Multnomah County NPDES MS4 Phase I Permit
Stormwater Management Program

Annual Report 2020
Permit year 25

DRAFT for PUBLIC COMMENT

Submitted to:
Oregon Department of Environmental Quality
November 2020

Submitted in Accordance with the Requirements
of the National Pollutant Discharge Elimination System
(NPDES) Permit Number 103004, File Number 120542

Submitted by:
Water Quality Program
Department of Community Services
Multnomah County

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1. Introduction

Multnomah County implements a comprehensive stormwater management program with the goal of reducing pollutants into the municipal stormwater system to the maximum extent practicable. This program is maintained and prioritized in response to the federal Clean Water Act and the County's responsibility to protect the health and welfare of its citizens and natural environment. The Stormwater Management Plan is the main component of the stormwater management program. This plan is submitted to and approved by the Oregon Department of Environmental Quality (DEQ) under the National Pollutant Discharge and Elimination System Municipal Separate Storm Sewer Phase I (NPDES MS4 Phase I) permit. The County's roles and responsibilities for complying with the permit term falls under seven categories of Best Management Practices (BMPs) with a focus on operating and maintaining the County bridges and roads.

This Annual Report summarizes the implementation activities of Multnomah County's Stormwater Management Plan in the County's permit area for the Permit Year 25 (Fiscal year 2020: July 1, 2019 – June 30, 2020).

2. Program Overview

History

From 1995 to 2010, the Oregon Department of Environmental Quality (DEQ) regulated stormwater from Multnomah County through two separate NPDES MS4 Phase I Discharge permits: Permit #101314 for the areas within the City of Portland permit boundary and Permit #108013 for the areas within the Gresham permit boundary. Multnomah County was a co-permittee on both Portland and Gresham's MS4 Permit.

The County had a limited amount of regulatory area under each permit under the two separate MS4 permits. To reduce the administrative burdens for program management and reporting, Multnomah County requested to DEQ that the permit areas be combined under a single individual permit for the 2010 permit renewal. DEQ granted this request and issued the new individual Phase I permit on December 30, 2010.

Permit area description

Multnomah County is a unique jurisdiction with NPDES permit areas composed of several discrete urban pockets, and approximately twenty-eight miles of road and bridge right-of-ways. The terms "Portland Area" and "Gresham Area" are used in this report to provide clarity in the area descriptions, and to provide continuity from the previous reporting areas.

Within the Portland Area, Multnomah County is responsible for five Willamette River bridges (see Figure 2-1). A few small unincorporated pocket areas within the Portland Urban Services boundary are under Portland's stormwater management through an Intergovernmental Agreement with the City of Portland. These areas are also under the City of Portland's land use authority.

Within the Gresham Area, Multnomah County is responsible for approximately twenty-eight miles of arterial roadways in the Cities of Fairview, Troutdale, and Wood Village, and the unincorporated residential area known as "Interlachen" that is located between Fairview Lake and Blue Lake (see Figure 2-2). In 2007, Troutdale and Wood Village came under NPDES Phase II coverage, and the County roads in those communities also came into permit coverage. Some road segments shown in the following maps are served by Underground Injection Controls or lack curb/gutter systems and do not discharge to surface waters.

More specific details regarding the County's jurisdiction are provided in the Stormwater Management Plan (updated April 2011).

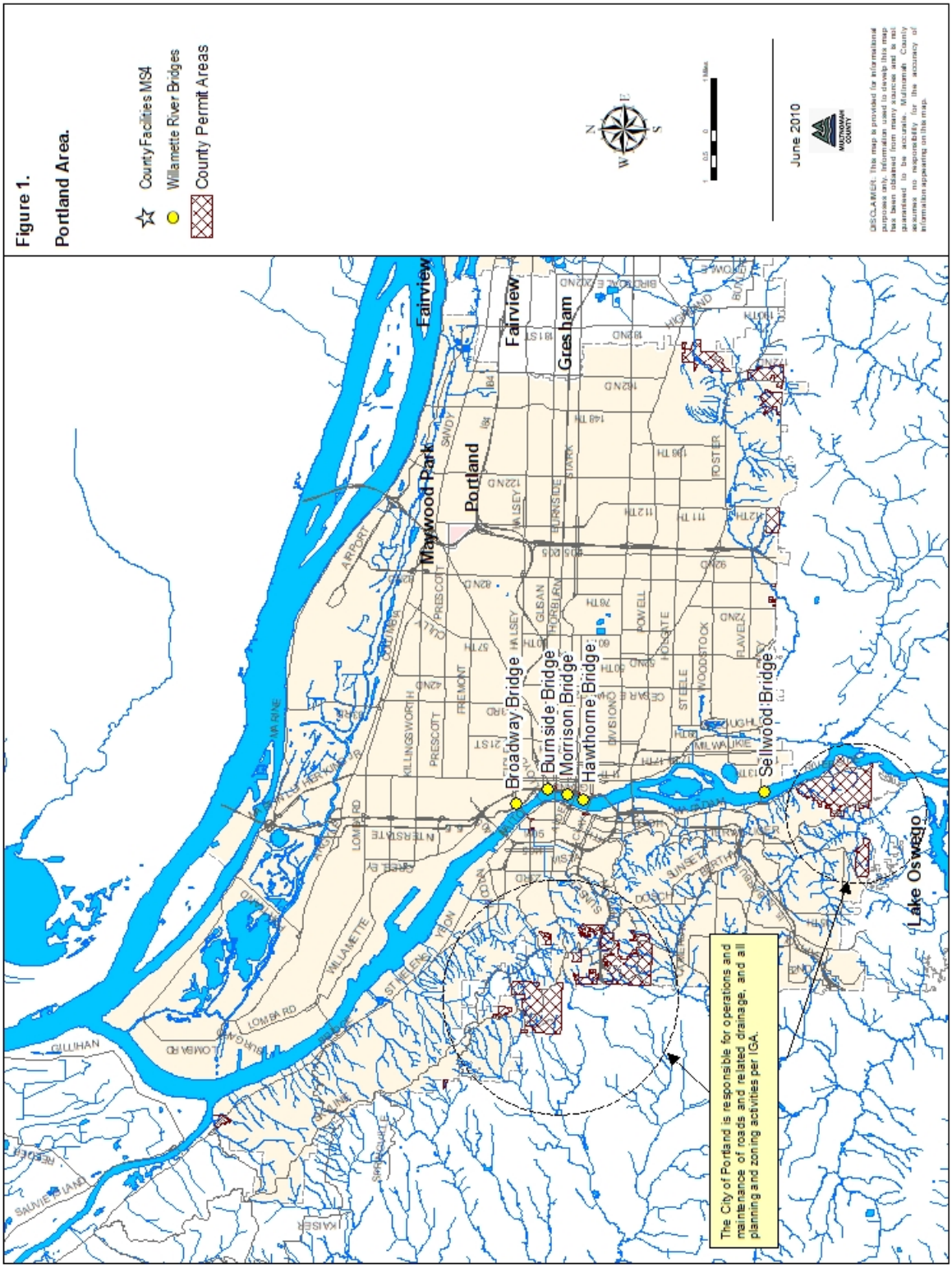
Figure 1.
Portland Area.
County Facilities MS4
Willamette River Bridges
County Permit Areas
June 2010
Fairview
Fairview
Gresham
Maywood Park
Portland
Broadway Bridge
Burnside Bridge
Morrison Bridge
Hawthorne Bridge
Sellwood Bridge
Lake Oswego
The City of Portland is responsible for operations and maintenance of roads and related drainage, and all planning and zoning activities per IGA.

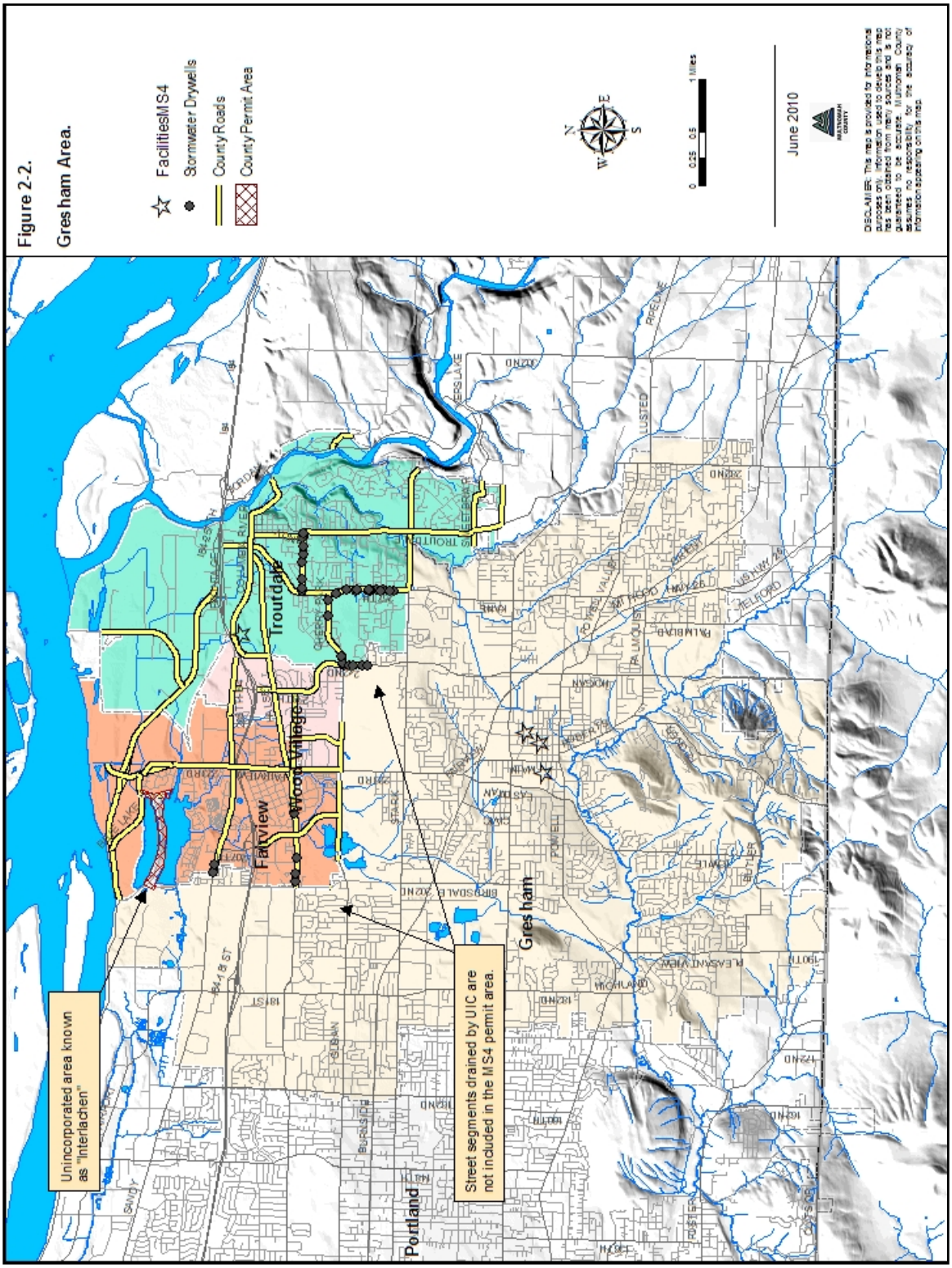
Figure 2-2.
Gresham Area.
FacilitiesMS4
Stormwater Drywells
CountyRoads
CountyPermit Area
June 2010
Unincorporated area known as "Interlachen"
Street segments drained by UIC are not included in the MS4 permit area.
Portland
Gresham
Fairview
Wood Village
Troutdale

Reporting requirements

The following table summarizes the requirements for the annual report as described in Schedule B.5 of the permit:

Permit reporting requirement	*Annual report section*
a. Status of each SWMP program element and progress in meeting measurable goals	BMP summary - status
b. Status or results of any public education program effectiveness evaluation conducted during the reporting year and summary of how the results were or will be used for adaptive management	BMP summary PI-1
c. Summary of the adaptive management process implementation during reporting year, including proposed changes or additions to BMPs	BMP summary – adaptive management
d. Proposed changes to SWMP elements designed to reduce TMDL pollutants	BMP summary
e. Summary of total stormwater program expenditures and funding sources over the reporting year and those anticipated in the next reporting year	Stormwater program budget
f. Summary of monitoring program results, including monitoring data and analyses	Environmental monitoring; also see Gresham and Portland permit annual reports
g. Proposed modifications to the monitoring plan	Environmental monitoring
h. Summary of the enforcement actions, inspections, public education programs, and illicit discharge screening and investigations	BMP summary
i. Overview of land use changes, concept planning and new development activities in the reporting year, including number of new post-construction permits issued and an estimate of the total new or replaced impervious surface area related to new development and redevelopment projects	Permit area description; BMP summary (ND, STR)
j. Results of ongoing field screening and follow up related to illicit discharges.	BMP summary (ILL-5)

Environmental monitoring

The City of Gresham and City of Portland have historically collected, managed, and analyzed stormwater and instream data on behalf of the County as the lead Permittee for the respective NPDES permits when the County was a co-permittee on both permits. Because the County's jurisdiction is part of the fabric of both permit areas, the data for each permit represented the overall quality of stormwater and instream health. This environmental monitoring was a component of the Intergovernmental Agreements (IGA) with both the City of Portland and City of Gresham.

Beginning December 2010, the County managed its stormwater program under a single individual permit. The monitoring requirements are met through a new IGA with the City of Gresham, and the monitoring plan is available online through the City of Gresham website.

The environmental data and analysis presented in the Annual Reports for City of Gresham independent of this report fulfill the monitoring requirement for the County's Annual Report, per the respective IGA. A monitoring summary is provided at the end of this report.

The data includes monitoring requirements from the County permit: two instream monitoring sites, two macroinvertebrate monitoring sites.

<u>Mercury monitoring</u>

The mercury monitoring requirement is part of a special study to further the development of the Mercury TMDL. Two full years of mercury monitoring were completed during 2011-2013, which fulfilled the mercury monitoring requirement as described in Table B-1 of the NPDES permit. The mercury monitoring data has contributed to the characterization of urban stormwater runoff, a stormwater monitoring program objective. DEQ is expected to review the monitoring data once all of the results from the MS4 permittees have been submitted.
The County submitted a permit modification request to eliminate the mercury monitoring after two years of data collection. The request was submitted to DEQ on November 1, 2013. Permit modification was granted on January 8, 2014.

The mercury monitoring data analysis by the City of Gresham was included as an appendix to the 2013 Annual Report.

Adaptive management process

The assessment of BMPs occurs annually during preparation of the County NDPES annual report, to be submitted to DEQ by November 1 of each permit year. Among other reporting requirements, the MS4 annual report must contain (Schedule B.5) the following:

> *The status of implementing the stormwater management program and each SWMP program element, including progress in meeting the measurable goals identified in the SWMP.*

By providing a summary in the NPDES annual report of progress toward attaining BMP measurable goals (through data collection and tracking measures), the County both: 1) meets the aforementioned reporting requirement, and 2) facilitates a critical step in adaptively managing its stormwater program by assessing each BMP.

While preparing this MS4 annual report, the County collected data and feedback from staff responsible for implementing/reporting on each BMP to facilitate the BMP assessment process. Key factors considered in the annual evaluation include but are not limited to:

- *Was the BMP measurable goal attained? If not, describe circumstances why, and how progress will be made toward future attainment.*
- *For multi-year BMPs, were milestones or timelines met?*
- *Can we feasibly refine or improve the BMP to gain efficiency or effectiveness in removing stormwater pollutants?*
- *Are staffing/financial resources available to support such a BMP improvement or refinement?*

3. BMP Summary

The Multnomah County Stormwater Management Plan is a set of Best Management Practices (BMPs) designed to reduce stormwater pollutants to the maximum extent practicable. The County's stormwater management plan is made up of thirty-two BMPs grouped into seven categories as shown below. The following table summarizes the task, measurable goals, status, and changes for each BMP.

PI	Public Involvement and Education
OM	Operations and Maintenance
ILL	Illicit Discharges Control
ND	New Development Standards
STR	Structural Controls
NS	Natural Systems
PM	Program Management

Managers and staff in several Multnomah County workgroups implement the Stormwater Management Program. The functional groups are:

Public Affairs	Public Affairs Office
Bridge Engineering	Department of Community Services
Bridge Maintenance	Department of Community Services
Land Use Planning	Department of Community Services
Transportation Planning	Department of Community Services
Code Compliance	Department of Community Services
Facilities	Department of County Assets
Emergency Response	Department of Community Services
Right-of Way Permits	Department of Community Services
Road Maintenance	Department of Community Services
Road Engineering	Department of Community Services
Asset Management	Department of Community Services
Nuisance Code	Health Department, Community Health Services
Program Management	Department of Community Services

PI – Public Involvement and Education

Overall goal: *To inform and educate the public about the causes of stormwater pollution, the effects on local streams and rivers, and the need for stormwater management, and to encourage active participation in pollution reduction efforts.*

BMP	*Tasks*	*Measurable Goal*	*Status*	*Adaptive Management*
PI-1 Participate in Regional Public Education Efforts	Provide County representative to attend the *Regional Coalition for Clean Rivers and Streams* (RCCRS) meetings. Plan and Implement public education campaign promoting behaviors that improve water quality.	Help develop and implement RCCRS annual strategy to promote behavior change through the RCCRS website, television, radio and social media. Evaluate education campaign effectiveness by November 1, 2014.	RCCRS continued to manage the River Starts Here outreach campaign for 2019-2020. The River Starts Here annual report is attached as an appendix to this report. County staff led the formation of the Clean Rivers Coalition (CRC), a new statewide outreach collaboration. The CRC developed a strategic communications plan to develop a statewide clean water outreach platform and campaign in 2020. The CRC was awarded a $232,000 grant from the EPA Columbia River Basin grant in September 2020 to help implement the strategic communication plan.	DEQ is participating in this effort along with many partners across the state.
PI-2 Participate in Public Meetings	Attend public meetings related to water quality.	Track participation in watershed council and ad hoc committee meetings.	Water Quality (WQ) staff shared monitoring and project updates at regular monthly meetings of the Johnson Creek Watershed Council and Sandy River Watershed Council. WQ Staff participates in the Interjurisdictional Committee for Johnson Creek, a technical workgroup that coordinates stream monitoring and analysis for Johnson Creek watershed. WQ staff facilitates the Beaver Creek Conservation Partnership. All meetings are held approximately once a month.	No change
PI-3 Distribute Public Education Information Regarding Stormwater	Make brochures and other educational materials from Soil & Water Conservation Districts and Watershed Councils available at the planning office. Ensure that public education materials are current and cover relevant topics.	Track the number of materials distributed at meetings, front counters and online.	The Land Use Planning counter where brochures are shared has been closed during Covid and the brochure count is not available at this time. As this is a passive BMP, we estimate that the rate in which brochures were taken pre-Covid is similar to previous years.	Because there are not stormwater specific brochures available, this BMP will likely be modified at permit renewal

PI-4 Conduct Training and Education for County Personnel	Send a representative(s) to water quality conferences when feasible. Share information learned in training with other staff. Train volunteers, maintenance and operations crews, as well as inspectors on impacts of activities on water quality and MS4 in addition to new approaches to water quality protection and proper reporting procedures.	Conduct a minimum of one staff training session a year.	WQ staff attended the regional Urban Ecology symposium (3/2020) Apprentice training approved and implemented with Maintenance Specialist Apprentices for proper Vactor procedures, sweeping and catch basin maintenance occurred throughout the permit year. Road Engineering and Road Maintenance managers and staff attended a stormwater presentation by Water Quality staff (12/2019)	No change
PI-5 Implement the Adopt-a-Road Program	Develop a strategy to promote the adopt-a-road program. Track road segments where volunteer roadside litter removal and clean-up is performed through participation in County Adopt-A-Road programs.	Continue to advertise and support the adopt-a-road program as interest exists.	Adopt-a-road program is promoted though a County webpage. Twenty one groups are active in Multnomah County. Clean ups range from once a month to once a year depending on the group. Adopt a Road is a trash pickup, but additional eyes on the road for illegal dumping is a benefit to the Roads program, as well as increasing the stewardship ethic in the community.	A comprehensive restoration and validation of the Adopt a Road program is expected in FY20-21.
PI-6 Maintain Signage to Protect Water Quality	Determine whether any areas need to be marked or re-marked and provide staff and materials to carry this out. Maintain signs in right-of-way promoting watershed awareness, as requested by watershed councils.	Inspect drain markers and signage once per permit term at all catch basins and stream crossings in the permit area.	Drain marker inspection was completed during the catch basin cleaning in Fall 2012	No change
PI-7 Provide Opportunities for Public Involvement During the CIP Process	Involve the public in the process of updating the Capital Improvement Plan and Program (every two years) and in evaluating the stormwater quality impacts and issues associated with the program.	Ensure opportunities for public participation in the CIP update process through public meetings. Ensure that public comment period is established for permit renewal.	The Capital Improvement Plan and Program (CIPP) is reviewed annually and updated biennially to ensure that limited resources for projects are efficiently and equitably allocated to the most critical capital needs, including where equity can be improved, as well as to leverage County funds. The CIPP is readily available for review online where feedback can be submitted to the County. During the last fiscal year, the County worked with the public to prioritize top projects, looking at concerns, additions and omissions. In November 2019, the County received 63 discrete comments from among an estimated 310 individuals attending a public open house (centrally located within the county), an online open house, and two stakeholder briefings. From these events, a near-final list was agreed upon, including comments specific to	No change

			projects, priorities and schedules, general suggestions applicable to more than one project, and whether any projects seem missing. After two years of planning and soliciting public input, the updated 20-year plan for road improvements was officially adopted by the Multnomah County Board of Commissioner on January 23, 2020.	
PI-8 Facilitate Public Reporting of Illicit Discharges	Determine where signs need to be posted regarding illegal dumping and place them.	Install and maintain signage in all known areas that are problematic in terms of dumping.	No activity in permit area.	No change

OM – Operations and Maintenance

Overall goal: *To implement operations and maintenance practices for public streets, bridges, storm sewers, and other facilities to reduce pollutants in discharges from the municipal separate storm sewer system.*

BMP	*Tasks*	*Measurable Goal*	*Status*	*Adaptive Management*
OM-1 Review the RMOM for Potential Updates to Address Water Quality	Review the Road Maintenance Operations Manual annually. When manual revisions are made, conduct refresher staff training as provided for under BMP PI-4.	Annually review of the RMOM to ensure current practices are incorporated respect to water quality.	Discussions with Road Maintenance integrate the environmental elements of the RMOM into a new standard operating procedure manual. Work is on hold during Covid-19	No change
OM-2 Inspect and Maintain the Storm Drainage System	Inspect the entire stormwater conveyance system on an annual basis. Utilize the record keeping system and database to record findings and follow-up work completed by field crews.	Establish criteria used to determine catch basin (CB) cleaning frequency to maintain effective pollutant removal by July 1, 2011. Clean all roadway catch basins (CB) a minimum of 2 times per year, unless catch basin cleaning records indicates less frequent or more frequent cleaning is appropriate.	Criteria for roadway CB and sweeping frequency were submitted to DEQ on June 22, 2011. The program uses Cartegraph software and iPads in the field. Catch basin cleaning was completed according to existing cleaning frequency regimen. Parking lot CBs maintained by County Facilities were inspected and cleaned on annual basis by Road Maintenance and private contractor.	New analysis of cleaning data is expected in FY21.
OM-3 Conduct Street Sweeping	Track street sweeping efforts to record the sweeping frequency.	Use catch basin cleaning records or inspections to inform the necessary sweeping frequency. Establish criteria used to determine street sweeping frequencies to maintain effective pollutant removal, and identify high priority street sweeping areas by July 1, 2011.	(See OM-2 and PM-3) Sweeping routes are included in the Cartegraph work order system. Multnomah County Route 1 and 2 (NPDES area in Troutdale, Fairview and Wood Village 254 miles per year. District 1 and 2 (NPDES permit area adjacent to Portland) 72 miles per year. Spot sweeping and miscellaneous sweeping for spills accidents and turn pockets approximately 20 miles per year.	See OM-2
OM-4 Properly Dispose of Road Waste Material	Identify alternatives for a new decant facility to be used for the dewatering of road wastes, or upgrades to the existing facility.	Annually review disposal options that protect water quality.	Vactor waste and sweepings are disposed at a private transfer facility (PPV Inc). Vactor liquid is field decanted into public sewer trunk with approval from Fairview. Ditching spoils from the urban area will continue to be disposed at a waste facility.	No change

OM-5 Minimize Impacts from Anti-icing Operations	Continue to follow the County RMOM procedures for the application, collection, and washing of sanding materials applied to roadways. Continue to research alternative anti-icing methods.	Conduct street sweeping to recover sanding materials within two weeks after the Road Maintenance Manager determines that the roads are free from the threat of an ice or snow event.	Sanding materials are used very sparingly on steep hills and freeway ramps during freezing events. In FY20, 800 gal of MgCl was used countywide.	No new updates on conventional road salt use from ODOT. Despite challenges of MgCl, it is still used conservatively.
OM-6 Minimize Impacts from County Truck Hauling Practices	Follow the RMOM procedures for conducting equipment checks when hauling materials.	See OM-1	No activity in permit area.	See OM-1
OM-7 Minimize Impacts From Right-of-Way and Road Shoulder Maintenance	Conduct maintenance according to RMOM	See OM-1	No activity in permit area.	See OM-1
OM-8 Minimize Impacts from Ditch Maintenance	Conduct maintenance according to RMOM	See OM-1	No activity in permit area.	See OM-1
OM-9 Maintain County-owned stormwater facilities	Inventory facilities by January 1, 2013	Annual inspection of treatment facility	Two stormfilter vaults exist in the permit area. Annual inspection did not occur in the permit year due to Road Maintenance staffing changes. A new contractor has been selected and inspections are scheduled. Stormfilters on County bridges were inspected and replaced in FY20. Vegetated facilities were maintained by Road Maintenance staff and the inmate work crew labor. County Facilities maintains several Vortex units which were cleaned.	No change

ILL – Illicit Discharge

Overall goal: *To prevent, identify, investigate, and if appropriate, control/eliminate any non-stormwater discharges into the municipal separate storm sewer system.*

BMP	*Tasks*	*Measurable Goal*	*Status*	*Adaptive Management*
ILL-1 Implement the Spill Response Program	Continue to follow and implement the Multnomah County Spill Response Plan. Track and record spills and information regarding spills as they occur.	Conduct spill response procedures when spills are reported.	County crews inspect the Spill Response Truck monthly to ensure proper spill control materials are stocked. No spills of significance during permit term.	No change
ILL-2 Address Spills from Private Truck Haulers	Report to the appropriate agency of the private truck hauling practices impacting the County right-of-way and the stormwater conveyance system.	Contact all private haulers when spills are observed to ensure proper clean up	See incident response from spills above.	No change
ILL-3 Require Erosion and Pollution Controls for Public Projects (formerly ILL-4 and ILL-5)	Execute formal contracting practices including pre-construction meetings, bonding, construction permit review, and erosion control inspections.	Inspect 100% of County project sites	FY 20 projects were all inspected for proper erosion control: • Arata Rd and Cochran Rd.	No change
ILL-4 Investigate Illegal Dumping	Continue to implement the existing field inspection program during routine maintenance activities. Record and report any noticeable illegal discharge and dumping in the right-of-way.	Clean up all reported discharge or debris dumped in the right-of-way	No threats to water quality were reported from illegal dumping activity in the permit area.	No change
ILL-5 Detect and Eliminate Illicit Discharges to the Storm Sewer	Continue to maintain the bridge restroom facility holding tanks quarterly. Document enforcement response plan for illicit discharges by November 1, 2011 Develop pollutant parameter actions levels and identify priority outfall locations by July 1, 2012.	Conduct quarterly maintenance of bridge facilities. Conduct tasks by date above, and annual inspection of dry weather flows at major outfalls.	Bridge facilities maintained quarterly without incident. Dry weather outfall inspection of four outfalls occurred in August 2019. No visible signs or other indications of illicit discharge were observed.	No change

ND – New Development

Overall goal: *New Development Standards (ND) BMPs are designed to mitigate pollutant discharges and other water quality impacts associated with new development and redevelopment during and after construction.*

BMP Description	*Tasks*	*Measurable Goal*	*Status*	*Adaptive Management*
ND-1 Require Erosion Control for Private Development	Review and provide comments on applications for grading permits and hillside development permits. Perform Erosion and Sediment Control Inspections for all approved construction projects.	Inspect 100% of sites once during the permit review, and a second time during active construction.	No activity in permit year in Interlachen	No change
ND-2 Regulate Stormwater Discharge	Continue to review new development permit applications to ensure proper connection to the storm sewer system and application of design standards. Inspect stormwater facilities during and after construction to ensure that the site is compliant with design standards.	Conduct plan reviews and inspections for 100% of permitted projects.	No activity in permit year in Interlachen	

STR – Structural Controls

Overall goal: *To implement structural modifications (constructed facilities) to existing systems/development to reduce pollutants in discharges from the municipal separate storm sewer system.*

BMP	*Tasks*	*Measurable Goal*	*Status*	*Adaptive Management*
STR-1 Address Water Quality with New Capital or Roadway Improvement Projects	Develop criteria and strategy for when stormwater treatment will be incorporated into public projects. Conduct plan checks of stormwater quality treatment facilities that are included in capital improvement or roadway improvement projects to assure they follow standard design criteria that include stormwater quality considerations, and that the appropriate facility is selected for the intended purpose.	Identify strategy or criteria used to determine when stormwater quality treatment will be incorporated into Capital Improvement Projects by November 1, 2013.	The County submitted criteria for when stormwater treatment is incorporated into public projects to DEQ in 2013. SE 238th Drive project incorporates stormwater swales and a bioretention pond in the design. Sandy Blvd project features off site UICs.	No change
STR-2 Retrofit Existing Facilities for Water Quality Benefit	Include consideration of stormwater treatment for water quality purposes in capital projects to reduce pollutants to the maximum extent practicable. Conduct a hydromodification assessment and develop a strategy to identify and prioritize potential retrofit projects by November 1, 2014.	Identify one retrofit project by November 1, 2013. Develop hydromodification and retrofit strategy by November 1, 2014.	Halsey St project was completed in 2016. Hydromodification Assessment and Stormwater Retrofit Strategy was submitted to DEQ on November 1, 2014.	No change
STR-3 Inventory and Map the County Storm Sewer System	Continue to update the County GIS storm sewer system map.	Complete GIS drainage system maps of the NPDES permit area by 2014, including catch basins, culverts, manholes, ditches and pipes systems.	Since 2015, the County has coordinated and maintained an online stormwater map with the cities of Troutdale, Gresham, Wood Village and Fairview. In 2018, data from the City of Portland, Port of Portland, and Multnomah County Drainage District were added to the map.	No change

NS – Natural Systems

Overall goal: *to help preserve and restore the natural environment/functions to reduce pollutants in discharges from the municipal separate storm sewer system.*

BMP	*Tasks*	*Measurable Goal*	*Status*	*Adaptive Management*
NS-1 Conduct Vegetation Management Activities	Follow RMOM and IVM procedures. Maintain current Oregon Department of Agriculture (ODA) certifications for chemical applicators. Review and update integrated vegetation management practices (IVM) annually.	Review RMOM vegetation activities and the Integrated Vegetation Management Program (IVM) annually.	The County has partnered with the Portland Water Bureau (PWB) to test a new BMP to use grass seed mix and broadleaf herbicide in the area adjacent to the road edge on roads adjacent to the Bull Run watershed to reduce overall pesticide use in the right of way. While it is too early to claim success and Countywide changes, including the NPDES permit area, we found that initial weed control with herbicides is necessary to establish fescue. Challenges to attaining the density of fescue remains the largest hurdle. The study is ongoing.	The study continues in partnership with PWB. While this study is outside the permit area, it has implications to the NPDES area and the countywide right of way.
NS-2 Specify Native Vegetation in ROW and Permitted Projects	Review the current contract specifications for landscaping in the right-of-way, and update as needed. Promote the use of native vegetation and develop contract specifications for landscaping. Condition plan approvals with invasive plants removal, if needed. Ensure contract specifications are followed which require certain landscaping materials and placement.	Inspect 100% of project sites for landscaping specifications.	No activity in the permit area	No change

PM – Program Management

Overall goal: *Program Management BMPs ensure effective program management, coordination, and reporting.*

BMP	*Tasks*	*Measurable Goal*	*Status*	*Adaptive Management*
PM-1 Stormwater Program Management	Continue to participate in the NPDES MS4 coordination meetings and any DEQ meetings. Continue to work with other NPDES MS4 permittees and DEQ to implement the stormwater management program. Review each BMP file annually. Prepare an annual report to demonstrate the County's compliance with requirements. Submit to DEQ.	Annually review BMP implementation data and submit annual report by November 1 each year.	Annual report submitted to DEQ.	No change
PM-2 Assess and Evaluate the Stormwater BMP Program	Evaluate progress of BMPs for annual report using adaptive management approach.	Develop an adaptive management approach by November 1, 2011.	The adaptive management approach was discussed mainly in the context of our catch basin and sweeping efficiency program.	No change
PM-3 Maintain Environmental Management Database	Pilot new GPS and onboard computer technology by July 2011. Develop GIS or other mapping technology to sync with GPS system by July 2012. Develop SAP work orders and tracking to integrate with GIS by July 2013.	Ensure tasks are completed by dates shown.	Work orders for Road Maintenance are captured in Cartegraph operations management system. Cartegraph uses GIS to capture catch basin cleaning and sweeping data.	No change

4. Stormwater Management Program Budget

Program activity within the County's NPDES permit area is divided between areas that were previously managed under the Portland area and Gresham area NDPES permits. The Water Quality program, consisting of one staff manages the County stormwater program, and portions of two Asset Management staff provide mapping and database services across the entire permit area. Services specific to the two areas are described below.

Gresham area stormwater related services:

- Road Maintenance expenditures and anticipated budget allocations within the Fairview and Interlachen incorporate items including drainage maintenance, right-of-way, surface management, vegetation management, general administration, emergency road hazard response and training.

- Road Engineering expenditures and anticipated budget allocations within Fairview and Interlachen incorporate drainage studies and reviews, environmental compliance review, as-built plan drafting and inventory, GIS database entry, and training.

- Land Use and Transportation Planning expenditures and anticipated budget for design review of capital improvements and right-of-way impacts to the County roads in Fairview, Troutdale, and Wood Village, and for design review and permits for development within the Interlachen Area.

Portland area stormwater related services:

- Bridge Maintenance expenditures and anticipated budget allocations within the Portland Permit area incorporate items including, drainage maintenance, right-of-way, surface management, vegetation management, general administration, emergency road hazard response and training.

- Bridge Engineering expenditures and anticipated budget allocations within the Portland Permit area incorporate drainage studies and reviews, environmental compliance review, as-built plan drafting and inventory, GIS database entry, and training.

- Multnomah County Road Maintenance, contracts the City of Portland and Clean Water Services to maintain and operate County owned roads to their respective standards in the urban unincorporated pocket areas through Intergovernmental Agreements.

- Road Engineering continues to retain authority to review access and impacts to the right-of-way including stormwater discharge when such discharges cannot be retained on site.

- Transportation Planning within the Portland Permit area includes development review in the unincorporated pockets where such development has the potential to access or impact the county right-of-way.

Funding for stormwater program expenditures are derived from two sources. The Land Use Planning receives funding from County's General Fund. The Transportation Division (Road and Bridge Services and

Transportation Planning) receive funding from the State Highway Trust Fund, which includes the State gasoline tax, weight/mile tax on trucks, and vehicle registration fees. Highway Trust Funds are constitutionally dedicated to road related issues. The County has no revenue from dedicated stormwater fees. This is a result of the County roads and unincorporated pockets being nested within other city jurisdiction's service areas.

The table below outlines program expenditures for Fiscal Year 2018 and provides the anticipated budget for Fiscal Year 2019.

Program Area	*FY 2019 actual*	*FY 2020 budget*
Water Quality Program[1]	$151,582	$261,509
Asset Management[2]	$8,689	$8,988
Gresham area		
• Road Maintenance[3]	$52,267	$53,000
• Road Engineering[3]	$117,922	$3,500
Portland Area		
• Bridge Maintenance/Operations	$14,526	$22,009
• Bridge Engineering[4]	$4,486,048	$16,304,388
• Road Maintenance IGA	$0[5]	$100,000
• Road Engineering[6]	$17,227	$17,789

[1]*Figure includes entire Water Quality program includes one staff, monitoring budget for UIC, TMDL and NPDES programs, and additional program costs.*
[2]*Estimate is based on a portion of time from two Asset Management staff.*
[3]*Budget estimate is based on actual spending from the previous year for time spent on water quality work plus a budget for training.*
[4] *The amount shown represents the entire Bridge Engineering program. The entire program is included because Bridge Services do not budget or collect charges for water quality tasks. Water quality best practices are integral in all aspects of design and construction and hence we are not able to be segregated from the other work. Increase in budget reflects Sellwood Bridge funding.*
[5]*Portland Road Maintenance IGA funds were used for non-water quality related maintenance, thus not reported here.*
[6]*Estimate of the amount of time spent on water quality issues in Portland area right-of-way.*

5. Monitoring Summary

Environmental monitoring for the NPDES MS4 Phase I permit includes instream monitoring, macroinvertebrate monitoring, stormwater sampling for mercury, and pesticide monitoring. This summary describes the instream and macroinvertebrate monitoring. In previous permit terms, the mercury monitoring was completed. Pesticide monitoring is slated to be done in conjunction with the County's underground injection control (UIC) Water Pollution Control Facility (WPCF) permit requirements. The County received the UIC WPCF permit in March 2014, and stormwater sampling began in fall of 2014.

Instream Data

Instream monitoring is required at two sites in the permit area for a range of pollutant parameters shown in the table below. Monitoring is coordinated with the City of Gresham; the County maintains an intergovernmental agreement with Gresham to contract monitoring services, including monitoring scope, and sampling methods. Fairview Creek and Beaver Creek are the two priority watersheds in the Gresham area. Fairview Creek results are summarized in the Gresham NPDES Annual Report.

Monitoring location	*Sampling frequency*	*Parameters*
Lower Beaver Creek (BCI1) Upper Beaver Creek (BCI2)	4 events/year	Biological Oxygen Demand (BOD5) Total suspended sediment (TSS) Hardness Temperature Dissolved Oxygen (DO) Conductivity pH Nitrate (NO3) Ammonia nitrogen (NH3-N) Total phosphorus (TP) Ortho-phosphorus (O-PO4) Copper, total and dissolved Lead, total and dissolved Zinc, total and dissolved E.coli bacteria
Lower Beaver Creek (BCI1) Upper Beaver Creek (BCI2)	1 event/year	Macroinvertebrate

Two sites in Beaver Creek are monitored by the County, one site at the boundary of the urban and agricultural land uses, and one near the mouth of the stream, where the stream joins the Sandy River. Instream monitoring results are generally within expected ranges, with exceedances in temperature and E.coli. Macroinvertebrate scores are low, which is consistent with previous sampling results.

Sample ID	Site ID	Date	Time	24-hr rain (in)	Field DO (mg/L)	Field pH	Field Temp (°C)	Conductivity (uS/cm)	Turbidity (ntu)	BOD5 (mg/L)	TSS (mg/L)	NH3-N (ug/L)	Chloro-phyll-a (mg/m3)	NO3-N (ug/L)	O-PO4 (ug/L)	TKN (ug/L)	Total-P (ug/L)	Hardness (mg CaCO3/L)
W19G165-10	BCI1	7/22/2019	12:11	0.00	4.97	7.38	21.2	169.3	2.3	**2**	**3**	25	**2**	1040	79	292	71	79.8
W19J255-10	BCI1	10/29/2019	13:31	0.00	10.9	7.81	5.7	37.9	3.31	**2**	**3**	**20**	**2**	1880	44	265	53	62.5
W20A237-10	BCI1	1/27/2020	12:57	0.21	15.69	7.72	8.5	60.8	35.6	**2**	56	**20**		3340	**20**	750	92	40.3
W20D165-10	BCI1	4/28/2020	12:48	0.00	7.32	7.81	14.4	108.5	7.98	**2**	17	21		1290	50	491	80	53
W19G165-11	BCI2	7/22/2019	13:42	0.00	6.24	7.02	18	119.3	3.83	**2**	**3**	40	**2**	1050	108	521	123	51.3
W19J255-11	BCI2	10/29/2019	12:20	0.00	13.85	7.61	3.8	30.1	6.33	**2**	**3**	**20**	6	4090	27	450	70	47.2
W20A237-11	BCI2	1/27/2020	11:28	0.21	16.26	7.32	8	55.2	44.4	**2**	16	**20**		4120	**20**	960	92	36
W20D165-11	BCI2	4/28/2020	11:28	0.00	8.85	7.37	13.3	91	11.1	**2**	**3**	44		2350	97	665	135	39.4

Sample ID	Site ID	Date	Time	Hg-Total (ug/L)	Cu-Total (µg/L)	Pb-Total (µg/L)	Zn-Total (µg/L)	Cu-Diss (µg/L)	Pb-Diss (µg/L)	Zn-Diss (µg/L)	E. coli (MPN/100ml)
W19G165-10	BCI1	7/22/2019	12:11	0.00103	1.13	**0.056**	2.9	0.884	**0.105**	1.79	150
W19J255-10	BCI1	10/29/2019	13:31	**0.00150**	10	0.1	9.8	9.89	**0.106**	9.41	**10**
W20A237-10	BCI1	1/27/2020	12:57	0.00436	2.38	0.745	18.9	0.91	**0.106**	5.56	110
W20D165-10	BCI1	4/28/2020	12:48	0.00279	2.44	0.269	10.5	1.56	**0.106**	3.49	**10**
W19G165-11	BCI2	7/22/2019	13:42	0.00151	1.94	0.099	3.7	1.63	**0.105**	2.3	74
W19J255-11	BCI2	10/29/2019	12:20	**0.00150**	21.4	0.257	6.4	19.8	**0.106**	5.07	170
W20A237-11	BCI2	1/27/2020	11:28	0.00367	1.99	0.617	7.9	0.749	**0.106**	1.69	51
W20D165-11	BCI2	4/28/2020	11:28	0.00161	3.26	0.189	3.5	2.73	**0.106**	0.529	300

Macroinvertebrate Site	B-IBI score
BCI1	26
BCI2	24

*Bold indicates values below detection limits
*Shaded cells indicate values above water quality standard

APPENDIX A. Regional Coalition for Clean Rivers and Streams Annual Report 2020

Regional Coalition for Clean Rivers and Streams

Fiscal Year 2019-2020 Annual Report

September 23, 2020

Prepared by:

enviroissues

THE RIVER STARTS HERE

FY 2019-20 Overview

The Regional Coalition for Clean Rivers and Streams (Coalition) continued its work – initiated in the mid-1990s – of providing coordinated messaging to target behaviors linked to stormwater pollution from residential sources across the Portland metropolitan region. 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 2019-20 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 Troutdale
- City of West Linn
- City of Wilsonville
- Oak Lodge Water Services
- Multnomah County
- Washington County

This report covers the time frame of July 1, 2019 - June 30, 2020.

Background

As identified in the 2013 Strategic Plan, the mission of the Coalition is to collaborate 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 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 is able to reach many thousands of people in the region compared to what entities can typically achieve on their own.

The Coalition targets 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 toxics 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 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 is now our number one source of water pollution. When it rains, pollutants from your home, car, and garden wash into our rivers and streams.
- 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 2019-20 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. This concept was informed by the research summary about stormwater behavior (DHM Research, Feb. 2014) used by Coalition members in partial fulfillment of the FY 2014-2015 MS4 permit requirement to evaluate the effectiveness of permittee's education and outreach program.

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 2019-20. 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 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 event promotion and digital advertising, including materials such as temporary tattoos, T-shirts for staffing, message banners for booths, and a large durable watershed map. Coalition members use collateral materials through individual outreach events held throughout the year.

Goal 3: Practice adaptive management

The Coalition is committed to leveraging available resources to maximize impact while setting the stage for a future collaboration among agencies. Total member representation in the Coalition has increased in the past few years, bringing in more regional partners.

The River Starts Here Messaging and Outreach

Community Events and Agency Collaboration

Representatives of member agencies promoted Coalition messages throughout the fiscal year using Facebook, Instagram, YouTube and Twitter. The Coalition produced collateral materials emphasizing *The River Starts Here* brand and messages to support community events. In addition, the Coalition adapted to the changing landscape of COVID-19 by increasing social media posts and digital events. The primary focus of digital outreach was to drive engagement in the first annual Student Video Contest.

Watershed Village – The Big Float

In the summer of 2019, the Coalition staffed a large interactive booth at the Big Float along with a number of regional watershed councils including Tryon Creek, Oswego Lake, Johnson Creek, Columbia Slough and Clackamas River. The booth served lemonade, had a salmon obstacle course, a large watershed map that people put dots on to learn what watershed they lived in and a social media photo booth with props for people to take photos with. An estimated 500 or more people visited the booth.

THE RIVER STARTS HERE

STUDENT VIDEO CONTEST FOR CLEAN RIVERS WIN $500

Dear Portland-Metro Area School Administrator:

The Regional Coalition of Clean Rivers and Streams (RCCRS), a partnership of public agencies in the Metro region, works to educate the public about how stormwater pollution impacts our rivers and streams and steps we can all take to protect our water.

We invite your students to enter *our first ever* **Portland-Metro* area middle and high school video contest.** To learn more about the RCCRS, visit facebook.com/cleanrivers or theriverstartshere.org.

Contest details:

Contest entries will consist of 25 or 55 second videos about water pollution. Multiple entries allowed with separate application forms. All Portland-Metro area middle and high school students are invited to participate. Public, private, charter, and home school students in grades 6 to 12 as of September 2019 are eligible to enter.

A **$500 first prize** will be awarded in each of these categories:

- Best Long Video (55 seconds)
- Best Short Video (25 seconds)
- People's Choice (overall favorite, short or long)

Students may enter as a school group or club (e.g. Gresham High School technology class or Beaumont Middle School Green Club) or as an individual. Prize money will be awarded based on the category selected.

Video entries must focus on one of the following stormwater pollution prevention topics:

A. Leave no trace: protect rivers while enjoying the outdoors
B. We all live downstream: what connects you to Oregon's water?
C. Everyday pollution prevention: how daily routines at home can pollute stormwater
D. Cars: minimize water pollution from driving and maintaining vehicles
E. Watershed councils: make a commercial promoting your local council

Videos will be evaluated based on factual accuracy, educational value, and entertainment factors.

Application and video factsheets are available at theriverstartshere.org

If you plan to enter, please email info@theriverstartshere.org so we can send you updates and reminders. Your email address will not be shared.

**Students in grades 6 to 12 in Washington, Clackamas, and Multnomah counties are eligible to enter.*

The Regional Coalition for Clean Rivers and Streams is a partnership of Multnomah County, Clean Water Services, Clackamas County Water Environment Services, Oak Lodge Water Services, and the Cities of Lake Oswego, West Linn, Gladstone, Troutdale, Fairview, Gresham, Wilsonville, and Milwaukie.

Student Video Contest

Beginning in summer 2019, the RSH team developed a YouTube page in order to host a student video contest. The team also developed a region-wide mailing list including public, private and homeschooling organizations, and collected emails whenever possible. The team developed an application, rules, a waiver, added materials to its website and launched the first annual 6th-12th grade Student Video Contest in fall 2019 with submissions due in 2020. Finally, the team sent a mailer to 229 schools in fall and winter.

Categories included first prize of $500 for best long video (55 seconds), best short video (25 seconds) and people's choice. The team created fact sheets to support student learning and video content accuracy on the topics of 1) Leave No Trace 2) Pollution from Cars 3) What Connects You to the River 4) Pollution from Everyday Behaviors.

The Coalition received an overwhelming response from participants and viewers who learned about our connection with local waterways. In this first year, local youth environmentalists passionate about telling their story responded to the call and helped create videos about how we each have a role in protecting rivers and streams. Overall, the Coalition received 46 entries, of those 36 were deemed completed applications with appropriate content accuracy and were uploaded to the Coalition's YouTube site.

On June 6, 36 middle and high school student finalists from throughout the Portland Metro area shared videos to encourage clean water behaviors like reducing pesticide use, practicing Leave No Trace principles in natural areas and traveling by transit, bike and foot to reduce pollution. Expert judges from the film industry, governments and river organizations voted to select the winners for the best 55-second and 25-second videos. From June 6-19, students rallied friends and family to vote for them to win the People's Choice Award for the most liked, commented, viewed and shared video. Over 4,000 community members watched student videos, which were viewed over 11,000 times. Viewers submitted over 1,800 likes and added hundreds of comments. Commenters shared their enthusiasm for these creative videos.

"I always forget that everyday activities can be harmful to my community whether I intended it to or not, I will definitely remember the car wash part!" – Margo Flanagan

"This is the greatest public service announcement for keeping our waters clean I have ever seen." – Robert Pirtle

In July, the Coalition met over Zoom to finalize all winners and honorable mentions. The Coalition will report on the winners and awards in the next fiscal year's annual report.

River Starts Here Blog

In May 2020, the Coalition began refreshing the website and added a blog. The blog created new opportunities for agency collaboration, event cross-promotion and driving traffic to partner resources. This fiscal year, the blog promoted upcoming events including The Big Float, the East Multnomah Soil and Water Conservation District 2020 Yard Tour and local native plant sales.

Website: TheRiverStartsHere.org

TheRiverStartsHere.org launched in June 2015. The website uses a modern design 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. During the fiscal year, the Coalition met and analyzed the website layout and content areas and planed a full website refresh in August 2020.

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: 2,500 (▲114 %)

- **Users:** 1.7k (▲64%)
- **Traffic type**
  - Direct: 52% (▲160%)
  - Social: 33% (▲1,890%)
  - Organic (search engine): 14% (▼60%)
  - Referral: 1.2% (▼95%)
- **Bounce rate:** 77% (▼10%)
- **Time on site:** 1:39 (▲171%)

During this fiscal year, web traffic has increased rapidly. In particular, traffic from social media to the website increased 1,890%. This change is due in part to the hosting Student Video Contest content on the website. The River Starts Here also increased post frequency on social media and linked more regularly to the website. Finally, COVID-19 increased social media and website engagement in 2020.

Social Media

The Coalition continued posting to its social media channels with an increase in frequency compared to previous years. As in past years, the Coalition concentrated social media activity in the spring and

summer time period when households in the region have an increased interest in yard and garden activities relevant to surface water quality. Social media messages build on existing conversations and connect with organizations around the region. While spring and summer are also times for promoting events, this year presented a different challenge with the COVID-19 pandemic. The Coalition focused on promoting educational webinars and online events as opposed to in person events such as restorations and river cleanups.

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.

Facebook page, The River Starts Here

A summary of Coalition Facebook account use during the fiscal and as of July 1, 2020 is as follows:

- **Followers ("likes"):** 1,684 (▲110)
- **Weekly organic reach:** 193 (▲29)
- **Posts:** 89 (▲16)

Facebook follower demographics breakdown:

Age	Female	Male	Total by Age
18-24	1%	1%	2%
25-34	11%	7%	16%
35-44	19%	8%	27%
45-54	16%	8%	24%
55-64	10%	4%	14%
65+	9%	4%	13%
Total by Gender	66%	32%	-

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.

The Coalition's social media following is dominated by women. In particular, the Coalition Facebook mostly reaches women who are 35-54. The Coalition's Facebook following has also increased its reach to older people while reaching fewer young people.

Facebook ads, The River Starts Here

The Coalition continued to use low cost social media advertising as part of its campaign in FY 2019-20. 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. The majority of advertising was on Facebook.

A summary of Facebook ad engagement during the fiscal year is as follows:

- **Advertisements run:** 5
- **Reach:** 102,586
- **Link clicks and video views**: 31,305

Ads or Boosts during FY 19-20

Topic	Engagement	Reach	Impressions
The Big Float 2019—Watershed Village promo	94	781	NA
24th Annual Columbia Slough Regatta	82	2,602	4,406
Sandy River Annual Float Clean -Up	406	16,418	26,660
Johnson Creek Annual Clean-Up	153	7,696	12,021
Harmful Algal Blooms educational post	1,159	60,603	131,800
12th Annual Johnson Creek Clean-Up	120	8,235	12,754
Tualatin Tire Collection Event	20	2,958	6,113
Where does Stormwater Go—Downspouts (Portland edu video)	82	1038	NA
Salmon recovery & toxics—educational-engagement	412	10,192	19,395
Car Washing techniques for water protection educational video (from City of Salem)	2,445	8,245	16,307
Willamette Riverkeeper Clean-Up	106	8,384	11,962
Student Video Contest post	18	504	
Student Video Contest	1,276	13,196	25,479
Student Video Contest -deadline extended (video link)	30,037	21,756	39,157
Pesticides Harm Pollinators/Backyard Habitat	175	1860	NA
Columbia Slough anti-littering promo	1,173	24,414	64,382
Follow Us: River Starts Here	5	15,555	34,849
JCWC Watershed Wide Event	113	5,999	12,026
Totals	190,723	210,436	2.5M
Total Cost			**$3,503***

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. **Impressions** are the number of times placed by Facebook including being show to individuals more than once. NA=unpaid spot.

*Some ads also ran on Instagram.

Twitter, @riverstartshere

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

- **Followers:** 1,438 (▼32)
- **Tweets:** 53 (▲4)

Instagram, @theriverstartshere

A summary of Coalition Instagram account use during the fiscal and as of July 1, 2019 is as follows:

- **Followers:** 164 (▲160)
- **Posts:** 26 (▲14)

Instagram follower demographics breakdown:

Age	Female	Male	Total by Age
13-17	1%	4%	2%
18-24	5%	2%	4%
25-34	39%	35%	37%
35-44	28%	24%	26%
45-54	18%	24%	20%
55-64	4%	8%	6%
65+	6%	4%	6%
Total by Gender	62%	38%	-

Table 3: Instagram followers by age range and gender. A large portion of the Coalition's Instagram audience is made up of women from age 25-44.

The Coalition's move in 2019-2020 to consolidate Instagram handles and grow its audience has had tangible effects on the diversity of demographics reached. The Instagram audience is dominated by people ages 25-34. The Coalition can continue to build a following from youth by promoting YouTube and Instagram content while reaching older people through Facebook.

YouTube, The River Starts Here

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

- **Subscribers:** 9
- **Videos added:** 5
- **Watch time (hours):** 28.5
- **Views:** 225

In 2019, the River Starts Here created a YouTube account for the Student Video Contest. During this fiscal year, the channel saw a modest increase in views and subscribers. The People's Choice Award voting for the student video contest occurred in July 2020. The annual report for the next fiscal year will capture the large increase in YouTube audience.

FY 2019-20 BUDGET

Category	Services	Investment
Event sponsorship and promotion		
Big Float	2019 Big Float Sponsorship	$3,000
Materials		
Mailers	Environmental Paper and Print – Student video contest mailer	$424
Mailers	Student video contest mailer	$120
Stickers	1000 The River Starts Here stickers	$510
Banner	Streamside forest banner	$125
Banner	Watershed village banner	$100
Advertisement		
Facebook	Facebook digital advertisements	$3,681.85
Coordination support		
EnviroIssues	Meeting facilitation and member coordination, website maintenance, social media authoring	$18,000
	TOTAL	$25,960.85

Table 3: FY 2019-20 expenditures

OBSERVATIONS

The following observations are based on the results of FY 2019-20 activities and suggest future 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 19-20 efforts consisted of the Coalition continuing to use online social media advertising, contracting with EnviroIssues to assist with increasing social media post frequency and meeting coordination and data analytics, building a YouTube page and creating thematic playlists and switching Coalition meetings to digital. As noted in the advertising review section, The Coalition's digital strategies were effective.

The Student Video Contest **outreach through schools proved challenging**, as only two teachers responded to the video contest by involving their students resulting in about 20 submissions. To compensate, the Coalition extended the deadline and purchased Instagram advertising that was geotargeted to the region's young people which resulted in a total of 46 entries. This **digital outreach strategy was successful**. The group noted that given the amount of time it took to receive, organize and upload the videos, review them for accuracy and score them, having many more entries would be incredibly time intensive. As such, the outreach strategy will not be much altered. The group is very pleased with the quality of the videos submitted and the enthusiasm shown by the engaged young people and will continue this approach to engage the next generation of adults in addition to the adult population already engaged via Facebook and Twitter. The Coalition will continue to focus on Instagram and YouTube content targeted to reach young people.

Next fiscal year, the Coalition will conduct a **three-fold student outreach strategy** through school mailers, Instagram ads and through other community-based organizations, especially those serving marginalized populations and BIPOC youth, in an effort to achieve more diversity, equity and inclusion. The Coalition will now be able to use student videos from the 2019-2020 competition as collateral for social media ads and posts.