

City of Duvall 2026 Stormwater Management Program Plan



Prepared in compliance with the Western Washington Phase II Municipal Stormwater Permit (issued on July 1, 2024, effective on August 1, 2024)

Permit # WAR04-5512

Prepared by:
City of Duvall Public Works Department | March 31, 2026

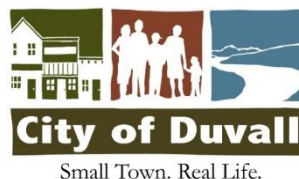


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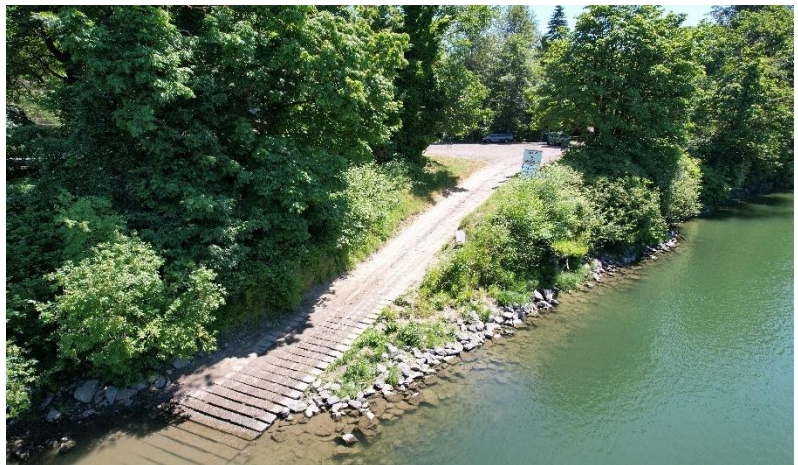
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INTRODUCTION

Regulatory Background

The foundation for the City of Duvall’s Stormwater Management Program (SWMP) Plan lies in the Federal Water Pollution Control Act of 1948, which was significantly amended in 1972 and became known as the Clean Water Act (CWA). This landmark legislation aimed to curb point source pollution and enhance water quality for various uses, including fishing, drinking, and recreation. A key component of the 1972 CWA is the National Pollutant Discharge Elimination System (NPDES) Permit Program, designed to protect and restore surface water quality by requiring permits for discharges into waters of the United States. The Washington State Department of Ecology (Ecology) administers the NPDES Permit for the Environmental Protection Agency (EPA).

The NPDES Permit necessitates the establishment of a comprehensive stormwater program, outlining specific activities and actions to safeguard and restore local water bodies such as creeks, streams, rivers, and lakes. The City of Duvall’s SWMP Plan is structured to align with the requirements of the 2024-2029 NPDES Permit, which became effective August 1, 2024. This permit mandates annual progress reports and phased implementation of various requirements throughout its five-year term.



Stormwater discharging from Duvall directly impacts resident health and recreation (boat launch at Taylor’s Landing Park)

Document Overview

The City’s SWMP encompasses the following core elements, as defined by the permit:

- Stormwater Planning (S5.C.1)
- Public Education and Outreach (S5.C.2)
- Public Involvement and Participation (S5.C.3)
- MS4 Mapping and Documentation (S5.C.4)
- Illicit Discharge Detection and Elimination (S5.C.5)
- Controlling Runoff from New Development, Redevelopment, and Construction Sites (S5.C.6)
- Stormwater Management for Existing Development (S5.C.7)
- Source Control Program for Existing Development (S5.C.8)
- Operations and Maintenance (S5.C.9)

The purpose of the SWMP Plan is to detail the City’s strategy for addressing regulations, adopted plans, programs, and policies related to urban stormwater, flooding, and associated water-dependent resources. The Public Works Department is responsible for the SWMP Plan and NPDES Permit implementation, with input from the City’s Planning Department, Building Department, City Administration, consultants, and residents of Duvall.

Specific permit requirements are identified using the Permit’s citation methodology (e.g., S5.C.3.b) in the 2024 NPDES Permit. The current NPDES permit can be viewed on the Washington Department of Ecology Website or by clicking on the following hyperlink:

<https://ecology.wa.gov/regulations-permits/permits-certifications/stormwater-general-permits/municipal-stormwater-general-permits/western-washington-phase-ii-municipal-stormwater>

The City is committed to adhering to all permit requirements and proactively planning for future compliance. Public input on the City’s SWMP Plan is encouraged. Comments can be submitted via:

Email: stormwater@duvallwa.gov

Phone: Public Works at 425.939.8040

Mail: City of Duvall - Public Works Department, PO BOX 1300, Duvall WA, 98019

Past reports are available at: <http://www.duvallwa.gov/159/Stormwater-System-Information>



Residents gather for the City’s Summer Concert Series on the Snoqualmie River (McCormick Park)

S5.C.1 Stormwater Planning

Stormwater planning, introduced as a requirement in the 2019–2024 NPDES Permit, continues to be a key component of the current permit cycle. For many years, the City has undertaken various stormwater planning initiatives to guide the development of policies and strategies that enhance water quality management tools, ensuring the protection of its receiving waters. The city emphasizes place-based mitigation approaches that prioritize on-site and local stormwater impact reduction wherever feasible.

S5.C.1.a Interdisciplinary Team

The City utilizes the Development Review Committee (DRC) to inform and assist in the development of policies and strategies such as water quality management tools to protect receiving waters. This committee includes City staff from the Public Works and Engineering Department, Planning Department, Building Department, and Fire Department.

S5.C.1.b Coordination with Long-Range Plan Updates

The DRC team, as well as City Administration, will continue to ensure that stormwater considerations are used to inform updates to the City’s Comprehensive Plan, Transportation Plan, Water Comprehensive Plan, Sewer Capital Improvement Program Plan, Surface and Stormwater Management Plan, Capital Facility Plan, and Watershed Plan.

The City adopted a Capital Facilities Plan (CFP) in 2024, an updated Comprehensive Plan in 2025, and will continue to revise City Municipal Code to enhance water quality protections and watershed management. These efforts will enhance policies, strategies, and regulations to improve the health of local receiving waters by integrating stormwater management considerations into long-term planning. By aligning growth, infrastructure, and environmental sustainability, the City is taking proactive steps to protect water resources and address stormwater management needs and limitations.

S5.C.1.c Low Impact Development Code Requirements

On an annual basis, Public Works Engineering Department will review municipal and zoning code to affirm that Low Impact Development (LID) principles and best management practices (BMPs) continue to be the preferred approach to site development. This step is included in the City’s Annual Code Cleanup process. No barriers were identified during this reporting period.

Where feasible, the City prioritizes on-site and local stormwater impact reduction strategies, including infiltration, detention, treatment, and habitat co-benefits, before relying on off-site mitigation. When off-site mitigation is the only viable option, the City prioritizes opportunities within the City, consistent with applicable code and regulatory authority, before allowing mitigation credits located outside the community.

S5.C.1.d Stormwater Management Action Planning (SMAP)

The City adopted the Surface and Stormwater Management Plan (City of Duvall, 2018) which includes basin delineation as well as prioritizing retrofit, and stormwater management related projects based on receiving water, water quality, and erosion impacts.

Based on the Ecology SMAP guidance document (Washington State Department of Ecology, 2024), in Step 4 – *Permittees are not required to prioritize basins that were determined in Step 3 to have relatively low expected Stormwater Management Influence for SMAP*. The City will continue its ongoing efforts to address stormwater facility retrofits as outlined in the adopted Surface and Stormwater Management Plan. Ranking and prioritization metrics, detailed in preliminary technical reports included in the Plan's appendix, will guide future budgeting and grant application initiatives. The City of Duvall has documented there are no high priority catchment areas within city limits.

While SMAP did not identify high stormwater-influence catchments under Ecology's methodology, the city continues to prioritize localized flooding, erosion, and water quality needs through implementation of the adopted Surface and Stormwater Management Plan and associated capital improvement program. The city will continue its ongoing efforts to address stormwater facility retrofits as outlined in the Plan. Ranking and prioritization metrics, detailed in the preliminary technical reports included in the Plan's appendix, guide future budgeting decisions and support grant application initiatives.

S5.C.2 Public Education and Outreach

The City provides and participates in a variety of stormwater education and outreach efforts focused on environmental stewardship and stormwater management often partnering with neighboring jurisdictions to ensure stormwater outreach messages are clear, consistent, and widely distributed.

S5.C.2.a.i-ii Implement an Education & Outreach Program

The City continues to engage in the following activities to provide stormwater-related outreach programs to the public to build general awareness, affect behavior change, and create stewardship opportunities:

- **School-Based Environmental Education** Through partnerships with Nature Vision, an environmental education nonprofit, and Hamline's Adopt-a-Drain K-12 Program, the City provides experiential learning opportunities that help students understand stormwater systems and their role in protecting local waterways.
- **Community Engagement** City staff maintain a presence at community events including the Duvall Farmers Market, Earth and Arbor Day activities, and the Summer Concert Series. These outreach opportunities facilitate direct conversations about stormwater management through interactive demonstrations, educational materials, and information about volunteer initiatives.
- **Pet Waste Management** The City operates pet waste stations and receptacles at strategic locations throughout Duvall. Staff monitor and respond to pet waste complaints through targeted outreach at community events and social media campaigns that promote responsible pet ownership and its connection to water quality.
- **Stormwater Facility Signage** The City regularly assesses and updates interpretive signage at municipally owned stormwater ponds. This signage educates residents, businesses, and visitors about the critical role these facilities play in managing runoff and protecting downstream water quality.
- **Digital Resources** The City's [Stormwater System Information webpage](#) serves as a resource hub, providing pollution prevention strategies, best management practices, and current program information.

QUESTION: WHAT IS THE BEST PART ABOUT THE ADOPT- A-DRAIN PROGRAM?

“Empowering young children to have a direct impact on the stewardship of their environment. All pf my students truly care about water.”

“It’s a chance for all of the students to come together and do something that makes a difference in their community.”

“They seem to love doing this work to care for the land. They know where the drain flows and they really care about the water. They also just love sweeping.”

- *Duvall Educators*

The City promotes Hamline's Adopt-a-Drain program as its primary behavior change campaign, engaging residents and business owners in preventing pollution from entering the municipal stormwater system. This program utilizes social marketing strategies to encourage participants to regularly clear debris—including trash, sediment, and organic matter—from storm drains, thereby reducing localized flooding and improving water quality.

Participants register at [Adopt-a-Drain.org](https://www.adopt-a-drain.org), where they can adopt storm drains in their vicinity, track the volume of debris collected, and share their conservation efforts through social media platforms. This approach mobilizes community members to take consistent, sustained action in stormwater protection.



Duvall’s Summer Concert Series provides a venue for engaging with and educating hundreds of residents

In 2026, with the addition of a new full-time Stormwater staff member, Duvall is implementing a refined outreach strategy designed to deepen community engagement. This includes developing more consistent messaging across city platforms, creating enhanced interactive educational activities, and establishing partnerships with local community hubs to expand program reach and effectiveness.

S5.C.2.a.iii Creating Stewardship Opportunities

Stewardship opportunities have been created to encourage participation in surface water protection and active incorporation of SWMP principles. General residential stewardship activities such as volunteer plantings and catch basin stenciling kits are emphasized during public events such as Earth and Arbor Day, Duvall Farmers Market, and other public events.

Through a partnership with the Riverview School District and private schools, the City provides stormwater educational activities for elementary school students. Additional stewardship opportunities are offered through volunteer planting and



Scouts pose with supplies for their storm drain stenciling project

maintenance parties and storm drain marking events with local Scout troops, students, and community members completing volunteer service hours.

In response to community feedback, the City will launch a new volunteer program in 2026 focused on invasive plant removal in city parks and protected Sensitive Areas. The City will develop this program with guidance from King County Noxious Weeds, neighboring agencies, and local organizations such as Stewardship Partners, Mountains to Sound Greenway Trust, and Green Redmond Partnership.



*In 2025, Duvall volunteers stenciled over **200 storm drains**, placed over **20 curb markers**, adopted **17 new drains** and removed **170lbs of debris** from the storm system! It was a great year of involvement, education, and community engagement.*

S5.C.3 Public Involvement and Participation

The City welcomes comments from the public throughout the year and provides information for residents to contact staff. The public is invited to comment on a draft of the SWMP Plan every year via an announcement on the City's website, the monthly newsletter, postings at community hubs, and social media accounts. All city webpages can be translated into other languages using the Google Translate tool.

In 2026, through regional collaboration and strategic partnership, the City is working to provide a greater number of translated materials and resources into languages spoken in the community to provide better opportunities for engagement. Currently translation efforts are as follows:

- Partner with Puget Sound Starts here to provide funding for greater diversity of translated stormwater materials
- Participate in regional efforts with City of Seattle and Western Washington to create multi-lingual Adopt-a-Drain content and communications
- Partner with BEA Environmental to provide multi-lingual educational programs and spill kit training for local businesses that might impact stormwater quality.
- Frequent collaboration with Washington Stormwater Center to develop relevant and regional stormwater campaigns

Ways to participate or get involved:

- Website: <http://www.duvallwa.gov/159/Stormwater-System-Information>
- Social media: [Facebook](#) and [Instagram](#)
- Email: stormwater@duvallwa.gov
- Call Public Works: 425.939.8040
- Mail comments to:

City of Duvall - Public Works Department
PO BOX 1300
Duvall WA, 98019



Duvall Pollution Hotline
(425) 939-8040

After hours, Public Works Emergency Only: (425) 419-3748
Please note this number does not receive text messages

Non-emergency information may also be sent to
stormwater@duvallwa.gov

City of Duvall
Small Towns. Big Life.

WHEN IT RAINS
IT DRAINS

Snip of the duvallwa.gov NPDES Stormwater Permit website encouraging public feedback

S5.C.4 MS4 Mapping and Documentation

Accurate mapping of Duvall's stormwater system is essential for effective management and regulatory compliance. The City maintains comprehensive digital maps of all stormwater infrastructure Geographic Information System (GIS) technology. These maps are continuously updated as new information becomes available and support informed decision-making for maintenance, planning, and capital improvements.

S5.C.4.a Ongoing Mapping

Updating and managing data is completed according to documented procedures and quality control standards. Geographic Information System (GIS) data includes attributes that describe ownership, water-quality-facility design details, flow-control-facility design details, conveyance design information, outfall location (size and material), and spatial data. Both private and public stormwater system connections and data are managed geospatially and are updated/added as information is made available or discovered. Land use and drainage area delineations for each outfall have been developed and are also updated regularly. The City has no known connections from the MS4 to privately owned stormwater systems.

S5.C.4.b New Mapping

In 2025, Duvall completed the 2026 requirement to include size and material for all known outfalls and will continue to update data as discovered. In 2026, the City will continue to refine its tree canopy mapping data that supports stormwater management on city-owned properties. Upon request, and to the extent appropriate, all mapping information described is available to the public.

S5.C.5 Illicit Discharge Detection and Elimination

The City's Illicit Discharge Detection and Elimination (IDDE) program works to prevent, detect, and eliminate contamination in local waters from illegal connections and dumping to the stormwater drainage system. The City's SWMP Plan includes an ongoing program to detect and remove illicit connections and discharges into Duvall's stormwater system, including responding to spills when no other agency has jurisdiction.

S5.C.5.a Reporting and Corrective Measures

The City has a telephone number that allows residents, visitors, and City employees to report illicit discharges, dumping or other stormwater related concerns within City limits: (425) 939-8040; emergency after-hours: (425) 419-3748.

Additionally, reporting parties can email: stormwater@duvallwa.gov. This information is available on the City's Public Works Department [stormwater webpage](#).

During regular business hours, calls are received by the Public Works Department. After-hours reporting is managed by a Public Works Maintenance Crew standby person(s).



Duvall Spill Hotline
(425) 939-8040
Emergency After Hours: (425) 419-3748
Call right away to report spills on land or in water

In 2025, Duvall redesigned the Spill Hotline for greater recognizability with a public works first responder color way

S5.C.5.b Illicit Discharges and Improper Disposal of Waste

As described previously, reference S5.C.2.(a. i-iii), the City utilizes a multifaceted approach to inform and engage residents regarding spill prevention, spill response, and best practices for daily behaviors that might impact stormwater. For IDDE the educational focus is centered around not dumping waste and preventing non-rainwater discharge from leaving private property. For a list of illicit discharges please reference Duvall Municipal Code (DMC) [9.06.035.D.b](#).

S5.C.5.c Ordinance prohibiting non-stormwater and illicit discharges into MS4

A City IDDE Ordinance was developed and adopted into the Duvall Municipal Code (DMC) [9.06.035](#) to effectively prohibit non-stormwater, illicit discharges into the City's MS4 to the maximum extent allowable under State and Federal law. The City continues to research and network with surrounding jurisdictions and Ecology to continue to improve and update these policies.

S5.C.5.d IDDE Program to Detect and Identify Non-Stormwater Discharges and Illicit Connections

The City is required to screen or inspect 12% of the City's stormwater conveyance and catchment system for illicit connections each year in accordance with permit section

S5.C.5.d.i.a. This is accomplished by annual dry weather screening/inspection of City outfalls that exceed 12-inches in diameter, catch basins, and stormwater facilities. Any identified illicit connections during these inspections are recorded and documented with inspection paperwork or asset management software. The inspector would then notify the Engineering Department for documentation and remedy. To comply with this provision, all potential illicit discharges, including spills, must be investigated or referred to the appropriate agency within seven days. Emergencies, urgent problems, and severe violations require immediate investigation or referral. This protocol will continue as required.

S5.C.5.e Implement a Program to Address Illicit discharges

Under the IDDE program the City responds to and investigates calls and emails regarding environmental concerns such as illegal dumping, spills, illicit discharges, and illicit connections.

S5.C.5.f IDDE Staff Training and Recordkeeping

Public Works Maintenance crewmembers, inspectors, and those who may encounter or otherwise observe, an illicit discharge are trained to identify and report illicit discharges or connections to the Engineering Department. This training is geared towards identification, investigation, termination, cleanup, and reporting illicit discharges, spills, and connections. Training materials may feature annual video(s) describing IDDE identification and response, discussion of illicit discharge and spills identified during the previous 12 months, question and answer session, and lessons learned summary.



Duvall Public Works staff attend WSU IDDE and spill response training

City staff continue to look for resources that are tailored to specific job-related activities to continue training the City's workforce. The City will also continue to refine new employee information and training opportunities. These training courses and recordkeeping activities will continue as required.

Illicit discharge investigating and field screening is completed in accordance with the document titled *Illicit Connection and Illicit Discharge Field Screening and Source Tracing Guidance Manual* (Herrera Environmental Consultants, Inc., 2020).

S5.C.5.g Program Recordkeeping

The City uses the [Washington State WQWebIDDE portal](#) to track and report on each illicit discharge incident that could constitute a threat to human health, welfare, or the environment.

S5.C.6 Controlling Runoff from New Development, Redevelopment, and Construction Sites

Development and redevelopment projects in Duvall can have a significant impact on the health of the City's creeks, streams, and rivers. City staff review and inspect development sites during construction to ensure temporary and permanent facilities are properly installed, maintained, and functioning as designed. The City implements and enforces codes, standards, and policies that reduce pollutants in stormwater runoff from new development, redevelopment, and construction activities. This program applies to all private and public development projects, including transportation improvements.

S5.C.6.a-b Ordinance or Other Enforceable Mechanisms

[DMC 9.06.030](#) codifies stormwater management in the City and includes code for construction and stormwater infrastructure design. DMC authorizes the City to enforce provisions required by the NPDES permit, including the minimum requirements in the 2019 [Appendix 1](#) amended to include [Appendix 10](#).

S5.C.6.c Review, Inspection, and Enforcement for Public and Private Projects

The City's Development Review Committee (DRC) reviews permit applications for all public and private development, redevelopment, and infrastructure improvement projects. This process includes engineering and site plan review, approvals, inspections, and enforcement actions necessary to meet standards established in the Duvall Municipal Code (DMC).

The program ensures adequate long-term operation and maintenance (O&M) of post-construction stormwater facilities and best management practices (BMPs). City Ordinance 1214 clearly identifies the party responsible for maintenance and inspection of these facilities in accordance with all NPDES Permit requirements.

- i. Review of all stormwater site plans for proposed development.
- ii. Inspection prior to clearing and grading activities
- iii. Inspect all construction site temporary erosion and sediment controls for proper maintenance and continued function.
- iv. Inspect all permanent establishment of erosion control measures and or required surface and stormwater management facilities every 6 months until 90% buildout of lots is achieved.
- v. Final inspection of permitted development site upon completion of construction and prior to Final Plat approval or occupancy to ensure proper installation and function of stormwater facilities.
- vi. Compliance with required inspections and corrective actions is documented in project folders and completed by qualified personnel.
- vii. All record keeping of inspections and enforcement actions are maintained in the project folders.

- viii. Enforcement strategies are identified in [DMC 2.24.140](#) in response to issues of non-compliance.

The City has implemented new financial and permit software that streamlines the submittal, review, and approval process. The Public Works Department also administers a Wet Weather Permit requiring additional oversight for construction activities occurring between October 1 and April 30.

S5.C.6.d Notice of Intent (NOI)

The City will continue to require application for NOIs for coverage under the NPDES Construction Stormwater General Permit and the NPDES General Industrial Stormwater Permit available to the development community. These forms are available on Ecology’s website.

S5.C.6.e Staff Training

All staff responsible for implementing stormwater runoff controls—including permitting, plan review, construction site inspections, and enforcement—receive appropriate training for their duties. Staff who inspect temporary erosion and sediment control (TESC) measures at larger construction sites are Certified Erosion and Sediment Control Lead (CESCL) certified, while staff inspecting smaller sites receive training specific to those activities. Many staff hold CESCL certification regardless of the scale of their work. The City documents and maintains all staff training records.

S5.C.7 Stormwater Management for Existing Development

The City has historically taken a strategic and opportunistic approach to stormwater investments by leveraging projects to enhance stormwater management and infrastructure. In 2024, the city began developing a Stormwater Management Program for Existing Development (SMED). This program was implemented to focus project efforts on reducing negative stormwater impacts from existing developments. The current NPDES permit cycle designated the City improve stormwater quality of 1.3 equivalent acres, a number derived from population size, by completing qualified projects listed in [Appendix 12](#) of the 2024-2029 NPDES Permit.



Above: City Staff, Mayor, and Council celebrate the completion of 3rd Ave Box Culvert promoting safe fish passage, improved wildlife habitat and, greater stormwater capacity

Above: Mountains to Sound Greenway Trust crew planting live stakes supporting Coe Clemons restoration

S5.C.7.c Projects to Meet Assigned Equivalent Acreage

To fulfill this SMED acreage requirement, the city has completed and planned several projects including facility retrofits for water quality improvement, protected land acquisition, and restorative buffer plantings:

RIPARIAN RESTORATION	WATER QUALITY IMPROVEMENTS	LAND AQUISITION
<p>2024 — 3,570 trees were planted along Coe Clemons Creek by The Mountains to Sound Greenway Trust</p> <p>2025 — 3,140 trees were planted along Coe Clemons Creek by The Mountains to Sound Greenway Trust</p> <p>2026 — 5,250 native plants will be planted along with 6.4 acres of invasive weed suppression</p> <p>2027 — Continuation pending grant funding</p>	<p>2024 — 142nd Sidewalk Phase II added sidewalk, bike lane, and LID stormwater features and enhanced landscaping</p> <p>2026 — Miller Street Conveyance Improvement will address recurring flooding by replacing undersized pipes, installing catch basins, and potentially upgrading culverts</p> <p>2026 — 150th Sidewalk Extension will complete pedestrian sidewalk gaps while incorporating stormwater infrastructure that meets current water quality standards</p>	<p>2025 — Big Rock Ballfields Park Expansion acquired 13.8 acres to be maintained as protected land with minimal impervious surfaces and limited trail development</p>

S5.C.8 Source Control for Existing Development

S5C.8.c Implement an Inspection Program

In 2025 the City revitalized its Source Control program extending stormwater education and assistance to local businesses that have potential to impact the public storm system through daily outdoor practices such as dumpster use, wash water disposal, and loading dock operations. The NPDES permit requires that 20% of potentially pollutant generating businesses are visited each year, currently totaling 15 site visits for Duvall annually. The Source Control Program is designed to provide technical assistance and education for pollution prevention but may also need to follow a progressive compliance strategy (see below) to ensure necessary improvements.

In 2026, the City is working to partner with BEA Environmental to provide multilingual professional support and spill response education to better support local businesses. Additionally, City staff will continue to attend regional collaborative meetings with The Business Inspection Group (BIG) and seek support and guidance from neighboring jurisdictions

S5.C.8.d Progressive Enforcement Policy

Staff updated [DMC 9.06.100](#), requiring Source Control BMPs to be applied to any business or residential activity that might discharge contaminants to a public drainage facility, natural drainage system, surface and stormwater, or ground water. Contaminants shall be controlled by implementing appropriate source control BMPs, as described in the KCSWPPM. Discharges associated with activities not addressed in the KCSWPPM shall be controlled using BMPs reviewed and accepted by the City. Failure to implement such practices are enforced and subject to [DMC 2.24.140](#).



Spill Plan

1. Be Safe

- What spilled?
- Large or dangerous spill? Call 911.
- Do you have the correct supplies for clean up? (goggles, gloves, etc.)

2. Stop the Source

- Upright the container or plug the leak

3. Protect the Environment

- Contain the spill with absorbent pads, boom, or socks
- Prevent the spill from entering drains or soil

4. Notify

- Alert supervisor or manager
- If drains or soils are impacted, call Duvall's spill hotline for guidance on cleaning

5. Clean Up

- Clean up all spills - NEVER wash into drains or soil

6. Dispose of Properly

- Double-bag used spill materials and tie-off
- Use a waste contractor if necessary

7. Replace and Review

- Replace used spill kit materials
- Assess the cause of the spill and take the necessary steps to prevent recurrence

Duvall Spill Hotline
(425) 939-8040

It is the property owner's responsibility to clean the storm system after a spill.

The City provided spill response guides for businesses visited in 2025 for staff reference

S5.C.9 Operations & Maintenance

Proper maintenance of stormwater infrastructure is fundamental to protecting water quality. The City oversees the operation and maintenance of all stormwater systems within Duvall—both public and private. This includes 30 miles of pipe, 2,936 catch basins, and 125 City-owned treatment and flow control facilities. The City has implemented comprehensive measures to ensure that these operational and maintenance activities protect stormwater infrastructure and minimize impacts on local creeks, streams, rivers, wetlands, and lakes.

S5.C.9.a Maintenance Standards

Duvall has adopted the stormwater infrastructure maintenance standards described in the *2019 Stormwater Management Manual for Western Washington* for all stormwater treatment and flow control facilities, both public and private. For facilities without an established maintenance standard, the City develops site-specific standards as needed. These standards determine maintenance requirements and establish timelines for service completion.

S5.C.9.b Maintenance of Facilities Regulated by the City

To ensure long-term functionality of permanent stormwater facilities and BMPs, the City verifies adequate operations and maintenance for both private and public operations. [DMC 9.06.030](#) establishes the regulatory framework that authorizes inspection of private stormwater facilities and provides the City's enforcement authority to require cleaning or maintenance.

The City collaborates with private stormwater facility owners and operators to ensure new systems function as designed. All stormwater infrastructure—including runoff treatment and flow control facilities—undergoes inspection before receiving formal City approval. Once approved, private stormwater facilities are incorporated into the City's long-term inspection program.

City staff inspect private stormwater infrastructure annually to ensure proper flow control, treatment, and compliance with adopted maintenance standards. When maintenance deficiencies are identified, property owners provide documentation of corrective actions.



Maintenance crew member poses with giant root ball removed from storm pipe on NE Richardson Street

S5.9.c Maintenance of Facilities Owned or Operated by the City

The City maintains a municipal catch basin inspection program, evaluating all City-owned or operated catch basins, inlets, and control structures on a biennial basis. New conveyance, catchment, and stormwater facilities are added to the City's inventory and inspection list upon

City ownership, typically following the maintenance and defect bonding period. Public Works crews and City staff utilize asset management software to track and address maintenance needs through maintenance requests.

To mitigate stormwater system vulnerabilities, the City inspects known “hotspots” immediately following significant storm events (24-hour storms with a 10-year or greater recurrence interval). In Duvall, a large storm event is defined as two or more inches of rainfall within 24 hours, unless otherwise directed by the Engineering Department. Rainfall measurements are recorded at the City's Wastewater Treatment Plant (WWTP).

S5.C.9.d Practices, Policies, and Procedures to Reduce Stormwater Impacts of Municipal Operations

The City has established policies, procedures, and best management practices (BMPs) to minimize stormwater impacts from publicly owned and maintained properties. This includes parking lots, roads, highways, buildings, parks, open spaces, rights-of-way, maintenance yards, and stormwater facilities. Maintenance activities follow the *2018 Stormwater Facility Maintenance Manual* to reduce surface and stormwater runoff impacts.

S5.C.9.e Street Sweeping Program—New

Street sweeping helps intercept pollutants and debris from paved surfaces before they reach the City's storm system and waterways. Duvall's current street sweeping program visits all city streets at least twice annually, with increased frequency on high-traffic streets. In 2026, the City will develop a revised street sweeping program that meets new NPDES requirements for implementation in July 2027.

S5.C.9.f Stormwater Pollution Prevention Plan (SWPPP) for Heavy Machinery and Material Storage

The City has implemented a SWPPP for all heavy equipment maintenance or storage yards and material storage facilities under its jurisdiction that are subject to this Permit but not covered under the Industrial Stormwater General Permit.

S5.C.9.g Operation and Maintenance Employee Training

The City's training program ensures compliance with water quality protection requirements through ongoing education on operation and maintenance standards, inspection procedures, Stormwater Pollution Prevention Plans (SWPPPs), BMP selection, illicit discharge detection and elimination (IDDE), spill response, and best practices for minimizing water quality impacts. All employees engaged in construction, operations, or maintenance activities that may affect stormwater quality receive this training. The City maintains comprehensive records, including training dates, course descriptions, and attendee information.

S5.C.9.h Record Maintenance

The City maintains comprehensive records of inspections, maintenance, and repairs for all City-operated stormwater facilities, as outlined in this section.

S8. Monitoring and Assessment

Understanding the health of the region’s waterways and the effectiveness of stormwater management efforts requires ongoing monitoring and assessment. Duvall is an active member of the Stormwater Action Monitoring (SAM) consortium, a regional partnership that coordinates comprehensive monitoring programs including status and trends monitoring, stormwater program effectiveness studies, and source identification research. Through SAM, the City contributes to and benefits from regional data that informs local decision-making and helps track progress toward water quality goals.

For information about SAM-sponsored monitoring projects, visit:

<https://ecology.wa.gov/Regulations-Permits/Reporting-requirements/Stormwater-monitoring/Stormwater-Action-Monitoring>.

S8.A Status and Trends Monitoring

The City participates in the Regional Stormwater Management Plan (RSMP) to track long-term water quality conditions and identify trends in local waterways. This regional approach provides more wholistic data than individual jurisdictions could collect independently, helping cities understand how stormwater management actions impact receiving waters over time.

S8.B Effectiveness and Source Identification Studies

The City has chosen to participate in the SAM effectiveness and source identification programs to meet this requirement.

In 2026, the City is contributing two monitoring sites to a statewide study examining pollution concentrations in bioretention facility soils. Bioretention cells use specially designed soil mixes as filters to treat stormwater runoff before it reaches waterways. The study will help cities better understand maintenance practices that optimize the capture of contaminants, including 6PPDQ—a toxic chemical released from worn tire particles contributing to rising salmon deaths. City stormwater staff are actively participating in the project's technical advisory committee, offering practical guidance for bioretention maintenance across Washington State.

GLOSSARY

Best Management Practices (BMPs): The schedules of activities, prohibitions of practices, maintenance procedures, and structural and/or managerial practices approved by the Department of Ecology that, when used singly or in combination, prevent or reduce the release of pollutants and other adverse impacts to waters of Washington State. For example, a structural BMP is the use of catch basin cloth inserts to capture sediment from turbid water prior to the water discharging into the stormwater system.

Clean Water Act (CWA): Formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972, Pub. L. 92-500, as amended Pub. L. 95-217, Pub L. 95-576, Pub L. 6-483 and Pub. L. 97-117, 33 U.S.C. 1251 et seq.

Illicit Connection: Any man-made conveyance that is connected to a municipal separate storm sewer without a permit, excluding roof drains and other similar type connections.

Illicit Discharge: Examples include sanitary sewer connections, floor drains, channels, pipelines, conduits, inlets, or outlets that are connected directly to the municipal separate storm sewer system. Any discharge to a municipal separate storm sewer that is not composed entirely of stormwater except discharges pursuant to an NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer) and discharges resulting from firefighting activities.

Low Impact Development (LID): A stormwater management and land development strategy applied at the parcel and subdivision scale that emphasizes conservation and use of onsite natural features integrated with engineered, small-scale hydrologic controls to more closely mimic predevelopment hydrologic functions. It aims to capture water, slow it down, allow it to enter our soil, and clean and cool the water before it reaches our streams.

Municipal Separate Storm Sewer System (MS4): A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains):

- i. Owned or operated by a state, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State Law) having jurisdiction over disposal of wastes, stormwater, or other wastes, including special districts under State Law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe of an authorized Indian tribal organization, or a designated and approved management agency under Section 208 of the CWA that discharges to water of the United States;
- ii. Designed or used for collecting or conveying stormwater;
- iii. Which is not a combined sewer; and
- iv. Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

National Pollution Discharge Elimination System (NPDES): The national program for issuing, modifying, revoking, and reissuing, terminating, monitoring and enforcing permits,

and imposing and enforcing pretreatment requirements, under Sections 307, 402, 318, and 405 of the Federal Clean Water Act, for the discharge of pollutants to surface waters of the state from point sources. These permits are referred to as NPDES permits and, in Washington State, are administered by the Washington State Department of Ecology.

Non-Point Source Pollution (NPS): NPS pollution is caused by rainfall or snowmelt moving over and through the ground. As the runoff moves, it picks up and carries away natural and human-made pollutants, finally depositing them into lakes, rivers, wetlands, coastal waters, and ground waters.

Point Source Pollution: Any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged. This term does not include agricultural stormwater discharges and return flows from irrigated agriculture.

Stormwater: Runoff during and following precipitation and snowmelt events, including surface runoff and drainage.

Stormwater Management Program (SWMP): A set of actions and activities designed to reduce the discharge of pollutants from the regulated small MS4 to the maximum extent practicable and to protect water quality, and comprising the components listed in S5 and S6 of the NPDES permit and any additional actions necessary to meet the requirements of the NPDES permit.

Surface Water: Includes lakes, rivers, ponds, streams, inland waters, saltwater, wetlands, other surface waters, and water courses as well as shallow groundwater.

Total Maximum Daily Load (TMDL): A water cleanup plan. A TMDL is a calculation of the maximum amount of a pollutant that a water body can receive and still meet water quality standards, and an allocation of that amount to the pollutant's sources. A TMDL is the sum of the allowable loads of a single pollutant from all contributing point and nonpoint sources. The calculation must include a margin of safety to ensure that the water body can be used for the purposes the state has designated. The calculation must also account for reasonable variation in water quality. Water quality standards are set by states, territories, and tribes. They identify the uses for each water body (i.e. drinking water supply, contact recreation such as swimming, and aquatic life support such as fishing), and the scientific criteria to support that use. The Clean Water Act, Section 303, establishes the water quality standards and TMDL programs.

References

- City of Duvall. (2018). *Surface and Stormwater Management Plan*. Duvall: City of Duvall.
- Herrera Environmental Consultants, Inc. (2020). *IC-ID FIELD SCREENING AND SOURCE TRACING GUIDANCE MANUAL*. Retrieved from Washington Stormwater Center: <https://www.wastormwatercenter.org/permit-assistance/municipal/permit-assistance-2/ic-id/>
- Washington State Department of Ecology. (2024). *Stormwater Management Action Planning Guidance*. Olympia: Washington State Department of Ecology.