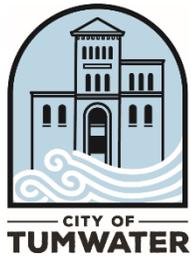


Stormwater Management Program Plan
City of Tumwater
2023



Contents

1. Introduction	3
2. Permit Administration	3
3. Stormwater Planning	4
3.1 Permit Requirements	4
3.2 Existing Stormwater Planning Program	5
3.3 Stormwater Planning During Active Permit Period	5
4. Public Education and Outreach	6
4.1 Permit Requirements	6
4.2 Existing Education and Outreach Program	6
5. Public Involvement and Participation	8
5.1 Permit Requirements	8
5.2 Existing Public Involvement and Participation	8
5.3 Public involvement and Participation During Active Permit Period	9
6. Municipal Separate Sewer Stormwater System (MS4) Mapping	9
6.1 Permit Requirements	9
6.2 Existing Mapping Program	9
6.3 Mapping During Active Permit Period	10
7. Illicit Discharge Detection and Elimination (IDDE) Program	10
7.1 Permit Requirements	10
7.2 Existing IDDE Program	11
8. Controlling Runoff from New Development, Redevelopment, and Construction Sites	12
8.1 Permit Requirements	12
8.2 Existing Program for Site Review, Inspection, and Enforcement	12
8.3 Site Review, Inspection, and Enforcement During Active Permit Period	13
9. Operations and Maintenance	13
9.1 Permit Requirements	13
9.2 Existing Inspection Programs	14
9.2.1 City Owned Facilities Inspection Program	14
9.2.2 Privately Maintained Stormwater System Inspection Program	14
9.2.3 Post-Storm Inspection Program	14
9.3 Pollution Prevention Activities	14
9.4 Operations and Maintenance During Active Permit Period	15
10. Source Control Program for Existing Development	15
10.1 Permit Requirements	15
10.2 Existing Source Control Inspection Program for Existing Development	16
10.3 Source Control Program During Active Permit Period	16
11. Underground Injection Control (UIC) Wells	16
11.1 Overview	16
11.2 Stormwater Management Program Plan for UIC Wells	17
11.3 UIC Management for Permit Compliance	17
12. Total Maximum Daily Load (TMDL) Requirements	18
13. Monitoring and Assessment – Section S8	18
14. NPDES Reporting	19
13.1 Compliance with the NPDES Permit	19
14. Conclusion	20

1. Introduction

Stormwater runoff is generated when precipitation from rain and snowmelt events flows over land or impervious surfaces such as paved streets, parking lots, and building rooftops. As the runoff flows over the land or impervious surfaces, it accumulates debris, chemicals, sediment, or other pollutants that could adversely affect water quality if the runoff is discharged untreated. The primary method to control pollutants from stormwater discharges is the use of Best Management Practices (BMPs). In addition, most stormwater discharges are considered point sources of pollution and require coverage under a National Pollutant Discharge Elimination System (NPDES) permit.

During the early 1990's, the Environmental Protection Agency (EPA) created the NPDES to address the high levels of pollutants entering our nation's waterways. The permitting system requires that waste producers having direct discharges to surface waters undergo an extensive permitting process to demonstrate that the impacts of respective industrial operation be minimized. Since the inception of the program, NPDES has been expanded to include stormwater issues.

Under the first phase of the permitting system, jurisdictions with populations of 100,000 or greater were required to go through the NPDES permitting process. Smaller jurisdictions, like the City of Tumwater, with populations between 10,000 and 100,000 residents, have since been required to have a Municipal Stormwater Permit as part of Phase II of the program. The implementation of various permit conditions is phased in throughout the five-year Permit term. The current NPDES Phase II permit runs from August 1, 2019 through July 31, 2024.

The City is required to report annually on progress in permit implementation for the prior year and submit a Stormwater Management Program (SWMP) Plan that describes existing program activities and how those activities will meet permit requirements in the coming year.

The City is committed to implementing this SWMP Plan, which is designed to reduce flooding, protect water quality, protect, and maintain infrastructure, and improve aquatic habitat conditions. The SWMP Plan is a working document that will be updated annually to reflect adaptations that contribute to a successful program. The public is encouraged to be involved in the development of program plans. Comments or questions regarding the SWMP can be directed to the City of Tumwater's Water Resources and Sustainability Program at 360-754-4140, or email WaterResources@ci.tumwater.wa.us. The SWMP Plan is available for review in the stormwater section of the City's website, located at <https://www.ci.tumwater.wa.us/departments/water-resources-sustainability-department/water-resources/stormwater/plans-program-guidance>

2. Permit Administration

Within the City many staff members contribute toward meeting permit requirements. Currently, the Permit is administered by the City of Tumwater's Water Resources and Sustainability Department. Substantial implementation assistance comes from the Community Development and the Transportation and Engineering Departments.

The NPDES Permit requires the City to develop a SWMP Plan that describes actions and activities comprising the components in S5 and and additional actions necessary to meet the requirements of any Total Maximum Daily Load (TMDL) and S8 - Monitoring and Assessment. Section S5.C includes:

- Stormwater Planning
- Public Education and Outreach
- Public Involvement and Participation
- Municipal Separate Storm Sewer System (MS4) Mapping and Documentation
- Illicit Discharge Detection and Elimination
- Controlling Runoff from New Development, Redevelopment, and Construction Sites
- Operations and Maintenance
- Source Control Program for Existing Development

TMDL Requirements include:

- Temperature reduction measures in the Deschutes River watershed

3. Stormwater Planning

Section S5.C.1 of the Permit requires the City to implement a Stormwater Planning Program to inform and assist in developing policies and strategies as water quality management tools to protect receiving waters and ground water.

3.1 Permit Requirements

The minimum requirements include:

- Convening an inter-disciplinary team by August 1, 2020 to inform and assist in the development, progress, and influence of the program.
- Coordinating long range plan updates by using receiving water health information to inform the planning update process.
- By March 31, 2023, develop a Stormwater Management Action Plan (SMAP) that prioritizes at least one catchment within the City. The Plan will include:
 - Receiving water assessment.
 - Stormwater retrofit needs
 - Land use strategies for water quality management
 - Targeted, enhanced, or customized stormwater management implementation related to section S5
 - Receiving water prioritization.
 - Identification of changes needed to long range planning (if applicable).
 - A proposed implementation schedule and budget source.
 - Scheduled future assessments to improve planning and implementation of projects.
- Low Impact Development (LID) principles and BMP requirements implemented by December 31, 2023 when updating codes and rules so LID is the preferred approach to site development.

3.2 Existing Stormwater Planning Program

Several internal and external coordination mechanisms exist within the City to inform and assist in developing policies and strategies to protect receiving waters. The City's current Stormwater Planning Program consists of:

- Meetings held with Community Development, Transportation and Engineering, Facilities Maintenance, Code Enforcement, and Water Resources and Sustainability Departments as needed to discuss procedures designed to achieve and maintain Stormwater Planning Permit compliance. This group is the foundation for the Interdisciplinary Planning Team also known as the Stormwater Planning Interdisciplinary Group of Tumwater (SPIGOT).
- Conduct SMAP receiving water assessments and watershed prioritization using existing documented watershed plans and regional assessments.
- Secured grant funding to develop SMAPs for three priority catchments. Strategies were developed to address stormwater improvements and improve water quality.
- Completion of a SMAP the Trosper Lake subbasin. More information about the Trosper Lake Subbasin can be found on the City's website:
<https://www.ci.tumwater.wa.us/departments/water-resources-sustainability-department/water-resources/stormwater-management-action-plan>
- Engagement with the cities of Olympia and Lacey, as well as Thurston County to address regional stormwater-related projects and objectives.
- Adopted updates to the City's Drainage Design and Erosion Control Manual to maintain current BMPs including Low Impact Development (LID) as the preferred approach to stormwater management as required by the Department of Ecology.
- Development of a Comprehensive Stormwater Management Plan in 2018. This document is foundational for stormwater planning in the city and is currently available on the City's website (<https://www.ci.tumwater.wa.us/home/showpublisheddocument/19238/638283102651800000>).
- A work plan and schedule for prioritizing stormwater actions was developed using the Comprehensive Stormwater Management Plan and is used for internal planning purposes.
- Assessments of areas known throughout the City with poorly functioning stormwater facilities and conveyances to receiving waters and work towards solutions for those areas.
- Project and program scopes and budgets are developed and approved by City leadership. Projects of significance, greater than \$25,000, are reviewed by the City Council and made available for public review and comment.
- Grant funding exploration for partial funding of stormwater improvement projects. Internal funding is available for maintenance projects in priority receiving waters areas.

3.3 Stormwater Planning During Active Permit Period

Existing elements of the Stormwater Planning Program will remain in place. Additionally, the NPDES Permit outlines target dates for new elements of the Stormwater Planning Program to achieve. The following elements will be the focus of future planning efforts:

- ✓ Convene interdisciplinary meetings as needed.
- ✓ Annually assess and document any newly identified administrative or regulatory barriers to implementing LID Principles or BMPs.

- ✓ Annually review codes, rules, standards, or other enforceable documents to incorporate and require LID principles and BMPs.
- ✓ By May 1, 2021 - Start the Stormwater Management Action Planning (SMAP) Process - Document and assess existing information related to receiving waters to identify which receiving waters are most likely to benefit from stormwater management planning.
- ✓ By March 31, 2022 – Complete a watershed inventory with a description of relative conditions of the receiving waters and contributing areas.
- ✓ By June 30, 2022 – Produce a prioritized and ranked list of receiving waters
- ✓ By March 31, 2023 – Develop a SMAP for at least one high priority catchment area that identifies retrofit needs, land management strategies and actions identified for water quality management including targeted or enhanced stormwater management actions. SMAP includes outreach for community engagement through a public facing interactive map and survey.
- ✓ By March 31, 2024 – Submit a summary of the results of the LID review and revision process using the format in Appendix 5 of the NPDES Permit.

4. Public Education and Outreach

Section S5.C.2 of the Permit requires the City to include an Education and Outreach program that is designed to build awareness, effect behavior change, and create stewardship opportunities to reduce stormwater impacts.

4.1 Permit Requirements

The minimum requirements include:

- Implementation of an Education and Outreach Program for the area served by the MS4 that builds general awareness for the general public (specifically overburdened communities and school-aged students) and the professional sector that includes engineers, contractors, developers, and land use planners.
- Selection of one target audience and one BMP (S5.C.2.ii.a) to affect behavior change and conduct an evaluation of the effectiveness of an ongoing behavior change campaign. Continue to develop the campaign to reach targeted audiences.
- Stewardship opportunities with existing organizations to encourage residents to participate in events within the community.

4.2 Existing Education and Outreach Program

The City's Education and Outreach Program has dedicated staff to carry out the Permit requirements. The City, along with regional partners, adapted some of their programming to a hybrid format. Expanding access to these programs has allowed for participants to learn and participate remotely, expanding our audience and reducing barriers to participation by increasing the ease and flexibility to access outreach material and opportunities. Current activities include:

- Outreach materials found at the City of Tumwater Water Resources counter or on the City's website, located at <https://www.ci.tumwater.wa.us/departments/water-resources-sustainability-department/water-resources/stormwater>.
- Participation and support for the local and regional Stream Team program.
- Collaboration with other NPDES jurisdictions through the Stormwater Outreach Group (SOG), Stormwater Outreach for Regional Municipalities (STORM), Business Inspection Group (BIG), and Dumpster Outreach Group (DOG) to promote regional education and outreach programs.

- Engage local businesses in a behavior change campaign that addresses open dumpster lids and identify solutions for business employees to close dumpster lids.
- Coordination with staff from the South Sound Global Rivers Environmental Education Network (GREEN) to convey messages important for resource conservation and watershed protection to school age children while offering hands-on learning experiences.
- Provide technical assistance to local businesses and homeowner associations on necessary maintenance, water quality, habitat protection, and stormwater impacts.
- Coordination with Thurston County and the cities of Olympia and Lacey to provide an online stormwater pond maintenance workshop targeted to homeowner associations, property management firms and contractors.
- Promote the Don't Wait to Inflate campaign and other "Puget Sound Starts Here" initiatives.
- Support businesses and community organizations' carwash fundraisers that comply with Illicit discharge ordinances.
- Support for the Pet Waste Program by providing free neighborhood pet waste stations, on-leash pet waste bag dispensers, and bag refills.
- Provide pet waste bag dispensers on leashes and information pet waste brochures to Joint Animal Services that go out to new owners after dog adoptions.
- Habitat restoration, trail maintenance, and wildlife survey events scheduled throughout the year.
- Develop a leaf litter management campaign aimed at private property owners to reduce nutrient inputs in stormwater runoff. Conduct outreach for beaver coexistence strategies that help improve water quality and habitat functions within urban settings.
- Engage the Tumwater School District to bring hands-on educational opportunities to the students that integrate into existing lesson plans.
- Implement the Dumpster Outreach Campaign, designed to have businesses close the lids of their dumpsters to minimize runoff from dumpsters.

4.3 Education and Outreach During Active Permit Period

Education and outreach campaigns continue to engage the local community through stewardship events and programs aimed at improving water quality. New partnerships with the Tumwater School District will provide opportunities for the City and students to participate in meaningful projects and curriculum development. The Education and Outreach Program will include the following Permit requirements:

- ✓ Provide education and outreach for selected subject areas to target audiences on an ongoing and strategic schedule.
- ✓ Provide and advertise stewardship opportunities and/or partner with existing organizations to encourage residents to participate in activities or events planned and organized within the community.
- ✓ Select at a minimum one target audience and one subject area from either C.2.a.i.a. or C.2.a.i.b of the Permit.
- ✓ By February 1, 2021 - Select at least one target audience and one BMP to effect behavior change. Based on recommended social marketing practices and methods and develop a campaign that is tailored to the community, including the development of a program evaluation plan.
- ✓ By April 1, 2021 – Implement the strategy developed to affect behavior change in the selected target audience.

- ✓ By January 1, 2023 – Conduct an outreach campaign to businesses and institutions that provides information about activities that may generate pollutants and the source control requirements applicable to those activities.
- ✓ By March 31, 2024 - Evaluate and report on the changes in understanding and adoption of targeted behaviors resulting from the implementation of the strategy and any planned and recommended changes to the campaign to improve its effectiveness.
- ✓ By March 31, 2024 – Adopt the behavior change campaign using results of the evaluation to tailor the campaign to the targeted audience.

5. Public Involvement and Participation

Section S5.C.3 of the Permit requires the City to provide ongoing opportunities for public involvement and participation through advisory councils, public hearings, watershed committees, and participation in developing rate-structures or other similar activities and comply with state and local public notice requirements when developing elements of the SWMP or SMAP.

5.1 Permit Requirements

The minimum required actions include:

- Create opportunities for the public, including overburdened communities, to participate in the decision-making process involving the City’s SMAP and SWMP.
- Post the SWMP on the City website no later than May 31 each year and make Permit submittals available upon request.

5.2 Existing Public Involvement and Participation

The City’s goal for public involvement and participation is to actively engage all willing residents, business owners, property owners, and contractors in all of the aspects of the stormwater utility and surface water stewardship, broadening the sense of responsibility and understanding of the health of our watersheds throughout the community.

The City currently provides for public involvement and participation at City Council meetings, advisory council meetings, public hearings, and voluntary stewardship programs, such as Stream Team. The latest SWMP document, Comprehensive Stormwater Management Plan and annual report are posted on the City’s website here:

<https://www.ci.tumwater.wa.us/departments/water-resources-sustainability-department/water-resources/stormwater/plans-program-guidance>The public is encouraged to submit comments on the development and implementation of the City’s SWMP through City Council meetings or direct communication with the Water Resources and Sustainability Department.

Comments or questions regarding any of the posted documents can be directed to:

City of Tumwater
 Water Resources and Sustainability Department
 555 Israel Road SW
 Tumwater, WA 98501
 360-754-4140
 Email: WaterResources@ci.tumwater.wa.us.

5.3 Public Involvement and Participation During Active Permit Period

The City currently communicates activities and programs that meet the Permit requirements for public engagement through its website, www.ci.tumwater.wa.us, e-mail newsletters, social media, council meetings that are open to the public, and community events such as Tumwater University and Stream Team events. Through these actions, the following Permit requirements have been met:

- ✓ Create opportunities for public participation in the decision-making processes involving the development, implementation, and update of the SWMP and SMAP.
- ✓ Make current SWMP document and Annual Compliance Report available to public by posting on the permittee website.
- ✓ Present compliance strategies for the NPDES Permit to the Public Works Committee annually.

6. Municipal Separate Sewer Stormwater System (MS4) Mapping

Section S5.C.4 of the Permit requires the City to maintain current maps of the Municipal Separate Sewer Stormwater System (MS4) through routine reconnaissance and inspection activities. Mapping the City's MS4 is an ongoing project that incorporates new stormwater structures as they are added to the system through site development as well as adds existing structures as they become known. A Quality Assurance and Quality Control process was implemented to ensure data accuracy. The City currently uses Geographic Information Systems to house and analyze mapping data for the MS4.

6.1 Permit Requirements

Section S5.C.4.a-e. describes Permit requirements for mapping activities. The Permit requires new mapping activities to be completed during the normal course of business (inspection, outfall screening, and maintenance). Permit requirements include mapping the following elements:

- Known outfalls and discharge points
- Receiving waters other than groundwater
- Stormwater treatment and flow control facilities operated by the City
- Geographic areas served by the City's MS4 that do not discharge stormwater to surface waters
- Tributary conveyances to all known outfalls and discharge points that are 24 inch or larger in diameter.
- Connections between the City's MS4 and other jurisdictions
- All connections to the MS4 authorized by the City after February 16, 2007.
- By August 1, 2023 - Map known connections from privately owned systems to the City's MS4.

6.2 Existing Mapping Program

Currently the City meets the mapping requirements in the Permit and is conducting a needs assessment to help guide future stormwater work unrelated to permit requirements. Highlights for 2023 include implementing a catch basin inspection program using the Field Maps GIS based tool. We were also able to complete outfall screening for the remaining known outfalls in the city. Complete screening and mapping of all known outfalls in the city was completed in four years, which is half the time required by NPDES Permit Section S5.C.5.d.i(a). In 2023, 40 known outfalls were surveyed for illicit connections and water quality concerns. The survey team will look to identify and survey any remaining outfalls in 2024.

6.3 Mapping During Active Permit Period

The mapping work plan for 2024 will focus on improving mapping definitions used in the City's GIS geodatabase, implementing an Ambient Water Quality Monitoring Program, and providing support for 2024-2029 Permit requirements. Other Permit requirements that will remain a focus include:

- ✓ Maintain a map of the MS4 that includes ongoing mapping requirements.
- ✓ Make available upon request, maps depicting the Permit required mapping elements.
- ✓ Make available upon request, mapping information to federally recognized tribes, municipalities, and other Permittees.
- ✓ Map illicit discharges and connections to better understand patterns and problem areas where source control measures would be effective.
- ✓ By January 1, 2020 – Collect size and material data for all known MS4 outfalls during the normal course of business and update records accordingly.
- ✓ By August 1, 2021 – implement the required mapping format in electronic form: Geographic Information System, CAD drawings, or other software that can map and store points, lines, polygons, and associated attributes according to mapping standards.
- ✓ Map Deschutes River and Percival Creek corridors as part of routine IDDE outfall screening.
- ✓ Map drainage basins as part of the Stormwater Management Action Plan (SMAP) Permit requirement.
- ✓ Create a public facing Storymap that describes SMAP objectives and provides an opportunity for community feedback.
- ✓ By August 1, 2023 – complete mapping of all known connections from the MS4 to privately owned stormwater systems.

7. Illicit Discharge Detection and Elimination (IDDE) Program

Section S5.C.5 of the Permit requires the City to implement an ongoing program to detect and remove illicit connections, discharges, and improper disposal of pollutants into the MS4 owned or operated by the City. This section outlines the Permit requirements for the Illicit Discharge Detection and Elimination (IDDE) Program.

7.1 Permit Requirements

The requirements of the Permit include:

- Procedures for reporting and correcting illicit discharges identified through field screening, inspections, complaints, and monitoring information.
- Informing public employees, businesses, and the general public of hazards associated with illicit discharges and improper waste disposal.
- An ordinance with enforcement mechanisms that prohibits non-stormwater and illicit discharges. The ordinance shall define allowable discharges and conditionally allowable discharges, while addressing these discharges if they are identified as a significant source of erosion.
- An ongoing program to detect and identify illicit discharges that includes field screening, source control inspections, and outfall screening at a rate of 12% per year.
- Maintain a public spill hotline.

- Maintain a training program for employees whose job may encounter an illicit discharge or report an illicit discharge.
- Maintain a training program on how to respond to illicit discharges and spills within the city.
- Track and maintain records of illicit discharges from initial reporting to response.

7.2 Existing IDDE Program

The IDDE Program is designed to detect, remove, and eliminate illicit discharges and connections to the municipal stormwater system. This is achieved through inspection, education, regulation, and enforcement. The Water Resources and Sustainability Department manages the City's IDDE Program. Maintenance staff and construction site inspectors also play an important role in identifying illicit discharge problems and responding to reported spills, however, all Transportation and Engineering, Community Development, Parks, Police, and Fire Department staff play a role in locating, identifying, reporting, and responding to illicit discharges. Detailed procedures are outlined in the City of Tumwater's IDDE Standard Operating Procedure that the City updates as needed.

7.3 IDDE During Active Permit Period

The IDDE Program is a continuing program that the City will maintain at the current level of service to the community when responding to and resolving illicit discharges and connections. Specific items the Program will address in 2024 and beyond are:

- ✓ Maintaining a 24-hour Spills Hotline - (360) 754-4150.
- ✓ Staff training on identification and reporting of illicit connections and discharges.
- ✓ Updating [Tumwater Municipal Code 13.12.020](#) as needed, which identifies allowable and conditionally allowable discharges and take enforcement actions of code violations as needed.
- ✓ Mapping the City's MS4, wetlands and receiving waters in an ArcGIS database. This is a continuous process as new development and redevelopment occurs and updated, as necessary.
- ✓ Mapping reported spills as required.
- ✓ Tracking IDDE reports using Survey 123 and Ecology's WQWebportal. The City records notifications, identification of substance discharged, investigation procedures, clean-up activities, educational opportunities, and enforcement activities if needed.
- ✓ Outreach and education to businesses and the general public through technical assistance, brochures, fact sheets, community events, and applicable operational BMPs.
- ✓ Maintaining equipment and supplies necessary to conduct spill response.
- ✓ Coordinate with Department of Ecology and other affected agencies and jurisdictions to resolve spills and discharges that affect the City's MS4.
- ✓ Conduct dry weather outfall screening to detect ongoing illicit connections.
- ✓ Improve illicit discharge mapping capabilities through electronic field data collection.
- ✓ Review the City's Stormwater Pollution Prevention Plans (SWPPP) with the Tumwater Valley Golf Course, Parks and Facilities Department and the Utility Operations Department.
- ✓ Conduct annual SWPPP inspections to identify potential sources of pollution and pollution generating activities.
- ✓ Conduct tabletop training exercises to better prepare staff who may encounter spills.

8. Controlling Runoff from New Development, Redevelopment, and Construction Sites

Section S5.C.6 of the Permit requires the City to implement and enforce a program to reduce pollutants in stormwater runoff from new development, redevelopment, and construction site projects. Applicable projects include public, private, and transportation.

8.1 Permit Requirements

Permit requirements for the program include:

- An ordinance or other enforceable mechanism that addresses stormwater runoff from construction activities with minimum thresholds that are defined in Appendix 1 of the NPDES Permit.
- A permitting process with site plan review, inspection, and enforcement capabilities using qualified personnel.
- Review of all stormwater site plans for proposed development.
- Inspections of all sites, prior to development that have a high potential for sediment transport.
- Inspections of all sites during construction to verify proper installation and maintenance of sediment and erosion controls.
- Inspections of new residential development's stormwater treatment and flow control BMPs/facilities including catch basins every six months until 90% of the lots are constructed.
- Inspections of permitted development upon completion of construction and prior to final approval or occupancy. Verification that a maintenance plan is completed and responsibility for maintenance is assigned.
- Compliance with the inspection requirements above shall be determined by the presence and records of an established inspection program designed to inspect all sites. Compliance during this permit term shall be determined by achieving at least 80% of scheduled inspections.
- An enforcement strategy that is implemented to respond to issues of non-compliance.
- A link to the electronic Construction Stormwater General Permit Notice of Intent (NOI) form for construction activity and, as applicable, a link to the electronic Industrial Stormwater General Permit NOI form for industrial activity to representatives of proposed new development and redevelopment. Permittees shall continue to enforce local ordinances controlling runoff from sites that are also covered by stormwater permits issued by Ecology.
- Training for employees whose primary job duties are implementing the program to control stormwater runoff from new development, redevelopment, and construction sites, including permitting, plan review, construction site inspections, and enforcement. Follow-up training must be provided as needed to address changes in procedures, techniques, or staffing. Permittees shall document and maintain records of the training provided and the staff trained.
- Amend enforceable documents to be functionally equivalent to Appendix I in the Western Washington Phase II Municipal Stormwater Permit and the required portions of Ecology's 2019 Stormwater Management Manual for Western Washington.

8.2 Existing Program for Site Review, Inspection, and Enforcement

In 2021, the Water Resources and Sustainability Department assumed regular temporary erosion and sediment control inspections on development projects larger than one acre. The City's Stormwater

Inspector works with contractors, developers, and private applicants when construction activities affect stormwater runoff. The City of Tumwater's Drainage Design and Erosion Control Manual (DDECM) is a set of minimum requirements, technical thresholds, and definitions for construction activities that are at least as stringent as those outlined in Appendix 1 of the NPDES Permit and are consistent with the requirements of the 2019 Stormwater Management Manual for Western Washington (SWMMWW) that is used as guidance for development and redevelopment projects. Revisions to the DDECM became effective on July 1, 2022. A program is in place where trained staff review, inspect and enforce provisions in [Tumwater Municipal Code 13.12](#) (Stormwater System). Training for staff is current and continuing.

8.3 Site Review, Inspection, and Enforcement During Active Permit Period

The City will maintain its level of service when conducting site plan review, inspections, and enforcement. A new electronic data collection system was implemented that greatly improved inspection documentation and efficiency. In addition, the City hired a dedicated Stormwater Inspector that assists the engineering and building inspectors with conducting routine sediment and erosion control inspections. The City meets the requirements in the Permit by implementing the following procedures:

- ✓ By June 30, 2022 - Review and revise as needed Tumwater Municipal Code 13.12 which addresses runoff from construction activities.
- ✓ Adopt the 2022 Revised DDECM which includes Low Impact Design methods of development as the preferred design criteria.
- ✓ Implemented a site review process that includes 11 minimum requirements for new development and redevelopment.
- ✓ Continue to conduct scheduled inspections at least once per month.
- ✓ Implement an electronic stormwater inspection tool to reduce errors, improve efficiency and improve communication.
- ✓ Continue code enforcement strategies to ensure compliance with TMC 13.12 and the DDECM.
- ✓ Continue training opportunities for all the Community Development, Engineering and Transportation, and Water Resources and Sustainability inspectors as Certified Erosion and Sediment Control Leads (CESCL).

9. Operations and Maintenance

Section S5.C.7 of the Permit requires a documented program to regulate and conduct maintenance activities to prevent or reduce stormwater impacts. Operations and maintenance staff refer to the Stormwater Facility Maintenance Guide which was revised in 2022. This section summarizes the Permit requirements for Operations & Maintenance (O&M) and pollution prevention that describes current activities the City has implemented to meet the Permit requirements.

9.1 Permit Requirements

Minimum requirements include:

- Implementation of a maintenance standard for all facility functions that is as protective as or more protective than the 2019 SWMMWW.
- Ensure maintenance of stormwater facilities regulated by the City.
- Maintain stormwater facilities owned or operated by the City.

- Implement practices, policies, and procedures to reduce stormwater impacts associated with runoff from all lands owned or maintained by the City, and road maintenance activities under the functional control of the City.

9.2 Existing Inspection Programs

The City has a program in place where trained staff inspect municipally owned and regulated stormwater treatment and flow control BMPs and facilities. Based on the inspections, maintenance activities are conducted on the facilities to ensure they are functioning properly. Maintenance standards include timeframes for repair when an inspection identifies an exceedance of maintenance standards. City maintenance crews also conduct routine maintenance activities such as street sweeping and catch basin inspections and cleaning. The Inspections and Maintenance Program is a continuing program.

9.2.1 City Owned Facilities Inspection Program

The City conducts semi-annual inspections of all municipally owned or operated permanent stormwater treatment and flow control facilities. These inspections help prioritize maintenance projects that the City is responsible for. A new catch basin inspection survey was launched in 2022, increasing inspection frequency and efficiency to exceed Permit goals. Catch basins are required to be inspected at least every two years and maintained as needed. The minimum maintenance schedule when corrective action is required for all facilities:

- Within one year for typical maintenance of facilities.
- Within six months for catch basins.
- Within two years for maintenance that requires capitol construction of less than \$25,000.

9.2.2 Privately Maintained Stormwater System Inspection Program

The City currently manages private stormwater facilities inspections through Stormwater Maintenance Agreements with homeowner Associations and private property owners. The Stormwater Maintenance Agreements include provisions that identify the parties responsible for stormwater facility maintenance and a timeline for private parties to inspect and maintain their facilities. Stormwater Maintenance Agreements provide a date when inspection reports are to be submitted to the City. The private facility inspections are supplemented by inspections conducted by the Stormwater Inspector. The City also provides technical assistance upon request.

9.2.3 Post-Storm Inspection Program

The City conducts spot checks of facilities and flow control BMPs after potentially damaging major storm events (greater than 2.0 inches within a 24-hour period). When maintenance needs are identified through the spot check inspections, further inspections at other City owned facilities and flow control BMPs occur. Illicit discharges during storm events are handled according to the City's Illicit Discharge Detection Elimination and Spill Response Standard Operating Procedure.

9.3 Pollution Prevention Activities

The City is continuing routine practices to prevent and reduce stormwater impacts associated with runoff from streets, parking areas, and roads maintained by the City. The following activities are conducted by City maintenance teams that include Water Resources and Sustainability, Transportation and Engineering Department, Parks and Facilities, and the Tumwater Valley Golf Course:

- Catch basin cleaning

- Pipe cleaning
- Cleaning culverts that convey stormwater in ditch systems
- Ditch maintenance
- Street sweeping
- Roadside vegetation management
- Sediment and erosion control
- Landscape maintenance and vegetation disposal
- Pond maintenance
- Treatment facility maintenance
- Annual outfall screening

9.4 Operations and Maintenance During Active Permit Period

The City's Public Works Operations Department recently went through a re-organization, creating a dedicated Stormwater Utility Maintenance Team. The newly formed team receives support from the Water Resources and Sustainability Staff through a monthly training series to ensure the team is equipped with the current state of science and BMP maintenance techniques. The team has completed several maintenance projects since the re-organization and will maintain its level of service when inspecting and maintaining City-owned stormwater facilities and flow control BMPs. The Stormwater Inspector will work with private stormwater facility owners to implement the Stormwater Maintenance Agreements. Continuing activities to meet permit compliance include:

- ✓ Semi-annual inspections of City owned and maintained stormwater treatment facilities.
- ✓ Street sweeping and roadside vegetation maintenance.
- ✓ Catch basin and stormwater treatment facility maintenance as needed.
- ✓ Stormwater facility inspections after a significant rainfall event
- ✓ Private stormwater facility inspections and technical assistance
- ✓ Conduct regularly scheduled meetings with the Water Resources and Sustainability staff and the Stormwater Utility Maintenance Team to ensure maintenance standards are performed according to the schedule in S5.C.7.a.ii of the Permit.
- ✓ Continued educational opportunities for Stormwater Utility Maintenance Staff

10. Source Control Program for Existing Development

The Permit requires the City to implement a program to prevent and reduce pollutants in runoff from existing land uses and business practice that have potential to discharge pollutants to the MS4. The Source Control Program for Existing Development was implemented in a step wise process where an initial inventory of businesses was formed using NAICS codes from the Secretary of State's office database. The initial business inventory was ground truthed using windshield surveys for business type, business activities and a physical connection to the MS4. This ground truthing process identified 64 businesses, including City owned facilities, which qualified for inspections under the Source Control Program. The business inventory will be reassessed on an annual basis to ensure businesses that have left are excluded from the inventory. New businesses that have become established during the annual reporting cycle will be added to the inventory depending on their business type and activities.

10.1 Permit Requirements

Minimum Permit requirements for the program should include:

- Guidance for operational and structural source control BMPs for pollution generating sources.
- Inspections of pollutant generating sources at public and private sites to ensure required source control BMP implementation.
- Application and enforcement of local ordinances when inspections identify non-compliance.
- BMPs to reduce polluted runoff from the application of pesticides, herbicides, and fertilizers from sites.
- Inspect at least 20% of the sites listed in the site inventory per year.
- Inspect 100% of sites identified through credible complaints.
- Continuing training for staff who are responsible for implementing the Source Control Program.

10.2 Existing Source Control Inspection Program for Existing Development

The City has existing language in [Tumwater Municipal Code 13.12](#) with provisions that allow for site inspections related to stormwater discharge into the MS4. An education campaign was initiated in late 2022 into 2023 to inform businesses of the requirements of the new Source Control Business Inspection Program. Letters were mailed to the businesses selected for inspection, followed by a postcard asking for businesses to schedule an appointment with their inspector to conduct the inspection.

10.3 Source Control Program During Active Permit Period

The Washington Stormwater Center coordinated an effort to draft a regional Source Control Inspection Manual which aimed to produce guidance documents to help aid jurisdictions with implementing a source control inspection program. The Source Control Manual includes examples of Standard Operating Procedures, inspection templates and educational material. Water Resource and Sustainability staff have used this manual to help with the implementation of the Source Control Program. The City implemented a Source Control Program in 2023:

- ✓ By August 1, 2022 - Review Tumwater Municipal Code for existing language that applies to a Source Control Program and revise as needed.
- ✓ Establish a ranking system for businesses based on land use and business operations.
- ✓ Develop inspection criteria for businesses based on existing BMPs.
 - ✓ By August 1, 2022 - Establish an inventory of businesses that qualify for source control inspections.
 - ✓ Develop educational strategy for businesses based on land use and business practices.
 - ✓ Establish a system of record keeping for inspections, BMP selection, and enforcement actions.
- ✓ By January 1, 2023 – Implement an inspection program for sites identified in the inventory and priority ranking.

11. Underground Injection Control (UIC) Wells

11.1 Overview

To prevent redundancy between the Underground Injection Control (UIC) program rule and the NPDES Permit, the UIC program rule allows jurisdictions that own or operate Class V UIC wells, that are also covered under the NPDES Permit, to satisfy UIC requirements by the presumptive approach, pursuant to [WAC 173-218-090](#) (1)(c)(C), in the manner described below.

The UIC Program rule, [chapter 173-218 WAC](#), is the regulatory authority for UIC wells in Washington. The UIC program rule applies to Class V wells that receive stormwater regardless of

whether a UIC well is located in a jurisdiction covered under the Permit or not. The rule also applies regardless of whether the UIC well is municipally or privately owned. The Permit does not authorize stormwater discharges to groundwater through UIC wells. However, if the overflow or surface discharge from a UIC well drains to the MS4, then the Permit does authorize the discharge and the conditions of the Permit directly apply. No discharge or overflow to an MS4 means the UIC well is designed to manage the entire runoff profile from the Western Washington Hydrology Model.

In order to use the presumptive approach to meet UIC Program rule authorization for municipal Class V UIC wells, jurisdictions have the option of applying a Stormwater Management Program (SWMP) that complies with their Permit to the areas served by their municipal UIC wells or use the other approaches or combination of approaches as listed below:

1. Have a single jurisdiction wide SWMP that combines requirements for both the municipal UIC wells and the MS4; and or
2. Have a separate and distinct SWMP developed specifically for the municipal UIC wells in the jurisdiction; and or
3. Create a Stormwater Site Plan (SSP) for the area served by each municipal UIC well and complete a well assessment for each municipally owned existing (in use before 2/3/2006) UIC well.

11.2 Stormwater Management Program Plan for UIC Wells

Municipalities choosing to develop and implement a SWMP (either separately or in combination with the MS4 SWMP) in areas served by Class V UIC wells must:

- Register all UIC wells, including existing (in use before 2/3/2006) and new UIC wells with Ecology, unless already registered. Registration is only required once for each UIC well.
- Complete the well assessment for UIC wells in use prior to 2/3/2006, if not already completed. For information on a well assessment, go to the UIC section, Well Assessment subsection, in the [2019 Stormwater Management Manual for Western Washington \(SWMMWW\)](#).
- Site, design, construct, operate, and maintain new UIC wells according to the specifications throughout *2019 Stormwater Management Manual for Western Washington (SWMMWW) Section I-4 Underground Injection Control Wells*.
- Fulfill the source control and operation and maintenance requirements for new and existing (in use before 2/3/2006) municipal UIC wells by:
 - Operation and maintenance of existing wells according to the specifications throughout [2019 SWMMWW Section I-4.11 Operations and Maintenance of UIC Wells](#).
 - Providing source control activities (including targeted education and outreach) that are well-suited for the land uses associated with your UIC wells and to the specifications in [2019 SWMMWW Section I-4.13 Source Control and Runoff Treatment Requirements](#).
 - Providing Illicit discharge detection and elimination programs in areas served by their UIC wells to prevent pollutants from contaminating stormwater and to control other sources of pathogens according to [2019 SWMMWW Section I-4.14 Spills and Illicit Discharges](#).

11.3 UIC Management for Permit Compliance

- Review status of existing municipally owned UICs to ensure they are properly registered with Ecology.

- ✓ Identify qualifying UIC wells that predate 2/3/2006 and complete well assessments, if necessary.
- ✓ Conduct site plan review prior to construction and inspections during construction to ensure UIC wells are compliant with 2019 SWMMWW.
- ✓ Conduct semi-annual maintenance inspections on UIC wells.
- ✓ Perform maintenance activities on UIC wells when inspections identify an exceedance of maintenance standards.
- ✓ Integrate areas served by UICs into the Source Control Program
- ✓ Include areas served by UIC into the IDDE Program as part of routine response activities.

12. Total Maximum Daily Load (TMDL) Requirements

The City of Tumwater is responsible for implementing measures to help reduce temperature in the Deschutes River Watershed within city limits. Temperature reduction measures, thus far, have focused on project planning for a riparian restoration project in Pioneer Park as well as a small restoration project at the E St. Restoration Site. Temperature reduction measures include:

- ✓ Complete the Golf Course Habitat Restoration Plan for Salmon Safe Certification.
- ✓ Complete 60% designs for the golf course parking lot including stormwater treatment BMPs.
- ✓ Conduct an evaluation of stream bank erosion near the golf course parking lot.
- ✓ Evaluate alternatives design and permitting for a stormwater treatment facility near the East Linwood Basin.
- ✓ Received funding from the Department of Ecology for the Pioneer Park Riparian Restoration Design and Construct Project. Planning efforts are currently underway.
- ✓ Explore land acquisition for mitigation of the Tumwater Valley Regional Stormwater Facility.
- ✓ Vegetation planting and maintenance at the E Street Restoration Site.
- ✓ Tree planting at the Palermo Wetland site
- ✓ Install flexible levelers at Palermo wetlands to encourage beaver coexistence strategies.
- ✓ Dredge and maintain the Palermo Lagoon, an aerated stormwater and Superfund mitigation facility.
- ✓ Complete the Deschutes River Flood Reduction Study
- Purchase a deep chine aerator to improve surface water infiltration at the Tumwater Valley Golf Course.
- Construction of the Tumwater Valley Regional Stormwater Facility.
- Conduct riparian planting in the buffer of the Deschutes River Corridor
- Complete habitat restoration projects according to the Golf Course Habitat Restoration Plan.
- Explore grant opportunities for construction funding for the Pioneer Park Restoration Project.
- Construction of the Pioneer Park Riparian Restoration Project.

13. Monitoring and Assessment – Section S8

The NPDES Permit requires that all Permittees are required to choose to either contribute to a regional collective fund that helps to implement monitoring activities focused on regional small streams and marine nearshore areas in Puget Sound or conduct stormwater discharge monitoring per the requirements in S8.C of the Permit. Permittees that opt to conduct their own monitoring must develop stormwater discharge monitoring plans, data collection methods and data analyses that are subject to

an approved Quality Assurance Protection Plan (QAPP) through Ecology. Data is to be stored in Ecology's Environmental Information Management database.

Due to the staff and resources necessary to carry out an approved stormwater discharge monitoring program, Tumwater has chosen to contribute to the regional collective fund to help fund projects coordinated through the Stormwater Action Monitoring (SAM) Program. Tumwater is included in the Stormwater Work Group (SWG), which is a formal stakeholder group that provides oversight on SAM projects. The Pooled Resources Oversight Committee (PRO-C) is a subgroup of SWG and oversees the administration of SAM's pooled resources. Ecology administers the SAM Program by managing the funds and executing SAM contracts. SAM's goal is to produce useful information that improves stormwater management through awarding contracts and distributing funds that address improvements in stormwater pollution, improved water quality, and flooding reduction. These projects target three main categories:

- [Effectiveness Studies](#): How well are required or innovative stormwater management practices working? What are the most common types of pollution in stormwater and how can we improve treatment?
- [Status and Trends Studies](#): Are small streams and marine nearshore water quality is getting better or worse?
- [Source Identification Projects](#): What are the common sources of illicit discharges? What are some regional solutions for source control and elimination?

Projects and studies that have been completed through the SAM Program can be found on Ecology's website:

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

14. NPDES Reporting

During the 2017 through 2020 reporting years, several Notices of Non-Compliance, known as G-20s, were reported each year to the Department of Ecology for various reporting requirements where the City was unable to meet NPDES Permit compliance. Reasons for non-compliance included lack of documented actions, lack of trained staff, and lack of formally documented procedures. From 2019 through 2023, the City has implemented several efficiencies and improved communication among programs to reach Permit compliance. Although process improvements continue to be a focus for Stormwater, there are no known areas of non-compliance in 2023.

13.1 Compliance with the NPDES Permit

City staff have worked to correct areas of non-compliance through process improvements, updating Standard Operating Procedures and improving communication among programs. Through these efforts, the City has met its obligation to the requirements of the NPDES Permit for the 2023 Annual reporting cycle. City staff have been proactive in planning for future Permit requirements that will be effective in the 2024-2029 NPDES Permit cycle. Some of the actions that the City has taken in preparation include:

- Hired a Water Resources and Sustainability Program Manger
- Fully staff a 6 person operations and maintenance crew dedicated to stormwater maintenance activities.

- Developed SMAPs for the second and third highest priority sub basins
- Received grant funding from Department of Ecology for design and permitting for stormwater facility retrofit projects in the priority SMAP sub basin that will meet the Stormwater Management for Existing Development requirements in the 2024-2029 NPDES Permit.
- Received grant funding from Department of Ecology for a Nutrient Reduction Plan that will address street sweeping requirements, among other water quality improvement strategies, in the 2024-2029 NPDES Permit.
- Developed an ambient water quality monitoring plan that will inform actions to comply with requirements in the Budd Inlet TMDL.

These actions have positioned the City for the impending 2024-2029 NPDES Permit cycle. We will continue to develop existing programs to find efficient ways to meet permit requirements.

14. Conclusion

Throughout 2023, the City worked to maintain existing programs while implementing new programs that are required by the Permit, with the overarching goal of improving stormwater system functionality and water quality in our community. We take the responsibility of ensuring proper stormwater treatment and control seriously. The actions outlined in the NPDES Permit guide the steps taken in the Stormwater Management Program Plan to ensure the City is compliant with the Permit. It also assures the Tumwater community that City staff are actively pursuing clean stormwater that feeds the City's aquifers that provide clean drinking water to the community. By reviewing the Stormwater Management Program Plan annually, the City ensures that it can adaptively manage its water resources to maintain its current stormwater treatment and control capacity.