To request translation or disability-related accommodations, please contact us at:
email: wescustomerservice@clackamas.us **phone:** 503-742-4567

Si quiere solicitar servicios de traducción o adaptaciones para la discapacidad, contáctenos en/al
email: wescustomerservice@clackamas.us **phone:** 503-742-4567

Чтобы запросить перевод или приспособления, связанные с инвалидностью, пожалуйста, свяжитесь с нами по:
email: wescustomerservice@clackamas.us **phone:** 503-742-4567

Щоб попросити переклад або спеціальні послуги для осіб з особливими потребами, зверніться до нас, скориставшись такими контактними даними:
email: wescustomerservice@clackamas.us **phone:** 503-742-4567

如需翻译服务或残障相关的协助，请与我们联系：
email: wescustomerservice@clackamas.us **phone:** 503-742-4567

Để yêu cầu dịch vụ dịch thuật hoặc điều chỉnh liên quan đến tình trạng khuyết tật, vui lòng liên hệ với chúng tôi qua
email: wescustomerservice@clackamas.us **phone:** 503-742-4567

Clackamas County
www.clackamas.us

CLACKAMAS
WATER
ENVIRONMENT
SERVICES

CLACKAMAS
WATER ENVIRONMENT SERVICES

GREGORY L. GEIST | DIRECTOR

Water Quality Protection
Surface Water Management
Wastewater Collection & Treatment

December 1, 2025

Mr. Pablo Martos
Municipal Stormwater Program Coordinator
Oregon Department of Environmental Quality
700 NE Multnomah St. Ste 600
Portland, OR 97232
PabloMartos@deq.oregon.gov

RE: **Water Environment Services, Clackamas County, and the Cities of Happy Valley and Rivergrove MS4 Permit 2024-25 Annual Report and Permit Compliance Documents Due December 1, 2025**

Dear Mr. Martos:

Attached is the 2024-25 Annual Report for WES, Clackamas County, and the Cities of Happy Valley and Rivergrove as required by our NPDES Municipal Separate Storm Sewer Systems Phase I Individual Permit, No. 101348, dated October 1, 2021, and modified on May 5, 2023.

This is the document of record.

Also included, in Appendix B, is the following permit-compliance document: Public Education and Outreach Strategy.

This report has been uploaded in the Your DEQ Online portal as an attachment to the MS4 Annual Report Form. In addition, four Excel files of monitoring data as required per Schedule B.3.h. will accompany the annual report form.

We look forward to your comments. Please call me at (503) 742-4581, if you have any questions or need additional information.

Best regards,

Ronald E Wierenga

Ron Wierenga
Deputy Director
Clackamas Water Environment Services

Cc: Greg Geist, Director, Clackamas Water Environment Services
Dan Johnson, Director, Dept. of Transportation and Development
Jason Tuck, City Manager, City of Happy Valley
Analeis Weidlich, City Manager, City of Rivergrove

(Page intentionally left blank)

NPDES MS4 PERMIT

ANNUAL REPORT

JULY 1, 2024 THROUGH JUNE 30, 2025

For Clackamas County, Water Environment Services, and the Cities of Happy Valley and Rivergrove

December 1, 2025

This Page Intentionally Left Blank

December 1, 2025

Water Environment Services, Clackamas County, and the Cities of Happy Valley and Rivergrove

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) PHASE I PERMIT No. 101348

We, the undersigned, hereby submit this National Pollutant Discharge Elimination System (NPDES) Municipal Stormwater System Annual Report in accordance with NPDES Permit Number 101348. We certify under penalty of law that this document and all attachments were prepared under our direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on our 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 our knowledge and belief, true, accurate and complete. We are aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Greg Geist

Gregory L. Geist, Director
Water Environment Services

Nov. 18, 2025
Date

Dan Johnson
Dan Johnson (Nov 21, 2025 15:26:46 PST)

Dan Johnson, Director
Clackamas County Dept. of Transportation and Development

Nov. 21, 2025
Date

Jason Tuck
Jason Tuck (Nov 24, 2025 08:31:36 PST)

Jason Tuck, City Manager
City of Happy Valley

Nov. 24, 2025
Date

Analeis Weidlich
Analeis Weidlich (Nov 24, 2025 08:43:27 PST)

Analeis Weidlich, City Manager
City of Rivergrove

Nov. 24, 2025
Date

This Page Intentionally Left Blank

Contents

Tables

Appendices

Section 1 MS4 Permit requirements for annual reporting

This annual report summarizes MS4 Permit program implementation activities that Water Environment Services (WES), Clackamas County[1], and the Cities of Rivergrove and Happy Valley conducted from July 1, **2024**, to June 30, **2025**. The 2024 Shared Stormwater Management Program Document was implemented for the first time on July 1, 2024 and was in effect during the entire annual reporting period

WES is an intergovernmental entity formed under ORS 190 by Clackamas County Service District No. 1 (CCSD#1), the Surface Water Management Agency of Clackamas County (SWMACC) and the Tri-City Service District –governed by the Board of County Commissioners acting as the governing body of WES, as a legally distinct entity from Clackamas County. WES administers MS4 activities within its service area as defined by the underlying boundaries of the districts.

WES works closely within its service area with Clackamas County; Clackamas County's Department of Transportation and Development (DTD) represents Clackamas County in its capacity as a MS4 Permit Co-Permittee.

The Compliance Evaluation required in the 2021-2026 MS4 Permit's Schedule B(2) was conducted and progress was evaluated in implementing Stormwater Management Program (SWMP) control measures in Schedule A, and additional requirements in Schedules B and D. This annual report is the product of this evaluation.

Table 1 includes the submittal requirements for the 2024-25 MS4 Permit annual report in accordance with Schedule B.3 and the location in this document with the applicable program implementation information and data.

Table 1: MS4 Permit Annual Report Requirement Locations in Document

Summary of Schedule B(3) Requirements for 2024-25	Section Where Annual Report Requirement is Met:
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 as well as additional annual reporting requirements identified in each section, or, prior to DEQ's SWMP approval, measurable goals and tracking metrics approved under the previous permit's approved stormwater management plan.	Section 1.1
b. Summary of adaptive management implementation and changes or updates to programs made during the reporting year, including rationales for any proposed changes to the stormwater management program (e.g., new BMPs), and review new and historical monitoring data. Include discussion of the implications of or any findings related to recent years' adaptive management and/or changes made to the SWMP, based on data from tracking measures, measurable goals, and/or any monitoring relating to the change.	Section 1.2

[1] This report does not include the MS4 Permit program implementation activities which Clackamas County conducted within the Oak Lodge Water Services (OLWS) area. See separate annual report to see what the County did in 2024-2025 in the OLWS area.

Summary of Schedule B(3) Requirements for 2024-25	Section Where Annual Report Requirement is Met:
c. Any proposed changes to SWMP program elements designed to reduce TMDL pollutants	Section 1.3
d. 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.	Section 1.4
e. Summary describing the number and nature of enforcement actions, inspections, and public education programs, including the results of ongoing field screening and follow-up activities related to illicit discharges.	Section 1.5
f. 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.	Section 1.6
g. Summary of total stormwater program expenditures and funding sources over the reporting fiscal year, and those anticipated in the next fiscal year.	Section 1.7
h. Summary of monitoring program results, including monitoring data that are accumulated throughout the reporting year submitted in the DEQ-approved Submission Template, and any assessments or evaluations of that data completed by the co-permittees or an authorized third party.	Section 1.8
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 1.9
j. An overview, as it relates to MS4 discharges, of concept planning, land use changes and new development activities (including the number of new post-construction permit issues) that occurred in the Urban Growth Boundary (UGB) expansion areas during the reporting year, and those forecast for the following year, where such data is available.	Section 1.10
k. Details of all corrective actions implemented associated with Schedule A.1.b.iii (for instream WQ exceedances) during the reporting year.	Section 1.11
l. Compliance with annual reporting requirements found in the following sections:	Section 1.12
• Schedule A.3.c.vii – Illicit Discharge Detection and Elimination	1.12.a
• Schedule A.3.d.vii – Construction Site Runoff Control	1.12.b
• Schedule A.3.e.viii – Post-Construction Site Runoff Program	1.12.c
• Schedule A.3.f.v.c – Winter Maintenance	1.12.d
• Schedule A.3.h.i – Hydro-modification Assessment and Stormwater Retrofit Strategy Updates	1.12.e
• Schedule D.3.b – Mercury Minimization Assessment	1.12.f

1.1 Schedule B.3.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 as well as additional annual reporting requirements identified in each section, or, prior to DEQ's SWMP Document approval, measurable goals and tracking metrics approved under the previous permit's approved stormwater management plans.

Water Environment Services, Clackamas County, the City of Happy Valley, and the City of Rivergrove are submitting this annual report to comply with the current NPDES MS4 Phase I Individual Permit issued to them, which has been in effect since October 1, 2021.

On Feb. 6, 2023, DEQ approved the 2022 Shared MS4 Permit Stormwater Management Program Document (the 2022 Shared SWMP Document). It was then revised and the 2024 Shared Stormwater Management Program Document (2024 Shared SWMP Document) was implemented for the first time on July 1, 2024. It was in effect during the entire annual reporting period.

Appendix A of this annual report presents the data and information in this annual report. This appendix includes the Tracking Measures and Measurable Goals status from Best Management Practices (BMPs) in the 2024 Shared SWMP Document.

Appendix B (Public Education and Outreach Strategy) is a permit requirement that complies with Schedules A.3.a.i, A.3.a.ii, A.3.a.iii, and A.3.a.iv.

The remaining appendices, Appendix C (List of RiverHealth Stewardship Program 2024-25 Grant Awards), Appendix D (Training Events that Ensure Staff Is Able to and Continues to Implement the 2024 Shared SWMP Document), and Appendix E (City of Happy Valley's Snow Removal Procedures Map) are also 2024 Shared SWMP Document requirements.

1.2 Schedule B.3.b. -- Summary of adaptive management implementation and changes or updates to programs made during the reporting year, including rationales for any proposed changes to the stormwater management program (e.g., new BMPs), and review new and historical monitoring data. Include discussion of the implications of or any findings related to recent years' adaptive management and/or changes made to the SWMP Document, based on data from tracking measures, measurable goals, and/or any monitoring relating to the change.

WES and its co-permittees submitted the Shared MS4 Permit SWMP Document with its MS4 Permit renewal application package in February 2017, integrating three previously separate plans into a single, jointly managed SWMP Document.

A substantial number of modifications were made to various BMPs during the process of integrating the three existing SWMPs into the 2022 Shared SWMP Document, which had many BMPs with new, improved measurable goals and tracking measures.

This process included a project kickoff meeting and many workshops and meetings to receive input and direction from attendees, which was subsequently used to determine the depth and breadth of the program described in the

2022 Shared SWMP Document. Attendees at the Workshops and meetings included numerous staff from WES, Clackamas County's DTD and other County Departments, the City of Happy Valley and the City of Rivergrove.

2022 Shared SWMP Document (DEQ-approved)
DEQ approved the 2022 Shared SWMP Document in February 2023, and WES, Clackamas County, and the Cities of Happy Valley and Rivergrove implemented the 2022 Shared SWMP Document from July 1, 2023 to June 30, 2024

2024 Shared SWMP Document
The 2024 Shared SWMP Document, which was implemented during the entire 2024-2025 MS4 Permit year, differs from the 2022 Shared SWMP Document in the following ways:

- IDDE-4 ("Dry Weather Illicit Discharge Inspections") was re-written to describe an improved system for identifying the priority locations in the MS4 which shall be monitored.
- Comm-1 ("Identify Industrial NPDES Permit Facilities" which is about 1200-Z Permits) was revised. One change which was made clarifies that DEQ doesn't approve or decline the "No Exposure Certification" waiver forms which are submitted to DEQ from facilities.
- Comm-2 ("Industrial/Commercial Stormwater Pollutant Prevention) was revised to update the section about the updated inspection and enforcement strategy, which has already been created and submitted to DEQ.
- PREV-7 ("Fire Fighting Training) was revised to clarify that WES will verify once per MS4 Permit term that the sanitary-storm sewer system valve is being used correctly at the Clackamas Fire District #1 Training Center on SE 130th Avenue in Clackamas (97015).

An example of adaptive management activity which occurred during the 2023-24 MS4 Permit year is for implementation of BMP MAINT-4. In section 4.2, which is titled "Regulated Storm System Inspection and Enforcement", the list of high prioritized sites to inspect changes each year as WES inspects more commercial / industrial sites in the WES SWM service area for the first time. There are many other inspections that we conduct that are identified as low and medium risk sites and are not necessarily a prioritized site. In 2023-24, WES inspected 139 sites in total (45 high priority and 94 low/medium) as found in Sec. 1.6 and in the BMPs for Industrial and Commercial Facilities in Appendix A.

1.3 Schedule B.3.c.–- Any proposed changes to SWMP program elements designed to reduce TMDL pollutants

There are no proposed changes to SWMP program elements to reduce TMDL pollutants.

As noted above, the 2022 Shared SWMP Document was approved by DEQ in February 2023 and was subsequently revised to become the 2024 Shared SWMP Document. The version which was in effect during the 2024-25 MS4 Permit year is the 2024 Shared SWMP Document (see section 1.2 of this report). The 2024 Shared SWMP Document reduces the impact of municipal stormwater discharges on receiving waters, including the reduction of TMDL pollutants. An example of a new element in the 2024 Shared SWMP Document is a revised BMP IDDE-4, titled "Dry Weather Illicit Discharge Inspections". It describes a new system, which began to be implemented on July 1, 2024, for identifying the priority locations in the MS4 which were and will be monitored. The BMP's Measurable Goal is to conduct an inspection in a priority location in 10 percent of MS4-permitted MS4s each year in the WES SWM Service Area. If this goal is attained every year for 10 years, then a priority location in all of the MS4-permitted MS4s will be inspected once during a 10 year period. If some illicit discharges are located and removed from MS4s during this 10-year period, some of these discharges are expected to contain TMDL pollutants such as mercury and E. coli (both of which are found in sewage, for example).

1.4 Schedule B.3.d. -- 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.

The 2024 Shared SWMP Document has enabled WES and its co-permittees to:

- Assess the public education / involvement portion of the program
- Make improvements to the existing program which are now codified in the 2024 Shared SWMP Document.

See Appendix A for information about progress toward or achievement of measurable goals and tracking measures in 2024-25. Generally speaking, WES and its partners are striving to change behavior to protect and improve stormwater and surface water quality in several ways.

First, **WES and our partners are using electronic means to improve education and outreach.** WES continued its effective use of social media and other digital means such as Zoom to provide a wide variety of educational messages for students, customers, and other stakeholders. WES uses the Clackamas County social media channels which has approximately 31,000 followers on its Facebook page, 19,000 followers on its Twitter account, 75,000 members on NextDoor, 81,000 on Instagram and 4,100 email subscribers for updates via Constant Contact. With its *Clean Water Exchange* initiative, WES gathered insightful information via surveys of customers and other stakeholders to learn about their preferred channels for receiving educational information from WES. The 2025 Clean Water Exchange Survey sought this and other types of information to strengthen our understanding of what customers and stakeholders value the most.

Secondly, **WES and our partners employed a more precise measuring tool to gauge the effectiveness of its educational messages and articles on social media** and, therefore, on the Public Education and Outreach management strategy. The difference from years past is that co-permittees can now report well beyond the name of the article and the size of the net cast on Facebook, NextDoor, and Twitter. Articles addressing certain BMPs (*Alternatives to Pesticide, Herbicides, and Fertilizers* and the *Reporting of Illicit Discharges and Spills and Other Types of Improper Disposal of Materials*) can be measured against three ascending levels of impact when collaborating with the public to protect rivers and streams. They include:

- Impressions – The number of times public education content addressing those BMPs is displayed to users. **In 2024-25, there were 36 social media posts and 43,716 impressions.**
- Reach – The total number of unique users who see social media content about those BMPs. During the same period, **37,474 community members** read social media posts regarding alternatives to chemical use and the reporting of illicit discharges and spills.
- Engagement – This last level of content impact offers insight to the highest form of reader interaction and involvement where the reader engages with the article by "liking" it, "sharing" it with others, or commenting on the content. That deeper level of engagement occurred **1,133 times** in **2024-25**.

From engagement, the co-permittees learn how effective practices have been in reaching target audiences and garnering support. It unwraps opportunities to adjust the delivery of messages and method used that ensure maximum community engagement and support with the goal of keeping rivers clean well into the future; as a result, co-permittes can now quantify, measure often and adjust messages to targeted audiences where they could not before.

Finally, **WES and the SWMP partners continue to implement the 2022-2025 Communication and Engagement Roadmap (the Roadmap) to guide community engagement.** Through carefully constructed actions and clear objectives and by leveraging a variety of communication tools and outreach platforms, the Roadmap connects stakeholders, communities, and people, including multigenerational and underserved audiences, to the co-permittee's work. Equally important is that the Roadmap highlights where, how, and when to invest resources. Four strategic initiatives belonging to the Roadmap have brought about general change. Here are those initiatives:

1. **Distribute educational materials that are visually engaging, easy-to-understand, and accessible for diverse audiences.** We developed a Youth Education Activity, which is a poster-sized piece with activities for young children to learn about watershed health. We continue to distribute these through others' programs (such as the Environmental Learning Center preschool aged program) and at numerous educational or community events. We also co-branded the ACWA Illicit Discharge Detection and Elimination fact sheets with the WES logo and have posted those online and sought out opportunities to distribute them to our customers.

2. **Established innovative partnerships that leverage the strength of the community to achieve shared goals and deliver common messages.** We continue to partner with community groups such as our 4 local watershed councils, schools, SOLVE, and other environmental organizations. For example, we partnered with The Wetlands Conservancy to monitor amphibian egg masses in wetlands near Mt Scott Creek to bring awareness to the value of wetlands and water quality to wildlife. We participate in 27 events, such as National Night Out and other community events to support our partners and generate awareness of WES, as well as disburse messages about how community members can help maintain water quality.

3. **We are responsible environmental and fiscal stewards by investing in innovative initiatives** that communicate safe, reliable, and affordable services. For example, WES hosted its third Clean Water Exchange (CWE) which is a unique research process to better understand how we can safeguard a clean water future where all people benefit and rivers thrive, through collaboration and partnership. The purpose is to discover how our customers and stakeholders value clean water services. As well as explore and measure stakeholder understanding and confidence in WES' ability to protect public health and support the vitality of our communities, natural environment, and economy. Through this process we build community trust and create long-term clean water partnerships and advocates.

4. **Invested in community-driven solutions and cultivated a generation of diverse watershed leaders.** One of the events we sponsor, Science in the Park, is held at Mill Park and is aimed at the lower income neighborhoods in our Districts. The past two years this was held at Mill Park, in tandem with a cleanup along the Springwater Corridor Trail, located in the Overlook Park neighborhood, in attempt to draw in more students and families in this area.

In the summer of 2025, WES completed an update to its Public Education and Outreach Strategy which has been submitted with this annual report. Regularly reviewing and updating this strategy is important to ensure our education and outreach program continues to align with permit requirements and support our missions. This document will guide us in how we educate and engage with our communities across our services area, customers, and students. It is a comprehensive overview of WES' public education and outreach efforts for stormwater management (NPDES Municipal Separate Storm Sewer System permit), wastewater management (NPDES Waste Discharge Permit), Underground Injection Controls (UIC permit), and Water Quality Management Plans (Total Maximum Daily Load orders).

1.5 Schedule B.3.e. -- Summary describing the number and nature of enforcement actions, inspections, and public education programs, including the results of ongoing field screening and follow-up activities related to illicit discharges.

In Appendix A, see Section 1.4 for more information about our IDDE Public Education work and BMP IDDE-2.1 through IDDE-4.1 for more information about our IDDE program's "ongoing field screening" work.

Table 2: Illicit Discharge Events

Report Date	Inspection Date	Incident Description, including follow-up activity	Enforcement action taken? (Yes or No)
Discharges			
8/5/2024	8/6/2024	SE Monterey Ave. – A vehicle crash resulted in a rollover adjacent to vegetated stormwater planters. Less than one gallon of auto fluids entered the storm system. WES investigated, and Clackamas County DTD completed cleanup.	No
8/12/2024	8/12/2024	SE 130th Ave. – A caller reported a release of untreated sewage. Less than 100 gallons were discharged to the street and a public catch basin. No downstream impacts observed. The catch basin and storm system were cleaned by WES.	No
11/5/2024	11/5/2024	SE Nightingale Ave. – A sewage discharge to a public stormwater pond was traced to two homes with cross-connections. Repairs were made and the public storm system cleaned by WES. OERS #2024-2873.	No
11/20/2024	11/20/2024	SE For Mor Ct. – Turbid water was discharged from a construction site to a public catch basin and Cow Creek. A stop work order was issued. Cleanup was completed by the responsible party. A violation was issued.	Yes
12/5/2024	12/5/2024	SE Bristol Park Dr. – A resident reported white chemical residue and footprints from drywall or paint entering a public catch basin. A trail several blocks long was observed. Cleanup was completed by the responsible party.	Yes
12/26/2024	12/26/2024	SE Verns Way – An oil sheen was discovered in a storm pond following a report of a leaking vehicle. No vehicle was found. Cleanup was completed by WES. OERS #2024-3265.	No
6/4/2025	6/4/2025	SE Bollam Dr. – Concrete covered construction equipment was washed into a public catch basin in the MS4 from the driveway and yard at a residential home. This MS4 discharges into Rose Creek. WES issued a verbal directive for cleanup to the construction workers. No downstream impacts observed. Cleanup was completed by the responsible party.	Yes
6/4/2025	6/4/2025	SE Fuller Rd. – Concrete slurry and sediment from a mixing facility entered multiple public catch basins that discharge to Phillips Creek. Cleanup was completed by the responsible party. This was the third documented discharge from the responsible party. A civil penalty was issued.	Yes
6/18/2025	6/18/2025	SE 132nd Ave. – White paint was discovered at the inlet of a public storm pond. Additional discharge was traced to the upstream public catch basin. No paint reached the pond outlet. Responsible party was not	No

Report Date	Inspection Date	Incident Description, including follow-up activity	Enforcement action taken? (Yes or No)
		confirmed. Cleanup was completed by WES. OERS #2025-1514.	

1.6 Schedule B.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.

Screening for possible 1200-Z permit coverage

As of July 1, 2023, WES is screening existing industrial facilities for possible 1200-Z permit coverage on an annual basis. Additionally, WES staff annually reviews development applications for new industrial sites that may be subject to 1200-Z permit coverage. During the 2024-25 reporting year, WES referred 6 facilities to DEQ for possible 1200-Z permit coverage. Some of these facilities discharge into the MS4 and some discharge directly to surface waters through their own private storm sewer systems. They included:

1. Wright Manufacturing
2. Columbia Rubber Mills
3. Conveyco Manufacturing Corporation
4. Miller Engineering & Manufacturing Corporation
5. Alpenrose
6. Oregon Beverage Recycling Cooperative

Further information on these facilities is available upon request.

Categories Inspected

Categories of industrial and commercial facilities that WES inspected during the 2024-25 reporting year included: Shopping Centers, Business Parks, Industrial Manufacturers, Car Washes, Freight Hubs, Medical Offices, Restaurants, Auto Services, General Commercial/Retail, Recyclers, and Apartment Complexes. In last year's annual report, WES included the updated Industrial Stormwater Screen Strategy, outlining how WES prioritizes facilities for inspection based on risk factors. By June 30, 2025, WES had identified 156 facilities that meet the criteria to be included on the priority list. As WES staff continue inspecting new industrial and commercial facilities in the service area for the first time, the list of prioritized facilities will change.

Overview of Inspection Results

During the 2024-25 reporting year, WES inspected a total of 112 industrial and commercial facilities in the WES service area. Some of these facilities are served by the MS4. Others discharge directly to surface waters through private storm sewer systems; these facilities are not regulated by the MS4 Permit. WES performed 29 of those inspections at priority industrial and commercial facilities. Of the 29 priority facilities inspected, 9 complied with WES Rules and Regulations and required no further action. In addition to inspecting priority facilities, WES completed 83 inspections at other facilities with privately owned stormwater systems. Of the 83 other facilities inspected, 52 complied with WES Rules and Regulations and required no further action. The facilities that were found not in compliance with WES Rules and Regulations were issued written Notices to Correct and a timeline for required actions. Notices were issued for a range of issues, from failure to routinely maintain catch basins to extensive restoration of stormwater management ponds and other pollution control structures. Correction periods ranged from

30 days to 24 months for the facility to achieve compliance and avoid further enforcement. Please see COMM-1.1 and COMM-1.2 in Appendix A of this annual report for more information.

1.7 Schedule B.3.g -- Summary of total stormwater program expenditures and funding sources over the reporting fiscal year, and those anticipated in the next fiscal year.

WES, Clackamas County, and the Cities of Happy Valley and Rivergrove dedicated sufficient resources to implement the Stormwater Management Program in 2024-25. WES dedicated over **23,900 employee hours or the equivalent of 13.4 full-time employees** (FTEs) to the MS4 Permit program, to the Stormwater Underground Injection Control WPCF Permit program, to the Willamette/Tualatin TMDL non-point source pollution programs, and to the flooding reduction/drainage improvement programs – all of which make up WES' Surface Water Program.

The City of Happy Valley has four and a half FTEs in the Public Works Department who, in part, perform MS4 duties and four FTEs in the Engineering Division. In addition, WES is the service provider in the City of Rivergrove and, as a result, the City dedicates a sufficient but limited amount of staff time to implement the MS4 SWMP; therefore, Rivergrove's expenditures are not tracked or reported in this section.

WES' Operating and Construction Funds and Stormwater System Development Charge Fund resources, including Fund Balances, budgeted in the recent past, during the reporting period and in the current fiscal year, are in Table 3.

Table 3: Stormwater Resources and Requirements for WES

WES	2022-23 Actual	2023-24 Actual	2024-25 Amended Budget	2024-25 Estimate[1]	2025-26 Adopted
Resources	25,154,022	27,101,334	30,303,989	31,147,533	35,093,686
Materials & Services	4,508,085	4,756,366	6,121,400	5,210,165	6,095,020
Capital Outlay	1,264,390	986,306	4,359,500	2,218,410	7,603,350
Transfers	2,132,500	2,000,000	2,082,600	2,000,000	3,625,280
Contingency	0	0	2,109,875	0	2,916,800
Ending Fund Balance	17,249,047	19,358,662	15,630,614	21,718,958	14,853,236
Total Requirements	**25,154,022**	**27,101,334**	**30,303,989**	**31,147,533**	**35,093,686**

[1] "Estimated" year-end expenditures are not shown as "Actual" until the fiscal year closes.

Annual funding for the Stormwater Management Program for WES in FY **2024-25** came from six sources (unaudited numbers):

Monthly Stormwater Utility Fees	**$ 6,414,490**
Maintenance Fees, paid Monthly	**$ 406,380**
Systems Development Charges (SDCs)	**$ 82,464**
Stormwater and Erosion Control Permit Fees	**$ 173,266**
Miscellaneous Income and Interest Earnings	**$ 937,513**
Grants	**$ 1,153,221**

In 2024-25, customers in the North Clackamas unit of Rate Zone 2 (CCSD#1) paid a monthly program fee of $9.10 per Equivalent Service Unit (ESU) and customers in Rate Zone 3 (SWMACC) paid a monthly fee of $5.45 per ESU. An ESU is a single-family residence or 2,500 square feet of impervious surface for nonresidential customers. Fees were increased to $9.55 per ESU in Rate Zone 2 and $5.70 per ESU in Rate Zone 3, respectively, soon after this reporting period ended on June 30, 2025.

Most newly constructed single-family residential properties in Rate Zone 2, since 1998, also paid a monthly maintenance agreement fee of **$3.00** per ESU which is dedicated for maintenance of local subdivision stormwater conveyance, detention and retention, treatment, and infiltration facilities.

WES collects System Development Charges from new development and dedicates those revenues to planning, design, and construction of additional stormwater infrastructure capacity needed to accommodate growth. The FY 2024-25 **SDC rate is $246.50** per Equivalent Service Unit. That rate increased to **$265.00** effective November 1, 2025.

Clackamas County Department of Transportation and Development

The primary funding source for DTD activities related to the MS4 Permit is the Clackamas County Road Fund. Most of the County's road system is outside the MS4 Permit Boundary. Total program expense exceeds budgeted expense as materials and equipment capitalized in previous years are expended in implementation of the activity.

Table 4: DTD's Program Expenditures and Funding Sources for MS4 Permit

Program	2024-25 Total Expenditures[1]	2024-25 Expenditures within the MS4 Permitted Area[2]	2025-26 Anticipated Expenditures within the MS4 Permitted Area
Cleaning Storm Sewers	$658,109	$217,646	$224,175
Ditch Maintenance	$373,114	$23,181	$23,876
Street Sweeping	$425,607	$230,312	$237,221
Grand Total	**$1,456,830**	**$471,139**	**$485,272**

Source: Clackamas County Road Fund, Updated 9/23/2025

[1] Data sources are DTD's Job Cost System and DTD's OpenGov Enterprise Asset Management system. All costs include overhead charges.

[2] Expenditures include work done by DTD within the OLWS service area" and "Expenditures include work done by DTD in areas served by County-maintained drywells. Derived from the DTD's Job Cost System, DTD's OpenGov Enterprise Asset Management system and Clackamas County's MS4 Permitted Area boundary in ArcGIS. All costs include overhead charges.

[3] Three percent increase added to 2025-26 expenditures in MS4 Permitted Area.

Explanation of DTD's MS4 Activity

- Storm Sewers: maintenance and cleaning of catch basins and storm systems
- Ditch Maintenance: maintenance and erosion control of roadside ditches
- Street Sweeping: preventative maintenance sweeping of curbed streets to improve water quality

City of Happy Valley

MS4 Permit Program Funding Sources:

- **Permit fees for development** of land (plan review and inspection) are based upon the construction value of the project. In 2024-25, the City generated $314,788 in fees from 15 land development permits. Only a portion of these fees were spent on the implementation of the MS4 Permit Program.
- Thirteen **Engineering Erosion Control Permits,** which were issued for site development projects, yielded $7,791 in revenue from site development activity in 2024-25. The City expects to receive a range from $5,000 to $10,000 in Erosion Control Permit revenue in 2025-26. The $7,791 of MS4 permit program revenue is in addition to the land development permit fees of $314,788.
- The Building Division, which issues home site or building permits, collected $78,416 in **Erosion Control Permit fees** to cover the cost of their erosion control inspections for 206 building permits.
- $426,200 from the **Streets Maintenance** portion of the budget for street sweeping. Street sweeping is also conducted to improve road safety and for aesthetic reasons. An undefined portion of the $426,200 was spent to improve stormwater quality.
- Approximately $5,336 from the City of Happy Valley's **General Operating Budget** was spent by the City of Happy Valley during 2024-25 to administer the overall MS4 Permit Program (e.g., attendance at monthly Watershed Protection Program meetings, compiling data for this annual report). The City of Happy Valley expects to dedicate a similar amount of money from this portion of this budget during 2025-26 for administration of the overall MS4 Permit Program.

MS4 Permit Program Expenditures:

- **Street Sweeping Program:** The City of Happy Valley spent $426,200 on their street sweeping program in 2024-25, tripling its expenditure from the year before. The City expects to spend a similar amount of money on street sweeping in 2025-26.
- **Erosion Control Program**: The City of Happy Valley funds this Program with Erosion Control Permit fee revenue. The City spent approximately $89,800 to administer this program in 2024-25 and the City expects to spend a similar amount in 2025-26.
- **MS4 Permit Program Administration:** The City of Happy Valley spent approximately $5,336 in 2024-25 to administer the overall MS4 Permit Program (e.g., attendance at monthly Watershed Protection Program meetings and compiling data for this annual report). The City of Happy Valley expects to spend a similar amount of money during 2025-26 for administration of the overall MS4 Permit Program.

1.8 Schedule B.3.h. -- 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.

The co-permittees are in compliance with Schedule B's monitoring requirements. The co-permittees' MS4 Permit program 2024-25's creek water quality and stormwater quality data are being submitted using the Your DEQ Online portal, per DEQ's October 1, 2025, email from the MS4 Coordinator. The monitoring data are in these files:

File	Monitoring Data
1. WES2024 MS4BioSubmission	Biological data collected during our Macroinvertebrate survey conducted last permit year

2. MS4GrabSampleSubmission_24-25_Hg	All mercury and paired TSS monitoring data collected on behalf of our Co-Permittees (including WES) through the joint IGA.
3. MS4GrabSampleSubmission_24-25_Non-Hg	All non-mercury monitoring data collected
4. MS4GrabSampleSubmission_24-25_Gladstone	All monitoring data collected on behalf of the City of Gladstone through an IGA.

No assessments or evaluations of these results have been conducted in 2024-25.

1.9 Schedule B.3.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

No additional modifications to the monitoring plan are proposed. WES, on behalf of Clackamas County, and the Cities of Rivergrove and Happy Valley, implements a combined DEQ-approved Comprehensive Clackamas County NPDES MS4 Stormwater Monitoring Plan (Monitoring Plan). Other co-implementers of this Monitoring Plan include, but are not limited to, the Cities of Milwaukie and Oregon City. This Monitoring Plan was revised most recently in May 2023 and was implemented on July 1, 2023 and continues to be implemented at this time. The Monitoring Plan was revised in order to comply with numerous new requirements in the 2021-2026 MS4 Permit, which was modified by DEQ in May 2023 to include new pesticide monitoring requirements in stormwater runoff.

1.10 Schedule B.3.j. -- An overview, as it relates to MS4 discharges, of concept planning, land use changes and new development activities (including the number of new post-construction permits issued) that occurred in the Urban Growth Boundary (UGB) expansion areas during the reporting year, and those forecast for the following year, where such data is available.

Land Use Changes

- Number of zone changes approved in Happy Valley: 0[2]
- Number of new residential building lots approved by partition, subdivision, and planned unit development in Happy Valley: 7
- Number of Approved Zone Changes in Clackamas County[3]: 1
- Number of New Land Partitions[4]: 5
- Number of New Land Subdivisions[5]: 3

UGB Expansion

The UGB was not expanded in or near the Cities of Happy Valley or Rivergrove, or any other portion of WES' and the County's MS4-permitted service area in 2024-25.

Land Annexations

Acreage annexed into WES' SWM service area: 9.8
Acreage de-annexed from WES' SWM service area: 0.8

[2] The City of Happy Valley did not receive zone change applications in 2024-25.

[3] These land use statistics capture the entire unincorporated area of Clackamas County regulated by the MS4 permit, which is primarily comprised of lands in the Oak Lodge Water Services district and in the WES service area. Includes statistics within WES' MS4 Service Area.

[4] Ibid.

[5] Ibid.

Acreage annexed into the City of Happy Valley:	35.8

The Number of New Post-Construction Permits Issued and related information

Number of development permits reviewed by Clackamas County[6]:	25
Number of building division permits in Happy Valley:	349
Number of engineering division development permits in Happy Valley:	15
Total number of plans reviewed and approved by WES:	16
Number of building division site plan reviews in Happy Valley:	349
Number of engineering division site plan reviews in Happy Valley:	111
Number of new units of multi-family housing approved in Happy Valley:	120
Square feet of new commercial/office development approved in Happy Valley:	6,419

Estimated total new and replaced impervious surface area related to development projects

- 30.0 acres

When the lands described here in section 1.10 of this annual report were developed, post-construction stormwater management program requirements implemented by the City of Happy Valley, Clackamas County, and/or WES reduced storm sewer system pollution levels to the maximum extent practicable. For more information, see the post-construction program-related sections of this annual report.

City of Happy Valley

As discussed above, no UGB expansion occurred in the City of Happy Valley in 2024-25 and the UGB is not expected to be expanded in 2025-26. There were 35 acres annexed into the City of Happy Valley in 2024-25. With respect to annexations anticipated for 2025-26, the City has adopted the Pleasant Valley North Carver Comprehensive Plan, which is approximately 2,700-acre plan area. When these lands are eventually urbanized, regulations are expected to be applied by the City of Happy Valley and WES as properties are developed (to construct stormwater management systems, for example) which will reduce pollution levels to the maximum extent practicable.

Clackamas County

No UGB expansion occurred in 2024-25 in or near the WES-Rivergrove-Happy Valley MS4 Permit area, or in any other place where the MS4 Permit regulates Clackamas County, nor is it expected to occur in any of these places in 2025-26. The County did not conduct concept planning.

1.11 Schedule B.3.k. -- Details of all corrective actions implemented associated with Schedule A.1.b.iii (for Water Quality Standards) during the reporting year.

No corrective actions were implemented in 2024-25.

[6] Ibid.

1.12 Schedule B.3.I. -- Compliance with annual reporting requirements found in the following sections:

- Schedule A.3.c.vii – IDDE
- Schedule A.3.d.vii – Construction Site Runoff Control
- Schedule A.3.e.viii – Post-Construction Site Runoff Program
- Schedule A.3.f.v.c – Winter Maintenance
- Schedule A.3.h.i – Hydro-modification Assessment and Stormwater Retrofit Strategy Updates
- Schedule D.3.b – Mercury Minimization Assessment

WES and its co-permittees are required to summarize metrics to track and assess their progress with the Stormwater Management Program Control Measures. These other requirements in permit schedule B.3.I are found in Table 4 and include the following:

Table 5: Other Compliance Requirements

Citation	Description	2024-25 Update
A.3.c.vii – IDDE	Tracking and Assessment: Track implementation of IDDE program requirements. In each corresponding Annual Report, co-permittees must summarize or report on metrics or tracking measures related to implementation of the program. The report should include updates regarding any capital improvements needed or implemented associated with the IDDE program.	See Appendix A for more information.
A.3.d.vii – Construction Site Runoff Control	Tracking and Assessment: Routinely or continuously track all construction sites that result in a total land disturbance of equal to or greater than 1,000 square feet. The inventory must include relevant contact information for each project (name, address, phone, etcetera), the size of the project including area and/or volume of disturbance, the date the co-permittees approved the ESCP in accordance with Schedule A.4.d.iii or in accordance with coverage under the 1200-CN permit as applicable, and whether any complaints have been received or inspections made. Co-permittees must also track implementation of all activities required by the Construction Site Runoff program. In each corresponding annual report, co-permittees must summarize metrics or tracking measures related to	WES tracks this information in its database software. For additional information, see Appendix A.

Citation	Description	2024-25 Update
	implementation of the program, which may include but is not limited to number of regulated construction projects, number of inspections, and number of enforcement actions.	
A.3.e.viii – Post-Construction Site Runoff Program	Tracking and Assessment: Co-permittees must maintain records for activities conducted to meet the requirements of the Post-Construction Site Runoff program and include a summary of their activities and report on metrics or tracking measures related to implementation of the program in the corresponding annual report.	See Appendix A for details on implementation.
A.3.f.v.C – Winter Maintenance	Tracking and Reporting: Winter Maintenance activities for streets and roads must be included as an element of the annual report beginning in the annual report due December 1, 2022, or no later than upon DEQ's approval of the 2017 SWMP. Each year, the information needs to include but not limited to the following: List of materials used Number of winter weather events where maintenance materials are used Quantities and general location of each material used in relation to distance (for example, pounds per mile) Any other actions taken to protect waters of the state for areas that data is available or becomes available during the permit term.	**City of Happy Valley** Snow/Ice Event Response During winter/ice events, the City applies magnesium chloride for de-icing and sand for traction. Two Snow/Winter Ice Events During the 2024-25 winter season, the City responded to two snow/ice events and prioritized its response based on the winter weather map in Attachment E. Materials Used • 11,375 gallons of magnesium chloride, 25 gallons per lane mile. • 60 yards of sand, 1/4 yard per lane mile. See Appendix E on designated snow map Clean Up • Following these events, the City promptly removed 32 cubic yards of sand within the target 10-day timeframe. • Excess sand removed within 10 days. Storage Its public works yard, located at 13910 SE Ridgecrest Road, Happy Valley, 97086, has 6700 gallons of magnesium chloride on hand and roughly 240 to 280 yards of sand.

Citation	Description	2024-25 Update
		Clackamas County Snow/Ice Event Response During winter/ice events, Clackamas County prioritizes the application of traction and anti-icing materials to critical areas, including intersections, steep grades, curves, and bridges. Additional areas may be treated based on real-time assessments of road conditions. Residual sand is removed from roads and bike lanes as soon as feasible following the event, prioritizing areas with the highest impact. Cleanup operations may take several weeks, depending on the severity of the storm. One Snow/Winter Ice Event In 2024-25, the County responded to one snow/ice event in the MS4 service area. Materials Used • 58.35 tons of winter sand, 500-750 lbs. per lane mile • 22,232 gallons of magnesium chloride, 25 gallons per lane mile Clean Up • 27.17 yards of sand removed by sweeping 82.32 miles in the MS4 service area, 1/3rd yard per lane mile Storage Clackamas County DTD currently stores winter materials at two facilities in the MS4 service area. • The Transportation Services Building, 19246 Wacheno Parkway, Oregon City, 97045, stockpiles approximately 7,000 gallons of magnesium chloride, 15 to 20 tons of Ice Slicer, and 2 to 3 tons of white salt • The Dog Services facility, 13141 SE Hwy 212, Clackamas, 97015 stores approximately 7,000 gallons of magnesium chloride

Citation	Description	2024-25 Update
		<u>Other Actions That Attempt to Protect Waters of the State</u> The County does this: • Store sanding material in a manner that minimizes contamination of surface or groundwater (dry, covered sheds). • Contain runoff from treated stockpiles. • Maintain accurate records of application including when, where, and quantity of sanding material applied. • Follow application guidelines in the ODOT Maintenance Guide and/or guidelines provided by product supplier. • Assure application equipment is properly calibrated. • Routinely inspect equipment and storage facilities (including nozzles, slip in tanks, storage tanks, and secondary containment) for damage. • Store de-icer products in a manner that minimizes contamination of surface or groundwater. Prevent runoff from product tanks or treated stockpiles. • Ensure annual training and information sharing opportunities for DTD staff. See Appendix A for more detail on winter maintenance activity.
A.3.h.i – Hydro-modification Assessment and Stormwater Retrofit Strategy Updates	Co-Permittee are required to include in the third annual report (due Dec. 1, 2023) of this permit term, an assessment of any outcomes related to the Hydro-modification Assessment and Stormwater Retrofit Strategy reports.	Completed. The report was submitted in the 2022-23 MS4 Permit Annual Report.
D.3.b – Mercury Minimization Assessment	The following requirement is found in the 2021-2026 MS4 Permit's Schedule D(3)(b): 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	Completed. The revised Willamette River watershed Mercury Total Maximum Daily Load (TMDL) took effect in February 2021. This revised TMDL includes updated sub-basin-specific Waste Load Allocations (WLAs) for mercury in Municipal Separate Storm Sewer Systems (MS4) permitted discharges. For instance, the WLAs for the Clackamas River and Tualatin River sub-basins require a 75% reduction

Citation	Description	2024-25 Update
	permitted MS4 system (similar to the actions currently required in Schedule A). If the assessment indicates that mercury and sediment reducing BMPs are fully incorporated into the SWMP Document, a report documenting the results as such is sufficient.	in mercury discharges over time, compared to a baseline period. Since its implementation on July 1, 2024, the 2024 Shared SWMP Document has incorporated numerous Best Management Practices (BMPs) to reduce solids and mercury discharges into and from the permitted MS4 system. One notable example is the Construction Site Runoff Control BMPs, which focus on erosion and sediment control. The 2024 Shared SWMP Document was specifically designed to minimize mercury discharges into and from the MS4. For more detailed information on these BMPs, please refer to the 2024 Shared SWMP Document. Based on this assessment, it is evident that effective mercury and sediment reduction BMPs have been fully integrated into the 2024 Shared SWMP Document.

Appendix A: Best Management Practices

This Page Intentionally Left Blank

Appendix A: Best Management Practices

2021-2026 MS4 Permit Annual Report
Fiscal Year Ending: 6/30/2025

SWMP Document Elements

Education and Outreach (ED)

Public Participation (PP)

Illicit Discharge Detection and Elimination (IDDE)

MS4 Mapping (MAP)

Construction Site Runoff Control (EPSC)

Post-Construction Site Runoff (POST)

Pollution Prevention for Municipal Operations (PREV)

Industrial and Commercial Facilities (COMM)

Stormwater System Operation and Maintenance (MAINT)

Appendix A: Best Management Practices

Education and Outreach (ED)

BMP Activity #	BMP Activity	SWMP Page #	Measurable Goal #	Measurable Goal	Tracking Measure	Type	Response	Notes
ED-1.1	Implement the Stormwater Public Education and Outreach Strategy	17	ED-1.1-a	During the MS4 Permit term, include educational goals targeting audiences and topics in the Strategy.	Running total of target audiences included in the Public Education and Outreach Strategy.	Annual	16 target audiences 1. Retail Customers 2. Cities/Wholesale Customers 3. Education Partners 4. Underserved Community Members 5. Business 6. Landowners/Property owners 7. Students 8. Pet owners 9. Private stormwater facility owners 10. General public 11. Public employees 12. Construction Site Operators (contractors) 13. Dental offices 14. Businesses that use mercury 15. Landowners with septic systems 16. Food Service Business	For detail, see Appendix B Public Education and Outreach Strategy
ED-1.1	Implement the Stormwater Public Education and Outreach Strategy	17	ED-1.1-b	Each year complete at least 80% of planned written communication outputs (e.g., newsletters, websites, and pamphlets) described in the Strategy.	Annual percentage of written communication outputs completed	Annual	157%	Achieved Annual number of written communication outputs completed: 47 Annual number of planned written communication outputs: 30
ED-1.1	Implement the Stormwater Public Education and Outreach Strategy	17	ED-1.1-c	Each year hold or co-sponsor at least three in-person public education opportunities (e.g., training, seminars, and kids' programs).	Annual number of in-person education opportunities.	Annual	121	
ED-1.2	Update the Stormwater Public Education and Outreach Strategy	17	ED-1.2	Update the Strategy as needed.	Date(s) the plan was updated.	Annual	9/11/2025	
ED-2.1	Erosion Control Outreach	21	ED-2.1	Annually update erosion trainings on website.	Date of website update with trainings.	Annual	12/24/2024	
ED-2.2	Private Stormwater Facility Operations and Maintenance Outreach	21	ED-2.2-a	Create private stormwater facility maintenance handouts during the MS4 Permit term.	Date handouts created.	Annual	To be done	To be included in the 2025-26 annual report
ED-2.2	Private Stormwater Facility Operations and Maintenance Outreach	21	ED-2.2-b	Hold one maintenance workshop during the MS4 Permit term.	Date of workshop.	One-time	To be done	To be included in the 2025-26 annual report

Appendix A: Best Management Practices

BMP Activity #	BMP Activity	SWMP Page #	Measurable Goal #	Measurable Goal	Tracking Measure	Type	Response	Notes
ED-2.2	Private Stormwater Facility Operations and Maintenance Outreach	21	ED-2.2-b	Hold one maintenance workshop during the MS4 Permit term.	Number of owner/operators invited to workshop	One-time	To be done	To be included in the 2025-26 annual report
ED-2.2	Private Stormwater Facility Operations and Maintenance Outreach	21	ED-2.2-b	Hold one maintenance workshop during the MS4 Permit term.	Number of attendees at workshop	One-time	To be done	To be included in the 2025-26 annual report
ED-2.3	Source Control Outreach and Technical Assistance	21	ED-2.3	Incorporate spill prevention outreach into DTD Resource Conservation & Solid Waste (RCSW) certification.	Date spill prevention language incorporated into RCSW certification	One-time	Spill prevention language has been incorporated with a June 30, 2025, implementation date. Alterations to the public-facing application are in process.	Achieved
ED-2.4	Pesticide, Herbicide, and Fertilizer Technical Assistance and Training	21	ED-2.4	Hold one IPM check-in meeting for SWMP Document Participant staff during the MS4 Permit term.	Date of meeting.	One-time	To be done and in progress. Four check-in meetings were held in 2024-25: • Happy Valley, June 4, 2025. • DTD-Transportation Maintenance, June 9, 2025. • WES Field Operations, June 9, 2025. In 2025-26, check-in meetings are expected to be held with these other SWMP Document Participants: • City of Rivergrove • Clackamas County's Facilities Dept. • Clackamas County DTD's Development Agency"	To be included in the 2025-26 annual report
ED-3.1	Evaluation of Education and Outreach Activities	22	ED-3.1	Evaluate the SWMP Document Participants' Education and Outreach activities by April 3, 2026.	Date evaluation results included in permit renewal package.	One-time	To be done	Will be included in April 2026 renewal application

Appendix A: Best Management Practices

Public Participation (PP)

BMP Activity #	BMP Activity	SWMP Page #	Measurable Goal #	Measurable Goal	Tracking Measure	Type	Response	Notes
PP-1.1	Publicly accessible website	25	PP-1.1-a	Post MS4 Permit renewal documents to WES website by April 3, 2026.	Date documents posted.	One-time	To be done	Will upload in April 2026 renewal application onto WES' website
PP-1.1	Publicly accessible website	25	PP-1.1-b	Post MS4 Annual Report to each SWMP Document Participant's website by Dec. 5 each year.	Date(s) MS4 Annual Report posted to each SWMP Document Participant's website each year.	Annual	12/4/2024	
PP-1.1	Publicly accessible website	25	PP-1.1-c	Post draft documents for public comment for at least 30 days	Title of each document and starting and ending date of document postings on website.	As-needed	Not applicable	No document required public comment
PP-1.1	Publicly accessible website	25	PP-1.1-d	Consideration of comments received during public comments periods.	Summary of comments received and how they were addressed prior to final issuance for each document that was available for public comment	As-needed	Not applicable	Achieved
PP-1.1	Publicly accessible website	25	PP-1.1-e	Post reports, plans, and other documents to the website.	Title of each document and date of posting.	As-needed	• 12/5/2024, 2023-24 MS4 Annual Report • 6/30/2025, The 2024 Permit Shared Stormwater Management Program Document	By Dec 5th all partners had posted the annual report onto their website. The Shared SWMP Document is on WES' website.
PP-1.1	Publicly accessible website	25	PP-1.1-f	Annual review of website for current information and accuracy.	Date of completed review	Annual	12/1/2024	Achieved
PP-1.2	Facilitate Illicit Discharge Reporting	25	PP-1.2	Conduct at least one IDDE reporting publicity campaign during the MS4 Permit term.	Running total of IDDE reporting publicity campaigns to date.	Annual	5	Achieved
PP-2.1	Public Stewardship	27	PP-2.1-a	Each year budget for and award stewardship grants to community groups, businesses, and property owners to improve the health of watersheds in the Permit area.	Annual number of and value of grants awarded	Annual	12 /$300,000	12 RiverHealth Stewardship Program Grant Awards totaling $300,000 See Appendix C for detail.

Appendix A: Best Management Practices

BMP Activity #	BMP Activity	SWMP Page #	Measurable Goal #	Measurable Goal	Tracking Measure	Type	Response	Notes
PP-2.1	Public Stewardship	27	PP-2.1-a	Each year budget for and award stewardship grants to community groups, businesses, and property owners to improve the health of watersheds in the Permit area.	Purpose, outcomes, and number of participants for each grant awarded	Annual	The purpose of the RiverHealth Stewardship Program is to support community groups, businesses, and property owners who want to improve the health of watersheds within watershed protection areas served by WES. Outcomes from 2024-25 are: Riparian Restoration Projects New acres planted 20 Number of sites 25 Acres of invasives removed 46 Linear feet of streams worked on 10,686 Planted trees 3,948 Planted shrubs 6,057 Planted herbaceous plants 2,225 Number of volunteers 372 Volunteer hours 2,952 Education Projects Number of lessons, field trips, or tours 468 Number of events open to the public 34 Number of adults reached 401 Number of students reached 1,776	WES sponsored many volunteer activities through its RiverHealth Stewardship Program. The WES-SOLVE partnership held a total of 61 events with 1,461 volunteers removing 28,278 pounds of trash.
PP-2.1	Public Stewardship	27	PP-2.1-b	Each year hold or co-sponsor at least one volunteer activity with an education component.	Annual number of volunteer activities with an education component.	Annual	121	WES and our partners conducted 121 different lessons, field trips, plant tours or other educational sessions that reached 4,937 students and 799 adults. Educational programs reached 21 different schools. In addition, we sponsored the SOLVE Summer Waterway Cleanup Series, which includes volunteer cleanup events throughout the metro area at sites on or near waterways. Opportunities are advertised at https://www.solveoregon.org/waterway-series. WES also tables at community events throughout the year where staff speak to residents and distribute educational brochures.
PP-3.1	Evaluation of public participation Activities	28	PP-3.1	Evaluate the SWMP Document Participants public participation activities by April 3, 2026.	Date evaluation results included in permit renewal package.	One-time	To be done	Will be included in April 2026 renewal application

Appendix A: Best Management Practices

Illicit Discharge Detection and Elimination (IDDE)

BMP Activity #	BMP Activity	SWMP Page #	Measurable Goal #	Measurable Goal	Tracking Measure	Type	Response	Notes
IDDE-1.1	Review and Update Legal Authority	30	IDDE-1.1-a	Review and update legal authority as necessary to prohibit illicit discharges to County ROW by Dec. 1, 2024.	Date legal authority reviewed.	One-time	7/31/2024	Achieved
IDDE-1.1	Review and Update Legal Authority	30	IDDE-1.1-a	Review and update legal authority as necessary to prohibit illicit discharges to County ROW by Dec. 1, 2024.	Date legal authority updated, if necessary.	One-time	In Process	Clackamas County DTD currently maintains legal authority to prohibit illicit discharges to County rights-of-way in all areas of the County. This legal authority has historically been maintained and is currently maintained through the Clackamas County Sheriff's Office. To improve upon this authority, Clackamas County DTD staff and County legal counsel have written County Code amendment language to provide additional enforcement authority to Code Enforcement staff. This language is currently being reviewed by a 2nd member of County legal counsel and is expected to go to the Board of Commissioners upon completion of review.
IDDE-1.1	Review and Update Legal Authority	30	IDDE-1.1-b	Review and update legal authority as necessary to prohibit illicit discharges to MS4s in WES by Dec. 1, 2024.	Date legal authority reviewed.	One-time	12/1/2024	Achieved
IDDE-1.1	Review and Update Legal Authority	30	IDDE-1.1-b	Review and update legal authority as necessary to prohibit illicit discharges to MS4s in WES by Dec. 1, 2024.	Date legal authority updated, if necessary.	One-time	12/1/2024	Achieved
IDDE-2.1	Respond to Illicit Discharges (including Spills)	34	IDDE-2.1-a	Each year investigate and confirm 100% of reports of suspected illicit discharges within 24 hours.	Annual percentage of illicit discharges investigated within 24 hours	Annual	100%	Achieved Annual number of illicit discharges investigated within 24 hours: 11 Annual number of reported suspected illicit discharges: 11
IDDE-2.1	Respond to Illicit Discharges (including Spills)	34	IDDE-2.1-b	Each year evaluate removal of 100% confirmed illicit discharges within five working days of determining the source of the discharge.	Annual percentage of illicit discharges evaluated for removal within five working days	Annual	100%	Achieved Annual number of illicit discharges evaluated for removal within five working days: 11 Annual number of confirmed illicit discharges (not including spills cleaned up within 24 hours): 11

Appendix A: Best Management Practices

BMP Activity #	BMP Activity	SWMP Page #	Measurable Goal #	Measurable Goal	Tracking Measure	Type	Response	Notes
IDDE-2.1	Respond to Illicit Discharges (including Spills)	34	IDDE-2.1-c	Each year halt 100% of illicit discharges within 15 working days after the source has been confirmed.	Annual percentage of illicit discharges removed within 15 working days	Annual	100%	Achieved Annual number of illicit discharges removed within 15 working days: 11 Annual number of confirmed illicit discharges (not including spills cleaned up within 24 hours): 11
IDDE-2.1	Respond to Illicit Discharges (including Spills)	34	IDDE-2.1-d	Each year report 100% of reportable spills on public roadways or in the MS4 to state and federal authorities within required reporting timelines.	Annual percentage of reportable spills on public roadways or in the MS4 reported within required timelines	Annual	100%	Achieved Annual number of reportable spills on public roadways or in the MS4 reported within required timelines: 2 Annual number of reportable spills on public roadways or in the MS4: 2
IDDE-3.1	Implement Illicit Discharge Enforcement Procedures	37	IDDE-3.1	Track 100% of enforcement actions initiated in that MS4 Permit year and their resolution.	Annual number of enforcement actions initiated in that MS4 Permit year that were resolved by the discharger	Annual	4	These are formal enforcement actions requiring the WES director's signature
IDDE-3.1	Implement Illicit Discharge Enforcement Procedures	37	IDDE-3.1	Track 100% of enforcement actions initiated in that MS4 Permit year and their resolution.	Annual number of enforcement actions initiated in that MS4 Permit year that were abated by a SWMP Document Participant	Annual	0	
IDDE-3.1	Implement Illicit Discharge Enforcement Procedures	37	IDDE-3.1	Track 100% of enforcement actions initiated in that MS4 Permit year and their resolution.	Annual number of enforcement actions initiated in that MS4 Permit year that paid a civil penalty	Annual	1	
IDDE-3.1	Implement Illicit Discharge Enforcement Procedures	37	IDDE-3.1	Track 100% of enforcement actions initiated in that MS4 Permit year and their resolution.	Annual number of enforcement actions	Annual	4	
IDDE-4.2	Inspections and Analysis	40	IDDE-4.2-a	Each year, conduct an inspection at a priority location in 10% of the MS4-permitted MS4s in the WES SWM Service Area	Annual percentage of MS4s inspected	Annual	8%	Annual number of priority locations inspected: 68 Number of MS4-permitted MS4s in the WES SWM Service Area in the most recent location list: 882 WES is on track to inspect all known outfalls at the end of the 10-yr window as outlined in our new strategy for inspecting priority locations. See Appendix F for detail. The last year WES inspected the same 40-43 outfalls each year was 2023-24. IDDE Priority Locations mapping strategy changed on October 11, 2023 and was implemented July 1, 2024. The new goal is to inspect all outfalls in the MS4 service area for ten consecutive years, 10% each year, from 2023-24 through 2032-33. The first summer/year of inspections was in 2024-25

Appendix A: Best Management Practices

BMP Activity #	BMP Activity	SWMP Page #	Measurable Goal #	Measurable Goal	Tracking Measure	Type	Response	Notes
IDDE-4.2	Inspections and Analysis	40	IDDE-4.2-a	Each year, conduct an inspection at a priority location in 10% of the MS4-permitted MS4s in the WES SWM Service Area	Running Total of percentage of known MS4s inspected during the 10 years from year 1 (2023-24) to year 10 (2032-33)	Annual	14%	2023-24 = 6 2024-25 = 8
IDDE-4.2	Inspections and Analysis	40	IDDE-4.2-b	Each year refer 100% of confirmed (and unconfirmed) illicit discharges discovered through dry weather inspection to WES Field Operations or WES Watershed Protection within one working day	Annual percentage of confirmed and unconfirmed illicit discharges referred to WES Field Operations or WES Watershed Protection within one working day	Annual	100%	Achieved Annual number of confirmed and unconfirmed illicit discharges referred to WES Field Operations or WES Watershed Protection within one working day: 5 Annual number of illicit discharges discovered through dry-weather inspection at Priority Locations: 5
IDDE-5.1	Determine Training Needs	41	IDDE-5.1	Evaluate and document staff training and education needs one time during the MS4 Permit term.	Date staff training and education strategy published	One-time	To be done	To be included in the 2025-26 annual report
IDDE-5.2	Conduct Training	41	IDDE-5.2	Provide training documented in the staff training and education strategy.	Number of employees who receive training and education and type received	Annual	21 WES employees, Spill and Illicit Discharge Response Training	On December 12, 2024, 21 WES employees received a spill and illicit discharge response training conducted by WES Environmental Services and Field Operations staff. The training covered how to receive reports of spills or illicit discharges, how to respond to them, and how to document the events for future reporting. In total, 60 employees received surface water training, including the Illicit Discharge and Elimination training, in 29 training events: 49 from WES, 21 from DTD, and 6 from Happy Valley. See Appendix D for detail.
IDDE-6.1	Evaluation of IDDE Activities	42	IDDE-6.1	Evaluate IDDE activities by April 3, 2026.	Date evaluation results included in permit renewal package	One-time	To be done	Will be included in April 2026 renewal application

Appendix A: Best Management Practices

MS4 Mapping (MAP)

BMP Activity #	BMP Activity	SWMP Page #	Measurable Goal #	Measurable Goal	Reported Tracking Measure	Type	Response	Notes
MAP-1.1	Develop Mapping Strategy	45	MAP-1.1	Develop MS4 Mapping Strategy by December 1, 2022.	MS4 Mapping Strategy	One-time	Achieved, Ongoing	WES continues to map and maintain a stormwater asset inventory. April of 2024, WES staff resolved a question from DEQ regarding whether WES manages an online public facing map. WES currently does not present a comprehensive online map publically, but offered to submit an electronic map or digital inventory to DEQ. DEQ preferred to reach out in the future if they have a specific mapping need.
MAP-2.1	Update Inventory and Map Existing Infrastructure	47	MAP-2.1-a	MS4 Map and Digital Inventory submitted to DEQ by December 1, 2022.	Date MS4 Map and Digital Inventory submitted	One-time	Achieved, Ongoing	WES continues to map and maintain a stormwater asset inventory. April of 2024, WES staff resolved a question from DEQ regarding whether WES manages an online public facing map. WES currently does not present a comprehensive online map publically, but offered to submit an electronic map or digital inventory to DEQ. DEQ preferred to reach out in the future if they have a specific mapping need.
MAP-2.1	Update Inventory and Map Existing Infrastructure	47	MAP-2.1-a	100% of existing public stormwater conveyances and stormwater facilities mapped by December 1, 2022	Percentage of in-service public stormwater assets mapped by December 1, 2022	One-time	100%	Achieved Number of in-service public stormwater assets mapped by December 1, 2022: 39116 100% of existing public stormwater conveyances and stormwater facilities mapped by December 1, 2022: 39116
MAP-2.1	Update Inventory and Map Existing Infrastructure	47	MAP-2.1-b	25% of existing private stormwater facilities mapped by December 1, 2022	Percentage of existing private stormwater facilities mapped by December 1, 2022	One-time	100%	Achieved Number of existing private stormwater facilities mapped by December 1, 2022: 2983 25% of existing private stormwater facilities mapped by December 1, 2022: 2983
MAP-2.1	Update Inventory and Map Existing Infrastructure	48	MAP-2.1-c	100% of existing private stormwater facilities mapped by end of permit term.	Percentage of existing private stormwater facilities mapped by December 1, 2023	One-time	100%	Achieved Number of existing private stormwater facilities mapped by December 1, 2023: 228 100% of existing private stormwater facilities mapped by end of permit term.: 228

Appendix A: Best Management Practices

BMP Activity #	BMP Activity	SWMP Page #	Measurable Goal #	Measurable Goal	Tracking Measure	Type	Response	Notes
MAP-2.2	Inventory and Map New Stormwater Conveyance and Management Facilities	48	MAP-2.2	100% of new public stormwater conveyances and public and private stormwater facilities are mapped within 3 months of public acceptance and private final construction approval (see POST-4)	Percentage of new public stormwater conveyances mapped within three months of acceptance	Annual	100%	Achieved Number of new public stormwater conveyances and stormwater facilities mapped within three months of acceptance: 744 100% of new public stormwater conveyances and public and private stormwater facilities are mapped within 3 months of public acceptance and private final construction approval (see POST-4): 744
MAP-2.2	Inventory and Map New Stormwater Conveyance and Management Facilities	48	MAP-2.2	100% of new public stormwater conveyances and public and private stormwater facilities are mapped within 3 months of public acceptance and private final construction approval (see POST-4)	Percentage of new private stormwater facilities mapped within three months of final construction approval	Annual	100%	Achieved Number of new private stormwater facilities mapped within three months of final construction approvals: 303 100% of new public stormwater conveyances and public and private stormwater facilities are mapped within 3 months of public acceptance and private final construction approval (see POST-4): 303
MAP-2.3	Map Priority Locations for IDDE Field Screening	48	MAP-2.3	100% of IDDE Priority Locations mapped by December 1, 2023.	Percentage of Priority Locations mapped by December 1, 2023	One-time	100%	Achieved IDDE Priority Locations mapping strategy changed. Now goal is to inspect 10% each year of all outfalls in service area. Number of Priority Locations mapped by December 1, 2023: 42 Number of Priority Locations : 42
MAP-3.1	Map Chronic Illicit Discharges	49	MAP-3.1	MS4 Map and Digital Inventory submitted or access provided to DEQ by December 1, 2022.	Date MS4 Map and Digital Inventory submitted or access provided	Annual	On-going	WES continues to map and maintain a stormwater asset inventory. April of 2024, WES staff resolved a question from DEQ regarding whether WES manages an online public facing map. WES currently does not present a comprehensive online map publically, but offered to submit an electronic map or digital inventory to DEQ. DEQ preferred to reach out in the future if they have a specific mapping need.
MAP-4.1	Evaluation of MS4 Mapping Activities	50	MAP-4.1	Evaluate the MS4 mapping activities by April 3, 2026.	Date evaluation results included in permit renewal package	One-time	To be done	Will be included in April 2026 renewal application

Appendix A: Best Management Practices

Construction Site Runoff Control (EPSC)

BMP Activity #	BMP Activity	SWMP Page #	Measurable Goal #	Measurable Goal	Reported Tracking Measure	Type	Response	Notes
EPSC-1.1	Construction Site Runoff Legal Authority	54	EPSC-1.1-a	Review, and update, if necessary, DTD's boilerplate contract terms to ensure EPSC plans are required in construction contracts by Dec. 1, 2024.	Date legal authority reviewed	One-time	6/1/2023	Achieved
EPSC-1.1	Construction Site Runoff Legal Authority	54	EPSC-1.1-a	Review, and update, if necessary, DTD's boilerplate contract terms to ensure EPSC plans are required in construction contracts by Dec. 1, 2024.	Date legal authority updated, if necessary	One-time	7/7/2023	Achieved The County follows the Oregon Standard Specifications for Construction, developed and maintained by ODOT. A revised version is published every 3 years. The most recent (2024) edition updated and improved EPSC language, applicable to all DTD capital construction contracts. Additionally, many/most DTD capital projects are subject to requirements of the 1200-CA permit.
EPSC-1.1	Construction Site Runoff Legal Authority	54	EPSC-1.1-b	Review, and update, if necessary, Happy Valley code to ensure alignment with the MS4 Permit Schedule A.3.d by Dec. 1, 2024.	Date legal authority reviewed	One-time	8/30/2023	Achieved Result: No need to update the City's legal authority.
EPSC-1.1	Construction Site Runoff Legal Authority	54	EPSC-1.1-b	Review, and update, if necessary, Happy Valley code to ensure alignment with the MS4 Permit Schedule A.3.d by Dec. 1, 2024.	Date legal authority updated, if necessary	One-time	Not applicable	Review showed that there is no need to update City's legal authority
EPSC-1.1	Construction Site Runoff Legal Authority	54	EPSC-1.1-c	Review, and update, if necessary, WES Rules and Regulations to ensure alignment with MS4 Permit Schedule A.3.d by Dec. 1, 2024.	Date legal authority reviewed	One-time	4/1/2023	Achieved
EPSC-1.1	Construction Site Runoff Legal Authority	54	EPSC-1.1-c	Review, and update, if necessary, WES Rules and Regulations to ensure alignment with MS4 Permit Schedule A.3.d by Dec. 1, 2024.	Date legal authority updated, if necessary	One-time	4/1/2023	Achieved
EPSC-1.1	Construction Site Runoff Legal Authority	54	EPSC-1.1-d	Review, and update, if necessary, Clackamas County Code and Building and Development Ordinance to ensure alignment with MS4 Permit Schedule A.3.d by Dec. 1, 2024.	Date legal authority reviewed	One-time	8/1/2022	Achieved

Appendix A: Best Management Practices

BMP Activity #	BMP Activity	SWMP Page #	Measurable Goal #	Measurable Goal	Tracking Measure	Type	Response	Notes
EPSC-1.1	Construction Site Runoff Legal Authority	54	EPSC-1.1-d	Review, and update, if necessary, Clackamas County Code and Building and Development Ordinance to ensure alignment with MS4 Permit Schedule A.3.d by Dec. 1, 2024.	Date legal authority updated, if necessary	One-time	Within the MS4, construction site runoff authority is generally referred to the City and/or District which the project is taking place in. Clackamas County is currently developing a County-wide erosion control permitting, inspection and enforcement program. These changes are to be updated in the Clackamas County Code and will be presented to the Board of County Commissioners for their approval. Regretfully, we did not meet the prescribed September 3, 2025 due date, however, DTD management staff believes these changes will be implemented in February 2026.	In process
EPSC-1.2	Erosion and Sediment Control Plan Standards	54	EPSC-1.2	Review, and update, if necessary, Erosion Prevention Planning and Design Manual once during the MS4 Permit Term	Date manual reviewed	One-time	To be done	A review of the 2020 Erosion Prevention and Sediment Control Planning and Design Manual will be completed and, if necessary, updated by September 30, 2026. The 2020 Erosion Prevention and Sediment Control Planning and Design Manual was developed in partnership with Clean Water Services, Oak Lodge Water Service District and the cities of Gladstone, Happy Valley, Lake Oswego, Milwaukie, West Linn and Wilsonville. The manual provides a regional and comprehensive approach towards controlling construction site runoff. See https://www.clackamas.us/wes/erosion.html
EPSC-1.2	Erosion and Sediment Control Plan Standards	54	EPSC-1.2	Review, and update, if necessary, Erosion Prevention Planning and Design Manual once during the MS4 Permit Term	Date manual updated, if necessary	One-time	To be done	Will be updated by 9/30/2026, if needed
EPSC-2.1	EPSC Review of County CIPs	58	EPSC-2.1	Internally review the EPSC plan of 100% of County CIPs going to construction in the Permitted Area each year. (DTD)	Annual percentage of County CIP EPSC plans reviewed by DTD	Annual	100%	Achieved Annual number of County CIP EPSC plans reviewed by DTD: 5 Annual number of County CIPs going to construction in the Permitted Area: 5
EPSC-2.2	EPSC Review in Happy Valley	58	EPSC-2.2	Review EPSC plan of 100% of land use and building permit applications meeting threshold for erosion prevention and sedimentation control in Happy Valley each year. (Happy Valley)	Annual percentage of EPSC reviews conducted by Happy Valley	Annual	100%	Achieved Annual number of EPSC reviews conducted by Happy Valley: 294 Annual number of new land use and building permit applications meeting threshold for EPSC in Happy Valley: 294

Appendix A: Best Management Practices

BMP Activity #	BMP Activity	SWMP Page #	Measurable Goal #	Measurable Goal	Tracking Measure	Type	Response	Notes
EPSC-2.3	EPSC Review in WES' SWM Service Area	58	EPSC-2.3-a	Review EPSC plan of 100% of land use reviews and building permit applications meeting threshold for erosion prevention and sediment control in WES Service Areas	Annual percentage of EPSC reviews conducted by WES	Annual	100%	Achieved Annual number of EPSC reviews conducted by WES: 103 Annual number of new land use reviews and building permit applications meeting threshold for EPSC in WES: 103
EPSC-2.3	EPSC Review in WES' SWM Service Area	58	EPSC-2.3-b	Attend 80% of pre-construction meetings for projects meeting threshold for erosion prevention and sediment control in WES Service Areas	Annual percentage of pre-construction meetings attended by WES	Annual	100%	Achieved Annual number of pre-construction meetings attended by WES: 7 Annual number of pre-construction meetings for projects needing EPSC held in WES: 7
EPSC-3.1	County CIP Inspection and Enforcement	64	EPSC-3.1	Conduct at least three EPSC inspections over the life of the project at 100% of County CIP construction sites within the Permitted Area that require EPSC review.	Annual percentage of County CIP projects that DTD inspected for EPSC at least three times	Annual	100%	Achieved Annual number of County CIP projects in the Permitted Area that completed construction and that DTD inspected for EPSC at least three times over the life of the project: 1 Annual number of County CIP projects in the Permitted Area that met the threshold for EPSC review and that completed construction: 1
EPSC-3.1	County CIP Inspection and Enforcement	64	EPSC-3.1	Conduct at least three EPSC inspections over the life of the project at 100% of County CIP construction sites within the Permitted Area that require EPSC review.	Number of EPSC complaints received per project	Annual	1	
EPSC-3.2	Happy Valley Inspection and Enforcement	64	EPSC-3.2-a	Each year conduct the initial EPSC inspection prior to construction at 100% of EPSC permitted sites in Happy Valley.	Annual percentage of EPSC permitted sites that received an initial EPSC inspection by Happy Valley prior to construction	Annual	100%	Achieved Annual number of EPSC permitted sites that received an initial EPSC inspection by Happy Valley prior to construction: 217 Annual number of EPSC permitted sites that began construction in Happy Valley: 217
EPSC-3.2	Happy Valley Inspection and Enforcement	64	EPSC-3.2-a	Each year conduct the initial EPSC inspection prior to construction at 100% of EPSC permitted sites in Happy Valley.	Number of EPSC complaints received per permitted site	Annual	1	

Appendix A: Best Management Practices

BMP Activity #	BMP Activity	SWMP Page #	Measurable Goal #	Measurable Goal	Tracking Measure	Type	Response	Notes
EPSC-3.2	Happy Valley Inspection and Enforcement	64	EPSC-3.2-b	Inspect 90% of EPSC permitted sites in Happy Valley at least three times over the life of the project.	Annual percentage of EPSC permitted sites in Happy Valley that received at least three EPSC inspections	Annual	100%	Achieved Annual number of EPSC permitted sites that completed construction in Happy Valley and received at least three EPSC inspections over the life of the project: 11 Annual number of EPSC permitted sites that completed construction in Happy Valley: 11
EPSC-3.2	Happy Valley Inspection and Enforcement	64	EPSC-3.2-c	Inspect 100% of EPSC permitted sites in Happy Valley at least twice over the life of the project.	Number of EPSC complaints received per project	Annual	1	
EPSC-3.3	WES Inspection and Enforcement	64	EPSC-3.3-a	Each year conduct the initial EPSC site inspection prior to construction at 100% of EPSC permitted sites in WES SWM Service Areas	Annual percentage of EPSC permitted sites that received an initial EPSC inspection by WES prior to construction	Annual	100%	Achieved Annual number of EPSC permitted sites that received an initial EPSC inspection by WES prior to construction: 103 Annual number of EPSC permitted sites that began construction in WES: 103
EPSC-3.3	WES Inspection and Enforcement	64	EPSC-3.3-a	Each year conduct the initial EPSC site inspection prior to construction at 100% of EPSC permitted sites in WES SWM Service Areas	Number of EPSC complaints received per permitted site	Annual	1	
EPSC-3.3	WES Inspection and Enforcement	65	EPSC-3.3-b	Inspect 90% of EPSC permitted sites in WES at least three times over the life of the project	Annual percentage of EPSC permitted sites in WES that received at least three EPSC inspections	Annual	100%	Achieved Annual number of EPSC permitted sites that received at least three EPSC inspections by WES over the life of the project: 76 Annual number of EPSC permitted sites that completed construction in WES: 76
EPSC-3.3	WES Inspection and Enforcement	65	EPSC-3.3-b	Inspect 90% of EPSC permitted sites in WES at least three times over the life of the project	Number of EPSC complaints received per project	Annual	0	
EPSC-3.4	Adopt Construction Site Enforcement Procedures	65	EPSC-3.4	Adopt construction site enforcement procedures by December 1, 2023 (WES, DTD, Happy Valley).	Date construction site enforcement procedures adopted for each jurisdiction	One-time	• 5/27/2024, WES • To be done, DTD • 7/9/2019, Happy Valley	The County relies on Cities, WES and the OLWS District to manage erosion control violations within the MS4. As a requirement of the Willamette Basin Mercury TMDL and WQMP, DTD is undergoing the process of adopting legal authority for county-wide erosion control permitting and enforcement. DTD anticipates these program changes will be effective February 1, 2026.

Appendix A: Best Management Practices

BMP Activity #	BMP Activity	SWMP Page #	Measurable Goal #	Measurable Goal	Tracking Measure	Type	Response	Notes
EPSC-4.1	Determine Training Needs	66	EPSC-4.1	Evaluate and document staff training needs one time during the MS4 Permit term.	Date staff training and education strategy published	One-time	To be done	To be included in the 2025-26 annual report
EPSC-4.2	Conduct EPSC Training	66	EPSC-4.2	Conduct or procure training documented in the staff training and education strategy.	Number of employees who receive training and type training received	Annual	In total, 60 employees received surface water training, including Construction Site Runoff Control training, in 29 training events. See Appendix D for list of employees and trainings.	WES = 49 DTD = 21 HV = 6
EPSC-5.1	Evaluation of Construction Site Runoff Control Activities	67	EPSC-5.1	Happy Valley, DTD, and WES will evaluate their construction site runoff control activities by April 3, 2026.	Date evaluation results included in permit renewal package	One-time	To be done	Will be included in April 2026 renewal application

Appendix A: Best Management Practices

Post-Construction Site Runoff (POST)

BMP Activity #	BMP Activity	SWMP Page #	Measurable Goal #	Measurable Goal	Reported Tracking Measure	Type	Response	Notes
POST-1.1	Maintain Current Post-Construction Legal Authority	70	POST-1.1-a	Review, and update, if necessary, Happy Valley code to ensure alignment with the MS4 Permit Schedule A.3.e by December 1, 2024	Date legal authority reviewed	One-time	8/30/2023	Achieved No need to update the City's legal authority.
POST-1.1	Maintain Current Post-Construction Legal Authority	70	POST-1.1-a	Review, and update, if necessary, Happy Valley code to ensure alignment with the MS4 Permit Schedule A.3.e by December 1, 2024	Date legal authority updated, if necessary	One-time	Not applicable	Review showed there is no need to update City's legal authority
POST-1.1	Maintain Current Post-Construction Legal Authority	70	POST-1.1-b	Review, and update, if necessary, WES Rules and Regulations to ensure alignment with MS4 Permit Schedule A.3.e by December 1, 2024	Date legal authority reviewed	One-time	5/4/2023	Achieved The WES Board of Directors adopted revised stormwater rules and regulations and standards in May 2023. They took effect on July 1, 2023.
POST-1.1	Maintain Current Post-Construction Legal Authority	70	POST-1.1-b	Review, and update, if necessary, WES Rules and Regulations to ensure alignment with MS4 Permit Schedule A.3.e by December 1, 2024	Date legal authority updated, if necessary	One-time	7/1/2023	Achieved The WES Board of Directors adopted revised stormwater rules and regulations and standards in May 2023. They took effect on July 1, 2023.
POST-2.1	Require Low Impact Development/Green Infrastructure for Development And Redevelopment Projects	73	POST-2.1	By Dec. 1, 2023, review and update or develop and begin a LID/GI strategy.	Date LID/GI strategy update or adoption and adopted, if necessary	One-time	4/1/2023	Achieved
POST-2.2	Update Stormwater Standards Design Manual	73	POST-2.2	Update the stormwater design manual (currently WES Stormwater Standards) by Dec. 1, 2024.	Date stormwater design manual was updated	One-time	4/1/2023	Achieved
POST-3.1	Stormwater Management Plan (SWM Plan) Review of Permittee CIPs	79	POST-3.1	Review 100% of CIP SWM Plans that meet the minimum impervious surface threshold each year.	Annual percentage of CIP SWM Plans reviewed and approved where the project met the minimum impervious surface threshold	Annual	100%	Achieved Annual number of CIP SWM Plans reviewed and approved: 1 Annual number of CIPs that meet the minimum impervious surface threshold approved for construction: 1
POST-3.2	SWM Plan Review for Single-Family (SFR) Building Permits	77	POST-3.2	Review 100% of SFR SWM Plans received prior to signing off on building permit each year. (WES)	Annual percentage of SFR SWM Plans reviewed by WES prior to signing off on building permit	Annual	100%	Achieved Annual number of SFR SWM Plans reviewed by WES prior to signing off on building permit: 11 Annual number of SFR building permit applications referred to WES: 11

Appendix A: Best Management Practices

BMP Activity #	BMP Activity	SWMP Page #	Measurable Goal #	Measurable Goal	Tracking Measure	Type	Response	Notes
POST-3.3	SWM Plan Review for Land Use Applications	79	POST-3.3-a	Attend 100% of pre-application meetings (WES) for land use applications (DTD/Happy Valley).	Annual percentage of pre-application meetings attended by WES	Annual	100%	Achieved Annual number of pre-application meetings attended by WES: 46 Annual number of pre-application meetings held for applicants. (DTD and Happy Valley): 46
POST-3.3	SWM Plan Review for Land Use Applications	79	POST-3.3-b	Review and approve 100% of non-SFR SWM Plans for projects that meet the minimum impervious threshold each year. (WES)	Annual percentage of non-SFR SWM Plans approved by WES	Annual	100%	Achieved Annual number of non-SFR SWM Plans approved by WES: 17 Annual number of non-SFR stormwater management plans submitted to WES that meet the minimum impervious area threshold: 17
POST-4.1	Verify Single-Family Residential Building Site Stormwater Systems	84	POST-4.1	Perform final SWM construction site inspection on 100% of residential development sites each year.	Annual percentage of final SWM construction site inspections performed residential development sites	Annual	100%	Achieved Annual number of final SWM construction site inspections performed on residential development sites: 7 Annual number of residential development sites that complete construction: 7
POST-4.2	Verify Subdivision/Partition Stormwater Systems	84	POST-4.2	Perform final SWM construction site inspection on 100% of subdivision and partition sites each year.	Annual percentage of final SWM construction site inspections performed on subdivision and partition development sites	Annual	100%	Achieved Annual number of final SWM construction site inspections performed on subdivision and partition development sites: 8 Annual number of subdivision and partition development sites that complete construction: 8
POST-4.3	Verify Commercial Development Stormwater Systems	84	POST-4.3	Perform final SWM construction site inspection on 100% of commercial development sites each year.	Annual percentage of final SWM construction site inspections performed on commercial development sites	Annual	100%	Achieved Annual number of final SWM construction site inspections performed on commercial development sites: 4 Annual number of commercial development sites that complete construction: 4

Appendix A: Best Management Practices

BMP Activity #	BMP Activity	SWMP Page #	Measurable Goal #	Measurable Goal	Tracking Measure	Type	Response	Notes
POST-4.4	Verify SWMP Document Participant CIP Stormwater Systems	85	POST-4.4	Inspect 100% of stormwater facilities for completed County CIPs and new Happy Valley CIPs in the WES SWM Service Areas prior to acceptance each year (WES)	Percentage of completed County and Happy Valley CIPs with new stormwater facilities that are inspected prior to acceptance each year	Annual	0%	Annual number of completed County and Happy Valley CIPs with new stormwater facility that are inspected prior to acceptance : 0 Annual number of County CIPs completing construction with new stormwater facilities: 1 Annual number of Happy Valley CIPs completing construction with new stormwater facilities: 2 WES inspects stormwater projects throughout the design and construction phase of stormwater facility projects. WES has not, however, undergone the inspection completion phase for the three projects that the County and City cite due to a timing lag.
POST-5.1	Determine Staff Training Needs	86	POST-5.1	Evaluate and document staff training needs one time during the MS4 Permit term.	Date staff training and education strategy published	One-time	To be done	To be included in the 2025-26 annual report
POST-5.2	Conduct Staff Training	88	POST-5.2	Conduct or procure training documented in the staff training and education strategy.	Number of employees who receive training and type of training received	Annual	In total, 60 employees received surface water training, including Post-Construction Site Runoff Program training, in 29 training events. See Appendix D for list of employees and trainings.	WES = 49 DTD = 21 HV = 6 See Appendix D for detail.
POST-6.1	Evaluation of POST-Construction Site Runoff Activities	89	POST-6.1	Evaluate the SWMP Document Participants post-construction site runoff activities by April 3, 2026.	Date evaluation results included in permit renewal package	One-time	To be done	Will be included in April 2026 renewal application

Appendix A: Best Management Practices

Pollution Prevention for Municipal Operations (PREV)

BMP Activity #	BMP Activity	SWMP Page #	Measurable Goal #	Measurable Goal	Reported Tracking Measure	Type	Response	Notes
PREV-1.1	Street Sweeping	90	PREV-1.1-a	Sweep curbed arterials four times per year (Happy Valley).	Annual arterial curb miles swept in Happy Valley	Annual	185.22	Attained
PREV-1.1	Street Sweeping	90	PREV-1.1-a	Sweep curbed arterials four times per year (Happy Valley).	Total curb miles of Happy Valley arterial roadways	Annual	7	Each of the 7 curb miles was swept 4 times per year.
PREV-1.1	Street Sweeping	90	PREV-1.1-b	Sweep a minimum of 50% of County maintained curbed road and bike lane miles four times per year (DTD).	Percentage of curbed road and bike lane miles of County-maintained ROW in the Permitted Area which were swept	Annual	321%	Achieved Annual curbed road and bike lane miles of County-maintained ROW in the Permitted Area that have been swept: 1297 Total curbed road and bike lane miles of County-maintained ROW in the Permitted Area: 404
PREV-1.2	Continue to Conduct Pollution Prevention Activities Related to Road Operations	90	PREV-1.2	Remove 90% of solid waste dumps in SWMP Document Participants' ROW within six weeks of notification or discovery.	Annual percentage of solid waste dumps removed within six weeks	Annual	98%	Achieved Annual number of solid waste dumps removed within six weeks: 95 Annual number of solid waste dumps discovered or notified about: 97
PREV-2.1	Winter Materials Management	92	PREV-2.1	Maintain winter materials stockpile	List of types of materials stored and/or used in the Permitted Area per MS4 Permit year	Annual	De-icing: Magnesium Chloride • County - 14,000 gallons at two facilities • Happy Valley - 6,700 gallons, public works yard Ice Slicer (naturally mined mineral salt) • County - 15 to 20 tons, TSB White Salt • County - 2 to 3 tons, TSB Traction: Sand • County - sand and salt mix • Happy Valley - 240 to 280 yards	For detail, see section A.3.f.v.C – Winter Maintenance in the narrative portion of the annual report.
PREV-2.2	Winter Maintenance Strategy	92	PREV-2.2	Implement winter operations and maintenance activities if snow and/or ice events occur.	Number of winter weather events where winter maintenance materials are used in the Permitted Area per MS4 Permit year	Annual	3	Happy Valley = 2 County = 1
PREV-2.2	Winter Maintenance Strategy	92	PREV-2.2	Implement winter operations and maintenance activities if snow and/or ice events occur.	Quantities and general location of each material used in relation to distance (e.g., pounds per mile) in the Permitted Area per MS4 Permit year	Annual	Clackamas County DTD: 500 to 700 lbs of Sand per lane mile and 25 gallons of magnesium chloride per lane mile Happy Valley: 500 to 700 lbs of Sand per lane mile and 25 gallons of magnesium chloride per lane mile	For detail, see section A.3.f.v.C – Winter Maintenance in the narrative portion of the annual report.

Appendix A: Best Management Practices

BMP Activity #	BMP Activity	SWMP Page #	Measurable Goal #	Measurable Goal	Tracking Measure	Type	Response	Notes
PREV-2.2	Winter Maintenance Strategy	92	PREV-2.2	Implement winter operations and maintenance activities if snow and/or ice events occur.	Any other actions taken to protect waters of the state in the Permitted Area per MS4 Permit year	Annual	• Store sanding material in a manner that minimizes contamination of surface or groundwater (dry, covered sheds). • Contain runoff from treated stockpiles. • Maintain accurate records of application including when, where, and quantity of sanding material applied. • Follow application guidelines in the ODOT Maintenance Guide and/or guidelines provided by product supplier. • Assure application equipment is properly calibrated. • Routinely inspect equipment and storage facilities (including nozzles, slip in tanks, storage tanks, and secondary containment) for damage. • Store de-icer products in a manner that minimizes contamination of surface or groundwater. Prevent runoff from product tanks or treated stockpiles. • Ensure annual training and information sharing opportunities for DTD staff.	For detail, see section A.3.f.v.C – Winter Maintenance in the narrative portion of the annual report.
PREV-3.1	Continue to Conduct Pollution Prevention Activities Related to Landscape Maintenance and Vegetation Control	94	PREV-3.1	Clackamas County shall adopt and implement the most recent ODOT Guide or an approved alternative for vegetation maintenance in County-maintained ROW during the permit term	Date manual adopted	One-time	7/27/2007	Achieved On July 27, 2007 the Clackamas County Board of Commissioners approved the adoption of ODOT's Routine Road Maintenance BMPs, which applies to DTD's Tranportation Maintenance. DTD has continued to follow each revised version, with the latest being published in 2020.
PREV-4.1	Implement Litter Control Methods	96	PREV-4.1-a	Encourage event organizers to implement recycling at events	Number of events each year where recycling containers were lent out	Annual	49	
PREV-4.1	Implement Litter Control Methods	96	PREV-4.1-b	Respond to 100% of roadway litter reports each year.	Number of reports received, number of submitted reports each year, and percentage of roadway litter reports resolved	Annual	100%	Achieved Number of reports resolved : 4 Number of submitted reports each year : 4
PREV-5.1	Continue to Conduct Pollution Prevention Activities Related to Municipal Waste Facilities	98	PREV-5.1-a	Each year, inspect 100% of municipal waste facilities at least once.	Annual percentage of municipal waste facilities inspected	Annual	250%	Achieved Annual number of municipal waste facilities inspected: 15 Annual number of municipal waste facilities: 6
PREV-5.1	Continue to Conduct Pollution Prevention Activities Related to Municipal Waste Facilities	98	PREV-5.1-b	Each year, document the number of emergency overflow events to the dry pond. (WES)	Date of each emergency overflow event to the dry pond	Annual	Not applicable	There were no emergency overflows to the dry pond.

Appendix A: Best Management Practices

BMP Activity #	BMP Activity	SWMP Page #	Measurable Goal #	Measurable Goal	Tracking Measure	Type	Response	Notes
PREV-6.1	Inspect Sanitary Sewer Lines	100	PREV-6.1-a	Each year complete 100% of scheduled TV inspections of the public sanitary sewer system.	Annual percentage of scheduled TV inspections of public sanitary sewer system completed	Annual	104%	Achieved Annual length (linear feet) of public sanitary sewer pipe TV inspected: 170579 Annual length (linear feet) of public sanitary sewer pipe scheduled for TV inspection: 164736
PREV-6.1	Inspect Sanitary Sewer Lines	100	PREV-6.1-b	Eliminate 100% of sanitary sewer discharges to the MS4 public within five days of discovery each year.	Annual percentage of discharges to the MS4 resulting from cracked or broken public sanitary sewer lines that were eliminated within five days of discovery	Annual	Not applicable	There were no discharges to the MS4 resulting from cracked or broken public sanitary sewer lines Annual number of discharges to the MS4 resulting from cracked or broken public sanitary sewer lines that were eliminated within five days of discovery: 0 Annual number of discharges to the MS4 resulting from cracked or broken public sanitary sewer lines: 0
PREV-7.1	Pollution Prevention in Fire-Fighting Training	102	PREV-7.1	Once during the MS4 Permit term, perform one site visit to CFD#1's training center to review position of diversion valve and offer verbal guidance if appropriate	Date of site visit	Once	9/10/2024	Achieved
PREV-8.1	Determine Training Needs	103	PREV-8.1	Evaluate and document staff training needs one time during the MS4 Permit term.	Date staff training and education strategy published	One-time	To be done	To be included in the 2025-26 annual report
PREV-8.2	Conduct Pollution Prevention Training	103	PREV-8.2	Conduct or procure training documented in the staff training and education strategy.	Number of employees who receive training and type training received	Annual	In total, 60 employees received surface water training, including Pollution Prevention for Municipal Operations training, in 29 training events. See Appendix D for list of employees and trainings.	WES = 49 DTD = 21 HV = 6
PREV-9.1	Evaluation of Pollution Prevention for Municipal Operations Activities	104	PREV-9.1	Evaluate the SWMP Document Participants pollution prevention for municipal operations activities by April 3, 2026.	Date evaluation results included in permit renewal package	One-time	To be done	Will be included in April 2026 renewal application

Appendix A: Best Management Practices

Industrial and Commercial Facilities (COMM)

BMP Activity #	BMP Activity	SWMP Page #	Measurable Goal #	Measurable Goal	Reported Tracking Measure	Type	Response	Notes
COMM-1.1	Identify New Industrial Facilities Requiring NPDES Permits	106	COMM-1.1-a	Review new industrial development applications for applicability of 1200-Z permit a minimum of one time each year	Date(s) new development applications were reviewed	Annual	6/30/2025	Surveys sent throughout the year, not just on one date
COMM-1.1	Identify New Industrial Facilities Requiring NPDES Permits	107	COMM-1.1-b	Each year notify facility operator and DEQ of 100% of facilities newly identified as potentially needing a 1200-Z permit within 30 days of discovery	Annual percentage of facilities where operator and DEQ were notified within 30 days of discovery	Annual	100%	Achieved Annual number and list of facilities and where operator and DEQ were notified within 30 days of discovery: 10 Annual number and list of newly identified facilities: 10
COMM-1.2	Identify Existing Industrial Facilities Requiring NPDES Permits	106	COMM-1.2-a	Survey a subset of existing industrial facilities for 1200-Z permit applicability a minimum of one time each year	Date(s) survey sent via U.S. mail	Annual	6/30/2025	Surveys sent throughout the year, not just on one date
COMM-1.2	Identify Existing Industrial Facilities Requiring NPDES Permits	107	COMM-1.2-b	Each year notify facility operator and DEQ of 100% of facilities newly identified as potentially needing a 1200-Z permit within 30 days of discovery	Annual percentage of facilities where operator and DEQ were notified within 30 days of discovery	Annual	100%	Achieved Annual number and list of facilities and where operator and DEQ were notified within 30 days of discovery: 6 Annual number and list of newly identified facilities: 6
COMM-2.1	Review and Update the Industrial/Commercial Facilities Strategy	109	COMM-2.1	Update Industrial/Commercial Facilities Strategy by December 1, 2023.	Date Industrial/Commercial Facilities Strategy updated	One-time	11/10/2023	Achieved
COMM-2.2	Implement the Industrial/Commercial Facilities Strategy	109	COMM-2.2	Each year, inspect 100% of sites referred through complaint or referral within ten business days	Annual percentage of sites inspected with ten business days based on complaint or referral	Annual	100%	Achieved Annual number of sites inspected within ten business days based on complaint or referral: 11 Annual total of complaints and referrals: 11
COMM-2.2	Implement the Industrial/Commercial Facilities Strategy	109	COMM-2.2	Each year, inspect 100% of sites referred through complaint or referral within ten business days	List of SIC categories of facilities inspected	Annual	6512 – Operators of Nonresidential Buildings 6513 – Operators of Apartment Buildings 4225 – General Warehousing and Storage 5033 – Roofing, Siding, and Insulation Material	

Appendix A: Best Management Practices

BMP Activity #	BMP Activity	SWMP Page #	Measurable Goal #	Measurable Goal	Tracking Measure	Type	Response	Notes
COMM-2.2	Implement the Industrial/Commercial Facilities Strategy	109	COMM-2.2	Each year, inspect 100% of sites referred through complaint or referral within ten business days	Overview of results from inspections	Annual	• 2 Notices to Correct • 1 Citation of Violation • 1 Civil Penalty Assessment	
COMM-3.1	Determine Training Needs	110	COMM-3.1	Evaluate and document staff training needs one time during the MS4 Permit term.	Date staff training and education strategy published	One-time	To be done	To be included in the 2025-26 annual report
COMM-3.2	Conduct Training	110	COMM-3.2	Conduct or procure training documented in the staff training and education strategy.	Number of employees who receive training and type training received	Annual	In total, 60 employees received surface water training, including Industrial and Commercial Facilities stormwater training, in 29 training events. See Appendix D for list of employees and trainings.	WES = 49 DTD = 21 HV = 6
COMM-4.1	Evaluation of Industrial and Commercial Facilities Activities	111	COMM-4.1	Evaluate the SWMP Document Participants industrial and commercial facilities activities by April 3, 2026.	Date evaluation results included in permit renewal package	One-time	To be done	Will be included in April 2026 renewal application

Appendix A: Best Management Practices

Stormwater System Operation and Maintenance (MAINT)

BMP Activity #	BMP Activity	SWMP Page #	Measurable Goal #	Measurable Goal	Reported Tracking Measure	Type	Response	Notes
MAINT-1.1	Review Operation and Maintenance Legal Authority	113	MAINT-1.1	Review, and update, if necessary, legal authority in WES to require maintenance and inspect private storm systems (once during the MS4 Permit term) by Dec. 1, 2024	Date legal authority verified	One-time	4/1/2023	Achieved
MAINT-1.1	Review Operation and Maintenance Legal Authority	113	MAINT-1.1	Review, and update, if necessary, legal authority in WES to require maintenance and inspect private storm systems (once during the MS4 Permit term) by Dec. 1, 2024	Date legal authority updated, if necessary	One-time	4/1/2023	Achieved
MAINT-2.1	Ongoing Facility Maintenance	118	MAINT-2.1-a	Each year inspect the stormwater systems in 70% of subdivisions and other participants enrolled in WES' Residential Maintenance Agreement Program. (WES)	Annual percentage of Residential Maintenance Agreement subdivisions and other participants inspected	Annual	96%	Achieved Annual number of Residential Maintenance Agreement subdivisions and other participants inspected: 349 Total number of subdivisions and other participants in WES' Residential Maintenance Agreement Program during reporting year: 363
MAINT-2.1	Ongoing Facility Maintenance	118	MAINT-2.1-b	Correct 100% of maintenance deficiencies discovered during a Residential Maintenance Agreement inspection within two years (WES)	Percentage of deficiencies corrected within two years to date	Annual	100%	Achieved Running total of deficiencies found during Residential Maintenance Agreement inspections that were corrected within two years: 10 Running total of deficiencies found during Residential Maintenance Agreement inspections through December 31, 2020: 10
MAINT-2.1	Ongoing Facility Maintenance	118	MAINT-2.1-c	Each year mow and/or cut brush and weeds from stormwater facilities within 100% of subdivisions and other participants enrolled in WES' Residential Maintenance Agreement Program. (WES)	Annual percentage of Residential Maintenance Agreement subdivisions and other participants where stormwater facilities were mowed/brushed	Annual	100%	Achieved Annual number of subdivisions and other participants where stormwater facilities were mowed/brushed: 173 Total number of subdivisions and other participants in WES' Residential Maintenance Agreement Program during reporting year: 173

Appendix A: Best Management Practices

BMP Activity #	BMP Activity	SWMP Page #	Measurable Goal #	Measurable Goal	Tracking Measure	Type	Response	Notes
MAINT-2.1	Ongoing Facility Maintenance	118	MAINT-2.1-d	Each year remove sediment and trash from 20% of underground public water quality facilities operated by WES (WES)	Annual percentage of underground water quality facilities where WES removed sediment and trash	Annual	22%	Achieved Annual number of underground water quality facilities where WES removed sediment and trash: 89 Total number of underground public water quality facilities operated by WES in reporting year: 407
MAINT-2.1	Ongoing Facility Maintenance	118	MAINT-2.1-d	Each year remove sediment and trash from 20% of underground public water quality facilities operated by WES (WES)	Estimated volume of debris removed as a total or by category or type of activity, if known	Annual	89 Cubic Yards	
MAINT-2.1	Ongoing Facility Maintenance	118	MAINT-2.1-e	Each year respond to 100% of non-emergency complaints and referrals for facility maintenance within 72 hours. (WES)	Annual percentage of non-emergency complaints and referrals for facility maintenance responded to within 72 hours	Annual	100%	Achieved Annual number of non-emergency complaints and referrals for facility maintenance responded to within 72 hours: 66 Annual number of non-emergency complaints and referrals for facility maintenance received by WES: 66
MAINT-2.1	Ongoing Facility Maintenance	118	MAINT-2.1-f	Each year replace proprietary components in 100% of stormwater management structures operated by DTD in which a proprietary component needs replacement. (DTD)	Annual percentage of structures with proprietary components that have been replaced	Annual	Not applicable	Annual number of structures with proprietary components that need replacement that were replaced by DTD: 0 Annual number of structures with proprietary components that need replacement: 0
MAINT-2.1	Ongoing Facility Maintenance	119	MAINT-2.1-g	Each year respond to 100% of non-emergency complaints and referrals for facility maintenance within 72 hours. (DTD)	Annual percentage of non-emergency complaints and referrals for facility maintenance responded to within 72 hours	Annual	71%	Annual number of non-emergency complaints and referrals for facility maintenance responded to within 72 hours: 39 Annual number of non-emergency complaints and referrals for facility maintenance received by DTD: 55
MAINT-2.2	Routine Catch Basin Cleaning	119	MAINT-2.2-a	Clean 20% of catch basins and inlets (with sumps) under WES responsibility each year.	Annual percentage of catch basins and inlets (with sumps) cleaned	Annual	30%	Annual number of catch basins and inlets cleaned: 3135 Total number of catch basins and inlets (with sumps) under WES responsibility in reporting year: 10567

Appendix A: Best Management Practices

BMP Activity #	BMP Activity	SWMP Page #	Measurable Goal #	Measurable Goal	Tracking Measure	Type	Response	Notes
MAINT-2.2	Routine Catch Basin Cleaning	119	MAINT-2.2-b	Clean 20% of catch basins and inlets (with sumps) under DTD responsibility each year.	Annual percentage of catch basins and inlets (with sumps) cleaned	Annual	2%	Annual number of catch basins and inlets cleaned: 5 Total number of catch basins and inlets (with sumps) under DTD responsibility in reporting year: 259 In November 2025, DTD realized it was using the wrong metric for this tracking measure and have since determined that it is solely responsible for 259 catch basins with sumps in the MS4 service area, and not the 3,249 catch basins reported in recent annual reports. A list of the 259 catch basins with sumps is being created and will be distributed to Maintenance staff to ensure DTD meets the 20% annual threshold and all 259 catch-basins are inspected / cleaned at least once, every 5 years, as required. Having said that, in 2024-25, in the MS4 Service Area, DTD cleaned 149 total catch-basins, of which 48 have sumps. 43 of the 48 with sumps were within the Oak Lodge
MAINT-3.1	Public Conveyance Cleaning and Maintenance	120	MAINT-3.1	Complete 100% of scheduled conveyance system cleaning maintenance activities each year (WES, DTD, Happy Valley).	Annual percentage of conveyance system work orders completed every year	Annual	145%	Achieved Annual number of conveyance system work orders completed each year: 3303 Annual number of conveyance system work orders planned each year: 2281
MAINT-4.1	Storm Drain Cleaning Assistance Program	123	MAINT-4.1	Each year, implement SCAP.	Number of participants	Annual	105	
MAINT-4.1	Storm Drain Cleaning Assistance Program	123	MAINT-4.1	Each year, implement SCAP.	Number and type of facilities cleaned and maintained	Annual	403 privately owned catch basins	
MAINT-4.2	Regulated Storm System Inspection and Enforcement	123	MAINT-4.2-a	Inspect 20% of prioritized regulated private storm systems in WES each year.	Annual percentage of prioritized regulated private storm systems inspected.	Annual	19%	Annual number of prioritized regulated private storm systems inspected at least one time: 29 Total number of prioritized regulated private storm systems in WES service area in reporting year: 156 This program provides its services to all categories of private storm sewer systems, including those which discharge: I) into our MS4, II) into ODOT's MS4, III) directly to surface waters (Non-Point Sources of pollution), IV) public drywells and V) privately owned drywells

Appendix A: Best Management Practices

BMP Activity #	BMP Activity	SWMP Page #	Measurable Goal #	Measurable Goal	Tracking Measure	Type	Response	Notes
MAINT-4.2	Regulated Storm System Inspection and Enforcement	124	MAINT-4.2-b	50% of prioritized regulated private storm systems pass initial inspection each year.	Annual percentage of prioritized regulated private storm systems that passed initial inspection	Annual	31%	Annual number of prioritized regulated private storm systems that passed initial inspection: 9 Annual number of prioritized regulated private systems inspected: 29
MAINT-4.2	Regulated Storm System Inspection and Enforcement	124	MAINT-4.2-c	Provide technical assistance to 90% of prioritized regulated private storm systems found to have a maintenance deficiency within one year.	Percentage of prioritized regulated private storm systems that received technical assistance within one year to date	Annual	100%	Achieved Running total of prioritized regulated private storm systems that received technical assistance within one year of an inspection that discovered a maintenance deficiency: 20 Running total of prioritized regulated private storm systems where an inspection discovered a maintenance deficiency: 20
MAINT-6.1	Infrastructure Retrofit and Hydromodification Assessment Update	127	MAINT-6.1	Assessment of outcomes related to the Hydromodification Assessment and Stormwater Retrofit Strategy reports by December 1, 2023.	Progress or completion of projects identified in Retrofit Strategy	One-time	The completed SE 117th Stormwater Improvements project took untreated stormwater runoff from a few acres of an existing single-family residential neighborhood and sent it to a modern stormwater management pond which is specifically designed to remove stormwater pollution.	While this was not in the Retrofit Strategy, this project is being mentioned here so DTD knows that WES continues to retrofit MS4s as needed.
MAINT-6.1	Infrastructure Retrofit and Hydromodification Assessment Update	127	MAINT-6.1	Assessment of outcomes related to the Hydromodification Assessment and Stormwater Retrofit Strategy reports by December 1, 2023.	Dates Hydromodification Assessment and Stormwater Retrofit Strategy assessed and, if needed, updated	One-time	12/1/2023	Achieved
MAINT-7.1	Determine Training Needs	128	MAINT-7.1	Evaluate and document staff training needs one time during the MS4 Permit term.	Date staff training and education strategy published.	One-time	To be done	To be included in the 2025-26 annual report
MAINT-7.2	Conduct Training	128	MAINT-7.2	Conduct or procure training documented in the staff training and education strategy.	Number of employees who receive training and type training received.	Annual	In total, 60 employees received surface water training, including Stormwater System Operation and Maintenance training, in 29 training events. See Appendix D for list of employees and trainings.	WES = 49 DTD = 21 HV = 6
MAINT-8.1	Evaluation of Stormwater System Maintenance Activities	129	MAINT-8.1	Evaluate the SWMP Document Participants operations and maintenance activities by April 3, 2026.	Date evaluation results included in permit renewal package.	One-time	To be done	Will be included in April 2026 renewal application

Appendix B: Public Education and Outreach Strategy

This Page Intentionally Left Blank

CLACKAMAS
WATER ENVIRONMENT SERVICES

Public Education and Outreach Strategy

Watershed Health Education Program

September 2025

Table of Contents

About WES

Clackamas Water Environment Services (WES) produces clean water, protects water quality and recovers renewable resources. We do this by providing wastewater services, stormwater management, and environmental education. It's our job to protect public health and support the vitality of our communities, natural environment and economy.

About the Public Education and Outreach Strategy

As defined by the **U.S. Water Alliance, "One Water"** is a transformative way of viewing, valuing, and managing water. The One Water approach considers all water sources (wastewater, stormwater, drinking water, and grey water) as we work to manage finite water resources. With One Water in mind, we have included wastewater and stormwater messages in our public education and outreach strategy. By approaching our public education and outreach strategy with a One Water lens, we can communicate how behavioral changes can impact this precious resource. WES is committed to building collaborative partnerships that result in a resilient clean water future where all people benefit, and rivers thrive through proactive engagement, effective communication, public education, and community leadership.

This document is intended to guide us in how we educate and engage our community, customers and students. It is a comprehensive overview of WES' public education and outreach efforts for stormwater management (NPDES Municipal Separate Storm Sewer System permit), wastewater management (NPDES Waste Discharge Permit), Underground Injection Controls (UIC permit), and Water Quality Management Plans (Total Maximum Daily Load orders)**.**

About our State-Issued Permits that Guide Education Efforts

A. National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Permit

The intent of MS4 permits is for municipalities to implement measures that reduce pollution in stormwater runoff. The Oregon Department of Environmental Quality (DEQ) is the state agency that issues these permits, which are required under the Clean Water Act. MS4 permits require eight "minimum control measures," of which public education and outreach is one.

The MS4 co-permittees in Clackamas County are Clackamas County (Department of Transportation and Development), the cities of Gladstone, Happy Valley, Johnson City, Lake Oswego, Milwaukie, Oregon City, Rivergrove, West Linn, Wilsonville, Oak Lodge Water Services and WES. The MS4 Permit was most recently renewed in September of 2021 and expires September 30, 2026. The permit requires an update to and implementation of a documented Public Education and Outreach Strategy (Schedule A.3.a.iii). This document is intended to satisfy that requirement. Information about WES' broader efforts to reduce pollutants discharged by the storm sewer system can be found in the 2022 MS4 Permit Shared Stormwater Management Program Document, in compliance with the MS4 Permit.

B. Underground Injection Control (UIC) Permit

DEQ requires a UIC permit to operate a system that injects stormwater underground, such as a drywell for stormwater runoff, to ensure that the injection process does not contaminate groundwater sources, including drinking water wells or aquifers.

The WES Underground Injection Control System Management Plan (UICSMP) has a BMP for an employee education and a public outreach element. It calls for a similar approach as for MS4, educating the public on how to prevent pollution of our water resources but with an emphasis on groundwater.

C. Non-Point Source Total Maximum Daily Load (TMDL) Program

A TMDL is a regulatory document that sets the maximum amount of a specific pollutant a water body can receive while still meeting water quality standards. The Clean Water Act requires states to develop a TMDL for each water body on the state's polluted waters list, also known as the 303(d) list. TMDL implementation involves actions to be taken across agricultural, forest, urban, and rural residential land uses to reduce pollutants and improve water quality. DEQ has named WES, along with other local governments and agencies, as Designated Management Agencies responsible for reducing TMDL pollutants in our watersheds.

WES has prepared a TMDL Implementation Plan to outline our actions to reduce non-point sources of pollution, including messaging to the public. It also calls for a similar approach as for MS4, with a few added messages relating to septic systems, solid waste dumping, and notifying the appropriate authority when a spill occurs.

D. National Pollutant Discharge Elimination System (NPDES) Waste Discharge Permit

A DEQ NPDES Waste Discharge permit allows a water resource recovery facility to discharge pollutants into surface waters, under specific limitations and monitoring requirements, ensuring that the discharge complies with the Clean Water Act. WES implements educational messaging relating to our wastewater system to help prevent pollution and reduce the effort and cost which WES expends to maintain the sanitary sewer system.

WES' Watershed Health Education for Students

Why invest in students?

Today's students are the next generation of diverse watershed leaders. They will soon make critical decisions about their lifestyles, priorities, beliefs, career paths, and the use of natural resources. Our program offers students hands-on and virtual learning opportunities to enhance their understanding of watershed health, encouraging them to share their knowledge with friends and family to collectively adopt sustainable behaviors. WES strives to offer students and adults practical tools to promote the long-term health of waterways in our community, such as the Kellogg-Mt. Scott Creek, Clackamas River, Johnson Creek, and Tualatin River watersheds.

WES' Watershed Health education goal is two-pronged:

1. Educate and inform students and adults about issues in watershed health.
2. Motivate and inspire them to act by reducing our collective impact on water quality.

How do we achieve this?

Our comprehensive "Watershed Health Education Program" (WHEP) provides the public with watershed science, environmental literacy, and community engagement opportunities. Through the activities outlined below, we aim to instill watershed protection values, attitudes, commitment, and skills that empower our communities to protect and improve water quality:

- Provide tours of treatment plants and project sites
- Contract with education providers to conduct programs in the classroom and field trips
- Sponsor educational events and in-kind partnerships
- Actively participate in regional education events
- Table at community events
- Support education programming through the RiverHealth Stewardship Grant Program
- Implement education programming through an intergovernmental agreement (IGA) with Clackamas Community College/Environmental Learning Center
- Actively participate in Regional Clean Water Partnerships (i.e., Regional Coalition for Clean Rivers and Streams, and Tualatin Basin Public Awareness Committee)
- Participate in regional education and outreach professional groups (i.e., Pacific Northwest Clean Water Association, Oregon Association of Clean Water Agencies)

Education Objectives

The list below captures what WES will achieve regarding stormwater, watershed health, and wastewater education.

- Communicate healthy watershed messages and influence behavioral change
- Support equitable opportunities for historically underserved and excluded communities to benefit from watershed health education and opportunities to partner with our work
- Increase understanding of specific stormwater quality issues and communicate how to minimize or reduce pollutant discharges in stormwater runoff
- Increase understanding of wastewater challenges that cause issues for the collection system and the water resource recovery facilities
- Encourage participation in the protection and enhancement of local waterways and wildlife including preventing and reporting of illicit discharges and spills

Key Behaviors & Attitudes

WES staff and the education contractors we work with abide by the following framework while working with students and the public.

Understanding & Knowledge

- Define and understand the concepts of stormwater, wastewater, and watershed
- Understand the causes and effects of stormwater pollution and be able to offer reasonable solutions
- Identify their watershed and its key features
- Recognize the dependence of human, animal, and plant species on a healthy watershed
- Understand the interconnectedness of the watershed, themselves, and their community
- Problem-solve strategies to improve water quality and watershed health
- Be aware of the complex infrastructure and jobs involved in water resource management

Beliefs & Attitudes

- I am responsible for the health of my watershed.
- I am an integral component of my watershed and its health.
- I can improve the health of my watershed and my community.
- It is important to me and my community to have a healthy watershed.
- I am empowered to think about the short and long-term effects of my actions on the watershed and my community.
- Be a collaborative partner in building a resilient clean water future where all people benefit, and rivers thrive.

Behavior

- Care for the long-term health of the watershed by avoiding pollutants, participating in restoration projects, and being an informed and active citizen (i.e. incorporating "green" infrastructure and design at home and in business)
- Adoption of water-friendly living and working practices
- Participate in community engagement and environmental stewardship

Public Outreach Content and Channels

A yearly content calendar is developed to educate the public on issues pertaining to watershed health awareness and protection.

Priority Audiences

The MS4 permit requires us to communicate with:

- General public (e.g., renters, homeowners, homeowner associations, youth, and other residents)
- Local elected officials, land use planners, engineers, developers, and/or employees of the co-permittees responsible for implementing the Stormwater Management Program (SWMP), as appropriate

- Construction site operators
- Private storm system operators
- Businesses (including industrial and commercial facilities); and,
- Any other groups/entities as appropriate.

Communication Tools to Promote Education Content

We use the following tools and platforms to share our messaging.

- Nextdoor, Facebook, Instagram, Twitter/X, including sharing and "liking" partner posts
- Happy Valley News advertisements
- WES Quarterly E-Newsletter
- Sharing educational content with partners (Gladstone, Oregon City, Chambers) for their communication channels
- Blog post on WES website
- Bill inserts
- TV spots when sharing regional messages with Regional Coalition for Clean Rivers and Streams
- Brochures and web pages on specific topics and specific audiences (such as education on erosion control measures for construction site operators)

Public Education and Outreach Matrix

WES provides educational opportunities for students and adults on a variety of topics. The pollutants or appropriate/healthy chemical constituents addressed by this work include: dissolved oxygen, pH, temperature, conductivity, E. coli, hardness, total alkalinity, dissolved organic carbon (DOC), total suspended solids (TSS), nitrate, ammonia-nitrogen, total phosphorus, ortho-phosphorus, total recoverable and dissolved copper, lead, and zinc, and pesticides. The behaviors and Best Management Practices shown in the matrix will reduce concentrations of these and many other pollutants in stormwater.

This matrix provides a summary of the behaviors and the messages we communicate, organized by target audience. Each cell in the matrix represents a project, program, or activity we use to communicate each message/behavior. The projects, programs, and activities may take many different forms, such as signage, brochures, websites, events, news articles, presentations, social media posts, field trips, classroom programs, and others. WES may implement these projects, programs, and activities with partners, including hired contractors. The following matrix illustrates the products or deliverables we use to communicate various messages to each audience, along with the behavior change we are aiming for. WES will summarize or report on metrics and/or tracking measures shown in the annual reporting templates.

Topic	**Audience**	**Message**	**Deliverables**	**Behavior Change**
Illicit Discharges Spills & Leaks	Retail Customers Cities/Wholesale Customers	How to report a discharge How to clean up a discharge	Drain Markers Dos and Don'ts for Food Service Employees brochure	Report or clean a spill when you see it

	Education Partners Underserved Community Members Business Landowners Students		RV Waste Disposal Handout Mobile carpet cleaner Brochure Web reporting How to clean spills & leaks Fact Sheet Spills Webpage	No dumping into storm drains, rivers, or streams
Pesticide and Fertilizer Use	Retail Customers Cities/Wholesale Customers Education Partners Underserved Community Members Business Landowners Students	Reduce and/or minimize the use of pesticides, herbicides, fertilizers, and other household chemicals.	Lawn Care Webpage Watershed Health Brochure Landscape Maintenace for Professional Landscapers Fact Sheet and webpage KPTV PSAs (videos and social media) How to talk to your landscaper about these issues fact sheet	Reduce the use of pesticides, herbicides, fertilizers, and other household chemicals Use only according to label instructions
Topic	**Audience**	**Message**	**Deliverables**	**Behavior Change**
Pick-up Pet Waste	Pet owners Property owners Students	Bacteria from pet waste negatively impacts our waterways including fish, wildlife, and water quality	"There is no poop fairy" bookmarks and yard signs Poop Fairy Webpage Dog waste poop bags provided to NCPRD	Pick up after your pet

			Pollution Prevention Guide for Property Managers brochure Signage partnership w/Dog Services Signs in parks	
Reduce Litter & Discharge	Retail Customers Cities/Wholesale Customers Education Partners Underserved Community Members Business Landowners Students	Dispose of trash properly	SOLVE Summer Waterway Clean-up Series Clackamas River Basin Council "Down the River" Clean-up	Proper disposal of trash. Understanding: Individual behaviors affect water quality.
Topic	**Audience**	**Message**	**Deliverables**	**Behavior Change**
Watershed Awareness & Education	Retail Customers Cities/Wholesale Customers Education Partners Underserved Community Members Business Landowners Students	Storm drains lead to creeks and rivers, "if it's on the ground, it's in the water" Protect water quality buffers, take measures to improve stream health	Protecting Our Watersheds brochure "If it's on the ground, it's in the water" webpage Volunteer opportunities through RiverHealth grants, SOLVE, and watershed councils Tree Planting Events	Understanding that individual behaviors affect water quality. Increase in stewardship

		Catch basins lead to rivers and streams	Vegetated Buffer standards Facility Tour of Water Resource Recovery Facility Classroom Presentations Children's Clean Water Festival Celebrating Water Event	
Operation & Maintenance Best Practices for Private Stormwater Facilities	Cities/Wholesale Customers Private stormwater facility owners Business Landowners	Maintain your stormwater facilities for better water quality.	Inspections Handouts Vegetated Stormwater Facility Maintenance Class at CCC	Proper maintenance of facilities
Topic	**Audience**	**Message**	**Deliverables**	**Behavior Change**
Good Housekeeping Best Practices for Property Owners	Businesses Landowners in locations with septic systems General public Public employees	Implement BMPs to avoid discharges from power washing, carpet cleaning, and auto repair and maintenance. Take proper care of septic systems Respond to and prevent illegal	Brochures, Post info on our website, Social media posts Septic system Brochures	Proper disposal of these discharges Septic systems properly maintained

		solid waste dumping	Signage on sites we own	Reduced incidents of illegal dumping
Construction Site Control Measures	Cities/Wholesale Customers Construction Site Operators (contractors) Landowners	Construction site control measures are important for protecting water quality Low-impact development and green infrastructure approaches.	Inspections Handouts Post info on our website on trainings	Proper use of construction site control measures
Topic	**Audience**	**Message**	**Deliverables**	**Behavior Change**
Mercury Disposal	Retail Customers Cities/Wholesale Customers Dental offices Underserved Community Members Business that use mercury	Mercury is hazardous & highly regulated, dispose of it appropriately	"A Closer Look at Mercury" brochures from ACWA Construction Site Control Measures and BMPs	Dispose properly of mercury-containing items
Wipes Disposal	Retail Customers Cities/Wholesale Customers Education Partners Underserved	Don't Flush Wipes Trash it, Don't Flush it Keep the wipes out	Wipes Out Brochure What Not To Flush Game	Less/no flushing of non-flushable wipes

	Community Members Business General public Students			
Drug Disposal	General public	Dispose of unused/ unwanted medications properly	Information posted on our website and social media	Unused medications disposed in trash or drop-off sites
Topic	**Audience**	**Message**	**Deliverables**	**Behavior Change**
Fats, Oils, and Grease (FOG)	Retail Customers Cities/Wholesale Customers Education Partners Underserved Community Members Food Service Business General public Students	FOG causes blockages in the sanitary sewer system, which leads to costly maintenance	FOG brochure Source Control Inspections FOG Webpage	Properly dispose of Fats, Oils, and Grease

Performance Management

MS4 Reporting Guidelines *for Education and Outreach*

The following tables are the templates we use to report on our education and outreach tracking measures required by our MS4 permit.

(I) BMP Activities

BMP Activity	What's included in BMP (SWMP)	BMP Pg. # in SWMP	Measurable Goal #	Measurable Goal	Tracking Measure	Frequency
Implement **Stormwater** Public Education & Outreach Strategy	16	17	ED-1.1-b	Each year complete at least 80% of planned written communication outputs (e.g. newsletters, websites and pamphlets) described in the Strategy. Implement 24 communication outputs	Annual number of written communication outputs completed.	Annual
Publicly **Accessible** Website	23	25	PP-1.1-a	Post MS4 Permit renewal documents to WES website by April 3, 2026.	Date documents posted	One-time
Publicly **Accessible** Website	24	25	PP-1.1-b	Post MS4 Annual Report to each SWMP Document Participant's website by Dec. 5 each year.	Date(s) MS4 Annual Report posted to each SWMP Document Participant's website each year.	Annual
Publicly **Accessible** Website	24	25	PP-1.1-f	Annual review of website for current information and accuracy.	Date of completed review.	Annual
Facilitate Illicit Discharge Reporting	24	25	PP-1.2	Conduct at least one IDDE reporting publicity campaign during the MS4 Permit term.	Running total of IDDE reporting publicity campaigns to date.	One-time

(II.) Measurable Goals and Tracking Measures

ID	Measurable Goals	Tracking Measures
PP-1.1-a	Post MS4 Permit Renewal documents to WES website by April 3, 2026	Date documents posted
PP-1.1-b	Post MS4 Annual Report to each SWMP Document Participant's website by Dec. 5 each year.	Date(s) MS4 Annual Report posted to each SWMP Document Participant's website each year
PP-1.1-c	Post draft documents for public comment for at least 30-days	Title of each document and starting and ending date of document postings on website
PP-1.1-d	Consideration of comments received during public comments periods.	Summary of comments received and how they were addressed prior to final issuance for each document that was available for public comment.
PP-1.1-e	Post reports, plans and other documents to the website.	Title of each document and date of posting
PP-1.1-f	Annual review of website for current information and accuracy	Date of completed review
PP-1.2	Conduct at least one IDDE reporting publicity campaign during the MS4 Permit term	Running total of IDDE reporting publicity campaigns to date

(III.) Adaptive Management

As we adapt the plan to meet the needs of the MS4 permit, below is a chart to track adjustments made to the Public Outreach and Education Strategy.

ACTION	DATE COMPLETED
Removed activities from BMP list and matrix that we no longer execute.	March 2025

Annual reporting templates:

- 1A. MS4_Template 1 Public Education and Outreach BMPs
- 1B. MS4_Template 2 Public Participation BMPs
- 1C. TMDL Annual Reporting in support of Education and Outreach

1A. MS4 Template 1 Public Education and Outreach BMPs

BMP #	BMP Activity	SWMP Pg. #	Measu-rable Goal #	Measurable Goal	Tracking Measure	Frequency	Key Deadline
ED-1.1	Implement the Stormwater Public Education and Outreach Strategy	17	ED-1.1-a	During the MS4 Permit term, include educational goals targeting audiences and topics in the Strategy.	Running total of target audiences included in the Public Education and Outreach Strategy.	Annual	Annual
ED-1.1	Implement the Stormwater Public Education and Outreach Strategy	17	ED-1.1-b	Each year complete at least 80% of planned written communication outputs (e.g., newsletters, websites, and pamphlets) described in the Strategy.	Annual number of written communication outputs completed.	Annual	Annual
ED-1.1	Implement the Stormwater Public Education and Outreach Strategy	17	ED-1.1-b	Each year complete at least 80% of planned written communication outputs (e.g., newsletters, websites, and pamphlets) described in the Strategy.	Annual percentage of written communication outputs completed.	Annual	Annual

ED-1.1	Implement the Stormwater Public Education and Outreach Strategy	17	ED-1.1-c	Each year hold or co-sponsor at least three in-person public education opportunities (e.g., training, seminars, and kids' programs).	Annual number of in-person education opportunities.	Annual	Annual
ED-1.2	Update the Stormwater Public Education and Outreach Strategy	17	ED-1.2	Update the Strategy as needed. Add educational goals, address and prioritize target audiences and required pollution reduction topics, and assign respons. to each co-permittee who are affected.	Date(s) the plan was updated.	As-needed	Annual
ED-2.1	Erosion Control Outreach	21	ED-2.1	Annually update erosion trainings on website.	Date of website update with trainings.	Annual	Annual
ED-2.2	Private Stormwater Facility Operations and Maintenance Outreach	21	ED-2.2-a	Create private stormwater facility maintenance handouts during the MS4 Permit term.	Date handouts created.	One-time	9/30/2026
ED-2.2	Private Stormwater Facility Operations and Maintenance Outreach	21	ED-2.2-b	Hold one maintenance workshop during the MS4 Permit term.	Date of workshop.	One-time	9/30/2026
ED-2.2	Private Stormwater Facility Operations and Maintenance Outreach	21	ED-2.2-b	Hold one maintenance workshop during the MS4 Permit term.	Number of owner/operators invited to workshop.	One-time	9/30/2026
ED-2.2	Private Stormwater Facility Operations and Maintenance Outreach	21	ED-2.2-b	Hold one maintenance workshop during the MS4 Permit term.	Number of attendees at workshop.	One-time	9/30/2026
ED-2.3	Source Control Outreach and Technical Assistance	21	ED-2.3	Incorporate spill prevention outreach to businesses into DTD Resource Conservation & Solid Waste (RCSW) certification.	Date spill prevention language incorporated into RCSW certification	One-time	9/30/2026
ED-2.4	Pesticide, Herbicide, and Fertilizer Technical Assistance and Training	21	ED-2.4	Hold one IPM check-in meeting for SWMP Document Participant staff during the MS4 Permit term.	Date of meeting.	One-time	9/30/2026

ED-3.1	Evaluation of Education and Outreach Activities	22	ED-3.1	Evaluate the SWMP Document Participants' Education and Outreach activities by April 3, 2026.	Date evaluation results included in permit renewal package.	One-time	4/3/2026

1B. MS4 Annual Reporting for Public Participation

BMP #	BMP Activity	SWMP Pg. #	Measurable Goal #	Measurable Goal	Tracking Measure	Frequency
PP-1.1	Publicly accessible website	25	PP-1.1-a	Post MS4 Permit renewal documents to WES website by April 3, 2026.	Date documents posted.	One-time
PP-1.1	Publicly accessible website	25	PP-1.1-b	Post MS4 Annual Report to each SWMP Document Participant's website by Dec. 5 each year.	Date(s) MS4 Annual Report posted to each SWMP Document Participant's website each year.	Annual
PP-1.1	Publicly accessible website	25	PP-1.1-f	Annual review of website for current information and accuracy.	Date of completed review.	Annual
PP-1.2	Facilitate Illicit Discharge Reporting	25	PP-1.2	Conduct at least one IDDE reporting publicity campaign during the MS4 Permit term.	Running total of IDDE reporting publicity campaigns to date.	One-time
PP-2.1	Public Stewardship	27	PP-2.1-a	Each year budget for and award stewardship grants to community groups, businesses, and property owners to improve the health of watersheds in the Permit area.	Annual number of and value of grants awarded.	Annual
PP-2.1	Public Stewardship	27	PP-2.1-b	Each year hold or co-sponsor at least one volunteer activity with an education component.	Annual number of volunteer activities with an education component.	Annual

1C. TMDL Reporting in support of Education and Outreach

Reporting Question (yes/no): During the TMDL Implementation Plan (IP) year, was the public education program which is required by the MS4 Permit implemented? *A yes/no answer shall be provided in each TMDL IP annual report.*

Reference: 7.6 Public Education (document pg. 27)

Measurable milestones: During the TMDL IP year, was the public education program which is required by the MS4 Permit implemented? A yes/no answer shall be provided in each TMDL IP annual report.

Responses

- WES – Yes/No
- Clackamas County – Yes/No
- Happy Valley – Yes/No
- Rivergrove – Yes/No

Fiscal analysis: This management strategy is currently funded.

Timeline for implementation: This management strategy is currently being implemented and is an ongoing activity.

CLACKAMAS WATER ENVIRONMENT SERVICES

APPENDIX

Public Education and Outreach Strategy

Current MS4 Permit: September 2021-September 30, 2026

Contracts, IGAs, and Partners

Organization	Point-of-Contact	Amount	Start Date	End Date
Ecology in Classrooms & Outdoors (ECO)	Sarah Bercume Woods	$365,279	7/7/25	6/30/29
Clackamas River Basin Council (sub-consultant)	Amy Barton	Sub-contractor to ECO		

Intergovernmental Agreement

Organization	Point-of-Contact	Amount	Start Date	End Date
Clackamas Community College - Environmental Learning Center	Heidi Blackwell	$230,194	7/1/25	6/30/30

Ongoing Partnerships

Organization	Amount	Action
North Clackamas Parks & Recreation District (NCRPD)	$4,500 incorporated into IGA	Placing dog waste bags in NCPRD parks
Oregon Association of Clean Water Agencies (OR ACWA)		Goal is to protect and enhance Oregon's water quality. By cooperatively addressing the many water quality issues facing wastewater treatment and stormwater managers, we can be more effective advocates with our federal and state regulatory agencies, can identify areas of collaboration with other water quality stakeholders, and can pool resources to meet environmental standards more effectively.
Regional Coalition for Clean Rivers and Streams (RCCRS)	$4,250	

Events

Event	Date	Amount	Action
Children's Clean Water Festival	April	$1,000	WES: Classroom presentation led by Mike Hawkins and Victoria Mendez PGA: Attend planning meetings and participate in the event planning logistics and coordination with WES staff.
Clackamas County Celebrating Water	Spring	In-kind	Tabling event

Co-Permittee Contacts

Location	Name	Email
City of Gladstone	Justin Poyser	poyser@ci.gladstone.or.us
City of Oregon City	Marcos Kubow	mkubow@orcity.org
City of Happy Valley	Sally Curran Chris Randall	sallyc@happyvalleyor.gov; chrisr@happyvalleyor.gov
City of Johnson City		johnson.city@comcast.net; cyndejohnson07@comcast.net
City of Lake Oswego	Megan Charbonneau	Mcharbonneau@lakeoswego.city
City of Milwaukie	Riley Gill	GillR@milwaukieoregon.gov
Oak Lodge Water Services	Brad Albert and Lara Christensen	brada@olwsd.org; lara@olwsd.org
City of Rivergrove	Analeis Weidlich	manager@cityofrivergrove.com; dmclean@teleport.com
City of West Linn	Joseph Conrad, Matt Kaatz	Joseph.conrad@westlinnoregon.gov; mkaatz@westlinnoregon.gov; skelley@westlinnoregon.gov;
Clackamas County DTD	Devin Patterson	DevinPat@clackamas.us
City of Wilsonville	Jim Cartan	jcartan@ci.wilsonville.or.us
WES	Galen Hoshovsky Ron Wierenga	GHoshovsky@clackamas.us RWierenga@clackamas.us

	Andrew Swanson Robert Livingston Christopher Desiderati Gail Shaloum	AndrewSwa@clackamas.us RLivingston@clackamas.us CDesiderati@clackamas.us GShaloum@clackamas.us;

Brief Description of Each Contractor

Ecology in Classrooms & Outdoors (ECO)

ECO is a nonprofit that inspires students to care for nature and their local communities through hands-on science education and climate action. Programs include K-8th grade, Ecology for Everyone, Place-Based Units for K-5th grade and Climate Action Program for 6-12th grade. Lessons are standard-aligned and support classroom teachers in meeting academic benchmarks.

Lower Columbia Estuary Partnership

The Lower Columbia Estuary Partnership is a non-profit, a National Estuary Program, and a collection of dedicated scientists, educators, and community members who are passionate about the Columbia River. This team focuses on the lower 146 miles of the Columbia River, from Bonneville Dam to the Pacific Ocean, including the tidally influenced portions of tributaries in that area. The watershed includes 28 cities, nine counties, and 45 school districts within the states of Oregon and Washington.
Educators deliver developmentally appropriate science lessons and field trips based on the best teaching practices. Other opportunities are the “Big Canoe Program” and “Learning with Vancouver Lake.”

Clackamas River Basin Council

Focus on partnerships for clean water and to improve fish and wildlife habitat and the quality of life for those who live, work and recreate in the watershed. CRBC engages with the community through various restoration events, school visits, landowner meetings, and other local, regional and watershed-wide activities. Programs include: Clackamas360 Watershed Health Education Program (VR tour(s) in schools), Field Trips, Workshops and Webinars.

Clackamas Community College - Environmental Learning Center

ELC offers many opportunities for adults and children alike to explore and learn about the outdoors through hands-on environmental education: field trips and camps for K-12 students, continuing education training for professionals, and workshops and special events for community members. Specific programs include School Field Trips (K-5), Carrer Exploration Field Trips (6-12), the Nature Striders Preschool Program and Livestream classes about water (K-5).

North Clackamas Parks & Rec District

North Clackamas Parks & Recreation District (NCPRD) is a service district of Clackamas County dedicated to providing exceptional parks and recreation programs, facilities and services. Voters approved the formation of the District in 1990 because they saw the need for greater parks and recreation services in the north end of the county.
NCPRD offers youth sports, youth camps and adult programs. Examples: “STEAMventures” series, “Play-Well” series.

Collateral to use (FROM: Watershed Health Education Program Matrix)

Section Key:

- *Key theme*
  - *Topic*
  - *Behavior*
    - *Resources*

CONT. (PGA-supported collateral to use FROM: Watershed Health Education Program Matrix)

- **Illicit Discharges**
  - Topic: Impacts of illicit discharges on receiving waters and how to report them.
  - Behavior 1: Report spills & discharges that may enter storm drain or stream
    - Publicly accessible **website**
      - https://www.clackamas.us/wes/education
    - Web reporting **form**
      - https://www.clackamas.us/wes/reportaproblem.html
    - **Fact-sheet** Spills & Leaks for Homeowners
      - https://www.clackamas.us/wes/spills-and-leaks
    - Do's and Don'ts for Food Service Employees **brochure**
      - S:\Communications\Education\IDDE files
    - RV Waste Disposal **handout** (ACWA)
      - S:\Communications\Education\IDDE files
    - Protect Our Watersheds **brochure**
      - S:\Communications\Communications plans & projects\External Communications\Print Communications\Brochures\watershed_brochure_tri_2021\watershed_brochure_tri_2021
    - Water Pollution Prevention **Guide** for Property Managers
      - S:\Communications\Education\IDDE files
      - https://dochub.clackamas.us/documents/drupal/ff3e72cf-56e5-4bdf-85e2-18a8a4602775

  - Topic: Best Management Practices (BMPs) to avoid discharges from power washing, carpet cleaning, and auto repair and maintenance.

  - Behavior 2: Follow vehicle washing & maintenance best practices, Prevent soapy/ dirty water from entering storm drains.
    - KPTV car wash PSA
      - https://www.youtube.com/watch?v=EaQAx8sK_uc
    - Protect Our Watershed brochure
      - S:\Communications\Communications plans & projects\External Communications\Print Communications\Brochures\watershed_brochure_tri_2021\watershed_brochure_tri_2021

- Behavior 3: Follow pressure washing BMPs
  - Fact sheet and website
    - https://www.clackamas.us/wes/pressure-washing
  - Water Pollution Prevention Guide for Property Managers
    - S:\Communications\Education\IDDE files
    - https://dochub.clackamas.us/documents/drupal/ff3e72cf-56e5-4bdf-85e2-18a8a4602775
  - Fact sheet and website
    - https://www.clackamas.us/wes/pressure-washing

- **Spills & Leaks**
  - Topic: Appropriate practices or techniques to avoid adverse water quality impacts due to impervious surfaces.
  - Behavior 1: Minimize creation of new effective impervious surfaces
    - Sponsor watershed wide **events**
      - Includes: science talks, CCC Water Friendly Gardening webinar series, other community events
    - 273-page "Stormwater Standards" **PDF** to avoid adverse water quality impacts due to new impervious surfaces
      - https://dochub.clackamas.us/documents/drupal/8d85190a-fd37-4c24-a2c6-e26026b7dae8
  - Behavior 2: Sweep don't wash impervious surfaces
    - Sweep don't wash content on **external website**
      - https://www.clackamas.us/wes/pressure-washing

- **Pesticide and Fertilizer Use**
  - Topic: BMPs for proper use, application, storage, and disposal of pesticides, herbicides, fertilizers, and other household chemicals.
  - Behavior 1: Reduce/minimize/safe use of yard chemicals: pesticides, fertilizers
    - **Web page** lawn care tips
      - https://www.clackamas.us/wes/lawn-care-tips-to-help-protect-our-water
    - Water Pollution Prevention **Guide** for Property Managers
      - S:\Communications\Education\IDDE files
      - https://dochub.clackamas.us/documents/drupal/ff3e72cf-56e5-4bdf-85e2-18a8a4602775
    - Landscape Maintenance for Professional Landscapers **brochure** (ACWA+WES)
      - S:\Communications\Education\IDDE files
  - Behavior 2: Use natural products such as compost, slow-release fertilizer if any
    - KPTV **PSA**
      - S:\Communications\Education
    - Protect Our Watersheds **brochure**

- S:\Communications\Communications plans & projects\External Communications\Print Communications\Brochures\watershed_brochure_tri_2021\watershed_brochure_tri_2021

♣ **Web page** – Looking To Hire a Landscaper?
- https://www.clackamas.us/wes/landscape-maintenance
- Print brochure: https://oracwa.org/idde-outreach-toolkit/

o Behavior 3: Use native vegetation on your property to minimize the need for chemicals

o Behavior 4: Properly dispose of unwanted household chemicals and drugs
♣ Advertise Year-round drug take back locations
- https://www.clackamas.us/healthcenters/takeback.html?fbclid=IwAR2hZ6p1y7iEHV9VO5ODxHANrZJu_qoUljb3dQ1Rkx5Gtwl7ctUrXmfZN-w

♣ Water Pollution Prevention Guide for Property Managers
- https://dochub.clackamas.us/documents/drupal/ff3e72cf-56e5-4bdf-85e2-18a8a4602775

o Behavior 5: No drugs or hazardous chemicals down the drain
♣ Brochure: Have leftover medicines? (WES/Sheriff/H3S), place at doctor/dentist waiting rooms & pharmacies
- https://www.clackamas.us/wes/dont-flush-prescription-and-over-the-counter-medications

♣ Advertise National Prescription Drug Take Back Day
- https://www.clackamas.us/wes/dont-flush-prescription-and-over-the-counter-medications

♣ Water Pollution Prevention Guide for Property Managers
- R:\Communications\Education\IDDE files
- https://dochub.clackamas.us/documents/drupal/ff3e72cf-56e5-4bdf-85e2-18a8a4602775

o Behavior 6: Avoid chemicals for roof maintenance and moss treatment
♣ NCAP moss removal fact sheet on web
- https://dochub.clackamas.us/documents/drupal/ad9e796c-87d8-484e-ad9c-f464e5fef7f9

- **Pick up your waste**
o Topic: BMPs to avoid or reduce discharge of litter and trash to the MS4 or surface waters.
o Behavior 1: Pick up pet waste and dispose of in trash
♣ Dog pickup bags in parks
♣ "There is no poop fairy" bookmark
♣ Water Pollution Prevention Guide for Property Managers
- R:\Communications\Education\IDDE files

- https://dochub.clackamas.us/documents/drupal/ff3e72cf-56e5-4bdf-85e2-18a8a4602775
  - ♣ Website
    - https://www.clackamas.us/wes/there-is-no-poop-fairy
  - ♣ Signage partnership w/Dog Services
  - ♣ Signs in parks

- Behavior 2: Volunteer litter cleanups, dispose of litter properly, cigarette butts in trash not street
  - ♣ SOLVE waterway cleanup series sponsor
  - ♣ Sponsor other cleanups

- **Reduce Litter and Discharge**
  - Topic: BMPs for recycling programs
  - Behavior 1: Encourage event organizers to implement recycling events (See Pg. 98 of SWMP)
    - ♣ Social media posts, partner with DTD-Resource Conservation & Solid Waste group
      - https://www.clackamas.us/recycling

  - Behavior 2: Cleanup drips & spills from pavement, stop fluids from vehicles from entering storm drains, fix leaks & drops
    - ♣ Protect Our Watershed brochure
      - R:\Communications\Communications plans & projects\External Communications\Print Communications\Brochures\watershed_brochure_tri_2021\watershed_brochure_tri_2021
    - ♣ Encourage Eco Biz certification for auto repair businesses
      - https://www.clackamas.us/wes/education

  - Behavior 3: Use LID approaches
    - ♣ Stormwater design standards and BMP Sizing Tool
      - https://www.clackamas.us/wes/bmp-sizing-tool
    - ♣ Promote applications to RiverHealth Stewardship Program for retrofits
      - https://www.clackamas.us/wes/riverhealth
    - ♣ Stormwater design standards
      - https://dochub.clackamas.us/documents/drupal/8d85190a-fd37-4c24-a2c6-e26026b7dae8
    - ♣ Stormwater design standards and BMP Sizing Tool
      - https://www.clackamas.us/wes/bmp-sizing-tool
    - ♣ Stormwater design standards include O&M

- https://dochub.clackamas.us/documents/drupal/8d85190a-fd37-4c24-a2c6-e26026b7dae8

- Behavior 4: Properly maintain LID facilities
  - Water Pollution Prevention Guide for Property Managers
    - R:\Communications\Education\IDDE files
    - https://dochub.clackamas.us/documents/drupal/ff3e72cf-56e5-4bdf-85e2-18a8a4602775

- **Watershed Awareness & Education**
  - Topic: Watershed awareness education, including how storm drains lead to local creeks and rivers, and potential impacts to fish and other wildlife.
  - Behavior 1: Storm drains lead to creeks and rivers, "if it's on the ground, it's in the water"
    - Protecting Our Watersheds brochure
      - S:\Communications\Communications plans & projects\External Communications\Print Communications\Brochures\watershed_brochure_tri_2021\watershed_brochure_tri_2021
  - Behavior 2: Individual behaviors affect water quality.
    - Volunteer opportunities through RiverHealth grants and SOLVE
      - https://www.clackamas.us/events?dept=561
  - Behavior 3: Protect water quality buffers, take measures to improve stream health
    - Volunteer opportunities through RiverHealth grants, SOLVE, watershed councils and others
      - https://www.clackamas.us/events?dept=561
    - Vegetated Buffer standards
      - https://dochub.clackamas.us/documents/drupal/dc78f487-0d19-45c1-a9fb-02ff0aad4fdb
  - Behavior 4: Increase science literacy & understanding of watershed health for students & adults
    - Sponsor & publicize Cleanups, Watershed Wide Events, science talks, Water Friendly Garden web series, others
      - https://www.clackamas.us/events?dept=561
  - Behavior 5: Plant trees to intercept rain
    - Protect Our Watershed signs

- **O&M Best Practices for Private Stormwater Facilities**
  - Topic: Operation & Maintenance practices for privately owned stormwater quality management facilities.
  - Behavior: Stormwater facilities protect stream health when properly maintained. Stormwater facilities need regular maintenance, provide info on proper maintenance.
    - Protect Our Watershed signs
    - Private storm drainage facilities maintenance plan or public maint agreement required at installation
      - https://www.clackamas.us/wes/swm
    - Annual storm drain structure maintenance report required
      - https://www.clackamas.us/wes/swm
    - Private storm drainage facilities maintenance plan or public maint agreement required at installation
      - https://www.clackamas.us/wes/swm
    - WES provide periodic inspections to monitor for maintenance/ function & enforcement when necessary
      - https://www.clackamas.us/wes/swm
    - Storm drain cleaning assistance program (SCAP)
      - https://www.clackamas.us/wes/swm
    - Water Pollution Prevention Guide for Property Managers
      - S:\Communications\Education\IDDE files
      - https://dochub.clackamas.us/documents/drupal/ff3e72cf-56e5-4bdf-85e2-18a8a4602775

- **Construction Site Control Measures**
  - Topic: Construction site control measures and BMPs, including information on where in-depth training on erosion prevention and sediment control can be obtained.
  - Behavior 1: Permits are required when land disturbance threshold is reached
    - Erosion and sediment control permits, Erosion Prevention and Sediment Control Planning and Design Manual online & permit lobby
      - https://www.clackamas.us/wes/erosion.html
  - Behavior 2: Keep soil on site, awareness of effect on streams

- **Spill Prevention**
  - Topic: Spill prevention messages for businesses and City/County municipal property owners with potential to spill hazardous substances.

- PSA: KPTV Sweep don't wash and web page
  - https://www.clackamas.us/wes/spills-and-leaks
- Water Pollution Prevention Guide for Property Managers
  - S:\Communications\Education\IDDE files
  - https://dochub.clackamas.us/documents/drupal/ff3e72cf-56e5-4bdf-85e2-18a8a4602775

- **WES-Identified Stormwater Topics**
  - Topic: Stormwater issues of significance identified by WES.
  - Behavior 1: Water industry careers/ recruiting
    - Meet the Experts videos
      - https://www.clackamas.us/wes/careers.html

  - Behavior 2: Keep catch basins by your home/business clear from leaves. Put leaves in the yard debris bin.
    - Dog bags in parks and giveaway holders at events
    - Water Pollution Prevention Guide for Property Managers
      - R:\Communications\Education\IDDE files
      - https://dochub.clackamas.us/documents/drupal/ff3e72cf-56e5-4bdf-85e2-18a8a4602775
    - Banners or signs in dog parks, other select locations
    - Poop fairy bookmarks

  - Behavior 3: Partnerships matter to the community, help get work done (watershed councils, schools, businesses, etc.).
    - Participating in festivals, Flood of Information, other partnership events
    - WES staff participate in watershed councils, ACWA, train other depts

- **Mercury Disposal**
  - Topic: Dispose properly of mercury-containing items.
  - Behavior: Mercury is hazardous & highly regulated, dispose of it appropriately.
    - Add link to Metro mercury info to WES website
      - https://www.oregonmetro.gov/tools-living/healthy-home/common-hazardous-products/mercury-and-pcb-containing-items.%20Add%20link%20to%20Metro%20mercury%20info%20to%20website.
    - "A Closer Look at Mercury" brochures from ACWA
    - See #10 Construction Site Control Measures and BMPs

- **Don't flush wipes**
  - Topic: Don't flush wipes (Sanitary program)
  - Behavior 1: Keep the wipes out.
    - Protecting Our Watersheds brochure
      - R:\Communications\Communications plans & projects\External Communications\Print Communications\Brochures\watershed_brochure_tri_2021\watershed_brochure_tri_2021
    - Signage on porta-potties during various festivals/events
    - PRINT and WEB: Keep the Wipes Out
  - Behavior 2: Toilets are not trash cans.
    - VIDEO: Trash It, Don't Flush It
      - https://www.clackamas.us/wes/trash-it-dont-flush-it

- **FOG**
  - Topic: Properly manage Fats, Oils, and Grease (Sanitary program)
  - Behavior 1: Industrial processes, FOG, and any discharge besides uncontaminated stormwater go to sanitary sewer
    - WEB: Fog Monster
      - https://www.clackamas.us/wes/keep-fog-out-of-your-pipes
    - FOG brochure (Source Control Program) and Steps for Food Service Business
      - S:\Communications\Communications plans & projects\External Communications\Print Communications\Brochures
    - Protecting Our Watersheds brochure
      - S:\Communications\Communications plans & projects\External Communications\Print Communications\Brochures\watershed_brochure_tri_2021\watershed_brochure_tri_2021
    - Dos & Don'ts Food Svc Employees (ACWA)
      - S:\Communications\Education\IDDE files
  - Behavior 2: Freeze the grease, dispose in trash.
    - PRINT: Trap the Grease in the Kitchen (ACWA)
      - S:\Communications\Education\IDDE files

Examples of messages used throughout the year

Spills and Leaks	Learn more about steps you can take to prevent spills and leaks, clean up a small leak, or who to contact if the spill is hazardous or an emergency.

	https://www.clackamas.us/wes/spills-and-leaks
Pressure Washing	Learn more about steps you can take when you are pressure washing to help protect our streams, rivers, and drinking water by following a few quick, easy tips.
	https://www.clackamas.us/wes/pressure-washing
If it's on the ground, it's in the water	When trash — plastic bags, bottles, cigarette butts, etc. — is thrown on the ground, it gets washed into storm drains and directly into our waterways. In addition to potentially choking, suffocating, or disabling aquatic life like ducks, fish, turtles, and birds, litter decreases oxygen levels in the water when it decays. Remember, if it's on the ground, it's in our water.
	https://www.clackamas.us/wes/on-the-ground
Hiring a Landscape maintenance service	Learn more about how you can help protect our streams, rivers, and drinking water by following a few quick, easy tips.
	https://www.clackamas.us/wes/landscape-maintenance
FOG	These days, many of us are doing a lot more cooking in the home. Please be aware that fats, oils and grease (FOG) found in meat, fish, butter, cooking oil, mayonnaise, milk, sauces, food scraps and various ingredients can cause expensive problems if poured down the sink or into your garbage disposal. FOG builds up by sticking to the sides of sewer pipes. Grease-blocked sewer pipes can cause sewage overflows in your home or your neighbor's home causing expensive cleanups and other problems. The good news it is that is easy to avoid these problems! Learn more from your friends at Clackamas Water Environment Services!
	https://www.clackamas.us/wes/keep-fog-out-of-your-pipes

KPTV ad OMRI	**Video** With many of us spending so much time at home, a lot of us are deciding that now is a good time to get some yardwork done. Before you get to work, please remember there are a few simple things you can do to help protect our local rivers and streams. Watch this friendly video reminder from Clackamas Water Environment Services, KPTV and our other Clean Water Partners to learn how to help protect our shared environment.
	https://www.youtube.com/watch?v=Y8FGAoJnGdc
KPTV Ad Storm Drains	**Video** Heavy rainfall can lead to flooding if storm drains get clogged with leaves or other debris. Watch this friendly video reminder from Clackamas Water Environment Services, KPTV and our other Clean Water Partners to find out what you can do to protect your home.
	https://www.youtube.com/watch?v=mz17gCG2WoE
KPTV Car Wash	**Video** What goes down your driveway can get to our streams and rivers. Watch this short video and get tips from Clackamas Water Environment Services, KPTV and our clean water partners to find out how you can get your car clean and still protect our waterways. Learn more about how you can protect our water.
	https://www.youtube.com/watch?v=PgRL5pMtW1I
Pesticides	Lawn Care Tips to Help Protect Our Water. While pesticides, herbicides, and fertilizers can help control pesky weeds and insects, they can also cause other problems. Your friends at Clackamas Water Environment Services want to remind you that all pesticides have some level of toxicity that can be harmful to honey bees, earthworms, aquatic bugs, fish and people. Learn how you can help protect the environment while taking care of your yard
	https://www.clackamas.us/wes/lawn-care-tips-to-help-protect-our-water
Storm Drains	If you are able, use a rake to clear nearby storm drains of leaves and other debris to reduce the chance of flooding near your home or business.

	Find more helpful hints from your friends at Clackamas Water Environment Services
	https://www.clackamas.us/news/2024-11-12/clear-storm-drains-to-protect-your-property-and-our-water
Pet Waste	Did you know that there are nearly 100,000 family dogs in Clackamas County? We love our four-legged friends, even though they produce 13,000 tons of waste every year! Please be a good neighbor and pick up after your pet. Pet waste can be carried by stormwater runoff into rivers and streams where it can harm aquatic life and our shared environment. Thank you for your help! Learn more from your friends at Clackamas Water Environment Services:
	https://www.clackamas.us/wes/there-is-no-poop-fairy
Household products	Common household and yard products can be hazardous to fish and wildlife. Learn what you can do toy protect the environment and our water. What you can do help:
	https://www.clackamas.us/news/2022-11-29/safely-use-hazardous-household-products
Trash it, Don't Flush it	**Video** Flushing trash doesn't make it magically disappear. It either clogs pipes or stops operation at the wastewater system. So, trash it... don't flush it.
	https://www.clackamas.us/wes/trash-it-dont-flush-it

Education and Outreach (ED)

ED section from the 2024 MS4 Permit Shared Stormwater Management Program Document

Regulatory Overview

The MS4 permit requires SWMP Document Participants to address public education and outreach; this section is organized to include requirements from multiple schedules of the permit.

These BMPs respond to MS4 Permit requirements to conduct public education and outreach activities. These requirements are intended to increase public knowledge of stormwater impacts on receiving waterbodies and the actions that can reduce pollutants in stormwater

runoff. The public education and outreach program also supports other aspects of the stormwater management program to:

- Increase understanding of specific stormwater quality issues and which pollutants, products, and behaviors contribute to problems
- Communicate and demonstrate how to minimize or reduce pollutant discharges in stormwater runoff
- Encourage participation in the protection and enhancement of local waterways and wildlife including preventing illicit discharges and
- Facilitate reporting of illicit discharges and spills.

Requirement Summary for Education and Outreach

SCHEDULE	REQUIREMENT	BMPS		
		ED-1	ED-2	ED-3
A.2.f	Review and Modification of the SWMP Document			■
A.3.a.i	Education and Outreach Program ❶	■	■	
A.3.a.ii	Stormwater Education Activities	■	■	
A.3.a.iii	Priority Audiences and Topics ❶ ❷ ❸	■	■	
A.3.a.iv	Tracking and Assessment	■	■	■
B.4.b. and c.	Evaluation of SWMP for Permit Renewal			■

The full text of the requirement that each BMP is addressing can be found in the 2021 MS4 Permit.
❶ See PP-1 for the public website with illicit discharge reporting instructions.
❷ See IDDE-5, EPSC-4, POST-5, PREV-8, COMM-3, and MAINT-7 for SWMP Document Participant staff training.
❸ See POST 2 for low impact development and green infrastructure approaches, COMM-2 for commercial and industrial facility pollution prevention, PREV-3 regarding pesticide and fertilizer BMPs, PREV 4 regarding BMPs for litter control and recycling programs, and MAINT-4 for private storm system inspections.

BMPs

ED-1 Stormwater Public Education and Outreach Strategy

Purpose

This BMP meets the MS4 Permit requirements found in Schedule A.3.a.i, A.3.a.ii, A.3.a.iii, and
A.3.a.iv. The purpose of this BMP is to promote pollutant source control among members of the public through education and outreach activities. The Stormwater Public Education and Outreach Strategy will guide the SWMP Document Participants' activities to reach specific education and outreach goals and to coordinate activities to ensure coverage and reduce redundancy.

Geography

✓	WES Rate Zone #2, including Happy Valley
✓	WES Rate Zone #3, including Rivergrove
✓	County-maintained ROW
	Municipal Facilities in Permitted Area

General Responsibility

✓	WES
	Happy Valley
✓	Clackamas County DTD
	Other Clackamas County departments
	Rivergrove
✓	OLWS (see OLWS SWMP)

Background

On behalf of all SWMP Document Participants, WES updates and maintains an Education Matrix, most recently updated June 7, 2021, to document the stormwater public education and outreach strategy The Education Matrix describes outreach programs intended to reduce pollutants in stormwater discharges through knowledge and behavior change. The Education Matrix identifies targeted audiences, pollution reduction topics, and specific education activities.

Other Outreach

The SWMP Document Participants engage in a range of other water quality-focused education and outreach activities as part of their stormwater programs. These activities often target broad segments of the population or broad watershed health knowledge rather than the specific stormwater quality issues and audiences associated with the MS4 Permit requirements. As a result, they serve a key purpose in educating the public, but do not target specific educational goals. These activities include the Watershed Health Education Program (WHEP), social media campaigns telling the story of the surface water program, partnerships with other water quality organizations, and cooperation with regional watershed councils.

WES implements WHEP, which provides water quality-focused curriculum and science instruction for the public, including adults and school children in grades K-12. The goal of the school-age education program is to engage, inspire, and educate students to protect and restore watershed health and to influence the larger community. The program also supports broader science, technology, engineering, and math (STEM) and Next Generation Science Standards (NGSS) educational goals.

Social media campaigns use video and interactive activities to build support for watershed protection. These campaigns tell the story of the surface water program and encourage public engagement (such as inviting the public to upload photos). The campaigns may target specific education and outreach goals or may have a more general intent of increasing the audience's knowledge of and connection to local watersheds.

Partnerships with other organizations increase the impact of education and outreach funds and activities. The SWMP Document Participants partner with the watershed councils in the

region and other public agencies in the Portland-Vancouver metropolitan area as part of the Regional Coalition for Clean Rivers and Streams. This organization allows members to coordinate education and outreach activities. This coordination extends the reach of agencies' messages to connected watersheds and improves message consistency across the region. The SWMP Document Participants participate with nonprofits and other public agencies in other regional partnerships, such as the Regional Coalition for Clean Rivers and Streams, Tualatin Basin Public Awareness Committee, and others.

BMP Activities

ED-1.1 – IMPLEMENT THE STORMWATER PUBLIC EDUCATION AND OUTREACH STRATEGY

TYPE:
ONGOING
STATUS:
ONGOING

On an ongoing basis, SWMP Document Participants will implement the latest version of the strategy. Each SWMP Document Participant will contribute to implementing at least one outreach activity during the MS4 Permit term. Activities will take place throughout the year to maintain public awareness of issues, and activities will be timed to address seasonal topics when appropriate.

SWMP Document Participants' Communications and Community Relations departments will continue to maintain stormwater information on their websites. WES will continue to create public service announcements and to publish articles in County news publications. WES Watershed Protection and its education contractors will continue to implement the WHEP. WES Watershed Protection and Field Operations and DTD RCSW will continue to include stormwater messages in business outreach efforts.

ED-1.2 – UPDATE THE STORMWATER PUBLIC EDUCATION AND OUTREACH STRATEGY

TYPE:
PERIODIC
STATUS:
ONGOING

On behalf of SWMP Document Participants, WES will update the Strategy as needed.

Any updates will incorporate SWMP Document Participants' ongoing outreach activities that are not currently documented in the SWMP Document, add education goals, address and prioritize target audiences and required pollution reduction topics, and assign responsibilities to each SWMP Document Participant. Other updates will include developing new goals responsive to newly identified issues and improvements to activities targeting the existing goals.

Updates will address the *TMDL PollutantLoad Reduction Evaluation* and the *303(d) Evaluation* dated 2015 or the latest versions adopted by WES, as well as any new issues identified by staff in the previous year. If new goals are developed, WES will identify relevant audiences and activities to achieve each goal. SWMP Document Participant staff members will also

evaluate progress on existing goals and determine what changes, if any, need to be made to existing activities including targeting new audiences.

Organizations engaged in stormwater pollutant reduction outreach in the region include, but are not limited to:

- Clackamas River Water Providers
- Clackamas Soil and Water Conservation District
- Watershed Councils
- OLWS
- Cities
- Clackamas Community College John Inskeep Environmental Learning Center
- Partner groups such as the Regional Coalition of Clean Rivers and Streams, Oregon Association of Clean Water Agencies, and the Tualatin Basin Public Awareness Committee.

Responsibilities for Updating and Implementing the Stormwater Public Education and Outreach Strategy

Responsibilities Matrix	Public and Government Affairs	WES Watershed Protection	WES Field Ops	DTD RCSW
Maintain WES website	P	C		
Maintain DTD website	P			
Implement WHEP	P	P		
Conduct business outreach	S	P	P	P
Prepare news articles	P	C		
Create PSAs	P			
Update Public Education and Outreach Strategy	P	P		C/S

P = Performs Task, C = Consulted, S = Supports, I = Informed

Measurable Goals and Tracking Measures

ID	Measurable Goals	Tracking Measures
ED-1.1-a	During the MS4 Permit term, include educational goals targeting audiences and topics in the Strategy.	• Running total of target audiences included in the Public Education and Outreach Strategy.
ED-1.1-b	Each year complete at least 80% of planned written communication outputs (e.g., newsletters, websites, and pamphlets) described in the Strategy.	• Annual number of written communication outputs completed. • Annual number of planned written communication outputs. • Annual percentage of written communication outputs completed.
ED-1.1-c	Each year hold or co-sponsor at least three in-person public education opportunities (e.g., training, seminars, and kids' programs).	• Annual number of in-person education opportunities.
ED-1.2	Update the Strategy as needed.	• Date(s) the plan was updated.

ED-2 Outreach to Priority Audiences

Purpose

This BMP meets the MS4 Permit requirements found in Schedule A.3.a.i, A.3.a.ii, A.3.a.iii, and
A.3.a.iv. The purpose of this BMP is to conduct targeted outreach to key stakeholders and audiences with a greater ability to change behaviors and reduce adverse impacts on receiving waters. SWMP Document Participants identify priority audiences and topics in the Public Education and Outreach Strategy (see ED-1); the activities in this BMP are ongoing and planned.

Geography

✓	WES Rate Zone #2, including Happy Valley
✓	WES Rate Zone #3, including Rivergrove
	County-maintained ROW
✓	Municipal Facilities in Permitted Area

General Responsibility

✓	WES
✓	Happy Valley
✓	Clackamas County DTD
	Other Clackamas County departments
	Rivergrove
✓	OLWS (see OLWS SWMP)

Background

The SWMP Document Participants conduct outreach to specific audiences with a greater potential to cause or reduce adverse impact on receiving waters. These audiences include construction site operators, commercial and industrial business owners/operators, operators of private stormwater facilities, and municipal employees who maintain landscaping at municipal facilities and buildings in the Permitted Area.

For construction site operators, the SWMP Document Participants make available the *Erosion Prevention and Sediment Control Planning and Design Manual* (EPSC Planning and Design Manual) on the WES website. The manual includes design details, which are also available in PDF file format on the WES website. Erosion control education and training for construction site operators is voluntary. SWMP Document Participants offer guidance and information.

The 1200-Z Stormwater Discharge General Permit regulates stormwater discharges from industrial facilities that may reach Oregon waterways. The SWMP Document Participants regulate industrial or commercial properties that are not eligible for the 1200-Z permit through the MS4 Permit.

During the 2012-2017 MS4 Permit term, WES developed the *Strategy for the WES Industrial/Commercial Stormwater Program* in the City of Happy Valley and in the portions of SWMACC and CCSD #1 which are regulated by the MS4 permit, (Strategy for the Industrial/Commercial Stormwater Program) which was last updated on June 2013.

The strategy includes a program of source control inspections and technical assistance to improve the operators' pollution prevention practices. Owners and operators of private stormwater facilities serving industrial, commercial, churches and other religious institutions,

multi-family residential properties, and subdivisions are obligated to inspect and maintain their facilities. Many of these private operators have signed stormwater facility maintenance agreements with WES describing these obligations. WES currently offers minimal guidance to private facility owners on the operation and maintenance of their facilities.
Some guidance is provided in the Storm Drain Cleaning Assistance Program (SCAP) mailers (see MAINT-5.1).

SWMP Document Participants maintain landscapes and control vegetation on a variety of municipal properties and roads located throughout the Permitted Area. To guide vegetation and pest control activities, SWMP Document Participants follow either the 2012 *Integrated Pest Management Plan for the Surface Water Management Agency of Clackamas County, Clackamas County service District No. 1, and the City of Happy Valley* (IPM Plan), the *Clackamas County Integrated Vegetation Management Plan,* dated 2000, (IVM Plan), or an equivalent plan.

BMP Activities

ED-2.1 EROSION CONTROL OUTREACH

TYPE:
ONGOING
STATUS:
ONGOING

SWMP Document Participants will continue to offer the *EPSC Planning and Design Manual* on their websites.

SWMP Document Participants will continue to offer information on their websites and in their permit lobbies about state NPDES construction site discharge permits (1200-C and 1200-CN), which are required by DEQ for some construction sites.

Happy Valley and WES will introduce their building site inspector and offer to review specific EPSC information during pre-construction meetings for subdivision, partition, and commercial/industrial construction projects, as well as for their own CIPs. DTD will review EPSC requirements at pre- construction meetings for County CIPs.

WES will maintain a list of local and regional training opportunities for construction site erosion control and pollution prevention. WES will distribute the list to other SWMP Document Participants. All SWMP Document Participants will post the list to their websites.

Responsibilities for Erosion Control Outreach

Responsibilities Matrix	WES Development Review	DTDPermit Lobby	Happy Valley Building Division	Happy Valley Engineering Division	DTD Transportation Construction
Offer Erosion Prevention and Sediment Control Planning and Design Manual on website	P	P	P	P	

Offer EPSC brochures, flyers, and 1200-C info in permit lobbies	P	P	P		
Annually update EPSC training opportunities	P	C/S	C/S		
Publish EPSC training opportunities on websites		P	P		
Provide EPSC information at pre-construction	P S meetings			P	P

ED-2.2 PRIVATE STORMWATER FACILITY OPERATIONS AND MAINTENANCE OUTREACH

TYPE: ONE-TIME
STATUS: FUTURE

WES will offer private stormwater facility maintenance guidance on the WES website and during inspections. WES also provides information on inspection and maintenance standards through the Storm Drain Assistance Program (SCAP) (see MAINT-4)

WES will create private stormwater facility maintenance handouts to guide operators of private stormwater facilities. Handouts will describe an inspection schedule and maintenance tasks based on the SWMP Document Participants' inspection and maintenance strategies and schedules (see MAINT-2). Handouts will be posted to SWMP Document Participants' websites, advertised with SCAP notices, and handed out during private stormwater facility inspections (see MAINT-4).

WES will promote the Clean Water Services online Private Water Quality Facility Maintenance Program and explore opportunities to partner on offering additional education options. WES will invite operators through the SCAP program notices (see MAINT-4) or other outreach.

Responsibilities for Private Stormwater Facility Operations and Maintenance Outreach

Responsibilities Matrix	WES Watershed Protection	Clackamas County Public and Government Affairs	WES Field Operations	DTD Resource Conservation and Solid Waste
Prepare stormwater facility maintenance handouts	P	S	C	
Post handouts to website		P		
Distribute handouts during inspections	P		S	P
SCAP notices	P	I		

P = Performs Task, C = Consulted, S = Supports, I = Informed

ED-2.3 SOURCE CONTROL OUTREACH AND TECHNICAL ASSISTANCE

TYPE:
ONGOING
STATUS:
ONGOING

WES will identify and reach out to businesses and to City and County municipal property operators that have a potential to spill oil, hazardous substances, or other materials to the MS4.

Spill prevention outreach to businesses will be integrated into the DTD Resource Conservation and Solid Waste (RCSW) program's Leaders in Sustainability Certification. The program, which supports businesses seeking to adopt and strengthen sustainable best practices, will provide voluntary inspections and pollution prevention education markers for storm drains. WES Watershed Protection will work with RCSW to integrate additional spill prevention activities in the program.

WES will create spill prevention messages for distribution through various types of interactions with businesses. The spill prevention messages will be included in contacts with businesses under COMM-2.2, Implement the Industrial and Commercial Facilities Strategy, and MAINT-4, Regulated Private Storm System Inspection and Maintenance. WES will combine stormwater source control inspections of priority facilities with other inspections when feasible.

There is no responsibilities matrix for this BMP activity.**ED-2.4 PESTICIDE, HERBICIDE, AND FERTILIZER TECHNICAL ASSISTANCE AND TRAINING**
TYPE: ONGOING
STATUS: ONGOING

On behalf of SWMP Document Participants, WES will provide one meeting per permit term to check in with key personnel from Happy Valley, Rivergrove, WES and Clackamas County who maintain landscaping at parks, municipal facilities and buildings in the Permitted Area.

There is no responsibilities matrix for this BMP activity.

Measurable Goals and Tracking Measures

ID	Measurable Goals	Tracking Measures
ED-2.1	Annually update erosion trainings on website.	• Date of website update with trainings.
ED-2.2-a	Create private stormwater facility maintenance handouts during the MS4 Permit term.	• Date handouts created.
ED-2.2-b	Hold one maintenance workshop during the MS4 Permit term.	• Date of workshop. • Number of owner/operators invited to workshop. • Number of attendees at workshop.

ED-2.3	Incorporate spill prevention outreach into DTD RCSW.	• Date spill prevention language incorporated into RCSW certification
ED-2.4	Hold one IPM check-in meeting for SWMP Document Participant staff during the MS4 Permit term.	• Date of meeting.

ED-3 Evaluation of Education and Outreach Activities

Purpose

This BMP meets the MS4 Permit requirements found in Schedule A.2.f, A.3.a.iv, B.4.b, and B.4.c. The purpose of assessing education and outreach activities is to:

- Assist with the adaptive management of the education and outreach program, and
- Support DEQ's independent assessment of the SWMP Document Participant's stormwater management program.

Geography

✓	WES Rate Zone #2, including Happy Valley
✓	WES Rate Zone #3, including Rivergrove
✓	County-maintained ROW
✓	Municipal Facilities in Permitted Area

General Responsibility

✓	WES
✓	Happy Valley
✓	Clackamas County DTD
	Other Clackamas County departments
	Rivergrove
✓	OLWS (see OLWS SWMP)

Background

DEQ requires SWMP Document Participants to follow an adaptive management approach to assess and modify, as necessary, any or all existing SWMP components and adopt new or revised SWMP components. Modifications that add elements to the approved SWMP may be made at any time and described in the Annual Report for that year. Modifications to delete, adjust, or replace elements in the approved SWMP with an alternate action or activity may be made at any time and must be supported by documentation submitted with the subsequent annual report that must include:

- An analysis of why the new action is an appropriate alternative from the standpoint of effectiveness, feasibility, and/or cost; and
- Expectations on the effectiveness of the replacement action or activity.

In addition, the SWMP Document Participants will submit a permit renewal application package that must support any proposed modifications to programs and stormwater control measures. This application package must evaluate the adequacy of the programs described in the SWMP Document for effectiveness, feasibility, and cost.

BMP ACTIVITIES

ED-3.1 EVALUATION OF EDUCATION AND OUTREACH ACTIVITIES

TYPE: ONE-TIME
STATUS: FUTURE

During the MS4 Permit term, the 2024 MS4 Permit Shared Stormwater Management Program Document Participants will evaluate the education and outreach activities conducted as per the SWMP Document. The SWMP Document Participants will develop a standard set of objective criteria relative to effectiveness, local applicability, and program resources to adaptively manage the education and outreach activities, and the SWMP Document Participants will provide the results of the evaluation to DEQ to support DEQ's independent assessment of the SWMP Document Participants stormwater management programs. The evaluation will be planned to meet the Permit renewal application package timeline. The criteria and plan may be developed independently or jointly by the SWMP Document Participants, and the criteria and plan may include only education and outreach activities or combine education and outreach activities with other Permit required evaluation topics.

There is no responsibilities matrix for this BMP activity.

Measurable Goals and Tracking Measures

ID	Measurable Goals	Tracking Measures
ED-3.1	Evaluate the SWMP Document Participants' Education and Outreach activities by April 3, 2026.	• Date evaluation results included in permit renewal package.

Appendix C: List of RiverHealth Stewardship Program 2024-25 Grant Awards

This Page Intentionally Left Blank

RiverHealth Stewardship Program Grant Award Recommendations FY 2024-25

	Organization	Project name	Amount funded	Project summary
1	Bob's Red Mill Natural Foods	Mill's End Restoration	$29,833	Restore 4.56 acre Mill's End Wetland located on our property, just south of 3-Creeks, by controlling invasive species and planting natives, to improve habitat and water quality. The project mitigates runoff from our impervious areas by filtering stormwater for treatment. We plan to involve employees in work events, and are committed to be stewards of our wetland and continue stormwater work in future years.
2	Clackamas River Basin Council	Clackamas Basin Urban Shade Our Streams	$30,000	This project will steward three existing and two new RiverHealth-funded Shade Our Streams project sites totaling 9.25 acres of restoration area and 1,805' of river/stream length. This project will also support educational workshops, pub talks, and outreach. Note that the Clackamas River site work is adjacent to WES' Carli Creek property.
3	Columbia Land Trust/Bird Alliance of Oregon	Backyard Habitat Certification Program-Clackamas	$20,000	The BHCP turns residents into restoration and clean river volunteers by providing in-person and follow-up education, resources, and recognition for them to manage stormwater on their properties, plant native plants, remove invasive weeds, reduce or eliminate use of pesticides, and steward wildlife. Within WES' service area-including SWMACC, 238 residents have enrolled in the program. Approx. 30 new sites will be added.
4	Friends of Trees	Clackamas Education & Watershed Stewardship 24-25	$30,000	Restoration, volunteer engagement, and community stewardship to educate and empower landowners and engage youth through hands-on environmental education experiences. We will host two volunteer planting and stewardship events, two education days for students at Oregon Trail Elementary, and support North Clackamas Watershed Council with their community workshop series. We will engage a contractor and Northwest

	Organization	Project name	Amount funded	Project summary
				Youth Corps for site preparation and maintenance at our project sites.
5	Happy Valley Heights Homeowners Association	Happy Valley Natural Area Restoration	$27,815	This project includes 5 Homeowner Associations and 2 private landowners who have partnered to develop a large-scale plan to restore natural areas in Happy Valley and Milwaukie. In partnering, these HOAs will collaborate on riparian treatments in keeping with the Watershed Action Plans for Mt Scott Creek and the Clackamas River.
6	Johnson Creek Watershed Council	Johnson Creek Volunteer Stewardship, Education & CreekCare	$27,890	We aim to engage 230 volunteers in stewardship or educational activities in WES' district: goal is 200 volunteers and 6 community partners in the Johnson Creek Clean-Up, 300 volunteers in Watershed Wide, including at least 30 at the Luther Rd site, 40 participants at Science in the Park, and 50 at Watershed Discovery Day. We also plan to increase participation of private landowner riparian restoration in our CreekCare program.
7	National Wildlife Foundation	Fish Eggs to Fry: EcoSchools U.S. Salmon Stewards	$10,695	The project will improve watershed health via education. We will increase the diversity of youth engaged in outdoor education; prepare educators in integrating environmental education across subjects; and improve youth's ability to problem solve and think critically about environmental issues. NWF partners with ODFW on the Fish Eggs to Fry program.
8	North Clackamas Watersheds Council	Streamside Stewards Riparian Revegetation & Landowner Stewardship	$29,998	NCWC will expand riparian restoration in the Kellogg-Mt. Scott Watershed, at Parmenter Ponds Target Area, identified based on temperature and salmonid use to be vital cold water refugia and climate resilience that will become even more critical with the removal of Kellogg Dam in 2027-28. We will work to develop new sites on Dean Creek, also cold-water refugia; expand resources for landowners to ensure they succeed at maintaining

	Organization	Project name	Amount funded	Project summary
				previously restored sites, setting the stage for expanded restoration in the watershed; and continue to engage community members in understanding and acting on their knowledge of watershed function in WES's district.
9	Northwest Youth Corps	NYC Inclusive Stewardship Program	$26,295	Complete four weeks of mulching, daylighting and watering recent native plantings; and hand removal of invasives at four sites. Youth will earn money as they work to restore habitat, increase their understanding of nature through daily environmental lessons, and earn academic credit. Half of the crews will consist of young women and non-binary individuals, including Girls Inc. participants; others will be recruited from a more general population, including low-income, BIPOC, and gender queer.
10	The Wetlands Conservancy	Kellogg Headwaters Enhancement 2024-2025	$29,664	Continue the progress of managing weeds and planting native vegetation in Hearthwood wetland for diverse habitat. Hire Native American crews from Wisdom of the Elders to mow and clear areas for native plant species to be planted by volunteers. Engage neighbors in Hearthwood Mobile Home park by inviting them to volunteer and tour the wetlands.
11	Tualatin River Watershed Council	Improving Riparian Health & Stream Shading-Saum, Wilson, Rock, Fields Creeks	$27,810	Conduct streamside enhancements with eight riparian landowners on four tributaries: Fields, Wilson, Saum, and Rock Creeks. All these riparian activities occur within the Surface Water Management Agency of Clackamas County (SWMACC) service area. In this proposal we are proposing new work in Saum Creek, as well as adding a new landowner on Wilson Creek, and working in new riparian areas with our existing landowners.

	Organization	Project name	Amount funded	Project summary
12	World Salmon Council	Salmon Watch in Clackamas County	$10,000	Provide environmental education that combines classroom and online curriculum, field learning, community service, incorporating innovative learning activities designed to enhance students' critical thinking and problem-solving skills. Program enables students to explore their natural heritage and develop a sense of stewardship and future career exploration through learning about watershed health and the lifecycle and habitat needs of Northwest salmon.
		Total	$300,000	

Appendix D: Training Events that Ensure Staff Is Able to and Continues to Implement the 2024 Shared SWMP Document

This Page Intentionally Left Blank

List of 64 Staff Who Received Training to Implement the 2022 Shared SWMP Document in accordance with the 2021 NPDES MS4 Permit

Name	Position	Course Name	Training
Andersen, Jeannie	Permits Technician	Erosion Control & Stormwater Management Summit	City of Salem
Bachman, Andrew	Civil Engineer, Senior	PNCWA Annual Conference	PNCWA - Pacific Northwest Clean Water Assoc
Baker, Adam	Field Operations Technician 1	Vegetated Stormwater Facilities	Clackamas Community College
Bazan, Giovanni	Field Operations Technician 1	Street Maintenance & Collections Systems	APWA - American Public Works Association
		Vegetated Stormwater Facilities	Clackamas Community College
Bennington, James	Field Operations Technician 1	Street Maintenance & Collections Systems	APWA - American Public Works Association
		Vegetated Stormwater Facilities	Clackamas Community College
Bertram, Erik	Development Review Specialist	Aquatic Weed Management	Oregon State University
		Erosion Control & Stormwater Management Summit	City of Salem
		Organic Systems	Oregon State University
		UERC Urban Ecology & Conservation Symposium	Urban Ecosystem Research Consortium of Portland/Vancouver
Bodner, Jeremy	Field Operations Technician 1	Street Maintenance & Collections Systems	APWA - American Public Works Association
Bruce Brown	Development Review Inspector	Mid-Willamette Erosion Control and Stormwater Management Summit	Mid-Willamette Erosion Control and Stormwater Management Summit
		Certified Erosion and Sediment Control Lead (CESCL) Re-Certification Training	Certified Erosion and Sediment Control Lead (CESCL) Re-Certification Training
Bryson Hellman	Transportation Maintenance Specialist	Mid-Willamette Erosion Control and Stormwater Management Summit	Mid-Willamette Erosion Control and Stormwater Management Summit
Cameron Aronson	Transportation Maintenance Specialist	Mid-Willamette Erosion Control and Stormwater Management Summit	Mid-Willamette Erosion Control and Stormwater Management Summit
Colton, Andrew	Field Operations Technician 1	Vegetated Stormwater Facilities	Clackamas Community College
Contreras Jr, Manuel	Pol, Perf & Research Analyst	ACWA Stormwater Summit	ACWA - Assoc of Clean Water Agencies
		October Forum - One Water Summit	Oregon City Business Alliance
		PNCWA Annual Conference	PNCWA - Pacific Northwest Clean Water Assoc
Dakota Rushing	Transportation Maintenance Specialist	Mid-Willamette Erosion Control and Stormwater Management Summit	Mid-Willamette Erosion Control and Stormwater Management Summit
David Holmes	Transportation Maintenance Specialist	APWA Street Maintenance & Collection Systems School	APWA Street Maintenance & Collection Systems School
Degliantoni, Nicholas	Technical Services Specialist	Erosion Control & Stormwater Management Summit	City of Salem
		Certified Erosion and Sediment Control Lead (CESCL) Re-Certification Training	Eco-3
Desiderati, Christopher	Environmental Services Supervisor	ACWA Annual Conference	ORACWA - Oregon Assoc of Clean Water Agencies
Devin Patterson	CIP Project Manager & Stormwater Reporting Coordinator	Association of Clean Water Agencies (ACWA) Summit	Association of Clean Water Agencies (ACWA) Summit

List of 64 Staff Who Received Training to Implement the 2022 Shared SWMP Document in accordance with the 2021 NPDES MS4 Permit

Name	Position	Course Name	Training
		Mid-Willamette Erosion Control and Stormwater Management Summit	Mid-Willamette Erosion Control and Stormwater Management Summit
Dillon Hagaman	Development Review Inspector	Mid-Willamette Erosion Control and Stormwater Management Summit	Mid-Willamette Erosion Control and Stormwater Management Summit
		Certified Erosion and Sediment Control Lead (CESCL) Re-Certification Training	Certified Erosion and Sediment Control Lead (CESCL) Re-Certification Training
Eric Fine	CIP Inspector	Fundamentals of Erosion and Sediment Control Workshop	Fundamentals of Erosion and Sediment Control Workshop
Estrada, Elena	Risk & Loss Control Analyst	Street Maintenance & Collections Systems	APWA - American Public Works Association
Fredinburg, Kaydin	Field Operations Tech Trainee	Street Maintenance & Collections Systems	APWA - American Public Works Association
		Vegetated Stormwater Facilities	Clackamas Community College
Gates, Akiko	Administrative Specialist 1	Johnson Creek Science Symposium	Johnson Creek Watershed Council (JCWC)
		UERC Urban Ecology & Conservation Symposium	Urban Ecosystem Research Consortium of Portland/Vancouver
Geist, Gregory	Director	ACWA Annual Conference	ORACWA - Oregon Assoc of Clean Water Agencies
		PNCWA Annual Conference	PNCWA - Pacific Northwest Clean Water Assoc
Hoffman, Robert	Field Operations Technician 1	Street Maintenance & Collections Systems	APWA - American Public Works Association
		Vegetated Stormwater Facilities	Clackamas Community College
Hoshovsky, Galen	Technical Services Specialist	ACWA Stormwater Summit	ACWA - Assoc of Clean Water Agencies
		Erosion Control & Stormwater Management Summit	City of Salem
		Johnson Creek Science Symposium	Johnson Creek Watershed Council (JCWC)
		UERC Urban Ecology & Conservation Symposium	Urban Ecosystem Research Consortium of Portland/Vancouver
Jason Gomez	Development Review Inspector	Mid-Willamette Erosion Control and Stormwater Management Summit	Mid-Willamette Erosion Control and Stormwater Management Summit
Johanson, Leah	Civil Engineer, Senior	ACWA Stormwater Summit	ACWA - Assoc of Clean Water Agencies
		Sustainable Stormwater Symposium	ASCE - American Society of Civil Engineers
Johnny Gish	Development Review (Plan Review)	Fundamentals of Erosion and Sediment Control Workshop	Fundamentals of Erosion and Sediment Control Workshop
Kara Ballinger	Transportation Maintenance Specialist	APWA Street Maintenance & Collection Systems School	APWA Street Maintenance & Collection Systems School
Kathleen Doherty	Transportation Maintenance Specialist	Mid-Willamette Erosion Control and Stormwater Management Summit	Mid-Willamette Erosion Control and Stormwater Management Summit
Kay, Timothy	Field Operations Coordinator	Street Maintenance & Collections Systems	APWA - American Public Works Association
Kelly Peterson	Building Inspector	Erosion Control Class	Erosion Control Class
Kevin Morris	Bridge Maintenance Supervisor	DEQ's Hazardous Waste RCRA Basic Training	DEQ's Hazardous Waste RCRA Basic Training
Koellermeier, Zachary	Technical Services Coord	Street Maintenance & Collections Systems	APWA - American Public Works Association
Kurt Snowley	Transportation Maintenance Specialist	Mid-Willamette Erosion Control and Stormwater Management Summit	Mid-Willamette Erosion Control and Stormwater Management Summit

List of 64 Staff Who Received Training to Implement the 2022 Shared SWMP Document in accordance with the 2021 NPDES MS4 Permit

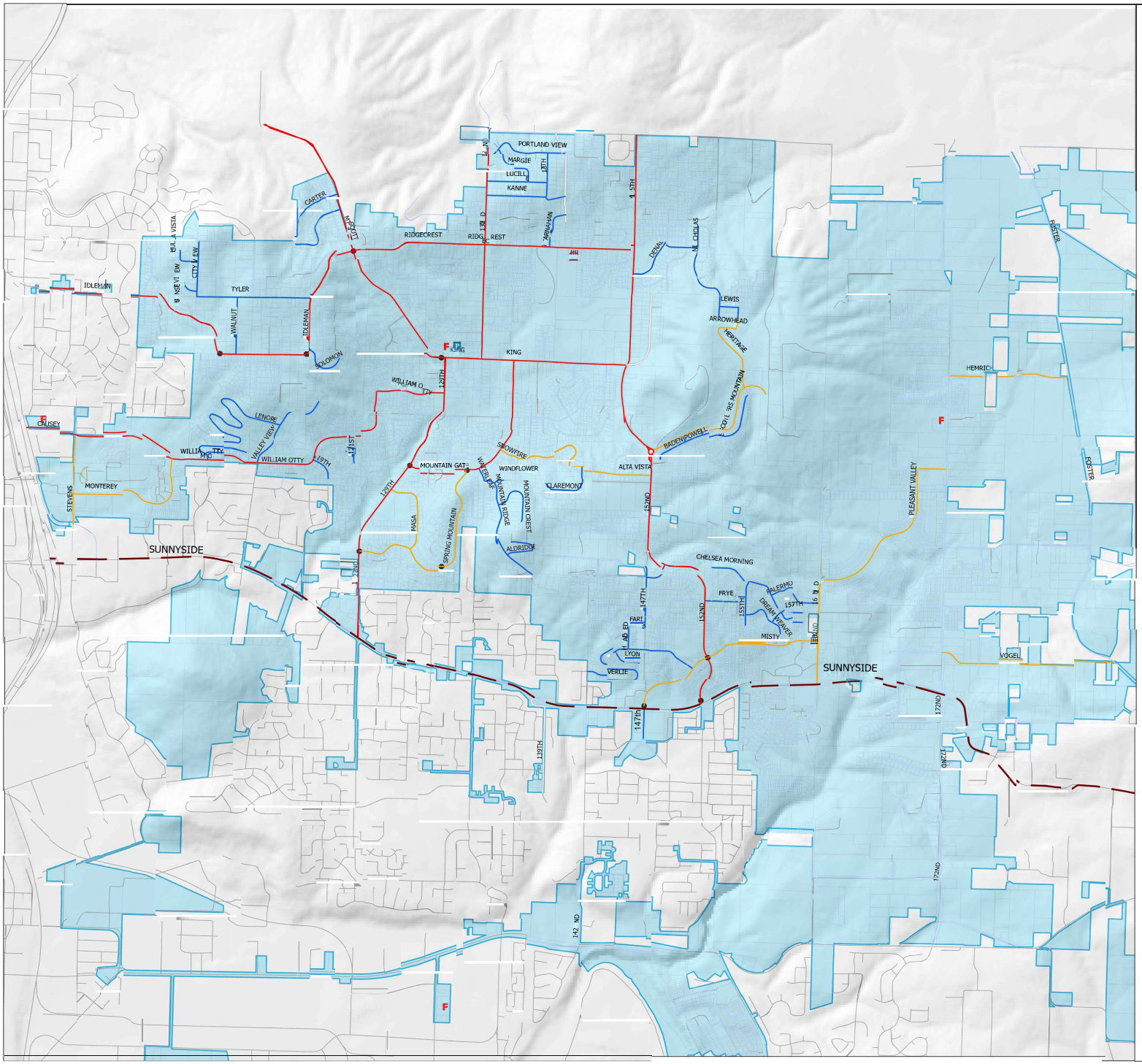
Name	Position	Course Name	Training
Kyle Kivett	Transportation Maintenance Specialist	Mid-Willamette Erosion Control and Stormwater Management Summit	Mid-Willamette Erosion Control and Stormwater Management Summit
Laura Garrett	Transportation Maintenance Specialist	APWA Street Maintenance & Collection Systems School	APWA Street Maintenance & Collection Systems School
Livingston, Robert	Technical Services Specialist	ACWA Stormwater Summit	ACWA - Assoc of Clean Water Agencies
		Erosion Control & Stormwater Management Summit	City of Salem
		Johnson Creek Science Symposium	Johnson Creek Watershed Council (JCWC)
		Certified Erosion and Sediment Control Lead (CESCL) Re-Certification Training	CWT, LLC
Loggan, Todd	PGA	PNCWA Communication Camp	PNCWA - Pacific Northwest Clean Water Assoc
Lundgren, Otis	Field Operations Technician 2	Street Maintenance & Collections Systems	APWA - American Public Works Association
Mejia, Justin	Field Operations Tech Trainee	Vegetated Stormwater Facilities	Clackamas Community College
Morris, Alexa	Policy, Perf & Research An, Sr	ACWA Stormwater Summit	ACWA - Assoc of Clean Water Agencies
Nathan Loffler	Transportation Maintenance Specialist	APWA Street Maintenance & Collection Systems School	APWA Street Maintenance & Collection Systems School
Ogbeide, Haakon	Civil Engineer, Senior	PNCWA Annual Conference	PNCWA - Pacific Northwest Clean Water Assoc
Parini-Runge, Shelly	Policy Analyst, Senior	ACWA Annual Conference	ORACWA - Oregon Assoc of Clean Water Agencies
Ricardo Sandoval	Transportation Maintenance Supervisor	APWA Street Maintenance & Collection Systems School	APWA Street Maintenance & Collection Systems School
Rice, Mike	Civil Engineer, Senior	PNCWA Annual Conference	PNCWA - Pacific Northwest Clean Water Assoc
Rice, Steven	Civil Engineering Supervisor	ACWA Annual Conference	ORACWA - Oregon Assoc of Clean Water Agencies
Rinner, Jessica	Civil Engineering Supervisor	PNCWA Annual Conference	PNCWA - Pacific Northwest Clean Water Assoc
Romaine, Terrance	WES Tech Division Manager	ACWA Annual Conference	ORACWA - Oregon Assoc of Clean Water Agencies
Ronald Dethloff	Transportation Maintenance Specialist	Mid-Willamette Erosion Control and Stormwater Management Summit	Mid-Willamette Erosion Control and Stormwater Management Summit
Rotrock, Kevin	Field Operations Technician 2	Street Maintenance & Collections Systems	APWA - American Public Works Association
Sandra Sather	Transportation Maintenance Specialist	APWA Street Maintenance & Collection Systems School	APWA Street Maintenance & Collection Systems School
Seaver, Nathan	Civil Engineer, Associate	PNCWA Annual Conference	PNCWA - Pacific Northwest Clean Water Assoc
Shaloum, Gail	Technical Services Coord	ACWA Stormwater Summit	ACWA - Assoc of Clean Water Agencies
		Johnson Creek Science Symposium	Johnson Creek Watershed Council (JCWC)
		October Forum - One Water Summit	Oregon City Business Aliance
		UERC Urban Ecology & Conservation Symposium	Urban Ecosystem Research Consortium of Portland/Vancouver

List of 64 Staff Who Received Training to Implement the 2022 Shared SWMP Document in accordance with the 2021 NPDES MS4 Permit

Name	Position	Course Name	Training
Skinner, Robert	Field Operations Technician 2	Street Maintenance & Collections Systems	APWA - American Public Works Association
Stallard, Jeffery	Capital Program Manager	PNCWA Annual Conference	PNCWA - Pacific Northwest Clean Water Assoc
Sundstrom, Daniel	Field Operations Technician 1	Street Maintenance & Collections Systems	APWA - American Public Works Association
		Vegetated Stormwater Facilities	Clackamas Community College
Swanson, Andrew	Water Quality Analyst	ACWA Stormwater Summit	ACWA - Assoc of Clean Water Agencies
		Johnson Creek Science Symposium	Johnson Creek Watershed Council (JCWC)
Terry (Shane) Abbott	Transportation Maintenance Manager	APWA Street Maintenance & Collection Systems School	APWA Street Maintenance & Collection Systems School
Tyrell Abbett	Transportation Maintenance Specialist	Mid-Willamette Erosion Control and Stormwater Management Summit	Mid-Willamette Erosion Control and Stormwater Management Summit
Wayne Kumpf	Transportation Maintenance Specialist	APWA Street Maintenance & Collection Systems School	APWA Street Maintenance & Collection Systems School
Wierenga, Ronald	Assistant Director	ACWA Annual Conference	ORACWA - Oregon Assoc of Clean Water Agencies
Oleson, Mike	CIP Inspector	ODOT Environmental Construction Inspector course	ODOT Environmental Construction Inspector course

Appendix E: City of Happy Valley's Snow Removal Procedures Map

This Page Intentionally Left Blank



HAPPY VALLEY, OR
EST. 1965

City of Happy Valley Snow Removal & Sanding Procedures

- Priority 1 Arterial Streets 13.6 Miles
- Priority 2 Major/Minor Collectors 7.8 Miles
- Priority 3 Local/Residential 12.25 Miles

Priority based on accident data

City Elevations

1097 ft.	Mt. Scott
503 ft.	CPC
937 ft.	Scout Camp
840 ft.	Ridgecrest at Idleman
581 ft.	132nd at Clatsop
901 ft.	Idleman at Walnut
617 ft.	Deerfield

N

0 0.33 0.65 1.3 Miles

Source: Data from Clackamas County GIS and Metro data (2022)

 Last Update: 1/11/2024

Document Path: G:\Maps\Maps For Public Works\Snow Removal\2023\Snow Removal Map 2022 Internal.aprx

Appendix F: Updated Rationale Memorandum for MS4 IDDE Dry Weather Priority Locations

This Page Intentionally Left Blank

CLACKAMAS

WATER ENVIRONMENT SERVICES

Gregory L. Geist
Director

MEMORANDUM

TO: Ron Wierenga, Susan Ottersen, Jim Conrad, Chris Desiderati, Rob Livingston, and Galen Hoshovsky

FROM: Andrew Swanson AVS

DATE: October 11, 2023

SUBJECT: Updated MS4 Priority Locations for dry weather IDDE monitoring

---

Our current MS4 Permit – which was renewed on October 1, 2021, and then modified on May 5, 2023 – includes a requirement to *"…review and update the prioritization criteria for dry weather screening locations…"* which are used by our Illicit Discharge Detection & Elimination (IDDE) monitoring program. The MS4 Permit says this review and update must be completed prior to Dec. 1, 2023. These dry weather screening/monitoring locations are known as Priority Locations. This October 11, 2023 Memo contains this required review and update. This memo replaces the dry weather IDDE Priority Locations monitoring memo which was issued on June 16, 2022 and which had been in effect until today.

The purpose of these dry-weather inspections is to proactively locate illicit discharges which might be present in our MS4. When an illicit discharge is identified, staff track it upstream, if possible, through the storm sewer system to the source, where it is then controlled.

Measurable Goal: All known MS4-Permitted storm sewer systems to be monitored once in 10 years:
For many years, WES has monitored Priority Locations in more than 40 MS4-Permitted storm sewer systems each July 1st to June 30th year. Each of these storm sewer systems was selected based on a careful consideration of all relevant factors, including but not limited to the land use of the drainage area (ie. Industrial) and the diameter of the outfall. Although many illicit discharges have been found at these locations since 1999, it has been several years since any new illicit discharges have been found at any of these existing Priority Locations. **As a result, a significant change to our IDDE Priority Location monitoring system will be implemented beginning on July 1, 2024: WES has set a new Measurable Goal to conduct dry-weather field screening inspections in 10% of all of our known MS4-Permitted storm sewer systems in the WES SWM service area each July 1st to June 30th year.** If this goal is reached, all of our known MS4-Permitted storm sewer systems – those which are owned and/or operated by Clackamas WES, Clackamas County, and the Cities of Rivergrove and Happy Valley – will receive one dry-weather inspection during a 10 year period.

Implementing this new monitoring approach, where all MS4-Permitted storm sewer systems are eventually inspected, I fully expect that our field crew will find more illicit discharges per year than they've found in recent years by visiting the same 43 Priority Locations year after year.

In January 2023, Susan Ottersen generated an inventory which showed that Clackamas WES, Clackamas County and the Cities of Rivergrove and Happy Valley combined own and/or operate 654 surface-discharging, MS4-Permitted storm sewer systems in the WES SWM service area. Because

43 Priority Locations were inspected during the July 1, 2023 to June 30, 2024 year (year 1), inspecting the remaining 611 MS4s over the next 9 years would require monitoring about 68 MS4s per year in order to reach the goal of inspecting all known, existing MS4 Permitted storm sewer systems in the WES SWM service area during a 10 year period. This Jan. 2023 inventory shall serve as the starting point for generating the inventory which shall be used over the next 9 years.

Geography:
To save time and gasoline during inspections, I recommend that the 68 or so Priority Location inspections conducted in any given July 1st to June 30th year be in the same geographic area.

Flexibility is Essential When Selecting a Priority Location within a MS4:
Because resources are not available to "field verify" these Priority Locations ahead-of-time, beginning in July 2024, the person(s) conducting the Priority Location inspections has full authority to be flexibile, and use their best judgement, when choosing the storm sewer system's Priority Location. The Priority Location can be the outfall, or the 1st or 2nd or even 3rd manhole up from the outfall, or a flow-through catch basin (if one is present) which is near and up from the outfall. Although it is typically ideal to select the outfall for the Priority Location, because it receives drainage from the entire storm sewer system, the effort and time required to access and find the outfall (ie. cut weeds/brush) can be excessive. See below for a discussion about unsafe conditions which could prevent WES staff from conducting a Priority Location inspection in an MS4.

Lucity:
During a May 9, 2023 meeting of WES staff, meeting attendees agreed that when WES begins to conduct the dry weather screening inspections at the new monitoring sites in Summer 2024, and in subsequent years, each inspection should continue to be documented in Lucity. This significant and positive switch – from paper documentation to paperless documentation in Lucity – was made by WES prior to conducting the 2022 inspections.

2022 MS4 Permit Shared Stormwater Management Program Document:
We began implementing this document on July 1, 2023. BMP IDDE-4 accurately describes the dry-weather IDDE Priority Location monitoring that was done in Summer 2023. But BMP IDDE-4 will need to be revised prior to July 1, 2024 to reflect the monitoring work which is described in this memo. I expect to serve as the lead staff member for making this revision to our SWMP Document.

MS4-Permitted Outfalls which Directly Drain Vegetated Ponds, Swales, etc.:
This section is for those vegetated stormwater management ponds, etc. which are within a few feet of the MS4's outfall; in these instances, the other end of the outlet pipe from the pond or swale is the outfall. When these storm sewer systems are being monitored for illicit discharges, the outfall shouldn't be chosen for the Priority Location, because it drains the pond or swale and the pollutants from any illicit discharge which may be present are more difficult to detect at the outfall (for example, dilution by standing water in the pond). In these instances, the inlet pipe(s) to the pond or swale should be chosen for the Priority Location(s).

Shall a GPS measurement and/or photo of the Priority Location be taken during these inspections?
It is too soon to say. Stay tuned.

Field Verification and Mapping of the MS4:
Shall this also be done during Priority Location monitoring? It is too soon to say. Stay tuned.

Safety:
If WES staff determine that one or more desired Priority Locations in a MS4 cannot be inspected due to unsafe conditions, if the conditions cannot be readily made sufficiently safe, then this MS4 will not

receive a Priority Location inspection. See one of the paragraphs above for a discussion about selecting an alternative Priority Location within an MS4; in many instances, an alternative Priority Location within an MS4 will be able to be identified which can be safely inspected.

Rationale for the Priority Location Monitoring Changes Described in this Memo:

As was mentioned previously in this memo, although many illicit discharges have been found at our Priority Locations since 1999, it has been several years since any illicit discharges have been found at any of these existing designated Priority Locations (43 PLs in 2023-2024). By monitoring all of our known, existing MS4s once over a 10 year period, no consideration of any relevant factors (such as drainage area, population density, land use, or age of the buildings in the area) needs to be conducted to justify why some MS4s were monitored and not others.

Other ways of learning about illicit discharges:

Note that we also utilize the following two additional parallel systems for identifying illicit discharges, which includes spills:

- Reports about these discharges are received from citizens, non-profit groups (ie. watershed councils), for-profit corporations, and government agencies (ie. Clackamas Fire District No. 1).
- Reports from staff (WES, other Clackamas County Departments, and the Cities of Happy Valley and Rivergrove) who detect these discharges in the course of completing their other assigned duties. For example, as catch basins are being cleaned, illicit discharges are occasionally detected by field staff.

If an illicit discharge is identified in response to a report which was received via either of these notification methods, it will be traced to the source, if possible, and controlled. And if appropriate, pollution cleanup will then be conducted or overseen.

Preventing illicit discharges:

Some potential future illicit discharges are expected to be prevented from occurring in the first place through:

- Implementation of our public education program.
- Implementation of the County's, WES', and the City building permit processes (ie. plumbing permits are issued which ensure that wastewater is captured and directed to WES' public sanitary sewer system).
- Implementation of our Industrial/Commercial stormwater quality program, which involves WES site visits to these businesses. Illicit discharge prevention is typically discussed during these visits.
- And finally, another way that illicit discharges are prevented occurs during those instances when an illicit discharge is documented and the responsible party is identified. In these instances, the responsible party is always instructed to prevent an illicit discharge from ever happening again, if possible.