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Introduction

Purpose of the Stormwater Management Program Plan (SWMP Plan)

All stormwater runoff flowing through Olympia's pipes, ponds, and ditches is managed according to the requirements of a permit first issued by the Washington State Department of Ecology (Ecology) in January of 2007. The *Western Washington Phase II Municipal Stormwater Permit*; *National Pollutant Discharge Elimination System* (NPDES) *and State Waste Discharge General Permit for discharges from Small Municipal Separate Storm Sewers in Western Washington* (Permit) requires the City to take actions like; educating the public and encouraging non-polluting behaviors, looking for illegal dumping and cross-connections, enforcing erosion and sediment control at construction sites, and using best practices for land management and stormwater system maintenance.

This Stormwater Management Program Plan (SWMP Plan) is designed to reduce the discharge of pollutants from Olympia's regulated MS4 (municipal separate storm sewer system) to the maximum extent practicable, meet state AKART (all known and reasonable technologies) requirements, and protect water quality.

Implementation Timing

The Permit is now in its second issuance for the City of Olympia. The current Permit is effective for five years, from August 2013 through August 2018. After careful consideration of many factors, Ecology extended the current permit coverage for one year. In accordance with permit section G18, the City of Olympia filed a Duty to Reapply - Notice of Intent with Ecology on October 12, 2017 to receive extended permit coverage. Ecology plans to reissue permit coverage with new requirements on July 1, 2019, and will become effective on August 1, 2019.

Olympia Storm and Surface Water Utility - Other Activities

The Utility maintains over 157 miles of underground pipe, over 7,500 storm drains, and 50 stormwater ponds that carry stormwater runoff from roads and rooftops to our streams and Budd Inlet. We work on many levels to protect water quality, aquatic habitat, and prevent flooding. This involves working closely with residents, businesses and other government agencies to maintain a safe and healthy environment for people and wildlife.

Relationship to Other Plans

The City's 2018 Storm and Surface Water Plan (Master Plan) guides the Storm and Surface Water Utility (Utility). The Master Plan was adopted on April 10, 2018 by the City Council. The Master Plan aligns with Olympia's Comprehensive Plan and focuses on the programs and policies of the Utility. This SWMP Plan represents a subset of the work performed by the Utility; specifically, those areas that are governed by the Permit.

The Permit as Document Map

This SWMP Plan generally follows the S5 section of the Permit. Each year this SWMP Plan is required to be updated and planned activities will move to current activities when they are scheduled as work items for the upcoming calendar work year. The current activities listed are the City's ongoing, permit-related programs and practices.

The remainder of this document details the required elements of the SWMP Plan as noted in Condition S5.C of the Permit, and notes current and planned compliance activities.

Public Education and Outreach

Permit Requirements

Permit Section S5.C.1 outlines the required elements of a public education and outreach program. Specifically:

- Provide an education and outreach program designed to educate target audiences about stormwater problems and provide specific actions they can follow to minimize these problems. Prioritize the target audiences and messages for awareness building campaigns, as well as behavior change campaigns.
- Create stewardship opportunities and encourage residents to participate in activities such as Stream Team, storm drain marking, volunteer monitoring, riparian plantings and education activities.
- Summarize public education and outreach efforts annually and submit with Annual Report.

Current Activities

The Olympia Storm and Surface Water Utility has a long-standing and robust public outreach and education program. The following are some of the current activities of our program:

- Contribute to the production of a quarterly Stream Team newsletter with regional distribution of over 10,450 copies annually. Approximately 2,325 copies are distributed in Olympia. Over 2,000 people receive this newsletter electronically.
- Feature stormwater-related messaging in the City's Utility Bill Insert (*Five Things*), which is produced every two months. Articles included pet waste, car washing, keeping storm drains clear, don't drip and drive campaigns.
- Distribute and install pet waste stations. Seven pet waste stations were installed in 2018. Also distributed 3,000 pet waste brochures to local veterinarians, pet supply stores, kennels, and Animal Services.
- Provide cost share incentives for the construction of rain gardens.
- Promoted natural lawn care videos on TCTV, City of Olympia, and Stream Team websites. Sent quarterly natural lawn care tip emails to 211 residents.
- Continue to work with the local Jurisdictions City of Lacey and City of Tumwater to produce regional education materials and campaigns. This programming is governed by an interlocal agreement (ILA) know as Regional Environmental Education Partnership (REEP) also known as Stream Team.
- The Construction Stormwater Pollution Prevention (CSWPP) workgroup continued to meet monthly during 2018. This workgroup consisted of REEP staff, municipal engineers, inspectors, plans examiners, Washington State Department of Ecology and Transportation staff. A consultant conducted target audience research and completed a final report in May. The workgroup developed an outreach plan using social marketing strategies for 2019.

- Piloted a Schoolyard Water Quality Curriculum with Olympia Regional Learning Academy (ORLA) students in 4th through 6th grade. Parts of the Drain Rangers curriculum and lesson plans were utilized to help guide this effort. The final project culminated into a student-created Stormwater Interpretive Map and Self-Guided Tour. City staff are evaluating the ability to include more school age students in a modified approach. Municipalities throughout the Puget Sound region are also networking to develop and deliver a more effective and efficient program.
- Partnered with Stormwater Outreach for Regional Municipalities (STORM) to create Comcast spotlight pollution prevention ads reaching 80,000 viewers in Thurston County.

Planned Activities

The following activities (Table 1) are planned for 2019 in order to continue Olympia's leadership and commitment to excellence in water quality programming. The one year permit extension does not place any further requirements for program development in 2019.

Table 1 – 2019 Public Education and Outreach

Action Item	Target Audience	Goal and/or Behaviors Promoted
Construction Stormwater Pollution Prevention	Construction Engineers, Contractors, and Business Owners	Implement outreach plan using social marketing strategies
Develop 2019 work plan for Regional Environmental Education Partnership (REEP)	Citizens of Olympia and Thurston County Region	Promote positive behavior change activities

Public Involvement in SWMP Plan Development

Permit Requirements

The Permit (Section S5.C.2) requires the following:

- Create opportunities for the public to participate in the decision-making processes involving the development, implementation and update of the SWMP Plan.
- Make the SWMP Plan and Annual Report available to the public, including on the City's website.

Current Activities

The most recent SWMP Plan is posted on the City's website, along with the most current Annual Permit Compliance Report.

Planned Activities

Activities planned for continued compliance with Permit Section S5.C.2 are listed below (Table 2).

Table 2 – 2019 Public Involvement in SWMP Plan Developmentsto

Action Item	Staff Involved	Schedule Notes
Present the 2019 SWMP Plan to the City's Utility Advisory Committee and provide opportunity for public comment.	Storm and Surface Water (SSW) Utility	Scheduled for March 2019 Utility Advisory Committee meeting.
Post the 2019 SWMP Plan on the City's website.	SSW Utility	To be completed by May 31, 2019.

Update the SWMP Plan for 2020 planned activities.	SSW Utility, in coordination with other city staff	Begin December 2019.

Illicit Discharge Detection and Elimination (IDDE)

Permit Requirements

The Permit (Section S5.C.3) requires the City to implement an ongoing program to prevent, detect, characterize, trace and eliminate illicit connections and illicit discharges into the MS4.

- Continue to update and refine mapping of the MS4 (municipal separate storm sewer system).
- Implement a regulatory mechanism to effectively prohibit non-stormwater, illicit discharges into the stormwater system to the maximum extent allowable under state and federal law. Update the regulatory mechanism, if necessary, by February 2, 2018.
- Implement a compliance strategy that includes informal compliance actions, as well as the enforcement provisions of the regulatory mechanism.
- Implement a field screening methodology appropriate to the characteristics of the MS4 and water quality concerns. Complete field screening for at least 40% of the MS4 no later than December 31, 2017, and on average 12% each year thereafter.
- Publicly list and publicize a hotline for public reporting of spills and other illicit discharges.
- Implement an ongoing training program for all municipal field staff that might come into contact with or observe an illicit discharge.
- Inform public employees, businesses and the general public of hazards associated with illicit discharges and improper disposal of waste.
- Implement an ongoing program to address illicit discharges into the MS4. Program elements should include:
    - Procedures for characterizing the nature of any illicit discharge. Procedures shall address the evaluation of whether the discharge must be immediately contained and steps to be taken for containment of the discharge.
    - Procedures for tracing the source of an illicit discharge.
    - Procedures for eliminating the discharge.
- Train staff responsible for identification, termination, cleanup, and reporting of illicit discharges and illicit connections to conduct these activities. Conduct follow-up training as needed to address changes in procedures, techniques, requirements or staffing.
- Summarize activities in the Annual Report.

Current Activities

Current illicit discharge detection and elimination (IDDE) activities that are part of ongoing permit compliance include:

- Olympia maintains a geographic information systems (GIS) database of the MS4. Mapping of the public/private stormwater system continues. Standard procedures are in place for maintaining the GIS database to document new connections, changes/alterations to the existing system, and corrections based on field verification. Drainage areas and land use have been identified for outfalls 24” or greater in size. Maps are available to Ecology and other permittees (NPDES permitted jurisdictions) upon request.
- Olympia Municipal Code Chapter 13.16 prohibits illicit discharges and provides for escalating enforcement.
- MS4 field screening is accomplished through multiple methodologies including but not limited to video inspections, catch basin/manhole inspections, ditch inspections, and stormwater BMP (best management practices) inspections.

- The City advertises a Spill Hotline (360-753-8333) to the public for reporting spills and illicit discharges. Records are kept of calls and emails received, and follow-up actions are taken by City staff to investigate and respond appropriately.
- The City condition rated a total of 52,000 lineal feet (6%) of stormwater pipe in 2018, with 604,590 total linear feet (70%) of the stormwater pipe system rated by December 31, 2018.
- Developed basic spills identification and reporting training in July 2017 and has been included as part of the City's New Employee Orientation Training. All new hires to the City of Olympia are required to take this training.

Planned Activities

In addition to continuing the IDDE programs required previously by the Permit, the following activities (Table 3) are planned for 2019.

Table 3 – 2019 Illicit Discharge Detection and Elimination

Action Item	Staff Involved	Schedule Notes
Continue to refine and implement the Illicit Discharge Detection and Elimination program.	SSW Utility	Ongoing
Continue to televise and condition rate stormwater pipe.	SSW Utility	Approximately 50,000 lineal feet of pipe will be screened in 2019.
Required to field screen 40% of the MS4 no later than December 31, 2017.	SSW Utility	Total of 90% of MS4 screened.

Controlling Runoff from New Development, Redevelopment and Construction Sites

Permit Requirements

The Permit (Section S5.C4) requires Olympia to implement and enforce a program to reduce pollutants in stormwater runoff from new development, redevelopment, and construction sites. The program applies to private and public development, including roads. Specifically:

- Review all stormwater site plans for proposed development activities.
- Require legal authority to inspect private stormwater facilities and enforce maintenance standards.
- Conduct inspections prior to clearing and construction.
- Conduct inspections during construction to verify proper installation and maintenance of required erosion and sediment controls. Enforce as necessary based on the inspection.
- Conduct post-construction inspections to ensure proper installation of stormwater system elements.
- Conduct inspections during construction for all permanent stormwater treatment and flow control BMPs/facilities and catch basins in new residential developments (every six months until 90% of the lots are constructed or when construction is stopped and the site is fully stabilized). Enforce compliance with maintenance standards as needed.
- Implement a regulatory mechanism to require construction site operators to prepare and implement a Construction Stormwater Pollution Prevention Plan.
- Make available the "Notice of Intent for Construction Activity" to representatives of proposed new development and redevelopment. Continue to enforce local ordinances controlling runoff from sites that are covered by other stormwater permits issued by Ecology.

- Implement maintenance standards.
- Train staff involved in construction site inspections and enforcement.
- Implement an ongoing training program for employees who have primary Operations and Maintenance (O&M) job functions that may impact stormwater quality.
- Keep records of inspections and enforcement actions.

Current Activities

For many years, Olympia has had a program to control stormwater runoff from new development, redevelopment, and construction sites. The following are some of Olympia's ongoing program activities.

- The Drainage Design and Erosion Control Manual for Olympia was updated and adopted by City Council on December 31, 2016. This update made the City's manual equivalent to the Department of Ecology's 2012 Stormwater Management Manual for Western Washington and Appendix 1 of the Permit.
- Community Planning and Development and Public Works Departments coordinate a program to review development plans, inspect sites during construction, and to take enforcement action when necessary.
- Records of reviews, construction inspections, and enforcement actions are maintained by both Community Planning and Development and Public Works Department staff.
- The Notice of Intent for Construction Activity and Notice of Intent for Industrial Activity applications are available for project applicants on the City's development applications webpage.
- Staff receive training on erosion control, low impact development (LID) techniques, and stormwater design, inspection and modeling on an ongoing basis as needed.
- Post-construction inspections of private stormwater systems are performed by Storm and Surface Water staff according to the Permit's regulated timelines. Records of these inspections and maintenance compliance are maintained by Storm and Surface Water staff.
- Ordinance #7027 was adopted by City Council to make LID standards the preferred method to control stormwater runoff.

Planned Activities

The following activities (Table 4) are planned for 2019 to continue compliance with permit requirements.

Table 4 – 2019 Controlling Runoff from New Development, Redevelopment and Construction Sites

Action Item	Staff Involved	Schedule Notes
Continue to refine and implement Olympia's program to Control Runoff from New Development, Redevelopment and Construction Sites.	Community Planning & Development, SSW Utility, PW Engineering	Ongoing

Pollution Prevention and Operation and Maintenance for Municipal Operations

Permit Requirements

The Permit (Section S5.C.5) requires the City to:

- Implement maintenance standards at least as protective as those specified in Chapter 4 of Volume V of the 2012 Stormwater Management Manual for Western Washington.
- Perform annual inspections of all municipally owned or operated permanent stormwater treatment and flow control BMPs/facilities, and take appropriate maintenance actions in accordance with maintenance standards.
- Perform spot checks of potentially damaged permanent stormwater treatment and flow control BMPs/facilities after major storm events. Conduct repairs or take appropriate maintenance action in accordance with maintenance standards, based on the results of the inspections.
- Inspect all catch basins and inlets owned or operated by the City at least once no later than August 1, 2017 and every two years thereafter. Clean catch basins if the inspection indicates cleaning is needed to comply with the maintenance standard. Properly dispose of decant water (water that has separated from sludge and is removed from the layer of water above the settled sludge).
- Implement practices, policies and procedures to reduce stormwater impacts associated with runoff from all lands owned or maintained by the City, including road maintenance activities under functional control of the City.
- Implement an ongoing training program for employees whose primary construction, operations or maintenance job functions may impact stormwater quality.
- Implement a Stormwater Pollution Prevention Plan (SWPPP) for all heavy equipment maintenance or storage yards, and material storage facilities owned by the City.
- Maintain records of inspections and maintenance or repair activities.

Current Activities

The following ongoing programs have been developed to comply with permit requirements.

- Inspect all publicly owned and operated stormwater treatment and flow control facilities annually. If an inspection identifies exceedance of an applicable maintenance standard, the timelines in S5.C.5.a.ii are followed.
- Catch basins are inspected, and cleaned when the maintenance standard is exceeded, on a schedule that meets Permit requirements. Of the 7,534 known catch basins, over 2,935 (52%) were inspected and cleaned in 2018.
- Environmental Planning and O&M staff have been working together to develop an abbreviated Erosion Control Plan to be used for ground disturbing work when affecting more than 100 square feet of earth, any saw cutting, or ditching activities.
- Ongoing pollution prevention training is provided to municipal maintenance and operations field staff.
- SWPPP's have been developed and are continuously implemented at the Olympia Public Works Maintenance Center and Olympia Parks Priest Point Park Maintenance facilities.
- Olympia has an Integrated Pest Management (IPM) Plan that was developed by the Olympia Parks Department.
- Staff maintains a "hot spot" list of potentially vulnerable stormwater infrastructure. These sites are monitored during and after major storm events.

Planned Activities

Activities planned for 2019 in order to continue compliance with permit requirements are listed below (Table 5).

Table 5 – 2019 Pollution Prevention and Operation and Maintenance for Municipal Operations

Action Item	Staff Involved	Schedule Notes
Continue to implement and refine Pollution Prevention and Operation and Maintenance activities and programs.	SSW Utility, O&M staff city wide	Ongoing

Coordination

Permit Requirements

Permit Section S5.A.5 requires that there is coordination between Permittees, as well as within departments within the City in order to eliminate barriers to compliance with the terms of the Permit.

- Develop coordination mechanisms to clarify roles and responsibilities for the control of pollutants between physically interconnected MS4s.
- Coordinate stormwater management activities for shared water bodies among Permittees to avoid conflicting plans, policies and regulations.

Current Activities

Listed below are ongoing coordination activities:

- Public Works Water Resources performs a lead role in coordinating Permit and municipal stormwater-related activities among City departments. Most departments in the City are affected in some way by Permit requirements.
- Olympia staff participate in a regional Stormwater Technical Advisory Committee (StormTAC) that includes staff from the other Phase II Permittee jurisdictions (Lacey, Tumwater, Thurston County), as well as, both local Phase II Secondary Permittees (Port of Olympia, Washington State Department of Enterprise Services (DES)) and LOTT Clean Water Alliance. StormTAC meets bi-monthly and discusses stormwater topics related to the Phase II Permit, as well as other watershed planning projects and studies. Participating jurisdictions rotate the responsibility of hosting these meetings on a yearly basis. The City of Olympia coordinated this effort since early 2016. At the November 2018 StormTAC meeting, the City of Lacey volunteered to host meetings beginning 2019.

Planned Activities

Coordination activities planned for 2019 are listed below (Table 6).

Table 6 – 2019 Coordination

Action Item	Staff Involved	Schedule Notes
Continue to implement current coordination activities.	City staff, staff from adjacent Phase II Permit jurisdictions, LOTT	Ongoing
Continue to convene a Construction Stormwater Workgroup for the purpose of ensuring compliance with NPDES permit standards.	Community Planning & Development, Public Works	Ongoing

Compliance with Total Maximum Daily Load (TMDL) Requirements

Permit Requirements

Olympia has two additional requirements that stem from the Henderson Inlet Watershed TMDL (Appendix 2).

- For areas discharging to Henderson Inlet via the MS4, require phosphorus control for new and redevelopment projects that discharge via MS4 to Woodard Creek and meet the project thresholds in Appendix 1.
- Continue to implement a coordinated plan with the City of Lacey to monitor and reduce fecal coliform bacteria discharges from the Fones/Taylor wetland treatment facilities.

Current Activities

Current activities for the Henderson TMDL are:

- Development and redevelopment projects that are located within city limits and discharge via MS4 to Woodard Creek and meet the project thresholds in Appendix 1 are required to include phosphorus control in the stormwater design of their project.
- Staff continue to coordinate with City of Lacey on a joint stormwater sampling effort known as Henderson TMDL – Coordinated Sampling Plan (November 6, 2013; Revised January 29, 2016). This plan monitors fecal coliform bacteria in the area in and adjacent to the Fones/Taylor wetland treatment facilities.

Planned Activities

In 2019, the following additional Henderson TMDL related activities are planned (Table 7).

Table 7 – 2019 Total Maximum Daily Load

Action Item	Staff Involved	Schedule Notes
Following completion of sampling activities, draft a summary report on findings.	City of Lacey, SSW Utility	Summary report will be submitted to Ecology in each annual report.

Monitoring and Assessment

Permit Requirements

Section S8 of the Permit outlines requirements for monitoring and assessment.

- Provide a description in each Annual Report of any stormwater monitoring or stormwater-related studies conducted by or on behalf of the City.
- Participate in status and trends monitoring, stormwater management program effectiveness studies, and source identification and diagnostic monitoring. Olympia is given the option to pay into a regional program to perform these activities or may choose to complete the monitoring activities individually and submit monitoring results annually to Ecology.

Current Activities

Current activities to meet monitoring and assessment needs include:

- Stormwater Action Monitoring (SAM) is a collaboration of municipal stormwater permittees working together as a group to improve stormwater management, reduce pollution, improve water quality, and reduce flooding. The City of Olympia meets Permit requirements by funding SAM in the areas of status and trends monitoring, effectiveness studies, and source identification and diagnostic monitoring.
- Other stormwater monitoring or studies will be undertaken periodically in association with TMDL requirements and as otherwise needed.
- The City entered into an agreement with Ecology to conduct a hydrologic performance effectiveness study at Bioretention facilities designed under the 2012 Stormwater Management Manual for Western Washington. The study is the second phase of an earlier effort and will continue to provide NPDES permittees with regional information as part of the SAM program to help improve their understanding of Bioretention to infiltrate stormwater runoff. It is anticipated this study will be completed at the end of 2019 or early 2020.

Planned Activities

The following monitoring or assessment activities are planned for 2019 (Table 8).

Table 8 – 2019 Monitoring and Assessment

Action Item	Staff Involved	Schedule Notes
Continue funding SAM for Puget Sound monitoring activities.	SSW Utility	Annual payment of $31,338 due in 2019.
Contract with Thurston County Environmental Health Department to conduct monthly sampling on Percival, Chambers, and Moxlie Creeks.	SSW Utility and Thurston County Environmental Health	Not required by the Permit, but sampling of local creeks has been an ongoing activity of the SSW Utility for over a decade.

Glossary

AKART means all known, available, and reasonable methods of prevention, control and treatment. See also State Water Pollution Control Act, chapter 90.48.010 RCW and chapter 90.48.520 RCW.

All known, available and reasonable methods of prevention, control and treatment refers to the State Water Pollution Control Act, chapter 90.48.010 RCW and chapter 90.48.520 RCW.

Best Management Practices are the schedules of activities, prohibitions of practices, maintenance procedures, and structural and/or managerial practices approved by Ecology that, when used singly or in combination, prevent or reduce the release of pollutants and other adverse impacts to waters of Washington State.

BMP means Best Management Practice.

IDDE means Illicit Discharge Detection and Elimination

Illicit discharge means any discharge to a MS4 that is not composed entirely of stormwater or of non-stormwater discharges allowed as specified in this permit (S5.C.3 and S6.D.3).

Illicit Discharge Detection and Elimination is an ongoing program designed to prevent, detect, characterize, trace and eliminate illicit connections and illicit discharges into the MS4.

Maximum Extent Practicable refers to paragraph 402(p)(3)(B)(iii) of the federal Clean Water Act which reads as follows: Permits for discharges from municipal storm sewers shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques, and system, design, and engineering methods, and other such provisions as the Administrator or the State determines appropriate for the control of such pollutants.

MEP means Maximum Extent Practicable.

MS4 means municipal separate storm sewer system.

Municipal Separate Storm Sewer System means 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 or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of Washington State.

(ii) Designed or used for collecting or conveying stormwater.
(iii) Which is not a combined sewer;
(iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.; and
(v) Which is defined as "large" or "medium" or "small" or otherwise designated by Ecology pursuant to 40 CFR 122.26.

Stormwater Management Program means a set of actions and activities designed to reduce the discharge of pollutants from the MS4 to the MEP and to protect water quality, and comprising the components listed in S5 (for cities, towns, and counties) or S6 (for Secondary Permittees) of this Permit and any additional actions necessary to meet the requirements of applicable TMDLs pursuant to S7 *Compliance with TMDL Requirements,* and S8 *Monitoring and Assessment*.

SWMP means Stormwater Management Program.

TMDL means Total Maximum Daily Load.

Total Maximum Daily Load means 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 seasonable variation in water quality. Water quality standards are set by states, territories, and tribes. They identify the uses for each water body, for example, drinking water supply, contact recreation (swimming), and aquatic life support (fishing), and the scientific criteria to support that use. The Clean Water Act, section 303, establishes the water quality standards and TMDL programs.