.00388	2.16	1.72	**0.1**	16.7	4.29	1.28	36.7	31					
W17C047-05	Kane Road Full Pervious	KanePP_2	3/7/2017	5	0.38	0.00412	2.44	1.62	**0.1**	14.4	3.04	1	23.4	52					
W17C047-09	Kane Road Full Pervious	KanePP_3	3/7/2017	5	0.48	0.00427	2.11	1.83	**0.1**	14.5	4.13	1.44	32.8	75					

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

FD = Field 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.

Table 2-5 Stormwater BMP Monitoring Data

Sample ID	Site ID	Point Code	Date	Storm	24-hr Rainfall inches	Bentazon ug/L	Dicamba ug/L	Picloram ug/L	Dichlor-prop ug/L	Dinoseb ug/L	Pentachloro-phenol ug/L	3,5-Dichloro-benzoic acid ug/L
						EPA 515.3	EPA 515.3	EPA 515.3	EPA 515.3	EPA 515.3	EPA 515.3	EPA 515.3
						0.4	0.2	0.2	0.4	0.4	0.04	0.2
W16I148-02	Brookside regional facility inlet	BRF1-1	9/17/2016	1	0.88	0.4	0.2	0.2	0.4	0.4	0.04	0.2
W16K129-01	Brookside regional facility inlet	BRF1-1	11/14/2016	3	0.63	0.4	0.2	0.2	0.4	0.4	0.04	0.2
W16I152-02	Brookside regional facility inlet	BRF1-2	9/17/2016	1	0.88	0.4	0.2	0.2	0.4	0.4	0.04	0.2
W16K129-02	Brookside regional facility inlet	BRF1-2	11/14/2016	3	0.89	0.4	0.2	0.2	0.4	0.4	0.04	0.2
W16I152-05	Brookside regional facility inlet	BRF1-3	9/17/2016	1	0.88	0.4	0.2	0.2	0.4	0.4	0.04	0.2
W16K129-03	Brookside regional facility inlet	BRF1-3	11/14/2016	3	1.23	0.4	0.2	0.2	0.4	0.4	0.04	0.2
W16I148-03	Brookside regional facility outlet	BRF2-1	9/17/2016	1	0.88	0.4	0.2	0.2	0.4	0.4	0.04	0.2
W16K129-04	Brookside regional facility outlet	BRF2-1	11/14/2016	3	0.63	0.4	0.2	0.2	0.4	0.4	0.04	0.2
W16I152-03	Brookside regional facility outlet	BRF2-2	9/17/2016	1	0.88	0.4	0.2	0.2	0.4	0.4	0.04	0.2
W16K129-05	Brookside regional facility outlet	BRF2-2	11/14/2016	3	0.89	0.4	0.2	0.2	0.4	0.4	0.04	0.2
W16I152-06	Brookside regional facility outlet	BRF2-3	9/17/2016	1	0.88	0.4	0.2	0.2	0.4	0.4	0.04	0.2
W16K129-06	Brookside regional facility outlet	BRF2-3	11/14/2016	3	1.38	0.4	0.2	0.2	0.4	0.4	0.04	0.2
W16I148-01	Street runoff at Brookside	BrookBub-1	9/17/2016	1	0.88	0.4	0.2	0.2	0.4	0.4	0.047	0.2
W16I152-01	Street runoff at Brookside	BrookBub-2	9/17/2016	1	0.88	0.4	0.2	0.2	0.4	0.4	0.04	0.2
W16I152-04	Street runoff at Brookside	BrookBub-3	9/17/2016	1	0.88	0.4	0.2	0.2	0.4	0.4	0.04	0.2
W16K062-05	CSWQF downstram of beaver dam at last rock terrace	CSDSB-1	11/5/2016	2	0.26	0.4	0.2	0.2	0.4	0.4	0.04	0.2
W16K057-05	CSWQF downstram of beaver dam at last rock terrace	CSDSB-2	11/5/2016	2	0.81	0.4	0.2	0.2	0.4	0.4	0.081	0.2
W16K058-05	CSWQF downstram of beaver dam at last rock terrace	CSDSB-3	11/5/2016	2	1.14	0.4	0.2	0.2	0.4	0.4	0.068	0.2
W16K062-03	CSWQF Main outfall from cells 1 and 2	CSI-1	11/5/2016	2	0.25	0.4	0.2	0.2	0.4	0.4	0.107	0.2
W16K057-03	CSWQF Main outfall from cells 1 and 2	CSI-2	11/5/2016	2	0.67	0.4	0.2	0.2	0.4	0.4	0.04	0.2
W16K058-03	CSWQF Main outfall from cells 1 and 2	CSI-3	11/5/2016	2	1.14	0.4	0.2	0.2	0.4	0.4	0.074	0.2
W16K062-04	CSWQF upstram of beaver dam at first rock terrace	CSUSB-1	11/5/2016	2	0.26	0.4	0.2	0.2	0.4	0.4	0.089	0.2
W16K057-04	CSWQF upstram of beaver dam at first rock terrace	CSUSB-2	11/5/2016	2	0.81	0.4	0.2	0.2	0.4	0.4	0.092	0.2
W16K058-04	CSWQF upstram of beaver dam at first rock terrace	CSUSB-3	11/5/2016	2	1.14	0.4	0.2	0.2	0.4	0.4	0.072	0.2
W16K062-01	CSWQF Stormdrain Creek	CSWQF1-1	11/5/2016	2	0.25	0.4	0.2	0.2	0.4	0.4	0.115	0.2
W16K057-01	CSWQF Stormdrain Creek	CSWQF1-2	11/5/2016	2	0.67	0.4	0.2	0.2	0.4	0.4	0.155	0.2
W16K058-01	CSWQF Stormdrain Creek	CSWQF1-3	11/5/2016	2	1.14	0.4	0.2	0.2	0.4	0.4	0.075	0.2
W16K062-06	CSWQF Outlet	CSWQF3-1	11/5/2016	2	0.26	0.4	0.2	0.2	0.4	0.4	0.04	0.2
W16K057-06	CSWQF Outlet	CSWQF3-2	11/5/2016	2	0.81	0.4	0.2	0.2	0.4	0.4	0.088	0.2
W16K058-06	CSWQF Outlet	CSWQF3-3	11/5/2016	2	1.21							
W16K129-09	Hayden's Meadow rain garden A7 Gresham blend inlet	HMGA71	11/14/2016	4	0.78	0.4	0.2	0.2	0.4	0.4	0.04	0.2
W17E090-03	Hayden's Meadow rain garden A7 Gresham blend inlet	HMGA71	5/11/2017	6	0.28	0.4	0.2	0.2	0.4	0.4	0.04	
W16K129-11	Hayden's Meadow rain garden A7 Gresham blend outlet	HMGA72	11/14/2016	4	0.78	0.4	0.2	0.2	0.4	0.4	0.04	0.2
W17E090-04	Hayden's Meadow rain garden A7 Gresham blend outlet	HMGA72	5/11/2017	6	0.28	0.4	0.2	0.2	0.4	0.4	0.04	
W16K129-14	Hayden's Meadow rain garden B11 Gresham blend inlet	HMGB111	11/14/2016	4	0.98	0.4	0.2	0.2	0.4	0.4	0.04	0.2
W16K129-13	Hayden's Meadow rain garden B11 Gresham blend outlet	HMGB112	11/14/2016	4	0.98	0.4	0.2	0.2	0.4	0.4	0.04	0.2
W16K129-16	Hayden's Meadow rain garden B15 Gresham blend inlet	HMGB151	11/14/2016	4	0.98	0.4	0.2	0.2	0.4	0.4	0.04	0.2
W17E090-07	Hayden's Meadow rain garden B15 Gresham blend inlet	HMGB151	5/11/2017	6	0.22	0.4	0.2	0.2	0.4	0.4	0.04	
W16K129-18	Hayden's Meadow rain garden B15 Gresham blend outlet	HMGB152	11/14/2016	4	1.23	0.4	0.2	0.2	0.4	0.4	0.04	0.2
W17E090-08	Hayden's Meadow rain garden B15 Gresham blend outlet	HMGB152	5/11/2017	6	0.23	0.4	0.2	0.2	0.4	0.4	0.04	
W16K129-10	Hayden's Meadow rain garden A2 Portland blend inlet	HMPA21	11/14/2016	4	0.78	0.4	0.2	0.2	0.4	0.4	0.04	0.2
W17E090-05	Hayden's Meadow rain garden A2 Portland blend inlet	HMPA21	5/11/2017	6	0.28	0.4	0.2	0.2	0.4	0.4	0.065	
W16K129-12	Hayden's Meadow rain garden A2 Portland blend outlet	HMPA22	11/14/2016	4	0.89	0.4	0.2	0.2	0.4	0.4	0.04	0.2
W17E090-06	Hayden's Meadow rain garden A2 Portland blend outlet	HMPA22	5/11/2017	6	0.28	0.4	0.2	0.2	0.4	0.4	0.044	
W16K129-07	Hayden's Meadow rain garden B12 Portland blend inlet	HMPB121-1	11/14/2016	4	0.68	0.4	0.2	0.2	0.4	0.4	0.04	0.2
W17E090-01	Hayden's Meadow rain garden B12 Portland blend inlet	HMPB121-1	5/11/2017	6	0.22	0.4	0.2	0.2	0.4	0.4	0.051	

Table 2-5 Stormwater BMP Monitoring Data

Sample ID	Site ID	Point Code	Date	Storm	24-hr Rainfall inches	Bentazon ug/L	Dicamba ug/L	Picloram ug/L	Dichlor-prop ug/L	Dinoseb ug/L	Pentachloro-phenol ug/L	3,5-Dichloro-benzoic acid ug/L
						EPA 515.3	EPA 515.3	EPA 515.3	EPA 515.3	EPA 515.3	EPA 515.3	EPA 515.3
						0.4	0.2	0.2	0.4	0.4	0.04	0.2
W16K129-15	Hayden's Meadow rain garden B12 Portland blend inlet	HMPB121-2	11/14/2016	4	0.98	**0.4**	**0.2**	**0.2**	**0.4**	**0.4**	**0.04**	**0.2**
W16K129-08	Hayden's Meadow rain garden B12 Portland blend outlet	HMPB122-1	11/14/2016	4	0.68	**0.4**	**0.2**	**0.2**	**0.4**	**0.4**	**0.04**	**0.2**
W17E090-02	Hayden's Meadow rain garden B12 Portland blend outlet	HMPB122-1	5/11/2017	6	0.23	**0.4**	**0.2**	**0.2**	**0.4**	**0.4**	**0.04**	
W16K129-17	Hayden's Meadow rain garden B12 Portland blend outlet	HMPB122-2	11/14/2016	4	1.23	**0.4**	**0.2**	**0.2**	**0.4**	**0.4**	0.043	**0.2**
W17C047-04	Kane Road Impervious with Contect filter cartridges	KaneIC_1	3/7/2017	5	0.32							
W17C047-08	Kane Road Impervious with Contect filter cartridges	KaneIC_2	3/7/2017	5	0.38							
W17C047-12	Kane Road Impervious with Contect filter cartridges	KaneIC_3	3/7/2017	5	0.48							
W17C047-03	Kane Road Impervious	KaneIP_1	3/7/2017	5	0.32							
W17C047-07	Kane Road Impervious	KaneIP_2	3/7/2017	5	0.38							
W17C047-11	Kane Road Impervious	KaneIP_3	3/7/2017	5	0.59							
W17C047-02	Kane Road Pervious Overlay	KanePO_1	3/7/2017	5	0.26							
W17C047-06	Kane Road Pervious Overlay	KanePO_2	3/7/2017	5	0.32							
W17C047-10	Kane Road Pervious Overlay	KanePO_3	3/7/2017	5	0.48							
W17C047-01	Kane Road Full Pervious	KanePP_1	3/7/2017	5	0.32							
W17C047-05	Kane Road Full Pervious	KanePP_2	3/7/2017	5	0.38							
W17C047-09	Kane Road Full Pervious	KanePP_3	3/7/2017	5	0.48							

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

FD = Field 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.

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)	LD (JCI2)	KCI1	KCI4	KI1	KI2
Units in the columns are individuals of a species found and identified																		
Acari							7	15	7	9	7	6	26	11	6	17	11	9
Amphipoda				immature				1			2			1				
		Crangonyx					9		5	13		4	15		165	71	11	
Copepoda										1	2		2			122	2	
Decopoda	Astacidae	Pacifasticus							1	1	1	1	1	1	4		1	1
Hirudinea						tolerant		1								33		
Hydra						tolerant												
Isopoda	Asellidae					tolerant	1			1			10					
Mollusca	Ancylidae	Ferrissia			tolerant	tolerant	1	11		1	79	1		1	27		5	
	Corbiculidae	Corbicula			tolerant	tolerant			16		10					2		
	Hydrobiidae	Fluminicola				tolerant	33		45		27				4		3	
	Planorbidae	Menetus			tolerant	tolerant									3			
	Lymnaeidae				tolerant	tolerant	1		1				1					
	Physidae	Physa				tolerant	2	1	1						5			
	Pleuroceridae	Juga			tolerant	tolerant	10	143	13	303	120	166	118	227	39	1	139	36
	Sphaeriidae							5	22	12	2		1	1	1	4	138	5
Nematoda							8	4	1		4		1		6	7	2	2
Oligochaeta					tolerant	tolerant	6	3	45	20	28	15	35	22	10	88	62	6
Ostracoda										1								
Turbellaria	Planariidae						2	10		1		2	2		6	9		2
Ephemeroptera	Baetidae	Acentrella		immature			3							1				
		Baetis		immature														
		Baetis	tricaudatus				212	97	130	28	53	129	110	104	107	7		15
		Baetis	notus															
			flavistrga															
			flavistrga complex															
			fuscatus group								1							
		Centroptilum				tolerant					1							
		Diphetor	hageni								2	12		10				7
		Pseudocloeon				tolerant							1					
	Heptageniidae	Cinygma				sensitive												
		Cinygmula																2
		Epeorus alberta																
		Ironodes																8
	Leptophlebiidae	Paraleptophlebia					1	2			49	34		15		1	48	17
	Siphlonuridae	Siphlonurus				tolerant												
Plecoptera	Capniidae			immature		sensitive												
	Chloroperlidae	Sweltsa																16
	Leuctridae					sensitive	1											14
		Despaxia				sensitive												
	Perlodidae	Skwala																7
	Pteronarcyidae	Pteronarcella																1
	Nemouridae	Malenka																5
		Soyedina																33
		Zapada	cinctipes									8		4	1			123
Coleoptera				larva									1					
	Dytiscidae			adult		tolerant										1		
Coleoptera	Elmidae			immature														

Table 2-6 Macroinvertebrate Sampling

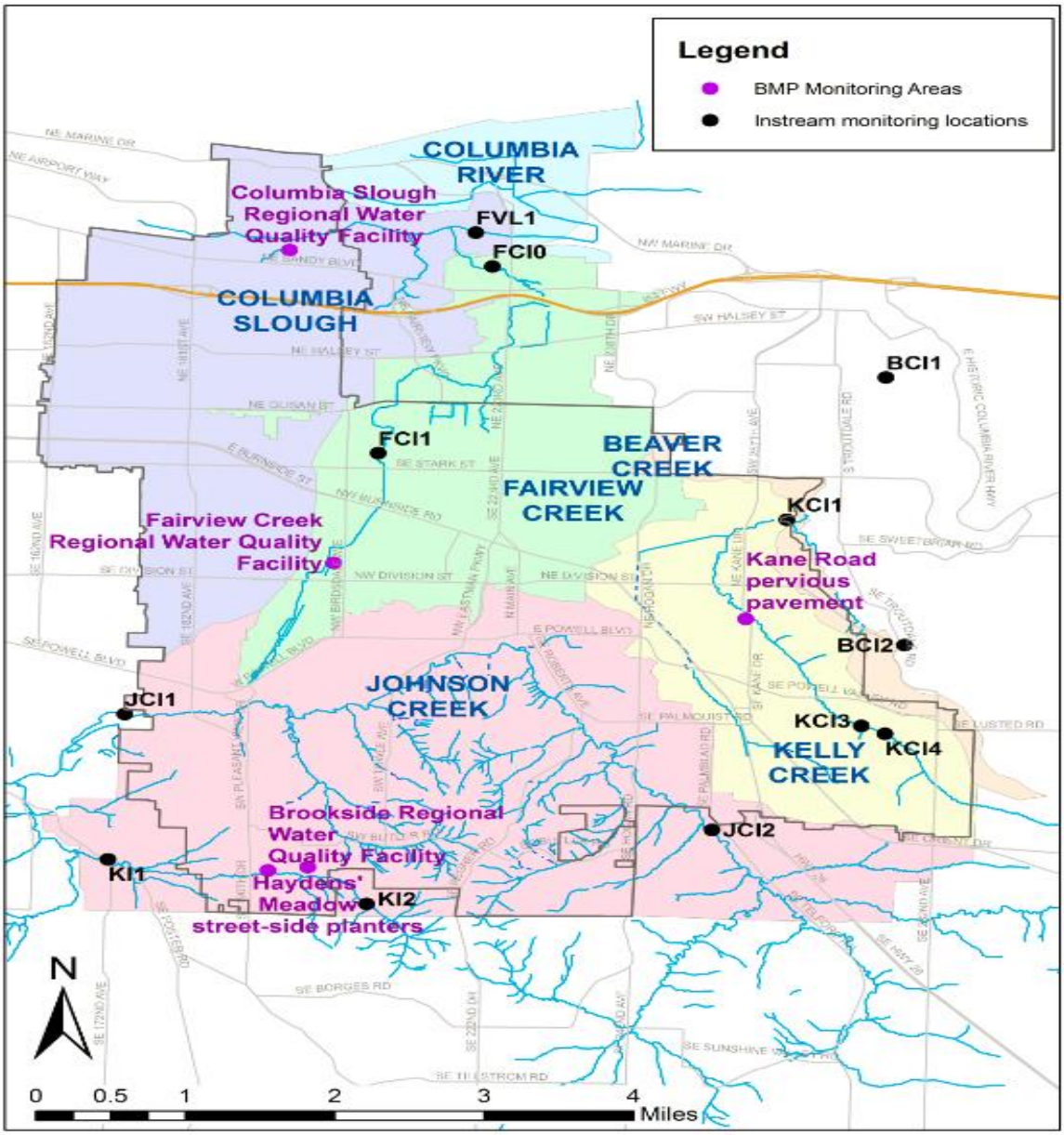
Order	Family	Genus	Species	Life stage	Sediment Sensitive/ Tolerant	Pollution Sensitive/ Tolerant	BCI1	BCI2	FCI0	FCI1	JCI1	JCI2	FD (JCI2)	LD (JCI2)	KCI1	KCI4	KI1	KI2
Units in the columns are individuals of a species found and identified																		
		Cleptelmis		adult		tolerant						2		3				
		Lara		immature					1	2		4	2	1			2	1
		Optioservus		larva		tolerant			6		4	13		10			1	3
		Optioservus		adult		tolerant		1	3		1	3		1				
		Narpus		larva														
		Zaitzevia		larva					2		1	10		8				
				adult		tolerant						1						
	Hydraenidae			adult														
Coleoptera	Hydrophilidae			larva														
				adult														
Lepidoptera	Pyralidae					tolerant												1
Megaloptera		Sialis				tolerant					1	1						2
Odonata				immature														
	Zygoptera						2									1		
Trichoptera				immature					2									
	Brachycentridae	Micrasema		larva														2
	Glossosomatidae	Glossosoma		larva														5
				pupa														1
	Hydroptilidae	Hydroptila		immature	sensitive		5			2				1				
	Hydroptilidae			pupa		tolerant				1			1					
	Hydropsychidae			pupa		tolerant				1	3			1				
		Cheumatopysyche				tolerant	41	1	9	33	72	28	27	21	7	3		
		Hydropsyche				tolerant												2
		Parapsyche																1
	Lepidostomatidae	Lepidostoma		larva					1	2							1	14
		Lepidostoma		pupa						1								1
	Limnephilidae			immature														42
		Onocosmoecus																1
		Philocasca				sensitive												
		Psychoglypha																1
	Philopotamidae	Wormaldia			sensitive							9		16				21
	Rhyacophilidae	Rhyacophila	betteni											1				1
		Rhyacophila	narvae															4
	Uenoidae	Neophylax																7
Dipter	Ceratopogoninae								1									
	Forcipomyinae		Atrichopogon				1								2			1
	Chironomidae	Ablabesmyia				tolerant												
		Brillia					1	6	1								1	2
		Brundiniella																
		Chaetocladius																
		Chironomus																
		Cladopelma				tolerant												
		Corynoneura								3	1		1					
		Cricotopus					4	2								1		
		Cricotopus	bicinctus group				3											
		Cryptochironomus				tolerant			1		1							
		Diplocladius														1		
		Eukiefferiella	brehmi group									1						
		Eukiefferiella	claripennis group				2	1	1				2		5			
		Eukiefferiella	devonica group										1					
		Eukiefferiella	pseudomontana group				2					1		2	2			
		Limnophyes				tolerant										2		
		Macropelopia																
		Micropsectra					3	126		13		4	3	6	23	31	6	53
		Nanocladius																
		Nilotanypus									1	1						
		Orthocladius complex													2			
		Orthocladius (Symposiocladius)																1
		Parametriocnemus							2				4		2			8

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)	LD (JCI2)	KCI1	KCI4	KI1	KI2
Units in the columns are individuals of a species found and identified																		
		Paraphaenocladius													1			
		Paratanytarsus					5											
		Paratendipes				tolerant												
		Pentaneura				tolerant							1					
		Phaenopsectra						4	67		1					15		
		Polypedilum					6	29	51	7	4	9		9	48	23	11	2
		Procladius				tolerant										1	1	
		Prodiamesa								1								
		Radotanypus									2	4						
		Rheocricotopus						3									1	
		Rheotanytarsus							19	4		28		38				
		Smittia																
		Synorthocladius				sensitive			4									
		Stempellinella															2	7
		Stenochironomus							1							1		
		Synorthocladius				sensitive												
		Tanypus				tolerant					25							
		Tanytarsus					2	28	45				1			78		
		Thienemanniella						1			9		10	1	17		73	
		Thienemannimyia complex					5	8	30	11			23			14		
		Tvetenia	bavarica group			tolerant	14	2		18					4			
		Zavrelimyia				tolerant					13							11
		Xenochironomus																
	Dixidae			pupa														1
		Dixa						1								2		20
		Maruina																
		Meringodixa																
				pupa														1
	Empididae			immature			1									1	1	
				pupa						1								
		Clinocera							2									1
		Chelifera																
		Hemerodromia		larva					1						1			
		Hemerodromia		pupa			1											
		Neoplasta		larva			1	2	2	3			7				1	
		Neoplasta		pupa			1						1					
		Trichoclinocera								1								
	Ephydridae			larva					1							3		
				pupa					1									
	Pelecorhynchidae	Glutops				sensitive												
	Phoridae						1											
	Psychodidae	Pericoma																1
	Sciomyzidae			pupa											1	1		
	Simuliidae			immature														1
				pupa			7			1	1		4	1	1			
		Simulium					99	38	12	34	8	43	109	35	23			
	Tabanidae					tolerant												
	Thaumaleidae																	1
	Tipulidae	Antocha			tolerant		33				1				9	1	1	
		Antocha		pupa	tolerant		1											
		Dicranota			tolerant							5		1				3
		Hexatoma			tolerant													2
		Limonia			tolerant	tolerant						1		1		1		
		Limnophila			tolerant													2
		Tipula			tolerant		1			1							1	
Benthic Index of Biological Integrity (B-IBI)					**Score**		**24**	**16**	**20**	**16**	**16**	**18**	**16**	**20**	**18**	**18**	**16**	**40**
Stream Condition as Level of Impairment from B-IBI							**Moderate**	**Severe**	**Moderate**	**Severe**	**Severe**	**Severe**	**Severe**	**Moderate**	**Severe**	**Severe**	**Severe**	**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 2-7 Instream and Stormwater Facility (BMP) Monitoring Site



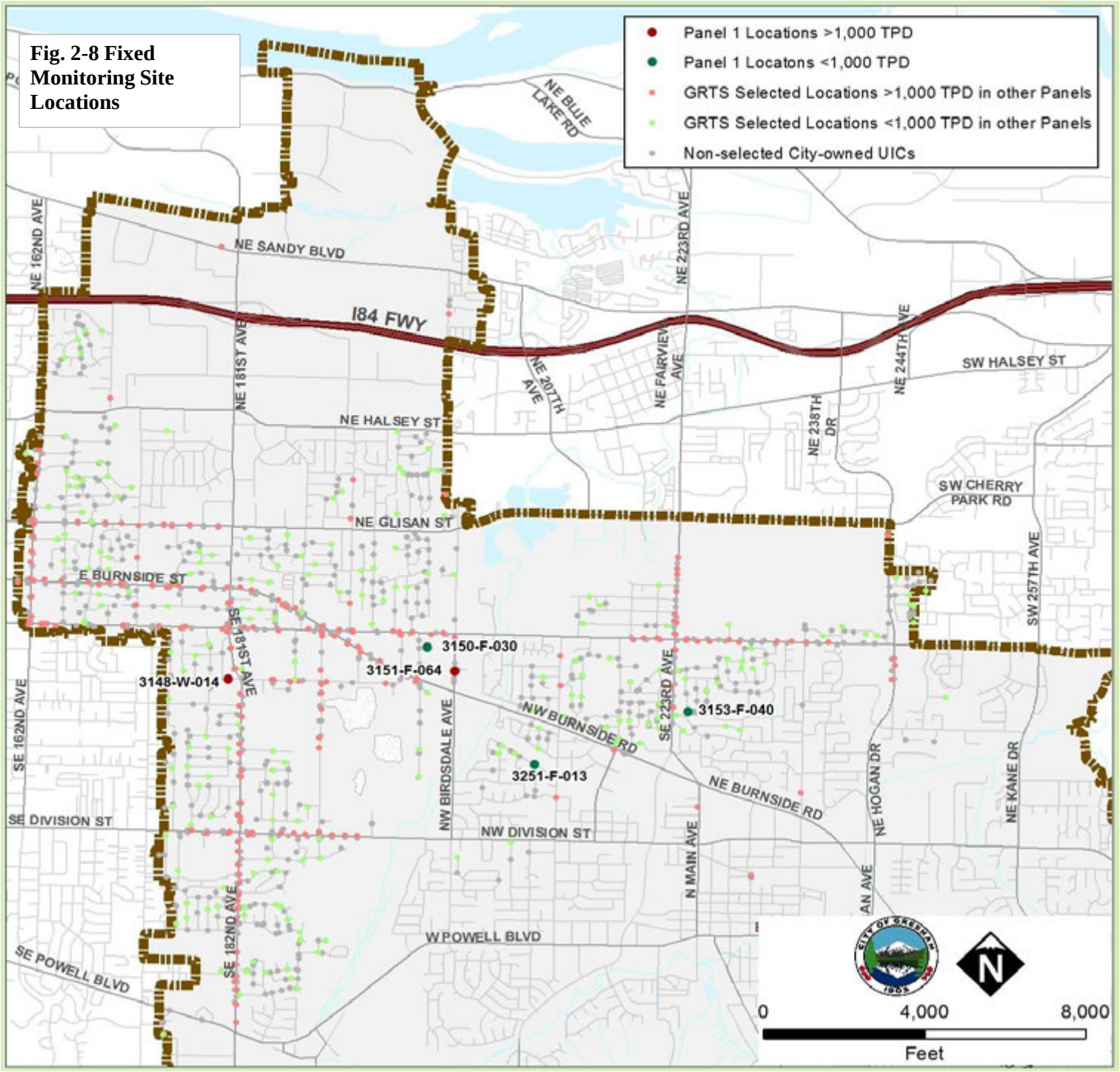


Fig. 2-8 Fixed Monitoring Site Locations

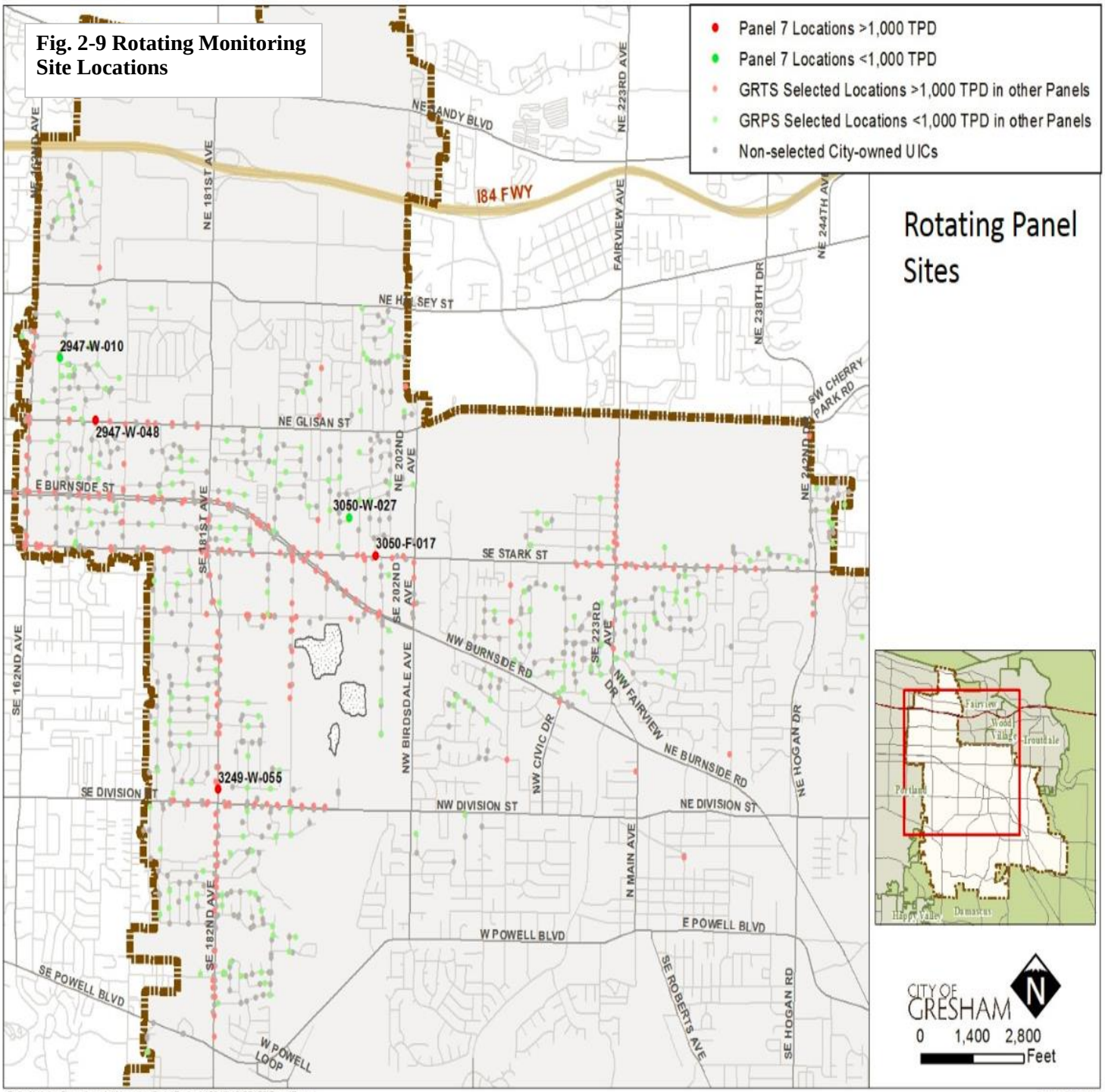


Fig. 2-9 Rotating Monitoring Site Locations

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	Status 2016-2017	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.	19.7 miles inspected and 5.7 cleaned. 2.25 cubic yards (cy) removed. Additional miles were inspected compared to previous years to accommodate a large scale Local Street Improvement Program undertaken by the Transportation Division and prioritized by City Council.	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.	6,256 residential cbs cleaned. 128 cy of debris removed. 1,435 arterial cbs cleaned. 65 yards of debris removed. The city has begun using software in the field to track debris in basins on the arterials to see if a different cleaning rate would be more cost and/or water quality effective. 3,016 hours of grey infrastructure cleaning activities (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.	Conducted 174 rain garden inspections and 24 ponds/swales. Routine maintenance is litter removal, minor sediment removal, mowing, pruning, removal of invasive weeds and volunteer trees, and debris blockage of inlets and outlets. 346 cy of debris removed from rain gardens, swales, ponds and ditches. 2,922 hours of green infrastructure cleaning activities. Inspected 128/128 stormwater proprietary systems (vaults), replaced 318 cartridge filters and removed 6.3 yds. of debris from 109 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.	~13,000 staff hours were allocated to the 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	Status 2016-2017	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 363/363 sedimentation manholes removing 27 cy of debris from 35 structures. Inspected 201/201 flow control manholes removing 4.7 cy of debris from 6 structures. Inspected 228/228 detention pipes removing 3.75 cy of debris from lines and manholes.	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, a DEQ permitted entity, to recycle as much of the debris (separated into dirt v. rock and is reused).	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 9 UICs and removed 18 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. During PY 22, Staff continued to work on the Stormwater Manual update and coordinate with other jurisdictions on policy direction. Staff did some field evaluation of one of the sites listed as a top ranked retrofit, but costs exceeded expectation and options are being further investigated and may be pursued during PY 23. 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. The Stormwater Manual update is expected to be completed in PY 23.	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	Status 2016-2017	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 approximately 60 newly constructed individual rain gardens located on private lots in new developments in Pleasant Valley. These rain gardens 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 PY 20, staff obtained approval from City Council to take over the maintenance responsibility for 41 multiple owner residential private stormwater facilities, which represents a significance maintenance work load impact in the next three to five years. During PY22, staff completed 31 inspections of 31 multi-owner underground vaults and determined that no proprietary filters needed to be replaced. Staff completed 18 inspections of multi-owner facilities and conducted maintenance activities at 13 multi-owner facilities. During PY23, documentation from approximately 45 single-owner commercial vault owners will be 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.	A flood reduction plan for Burlingame Creek is being finalized during FY 17-18. The City is also planning to undertake a systemwide stormwater master plan effort over the next three years.	None.

BMP Name	Compliance Date	BMP Description	Measurable Goals	Reporting Elements	Status 2016-2017	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: *Worked on East County partnership to add trees in canopy-deficient portions of Rockwood/N Gresham. *Developing a street tree pruning education and recognition program *Hosted Arbor Day events with Friends of Trees There were thirty-three tree code violations and all were resolved with replacement corrections.	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.	Just over 6,276 street miles were swept during 10 sweeps in residential areas and 12 sweeps of arterials. Over 1,481 cy removed. ~630 hours of additional sweeps were conducted by staff removing an additional 520 cy of debris, plus fall leaf sweep = 273 staff hours and 280 cy of leaves.	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.	Applied about 10,123 gallons of Magnesium Chloride to 478 lane miles (streets vary from 2-4 lanes) plus 30 fifty lb. bags of Freeze Gard pellets. Applied 334 yards of sanding rock and utilized 219 staff hours to sweep the rock off the street.	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	Status 2016-2017	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. Annual inspections by DEQ or Metro and storm water management compliance is part of the inspection protocol.	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	Status 2016-2017	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.	6.5 M 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 first 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. One site had conductivity above the action level of 300 uS/mL. One site had ammonia levels above the action level of 0.5 mg/L. Upstream investigation showed that this was likely due to natural wetland processes upstream of the outfall. Follow up investigation upstream did not reveal any illicit discharge. Several sites had turbidity above our action level of 15 NTU. Follow up investigation upstream did not reveal any source for the sediment. The most likely explanation is that the sample collection bailer stirred up sediment while collecting the water because the flow was very low. See Table 3.5. The City's illicit discharge enforcement response procedures are described in Section 7 of the Stormwater Monitoring Plan on the City's website at: www.greshamoregon.gov/watershed	None
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. About 19 miles CCTV'd for development finals, routine or investigative inspections. Represents ~1,600 staff hours.	None

BMP Name	Compliance Date	BMP Description	Measurable Goals	Reporting Elements	Status 2016-2017	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 3-6.	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) 30 gal drum Used oil: 230 gal Used Antifreeze: 50 gal Used Tires: 285 Used batteries are returned to the vendor for recycling All other recyclable commodities are recycled. Vendors utilized: Thermo Fluids, Tire Disposal & Recycling, Battery Systems, and Automotive Xpress Delivery.	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 3-7.	None

BMP Name	Compliance Date	BMP Description	Measurable Goals	Reporting Elements	Status 2016-2017	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 13,451 gallons of curbside oil collected. Earth Day Hazardous Waste Event collected 13,400 lbs. of electronics, computers, appliances, fluorescent lights, Styrofoam and shredded paper. Approximately 1,100 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.	The City's utility billing system shows 24,680 account locations. Some are undeveloped. Our records show 24,262 total wastewater accounts (active and inactive). County Sanitarian records show 14 tanks were decommissioned within Gresham, a portion of these were abandoned and these properties were already connected to the city system. Operations cleaned 74 miles of pipe and inspected 43 miles with the CCTV camera. Conducted 55 main line pipe patch repairs and 3 main line open trench repairs, 5 lateral pipe patch repairs and 20 lateral open trench repairs, 15 manhole repairs and investigated and alleviated 52 blockages. The Wastewater CIP work included replacement of 14, 878 linear feet (lf) of 8" pipe, 1,099 lf of 12" pipe, and 4,052 lf of laterals were replaced. 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) 277 new businesses licenses came into the city. Businesses that have the potential to pollute the stormwater and wastewater system and require additional review are flagged for staff follow-up. Applications were reviewed for environmental compliance concerns related to proper plumbing, storage, and disposal. During PY 22, this review included 19 food/bar/grocery related establishments, 23 automotive and 5 medical related businesses.	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 will rotate across the total number of automotive businesses every other year. As resources allow or observational concerns come up for a particular sector, additional businesses with potential to contribute to stormwater pollutants will be added.	None

BMP Name	Compliance Date	BMP Description	Measurable Goals	Reporting Elements	Status 2016-2017	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. Table 3-9 contains a list of currently permitted industries with their inspection history, as applicable.	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) 28 auto related businesses inspected, seven had stormwater violations which were corrected, six have corrections that are being made by early PY 23. Staff inspected 58 businesses within the wellfield area, six of which required corrections and voluntarily complied. Ten Pretreatment Inspections were conducted. No stormwater violations were found. Projections for PY 23, include 35-45 Wellfield/1200Z/Pretreatment Inspections and 10-12 automotive businesses. (2d) Staff inspected 6 permitted industrial 1200Z/COLSsites, minor corrections were requested and made. McDonald Wetle was brought into compliance with regard to violations from a PY 21 inspection. Staff and DEQ plan to coordinate on at least one 1200Z inspection during PY 23. (3) See Table 3-8.	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.	During PY 22, staff attempted to review the DEQ database of permitted facilities to check for DEQ enforcement actions. DEQ databases were not functioning. DEQ staff are too under resourced to assist prior to the submittal of this report. There are currently (as of PY 21) 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. One industry enforcement was completed that began in PY 21. These are listed in Table 3-9.	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 per	Track updates to the Manual.	The EPSC Standard Operating Details and Manual are being issued and implemented.	None

BMP Name	Compliance Date	BMP Description	Measurable Goals	Reporting Elements	Status 2016-2017	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 209 sites were inspected: 196 with residential or commercial building permits and 13 sites with grading permits. There were 26 disapproved inspections affecting 23 sites. Corrective actions required were related to installing/maintaining perimeter control, providing adequate cover for denuded soil, protecting stockpiles, improving construction entrances and sweeping streets. During PY22, staff attended the Certified Erosion and Sediment Control Re-certification Training and the Mid-Willamette Erosion Control and Stormwater Management Summit.	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 IPM policy with applicators Review of Stormwater Permit requirements for new supervisors 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 3-8. 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 3-8. For PY 23, staff will continue to support the implementation of the GREAT Business Program, the EcoBiz Program, the SCAP program, the EPSC contractor outreach. During PY 21 and 22, staff worked with teams of summer interns to GPS locate and mark private parking lot drains. This data is being used to ensure the annual maintenance of private drains and to educate owners on proper maintenance needs for their system.	None

BMP Name	Compliance Date	BMP Description	Measurable Goals	Reporting Elements	Status 2016-2017	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	This year's Annual Report included a public comment period from October 16-29, 2017. 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 3-10.	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 22.	None

BMP Name	Compliance Date	BMP Description	Measurable Goals	Reporting Elements	Status 2016-2017	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;	A summary of the Illicit Discharge Detection & Elimination Program (Dry Weather Screening and Spill Response) may be found in Tables 3-5 and 3-6. Locations for IDDE sampling are shown in Fig 3-5 A & B. 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 conducted during PY 22 include: *Provide maps for operations and maintenance activities. *Created a digital inspection form for mapping private catch basins. *Created walk/bus maps for stormwater interns cb mapping project. *Ongoing maintenance of stormwater asset data and drainage treatment areas *Map of Backyard Habitat Program Participants for outreach. *Address exports for illicit discharge issues, business program notices, community education events and workshops *Maps for public/private pond/swale/rg inspection and maintenance. *Maintenance mailers to private stormwater system owners.	None
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

BMP Name	Compliance Date	BMP Description	Measurable Goals	Reporting Elements	Status 2016-2017	Summary and Date of Any Proposed Adaptive Management Modifications
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 August 2014. All documents are located at GreshamOregon.gov Watershed Documents.	None

Table 3-1: Total New and Redevelopment Acreage

Project Name	Land Use Type	Develop-ment Type	Location	WQ Treatment	Ownership*	System	Project Size/Area Treated (acres)	Construction Disturbance (acres)	Percent*** Impervious
Hilltop View Estates Subdivision Development	VLDR5	New	Intersection of SE Hogan Rd and SE Butler Rd	Street-side Stormwater Planters	Public/Private	Johnson Creek	17.3 ac	4.4 ac	25%
Bonaventure Senior Living Center	CC	New	SE Stark Street	Rain Gardens, Bioswales, and Contech Stormwater Filters	Private	Fairview Creek	5.4	5.0	92%
Brookside Phase III Subdivision Development	LDR-PV	New	SW 41st Street	Street-side Stormwater Planters	Public/Private	Johnson Creek	5.7	4.7	83%
Christensen Electric Building	GI	New	NE Sacramento Street	Stormwater Planter	Private	Fairview Creek	2.5	2.0	80%
Dutch Bros Coffee	MC	New	NE Kane Dr	Rain Gardens	Private	Beaver Creek	0.6	0.5	85%
Gresham Crossing PhII	MC	New	NE 223rd Ave	Stormwater Detention Pond	Private	UIC	3.5	3.0	86%
Gresham Pediatric Building	DCC	RE	Intersection of NE 3rd St and NE Hood Ave	Stormwater Planter and pervious parking lot	Private	Johnson Creek	0.5	0.4	80%
McDonald's on Stark Renovation Project	RTC	RE	SE Stark Street	Rain Garden	Private	UIC	1.2	1.0	85%
NE Cleveland Transportation Project	LDR-5	RE	NE Cleveland from Powell north to Stark	Street-side Stormwater Planters	Public	UIC	0.9	0.9	100%
Oak Street Extension	TLDR	New	SE 165th Ave	Street-side stormwater planters	Public	UIC	0.4	0.4	100%
Open Meadows School	MC	RE	SE Stark Street	Stormwater Planter and parking lot rain gardens	Private	UIC	0.8	0.8	93%
Quattro Retail Building	DCL	RE	Intersection of SE 223rd Ave and SE Burnside Ave	Rain Gardens	Private	Fairview Creek	0.7	0.5	75%
Rockwood Church of God Parking Lot	LDR-5	RE	Intersection of NE Couch St and NE 192nd Ave	Rain Gardens	Private	UIC	0.3	0.3	86%
Samson Acres	LDR-5	New	Intersectin of SW 282nd Ave and Orient Drive	Contech Stormwater Filters and two street-side stormwater swales	Public	Beaver Creek	4.6	2.8	62%
Sierra Point Apartments	MDR-24	New	Intersection of Kane Rd and Powell Valley Rd	Vegetated Bioswale and Vegetated Detention Pond	Private	Beaver Creek	1.0	0.8	80%
Subaru Distribution Center	GI	New	NE 242nd Drive	Street-side Stormwater Planters and Detention Pond	Public and Private	Fairview Creek	39.1	12.5	32%
Total Disturbed Acreage								**35.5**	

Key: Treatment: N/A = development did not trigger water quality treatment requirements (disturbance of 1,000 sq. ft. or greater).
Disturbance: Trace or N/A = work done within an existing developed area, i.e., on pavement or within a pipe or other structure.
Impervious Area: N/A = existing impervious was not increased or reduced.
New = New Development
RE = Redevelopment (more likely to develop on existing impervious foot print)

*Public ownership is City of Gresham only, Private refers to all projects owned by entities other than City of Gresham.
**Typically, projects cross multiple years and data entry lags significantly from when permits are issued; therefore, data for many impervious estimates in this table is not currently available but will be reported in subsequent years, as finaled.

***Final percentage of site that is covered in impervious area and sometimes includes a net reduction in redevelopment projects. If data is unknown, modeling impervious values by land use are used.

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				
Riparian and Upland planting	Fairview Creek, Johnson Creek, Kelly Creek, Butler Creek, and Chastain Creek.	Restoration is occurring along Johnson Creek main stem (3 sites), Jenne Creek (1 site), Kelly Creek (1 site), Butler Creek (2 sites), Chastain Creek (1 site), Fairview Creek (3 sites). The Natural Resource program also started its Upper Butler Creek CIP project and in the past year has completed the baseline data collection and development of a site specific restoration plan for the nine reaches, as previously identified as priorities in Gresham's Natural Resources Master Plan. This upcoming year will include the hiring of a general contractor and implementation of the Upper Butler restoration plan over the next 4 years.	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	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	Provided all project materials to Port of Portland for their evaluation. Current plan is that the Port will spearhead and upfront the project costs. A revised design was developed this fiscal year and routed through Port channels for approval, with approval on design slated for September 2017.	Water quality, stream function, wetland function, and habitat improvements.	Watershed CIP and external partner funding (Port of Portland)
Environmental Overlay Project	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

Cities of Gresham and Fairview Environmental Monitoring Data

Project Name/Watershed	Watershed	Project Status	Stormwater Mitigation Measures/Area Treated	Funding Mechanism
Slope stabilization projects	Johnson and Kelly Creeks	Heavy rains/flood events in 2015, and extended slope saturation in 2016 lead to multiple bank stabilization needs in the Johnson and Kelly Creek basin. Geomorphology and geotech experts are providing background investigative work in advance of engineer and floodplain assessments for bank fixes. City is providing free technical assistance to private land owner where significant bank failure had encroached towards occupied structure.	Water quality, riparian function erosion control	Natural Resources CIP funding
Rehabilitate and Repair Pipe System	All	For the next four years, the Stormwater Program will provide major support to the City's Local Street Reconstruction Program. This program is a priority for residents and City Council. Additional rate increases allow for deferred maintenance to be updated in addition to damage caused by extreme winter weather. Stormwater pipe inspections are conducted jointly with other utilities to ensure efficient use of public funds for pipe repairs prior to street upgrades. Water quality treatment will be planned and included as applicable to the stormwater manual.	Water quality	Stormwater CIP funding
Local Drainage Improvements	All	Replaced old-style catch basins with current spec models to improve maintenance & water quality efficiency and reduce flood risk.	Water quality, flood 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 (Johnson Creek and Chastain Creek)	JCWC, FOT, NYC	585	24.0	11.0	3,540	Planted area includes 9 acres along Chastain Creek, completed by FOT through grants and matching City funds and 2 acres planted by the City 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 24 acre area of Gresham woods. Area included in JCWC Watershed Wide event.
Butler Creek Corridor	AC, NYC	245	21.0	2.5	1,260	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 and native interplanting throughout the entire site. 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, Citizen volunteers	264	7.0	2.8	2,150	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.

Cities of Gresham and Fairview Environmental Monitoring Data

Project Site	Project Partners	Volunteer Hours	Invasive Removal Acreage	Planting Acreage	Plants Installed	Notes
Springwater Woods (Johnson Creek)	AC, NYC, STHS, JCWC, Citizen volunteers	315	4.0	4.0	735	Multiple sites within the area are under active restoration. A total of 2 sites were planted with a mix of shrubs and trees and live stakes. Weed control was limited to hand pulling and grubbing of isolated sites within the project area. Two separate events picked up garbage throughout the area. Springwater woods is located west of Hogan on the north side of Johnson Creek. Area included in JCWC Watershed Wide event.
Fairview Creek Headwater Wetlands	AC, RLA	62	5.0	5.0	200	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.
Fujitsu Wetland Mitigation (Fairview Creek)	AC, NYC	48	4.0	0.0	0	Site is currently under maintenance activities which include weed control using hand pulling and spraying activities.
Scott Street (Kelly creek)	AC, NWYC	16	4.5	0.0	0	Restoration work includes invasive removal through hand pulling and spraying. Site is inundated with weedy species including Italian arum, yellow arch angel, morning glory, Himalayan blackberry, and knotweed.

Cities of Gresham and Fairview Environmental Monitoring Data

Project Site	Project Partners	Volunteer Hours	Invasive Removal Acreage	Planting Acreage	Plants Installed	Notes
Border Way (Jenne Creek)	AC, NYC, JCWC, Citizen volunteers	192	14.0	3.0	550	Invasive removal and native plantings. Included in JCWC Watershed Wide event. Removal of invasives included both hand pulling and spraying of herbicide throughout the entire parcel. Native plantings occurred within and isolated area on the west side of the site and included a mixture of herbaceous, shrub, and trees. Live stakes were used as a supplement.
Brookside (Kelley Creek)	AC, NYC	84	2.0	2.0	880	Restoration work includes invasive removal through hand pulling and spraying and native plantings. Site is inundated with weedy species including Canada thistle, scotch broom, Himalan blackberry, and other weedy species. Native plantings included a mix of shrubs and trees.
Jenne Butte	AC, NYC, Metro	286	10.0	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	640	Oak savannah restoration in the lower meadow. Included extensive planting and invasive weed removal effort.
Total		**2,157**	**97**	**32**	**9,955**	

CSWC =	Columbia Slough Watershed Council	PWRP =	Portland Watershed Revegetation Program
FOT =	Friends of Trees	STHS =	Springwater Trail High School
GHS =	Gresham High School	NYC =	Northwest Youth Corp
JCWC =	Johnson Creek Watershed Council	RLA =	Reynolds Learning Academy
AC =	AmeriCorps	Talon=	Audubon Society of Portland youth program

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)	247 oz.
	Roundup (glyphosate)	247 oz.
	Dimension (dithiopyr)	624 oz.
	Moss Out (sulfuric acid, zinc salt (1:1) monohydrate)	6 oz.
	Gallery (isoxaben)	77.5 oz.
	Dimension (dithiopyr)	624 oz.
	SureGuard (flumioxazin)	25.6 oz.
	Esplanade EZ (indaziflam, diquat dibromide, glyphosate isopropylamine salt)	10 gal.
Wastewater	none	NA
Watershed	Rodeo (isopropylamine salt of glyphosate)	514 oz.
	Milestone VM Plus (Triclopyr)	3 oz.
	Garlon 3A (triclopyr)	205 oz.
Natural Resource Program	Agridex (surfactant)	7.3 gal.
	Rodeo (isopropylamine salt of glyphosate)	6.1 gal.
	Milestone VM Plus (Triclopyr)	36 oz.
	Element 3A (triclopyr)	13.4 gal.
	Habitat (isopropylene salt of imazapyr)	49 oz.
Water	Roundup (glyphosate)	580 oz.
	Crossbow (2,4-D/Triclopyr, Kerosene)	14 oz.
	Casoron (dichlobenil)	56 lbs.
Parks	Roundup (glyphosate)	330 oz.
	Crossbow (2,4-D/Triclopyr, Kerosene)	216 oz.
	Casoron (dichlobenil)	118 lbs.
	Weed and Feed (glyphosate and 2,4-D)	560 lbs.
	liquid totals	**70.8 gal**
		16 grams
	dry totals	**1,499 lbs.**

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**	
Columbia Slough	G1	Yes	None	Clear	Clear	None	None	NA	Normal	NA	3-6 Days	4.2	8.34	18.6	142.3	1.63		0	
Columbia Slough	F2	Yes	None	Clear	Clear	None	None	NA	Normal	NA	3-6 Days	5.71	7.78	17.9	101.8	2.7		0	
Columbia Slough	D2A	No	None	Clear	Clear	None	None	NA	Normal	NA	3-6 Days								
Columbia Slough	D2B	Yes	None	Clear	Clear	None	None	NA	Normal	NA	3-6 Days	4.4	7.43		98.8	6.68	0.1		
Columbia Slough	2649-W-751	Yes	None	Yellow	Suspended Solid	None	None	NA	Normal	NA	3-6 Days	3.12	6.77	21	108.2	12.1		0.25	Standing water in pipe possibly due to back up from Catellus swale
Fairview Creek	I12B	Yes	None	Clear	Clear	None	None	NA	Normal	NA	3-6 Days	4.55	7.76	19.4	94.3	2.49	0	0	
Johnson Creek	M16	Yes	None	Yellow	Clear	None	None	NA	Normal	Iron Bacteria	> 1 Week	4.86	8.04	18.2	162	12.3	0.25	0.5	
Johnson Creek	N16	Yes	None	Yellow	Clear	None	None	NA	Normal	Iron Bacteria	> 1 Week	5.73	7.53	17.4	142.7	19.2	0.25	0.5	No illicit discharge found.
Johnson Creek	3553-J-601	Yes	None	Clear	Clear	None	None	NA	Normal	NA	> 1 Week	5.66	7.43	17.5	111.4	4.45	0	0.25	
Johnson Creek	L16B	Yes	Musty	Clear	Clear	None	None	NA	Normal	NA	> 1 Week	5.83	7.71	21	97	15.8	0	0	
Johnson Creek	J18A	Yes	None	Clear	Clear	None	None	NA	Corrosion	Iron Bacteria	> 1 Week	6.32	7.9	17	114.7	25.8	0	1.0	Yellow foam. No illicit discharge found.
Johnson Creek	J18	No	None	Clear	Clear	None	None	NA	Normal	NA	> 1 Week								
Fairview Creek	3051-F-601	No	None	Clear	Clear	None	None	NA	Normal	NA	> 1 Week								
Johnson Creek	F18	No	None	Clear	Clear	None	None	NA	Normal	NA	> 1 Week								
Johnson Creek	E18A	No	None	Clear	Clear	None	None	NA	Normal	NA	> 1 Week								
Johnson Creek	H18	No	None	Clear	Clear	None	None	NA	Normal	NA	> 1 Week								
Fairview Creek	3252-F-029	Yes	None	Clear	Clear	None	None	NA	Normal	NA	> 1 Week	3.2	7.72	22.9	49.9	6.07	0	0	
Burlingame Creek	S11	No	None	Clear	Clear	None	None	NA	Normal	NA	> 1 Week								
Kelly Creek	R15	Yes	None	Clear	Cloudy	None	None	NA	Normal	NA	> 1 Week	3.29	6.71	23.1	137.5	59.8	0.5		No illicit discharge found.
Kelly Creek	3356-K-601	No	None	Clear	Clear	None	None	NA	Normal	NA	> 1 Week								
Kelly Creek	3456-K-711	Yes	None	Brown	Suspended Solids	None	None	NA	Normal	NA	> 1 Week	2.65	6.64	22	162.8	107			No illicit discharge found.
Johnson Creek	3454-J-741	Yes	None	Clear	Clear	None	None	NA	Normal	NA	> 1 Week	4.72	8.25	20.6	137.8	12.6	0	0	
Kelly Creek	3656-K-611	Yes	None	Clear	Clear	None	None	NA	Normal	NA	> 1 Week	4.94	7.88	19.2	83.3	2.68	0.4	0	
Burlingame Creek	3656-K-606 or	Yes	None	Clear	Clear	None	None	NA	Normal	NA	> 1 Week	7.62	7.13	20.5	371.8	2.1	0	0	No illicit discharge found.
Kelly Creek	3658-K-631	No	None	Clear	Clear	None	None	NA	Normal	NA	> 1 Week								
Kelly Creek	3658-K-634	No	None	Clear	Clear	None	None	NA	Normal	NA	> 1 Week								
Kelly Creek	3558-K-605	Yes	None	Clear	Clear	None	None	NA	Normal	NA	> 1 Week	8.77	7.77	19.8	154.4	3.42	0.1	0	
Kelly Creek	3557-K-603	No	None	Clear	Clear	None	None	NA	Normal	NA									
Maps of the dry weather fixed and rotating monitoring sites are included as Fig 3-5 A and 3-5 B.																			

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.

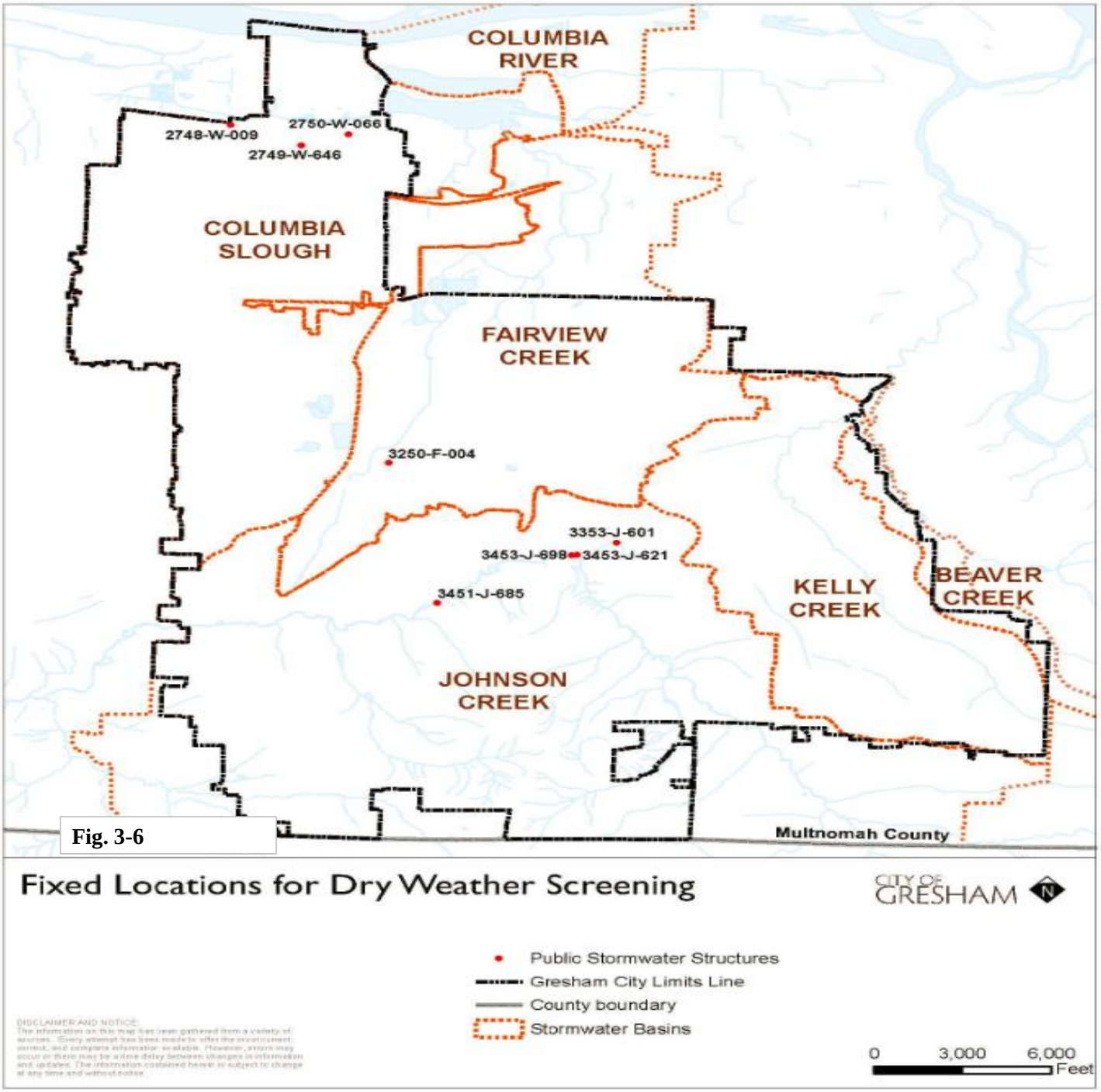

COLUMBIA RIVER
2748-W-009
2750-W-066
2749-W-646
COLUMBIA SLOUGH
FAIRVIEW CREEK
3250-F-004
3353-J-601
3453-J-698
3453-J-621
3451-J-685
KELLY CREEK
BEAVER CREEK
JOHNSON CREEK
Multnomah County
Fixed Locations for Dry Weather Screening
CITY OF GRESHAM
N
Public Stormwater Structures
Gresham City Limits Line
County boundary
Stormwater Basins
0
3,000
6,000
Feet

Fig. 3-6

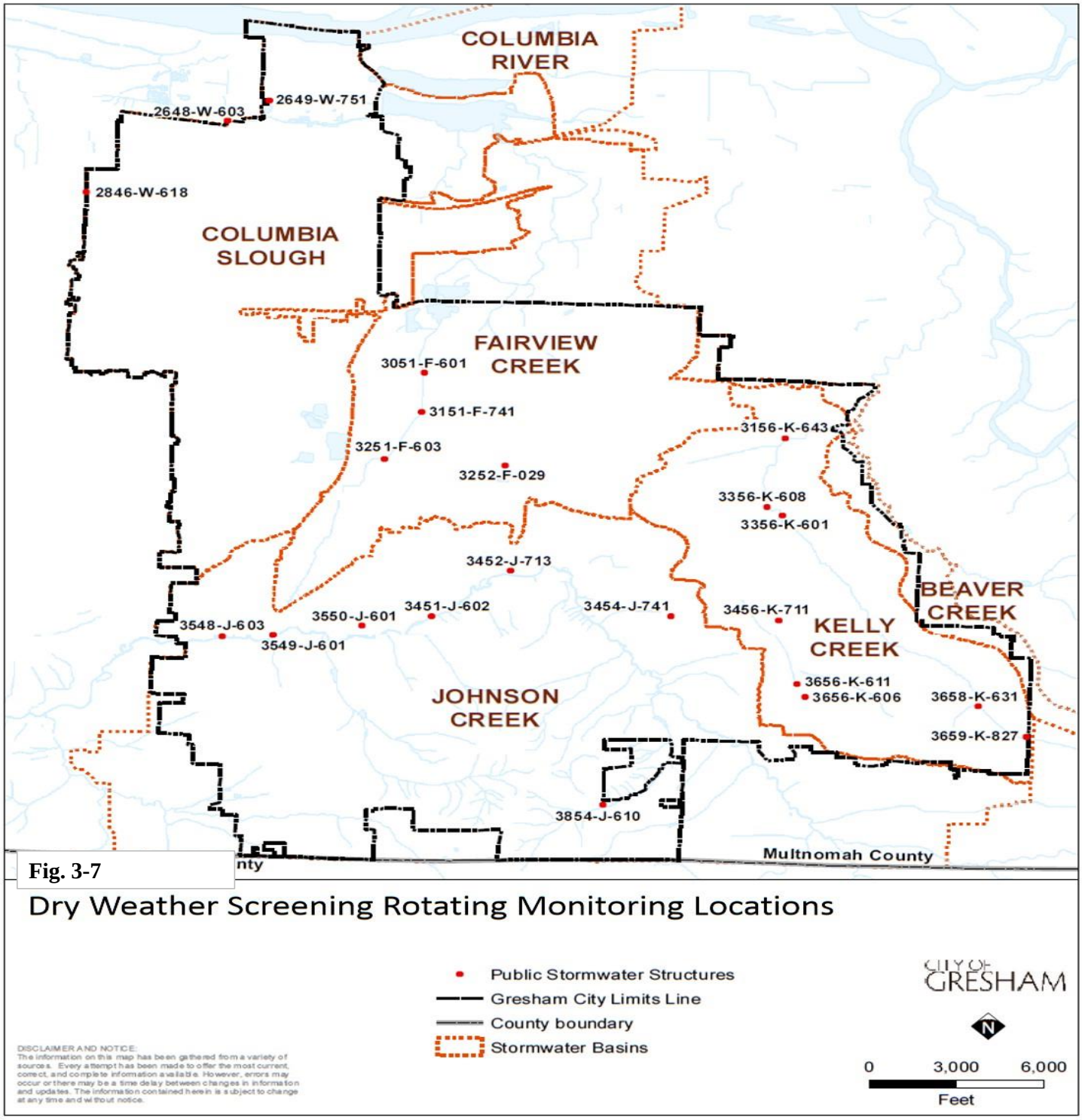


Fig. 3-7

Dry Weather Screening Rotating Monitoring Locations

- Public Stormwater Structures
- Gresham City Limits Line
- County boundary
- Stormwater Basins

CITY OF GRESHAM

N

0 3,000 6,000
Feet

DISCLAIMER AND NOTICE:
The information on this map has been gathered from a variety of sources. Every attempt has been made to offer the most current, correct, and complete information available. However, errors may occur or there may be a time delay between changes in information and updates. The information contained herein is subject to change at any time and without notice.

Path: Y:\Inter-Departmental\MapsAndData\Projects\2017\05\27891\DryWeather.mxd

Date: 5/31/2017

Table 3-8: Spill and Illicit Discharge Response

Category	Address	Complaint	Action	Resolution	Watershed
Auto fluids	EnviroClean, 2395 NW Eleven Mile	Anonymous complaint came in to permit center about work at this address occurring w/o permits, as well as potential dumping to CB	Referred to DEQ since private UIC on site. DEQ conducted investigation and follow up. Civil Penalty Warning.	Private UIC now registered w/ DEQ.	Columbia Slough
Paint	1422 SW 20th Ct.	White substance running down the curb line	Paint washed on to street surface and into two adjacent catch basins. Paint was dilute and dried. No further action req. Contractors and OCCB were sent notices about the incident. Contractor was unlicensed and reported to OCCB.	Outreach warning sent to the contractor to ensure that all contractors on site are licensed.	Johnson Creek
Misc.	19401 E Burnside Apts	Resident concerned about parking lot catch basin backing up	Staff checked to see if basin needed to be cleaned. Civil Penalty Warning.	Letter requesting fall cleaning to ensure proper future drainage. Staff will follow up in fall.	Fairview Creek
Carpet cleaner	Black Bear Diner, Burnside, Gresham	Wash water being dumped in to catch basin in parking lot	Staff later phoned contractor and sent a warning letter about best practices. Civil Penalty Warning.	Staff asked contractor to shop vac liquid out of catch basin. Best practice letter sent.	Fairview Creek
Misc.	Border Way Wetland	Lots of accumulated dog waste	Restoration volunteers cleaned up the immediate area.	General educational letter sent to over 200 homes, dog waste sign and doggie bag box installed. Letter to entire neighborhood.	Kelly Creek
Misc.	NE Greenway, natural area	Resident complained about owners leaving dog waste in natural area and letting dogs run loose	Letter to residents about best practices (100 homes)	Educational letter about best practices, dog sign installed.	Kelly Creek
Auto fluids	18433 SE Stark	Stormdrain in parking lot is clogged and flowing into adjacent lot	Staff visited site, documented clogged drain and illegal routing to street. Ordered the owners to have the system cleaned and submit documentation to the city. Work was completed. Staff returned to document the cleaned system. Civil Penalty Warning.	Violation notice was given of a penalty if not corrected on a work contractors timeframe. Owner complied.	Columbia Slough
Auto fluids	840 SE 8th Street	Customer concerned leaking anti-freeze leaking into storm catch basin.	City staff inspected. Nothing made it into the storm system. Code Enforcement to tag car for expired plates. Civil Penalty Warning.	Code Enforcement to tag car for expired plates. Resolved.	Johnson Creek
Misc.	Hood Center Apartments 1229 NE Hogan Place.	Rid-Moss on west side of parking lot behind Safeway.	Staff inspected and found a cart with many Rid Moss containers. No evidence of dumping or spill. Property manager to oversee disposal.	Containers disposed.	Beaver Creek
Paint	1200 N Main Ave Gresham HS	Citizen observed GHS contractor dumping acetone into a basin on the east side of Main Ave.	Met citizen on site who identified the contractor who dumped acetone. Placed absorbent in basin to absorb acetone and contractor removed all debris with an industrial shop vac. Civil Penalty Warning.	Staff spoke to Company's and GHS project manager/supervisor. Employee who dumped liquid was brand new and ESL challenged. Manager will explain dumping/washing requirements to all staff. This was an accidental oversight. City took no further action.	Fairview Creek

Table 3-8: Spill and Illicit Discharge Response

Category	Address	Complaint	Action	Resolution	Watershed
Paint	19404 NE Davis Street	Homeowner dumped paint into adjacent catch basin.	City staff cleaned the catch basin, line, and UIC. 1 Foot of debris removed from UIC.	Owner sent a warning letter with proper disposal options explained.	Columbia Slough
Sediment	2347 SE Kane Ave.	Mud running down west curb line.	Contacted responsible party.	Street cleaned by responsible party.	Beaver Creek
Auto fluids	181 x NE Everett	Vehicle accident resulted in auto fluids being dispersed.	Evidence of the spill was seen and removed within the Columbia Slough Water Quality Facility.	NRC Conducted clean-up of the crash site, line clean, installed booms at facility to absorb spill. Changed booms several times until spill was resolved.	Columbia Slough
Auto fluids	MHCC early education center	Vandals drilled a hole in the staff truck and stole gas. Residual drained on the asphalt surface and into a basin, and downstream pipe system.	City staff inspected structures and swale. Gasoline in catch basin, man hole, and pipe. Did not make it into swale.	River City cleaned up.	Beaver Creek
Paint	2232 SE 179th	Paint leaking from 30 yard garbage dumpster.	City staff placed pads, and called responsible party.	Responsible party removed dumpster on the same day.	Columbia Slough
Oil spill	SE Division Street/Kane	Oil spill	Transportation staff found oil spill in turn lane on Division, West of Kane 1000'. Used absorbent to wick oil, swept up absorbent and disposed of properly.	Follow-up inspection showed no residual in catch basins.	Kelly Creek
Sanitary discharge	Safeway: 1455 NE Division St., Gresham OR 97030	Sewage in the parking lot.	Dye test conducted and determined the sewage leak coming from employee toilet.	Responsible party hired River City to unblock pipe, vactor private CB, jet private line, and power wash parking lot.	Kelly Creek
Oil spill	SE Hogan/Roberts	Oil leaking from lineman truck	Responsible party contacted.	City staff conducted clean up and billed responsible party.	Johnson Creek
Auto fluids	NE 4th St	Business owner reported a work truck parked regularly on the street leaking oil/gas.	Leaks may be from work equipment. Stains on road.	Staff investigated during work and after hours. No RP found.	Johnson Creek

Table 3-9: Citizen Complaints*

Issue and Resolution	
Streambank Failure/Flooding concerns	Staff responded to ongoing bank stabilization complaints on Johnson Creek (across creek from Club Paesano) and initiated geo-tech studies to assess severity of ongoing erosion potential. Also initiated engineering repair to Kelly Creek at El Camino in response to discovering that creek alignment with culvert has shifted over time and has potential to impact adjacent private structure. Staff and consultants reviewed several reports of large trees felled by beaver on Johnson Creek.
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. 57 applications were processed in PY 22.
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	29 reports of concerns over drainage investigated by staff. 14 were private property to private property. 8 were placed on the CIP priority list for remedy. 3 were maintained by Operations. 1 was referred to Code Compliance; 1 was repaired; and 2 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	37 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 25 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. During FY 16-17, offered 25 workshops to over 400 people.
City of Gresham Parks & Recreation Division: Adopt a Trail program: Springwater, Butler, Bear and Kelly Trail Corridor about 5 miles of trail maintenance and litter removal	Johnson/Kelly	Total number of volunteers who participate is not reported to the City	General stewardship and appreciation of natural resources, litter removal.
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. Plus EMSWCD grant funded private riparian planting on 1.26 miles of stream front	Johnson	~65 Adults and children	Riparian buffer function for stream protection. More than ~7,500 trees and shrubs planted.
JCWC Beaver, Salmon, and Lamprey surveys across Gresham reaches	Johnson	56 volunteers	Stream and stormwater heath education.
Gresham Arbor Day Tree Planting Events (two locations)	All	Stakeholders and ~20 community members	Education on the value of trees
Columbia Slough Watershed Council--WMD support of Slough School program	Fairview/Columbia Slough	7 schools participated in SS programs, worked directly with 1213 students and teachers	General education of watershed protection and pollutant prevention measures.

Table 3-10 Examples of Water Quality Education Efforts*

Program/Event and Partners	Watershed of Focus	Number of Contacts	Educational Focus
Columbia Slough Watershed Council--Regatta event--supported by WMD	Fairview/Columbia Slough	Over 400 attendees.	General watershed education.
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 7 stormwater pollution reduction PSAs 105 times. 8M adult viewer TV impressions (32,000 homes) 1.1M impressions from web banner ads. ~ 4,000 web page visits.	Topics: plant natives, plant trees, erosion control, fall lawn care, wildlife friendly yards, avoid pesticides, remove invasives, RV and Spa disposal, car washing
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): 48,000 biennially Facebook: ~7,900 fans Twitter: ~2,122 MyGresham: ~1,600 GoCart:~ 680 Entire city website: 1.6 M/annually Web Watershed page: 1,000 annually Utility bill stuffer 22,000 print Y.O.U. digital utility bill ~2,600 Next Door: ~9,300	Pesticide and fertilizer reduction, naturescaping, recycling, sustainability, and private on lot stormwater management education information.

Table 3-10 Examples of Water Quality Education Efforts*

Program/Event and Partners	Watershed of Focus	Number of Contacts	Educational Focus
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	~ 30 volunteers	Conducted stormdrain marking in the Gresham downtown
For Businesses			
City of Gresham GREAT Business Newsletter (Fall, Spring)	All	400 businesses 2X Per Year	Stormdrain Cleaning Assistance Program, General Best Practices
City of Gresham Stormdrain Cleaning Assistance Program (SCAP)--offered to City of Fairview businesses as well (spring and fall)	All	294 Businesses, ~1079 drains cleaned	Pollution prevention via removal of sediment and debris.

Table 3-10 Examples of Water Quality Education Efforts*

Program/Event and Partners	Watershed of Focus	Number of Contacts	Educational Focus
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	15 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.
City of Gresham GREAT Business technical assistance visits	All	~120 Outreach assistance related to stormwater	11 new certifications and 16 recertifications. Supported 20 others. Marked 47 drains. Visits include education to limit introduction of stormwater pollutants from businesses including referrals to SCAP and recommendations to fix catch-basins, maintain stormwater facilities, follow spill response procedures, label storm drains, use native plants in landscaping, and reduce pollution from dumpsters. Additionally, the food composting program provided Recycling/Garbage area and stormwater BMP guidance to 50 businesses.
Summerworks intern storm drain marking project (3393 drains marked over two years)	All	436 properties PY21 588 properties PY22	Private drains must be kept clean and no dumping or littering is allowed by staff or the public.

Table 3-11
Industrial Stormwater Permit Holders (1200-COLS & 1200-Z) in Gresham's Jurisdictions

Facility Legal Name	Street Address	City	Zip	DEQ WQ File Number	Permit Type	DEQ Permit Expiration Date	DEQ Enforcement	Gresham Inspections
ABS OR-O DC LLC	17505 NE San Rafael St	Portland	97230	104374	Gen. 1200-COLS	9/30/2016	None	WFPP: Not inspected this FY
Denton Plastics Inc.	18811 NE San Rafael	Portland	97230	113915	Gen. 1200-COLS	9/30/2016	None	WFPP: Not inspected this FY
Pella Vinyl Northwest Inc.	18600 NE Wilkes Rd	Portland	97230	120478	Gen. 1200-COLS	9/30/2016	None	WFPP, in compliance, now in monitored status. Inspections not required (below chemical threshold).
McDonald & Wetle Inc.	2020 NE 194th Ave	Portland	97230	119535	Gen. 1200-COLS	9/30/2016	None	WFPP: Violations for lack of secondary containment and improper chemical storage. Site was brought into compliance during PY 22.
Owens Corning Foam Insulation, LLC	18456 NE Wilkes Rd	Portland	97230	113153	Gen. 1200-COLS	9/30/2016	None	WFPP: in compliance.
Cascade Corporation	2201 NE 201st Ave	Fairview	97024	100491	Gen. 1200-COLS	9/30/2016	None	WFPP: Not inspected this FY
The Boeing Company	19000 NE Sandy Blvd.	Portland	97230	9269	Gen. 1200-COLS	9/30/2016	None	WFPP: in compliance.
Rolling Frito Lay Sales LP	4300 NE 189th Ave	Portland	97230	113285	Gen. 1200-COLS	9/30/2016	None	WFPP: Business working to complete required protective floor coatings.

Cities of Gresham and Fairview Environmental Monitoring Data

Facility Legal Name	Street Address	City	Zip	DEQ WQ File Number	Permit Type	DEQ Permit Expiration Date	DEQ Enforcement	Gresham Inspections
International Paper Company	1601 NE 192nd Ave	Portland	97230	107744	Gen. 1200-COLS	9/30/2016	None	WFPP: Business working to complete paving of on-site transit route. To be completed summer 2017.
NRI Inc.	19004 NE San Rafael	Portland	97230	111262	Gen. 1200-COLS	9/30/2016	None	WFPP: Business completed overhead cover for oil tank.
First Student, Inc.	1625 SE Hogan Rd	Gresham	97080	112646	Gen. 1200Z	6/30/2017	None	Technical assistance provided by EcoBiz. Housekeeping practices required improvement. Voluntary compliance.
Mutual Materials Company	2300 SE Hogan Rd	Gresham	97080	108092	Gen.1200Z	6/30/2017	None	Some recommendations for materials storage provided. On-site stormwater treatment devices for run-off appear to be managed correctly.
Scenic Fruit Company	7510 SE Altman Rd.	Gresham	97080	78990	Gen. 1200Z	6/30/2017	None	Planned joint inspection with Gresham and DEQ staff for spring 2017.
Pioneer Sheet Metal	19591 NE San Rafael St.	Portland	97230	120503	Gen. 1200-COLS	9/30/2016	None	Inspected by DEQ 6/10/16. Required improved record keeping and employee education.
Wellfield Protection Program (WFPP)	Where noted, these businesses lie within the City's designated wellfield areas.							

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

Program Area	PY 20 Budget	PY 21 Budget
	FY 16-17 (actual)	FY 17-18 (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	$ 830,951	$ 888,204
Natural Resources: Restoration Capital Improvements Master Plan Updates Invasive Species Control TMDL Compliance Green Space Acquisition	$ 403,437	$ 414,182
Engineering: Capital Improvements Minor Drainage/Flood Control Public Works Standards Stormwater Manual Oversight Master Plan updates Mapping Stormwater Assets Management Training	$410,125 $14M CIP	$472,314 $10M CIP
Operations & Maintenance: Systems Maintenance & Repair Equipment Repair & Replacement Spill Response Inspection IMP implementation Mapping Training	$ 2,180,644	$ 2,579,841
Infrastructure Development (Development Engineering, Surveying, Public Works Inspections, Commercial Erosion Control Inspections)	$ 283,900	$ 375,900
City Admin Support, GIS Support, Management, Overhead	$ 2,399,494	$ 2,750,469
Total	**$6.5M Operating/Salary $14M CIP**	

FY 16-17 CIP includes $5M for Kane Road repairs and $4M for the Fujitsu Pond restoration project.

“City of Fairview NPDES MS4 Annual Compliance Report, PY 22”

Section Four – City of Fairview Summary of Program Monitoring

Municipal National Pollutant Discharge Elimination System Annual Report for Permit Year 22, Permit #101315, November 1, 2017

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) 22 Annual Report documents implementation activities from July 1, 2016 through June 30, 2017 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, 2016 to June 30, 2017 implementing the 2015 SWMP. Section 2 of this report summarizes the Environmental Monitoring Program that is conducted by the City of Gresham on behalf of the City of Fairview.

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

There are no Urban Growth Boundary expansion areas contiguous to the City of Fairview. Consequently there are no associated concept planning, significant land use changes or significant development activities to report for PY 22.

Stormwater Management Program Budget

City of Fairview Stormwater Management program costs for Permit Year 22 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	2016-2017	2017-2018
Program Area	**PY 22 Expenditures**	**PY 23 Anticipated Budget**
Stormwater Fund	$523,335	$805,343
Street Fund	$495,042	$849,979

BMP Name	Compliance Date	BMP Description	Measurable Goals	Tracking Measure	Status 2016-2017 (PY 22)	Summary and date of Proposed Adaptive Management Modification	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 22; are as follows: 1. Iron Eagle Trailer (21414 NE Sandy Blvd, Fairview, OR). 2. 5501 NE 223rd, Fairview, OR (By Chinook Landing, Portland Metro) 3. 21861 NE Park lane, Fairview, OR (Construction site) The enforcement details are as follows: 1. Iron Eagle Trailer (Commercial Facility)- A concerned citizen called Fairview in regards to a significant diesel spill coming from the identified responsible party (I.E.T). I was onsite immediately for investigation and assessment. The spill has reached the downstream point of discharge at Sandy Blvd. into a 10" diameter storm drain pipe. The pipe outfall or downstream conveyance was not known because the storm drainage system belongs to Multnomah County. The source of spill is upstream about 500 ft. of impervious pavement driveway that leads to the trailer office. Immediately I called and notified Gresham Fire Department for assessment, containment, clean-up and disposal. It was found out that the spill was caused by a customer according to the office manager. The spill was contained onsite by GFD and delegated the clean-up and disposal to an environmental service provider. 2. 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. 3. 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.	No modification	Engineering Associate
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 22. 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

BMP Name	Compliance Date	BMP Description	Measurable Goals	Tracking Measures	Status 2016-2017 (PY 22)	Summary and Date of Proposed Future Management Modifications	Responsible Party
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 (3) total of IDDE investigations conducted this PY 22, which resulted to enforcement actions. There were no samples taken from all the (3) incidents.	No modification	Engineering Associate
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 1608). 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 six (6) total of regulated industrial/commercial facilities that were inspected during PY 22. 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 six 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 48-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	No modification	Engineering Associate 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 this PY 22 by the City of Portland under the supervision of Doug Wise.		

MS4 Rule	Compliance Date	SWP Description	Measurable Goals	Tracking Measures	Status 2016-2017 (PY 22)	Summary and Date of Important Activities Management Modifications	Responsible Party
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 were no reported and recorded spill incident events that took place this PY 22 within the City of Fairview jurisdiction.	No modification	Gresham Fire Engineering Associate PW Superintendent
		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.		
		Releases from Traffic Accidents If there is a spill of automotive fluids resulting from a traffic accident, the Gresham Fire Department will spread an absorbent compound (usually clay) and specialized absorbent pads on automotive fluids. Buckets are placed underneath dripping fluids. The road is swept and cleaned and, when necessary, additional protection is placed around the catch basins. Large leaking spills from commercial vehicles or semi-trucks are captured using a children's plastic pool. From a legal standpoint, the generator of the spill is responsible; therefore the waste materials are bagged and placed inside the wrecked vehicle or given to the tow truck driver for disposal. The City will perform the clean-up or utilize private clean-up contractors in order to continue the spill response program, when no responsible party can be identified.			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

BMP Name	Compliance Date	BMP Description	Measurable Goals	Tracking Measures	Status 2016-2017 (PY 22)	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 (4) total of inspected regulated industrial/commercial facilities during this PY 22. 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 55.50 inspection hours (pre-documentation, inspection / photos, final documentation and follow up) were spent this PY 22, which exceeded the recommended 40 hours of inspection requirements. The City of Fairview has updated its inventory list for regulated, non-regulated, and monitored business facilities as reference for inspections. Coordinated inspection effort is performed with the City of Gresham through an IGA.	No modification	Engineering Associate
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 seven (7) total of developments with active 1200-C permits during this PY 22 and 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 • Dean Hurford Development - NW Corner of Halsey & 223rd, Permit not renewed and was closed on July, 2017	No modification	Engineering Associate
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 ordinance in Chapter 8 of the municipal code.	Inform all construction site owners that have 1 acre or more of disturbed land that they are required to obtain a 1200-C permit from DEQ. 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 19 (12 < 1 acre; 7 > 1 acre, with 1200-C SW Construction permits) erosion and sediment control permits were issued and inspected during PY 22. 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

MS4 Name	Compliance Date	BMP Description	Measurable Goals	Tracking Measures	Status 2016-2017 (PY 22)	Summary and Date of Proposed Adaptive Management Modification	Responsible Party
Erosion Control Program Training	Ongoing	The Technical Guidance describes regulations, standards and provisions for erosion control as well as fines 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
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 22. All were in total compliance with the City's Erosion Prevention & Sediment Control (EPSC) standards. No enforcement actions were taken. Total of 7 EPSC with 1200-C renewed permits inspections were conducted for PY 22. 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
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.	<u>Large scale public education campaigns:</u> - 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 - Fall Lawn Care - Be Rain Ready - Pet Waste - RV Waste - Wildlife Garden - Cigarette - Hot Tub - Native Plants - Pesticides - Invasive - Metro Garden - Washing - Hiatus <u>Local Outreach Effort:</u> City of Fairview Public Works staff maintained a booth annually at the "Fairview On The Green" event during the month of August. 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 Audoban Society through the City of Gresham. Other agencies that are affiliated with this program are: City of Wood Village and City of Troutdale. <u>Educational Outreach Articles:</u> 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. Spring Clean Up 3. Water Quality 4. Healthy Streams 5. Recent Flooding of Fairview Creek	No modification	Engineering Associate Development Analyst Event Coordinator

BMP Name	Compliance Date	BMP Description	Measurable Goals	Tracking Mechanism	Status 2016-2017 PY 22	Summary and Rationale for Proposed Adaptive Management Modifications	Responsible Party
					6. Spring Clean Up 7. Paint Recycling 8. Nature Viewing 9. Nature Related Classes or Tours 10. Sidewalk In-Fill 11. Community Garden Plots		
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 22.	No modification	Engineering Associate PW Superintendent Code Compliance
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 11 total news letter articles published during PY 22 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.	Report on activities annually.	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

BMP Name	Compliance Date	BMP Description	Measurable Goals	Tracking Measures	Status 2016-2017 (PY 22)	Summary and Date of Proposed Adaptive Management Modifications	Responsible Party
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.	Track personnel receiving training annually.	City of Fairview's engineering staff (responsible reporting party) conducted (2) in-house trainings with nine (9) Public Works Operation & Maintenance staff during PY 22 (August 31,2015 and April 28, 2016). Topics discussed were: Stormwater Management on Facilities / Stormwater Operation & Maintenance Standard Operating Procedures (SOP) / SW Regulatory Compliance / Spill Prevention and What To Do When You Have a Spill Emergency Protocol & Contact Information. The responsible reporting party (Engineering Associate) has attended a total of 28 committee meetings, trainings (actual and on-line), seminars, workshops and trainings during PY 22 (July 1, 2016 to June 30, 2017), which are as follows: 1. 7/21/2016 - EFCN Webinar 2. 9/6/2016 - EBBA Mechanical Pipe Restraint Webinar 3. 9/7/2016 - Wellfield Protection Program Coordination Meeting 4. 9/14/2016 - ACWA Monthly Committee Meeting (Salem, OR) 5. 10/11/2016 - Wellfield Protection Program Coordination Mtg 6. 10/12/2016 - ACWA Monthly Committee Meeting (Salem, OR) 7. 11/9/2016 - ACWA Monthly Committee Meeting (Salem, OR) 8. 11/15/2016 - DEQ Industrial Stormwater Permit 9. 11/17/2016 - Watershed Group 2017 Planning Mtg._KOIN 6 TV 10. 11/19/2016 - Groundwater 101 Workshop & Guided Tour 11. 11/29/2016 - FEMA Training 12. 12/12/2016 - Stormwater Outreach Meeting 13. 12/14/2016 - ACWA 2016 (Portland's Manual Update) 14. 1/11/2017 - CDBG Application Workshop 15. 1/19/2017 - ACWA_DEQ Draft MS4 Permit II Discussion 16. 2/8/2017- ACWA Monthly Committee Meeting (Salem, OR) 17. 2/9/2017 - ACWA Stormwater Outreach Collaborative 18. 2/22/2017 - Confined Space Entry Training 19. 3/8/2017 - ACWA Monthly Committee Meeting (Salem, OR) 20. 3/15/2017 - Sanitary Sewer Modeling (KP Solutions) 21. 4/12/2017 - DEQ Construction/Post-Const. SW Runoff 22. 5/01/2017 - Lateral Connection Repair 23. 5/9/2017 - Fluid Handling System 24. 5/10/2017 - Annual ACWA Stormwater Summit (Eugene) 25. 5/25/2017 - Training with East Mediation 26. 6/7/2017 - Riparian Protection and TMDL 27. 6/14/2017 - ACWA Monthly Committee Meeting (Salem, OR) 28. 7/12/2017 - Clean Rivers Coalition	No modification	Engineering Associate PW Superintendent Development Analyst

SWMP Name	Compliance Date	SWMP Description	Measurable Goals	Tracking Measures	Status 2016-2017 (PY 22)	Summary and Date of Proposed Adaptive Management Modifications	Responsible Party
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 22. 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							
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 3 total development reviews for private stormwater management facilities and 3 development reviews for agency stormwater management facilities conducted this PY 22. <u>Private Stormwater Management Facilities:</u> • Northbrook Proposed 180-Unit Apartment (Jeff Parker Dev.) • Fairview Woods Proposed 49-Unit Apartment • All Stor Ph. II, Proposed Apartment Unit Complex <u>Agency Stormwater Management Facilities:</u> • New Fairview Elementary School, 225 NE Main St. • Reynolds School District, Vestibular Modular Building • Reynolds School Maintenance Yard Improvement Project 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

SWP Name	Compliance Date	BMP Description	Measurable Goals	Tracking Measures	Status	Summary and Date of Proposed Adaptive Management Modifications	Responsible Party
					2016-2017 (PY 22)		
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 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 SWI Management Manual as a reference for guidelines implementation. City of Fairview's Standard Specifications, Standard Drawings and Design Standards (?) 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 SWI Design Standards which conforms to the provisions of our current public works development code.	No modification	Engineering Associate Development Analyst
			Document the City's post-construction inspection and enforcement response procedures by January 1, 2014.				

SWP Name	Compliance Date	BMP Description	Workable Goals	Tracking Measures	Status 2016-2017 (PY 22)	Summary and Date of Proposed Adaptive Management Modifications	Responsible Party
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 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: Project is under pre-design milestone 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. 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.	No modification	Engineering Associate
SWMP Element #7 - Pollution Prevention for Municipal Operations							
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

BMP Name	Compliance Date	BMP Description	Measurable Goals	Tracking Measures	Status 2016-2017 (PY 22)	Summary and Date of Proposed Adaptive Management Modifications	Responsible Party
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 22, 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 22	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 22. 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.	There are two de-icing events that took place during this PY22: • Once in December, 2016 • Once in January, 2017	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 (2) dock permits, which include Natural Resources Riparian reviews issued this PY 22.	No modification	Permit Tech
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 22. In addition, there are 4 Metro parks and 3 Reynolds Schoil 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-annually. Also, he attends seminars and trainings related to Parks and Recreation Pest Management presentations.	No modification	Engineering Associate 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

BMP Name	Compliance Date	BMP Description	Measurable Goals	Tracking Mechanism	Status 2016-2017 (PY 22)	Summary and Date of Proposed Additional Management Mechanisms	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 have no pump station failure or sanitary problem issues this PY 22. 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. Another significant sanitary sewer pipe bursting rehabilitation project was completed last February, 2016 on Bridge St. This project addressed capacity and eliminated Inflow and Infiltration (I & I) issues.	No modification	Engineering Associate
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: Project is under pre-design milestone 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

BMP Name	Compliance Date	BMP Description	Measurable Goals	Tracking Measures	Status 2016-2017 (PY 22)	Summary and Date of Proposed Adaptive Management Modifications	Responsible Party
SWMP Element #8 -Structural Stormwater Facility Operations and Maintenance							
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 (175 CBs) and Zone 3 (125 CBs). Each zone is inspected and maintained annually. Zone 3 was inspected by city staff and cleaned by Multnomah County crew, this PY 22. 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, this 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-Stration Swales - Detention Pipelines	No modification	Engineering Associate Storm Lead Worker PW Superintendent Map Tech

MEP Name	Compliance Date	MEP Description	Measurable Goals	Quantifiy Measures	Status 2016-2017 (PY 22)	Summary and Date of Proposed Adaptive Management Modifications	Responsible Party
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 7 total of new private developments conducted for permitting process this PY 22: are as follows: - Fairview Woods Apartment Proposed 48-Unit Apartment - Jay Ellis Development - New Fairview Elementary School - Reynolds School District Maintenance Yard Improvement - All Stor - Ph. II, Proposed Apartment Units - Arata Road (223rd - 238th)_Multnomah County Road Widening Project - Sandy Blvd. (230th - 238th)_Multnomah County Road There were four total of private regulated stormwater business facilities inspected during PY 22, are as follows: - Blue Lake Park - Knight Transportation - Thermo King Northwest - Yamaha Sports Plaza	No modification	Engineering Associate

Appendix A—Legal Authority

CITY OF GRESHAM
City Attorney's Office
1333 NW Eastman Parkway, Gresham, OR 97030-3813 USA
(503) 618-2507 / FAX (503) 667-3031

October 18, 2017

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 Article 3.23 contains 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 Article 3.23 contains 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 Article 3.28 contains 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 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 3.22.020 Stormwater Manuals
Schedule A. 4. C. vi.	Describe… the *enforcement response procedures* the permittee will implement. The enforcement response *procedures must ensure construction activities are in compliance with ordinances* or other regulatory mechanisms.	GRC 3.22.020 Stormwater Manuals

Adequate Legal Authority		
Permit Reference	**Requirement**	**Code Authority**
Schedule A. 4. F. iii	…co-permittees must develop or reference an enforceable post-construction stormwater quality management manual….	GRC 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 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 3.23.025(2) Waste Disposal Prohibitions, and GRC 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 3.20.035(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

Adequate Legal Authority		
Permit Reference	**Requirement**	**Code Authority**
		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. 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 Article 3.99 provides 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 3.24 and GRC Article 3.99 establish 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

BEH ATTORNEYS AT LAW | 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.

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

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

Summary of Pleasant Valley, Springwater & Kelley Creek Applications

Below is a list of Development Permit Applications and Pre-Applications that have come into the City in for properties within the Pleasant Valley, Springwater areas and the Kelley Creek Headwater Area.

2016-2017 Planning Permits

File Type	File No.	Date Filed	Project Description & Location	Pre-App#	Final Action	Action Date	Comments
FP	15-285	8/19/15	Jim Leeper/Charlotte Point final plat for Brookside @ PV Phase 3 – 38 lots; 2676 SW Butler Rd.	NA	APPD	8/16/16	Final Plat Approved 8/16/16 38 single-family lots – Pleasant Valley
FP	16-086	3/24/16	Sheldon Development final plat for Hilltop View Estates @ Persimmon; 7205 SE Hogan Rd.	NA	APPD	10/19/16	Final Plat Approved – Springwater area 31 lots Planned Development Subdivision
PD/SD / TR	16-106	4/13/16	Renaissance Homes 9-lot Planned Development Subdivision with Tree Removal; 6925 SE Hogan	15-175	AWC	9/6/16	9-lot PD Subdivision approved Springwater No record of final plat submittal at this time – deadline for filing final plat is 9/6/18
SUR3/ TR/MI S2VR3	16-188	6/21/16	City of Gresham develop Hogan Butte Nature Park Phase 1 including Tree Removal; end of Gabbert on top of Hogan Butte	15-332	AWC	9/13/16	Springwater Development approval for the Hogan Butte Nature Park
SD/FS	16-309	9/20/16	Clearwater Homes – Big Oak Subdivision, 42 lots; future street plan	16-119	AWC	3/15/17	42 lot single-family subdivision – Pleasant Valley Final Plat submitted 8/8/17 (FP 17-299) pending approval

SD	16-341	10/12/16	Jim Leeper Homestead at Pleasant Valley – 54 lots; SW Rodlun & Butler	16-058	AWC	1/10/17	54 lots approved – Pleasant Valley Final Plat submitted 8/7/17 (FP 17-298) pending approval
SD/DRD/VR2	16-315	9/30/16	Brickworks Village swc SE Fleming & Palmquist; 187-lot subdivision – 93 for single-family attached units	16-062	AWC	1/12/17	187 lots approved – 93 for SFA. Phasing plan approved for development in 3 phases 4/19/17 (MIS 17-043) Final Plat submitted 7/26/17 (FP 17-274) pending approval
AX	17-023	1/21/17	Telford Properties LLC annexation into City of Gresham				Annexation proposal still pending complete submittal and review
TU1	18-200	6/2/17	Temporary real estate sales office @ 4136 SW Redfern		AWC	6/12/17	Temporary placement of sales office

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

Vance Park

Pollinator Peace Garden & Community Garden—Grand Opening
Polinizador Jardín de la Paz y Jardín Comunitario—Gran Inauguración

Celebrate this bee-utiful new garden!
¡Celebre este hermoso jardin nuevo!

Saturday, June 24

Vance Park
1400 SE 182nd Ave.
Gresham

11:00 – 11:20 a.m

- Opening Remarks—Multnomah County Commissioner Lori Stegmann and Gresham Councilor David Widmark
- Garden History & Volunteer Recognition

11:20 – 11:40 a.m

Ribbon Cutting Ceremony for:

- Habitat Demonstration Garden—Heather Buley, Audubon Society of Portland and Columbia Land Trust
- Gresham's New Community Garden Location—Adam Kohl, Outgrowing Hunger

11:40 a.m. – Noon

- Tour the site, network, have refreshments

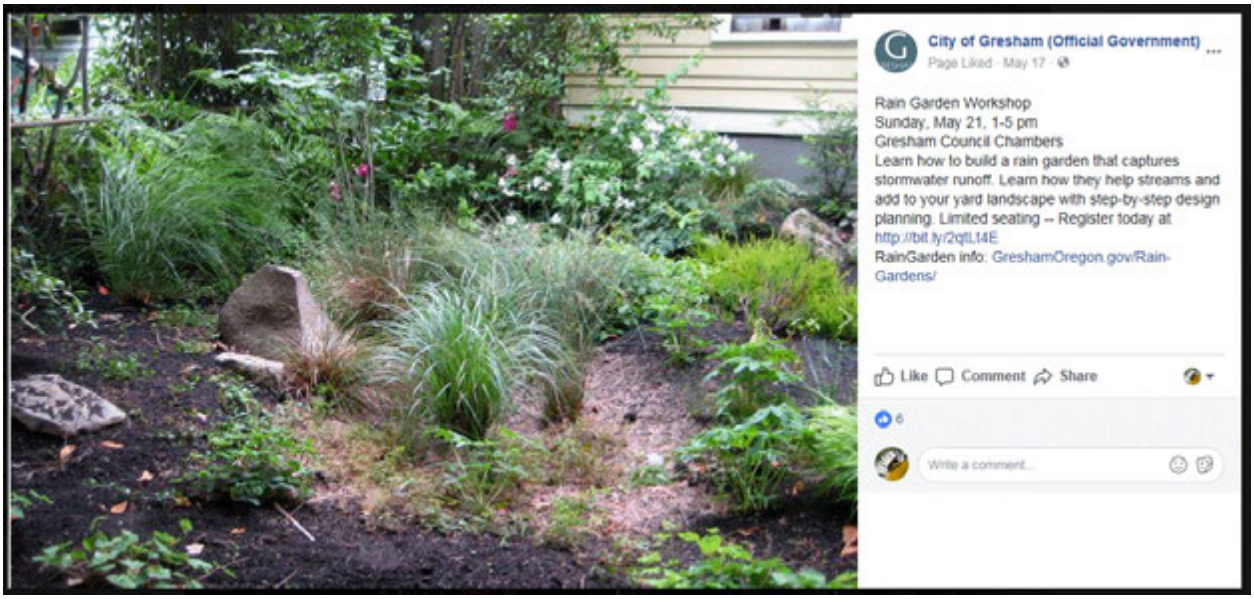
12:15 – 1:00 p.m.

- Native Bee Education Talk—Celeste Ets-Hokin

More info, or to RSVP: Please contact Keri Handaly Keri.Handaly@GreshamOregon.gov or 503-618-2657.
Photo Credit: Celeste Ets-Hokin

CITY OF GRESHAM

Multnomah County


City of Gresham (Official Government)
Page Liked · May 17
Rain Garden Workshop
Sunday, May 21, 1-5 pm
Gresham Council Chambers
Learn how to build a rain garden that captures stormwater runoff. Learn how they help streams and add to your yard landscape with step-by-step design planning. Limited seating -- Register today at http://bit.ly/2qtL14E
RainGarden info: GreshamOregon.gov/Rain-Gardens/
Like
Comment
Share
6
Write a comment...

Make National Drug Take Back Day Every Day in Gresham
GreshamOregon.gov/DrugDisposal
Help keep medications out of our water.
Properly dispose of unused prescription drugs.
Do not flush drugs down the sink or toilet.
Waste water treatment plants are not designed to remove chemicals.
The chemicals can harm fish and wildlife. Dispose of prescription drugs at these two safe, convenient places:
Gresham Police Dept. Lobby | Monday – Friday 8 a.m. – 5 p.m.
Kiosk at Walgreens Pharmacy | 24/7 - 1950 NE Burnside Rd.
GRESHAM GOING BEYOND
City of Gresham (Official Government)
Page Liked · April 29
National Drug Take Back Day
More than $1 billion worth of leftover drugs are thrown in the trash, flushed or left in medicine cabinets each year, leaving the door open for accidental poisonings, drug abuse and contamination of our waterways. Gresham Walgreens on Burnside has a safe, 24-7 drug take-back kiosk. In addition, our Gresham Police Dept. also accepts items 8 am- 6 pm, Monday through Friday, providing Gresham residents two options for safe disposal. Properly dispose of unused medications and keep #GreshamSafe.
GreshamOregon.gov/Prescription-Drugs-Disposal/
Like
Comment
Share
8
Write a comment...
People You May Know
See All
Corinne Handelman
7 mutual friends
Add Friend

PROOF
PROOF
PROOF

Interns marking storm drains with “drains to stream” medallions.

Free Watershed Events - Spring and Summer 2017

Sponsored by the Department of Environmental Services

April 19 Arbor Day Tree Planting at Vance Park, 10am-2pm
April 22 Solve It Planting Event at Nadaka Nature Park, 9am-12pm
April 22 Earth Day 2017 Recycling Collection Event at Gresham City Hall, 9am-2pm
April 26 Bird Survey Training at Gresham City Hall, 6pm-7:30pm
April 27 Urban Weeds Workshop at Gresham City Hall, 6pm-8:30pm
April 29 Green and Clean at Highland Elementary, 9am-12pm
May 4 Native Plants Workshop at St. Aidan's Episcopal Church and Nadaka Nature Park, 6:30pm-9pm
May 6 Grand Opening of the Johnson Creek Wildlife Garden/Native Bees 101 at Main City Park, 1pm-2pm
May 11 Wild Gresham: A Community Talk on Wildlife at Gresham City Hall Council Chambers, 6-7pm
May 20 Native Plant Workshop at Troutdale Police Station, 9am-11:30am
May 20 Chastain Creek Tree Care Volunteer Event at Chastain Creek, 9am-12pm
May 20 Native Bees and the Link to Our Food at Vance Park, 1pm-2pm
May 21 Rain Garden Workshop at Gresham City Hall Council Chambers, 1pm-5pm
June 10 Tips for Attracting Pollinators at Main City Park, 1pm-2pm
June 24 Grand Opening Celebration of Vance Park Pollinator Peace Gardens/Native Bees 101 at Vance Park, 1pm-2pm
June 24 Explorando el Columbia Slough at Colwood Golf Center in Portland, 1pm-5pm
July 15 Naturescaping for Pollinators at Main City Park, 1pm-2pm
July 29 Naturescaping for Pollinators at Vance Park, 1pm-2pm
August 6 Columbia Slough Regatta at Multnomah County Drainage District Offices, 10am-1pm
August 12 Nadaka Park Festival at Nadaka Nature Park, 12pm-4pm

CITY OF GRESHAM More information: GreshamOregon.gov/Calendar or 503-618-2525

Search our newspapers archives

Daily News Where you Live

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Clackamas	Lake Oswego	Sandy
Canby	Madras	Sellwood
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Estacada	Molalla	Tigard
Forest Grove	Newberg	Tualatin
Gladstone	Oregon City	West Linn
Gresham area	Portland	Wilsonville
King City	Portland SE	Woodburn
Happy Valley	Portland SW	

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50 Something! KPAM 860 Sunny 1550

News

- What's that noise? F-15 night flights are routine training missions
- Local students lag state on academic tests
- Fairview recall petition fails
- Man and beast race to the corny finish line
- Corey Brooks: Advocate for city growth

Opinion

- Measure 97 overflows with empty promises
- Urban Oregon legalized marijuana, rural Oregon pays the price

Local cities offer storm drain cleaning assistance

Created on Monday, 05 September 2016 11:54 | Written by Christopher Keizur |

Tweet G+1 Share 0 Comments Share

Removing dirt and oil can improve water quality -

FILE PHOTO - A storm drain.

Maintaining a private storm drain is an important way to prevent a parking lot from flooding and causing hazards in nearby streets, which is why the cities of Gresham, Troutdale, Wood Village and Fairview are partnering to offer private storm drain cleaning to businesses at a reduced cost.

The Storm Drain Cleaning Assistance Program (SCAP) takes place every spring and fall.

"Businesses with only one or two drains have found they're able to save more than $100 with this program because they are able to avoid the typical drain cleaning mobilization fee," said Keri Handaly, SCAP program coordinator for Gresham. "Removing dirt, oil and debris from drains also helps improve water quality in our local streams."

Property owners are responsible for cleaning privately owned storm drains to keep dirt and leaves that carry pollution from entering the public systems. Businesses that sign up for the program will have their storm drains cleaned for a $45 flat fee per drain by a private company. This compares favorably to the typical $120 charge, with additional fees, that most companies use.

To participate in the program, register online at www.GreshamOregon.gov/SCAP. The deadline is Oct. 1. Any questions can be directed to Christa Thompson at 503-618-2522.

The city of Gresham works as the coordinator of the program, but doesn't perform the cleaning or billing services.

Email Alerts Sign Up Here

Sustainable Life CLICK HERE

KOIN 6 Watching out for you

KPAM.COM KPAM NEWS TALK 860

Sunny 1550 AM

WILD GRESHAM

THURSDAY, May 11, 2017
6 p.m. - 7 p.m.
Gresham City Hall, Council Chambers
1331 NW Eastman Pkwy

Discover the wild neighbors that share our city spaces.

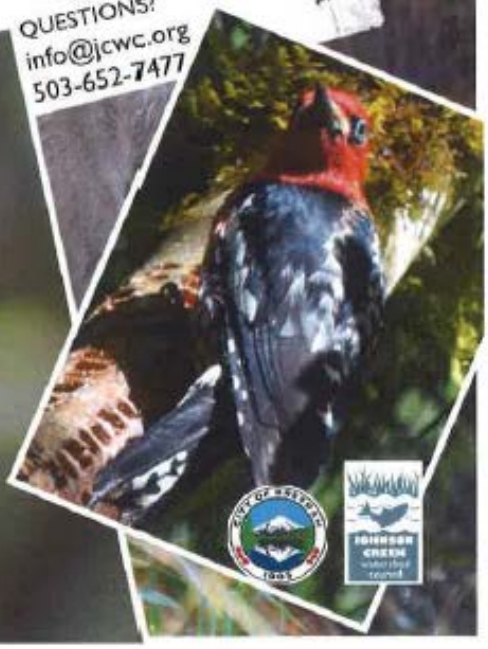
An encore presentation by the City of Gresham and the Johnson Creek Watershed Council

A family-friendly event.

Photos and videos taken in Gresham...

...by local photographer Caz Zyvatkauskas.

QUESTIONS?
info@jcwc.org
503-652-7477

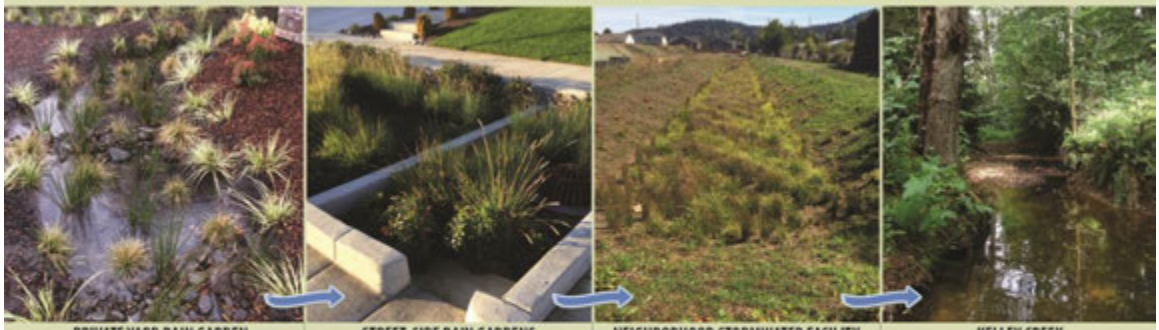


Interpretive panel installed in City parks

Storm Drain Mural Painting Contest

Summer 2017

VAN BUREN SUBDIVISION: Welcome to your nature friendly neighborhood



PRIVATE YARD RAIN GARDEN | STREET-SIDE RAIN GARDENS | NEIGHBORHOOD STORMWATER FACILITY | KELLEY CREEK

Three things to know about your rain gardens

1) Your neighborhood is helping fish and wildlife with a back-to-nature system from rain garden to stream.

2) This system captures dirt, oil, and other pollutants, and slows down water going to Kelley Creek.

3) Private yard rain gardens thrive with minimal maintenance. Keep the inlets and outlets clean. The City or the developer will maintain the rest.

CITY OF GRESHAM
GOING BEYOND

1333 NW Eastman Parkway
Gresham, OR 97030

Visit GreshamOregon.gov/RainGarden for FAQs, maintenance tips, and learn how to steward your street side rain gardens. | 503-618-2525 or Karen.Bromley@GreshamOregon.gov

HAYDEN'S MEADOW AT BROOKSIDE SUBDIVISION: Welcome to your nature friendly neighborhood

PRIVATE YARD RAIN GARDEN | STREET-SIDE RAIN GARDENS | NEIGHBORHOOD STORMWATER FACILITY | KELLEY CREEK

Three things to know about your rain gardens

1) Your neighborhood is helping fish and wildlife with a back-to-nature system from rain garden to stream.

2) This system captures dirt, oil, and other pollutants, and slows down water going to Kelley Creek.

3) Private yard rain gardens thrive with minimal maintenance. Keep the inlets and outlets clean. The City or the developer will maintain the rest.

CITY OF GRESHAM
GOING BEYOND

1333 NW Eastman Parkway
Gresham, OR 97030

Visit GreshamOregon.gov/RainGarden for FAQs, maintenance tips, and learn how to steward your street side rain gardens. | 503-618-2525 or Karen.Bromley@GreshamOregon.gov

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 verify that erosion protection and sediment control BMPs are installed and properly maintained. Contractors with failing erosion control BMPs are liable for civil penalties and costly corrective actions.

- Properly install & maintain perimeter control (silt fence or wattles) to keep soil on site.

- Protect stockpiles with plastic or mulch to minimize contact with rain water.

- Prevent sediment tracking into street with rocked construction entrance.

- Protect exposed soil with mulch, matting, or plastic to prevent runoff.

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

Best Management Practice or Activity	Commitment	Performance Measure	Status and Additional Goals, TMDL Year July 2015 through June 2016	Status and Additional Goals, TMDL Year July 2016 through June 2017	Proposed Adaptive Management	Pollutant									Watershed						Regulatory Program				
						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
NONPOINT SOURCE TMDL IMPLEMENTATION PLANS																									
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 currently show 24,014 active and inactive accounts. The previous year's data was reported as 24,286 accounts, therefore, an overall reduction in wastewater accounts. However, during 2014-15 the city switched to a new billing software and a large cleanup occurred. The decline in accounts is thought to be due to common margin of error in our data and the softward switchover process. As always, code requires new and redevelopment to hook up to the city system if a system exists within 300 feet.	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.	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 15 tanks were decommissioned in Gresham during 14-15.	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.	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	No spills from private systems were reported during the reporting year. 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 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.	None proposed.	ó	ó								P	P	P	P	P		X				
Temperature Managemen																									
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).	Permitting efforts continued for implementation of the 60 acre Fairview Creek Wetland Mitigation Bank at the Fujitsu Ponds site, a priority project that will take a 900 ft section of Fairview Creek offline from 2 relic quarry ponds that cause significant heat loading (existing shade contion a 1, or poor). Implementation expected to begin in 2016 when permit is approved.	See Table 3-2 of the NPDES report.				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).	Installation of a native riparian canopy occurred at 9 sites covering 60 acres and utilized 2500 volunteer hours (which augmented contract crew and staff time) in the 2014-2015 reporting year. 12,219 total plants were installed (5,875 fast growing shade trees). In addition, the city's watersheds (Johnson, Kelly, and Fairview) were surveyed and treated for Japanese knotweed, English ivy, Garlic mustard, Lesser Celandine, Purple Loosestrife, Yellow Flag Iris, and other invasive species. Sites being treated for invasive weeds and/or subject to restoration planting efforts will be assessed regularly according to NPT-3.	See Table 3-2 of the NPDES report.				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.	A total of 9 riparian restoration projects were implemented in the 2014-2015 reporting year, 7 of these sites were pre-existing and were expanded to include 2 new locations on Johnson Creek. Work continued on permitting for 1 large-scale CIP (see NPT-1). On-the-ground measures are anticipated to be implemented at both new sites in the 2015 reporting year, along with regular reporting of the ongoing restoration sites. Along with monitoring the City completed an inventory of the riparian habitat areas along all of its watersheds. This work was a continuation of work completed 10-years prior as part of a Natural Resources inventory of the City. Each site was evaluated on the presence of natives vs. non-natives at each level of vegetation (herbaceous, shrub and tree) and cover. Results are used to prioritize restoration sites to maximize shade gains.	See Table 3-3 of the NPDES report.				ó							P	P	P	P	P		X				X