City of Oregon City, Oregon

National Pollutant Discharge Elimination System Municipal Separate Storm Sewer System Discharge Permit

2021–2022 Annual Report

Prepared for the
Oregon Department of Environmental Quality

December 1, 2022

Assisted By:

CITY OF OREGON CITY

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM MUNICIPAL STORMWATER SYSTEM ANNUAL REPORT

JULY 1, 2021 – JUNE 30, 2022

I, the undersigned, hereby submit this National Pollutant Discharge Elimination System (NPDES) Municipal Stormwater System Annual Report in accordance with NPDES Permit No. 101348. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person, or persons, who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

11-30-22

Vance Walker
Public Works Operations Assistant Director
City of Oregon City

Date

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1.0 INTRODUCTION

1.1 NPDES MS4 Permit Background and Permit Renewal

The Oregon Department of Environmental Quality (DEQ) regulates stormwater runoff from the City of Oregon City (City) through the National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Permit (Permit) No. 101348, issued to Clackamas County and its co-permittees. Clackamas County co-permittees include the City of Oregon City along with the cities of Lake Oswego, Gladstone, West Linn, Milwaukie, Wilsonville, Happy Valley, Johnson City, and Rivergrove, the Oak Lodge Water Services District, Water Environment Services, and Clackamas County. Each co-permittee is a relatively small community, most having populations under 30,000 with some (Johnson City and Rivergrove) having populations significantly smaller.

This annual report bridges two effective permits. The City's effective NPDES MS4 Permit prior to October 1, 2021, was issued March 16, 2012, after a multi-year negotiation process with DEQ and an additional year-long delay related to an appeal. The 2012 Permit was not appealed, and thus maintained an effective date of March 16, 2012. The Permit expired on March 1, 2017 and went into administrative extension. The City submitted its Permit Renewal Application on February 27, 2017. The Permit Renewal Application required an evaluation of the Stormwater Management Plan (SWMP) for proposed modifications, development of Total Maximum Daily Load (TMDL) benchmarks, mapping, a maximum extent practicable (MEP) evaluation, updates to the City's environmental monitoring program, and an evaluation of proposed service area expansions and associated pollutant load estimates. The City's renewed NPDES MS4 Permit was issued on September 15, 2021, and became effective on October 1, 2021.

Each co-permittee is required to submit an annual report, summarizing accomplishments and implementation of their individual SWMPs. This annual report documents stormwater management activities from July 1, 2021 to June 30, 2022 in conjunction with the City's 2012 SWMP, and 2021 NPDES MS4 Permit requirements for annual reporting. The **City's 2012 SWMP remains the effective NPDES MS4 program document for purposes of this annual report**. Proposed SWMP updates are being submitted to DEQ for approval on the same date as this annual report (December 1, 2022) as required by the 2021 MS4 NPDES permit.

1.2 Document Organization

The following table (Table 1) outlines the organization of this annual report document, with respect to the annual reporting requirements per Schedule B.3 of the City's Permit.

Table 1: Summary of the NPDES MS4 Annual Report Requirements

	Annual reporting requirement	Location in document
a)	Status of implementing the stormwater management program and each control measure program element in Schedule A.3, including progress in meeting measurable goals and program tracking and assessment metrics identified in the SWMP Document.	Appendix A
b)	A summary of the adaptive management implementation and any changes or updates to programs made during the reporting year, including rationales for any proposed changes to the SWMP, and review of related new and historical monitoring data. This summary should also include discussion of the implications of or any findings related to recent years' adaptive management and/or changes made to the SWMP Document.	Section 2.0
c)	Any proposed changes to SWMP program elements that are designed to reduce TMDL pollutants.	Section 2.0
d)	A summary of education & outreach and public involvement activities, progress toward or achievement of measurable goals, and any relevant assessment of those activities. This should include planned adaptive management or other program enhancements to occur in the following years.	Appendix A (BMPs 4-1 through 4-5)
e)	A summary describing the number and nature of enforcement actions, inspections, and public education programs, including results of ongoing field screening and follow-up activities related to illicit discharges.	Appendix A (BMP 1-3)
f)	A list of entities referred to DEQ for possible 1200-Z NPDES general permit coverage based on co-permittee screening activities, a list of categories of facilities inspected, and an overview of the results of inspections of commercial and industrial facilities.	Appendix A (BMP 2-1)
g)	A summary of total stormwater program expenditures and funding sources over the reporting fiscal year, and those anticipated in the next fiscal year.	Section 3.0
h)	A summary of monitoring program results, including monitoring data that are accumulated throughout the reporting year submitted in the DEQ-approved Data Submission Template, and any assessments or evaluations of that data completed by the co-permittees or an authorized third party.	Section 4.0 & Data Submitted Online
i)	Any proposed modifications to the monitoring plan that are necessary to ensure that adequate data and information are collected to conduct stormwater program assessments.	Section 4.0
j)	An overview, as related to MS4 discharges, of concept planning, land use changes and new development activities (including the number of new post-construction permits issued) that occurred within the UGB expansion areas during the reporting year, and those forecast for the following year, where such data is available.	Section 5.0
k)	The details of all corrective actions implemented during the reporting year.	All corrective actions were covered under the Illicit Discharges Program (see BMP 1-3 in Appendix A)
l)	Additional Annual Report Requirements. For 2022, this includes reporting on winter maintenance and providing a mercury minimization assessment.	Section 6.0 and Appendix B

Each section of this report corresponds to the specific Permit requirements in Schedule B.3. This report emphasizes efforts and activities associated with individual Best Management Practices (BMPs) from the City's 2012 SWMP, as summarized in Appendix A.

Per Section 6.5 of the City's Willamette Basin TMDL Implementation Plan, an annual progress report is also required for submittal to DEQ. Typically, this TMDL annual report has been included as an appendix to this NPDES MS4 permit annual report. However, the TMDL annual report was due to DEQ by November 1, 2022. The NPDES MS4 annual report date changed to December

1st in the new 2021 permit. Oregon City has made a request to DEQ to revise the TMDL annual reporting deadline to December 1 so that these reports may continue to be submitted together in upcoming years.

2.0 ADAPTIVE MANAGEMENT PROCESS IMPLEMENTATION

2.1 Adaptive Management Program

In accordance with the issuance of the City's NPDES MS4 Permit (in 2012), the City was required to document their adaptive management approach to assess annually and modify, as necessary, existing and new SWMP components. The City submitted their approach to DEQ on November 1, 2012.

Historically, the City has implemented adaptive management principals to annually refine implementation methods and data collection activities in conjunction with their effective SWMP and BMPs. More significant modifications to SWMP activities occur every 5 years, in conjunction with the Permit renewal application and updated Permit requirements. The City's submitted adaptive management approach is consistent with the City's historical approach for implementing adaptive management principals.

Annually, as the City completes their NPDES MS4 annual report, the City reviews SWMP implementation through BMP-specific measurable goals and tracking measures. The City collects data and feedback from staff responsible for implementing and reporting on each BMP to gage whether implementation was deemed to be effective or whether there are suggested improvements to be made. Suggested adjustments to BMP implementation include consideration of resource availability, budget/ funding, and overall need.

Every 5 years, during the Permit renewal process and SWMP update effort, additional factors are considered as part of the City's overall adaptive management process. These factors include more detailed information related to BMP implementation, such as:

1. Whether technology or information is available that would help improve or refine BMPs,

2. How representative are the measurable goals and tracking measures to the BMP objective, and

3. Are resources available to make changes to the measurable goals and BMP objectives?

Additionally, at the end of the Permit term, technical investigations and studies completed over the Permit term are reviewed and used to help target and identify specific issues that need to be addressed to maintain waterbody health and help formulate BMP activities (measurable goals and tracking measures). During the 2012-2017 Permit term, such technical studies included a water quality trends analysis, pollutant load reduction evaluation, hydromodification assessment, and a retrofit assessment.

During the 2016-2017 Permit renewal application process, the City, with the assistance of a consultant, reviewed the adaptive management evaluation factors and the studies listed above. This information informed the City's MEP evaluation and proposed SWMP changes submitted as part of the Permit Renewal Application. Proposed program changes were categorized as an organizational change, a removed activity (due to completion), an implementation change (due to identified efficiencies and adjustments to internal processes and procedures), and a change due

to consolidation of activities. An updated (2017) SWMP was also included, reflecting refinement of BMPs, measurable goals, and tracking measures, for use in future permit negotiations and reissuance.

In 2022, the SWMP is going through another update as required under the new 2021 MS4 NPDES permit. The SWMP was reviewed against new permit requirements and updated as needed to meet requirements. A proposed 2022 SWMP is being submitted to DEQ for approval as required on the same date as submittal of this annual report (December 1, 2022).

2.2 SWMP Updates for the 2021 – 2022 Reporting Year

The 2021-2022 reporting year was the tenth full year in which the City's effective 2012 SWMP was implemented. For the 2021-2022 Permit year, no updates were made to the 2012 SWMP or BMP measurable goals and tracking measures, due to regulatory limitations preventing Permit modifications while a Permit is in administrative extension. It should be noted that a summary of proposed SWMP modifications was submitted with Oregon City's Permit Renewal Application on February 27, 2017, but those modifications were not implemented pending reissuance of the new Permit. As mentioned previously, SWMP updates are being developed and implemented according to the timeline required in the new 2021 Permit.

2.3 Monitoring Plan Updates for the 2020 – 2021 Reporting Year

The 2017 Comprehensive Clackamas County Stormwater Monitoring Plan (CCCSMP) is the effective monitoring plan for the City of Oregon City. There were not any updates or modifications to the 2017 CCCSMP during the 2021-22 reporting year. According to the new 2021 permit, an updated proposed monitoring plan is being submitted to DEQ for approval on the same date as submittal of this annual report (December 1, 2022).

3.0 SUMMARY OF PROGRAM EXPENDITURES

A summary of the City of Oregon City's revenue and expenditures for the 2021–2022 fiscal year and a projection of the City's revenue and expenditures for the 2022–2023 fiscal year are provided in Table 2, below. Projection of expenditures is considered draft at this time.

Table 2: Summary of Program Expenditures

Stormwater Fund (530) - City of Oregon City				
	Fiscal Year			
	2021 Audited Actual	2022 Unaudited Actual	2023 Adopted Budget	2024 Projected Budget
Beginning Fund Balance	$ 1,983,537	$ 2,613,635	$ 1,909,272	$ 1,957,469
Stormwater Fee Rates (per EDU per month)	Rate = $10.54 / $10.86 3% rate increase	Rate = $10.86 / $11.72 8% rate increase	Rate = $11.72 / $12.66 8% rate increase	Rate = $12.66 / $13.68 8% rate increase
Revenues				
Charges for Service	$ 3,117,561	$ 3,156,548	$ 3,374,740	$ 3,644,719
Intergovernmental	$ 2,503	$ 17,065	-	-
Interest Income	$ 9,442	$ 8,662	$ 7,000	$ 7,000
Miscellaneous Income	$ 51,974	$ 3,840	-	-
Erosion Control Permits	$ 31,688	$ 29,345	$ 45,000	$ 45,000
Project Management	$ 75,939	$ 44,442	$ 32,000	$ 32,000
TOTAL Revenues	$ 3,289,107	$ 3,259,902	$ 3,458,740	$ 3,728,719
Expenditures				
Personal Services	$ 1,252,021	$ 1,258,663	$ 1,432,043	$ 1,496,485
Material & Services	$ 961,959	$ 982,985	$ 1,048,500	$ 1,080,000
Capital Outlay Totals	$ 352,736	$ 210,374	$ 405,000	$ 405,000
Total Transfers	$ 92,293	$ 440,000	$ 525,000	$ 525,000
TOTAL Expenditures	$ 2,659,009	$ 2,892,022	$ 3,410,543	$ 3,506,485
Change in Fund Balance	$ 630,098	$ 367,880	$ 48,197	$ 222,234
Ending Fund Balance	$ 2,613,635	$ 2,981,515	$ 1,957,469	$ 2,179,703

Stormwater Fund (530) - City of Oregon City				
	Fiscal Year			
	2021 Audited Actual	2022 Unaudited Actual	2023 Adopted Budget	2024 Projected Budget
Capital Outlay – Details				
Operations New Equip. > $5000	$ 4,707	-	$ 5,000	$ 5,000
Capital Construction	$ 348,029	$ 210,374	$ 400,000	$ 400,000
TOTAL Capital Outlay	$ 352,736	$ 210,374	$ 405,000	$ 405,000
Transfers – Details				
Transfers from General Fund	$ (12,707)	-	-	-
Transfer to Building Reserve	-	$ 300,000	$ 300,000	$ 300,000
Transfer to Equipment Replacement	$ 105,000	$ 140,000	$ 225,000	$ 225,000
TOTAL Transfers	$ 92,293	$ 440,000	$ 525,000	$ 525,000

4.0 MONITORING DATA

4.1 Development of the Comprehensive Clackamas County Stormwater Monitoring Plan (CCCSMP)

Per the 2004 NPDES MS4 Permit requirements (Schedule B), the City of Oregon City, along with Clackamas County and other co-permittees, was required to develop and implement a stormwater monitoring program. Given the effort associated with implementing an effective environmental monitoring program that adequately met all Permit requirements and objectives, Clackamas County (i.e., CCSD#1 and SWMACC) and six other co-permittees including the City of Oregon City agreed to consolidate efforts and prepare one comprehensive stormwater monitoring plan. This plan, called the Comprehensive Clackamas County Stormwater Monitoring Plan (CCCSMP) was prepared for submittal with the 2006 NPDES Permit Annual Compliance Reports. The CCCSMP was implemented beginning July 1, 2007, and minor editorial changes were made in 2008.

In conjunction with requirements of the 2012 NPDES MS4 Permit, the 2007-2008 CCCSMP was reviewed for consistency with revised permit monitoring objectives. Monitoring locations and frequencies were adjusted to reflect requirements of the 2012 Permit. Additional efforts related to mercury monitoring, pesticide monitoring, macroinvertebrate (biologic) monitoring, and geomorphic monitoring were added to the CCCSMP. A description of the proposed time-composite sampling methodology was included as an appendix to the CCCSMP. Additional information such as quality assurance procedures were also added in conjunction with Schedule B.2 of the 2012 Permit.

The updated (2012) CCCSMP was submitted to DEQ in September 2012. Comments from DEQ were received in October 2012, and final revisions to the 2012 CCCSMP were submitted to DEQ June 30, 2013.

In 2016, the City, in collaboration with other co-permittees, participated in a series of workshops to propose modifications to the CCCSMP due to completion of monitoring obligations under the 2012 NPDES MS4 Permit. Modifications reflected completion of some select, one-time monitoring obligations under the 2012 Permit and refinement of monitoring locations, parameters, and activities based on information collected over the Permit term. Key modifications included the following:

- Inclusion of Oak Lodge Water Services District and the City of Wilsonville instream, stormwater, and biologic monitoring activities;
- Removal of mercury and pesticide monitoring activities, as those obligations have been met;
- Removal of biochemical oxygen demand (BOD) and total volatile solids (for co-permittees outside of the Tualatin basin) from the analyte list, because of the limited usefulness of the collected data to date;
- Adjustment of analytical methods and reporting limits based on consistency with Code of Federal Regulations (CFR) Title 40 and current laboratory capabilities;
- Adjustment of monitoring locations to ensure geographic distribution of data and to continue to inform trends analyses;
- Inclusion of routine instream sampling, in addition to targeted dry weather/wet weather instream sampling activities;

- Removal of Clackamas County Service District #1's (CCSD #1s) geomorphic monitoring activities from the Plan, as physical conditions are evaluated during biologic (macroinvertebrate) monitoring activities; and
- Minor editorial updates to improve clarity and consistency with current practices.

Per Schedule B.2.e of the Permit and 7.2 of the CCCSMP, the City and other CCCSMP participants submitted to DEQ a 30-day notice of the proposed CCCSMP modifications for the Department's review and approval on December 16, 2016. As no response was received from DEQ within 30 days, the proposed modifications were deemed approved without written approval. Implementation of the 2017 CCCSMP began July 1, 2017. For this reporting year (2021–2022), **the 2017 CCCSMP is the effective monitoring plan for the City of Oregon City**.

As described in the CCCSMP, the NPDES MS4 stormwater monitoring program requires two components. The first component is program monitoring, which involves the tracking and assessment of programmatic activities, as described in the individual permittees SWMP, through the use of performance indicators or metrics. Results of the program monitoring are reported in Appendix A as the annual tracking measures. The second component is environmental monitoring, which includes visual monitoring and the actual collection and analysis of samples. Visual monitoring efforts for the 2021–2022 reporting year included dry weather field screening, as described in the City's SWMP under the BMP 1-2: "Conduct Annual Dry Weather Field Screening." Results of the visual monitoring efforts are reported in Appendix A under the applicable BMP. Environmental monitoring also consists of instream sample collection and outfall sample collection, and the City's sampling efforts are outlined in more detail in Sections 4.2 and 4.3 and in the CCCSMP. Results of the instream and outfall sample collection efforts for this reporting year were submitted online to DEQ as required.

4.2 CCCSMP Updates and Modifications for the 2021–2022 Reporting Year

The 2017-2018 reporting year was the first full year implementing the revised 2017 CCCSMP. There have been no updates or modifications to the 2017 CCCSMP.

In 2018, seven Clackamas County jurisdictions, including the cities of Gladstone, Lake Oswego, Milwaukie, Oregon City, West Linn, Wilsonville, and Oak Lodge Water Services District participated in biological monitoring as is expected to be required during a future NPDES MS4 Permit period.

4.3 Summary of Monitoring Data

In accordance with the 2017 CCCSMP, Oregon City is required to conduct instream and outfall monitoring. Routine instream monitoring is required at six locations reflecting four tributaries to the Willamette River. Outfall monitoring is required at two outfall locations that discharge to the Clackamas River. Time-weighted composite (during storm events) and single grab samples are taken in accordance with the frequencies outlined in Table 3 below.

During the 2021-2022 monitoring year, the City of Oregon City collected all required outfall samples (three events at two sites) and instream samples (four events at six sites). One additional outfall sample was collected to make up for the lack of one sampling event in the 2020-2021 reporting period. In the 2020-2021 reporting period, the third set of samples could not be collected due to the lack of late winter/early spring rainfall. Complete sampling results have been submitted online to DEQ.

Table 3: 2021–2022 Oregon City Monitoring Locations and Required Frequencies

Site #	Location	Sample Type	Required Frequency	Routine Sampling
In-Stream Monitoring				
OC010is	Abernethy Creek at 17082 Holly Ln (Holly Ln Bridge)	Grab & Composite	4/year	Dry Weather (2/year) and Wet Weather (2/year)
OC011is	Abernethy Creek at 316 17th St (17th at railroad trestle)	Grab & Composite	4/year	Dry Weather (2/year) and Wet Weather (2/year)
OC012is	Coffee Creek behind 415 S McLoughlin (outfall at Willamette)	Grab & Composite	4/year	Dry Weather (2/year) and Wet Weather (2/year)
OC013is	Park Place Creek behind 13530 Redland Rd	Grab & Composite	4/year	Dry Weather (2/year) and Wet Weather (2/year)
OC014is	Singer Creek at the north end of Singer Creek Park (Linn Ave)	Grab & Composite	4/year	Dry Weather (2/year) and Wet Weather (2/year)
OC015is	Singer Creek 502 7th St (MH - 37138 located on Center St)	Grab & Composite	4/year	Dry Weather (2/year) and Wet Weather (2/year)
Outfall Monitoring				
OC006ofm	Clackamas River at O.C. Shopping Center	Composite	3/year**	Storm Event
OC007ofm	Clackamas River at Clackamette Cove	Composite	3/year**	Storm Event

*** Four outfall sampling events (as opposed to three as required) were conducted during the 2021-2022 reporting year. This additional event was conducted to make up for being unable to collect a third set of samples during the previous reporting year (2020-2021) due to the lack of late winter/early spring rainfall.*

5.0 Overview of Planning and Land Use Changes, UGB Expansions and New Development Activities

5.1 Summary of Land-Use Changes and UGB Expansions

The following land use/ zoning changes and/or annexations were approved by the City between July 1, 2021, and June 30, 2022:

- Zone Changes:
  - None
- Annexations:
  - None

5.2 Summary of Development Activities within the UGB

During the reporting year 2021 – 2022, there were 26 development applications (7 were constructed and placed in operation, 14 were permitted and are in some phase of construction or design and 5 were in the planning and plan review phase of development) reviewed and approved for compliance with water quality/water quantity standards. The projects that are completed and in operation included private detention chamber (1), private raingardens (2), public pond (2), private pond (1), miscellaneous roadside planters. Estimated drainage area related to development projects that commenced during the reporting year equals 58.33 acres.

There was one public improvement project (CIP), including a water quality and/or flow control project, for this reporting period. Details of this project can be found in Appendix A.

6.0 ADDITIONAL ACTIVITIES

In the 2021 permit, there are two specific additional annual reporting requirements for this 2022 annual report. These include reporting on winter maintenance as required in the 2021 Permit Schedule A.3.f.v.c, and providing a mercury minimization assessment as required in the 2021 Permit Schedule D.3.b. The winter maintenance activities for 2021/2022 are summarized in the paragraph below. The mercury minimization assessment is provided as Appendix B.

> "Winter Maintenance 2021-2022: The City conducted roadway winter maintenance activities during three days with winter events (December 22nd, February 23rd, and February 24th). The City used a total of 850 gallons of Magnesium Chloride during these events. The application rate for each street varied from 15-30 gallons per lane mile depending on temperature, humidity, ground moisture, hills, corners, intersections, and functional class. In addition, a total of 40 yards of sand was applied during these events on Singer Hill Rd., 7th St., Molalla Ave., 5th St., Linn Ave., Washington St., and Holcomb Blvd. The sand was applied to hills, corners, and intersections as needed."

In addition, the following stormwater-related activities occurred within the City and are not currently documented in Appendix A.

BMP 4-5 – Ensure Municipal Staff Training in Stormwater Pollution Prevention

There were sixty stormwater staff meetings conducted during the 2021-2022 reporting period. Dates, topics, and attendees are summarized below in Table 4 on the next page.

Table 4: 2021-2022 Staff Meetings and Training

Date/Time	Attendees	BMP's /Topics	Items Discussed	Next Steps/Program
7/21/2021	Brian Monnin, Mallory Ott	Section 4.0 Monitoring	Monitoring schedule for 2021-2022	Follow scheduled monitoring dates
7/25/2021	Brian Monnin, Kelly Ronnie	SWMP 8-4 PWQF Conversation about PWQFs and maintenance responsibilities	Proper maintenance and upkeep of PWQF's at 13851 Holcomb Blvd.	Maintenance and Inspection Forms due annually to OCPW
7/30/2021	Brian Monnin, James Peck	TMDL IP	Planting plan for 2021 ground truthing exercise	Develop planting plan for Fall of 2021-Stormwater Department
7/30/2021	Brian Monnin, Jon Waverly	TMDL IP	Planting plan for 2021 ground truthing exercise	Develop planting plan for Fall of 2021-Parks Department
8/11/2021	Phase I and Phase II Jurisdictions	Cleaning storm drains and vital infrastructure	Storm Drain Cleaning Assistance Program (SCAP)	Continue promoting SCAP for Fall session
8/24/2021	Brian Monnin, Edgewater at the Cove	SWMP 8-4 PWQF Conversation about PWQFs and maintenance responsibilities	Proper maintenance and upkeep of PWQF's	Maintenance and Inspection Forms due annually to OCPW
8/31/2021	Brian Monnin, Scott Vallance Clackamas Fire District	SWMP 8-4 PWQF Conversation about PWQFs and maintenance responsibilities	Proper maintenance and upkeep of PWQF's	Maintenance and Inspection Forms due annually to OCPW
9/22/2021	ACWA MS4 Phase I Permittee Working Group	NPDES MS4 Phase I Permit	Discussions on renewed NPDES MS4 Phase I Permit	Review of NPDES MS4 Phase I Permit and discussion topics for future meetings
9/22/2021	Regional Coalition for Clean Rivers and Streams	Public Outreach	Student video contest and how to reach a broader school aged audience via student videos on stormwater and watershed health	Continue to pursue avenues to promote the objectives of the RCCRS via student video contests

Date/Time	Attendees	BMP's /Topics	Items Discussed	Next Steps/Program
9/27/2021	Clean Water Partners and KPTV	Public Outreach	Stormwater related videos and social media on KPTV	Continue to provide stormwater related messaging to KPTV to be televised during most popular viewing hours and on social media
9/28/2021	Brian Monnin	Private Water Quality Facilities	Attended Clean Water Services Training – The Nature of Green Infrastructure	Use skill and knowledge from training to continue to inspect private water quality facilities in OC
9/30/2021	MS4 Phase I Clackamas Group	NPDES MS4 Phase 1 Permit	Discussions on renewed NPDES MS4 Phase I Permit. Monitoring, reporting, trainings	Continue to review and discuss collaborative options on the renewed NPDES MS4 Phase I Permit
10/1/2021	Brian Monnin, Tom Gaskill	TMDL IP, Public Outreach	Continued discussions on partnerships between OC and GOCWC	OC will again commit $5K towards TMDL shade planting. Continue to look for ways to partner
10/6/2021	Clackamas Group	NPDES MS4 Phase 1 Permit	Discussions on renewed NPDES MS4 Phase I Permit. Monitoring, reporting, trainings	Continue to review and discuss collaborative options on the renewed NPDES MS4 Phase I Permit
10/6/2021	Brian Monnin, small business owner	IDDE materials for 13863 Lazy Creek Rd	Sent ACWA IDDE informational materials on car detailing to homeowner/small business owner	Use ACWA materials to help public become aware of business practices that could harm stormwater
10/11/2021	Brian Monnin, Bob Balgos	Hydromodification Projects	Historic hydromod projects and current projects	Discussion on whether historic hydromod sites have been addressed. How to best tackle hydromod projects
12/2/2021	Clackamas River Watershed Spill Committee	Hazardous Materials Spills	Excess fire suppression flows and storm sewer systems, geographic response webtool, MS4 update	Continue to discuss pertinent issues regarding hazardous spills in the Clackamas River basin
12/7/2021	Brian Monnin, Erik Hopwood	Outfall Monitoring	Discussed creation of fillable outfall data sheet in Lucity	Continue to develop a workable field sheet for outfall monitoring

Date/Time	Attendees	BMP's /Topics	Items Discussed	Next Steps/Program
12/8/2021-12/10/2021	Brian Monnin	Vegetated Stormwater Facilities Inspection and Maintenance Course - CCC	Attended Clackamas Community College training course on Vegetated Stormwater Facilities	Use skill and knowledge from training to continue to inspect private water quality facilities in OC
12/22/2021	Brian Monnin, Rene Harber	Public Outreach/Private Water Quality Facilities	Discussion on recent Vegetated Stormwater Facilities course as well as potential for future courses aimed towards NPDES MS4 permittees	Continue the conversation between OC and CCC on how to promote educational courses pertaining to professionals in the stormwater field
12/22/2021	Brian Monnin, contractor	SWMP 8-4 PWQF Conversation about PWQFs and maintenance responsibilities	Discussion about PWQF at 19174 Friars Lane	Contractor will reevaluate PWQF at existing property and rescale PWQF at adjacent property
12/30/2021	Brian Monnin, Eric Hand, Jayson Thornberg, Kevin Hanks, Jon Waverly	Pesticide use at city facilities	Discussion about which pesticides are used at OCPW	Managers compiled list of pesticides, herbicides, fungicides, etc. that are used at the city. Consider these for pesticide monitoring
1/5/2022	Brian Monnin, Erik Hopwood	SWPPS	Discussion about how to get SWPPS on a reoccurring report produced by LUCITY. Add Fir St. site	Provide all required materials to correct staff so they can complete SWPPS, also solidify a work flow to make sure all are being addressed
1/13/2022	Brian Monnin, Renee Harbor	Vegetated Stormwater Facilities Inspection and Maintenance Course – CCC	Discussion on topics and exercises for next year's VSF inspection course	Update VSF inspection course structure, agenda and class exercises
1/13/2022	MS4 Phase I Clackamas Group	Section 4.0 Monitoring	Discussions on updating the Clackamas monitoring plan, pesticides, mercury	Decisions on group efforts or each jurisdiction separate monitoring efforts
1/25/2022	Brian Monnin, Mallory Ott, John Burrell	Mid-Willamette Erosion Control and SW Management Summit	Summit on current water quality issues and concerns in stormwater	Continuing education
2/2/2022	WW/STM Division	Spill Response Training	Safety meeting consisted of spill response video and training	Continue to train staff and make them aware of spill response activities and requirements

Date/Time	Attendees	BMP's /Topics	Items Discussed	Next Steps/Program
2/9/2022	Brian Monnin, Angela Wieland	TMDL Mercury, SWMP updates	OC's update to TMDL IP including the mercury minimization plan	Submit edits and track changes to TMDL IP to DEQ for review
2/9/2022	Brian Monnin, Lara Christensen	Pesticide Reduction Plans	OC's participation in regional pesticides reduction efforts	OC supports grant to pursue funds for staffing for regional pesticide reduction efforts in Clackamas County
2/10/2022	MS4 Phase I Clackamas Group	Section 4.0 Monitoring	Discussions on updating the Clackamas monitoring plan, pesticides, mercury	Decisions on group efforts or each jurisdiction separate monitoring efforts
2/16/2022	Brian Monnin, Renee Harbor	Public Education and Outreach	Discussion on Vegetated Stormwater facilities class offered by CCC	Continue to work with CCC staff to fine tune and present at the vegetated stormwater facilities course
3/2/2022	Brian Monnin, Resident	SWMP 8-4 PWQF Conversation about PWQFs and maintenance responsibilities	Discussion about PWQF at 111 Madison St	Maintenance and Inspection Forms due annually to OCPW
3/2/2022	Brian Monnin, Angela Wieland	TMDL Mercury, SWMP updates	OC's update to TMDL IP including the mercury minimization plan	Submit edits and track changes to TMDL IP to DEQ for review
3/4/2022	Brian Monnin, Chuck Merrit	Possible Illicit discharge	Inspection of property where illicit discharge was reported	No illicit discharge was found. Oil sheen was natural. No further action required
3/8/2022	Brian Monnin, Dante Posadas, GOCWC	Hydromodification Project	Discuss the status of the Scattering Canyon Project	Continue to monitor progress of project. Consider using alternate trees
3/10/2022	MS4 Phase I Clackamas Group	Section 4.0 Monitoring	Discussions on updating the Clackamas monitoring plan, pesticides, mercury	Decisions on group efforts or each jurisdiction separate monitoring efforts
3/10/2022	CCWET Group	Public Outreach and Education	Discussing where we are at with native plant sale, teacher workshops and kids celebrating water event	Continue to give efforts to try to bring these programs back up to speed
3/14/2022	RCCRS Staff and Dan Norton	Public Outreach and Education	Discuss who/what the RCCRS is and what they are striving to accomplish. How does OC and LW fit in to this group	Continue to participate in the group and continue funding the group

Date/Time	Attendees	BMP's /Topics	Items Discussed	Next Steps/Program
3/21/2022	Brian Monnin, Boulder Mountain staff	SWMP 8-4 PWQF Conversation about PWQFs and maintenance responsibilities	Proper maintenance and upkeep of PWQF's at 13851 Holcomb Blvd.	Maintenance and Inspection Forms due annually to OCPW
4/4/2022	Brian Monnin, Metro Staff	SWMP 8-4 PWQF Conversation about PWQFs and maintenance responsibilities	Proper maintenance and upkeep of PWQF's at Newell Creek Park.	Maintenance and Inspection Forms due annually to OCPW
4/11/2022	ACWA, Phase I Permittees	NPDES MS4 Permit	Discuss Cause and Contribute and coordination of Phase I deliverables	Continue to work towards meeting all requirements in the revised permit and work towards coordinated efforts when possible
4/25/2022	Brian Monnin, Eric Hand, Mallory Ott	Section 4.0 Monitoring	Meet at Singer Creek monitoring site to assess damage and look at new monitoring location	Will change instream monitoring site to upstream site. Will describe in annual report
1/2022 – 4/2022	Brian Monnin, Contractors for ICON	SWMP 8-4 PWQF Conversation about PWQFs and maintenance responsibilities	Contractors could not understand plans for Parker Knoll development. Multiple site visits to assure facilities were being built properly	Maintenance and Inspection Forms due annually to OCPW
5/4/2022	Brian Monnin, Mallory Ott	Section 4.0 Monitoring	Meet at two monitoring site to assess damage and look at new monitoring location	Will change instream monitoring site at Redland Rd immediately upstream of existing site. Will monitor additional site for lower singer creek for better location. Will describe in annual report
5/9/2022	Brian Monnin, Seth Mrwoka	SWMP 8-4 PWQF Conversation about PWQFs and maintenance responsibilities	Review Fir St. PWQF and Robert Libke PWQF forms and inspections	Maintenance and Inspection Forms due annually to OCPW
5/11/2022-5/12/2022	Brian Monnin, Mallory Ott, John Burrell	ACWA 2022 SW Summit	Summit on emerging and current practices, BMPs and projects	Continuing education

Date/Time	Attendees	BMP's /Topics	Items Discussed	Next Steps/Program
5/11/2022	Brian Monnin, Eric Hand, Alissa Maxwell	SWMP Updates	Review major changes coming to 2021 Permit, review 2017 proposed SWMP, discuss changes to upcoming SWMP	Continue to gather information to update SWMP
5/17/2022	OCPW Staff	Hazardous Spills	Hazardous Spills Training	Continue to train on how to respond to hazardous spills at city properties
5/18/2022	Brian Monnin, Audrey Meeker	NPDES MS4 Permit, TMDL IP	Review Permit and IP. Bring Audrey up to speed on aspects of permit and IP. Discussion on contracts associated with Permit and IP	Continue to administer programs and manage contracts related to the Permit and IP
5/18/2022	ACWA, Phase I Permittees	NPDES MS4 Permit	Cause and Contribute	Continue discussion on Cause and Contribute language in the Permit
5/19/2022	Clackamas Co-Permittees	NPDES MS4 Permit	Monitoring, Post Construction, Future topics	Continue discussion on monitoring for Pesticides, Mercury. Continue talks on collective approach
5/19/2022	Brian Monnin, Safeway Fuel Staff	SWMP 8-4 PWQF Conversation about PWQFs and maintenance responsibilities	Proper maintenance and upkeep of PWQF's at Safeway Fuel Center	Maintenance and Inspection Forms due annually to OCPW. Follow up maintenance required
5/23/2022	Brian Monnin, Jon Waverly	SWMP 8-4 PWQF Conversation about PWQFs and maintenance responsibilities	Proper maintenance and upkeep of PWQF's at OC Parks	Maintenance and Inspection Forms due annually to OCPW. Follow up maintenance required
5/25/2022	Brian Monnin, Dan Norton	NPDES MS4 Permit	Discuss NPDES MS4 Permit to Dan, new hire at West Linn	Continue to support Dan in understanding Permit and to assist in requirements of permit. Ongoing
5/27/2022	Brian Monnin, Tom Gaskill, Doug Neeley	TMDL IP	Discuss OC's contributions and expectations to stream shade project with GOCWC	Wrap up existing projects with the stream shade contract. Discussion on future land for projects

Date/Time	Attendees	BMP's /Topics	Items Discussed	Next Steps/Program
5/27/2022	Brian Monnin, Clackamas Fire Staff	SWMP 8-4 PWQF Conversation about PWQFs and maintenance responsibilities	Proper maintenance and upkeep of PWQF's at Clackamas fire station	Maintenance and Inspection Forms due annually to OCPW. Follow up maintenance required
6/9/2022	Clackamas Co-Permittees	NPDES MS4 Permit	Monitoring, Post Construction, Future topics	Continue discussion on monitoring for Pesticides, Mercury. Continue talks on collective approach
6/16/2022	Brian Monnin, others	Clackamas Spill Committee meeting	Review scope and purpose of Clackamas Spill Committee	Continue to meet as a group and possible tabletop exercise
6/27/2022	Brian Monnin, Tom Gaskill	TMDL IP	Discuss OC's contributions and expectations to stream shade project with GOCWC. Discuss city owned property	Continue discussion on clearing, rehab and planting of city owned site on Abernethy Creek. Additional stream shade project
6/28/2022	ACWA members, DEQ	NPDES MS4 Permit	Phase I permit issuance issues, data delivery, cause and contribute	Continue conversations about implementation of MS4 programs and data submission

Appendix A

Oregon City SWMP Implementation Status

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Appendix A. Status of Implementing Components of Oregon City's 2012 Stormwater Management Plan (SWMP)							
BMP or activity	Addresses bacteria?	Addresses mercury?	Responsible department	Measurable goals (2012 SWMP)	Tracking measures (2012 SWMP)	Annual report information: tracking measure status, Permit year 2021– 2022	Additional detail related to activities conducted
Element 1. Illicit Discharge Detection and Elimination							
BMP 1-1: Implement the Illicit Discharge Elimination Program	●	●	Oregon City Public Works Department (OCPW)	• Document and implement updated Standard Operating Procedures (SOPs) for the Illicit Discharge Detection and Elimination (IDDE) Program by November 1, 2012. • Conduct actions to remove identified illicit discharges in conjunction with timeframes outlined in OC's NPDES MS4 Permit. • Track and record all identified illicit discharges and how such discharges were removed.	1) Track status of documenting and updating the IDDE SOP. 2) Track the number, location, type of discharge, resolution, and enforcement action for any illicit discharge investigation conducted.	1) The IDDE SOP was updated on 7/29/16 (see BMP 1-2, item 5). 2) No illicit discharge investigations were deemed necessary as a result of annual dry weather field screening conducted during this reporting period.	1) OC developed an IDDE SOP (effective date: November 1, 2012), in conjunction with other Clackamas County co-permittees. The SOP includes guidelines for identification and enforcement of illicit discharges.
BMP 1-2: Conduct Annual Dry Weather Field Screening	○	○	OCPW	•	1) Track the number and location of outfalls inspected annually. 2) Summarize inspection results and track the number and location of outfalls requiring monitoring and/or investigations. 3) Report the outcome and resolution of any investigation activities. 4) Report the outcome and resolution of any code enforcement actions. 5) Track the status of updating standard procedures.	1) Nine outfalls were inspected as part of annual dry weather field screening activities. 2) Outfalls were inspected on 8/2/2021. Flow was observed at 3 of the outfalls; all discharges were a trickle and flows were characterized as permissible. 3) N/A 4) N/A 5) On 7/29/16 OC updated the IDDE SOP that includes procedures for conducting dry weather field screening. Priority sites 1 and 2 were relocated to address staff safety concerns. One site was added (site 9) as a result of a reported illicit discharge.	1) Dry weather screening was conducted at the following outfalls: 1. 99E and 6th Street (manhole 33556): 12-inch 2. 427 Main Street (manhole 33558): 15-inch 3. Abernethy Road at Tri-Lett: 15-inch 4. Clackamas River Drive: 48-inch 5. Metro Wetlands Pond: 48-inch 6. Falcon Drive: 30-inch 7. Berry Hill: 24-inch 8. Beavercreek at Hwy 213: 24-inch 9. Behind 1651 Beavercreek Road: 48-inch
BMP 1-3: Implement the Spill Response Program	○	○	Clackamas Fire District #1 (Hazardous Materials Team) and OCPW	• Respond to reports of hazardous and non-hazardous spills and follow the OC *Spill Response Plan*. • Report all hazardous and non-hazardous spills to DEQ as necessary.	1) Indicate the number of spills reported to OCPW and DEQ. 2) Track responses to reported spills. 3) Indicate sources, causes, and types of discharges resulting from spill activities. 4) Track any changes to the OC *Spill Response Plan*.	1) 4 spills were reported to OCPW during the 2021-2022 reporting period. 2) Responses were appropriate for each spill. See list below. 3) Three spills required DEQ reporting. These spills were from various causes, vehicle accidents, mechanical failure, illegal dumping & ice storm. • S 2nd & Center – a dump truck spilled a load of spoils on roadway. Spoils were picked up and intersection was swept. • Sandra Loop - 20 gallons of hydraulic fluid leaked from broken hydraulic line on a garbage truck. No waterways affected. Spill response and clean up was provided by the spiller including absorbent material that was applied, shoveled/swept up. Reported to OERS. • Singer Hill Rd. – 40 gallons of diesel fuel was released after truck went over guard rail. No waterways affected. Mitigation & clean up provided by environmental cleanup company, with oversight by Oregon City & DEQ. Reported to OERS. • 1136 Hughes – oil and grease on private driveway from damaged vehicle. No waterways affected. Vehicles owner was contacted and perform clean up including absorbent material that was applied, shoveled/swept up. Reported to OERS.	
Element 2. Industrial and Commercial Facilities							
BMP 2-1: Screen Existing and New Industrial Facilities	○	○	OCPW	• Review the business license inventory for 1200Z industries once over the permit term. • Notify DEQ of any existing or new industrial facilities within OC that may be subject to an industrial stormwater NPDES permit.	1) Track the number of existing or new facilities subject to a stormwater industrial NPDES permit during the permit term.	1) The Water Quality Coordinator continued to review all new business license applications for potential water quality-related issues. 214 business license applications were reviewed during the 2021-2022 reporting period. The screening did not identify any additional facilities potentially subject to an industrial stormwater permit.	DEQ provided additional guidance on industrial facility screening in June 2013. OC's consultant has coordinated with DEQ related to the methodology and process for identifying "potential" 1200-Z permittees.
BMP 2-2: Implement an Industrial/Commercial Inspection Program for High Priority Facilities	○	○	OCPW	• Pursue approval to hire staff to implement a business inspection program. • Develop a priority list of industrial/commercial facilities for inspection. • Investigate 25% of OC's manufacturing businesses once during the permit term.	1) Track the number of inspections conducted. 2) Report on inspection results and follow up actions. 3) Report on status of documenting and updating procedures.	1) No inspections were conducted during the 2021-2022 reporting period. 2) Table 2 of the Industrial/Commercial Facility Inspection Program SOP was updated May 2022 to reflect current Oregon City manufacturing-related business license holders. The 2013 Table 2 identified 31 facilities. The updated table identifies 36 manufacturing businesses with 20 potentially subject to inspection.	• While inspections have been conducted in accordance with SWMP commitments, OC has not hired additional staff to implement the business inspection program. • OC developed an Industrial/Commercial Facility Inspection Program SOP July 1, 2013. The SOP includes procedures and guidelines related to facility screening, DEQ notification of potential industrial stormwater permit needs, and high pollutant source facility inspections.

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Appendix A. Status of Implementing Components of Oregon City's 2012 Stormwater Management Plan (SWMP)							
BMP or activity	Addresses bacteria?	Addresses mercury?	Responsible department	Measurable goals (2012 SWMP)	Tracking measures (2012 SWMP)	Annual report information: tracking measure status, Permit year 2021– 2022	Additional detail related to activities conducted
				• Develop an industrial/commercial inspection procedure by July 1, 2013.			• OC investigated more than 25% of manufacturing businesses once during the permit term.
Element 3. Construction Site Runoff Control							
BMP 3-1: Implement the Erosion Control Ordinances	●	○	OCPW	• Review erosion control plans for all developments greater than 1,000 square feet. • Require erosion and sediment control plans not in compliance with standards to be amended and approved prior to construction. • By November 1, 2014, adopt the Clackamas County *Erosion Control Manual* or revise OC's manual in accordance with the NPDES MS4 permit requirements.	1) Record the number of erosion control plan reviews completed and approved. 2) Track the number of erosion control permits issued annually. 3) Report on the status of adopting the Clackamas manual or updating OC's manual.	1) 81 erosion control plans were reviewed and approved. 2 81 erosion control permits were issued. 3) OC has adopted the Clackamas County *Erosion Control Manual*, in conjunction with its update of the City's *Stormwater and Grading Design Standards* manual.	
BMP 3-2: Provide Educational Information to Construction Site Operators	○	○	OCPW	• Continue to provide OC's most current erosion control manual on OC website. • Continue to offer discounts on erosion control permits to contractors completing the Erosion Control Certification Program.	1) Track the number of contractors receiving a discount on erosion control permit fees.	1) No contractors received a discount on permit fees.	
BMP 3-3: Conduct Erosion Control Inspections	●	○	OCPW	• Conduct a minimum of three erosion control inspections at each permitted site. • Conduct appropriate enforcement activities for erosion control violations.	1) Record the number of erosion control inspections conducted annually. 2) Report the number of notices of non-compliance issued during inspections.	1) A total of 242 erosion control inspections were conducted this permit year. Due to the time frames with which construction occurs, some sites had all three required inspections, and some sites have only had one or two inspections at this time (construction is still ongoing). 2) 12 notices of non-compliance were issued. 1 stop work order was issued.	1) The total number of inspections are comprised of: • 92 initial site visits, Inspection 1 • 81 random inspections, Inspection 2 • 69 final inspections, Inspection 3
Element 4. Education and Outreach							
BMP 4-1: Provide Public Education and Outreach Materials Regarding Stormwater Management	○	○	OCPW	• Include a water quality related article in each City newsletter, distributed to citizens three times per year. • Participate in the Regional Coalition for Clean Rivers and Streams (Coalition). • Seek out opportunities to partner with other agencies/jurisdictions/organizations to educate and promote watershed health and low impact development. • Periodically install signs near water quality structures and around OC promoting water quality. • Sponsor the volunteer catch basin stenciling program. • Distribute an annual water quality report to OC residents.	1) Track the number, types, and topics of public educational materials distributed to the public. 2) Report any large scale public educational campaigns initiated during a given year. 3) Track coordinated public outreach activities with other permittees.	1) The following educational activities were conducted (see Appendix C for details): • A total of twelve water quality-related articles were included in Trail News. • OC participated in no special events and promoted one event on the city website and social media outlets. • The October 2021 utility bill included a message Only Rain Down the Drain. • Mailed 15,540 postcards announcing availability of the Annual Water Quality Report on OC's website. • Stormwater Banner Display at City Hall – 9/29/2021-10/13/2021, Pioneer Center - 10/13/2021-10/27/2021). • Continued participation in regional Stormdrain Cleaning Assistance Program (SCAP) in 2021-2022 permit year. • Distributed ACWA IDDE Pressure Washing Informational handout to business. 3) Coordinated efforts included: • Continued to sponsor the "Clean Water, It's Our Future" campaign via KPTV media outlets. • Continued participation in the Coalition for Clean Rivers and Streams. • Continued participation with other agencies to promote water quality education through Clackamas River Water Providers. • Continued participation with Greater Oregon City Watershed Council • Continued participation with Clackamas County Water Education Team • Continued participation with Clackamas Community College Environmental Learning Center Advisory Team • The Environmental Learning Center at Clackamas Community College began reintroducing limited in-person educational programs in Spring 2022. Plans were made to use the funds during the 2021/22 school year, to support the following programs: -Nature Striders - preschool nature education -Watershed Health Field Trips to Environmental Learning Center – for 4th Graders in Oregon City School District - Wildlife and Water Friendly Gardens -Sponsor for Vegetated Stormwater Facilities – continuing education for adults	• OC continues to conduct catch basin marking and stenciling to increase public awareness. During this reporting period 637 catch basins were either stenciled with the message "Dump No Waste – Drains to Stream" or had "No Dumping, Drains to Waterway" markers installed.

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						• Continued to sponsor the Down the River Clean Up event	
BMP 4-2: Participate in a Public Education Effectiveness Evaluation	○	○	OCPW	• Coordinate with other local, Phase I jurisdictions in providing/compiling information regarding a public education effectiveness evaluation by July 1, 2015.	1) Report on activities conducted annually.	1) OC submitted a Public Education Effectiveness Evaluation Summary to DEQ on June 29, 2015.	The Association of Clean Water Agencies (ACWA) Stormwater Committee completed a coordinated effort to compile existing educational survey information and develop conclusions to inform how public education efforts result in behavioral change. The study was conducted by DHM Consulting with cost shared among interested Phase I and Phase II communities, including OC.
BMP 4-3: Conduct Staff Training for Pest Management	○	○	OCPW and Parks	• Ensure OCPW and Parks Dept. staff conducting pest management activities are certified for spraying activities according to OSHA requirements. • Ensure licensed staff attends annual refresher courses.	1) Track the number of employees licensed for spraying activities. 2) Report number of employees that attended initial or refresher training.	1) Staff licensed for spraying activities: OCPW = 5, Parks Dept. = 6 2) Five OCPW staff and five Parks Department staff attended refresher training classes during the reporting period. Parks staff scheduled training was cancelled due to ice storm.	Annual refresher training is not required. OCPW and Parks Department staff attend refresher training per requirements of their licensing.
BMP 4-4: Conduct Staff Training in Spill Response	○	○	OCPW	• Provide non-hazardous spill response training annually through monthly safety meetings. • Coordinate annual training and refresher courses for staff initially responding to spills using OSHA hazardous materials educational resources.	1) Track spill-related training and education.	1) Spill response training at OCPW was conducted on 2/2/2022 and 6/7/2022. Staff participated in CRWP Clackamas Washington County Hazardous Spill Committee Meeting on 12/2/2021.	
BMP 4-5: Ensure Municipal Staff Training in Stormwater Pollution Prevention	○	○	OCPW	• Conduct municipal training for employees associated with stormwater management in OC. • Coordinate with other Clackamas County co-permittees regarding regional water quality efforts. • Participate in training and advisory committee opportunities available through state and local agencies and groups. • Conduct regular stormwater staff meetings once or twice a year.	1) Track the number of employees receiving training in stormwater management annually. 2) Track OC staff participation in groups, committees, and organizations relevant to stormwater quality management. 3) Track regular stormwater staff meetings and staff attendance at those meetings.	1) OCPW Employees receiving training in stormwater management: • Three employees attended APWA Fall Conference (10/6/21 - 10/8-21) • Two employees attended APWA Spring Conference (4/18/22 - 4/20/22) • One employee attended APWA PWX Conference (10/12/21 - 10/14/21) • One employee attended APWA Street Maintenance and Collection Systems School (3/15/22 - 3/18/22) • 10 employees attended Pesticide Refresher Training Courses • Three employees attended Erosion Control and Stormwater Management (1/25/2022) • One employee attended Vegetated Private Stormwater Facility Training (PCC virtual) (9/2021) • One employee attended Vegetated Private Stormwater Facility Training (PCC) (8/4/2022-8/5/2022) • One employee attended Vegetated Stormwater Facility training (12/9-10/2021) • One employee attended ACWA Stormwater Summit (5/11/2022-5/12/2022) • One employee attended Industrial Inspector Training (6/23/2022) 2) OC staff participates in the following groups and organizations: • ACWA - active participant in the ACWA Stormwater committee and Phase I Stormwater subcommittee • Continued collaboration with other co-permittees on Comprehensive Clackamas Stormwater Monitoring Program • Greater Oregon City Watershed Council • Clackamas County Water Education Team • Regional Coalition for Clean Rivers and Streams • Clackamas Spill Committee • Clackamas County Water Education Team 3) There were 60 stormwater staff meetings conducted during the 2021-2022 reporting period (see Section 6.0).	3) Dates, topics, and attendees are summarized in Table 4 in Section 6.0 of the annual report.
Element 6. Post-Construction Site Runoff							
BMP 6-1: Implement Municipal Construction Standards	●	●	OC Community Development	Per OC's Development Code, review all new development and applicable redevelopment for conformance with current city stormwater standards and ordinances.	1) Track the number of development applications reviewed and approved for compliance with stormwater regulations.	1) 26 development applications (some of which were permitted in previous reporting years but never completed construction) were reviewed and approved for compliance with water quality/water quantity standards. For applications that proceed to the construction phase all constructed treatment facilities will be noted in the appropriate reporting period.	<u>Details of completed treatment facility construction:</u> - Dotson Subdivision TP 17-09, 12 lot subdivision, 1 PUBLIC Stormwater Pond and roadside planters, 2.92 acres

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					2) Track the number, type, and drainage area of treatment facilities constructed annually.	2) The following were constructed and placed in operation during the reporting period of 7/1/2021 through 6/30/2022: 7 developments: 1 Private Detention Chamber, 1 Private Detention Pond, 2 Private Raingardens, 2 Public Detention Ponds, and some Public roadside planters • Total drainage area = 58.33 acres 3) 14 developments have been permitted and are in some phase of construction, but not yet complete. • Total drainage area = 103.22acres 4) 5 developments are seeking permits for construction. They have not started construction or completed permitting. • Total drainage area = 6.73 acres	- Canemah Cottages (SP 17-145) – 7 PRIVATE stormwater planters and a PRIVATE 1,089 cf underground detention system, 0.45 acres - Gardiner Middle School Replacement, PR 139-2019, 1 PRIVATE detention pond, 18.25 acres - Rowland Subdivision, PR 135-2019, 1.0 acres – part of the Thayer Pond regional system - Juniper Meadows Subdivision, PR 142-2019, 1.99 acres, 1 PUBLIC detention pond - Clairmont Mobile Homes Expansion, PR 143-2019, 28.93-acre property, 54,685 stormwater management area, 6.111 sf of Private rain garden and storm planters - Oregon City Operations Complex, PR 158-2020, 4.79-acre property, 50,135 sf stormwater management area, 1,580 sf of Private rain gardens and storm planters Under Construction: - Harley Apartments SP 18-125, 1 PRIVATE Stormwater Pond, Private and Public Stormwater Roadside Planters, 1.61 acres - Edward Oaks Subdivision TP 18-02, 1 PUBLIC Stormwater Facility, 1.97 acres - Caldera Subdivision TP 17-08, 5 lot subdivision, 3 PRIVATE raingardens, numerous roadside planters1.15 acres - Harrison St Apartments SP 17-168/SP 18-118, PRIVATE pervious pavement and PRIVATE underground detention pipe, 0.15 acres - Timberview Apartments, SP 14-01, 1 Public Pond, 4505 sf, 1 Private Contech Detention Chamber 4327 sf and public stormwater roadside planters, 9.72-acre property - Advantis Credit Union, PR 161-2020, 13.08-acre property, 202,220 sf stormwater management area, 17,720 sf of Private rain gardens and stormwater pond - Beavercreek North Campus, PR 148-2019, 11.75-acre property with 25,315 sf of Private stormwater ponds - 950 South End Expansion, SP 18-106/PR 150-2019, 1.18-acre property, with existing 4,940 cf Private storm chamber and a new 872 sf of Private storm planter - Oregon City Christian Church Expansion, PR 98-2020, 8.55 acres - Willamette Falls Hospital Expansion, PR 151-2020, 8.36 acres - PR 155-2019 /PR 145-2020– 182 Warner Parrott Expansion, 0.54 acres - PR 175-2021 – Holmes Lane Condominiums, 4.33 acres

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							- PR 179-2021 – Maplelane Low Income Housing, 5.63 acres - PR 183-2021 – Serres Subdivision, 35.2 acres <u>Under Permit Review, not started Construction:</u> - Cunningham Partition, MP 18-04, 0.76 acres - Marquis Parking Lot SP 18-119, 2 PRIVATE raingardens, 1.84 acres - Minton Subdivision, PR 140-2019, 0.88 acres - Hiram Subdivision, PR 149-2019, 2.39 acres - PR 192-2021 – Kamm Street Subdivision, 0.86 acres
BMP 6-2: Review and Update Code and Development Standards related to Stormwater Quality Control	●	●	OC Community Development	• Review OC's current/planned stormwater treatment and detention standards for compliance with new NPDES MS4 permit language. • Review OC's current public works development code provisions to ensure that applicable barriers to LID or green infrastructure (GI) are minimized and eliminated where practicable. • If necessary, update OC's post-construction stormwater design standards and code language by November 1, 2014.	1) Track progress related to review of OC's code and development standards per provisions in the NPDES MS4 permit. 2) Track any code/standards modifications made by ordinance.	1) The update has been completed to OC's *Stormwater and Grading Design Standards* to meet the current NPDES MS4 permit language. The update prioritizes the use of LID and GI to the maximum extent practicable and addresses flow duration. 2) OC reviewed and updated the Oregon City Municipal Code Chapter 13.12 Stormwater Management, the *Stormwater and Grading Design Standards* manual, and the *Erosion and Sediment Control Standards* manual. The updated manuals were adopted through Resolution 15-14 and the associated municipal code update was adopted by Ordinance 15-1006 on May 20, 2015. No modifications were made during this reporting period.	Stormwater Standards were updated and adopted March 2020.
Element 7. Pollution Prevention for Municipal Operations							
BMP 7-1: Conduct Street Sweeping and Roadway Repair Activities	●	●	OCPW	• Sweep city streets every 3-4 months on average, more frequently in high traffic areas and during leaf pick up and following deicing activities.	1) Track the average number of citywide sweeps per year. 2) Estimate the miles of streets swept per year. 3) Track volume of debris removed.	1) 10.6 city-wide sweeps were conducted for this reporting period. 2) During the 2021-2022 reporting period, 7,803 miles of roadway were swept. 3) 2,364 cubic yards of debris were removed as a result of sweeping and leaf pickup activity.	
BMP 7-2: Minimize Pollutant Discharges Associated with Landscape Management Practices	○	○	OCPW and Parks	• All chemical applicators, both contractor and city, must follow state laws related to the use of pesticides. • Applicators will complete spray reports for the application of chemicals.	1) Track any program changes regarding chemical application practices used by OC.	1) Both city and contracted chemical applicators comply with 2300-A, pesticide general permit requirements. Pesticide applications are kept at least three feet away from any water's edge. There were no program changes regarding chemical application practices used by OC.	
BMP 7-3: Implement a Program to Reduce the Impact of Stormwater Runoff from Municipal Facilities	○	○	OCPW	• By July 1, 2013, inventory municipal facilities subject to this permit requirement. • By July 1, 2013, identify whether there is a need for additional strategies to minimize discharge from these facilities.	1) Track updates to strategies used to minimize pollutant discharge from municipal waste storage facilities	1) OC developed a Stormwater Pollution Prevention Strategy document for municipal operations (SWPPS) July 1, 2013. The SWPPS includes a description of each of OC's six facilities that treat, store, or transport municipal waste. Additionally, it identifies potential pollutant sources as well as short- and long-term pollution reduction strategies. The SWPPS was updated during the 2021-2022 reporting period to reflect these changes.	In 2018, City Commissioners approved purchase of 13895 Fir Street as the OCPW Complex. The Fir Complex is complete and has been added to the current facilities list and is being monitored quarterly. Updated maps are pending.
BMP 7-4: Control Infiltration and Cross Connections to the City's Stormwater Conveyance System	●		OCPW	• Review new and redevelopment for possible cross-connections. • Eliminate cross connections upon identification.	1) Report whether any cross connections were discovered and describe follow up activities.	1) Zero cross-connections were discovered and corrected during this reporting period.	Dye tests are performed by OCPW upon request from plumbing inspectors if there are questions regarding sewer connections. Routine storm sewer video inspection continues, and cross-connections are repaired when identified.
BMP 7-5: Coordinate with Local Fire			OCPW	• By November 1, 2012, contact Clackamas Fire District #1 to determine what activities are conducted to minimize pollutant discharges associated with firefighting training activities.	1) Track contacts made with Clackamas Fire District #1.	1) No contacts were made during this reporting period.	On 9/12/12 OC's Water Quality Coordinator contacted Clackamas Fire District #1 to discuss firefighting training activities conducted in OC. Per an email dated 9/13/12 the

Key to Pollutant Symbols: A full circle (●) indicates the BMP is expected to address the parameter. An empty circle (○) indicates the BMP may be expected to address the parameter. A blank cell indicates that the effect of the BMP is unknown, at this time.

Appendix A. Status of Implementing Components of Oregon City's 2012 Stormwater Management Plan (SWMP)							
BMP or activity	Addresses bacteria?	Addresses mercury?	Responsible department	Measurable goals (2012 SWMP)	Tracking measures (2012 SWMP)	Annual report information: tracking measure status, Permit year 2021– 2022	Additional detail related to activities conducted
Department related to Pollutant Discharge from Fire Fighting Training Activities				• As applicable, provide educational information to Clackamas Fire District #1 by November 1, 2012.			Battalion Chief for Training & Safety confirmed that all foam drills were conducted at their primary training facility in Clackamas. Any training activities at the four OC stations use water only.
BMP 7-6: Conduct Master Planning and Implement Capital Projects for Stormwater Quality Enhancement	●	●	OCPW	• The *Oregon City Stormwater Master Plan dated July 2019 was adopted by Ordinance 19-1014 on March 18, 2020 and became effective April 17, 2020* • Prioritize CIPs by funding availability and water quality/flood control benefit. • Update maps to include location and drainage area of any new stormwater quality CIPs.	1) Track master planning activities. 2) Track number and cost of major (water quality) CIP projects and discuss added benefit. 3) Map the location and drainage area of water quality related CIPs.	1) The update to OC's *City-wide Stormwater Master Plan* was adopted by City Commission on April 17, 2020. 2) One project was contracted out, for a total cost of $59,388.40. • Zero in-house projects were completed during this reporting period Stormwater disconnections from the Sanitary Sewer System completed (CI 19-017) • A Stormwater Assessment Outfall Project and Scattering Canyon outfall project are anticipated to be constructed within the 2022-2023 reporting period • An inflow/infiltration project is anticipated to be completed within the 2022-2023 reporting period 3) Mapping: • The new storm sewers were added into the OCMap GIS System. New stormwater BMPS from development were mapped after the project completed construction.	2) Following are details of the contracted CIP projects completed during this reporting period: • Replaced 257' of failed 8" storm sewer with 12" storm sewer adding capacity to the system.
Element 8. Stormwater Management Facilities Operation and Maintenance							
BMP 8-1: Conduct Stormwater Conveyance System Cleaning and Maintenance	●	●	OCPW	• Maintain, repair, and/or replace conveyance system components when needed, based on ongoing inspections. • Update the stormwater system map when discrepancies are found.	1) Estimation of the volume of debris removed per year during public conveyance system cleaning activities (in conjunction with BMP 8-2).	See BMP 8-2.	
BMP 8-2: Conduct Catch Basin Cleaning and Maintenance	●	●	OCPW	• Inspect at least 33% of the public catch basins annually. • Schedule the repair, and replacement of catch basins as needed, based on inspections. • Update the stormwater system map when discrepancies are found.	1) Track the percentage of total public catch basins inspected and/or maintained annually. 2) Track the volume of sediment removed during cleaning activities conducted annually (also includes volume from BMP 8-1). 3) Track the number of catch basin replacements annually. 4) Track the number of public catch basins added to OC's catch basin inventory annually.	1) 37% of public catch basins were maintained during this reporting period. 2) 64.75 cubic yards of sediment were removed (includes sediment from pipes, culverts, manholes, open channels, and catch basins). 3) No catch basins were replaced or repaired. 4) OC's catch basin inventory was increased by 138 catch basins this year to a total of 4,306.	37% = 1593 public catch basins
BMP 8-3: Public Structural Control Facility Cleaning and Maintenance	●	●	OCPW	• Inspect and maintain public structural control facilities in accordance with documented frequencies and procedures. • Update the public structural control facility inventory as needed. • Update the stormwater system map in accordance with new public facility installations and when discrepancies are found.	1) Track the number of public structural facilities inspected and maintained. 2) Track the volume of sediment removed during cleaning. 3) Track changes to the public structural control facility inventory as needed.	1) 528 public structural facilities were inspected during the reporting period. See the next column for maintenance details. 2) 24 cubic yards of sediment were removed during maintenance/cleaning. 3) Additional public structural facilities added to inventory: • 51 swales – increase due to reclassification of existing facilities as well as new, additional facilities. • 3 soaker trench infiltrators - increase due to reclassification of existing facilities • rain gardens were reduced from 5 to 1 as several facilities were classified incorrectly. • roadside stormwater planters were reduced from 156 to 142 as numerous facilities were classified incorrectly • Zero pollution control manholes were added to the inventory this past year.	1) The following public structural facilities were inspected and maintained during the reporting period: • Ponds (82) = 82 inspected; 82 maintained • swales/bioswales (79) = 79 inspected & maintained. • soaker trench infiltrators (4) == 4 inspected; 4 maintained • rain gardens (1) = 1 inspected; 1 maintained • roadside planters (142) = 142 inspected; 142 maintained • detention pipes (44) = 36 inspected, no cleaning required • water quality vaults (8) = 8 inspected, no cleaning required • pollution control/flow control manholes (168) = 160 inspected, 48 cleaned

Key to Pollutant Symbols: A full circle (●) indicates the BMP is expected to address the parameter. An empty circle (○) indicates the BMP may be expected to address the parameter. A blank cell indicates that the effect of the BMP is unknown, at this time.

Appendix A. Status of Implementing Components of Oregon City's 2012 Stormwater Management Plan (SWMP)							
BMP or activity	Addresses bacteria?	Addresses mercury?	Responsible department	Measurable goals (2012 SWMP)	Tracking measures (2012 SWMP)	Annual report information: tracking measure status, Permit year 2021– 2022	Additional detail related to activities conducted
BMP 8-4: Private Structural Control Facility Cleaning and Maintenance	●	●	OCPW	• Require new private water quality facilities to submit maintenance agreements to OC. • Compile an inventory of existing private structural water quality facilities and work to collect maintenance agreements for these by July 1, 2013. • Implement an inspection strategy for private water quality facilities by July 1, 2013.	1) Track the number of maintenance agreements submitted to OC each year. 2) Track progress related to the inventory and mapping of existing private structural facilities. 3) Track the status of updating the inventory and map of private water quality facilities. 4) Track the status of developing procedures in accordance with permit requirements.	1) OC continues to require maintenance agreements for private water quality facilities. Four maintenance agreements were recorded during this reporting period. 2) Files have been reviewed for existing private structural facilities. An inventory list has been created. 3) Initial mapping is complete, refinements ongoing. 4) OC developed SOPs for public water quality facilities and private water quality facilities July 1, 2013. The SOPs outline procedures for ongoing mapping and inventory activities, as well as facility inspections. For private facilities, OC requires a maintenance agreement and submission of annual inspection records.	1) The following are details for the newly recorded private water quality facilities: - Canemah Cottages (SP 17-145) – 7 PRIVATE stormwater planters and a PRIVATE 1,089 cf underground detention system, 0.45 acres - Gardiner Middle School Replacement, PR 139-2019, 1 PRIVATE detention pond, 18.25 acres - Clairmont Mobile Homes Expansion, PR 143-2019, 28.93-acre property, 54,685 stormwater management area, 6.111 sf of Private rain garden and storm planters - Oregon City Operations Complex, PR 158-2020, 4.79-acre property, 50,135 sf stormwater management area, 1,580 sf of Private rain gardens and storm planters 2) The following are details for newly constructed PUBLIC improvements to be maintained by the city: - Dotson Subdivision TP 17-09, 12 lot subdivision, 1 PUBLIC Stormwater Pond and roadside planters, 2.92 acres - Rowland Subdivision, PR 135-2019, 1.0 acres - Juniper Meadows Subdivision, PR 142-2019, 1.99 acres

Appendix B

Mercury Minimization Assessment for the City of Oregon City

Mercury Minimization Assessment for the City of Oregon City

A Total Maximum Daily Load (TMDL) is a calculation of the maximum amount of a pollutant that a waterbody can receive and still meet applicable water quality standards. TMDLs assign wasteload allocations (WLAs) to point sources of pollutants, and load allocations (LAs) to nonpoint sources of pollutants. The Oregon Department of Environmental Quality (DEQ) has the regulatory authority to implement TMDL programs in Oregon with responsibility for: 1) requiring and reviewing TMDL Implementation Plans for nonpoint sources; and, 2) incorporating TMDL related requirements for point sources in NPDES permits. Therefore, with respect to municipal stormwater discharges regulated under an NPDES MS4 permit, DEQ includes TMDL requirements directly within those permits.

As stated in DEQ's Permit Evaluation Report (PER) for the 2021 Clackamas Group NPDES MS4 Permit,

> "*DEQ has determined that implementation of the permit conditions, BMPs identified in the SWMP Document, and the adaptive management process will meet TMDL WLAs for municipal stormwater* (PER, pp 35)."

The City of Oregon City's NPDES MS4 permit identifies applicable TMDLs and associated WLAs. Schedule D, *Special Conditions* of the permit lists specific conditions for addressing those TMDLs. These permit conditions include requirements to conduct a TMDL pollutant load reduction evaluation in comparison to assigned WLAs for stormwater, and to develop pollutant load reduction benchmarks targeting achievement of WLAs for specified TMDL pollutants over time. DEQ included TMDL requirements in the 2005, 2012, and the recently issued 2021 NPDES MS4 permits for Phase I permittees.

The City has complied with permit requirements to conduct pollutant load reduction evaluations and establish TMDL pollutant load reduction benchmarks. However, WLAs were not established for mercury until 2021 and, therefore, mercury was neither required nor included in the City's prior TMDL analyses.[1] The 2021 mercury TMDL includes a water quality management plan (WQMP) developed by DEQ, that outlines management strategies for both point and nonpoint sources of mercury. Specific management strategies for Phase I NPDES MS4 permittees are outlined in Section 13.3.2.2 of the revised TMDL (Appendix A) and were subsequently included in Schedule D.3.b of the Clackamas County Group NPDES MS4 permit. Per 2021 Permit Schedule D.3.b, requirements specific for mercury are detailed below:

i. Develop and submit a mercury minimization assessment with the annual report due December 1, 2022, that documents the current actions, such as BMPs implemented, that reduce the amount of solids discharged into and from the permitted MS4 system (similar to the actions currently required in Schedule A). If the assessment indicates that mercury and

[1] Mercury was originally included in the 2006 Willamette River TMDL, but establishment of WLAs was deferred due to lack of data. On November 22, 2019, DEQ issued a revised Willamette River TMDL for mercury. The United States Environmental Protection Agency (EPA) disapproved DEQ's TMDL on December 30th, 2019 and the final TMDL was issued on February 4, 2021.

sediment reducing BMPs are fully incorporated into the SWMP Document, a report documenting the results as such is sufficient.

ii. *Continued implementation of the BMPs and other actions described in the mercury minimization assessment that are effective for mercury reduction, along with documentation of implementation in each subsequent annual report.*

iii. *An analysis of the effectiveness of the best management practices and any other actions taken and qualitative pollutant load reductions achieved in the MS4 Permit Renewal Application Package. Due to data limitations, mercury benchmarks are not applicable in the first permit cycle after the TMDL is finalized.*

iv. *Collection of paired total mercury and total suspended solids samples, as described in Schedule B.*

v. *Submittal of paired mercury and total suspended solids monitoring data in the appropriate DEQ data submission template. Given the lack of sufficient mercury data, pollutant load reduction evaluations, benchmarks, and waste load allocation attainment analyses for mercury will not be required in this permit cycle.*

The purpose of this Mercury Minimization Assessment, included with the City's 2022 MS4 Annual Compliance Report is to address the requirement outlined in bullet *i.* above.

Chapter 4 of EPA's 2021 *TMDL for Mercury in the Willamette Basin* includes summary information regarding mercury sources. Atmospheric deposition of mercury from global sources is presented as the dominant source of mercury in the Willamette River Basin. Additional sources identified include: nonpoint sources such as runoff from forestry and agricultural land management practices that can transport sediment and mercury to streams; background/anthropogenic sources that include mercury in groundwater due to local geology, and naturally occurring sediment-bound mercury that is eroded and transported to streams; and point sources such as municipal waste discharges, industrial discharges, suction dredge mining and stormwater. Mercury loads in urban stormwater are believed to be predominantly associated with atmospheric deposition and active erosion or transport of sediment that is carried in runoff to downstream water bodies. **As a result, stormwater best management practices (BMPs) implemented by NPDES MS4 permittees are focused on reducing the discharge of sediment as the primary method to reduce discharges of mercury.**

The prevention and reduction of sediment in runoff has been a focus of the City's stormwater management program since the first MS4 permit-required Stormwater Management Plan (SWMP) was developed in the early 1990s. The City uses an adaptive management approach to continually improve upon existing stormwater BMPs over time as new knowledge is gained regarding the effectiveness and efficiency of these practices. The City has submitted the results of its adaptive management process every year in annual reports since the original SWMP became effective. The City has also conducted detailed quantitative and qualitative adaptive management analyses as part of each NPDES MS4 permit renewal. The City's 2022 MS4 Annual Compliance Report, due to DEQ on December 1, 2022, provides the latest summary of BMP implementation according to the pre-

existing 2012 SWMP. A new SWMP that meets the conditions of the recently issued 2021 NPDES MS4 permit is also being submitted to DEQ for approval on December 1, 2022.

Based on the City's long-term ongoing adaptive management process, a review of the current/approved 2012 SWMP, and a comprehensive MS4 program evaluation and update as per the 2021 permit, we have determined that **effective sediment and mercury reducing BMPs are fully incorporated into the City's new/proposed 2022 SWMP Document**. BMP tables in the proposed SWMP (Tables 2-2, 2-4, 2-6, 2-8, 2-10, 2-12, 2-14, 2-16) provide a cross-reference of each strategy to potential TMDL pollutants addressed, including mercury (i.e., by way of addressing sediments). To meet the NPDES MS4 permit standard, these BMPs have been developed as part of an overall program to reduce pollutants to the maximum extent practicable.

In summary, the City's BMPs, or Stormwater Program Management Control Measures as termed in the 2022 SWMP, include the following major categories of BMPs and activities that prevent sediment and mercury in stormwater discharges:

- Public Education & Outreach Strategy (Section 2.1)
- Public Involvement & Participation Strategy (Section 2.2)
- Illicit Discharge Detection & Elimination Strategy (Section 2.3)
- Construction Site Runoff Control Strategy (Section 2.4)
- Post-Construction Stormwater Management Strategy (Section 2.5)
- Pollution Prevention for Municipal Operations (Section 2.6)
- Industrial & Commercial Facilities Strategy (Section 2.7)
- Additional Program Elements (Section 2.8)

The 2022 SWMP includes detailed descriptions of each major MS4 strategy and associated BMPs, including measurable goals and tracking measures. As noted in the BMP tables, every strategy and nearly all program activities support the prevention and reduction of mercury and sediment.

Further, the City submitted an updated TMDL Implementation Plan to DEQ in August 2022 that addresses requirements of the 2021 *TMDL for Mercury in the Willamette Basin* for nonpoint sources of mercury in Oregon City.

As a result of this Mercury Minimization Assessment, the City finds that sediment and mercury reducing BMPs are fully incorporated into the SWMP Document.

Appendix C

Public Education and Outreach Information and Regional Coalition for Clean Rivers and Streams: Fiscal Year 2021-2022 Annual Report

Public Education and Awareness Activities
July 1, 2021 – June 30, 2022

Table 5: Summary of Activities

Date	Event	Location	Contact Total	Program/Subject
7/2021	KPTV Public Service Announcements	Portland Metro Area	General Public	Lawn Tips, Car Wash Tips
8/2021 – 9/2021	KPTV Public Service Announcements	Portland Metro Area	General Public	Water Conservation, Car Wash Tips
Fall 2021	Trail News – Autumn	Oregon City Public Buildings and City website	All OC residents and general public	Dog Etiquette, Fall Fertilizer, Help Keep Stormdrains Cleared, Leaf Season, Sanitary Sewer I/I Rehabilitation
10/2021	KPTV Public Service Announcements	Portland Metro Area	General Public	Fall Lawn Care, Be Rain Ready
10/2021	Message on Utility Bill	Oregon City water customers	Oregon City water customers	Remember, Only Rain Down the Drain!
10/23/2021	DEA National Rx Take Back Day	1234 Linn Ave	General Public – advertised in Trail News monthly E-newsletter	Drug take back program
9/29/2021-10/13/2021	Stormwater Banner Display at City Hall	625 Center St. Oregon City, OR	Visitors and Staff at City Hall	Display featuring Oregon City's major streams; tips to improve water quality
10/13/2021-10/27/2021	Stormwater Banner Display at the Pioneer Center	615 5th St. Oregon City, OR	Visitors and Staff at City Hall	Display featuring Oregon City's major streams; tips to improve water quality
Winter 2021	Trail News – Winter	Oregon City Public Buildings and City website	All OC residents and general public	Clear Stormdrains to Protect Property and Water, SCAP Saves Catch Basin Owners $$, To Sand or Not to Sand, Sanitary Sewer I/I Rehabilitation – River Crest Basin
11/2021	KPTV Public Service Announcements	Portland Metro Area	General Public	Fall Lawn Care, Be Rain Ready
11/20/2021	Tree Planting Event	North Oregon City Neighborhoods	General Public – advertised in Trail News monthly E-newsletter	Friends of Trees tree planting event in the following neighborhoods: Barclay Hills, Canemah, McLoughlin, Park Place, Rivercrest, and South End
12/2021	KPTV Public Service Announcements	Portland Metro Area	General Public	Rain Ready, Sweep don't wash (winter maintenance)
January 2022	Wildlife and Water Friendly Garden Series – Collaboration between OC and the Environmental Learning Center	Oregon City E-News letter	General Public	Winter 2022, will see the return of our FREE Wildlife & Water Friendly Gardens workshop series, this time with a focus on meeting the challenges of changing climate conditions. Learn how to garden with less water, choose temperature resilient trees, install permeable hardscapes, and more!

Date	Event	Location	Contact Total	Program/Subject
Spring 2022	Trail News – Spring	Oregon City Public Buildings and City website	All OC residents and general public	Sanitary Sewer I/I Rehabilitation – River Crest Basin
1/2022	KPTV Public Service Announcements	Portland Metro Area	General Public	Rain Ready, Sweep don't wash (winter maintenance)
1/28/2022	River Starts Here – Student Video Contest	Social Media, OC Website	General Public – generated towards students, grades 9-12	Student engagement in stormwater subjects which impact the students and/or communities
2/2022	KPTV Public Service Announcements	Portland Metro Area	General Public	Rain Ready, Sweep don't wash (winter maintenance)
3/2022	KPTV Public Service Announcements	Portland Metro Area	General Public	Car Wash Tips, Sweep don't wash (winter maintenance)
4/2022	KPTV Public Service Announcements	Portland Metro Area	General Public	Car Wash, Lawn Tips
5/3/2022	Annual Water Quality Report	N/A	15,540**, available on city website	Water Quality Information
Summer 2022	Trail News – Summer	Oregon City Public Buildings and City website	All OC residents and general public	Help Us Improve Water Quality in OC, Pesticide Free Pledge
5/2022	KPTV Public Service Announcements	Portland Metro Area	General Public	Car Wash, Lawn Tips
6/24/2022	BMP IDDE Handout	Email	Orion Garcia – Express Power Wash	Sent ACWA IDDE handout for pressure washing and surface cleaning for Mr. Garcia's new business
2021-2022	Regional Coalition for Clean Rivers & Streams	N/A	Metro area	Pollution prevention messages via website and social media
2021-2022	Clackamas River Water Providers	N/A	Residents with the Clackamas River as drinking water source	Various programs to promote source water protection, water conservation, and water quality awareness

***A postcard was mailed to each Oregon City utility customer announcing the on-line availability of the annual water quality report. Those with limited internet access were encouraged to request a printed copy of the report.*

SPECIFIC ACTIVITY INFORMATION

Trail News Articles

Autumn 2021

- Dog Etiquette
  - Clean up after your dog

- Fall Fertilizer
  - Tips on best practices when using fertilizers
  - Leave clippings on lawn to fertilize
  - Best times to fertilize lawns

- Help Keep Storm Drains Cleared
  - Rain is stormwater
  - Catch basins help to remove debris during storms
  - Help keep stormdrains cleared

- Leaf Season
  - Tips on what to do with leaves
  - Keep leaves off the street and out of stormdrains
  - Street sweeping helps with sediment, not leaves

- Sanitary Sewer I/I Rehabilitation
  - Explanation of I/I Abatement Program
  - Methods used to assess I/I
  - City's plan to address I/I

Winter 2021-2022

- Clear Stormdrains to Protect Your Property and Our Water
  - Clear stormdrains to protect property
  - Don't blow leaves into street or catch basins

- SCAP Saves Catch Basin Owners $$
  - Explanation of Stormdrain Cleaning Assistance Program (SCAP)
  - Encourages local businesses to sign up for SCAP Program to clean catch basins for nominal fee

- To Sand or Not to Sand
  - Discusses city's winter maintenance program and options it utilizes for public safety

- Sanitary Sewer I/I Rehabilitation
  - Explanation of I/I Abatement Program
  - Methods used to assess I/I
  - City's plan to address I/I

Spring 2022

- Sanitary Sewer I/I Rehabilitation
  - Explanation of I/I Abatement Program
  - Methods used to assess I/I
  - City's plan to address I/I

Summer 2022

- Help Us Improve Water Quality in Oregon City
  - Looking for opportunities to partner with neighbors, volunteers and groups interested in planting river corridors to help reduce water temperatures.
  - Explanation of TMDL IP

- Pesticide Free Pledge
  - Why go pesticide free?
  - Pesticide free pledge sign up information
  - Signs available for those who pledge to be pesticide free

Special Events

Annual Celebrating Water Event
This event was cancelled due to Covid 19 restrictions. All are hopeful for the 2022 return of this wonderful event!

Miscellaneous Items

Message on Utility Bill (mailed October 2021)
Remember, **Only Rain Down the Drain!** Help keep storm drains cleared. Please keep leaves and yard debris from entering catch basins and storm drains.

Annual Water Quality Report – 5/3/2022
The 2022 report included the following topics specific to stormwater:

- Clackamas River – Our Drinking Water Source
- Protecting our drinking water source
- Riparian Health
- Monitoring For Contaminants
- Stormwater Management
- 2018 System Improvements Projects
- Pollution prevention suggestions:
  - Lawn and garden care
  - Vehicle care
  - Roof treatments
  - Pressure washing
  - Pet waste
- Lead in drinking water
- Photos/graphics with accompanying captions:
  - Cross Connection Backflow Prevention Program
  - Riparian Health - does a stream flow through your property
  - Photo of “DogiPot” with discussion of the importance of picking up after pets

Beginning on March 3, 2022, a total of 15,540 postcards were mailed to Oregon City residents announcing the on-line availability of the annual water quality report. Those with limited internet access were encouraged to request a printed copy of the report.

Figure 1: Photo on 2022 Annual Water Quality Report Postcard

Pressure Washing Informational Handout to Customer

Figure 2: ACWA IDDE Pressure Washing Informational Hand Out

Stormwater Banner Display at City Hall – 9/29/2021-10/13/2021, Pioneer Center - 10/13/2021-10/27/2021

Visitors to City Hall (625 Center St) the Pioneer Center (615 5th St), Pioneer Center (as well as city staff, could view our stormwater banner display featuring Oregon City's largest basins and streams. Included are the following suggestions to prevent stormwater runoff pollution and to improve water quality:

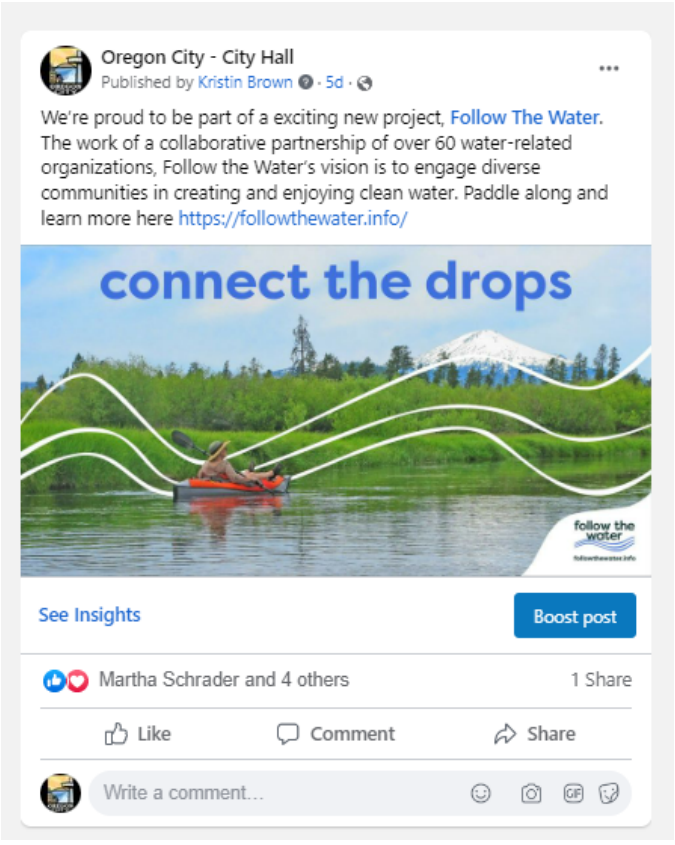
- Never dump anything down storm drains or into streams
- Sweep driveways and patios clean instead of hosing them down
- Repair your vehicles if they are leaking oil, antifreeze, or other fluids
- Take your car to a car wash, or wash it on the lawn instead of the driveway
- Minimize your use of fertilizers and pesticides; consider going organic
- Plant native trees and shrubs; if you have a stream flowing through your property streamside plantings will help reduce the temperature of the water
- Pick up after your pet

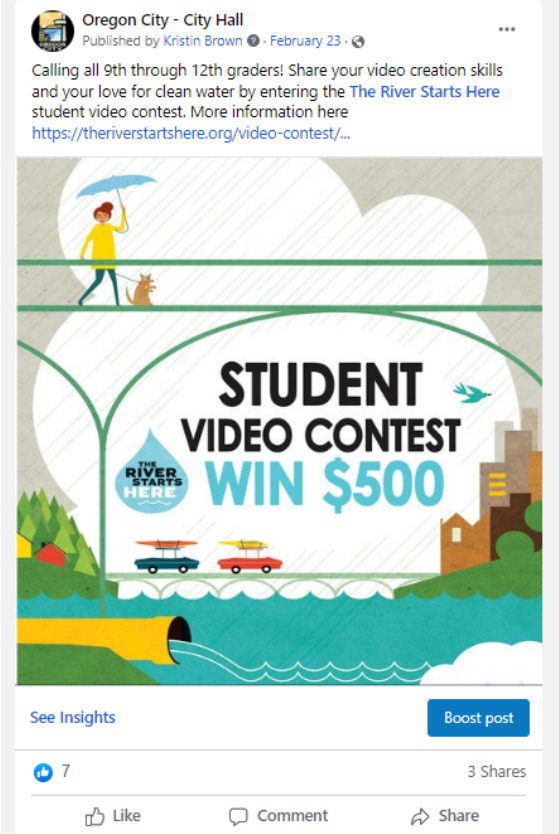
The banner includes contact information for the Greater Oregon City Watershed Council and how to obtain additional information about Oregon City's Stormwater Management Plan.

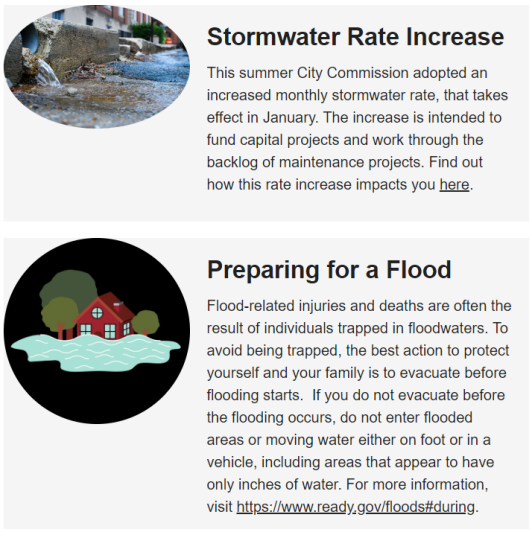
Clackamas River Water Providers – ongoing throughout the year
Oregon City, through its association with South Fork Water Board, partners with other agencies that use the Clackamas
River for potable water, to promote source water protection and water conservation. Programs include water quality monitoring and a pesticide outreach program. For specific information, and to read their annual report, visit the CRWP website at www.clackamasproviders.org.

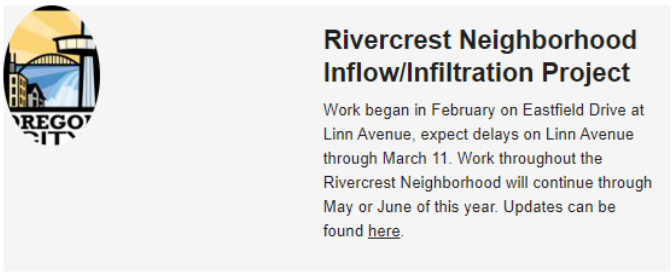
The Oregon City Website – ongoing throughout the year
A wide variety of information pertaining to stormwater, water quality, and Oregon City's NPDES MS4 permit is available to the public at www.orcity.org.

Social Media Posts









Collaboration with Other Agencies

Clackamas River Water Providers – ongoing throughout the year

Oregon City, through its association with South Fork Water Board, partners with other agencies that use the Clackamas River for potable water, to promote source water protection and water conservation. Programs include water quality monitoring and a pesticide outreach program. For specific information, and to read their annual report, visit the CRWP website at www.clackamasproviders.org.

"Clean Water, It's Our Future" Campaign on KPTV Chanel 12 on Television and Website (https://www.kptv.com/water/)

Oregon City continues to partner with other agencies in the Portland metro area in sponsoring public education messaging via KPTV media outlets. The campaign identifies simple things that can be done to keep our rivers and streams healthy. The following topics were highlighted on their website, social media, and television during the 2020-2021 campaign:

- Reducing stress while gardening
- Car maintenance
- Water friendly weed control
- Clean gutters and storm drains
- Fall lawn tips
- Clean driveways

Regional Coalition for Clean Rivers and Streams

Oregon City is one of the Clean River Partners of Clackamas County. As such, the city continues to support the effort, along with other agencies in the Portland metro area, to educate the public about the impact of stormwater runoff pollution on the health of our rivers and streams. For specific information about the current campaign – The River Starts Here – visit the Coalition website at http://theriverstartshere.org/.

The Environmental Learning Center at Clackamas Community College

Oregon City has begun a partnership with the Environmental Learning Center (ELC) at Clackamas Community College (CCC) to fund Watershed Health Program Activities for all age groups ranging from Preschool Programs to adults and continuing professional education.

Abernethy Creek Shade Project – September 2022

Project overview

The Greater Oregon City Watershed Council (GOCWC) has been working with the City of Oregon City Public Works over the past three years to improve shade conditions along the banks of lower Abernethy Creek. Three property owners at locations along Abernethy Creek near Anchor Way and S. Holly Lane have partnered with GOCWC in removing and suppressing invasive species while replanting with native shrubs and trees. Ash Creek Forest Management LLC has conducted vegetation management and native species planting and maintenance at all three properties to restore habitat and reduce stream temperatures.

This work is critical in addressing reduction of temperature in the creek by providing shading and stabilizing bank structure while ultimately providing sources of wood. Abernethy Creek lacks sufficient large wood sources along the banks which contribute branches, trunks, and root structure, all key components in trapping sediment to improve water quality while developing the habitat structure necessary for spawning and rearing of native fish such as salmon, trout, and lamprey.

Treatment plan and costs

Ash Creek Forest Management LLC provided project prescriptions for each of the three properties which were provided for advance approval to the City of Oregon City. The table below represents a summary of the work conducted between the start of the project at these properties and completion.

Date	Treatment	Cost
Year 1 – 2019/20		***$5,000***
Norton	Maintenance cutting and spray to suppress invasive plants.	$1,200
Price	Maintenance cutting and spray to suppress invasive plants. Install bare root plants.	$2,550
Wallis	Maintenance cutting and spray to suppress invasive plants.	$1,250
Year 2 – 2020/21		***$5,000***
Norton	Maintenance cutting and spray to suppress invasive plants.	$1,200
Price	Maintenance cutting and spray to suppress invasive plants. Install bare root plants.	$2,550
Wallis	Maintenance cutting and spray to suppress invasive plants.	$1,250
Year 3 – 2021/22		***$5,000***
Norton	Maintenance cutting and spray to suppress invasive	$1,362.50

	plants. Install bare root plants.	
Price	Maintenance cutting and spray to suppress invasive plants. Install bare root plants.	$1,437.50
Wallis	Maintenance cutting and spray to suppress invasive plants. Install bare root plants.	$2,200

Current project status

After two years primarily focused on removal and suppression of invasive species, the project undertook plantings of native species at all three sites during the 2021-2022 planting season. A dryer than average late winter was followed by a wetter than average spring which led to rapid growth of weed species in the early part of the growing season. Competition with native vegetation suppressed growth of previous plantings to some degree and required additional vegetation management in mid-summer to reduce competition and create "free to grow" conditions for plantings installed in April.

Figure 1 - Ash Creek Forest Management crew planting natives at Norton property.

A planting list is included for reference followed by a series of captioned photos to show the state of the three project sites pre and post planting and in late summer. A variety of species are chosen for use to build a riparian structure that will shade the creek and contribute habitat value for wildlife restoring both canopy and understory components.

2022 Planting list for 3 project sites – Norton, Price, Wallis

Abernathy Shade Sites FY22 Plant List 2.0

Norton				
Species	**Common**	**#**	**Stock**	**Mature Height**
Shrubs				
Rubus spectabilis	Salmonberry	100	BR	13 ft
Cornus sericea	Red-osier Dogwood	100	BR	7 ft
	Total Shrubs:	**200**		
Trees				
Cornus nuttallii	Pacific Dogwood	25	BR	66 ft
Abies grandis	Grand Fir	25	BR	250 ft
	Total Trees:	50		
	Total Plants:	**250**		

Price				
Species	**Common**	**#**	**Stock**	**Mature Height**
Shrubs				
Lonicera involucrata	Twinberry	100	BR	13 ft
Spirea douglasii	Douglas Spirea	100	BR	7 ft
	Total Shrubs:	**200**		
Trees				
Cornus nuttallii	Pacific Dogwood	25	BR	66 ft
Abies grandis	Grand Fir	25	BR	250 ft
	Total Trees:	50		
	Total Plants:	**250**		

Wallis				
Species	**Common**	**#**	**Stock**	**Mature Height**
Shrubs				
Rubus spectabilis	Salmonberry	150	BR	13 ft
Salix sitchensis	Sitka willow	500	BR	26 ft
Lonicera involucrata	Twinberry	200	BR	13 ft
Spirea douglasii	Douglas Spirea	200	BR	7 ft
	Total Shrubs:	**1050**		
Trees				
Fraxinus latifolia	Oregon Ash	150	BR	66 ft
Thuja plicata	Western Red Cedar	25	BR	213 ft
Calocedrus decurrens	Incense Cedar	75	BR	110 ft
Abies grandis	Grand Fir	200	BR	250 ft
	Total Trees:	**450**		
	Total Plants:	**1500**		

Figure 2 - Red osier dogwood is an important component of riparian understory providing bank stabilization and shade.

Figure 3 - A mature stand of Red osier dogwood along the banks of Abernethy Creek at the Norton property.

Figure 4 - Grand fir tolerate the wet soil conditions and periodic flooding of the banks along the creek.

Figure 5 - Flagging and stakes were used to avoid inadvertant mowing damage to plantings.

Figure 6 - Beaver and nutria predation on willow and other species is expected. Increasing density of plantings helped provide food while still supporting stand growth.

Figure 7 - Previous year willow cuttings are successfully established.

Figure 8 - As willows mature, they provide shade for other native species which will eventually become the canopy.

Figure 9 - A volunteer red alder, an important nitrogen fixer, in the understory of the willow stand.

Figure 10 - Young Oregon ash are a critical component of the riparian forest.

Figure 11 - As the Emeral Ash Borer, an introduced species discovered here in 2022, advances through the state, the outlook for all age classes of ash is not good.

Photo point establishment

Projects funded by the Oregon Watershed Enhancement Board require the establishment of photo point monitoring to assess change over time where investments in habitat restoration are undertaken. Using the same protocols, the Greater Oregon City Watershed Council has developed photo points for all three Abernethy Shade Project properties and will continue monitoring for a minimum of 3 years beyond project completion. The following images depict the photo point locations.

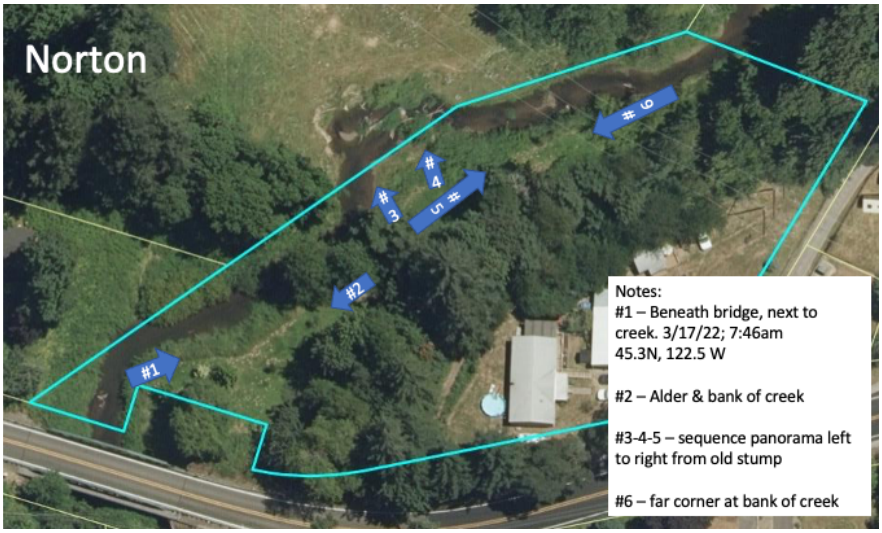


Figure 12 - Norton property photo point locations.

Figure 13 - Price property photo point locations.

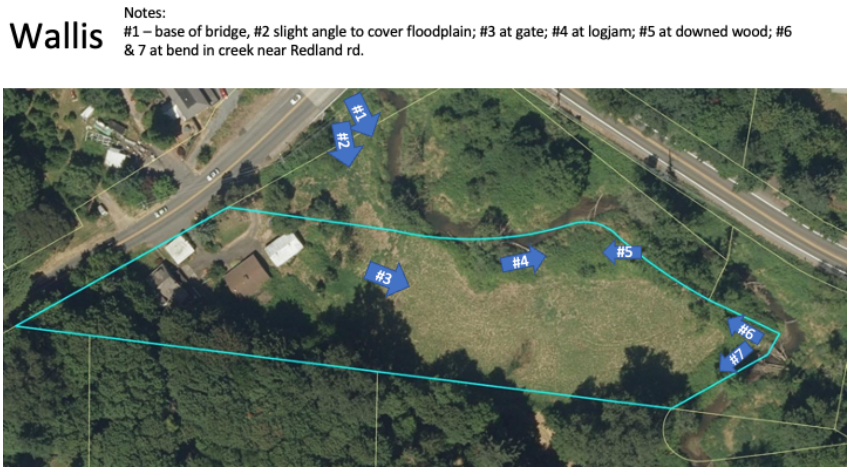


Figure 14 – Wallis property photo point locations.

Results

The Abernethy Shade Project represents a successful collaboration between the City of Oregon City – Public Works Department and the Greater Oregon City Watershed Council working with local property owners and a local contractor to restore native riparian habitat along Abernethy Creek. Land owner education and a continued commitment by the council to the long-term monitoring and maintenance of these sites will ultimately support reductions in stream temperatures, shade cover, provision of wood to the creek, and wildlife habitat for a diversity of species.

The council looks forward to a continued relationship with staff in developing new project sites that are a priority for both organizations. As we seek landowner involvement and consent to conduct this type of work on the property, we are also collaborating with the Clackamas Soil and Water Conservation District and riparian specialist Drew Donahue to develop detailed planting plans that support improved conditions over time. This technical assistance adds value to the projects and does not add cost.

The current investment of funding by the City of Oregon City is also leveraging additional resources in the form of discounts on plants provided by the Bonneville Environmental Foundation and other organizations to reduce the overall project cost. We look forward to a continued positive relationship in furthering this project in the coming year with selection of a new site/sites for restoration.

Regional Coalition for Clean Rivers and Streams

Fiscal Year 2021-2022 Annual Report

September 20, 2022

Prepared by:

enviroissues

THE RIVER STARTS HERE

FY 2021-22 Overview

The Regional Coalition for Clean Rivers and Streams (Coalition) continued its work – initiated in the late 1990s – of providing coordinated messaging about area water health and residential behaviors linked to stormwater pollution from across the Portland metropolitan region in Washington, Multnomah, and Clackamas counties. For many years, Clark County, WA was also a participant in the Coalition but due to staffing and resource constraints, are no longer a financial participant. However, the Coalition continues to collaborate voluntarily with the Southwest Stormwater Partners who work "on the other side of the river."

Population statistics for the tri-county Metro area are as follows: Washington County 600,372, Multnomah County, 815,428 and Clackamas County 421,401 (2020 Census). The Coalition continues its brand recognition efforts by consistently using the previously developed *The River Starts Here* creative concept in its various materials. Other Coalition activities in the 2021-22 fiscal year included sponsoring and promoting the Coalition and its messages at community events.

Coalition participants include:

- Clackamas Water Environment Services
- Clean Water Services
- City of Gladstone
- City of Gresham
- City of Lake Oswego
- City of Milwaukie
- City of Oregon City
- City of Portland, Bureau of Environmental Services
- City of Troutdale
- City of West Linn
- City of Wilsonville
- Oak Lodge Water Services
- Multnomah County

This report covers July 1, 2021 - June 30, 2022.

Background

As identified in the 2013 Strategic Plan, the Coalition continues its mission of collaborating across the Portland metropolitan region to improve watershed health by changing household behaviors, reducing polluted runoff and connecting people with their local waterways. Coalition members leverage their collective resources to conduct outreach to communities across the region with common stormwater information and messages. Coalition activities complement individual agency efforts to raise awareness of stormwater runoff and affect behavior change to prevent pollution and protect regional surface water quality. Coalition activities support commitments relative to state permits under the federal Clean Water Act (administered by the Oregon Department of Environmental Quality), including Total Maximum Daily

Load and National Pollution Discharge Elimination System Municipal Separate Storm Sewer System (MS4) programs, as well as compliance with the federal Endangered Species Act.

Participants in the Coalition represent agencies that serve diverse population sizes from very small (Troutdale) to very large (Clean Water Services). As such the ability to run programs specific to their community is limited by funding and staffing. The Coalition represents an efficient, effective method to combine stormwater outreach funds. Coalition members continue to provide funding for the collaborative work each fiscal year based on the size of the respective community. The group shares funds with Multnomah County acting as the fiscal agent to purchase associated consulting services, advertising, materials, and event sponsorships. By sharing resources, the group reaches many thousands of people in the region compared to what entities can typically achieve on their own.

The Coalition focuses on changing behaviors from residential sources linked to stormwater pollution prevention. Information and messages used by the Coalition are intended to reach those making purchasing and management decisions about yard care, pets and auto maintenance activities – some of the most likely sources of stormwater pollution from residents. Coalition activities address a range of surface water contaminants, including nutrients and toxins from fast-releasing synthetic fertilizers and pesticides applied to yards and lawns, pollutant loads from car washing soaps, metals and other toxics from vehicle maintenance (and unmaintained vehicles), *E. coli* from pet waste, turbidity, legacy pesticides, and mercury from eroded soils and other contaminants from illicit discharges.

Key Messages

The Coalition's key messages focus on raising awareness about pollution from stormwater runoff and motivating actions to protect surface water quality through action at the household level. The key messages are:

- Stormwater runoff goes directly to our local waterways without treatment. When it rains, pollutants from your home, car, and garden wash into our rivers and streams. Never dump anything into storm drains.
- Bacteria from uncollected dog waste washes into our rivers and streams. You can protect our water by picking up after your pets.
- Yard and garden products wash into our rivers and streams. You can protect our water by eliminating these products or using compost and slow-release fertilizer.
- Motor oil, solvents, and soaps wash into our rivers and streams. You can protect our water by keeping car-care chemicals out of storm drains, diverting wash water onto your landscaping, and going to a car wash.

FY 2021-22 Activities and Results

Activities during the reporting period focused on continuing to implement the Coalition's strategic plan with messaging and outreach using *The River Starts Here* creative concept, developed in FY 2014-15.

Strategic Plan Implementation

A strategic plan, adopted in 2013, continued to guide Coalition efforts during the fiscal year. The Coalition acted on strategic plan goals as summarized below:

Goal 1: Maintain a functioning Coalition

Each year, Coalition members prepare an updated cost-sharing approach and budget, which was implemented in 2020-21. Members of the Coalition share their knowledge with the broader regulated communities in Oregon via the Association of Clean Water Agencies (ACWA). Members have presented strategies on prioritizing public behaviors to maximize pollutant reduction success and on a water pollutant risk assessment database at the past two spring ACWA conferences.

Goal 2: Develop and adapt creative products to fulfill the Coalition's mission

The Coalition continued to use collateral materials developed with *The River Starts Here* creative concept through social media outreach and digital advertising, including messaging and news for the 2022 Student Video Contest. Partners continued to message on individual social media channels as well as the Regional Coalition for Clean Rivers and Streams.

Goal 3: Practice adaptive management

The Coalition is committed to leveraging available resources to maximize impact while setting the stage for future collaboration among agencies. Total member representation in the Coalition has increased in the past few years, bringing in more regional partners. During the beginning of the 2021-2022 fiscal year, the Coalition relied more on ongoing social media outreach as most in-person outreach opportunities were canceled or delayed due to the COVID-19 pandemic.

In spring 2021, the Coalition discussed the importance of acknowledging the intersectionality of the environmental and social justice movements. Independently, partner agencies had been in various stages of educating staff on the topics of diversity, equity, and inclusion. Partners committed together to think about practices that could be implemented that would result in more inclusivity for historically marginalized and underserved populations. This included opportunities to collaborate with community-based organizations and discussions about ways the Coalition can strengthen relationships with community partners. The partners agreed to broaden the content of their messages to include environmentally related social justice information and use their platform to amplify the voices of the Black, Indigenous, and People of Color (BIPOC) communities. Further, this resulted in the partners renaming a category within the Student Video Contest to, "Honoring Diverse Voices" to celebrate and recognize the impact, creativity, and contributions of BIPOC filmmakers.

The River Starts Here Messaging and Outreach

Community Events and Agency Collaboration

Summer 2021 still faced significant limitations on the number of in person events taking place; as such, few of the Coalition's agencies conducted physical outreach. However, the representatives of member agencies promoted the Student Video Contest, local watershed events, and Coalition messages throughout the fiscal year using Facebook, Instagram, YouTube, and Twitter.

Towards the spring and summer of 2022 digital outreach was used to promote in-person event opportunities with local watershed councils. Some of the events that received significant online engagement and in-person participation included the 10th Annual Soil School Event hosted by the West Multnomah Soil & Water Conservation District and Tualatin Soil and Water Conservation District, Greater Oregon City Watershed Council's Habitat Enhancement Event, a workshop with Clackamas River Basin Council, and a paddle trip with Tualatin Riverkeepers.

Student Video Contest

2021 Student Video Contest Winners:

- **Best BIPOC Filmmaker**: Grounding Waters with K by K (Kingston) Bonneau, Harriet Tubman Middle School
- **People's Choice Award**: Keep Our Rivers Clean by Shea Stephens, Grant High School
- **Clean Water Action Award for Leave No Trace**: Don't Litter Be Better by Liliana Jacobsen, Homeschool
- **Clean Water Action Award for Climate Change**: You, Doing Your Part by Maggie Sandberg, Summit Learning Charter School
- **Clean Water Action Award for Active Transportation:** Mindful Maintenance by Pauline Petersen, Lakeridge High School

The third annual Student Video Contest was launched in the Spring of 2022 with a deadline for video submission of April 24, 2022. 2022 Student Video Contest categories included People's Choice and Honoring Diverse Voices, in the following topics: Everyday Actions Add Up and Our Drinking Water/Don't Dump That. The 2022 winners and statistics will be reported in the 2023 annual report.

This Honoring Diverse Voices category was added to amplify the crucial perspectives and contributions of our Black, Indigenous, and People of Color (BIPOC) students in creating a more equitable and sustainable future. Despite extensive outreach directly to schools, community groups that serve youth, partnerships with watershed councils, and advertising on Instagram, Facebook, and Snapchat, the entries were significantly down from the previous two years to only three entries, which were uploaded to the Coalition's YouTube site. Coalition partners such as the City of Portland and Clean Water Services shared

on their individual social media accounts to promote the People's Choice voting for youth in their service area schools. Video submissions were viewed over 776 times and received 64 likes and 15 comments. Commenters shared their enthusiasm for these creative videos, and the winners were announced in June 2022.

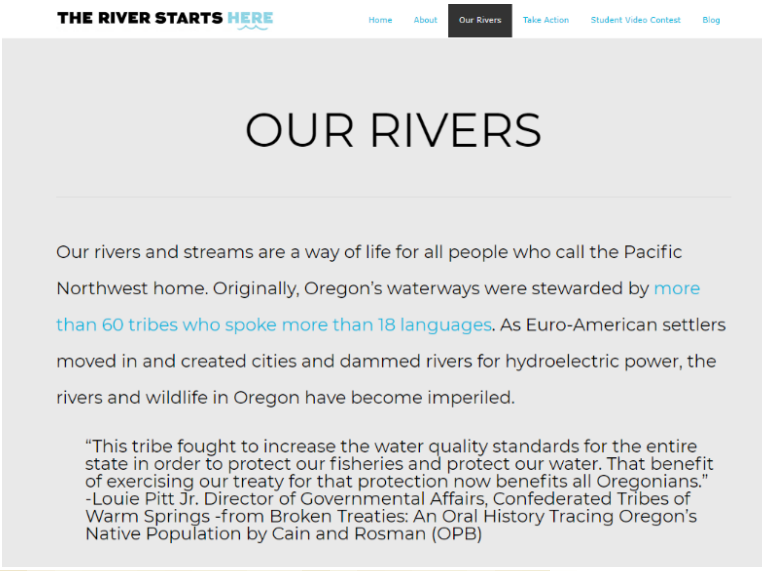
The next step for the Coalition is contracting with Outside the Frame, a nonprofit video firm that provides opportunities for underprivileged youth to gain skills to pursue work and careers in video production. Through this contract, fifteen of the best videos from all contests will be edited with River Starts Here branding and edited to create public call-to-action videos. These videos will also be available with subtitles and closed captioning in Spanish and Russian. These videos will then be used in the River Starts Here future social media digital advertising campaign.

"Great job of communicating a lot of useful information in an engaging way. Bravo!"
– Jumping Into Cool Water

"I love that this puts responsibility and action into the average person's hands and gives them a place to go to learn more!" – Madison Bryan

Website: TheRiverStartsHere.org

TheRiverStartsHere.org launched in June 2015 featuring *The River Starts Here* creative assets. It features an image slider highlighting Coalition messages and includes links to member websites and additional web resources.



Summary website analytics for the fiscal year are shown below. Statistics in parenthesis are the difference between last year's and this year's data. Positive changes are shown in green, negative changes are shown in red, and inconsequential changes are shown in lavender. New data points are presented in black.

Total sessions: 5,568 (▼2,288)

- **Users:** 4,533 (▼1,322)
- **Traffic type**
  - Direct: 2,193
  - Social: 868
  - Organic (search engine): 555
  - Referral: 439

The website has grown just a bit in visits each year, mostly due to the running of the Student Video Contest. That is a similar trend that was evident during the 2021-2022 fiscal year. The website had about 1,400 unique visitors from Oregon and about 800 visitors from Washington. As part of the RSH social media model, most of the posts advertised went directly to other websites such as registration for watershed council events, online resources, and partner websites. There were few posts that directed the public to the RSH website. The highest visited website pages were advertisements and information associated with the Student Video Contest and a page about how members of the public can safely get rid of moss. Due to the coalition's goal of reaching people where they are at and amplifying partner communications, website traffic is not a significant indicator of success.

The River Starts Here Blog

In December 2021, the Coalition began refreshing the website and updating the blog. The blog included cross links to partner webpages that supported student research to make a video entry submission.

Social media

The Coalition continued posting to its social media channels with the following types of content as emphasis: promotion of watershed council, soil and water conservation council and riverkeepers online or in person events, promotion of native plants for landscaping, promotion of good lawn and garden water protective techniques, promotion of the student video contest entry and voting for the people's choice, promotion of BIPOC events, opportunities, and nature organizations that focus on serving the BIPOC population, promotion of Native American tribal messages, videos, and public events/workshops, promotion of fall salmon migration watch, Earth Day events, World Water Day, the Nature of Oregon Day, and surface water drinking water protection from the Clackamas and Portland area Regional Water Providers.

The Coalition also leveraged its other campaign work by cross promoting the KPTV public service announcement campaign with Meteorologist Mark Nelson called "Clean Water, It's Our Future" and the statewide campaign launch of "Follow the Water –Connect the Drops" and "What's Your Lawn Style" as well as promoting the brand of the River Starts Here and its website via digital advertising buys.

Overall, the work was successful in reaching many audiences, although engagement and entry into the Student Video Contest was significantly lower than the previous two years.

Summary Table of Social Media Advertising Results

Facebook & IG Paid Ad Reach	96,192	Likes were up by 108%, IG followers added 146
Facebook Annual Reach (includes organic posts)	173,761 (up 15.5%) Total posts: 113	Total followers 1,978 (up 302)
Instagram Annual Reach (includes organic posts)	8,673	

Annual Reach of IG/FB Ads & Boosted Posts	101,421	Engagement (likes, shares, comments) 8,225

The Coalition's social media across platforms is majority women (see graphic below). In particular, Facebook and Twitter reach women between 35-54, whereas on Instagram, the majority categories are 25-54. Consistent with industry stats for social media, the Coalition is reaching an older population 55+ on Facebook as compared to Instagram, and is reaching more people under 25 on Instagram.

To increase the number of followers who interact with the Facebook page, account administrators invite individuals who like posts to follow the Facebook page, as management time allows. Statistics also show that more consumer engagement occurs in the morning before 9 a.m. and in the late afternoon and evening after 4 p.m. Therefore, scheduling posts or posting within these time frames is a best practice, when possible, especially with a short video. Continuing to add hashtags and tagging River Starts Here partners is also a best practice.

Social Media Age and Gender Demographics for Reporting Year

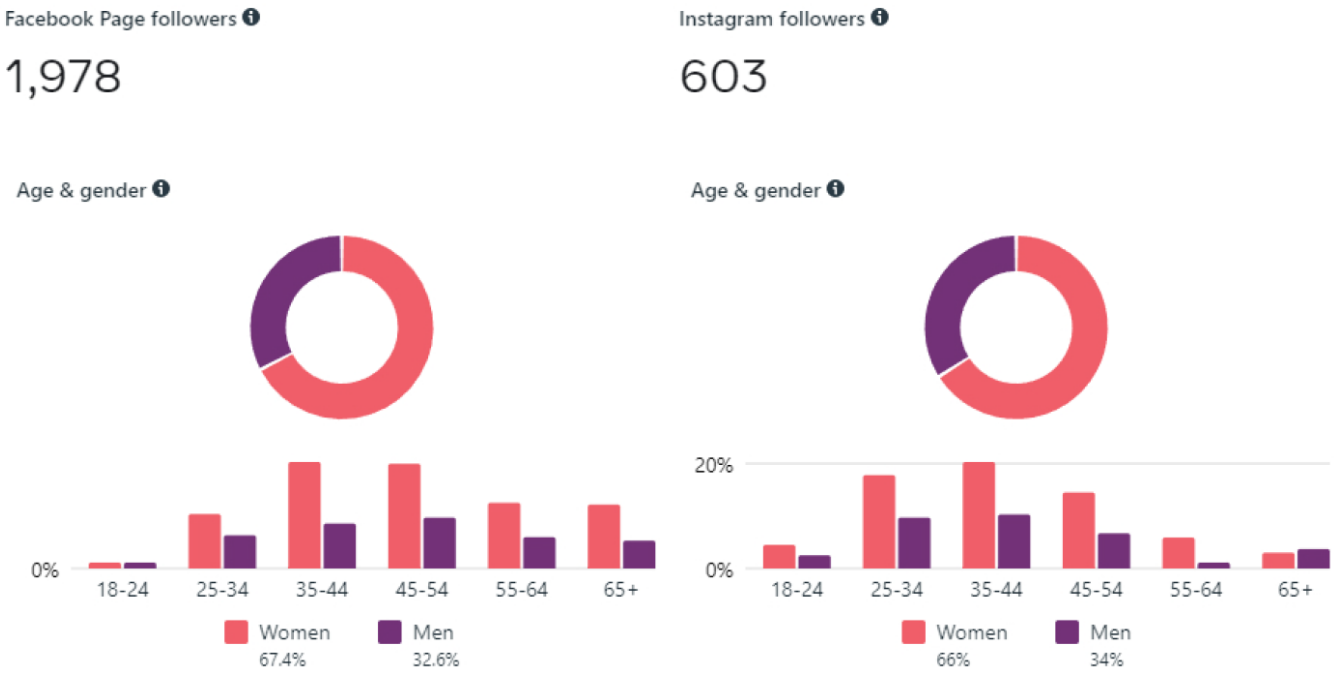


Table 1: Facebook followers by age range and gender. A large portion of the Coalition's Facebook audience is made up of women from age 35-54.

Facebook & Instagram ads, The River Starts Here

The Coalition continued to use low-cost social media advertising as part of its campaign in FY 2021-22. Continuing to focus on defined target audiences for messages (male v. female, age level for behavior, etc.) as well as targeting by ZIP code is a primary strategy. Most advertising was on Facebook. Increasing the consistency and number of paid ads and boosted posts would be influential in gaining more reach from Facebook users.

Top Performing Ads, Boosts, & Posts during FY 21-22

Topic	Engagement	Reach
Black History Month: J. Drew Lanham	1,054	9,146
Black History Month: Estella Ehelebe	2,091	11,543
Black History Month: People of Color Outdoors	30	70
Black History Month: Blueprint Foundation	398	8,264
Water IQ	516	6,085
Salmon Water Conservation Curriculum for Teachers	173	3,071
Black History Month: Chad Brown	171	3,279
Follow the Water	26	10,980
Greater Oregon City Watershed Habitat Cleanup	444	6,518
Forest Park Conservancy/Love is King MLK day Event	110	7,042
Student Video Contest Ad	16	4,315
Earth Day Events	32	270
Student Video Contest	1	4,225
Student Video Contest Winners	200	368
Spring Lawn Care—What's Your Lawn Style	479	10,980
Organic Posts typical reach		~70

Engagement is an interaction such as a like, comment, or click thru. **Reach** is the number of individuals who saw or interacted with the post. **Cost per result** indicates how cost-efficiently you achieved the objectives you set in your ad campaign.

*Some ads also ran on Instagram.

Twitter, @riverstartshere

A summary of use during the fiscal year is as follows:

- **Followers:** 1,449 (▲8)
- **Tweets:** 11 (▼51)

The Coalition continued to utilize Twitter to primarily share posts and information about the Student Video Contest and reshare content from partners. Posts with images and content from affiliated groups received the most engagement. As a strategy, the Coalition can increase the number of tweets that are promoted and encourage partners to like and retweet content from The River Starts Here Twitter page.

Instagram, @theriverstartshere

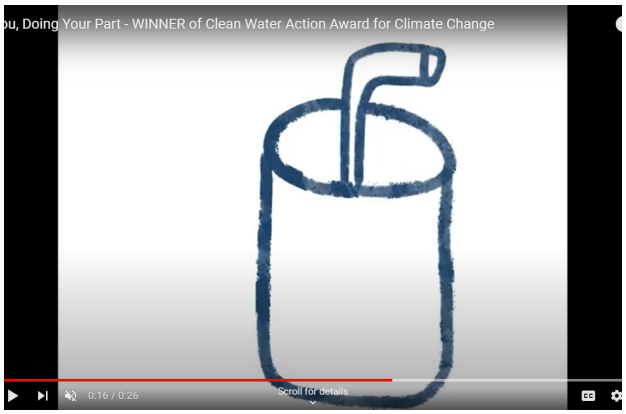
A summary of Coalition Instagram account use during the fiscal year is as follows:

- **Followers:** 602 (▲238)
- **Posts:** 14 (▼17)

The Coalition's move in 2020-2021 to consolidate Instagram handles and grow its audience continues to have noticeable effects on the diversity of people reached in comparison to last year. The Coalition can continue to build a following from youth by utilizing the Instagram Reels and Stories, adapting current social media challenges to fit River Starts' mission, and promoting Tik Tok content, and short clips, while reaching an older population through Facebook. All things to consider given the Coalitions' members limited time to manage multiple types of posting, advertising, and content generation.

YouTube, The River Starts Here

A summary of the Coalition YouTube account during the fiscal year is as follows:



- **Subscribers:** 170 (▲2)
- **Videos added:** 3 (▼38)
- **Watch time (hours):** 25 (▼107)
- **Views:** 2.1K (▼14.7K)
- **Impressions: ~17K**

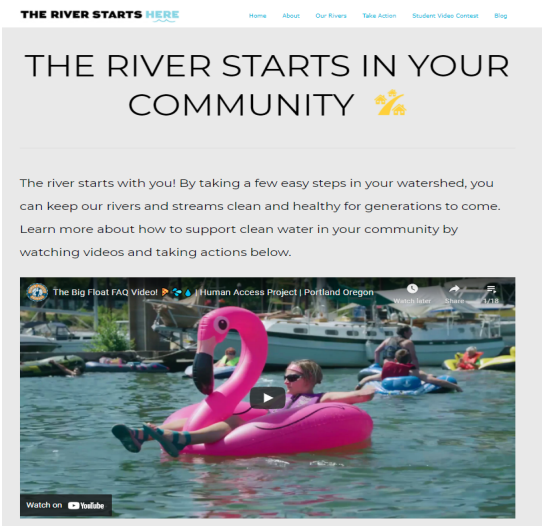
Since the 2019 inception of the Student Video Contest, entries have declined each year. The 2021 contest resulted in 234 video playlist views as a result of the People's Choice voting promotion. The most popular video across all playlists during the year was one of the 2021 contest winners "You, Doing Your Part" which has been seen 252 times.

FY 2021-22 EXPENDITURES

Category	Services	Investment
2022 Student Video Contest		
Participant awards		$1,500
Hollywood Theater	Honored Student Videos placement in the Portland EcoFilm Festival	$750
Advertisements		
Facebook & Instagram	Digital advertisements & Boosted posts	2, 179. 43
Snapchat	Student Video Contest Ads	$500
Coordination support		
EnviroIssues	Meeting support and member coordination, website maintenance, social media authoring	$19,998.00
	TOTAL	**$24,927.43**

OBSERVATIONS

The following observations are based on the results of FY 2021-22 activities and suggest additional direction the Coalition may take in its mission of educating the public about the impact of stormwater runoff pollution on the health of our rivers and streams.



The FY 2021-22 efforts consisted of the Coalition continuing to use digital advertising, contracting with EnviroIssues to assist with continued social media posts, meeting coordination and data analytics, and maintaining a YouTube page and blog.

While the Coalition's social media audience and its engagement grew slightly during the fiscal year, outreach for the Student Video Contest through schools continued to be challenging. The community capacity of schools, teachers, and students to become involved during the ongoing COVID-19 pandemic, with disruption and uncertainty for our education system, was severely impacted.

Based on feedback from partners, community members, and students, the River Starts Here team is exploring alternative ways to inform and engage youth during FY 22-23. The team is having ongoing conversations about finding alternative educational opportunities to bring attention to the importance

of water preservation and protection such as an art contest, social media contest, photo challenge, or potential Tik Tok challenge, as a new variation of the video contest.

The Coalition plans to continue to consult with social media specialists at Regional Coalition of Clean Rivers and Streams member agencies, including staff at the Oak Lodge Water District and Clean Water Services. The Coalition will also invest time in building and maintaining relationships with community partners and organizations that work with youth and Black, Indigenous, and People of Color (BIPOC) communities through outreach events and partnership opportunities.