Issuance Date: July 1, 2019
Effective Date: August 1, 2019
Expiration Date: July 31, 2024

Western Washington Phase II Municipal Stormwater Permit

National Pollutant Discharge Elimination System and
State Waste Discharge General Permit for discharges from
Small Municipal Separate Storm Sewers
In Western Washington

State of Washington
Department of Ecology
Olympia, WA 98504-7600

In compliance with the provisions of
The State of Washington Water Pollution Control Law
Chapter 90.48 Revised Code of Washington
and
The Federal Water Pollution Control Act
(The Clean Water Act)
Title 33 United States Code, Section 1251 *et seq.*

Until this Permit expires, is modified, or revoked, Permittees that have properly obtained coverage under this Permit are authorized to discharge to waters of the State in accordance with the special and general conditions which follow.

Heather R. Bartlett
Water Quality Program Manager
Department of Ecology

This page intentionally left blank

TABLE OF CONTENTS

APPENDICES

SPECIAL CONDITIONS

S1. PERMIT COVERAGE AREA AND PERMITTEES

A. Geographic Area of Permit Coverage

This Permit is applicable to owners or operators of regulated small Municipal Separate Storm Sewer Systems (MS4s) located west of the eastern boundaries of the following counties: Whatcom, Skagit, Snohomish, King, Pierce, Lewis, and Skamania.

1. For all cities required to obtain coverage under this Permit, the geographic area of coverage is the entire incorporated area of the city.

2. For all counties required to have coverage under this Permit, the geographic area of coverage is the urbanized areas and urban growth areas associated with permitted cities under the jurisdictional control of the county. The geographic area of coverage also includes any urban growth area contiguous to permitted urbanized areas under the jurisdictional control of the county.

3. For Whatcom County, the geographic area of coverage also includes the unincorporated Birch Bay urban growth area.

4. For Secondary Permittees required to obtain coverage under this Permit, the minimum geographic area of coverage is all areas identified under S1.A.1 and S1.A.2. At the time of permit coverage, the Washington State Department of Ecology (Ecology) may establish a geographic area of coverage specific to an individual Secondary Permittee.

5. All regulated small MS4s owned or operated by the Permittees named in S1.D.2.a(i), and (ii), and S1.D.2.b and located in another city or county area requiring coverage under this Permit, or the *Phase I Municipal Stormwater Permit* or the *Eastern Washington Phase II Municipal Stormwater Permit,* are also covered under this Permit.

B. Regulated Small Municipal Separate Storm Sewer Systems (MS4s)

All operators of regulated small MS4s are required to apply for and obtain coverage under this Permit or be permitted under a separate individual permit, unless waived or exempted in accordance with condition S1.C.

1. A regulated small MS4:

a. Is a "Small MS4" as defined in the *Definitions and Acronyms* section at the end of this Permit; and

b. Is located within, or partially located within, an urbanized area as defined by the latest decennial census conducted by the U.S. Census Bureau, or designated by Ecology pursuant to 40 CFR 123.35(b) or 40 CFR 122.26(f); and

c. Discharges stormwater from the MS4 to a surface water of Washington State; and

d. Is not eligible for a waiver or exemption under S1.C, below.

2. All other operators of MS4s, including special purpose districts, which meet the criteria for a regulated small MS4 shall obtain coverage under this Permit. Other operators of small MS4s may include, but are not limited to: flood control, or diking and drainage districts; schools, including universities; and correctional facilities that own or operate a small MS4 serving non-agricultural land uses.

3. Any other operators of small MS4s may be required by Ecology to obtain coverage under this Permit or an alternative NPDES permit if Ecology determines the small MS4 is a significant source of pollution to surface waters of the State. Notification of Ecology's determination that permit coverage is required will be through the issuance of an Administrative Order issued in accordance with RCW 90.48.

4. The owner or operator of a regulated small MS4 may obtain coverage under this Permit as a Permittee, Co-Permittee, or Secondary Permittee as defined in S1.D.1, below.

5. Pursuant to 40 CFR 122.26(f), any person or organization may petition Ecology to require that additional small MS4s obtain coverage under this Permit. The process for petitioning Ecology is:

    a. The person or organization shall submit a complete petition in writing to Ecology. A complete petition shall address each of the relevant factors for petitions outlined on Ecology's website.

    b. In making its determination on the petition, Ecology may request additional information from either the petitioner or the entity that is the subject of the petition.

    c. Ecology will make a final determination on a complete petition within 180 days of receipt of the petition and inform both the petitioner and the MS4 of the decision, in writing.

    d. If Ecology's final determination is that the candidate MS4 will be regulated, Ecology will issue an order to the operator of the MS4 requiring them to obtain coverage under this Permit. The order will specify:

        i. The geographic area of permit coverage for the MS4.

        ii. Any modified dates or deadlines for developing and implementing this Permit, as appropriate to the MS4, and for submitting their first annual report.

        iii. A deadline for the operator of the MS4 to submit a complete Notice of Intent (NOI, provided on Ecology's website) to Ecology.

C. Owners and operators of an otherwise regulated small MS4 are ***not*** required to obtain coverage under this Permit if:

1. The small MS4 is operated by:

    a. A federal entity, including any department, agency, or instrumentality of the executive, legislative, and judicial branches of the Federal government of the United States.

    b. Federally recognized Indian Tribes located within Indian Country, including all trust or restricted lands within the 1873 Survey Area of the Puyallup Tribe of Indians.

    c. The Washington State Department of Transportation.

Or

2. The portions of the small MS4 located within the census defined urbanized area(s) serve a total population of less than 1000 people and a, b, and c, below ***all*** apply:

   a. The small MS4 is not contributing substantially to the pollutant loadings of a physically interconnected MS4 that is regulated by the NPDES stormwater program.

   b. The discharge of pollutants from the small MS4 has not been identified as a cause of impairment of any water body to which the MS4 discharges.

   c. In areas where an EPA approved TMDL has been completed, stormwater controls on the MS4 have not been identified as necessary to meet wasteload allocations established in the TMDL that address the pollutant(s) of concern.

   In determining the total population served, both resident and commuter populations shall be included. For example:

   - For publicly operated school complexes including universities and colleges, the total population served would include the sum of the average annual student enrollment plus staff.
   - For flood control, diking, and drainage districts, the total population served would include residential population and any non-residents regularly employed in the areas served by the small MS4.

D. Obtaining coverage under this Permit.

All operators of regulated small MS4s are required to apply for and obtain coverage in accordance with this Section, unless waived or exempted, in accordance with Section S1.C.

1. Unless otherwise noted, the term "Permittee" shall include a city, town, or county Permittee, New Permittee, Co-Permittee, Secondary Permittee, and New Secondary Permittee as defined below:

   a. "Permittee" is a city, town, or county owning or operating a regulated small MS4 applying and receiving a permit as a single entity.

   b. "New Permittee" is a city, town, or county that is subject to the *Western Washington Phase II Municipal Stormwater General Permit* and was not subject to the Permit prior to August 1, 2019.

   c. "Co-Permittee" is any owner or operator of a regulated small MS4 that is applying in a cooperative agreement with at least one other applicant for coverage under this Permit. Co-Permittees own or operate a regulated small MS4 located within or in proximity to another regulated small MS4.

   d. A "Secondary Permittee" is an operator of a regulated small MS4 that is not a city, town, or county. Secondary Permittees include special purpose districts and other MS4s that meet the criteria for a regulated small MS4 in S1.B, above.

   e. "New Secondary Permittee" is a Secondary Permittee that is covered under a Municipal Stormwater General Permit and was not covered by the Permit prior to August 1, 2019.

2. Operators of regulated small MS4s have submitted, or shall submit, to Ecology either a Notice of Intent (NOI) for Coverage under National Pollutant Discharge Elimination System (NPDES) Municipal Stormwater General Permit or a Duty to Reapply - NOI provided on Ecology's website.

   a. The following Permittees and Secondary Permittees submitted a *Duty to Reapply - NOI* to Ecology prior to February 1, 2018:

      i. **Cities and towns:** Aberdeen, Algona, Anacortes, Arlington, Auburn, Bainbridge Island, Battle Ground, Bellevue, Bellingham, Black Diamond, Bonney Lake, Bothell, Bremerton, Brier, Buckley, Burien, Burlington, Camas, Centralia, Clyde Hill, Covington, Des Moines, DuPont, Duvall, Edgewood, Edmonds, Enumclaw, Everett, Federal Way, Ferndale, Fife, Fircrest, Gig Harbor, Granite Falls, Issaquah, Kelso, Kenmore, Kent, Kirkland, Lacey, Lake Forest Park, Lake Stevens, Lakewood, Longview, Lynden, Lynnwood, Maple Valley, Marysville, Medina, Mercer Island, Mill Creek, Milton, Monroe, Mountlake Terrace, Mount Vernon, Mukilteo, Newcastle, Normandy Park, Oak Harbor, Olympia, Orting, Pacific, Port Orchard, Port Angeles, Poulsbo, Puyallup, Redmond, Renton, Sammamish, SeaTac, Sedro-Woolley, Shoreline, Snohomish, Snoqualmie, Steilacoom, Sumner, Tukwila, Tumwater, University Place, Vancouver, Washougal, and Woodinville.

      ii. **Counties:** Cowlitz, Kitsap, Thurston, Skagit, and Whatcom.

      iii. **Secondary Permittees:** Bainbridge Island School District #303, Bellingham School District, Bellingham Technical College, Cascadia College, Central Kitsap School District, Centralia College, Clark College, Consolidated Diking Improvement District #1 of Cowlitz County, Edmonds Community College, Evergreen College, Highline Community College, Kelso School District, Kent School District, Longview School District, Lower Columbia College, Port of Anacortes, Port of Bellingham, Port of Olympia, Port of Skagit County, Port of Vancouver, Skagit County Drainage District #19, Skagit Valley College, University of Washington Bothell, Washington State University Vancouver, Washington State Department of Enterprise Services (Capitol Campus), Washington Department of Corrections, Western Washington University, and Whatcom Community College.

   b. Operators of regulated small MS4s have submitted or shall submit to Ecology a "Notice of Intent (NOI) for Coverage under National Pollutant Discharge Elimination System (NPDES) Municipal Stormwater General Permit" provided on Ecology's website before the effective date of this Permit, with the following exceptions:

      i. Operators of regulated small MS4s located in the City of Shelton, and the Clallam County urban growth area surrounding Port Angeles shall submit a NOI or application to Ecology no later than 30 days after the effective date of this Permit.

      ii. Operators of regulated small MS4s listed in S1.D.2.a do not need to submit a new application to be covered under this Permit.

   c. For operators of regulated small MS4s listed in S1.D.2.a, coverage under this Permit is automatic and begins on the effective date of this Permit, unless the operator chooses to opt out of this General Permit. Any operator of a regulated small MS4 that

is opting out of this Permit shall submit an application for an individual MS4 permit in accordance with 40 CFR 122.33(b)(2)(ii) no later than the effective date of this Permit.

d. Operators of regulated small MS4s which want to be covered under this Permit as Co-Permittees shall each submit a NOI to Ecology.

e. Operators of regulated small MS4s which are relying on another entity to satisfy all of their permit obligations shall submit a NOI to Ecology.

f. Operators of small MS4s designated by Ecology pursuant to S1.B.3 of this Permit shall submit a NOI to Ecology within 120 days of receiving notification from Ecology that permit coverage is required.

3. Application Requirements

a. For NOIs submitted after the issuance date of this Permit, the applicant shall include a certification that the public notification requirements of WAC 173-226-130(5) have been satisfied. Ecology will notify applicants in writing of their status concerning coverage under this Permit within 90 days of Ecology's receipt of a complete NOI.

b. Each Permittee applying as a Co-Permittee shall submit a NOI provided on Ecology's website. The NOI shall clearly identify the areas of the MS4 for which the Co-Permittee is responsible.

c. Permittees relying on another entity or entities to satisfy one or more of their permit obligations shall notify Ecology in writing. The notification shall include a summary of the permit obligations that will be carried out by another entity. The summary shall identify the other entity or entities and shall be signed by the other entity or entities. During the term of the Permit, Permittees may terminate or amend shared responsibility arrangements by notifying Ecology, provided this does not alter implementation deadlines.

d. Secondary Permittees required to obtain coverage under this Permit, and the *Phase I Municipal Stormwater Permit* or the *Eastern Washington Phase II Municipal Stormwater Permit,* may obtain coverage by submitting a single NOI.

S2. AUTHORIZED DISCHARGES

A. This Permit authorizes the discharge of stormwater to surface waters and to groundwaters of the State from MS4s owned or operated by each Permittee covered under this Permit, in the geographic area covered pursuant to S1.A. These discharges are subject to the following limitations:

1. Discharges to groundwaters of the State through facilities regulated under the Underground Injection Control (UIC) program, Chapter 173-218 WAC, are not authorized under this Permit.

2. Discharges to groundwaters not subject to regulation under the federal Clean Water Act are authorized in this Permit only under state authorities, Chapter 90.48 RCW, the Water Pollution Control Act.

B. This Permit authorizes discharges of non-stormwater flows to surface waters and to groundwaters of the State from MS4s owned or operated by each Permittee covered under this Permit, in the geographic area covered pursuant to S1.A, only under one or more of the following conditions:

1. The discharge is authorized by a separate NPDES or State Waste Discharge permit.
2. The discharge is from emergency firefighting activities.
3. The discharge is from another illicit or non-stormwater discharge that is managed by the Permittee as provided in Special Condition S5.C.5 or S6.D.3.

These discharges are also subject to the limitations in S2.A.1 and S2.A.2, above.

C. This Permit does not relieve entities that cause illicit discharges, including spills of oil or hazardous substances, from responsibilities and liabilities under state and federal laws and regulations pertaining to those discharges.

D. Discharges from MS4s constructed after the effective date of this Permit shall receive all applicable state and local permits and use authorizations, including compliance with Chapter 43.21C RCW (the State Environmental Policy Act).

E. This Permit does not authorize discharges of stormwater to waters within Indian Country as defined in 18 U.S.C. §1151, or to waters subject to water quality standards of Indian Tribes, including portions of the Puyallup River and other waters on trust or restricted lands within the 1873 Survey Area of the Puyallup Tribe of Indians Reservation, except where authority has been specifically delegated to Ecology by the U.S. Environmental Protection Agency. The exclusion of such discharges from this Permit does not waive any rights the State may have with respect to the regulation of the discharges.

S3. RESPONSIBILITIES OF PERMITTEES

A. Each Permittee covered under this Permit is responsible for compliance with the terms of this Permit for the regulated small MS4s that they own or operate. Compliance with (1) or (2) below is required as applicable to each Permittee, whether the Permittee has applied for coverage as a Permittee, Co-Permittee, or Secondary Permittee.

1. All city, town, and county Permittees are required to comply with all conditions of this Permit, including any appendices referenced therein, except for Special Condition S6 – *Stormwater Management Program for Secondary Permittees*.
2. All Secondary Permittees are required to comply with all conditions of this Permit, including any appendices referenced therein, except for Section S5 – *Stormwater Management Program for Cities, Towns, and Counties* and S8 – *Monitoring and Assessment.*

B. Permittees may rely on another entity to satisfy one or more of the requirements of this Permit. Permittees that are relying on another entity to satisfy one or more of their permit obligations remain responsible for permit compliance if the other entity fails to implement permit conditions. Permittees may rely on another entity provided all the requirements of 40 CFR 122.35(a) are satisfied, including but not limited to:

1. The other entity, in fact, implements the Permit requirements.

2. The other entity agrees to take on responsibility for implementation of the Permit requirement(s) as indicated on the NOI.

S4. COMPLIANCE WITH STANDARDS

A. In accordance with RCW 90.48.520, the discharge of toxicants to waters of the State of Washington which would violate any water quality standard, including toxicant standards, sediment criteria, and dilution zone criteria is prohibited. The required response to such discharges is defined in Section S4.F, below.

B. This Permit does not authorize a discharge which would be a violation of Washington State Surface Water Quality Standards (Chapter 173-201A WAC), Groundwater Quality Standards (Chapter 173-200 WAC), Sediment Management Standards (Chapter 173-204 WAC), or human health-based criteria in the National Toxics Rule (40 CFR 131.45). The required response to such discharges is defined in Section S4.F, below.

C. The Permittee shall reduce the discharge of pollutants to the Maximum Extent Practicable (MEP).

D. The Permittee shall use All Known, Available, and Reasonable methods of prevention, control and Treatment (AKART) to prevent and control pollution of waters of the State of Washington.

E. In order to meet the goals of the Clean Water Act, and comply with S4.A, S4.B, S4.C, and S4.D, each Permittee shall comply with all of the applicable requirements of this Permit as identified in S3 – *Responsibilities of Permittees*.

F. A Permittee remains in compliance with S4 despite any discharges prohibited by S4.A or S4.B, when the Permittee undertakes the following response toward long-term water quality improvement:

1. A Permittee shall notify Ecology in writing within 30 days of becoming aware, based on credible site-specific information that a discharge from the MS4 owned or operated by the Permittee is causing or contributing to a known or likely violation of Water Quality Standards in the receiving water. Written notification provided under this subsection shall, at a minimum, identify the source of the site-specific information, describe the nature and extent of the known or likely violation in the receiving water, and explain the reasons why the MS4 discharge is believed to be causing or contributing to the problem. For ongoing or continuing violations, a single written notification to Ecology will fulfill this requirement.

2. In the event that Ecology determines, based on a notification provided under S4.F.1 or through any other means, that a discharge from an MS4 owned or operated by the Permittee is causing or contributing to a violation of Water Quality Standards in a receiving water, Ecology will notify the Permittee in writing that an adaptive management response, outlined in S4.F.3, below, is required, unless:

a. Ecology also determines that the violation of Water Quality Standards is already being addressed by a Total Maximum Daily Load (TMDL) or other enforceable water quality cleanup plan; or

b. Ecology concludes the MS4 contribution to the violation will be eliminated through implementation of other permit requirements.

3. Adaptive Management Response

a. Within 60 days of receiving a notification under S4.F.2, or by an alternative date established by Ecology, the Permittee shall review its Stormwater Management Program (SWMP) and submit a report to Ecology. The report shall include:

i. A description of the operational and/or structural BMPs that are currently being implemented to prevent or reduce any pollutants that are causing or contributing to the violation of Water Quality Standards, including a qualitative assessment of the effectiveness of each Best Management Practice (BMP).

ii. A description of potential additional operational and/or structural BMPs that will or may be implemented in order to apply AKART on a site-specific basis to prevent or reduce any pollutants that are causing or contributing to the violation of Water Quality Standards.

iii. A description of the potential monitoring or other assessment and evaluation efforts that will or may be implemented to monitor, assess, or evaluate the effectiveness of the additional BMPs.

iv. A schedule for implementing the additional BMPs including, as appropriate: funding, training, purchasing, construction, monitoring, and other assessment and evaluation components of implementation.

b. Ecology will, in writing, acknowledge receipt of the report within a reasonable time and notify the Permittee when it expects to complete its review of the report. Ecology will either approve the additional BMPs and implementation schedule or require the Permittee to modify the report as needed to meet AKART on a site-specific basis. If modifications are required, Ecology will specify a reasonable time frame in which the Permittee shall submit and Ecology will review the revised report.

c. The Permittee shall implement the additional BMPs, pursuant to the schedule approved by Ecology, beginning immediately upon receipt of written notification of approval.

d. The Permittee shall include with each subsequent annual report a summary of the status of implementation and the results of any monitoring, assessment or evaluation efforts conducted during the reporting period. If, based on the information provided under this subsection, Ecology determines that modification of the BMPs or implementation schedule is necessary to meet AKART on a site-specific basis, the Permittee shall make such modifications as Ecology directs. In the event there are ongoing violations of water quality standards despite the implementation of the BMP approach of this Section, the Permittee may be subject to compliance schedules to

eliminate the violation under WAC 173-201A-510(4) and WAC 173-226-180 or other enforcement orders as Ecology deems appropriate during the term of this Permit.

e. A TMDL or other enforceable water quality cleanup plan that has been approved and is being implemented to address the MS4's contribution to the Water Quality Standards violation supersedes and terminates the S4.F.3 implementation plan.

f. Provided the Permittee is implementing the approved adaptive management response under this Section, the Permittee remains in compliance with Special Condition S4, despite any on-going violations of Water Quality Standards identified under S4.A or B, above.

g. The adaptive management process provided under Section S4.F is not intended to create a shield for the Permittee from any liability it may face under 42 U.S.C. 9601 *et seq*. or Chapter 70.105D RCW.

G. Ecology may modify or revoke and reissue this General Permit in accordance with G14 – *General Permit Modification and Revocation*, if Ecology becomes aware of additional control measures, management practices, or other actions beyond what is required in this Permit that are necessary to:

1. Reduce the discharge of pollutants to the MEP,

2. Comply with the state AKART requirements, or

3. Control the discharge of toxicants to waters of the State of Washington.

S5. STORMWATER MANAGEMENT PROGRAM FOR CITIES, TOWNS, AND COUNTIES

A. Each Permittee shall develop and implement a Stormwater Management Program (SWMP). A SWMP is a set of actions and activities comprising the components listed in S5 and any additional actions necessary, to meet the requirements of applicable TMDLs pursuant to S7 – *Compliance with Total Maximum Daily Load Requirements* and S8 – *Monitoring and Assessment*. This Section applies to all cities, towns, and counties covered under this Permit (termed as "Permittee," including cities, towns, and counties that are Co-Permittees).

New Permittees subject to this Permit, as described in S1.D.1.b, shall fully meet the requirements in S5 as modified in footnotes below, or as specified in an alternate schedule as a condition of coverage by Ecology. Permittees obtaining coverage after the issuance date of this Permit shall fully meet the requirements in S5 as specified in an alternate schedule as a condition of coverage by Ecology.

1. At a minimum, the Permittee's SWMP shall be implemented throughout the geographic area subject to this Permit as described in S1.A.[1]

2. Each Permittee shall prepare written documentation of the SWMP, called the SWMP Plan. The SWMP Plan shall be organized according to the program components in S5.C or a

[1] New Permittees shall fully develop and implement the SWMP in accordance with the schedules contained in this Section no later than February 2, 2024.

format approved by Ecology, and shall be updated at least annually for submittal with the Permittee's annual reports to Ecology (see S9 – *Reporting Requirements*). The SWMP Plan shall be written to inform the public of the planned SWMP activities for the upcoming calendar year, and shall include a description of:

a. Planned activities for each of the program components included in S5.C.

b. Any additional planned actions to meet the requirements of applicable TMDLs pursuant to S7– *Compliance with Total Maximum Daily Load Requirements*.

c. Any additional planned actions to meet the requirements of S8 – *Monitoring and Assessment.*

3. The SWMP shall include an ongoing program for gathering, tracking, maintaining, and using information to evaluate SWMP development, implementation, and permit compliance and to set priorities.

a. Each Permittee shall track the cost or estimated cost of development and implementation of each component of the SWMP.[2] This information shall be provided to Ecology upon request.

b. Each Permittee shall track the number of inspections, follow-up actions as a result of inspections, official enforcement actions and types of public education activities as required by the respective program component. This information shall be included in the annual report.

4. Permittees shall continue implementation of existing stormwater management programs until they begin implementation of the updated stormwater management program in accordance with the terms of this Permit, including implementation schedules.

5. Coordination among Permittees

a. Coordination among entities covered under municipal stormwater NPDES permits may be necessary to comply with certain conditions of the SWMP. The SWMP shall include, when needed, coordination mechanisms among entities covered under a municipal stormwater NPDES permit to encourage coordinated stormwater-related policies, programs and projects within adjoining or shared areas, including:

i. Coordination mechanisms clarifying roles and responsibilities for the control of pollutants between physically interconnected MS4s covered by a municipal stormwater permit.

ii. Coordinating stormwater management activities for shared water bodies, or watersheds among Permittees to avoid conflicting plans, policies, and regulations.

b. The SWMP shall include coordination mechanisms among departments within each jurisdiction to eliminate barriers to compliance with the terms of this Permit. Permittees shall include a written description of internal coordination mechanisms in the Annual Report due no later than March 31, 2021.

[2] New Permittees shall begin implementing the requirements of S5.A.3.a, no later than August 1, 2021.

B. The SWMP shall be designed to reduce the discharge of pollutants from regulated small MS4s to the MEP, meet state AKART requirements, and protect water quality.

C. The SWMP shall include the components listed below. To the extent allowable under state or federal law, all components are mandatory for city, town, or county Permittees covered under this Permit.

1. Stormwater planning

Each Permittee shall implement a Stormwater Planning program to inform and assist in the development of policies and strategies as water quality management tools to protect receiving waters.

The minimum performance measures are:

a. By August 1, 2020, each Permittee shall convene an inter-disciplinary team to inform and assist in the development, progress, and influence of this program.

b. Coordination with long-range plan updates.

i. Each Permittee shall describe how stormwater management needs and protection/improvement of receiving water health are (or are not) informing the planning update processes and influencing policies and implementation strategies in their jurisdiction. The report shall describe the water quality and watershed protection policies, strategies, codes, and other measures intended to protect and improve local receiving water health through planning, or taking into account stormwater management needs or limitations.

(a) On or before March 31, 2021, the Permittee shall respond to the series of Stormwater Planning Annual Report questions to describe how anticipated stormwater impacts on water quality were addressed, if at all, during the 2013-2019 permit term in updates to the Comprehensive Plan (or equivalent) and in other locally initiated or state-mandated, long-range land use plans that are used to accommodate growth or transportation.

(b) On or before January 1, 2023, the Permittee shall submit a report responding to the same questions included in (a), above, to describe how water quality is being addressed, if at all, during this permit term in updates to the Comprehensive Plan (or equivalent) and in other locally initiated or state-mandated, long-range land use plans that are used to accommodate growth or transportation.

c. Low impact development code-related requirements.

i. Permittees shall continue to require LID Principles and LID BMPs when updating, revising, and developing new local development-related codes, rules, standards, or other enforceable documents, as needed.

The intent shall be to make LID the preferred and commonly-used approach to site development. The local development-related codes, rules, standards, or other enforceable documents shall be designed to minimize impervious surfaces, native vegetation loss, and stormwater runoff in all types of development situations, where feasible.

(a) Annually, each Permittee shall assess and document any newly identified administrative or regulatory barriers to implementation of LID Principles or LID BMPs since local codes were updated in accordance with the 2013 Permit, and the measures developed to address the barriers. If applicable, the report shall describe mechanisms adopted to encourage or require implementation of LID principles or LID BMPs.

ii. By December 31, 2023, New Permittees shall review, revise, and make effective their local development-related codes, rules, standards, or other enforceable documents to incorporate and require LID principles and LID BMPs. New Permittees shall conduct a similar review and revision process, and consider the range of issues, outlined in the following document: Integrating LID into Local Codes: A Guidebook for Local Governments (Puget Sound Partnership, 2012).

New Permittees shall submit a summary of the results of the review and revision process with the annual report due no later than March 31, 2024. This summary shall be in the required format described in Appendix 5 and include, at a minimum, a list of the participants (job title, brief job description, and department represented), the codes, rules, standards, and other enforceable documents reviewed, and the revisions made to those documents which incorporate and require LID principles and LID BMPs. The summary shall include existing requirements for LID principles and LID BMPs in development-related codes. The summary must be organized as follows:

(a) Measures to minimize impervious surfaces.

(b) Measures to minimize loss of native vegetation.

(c) Other measures to minimize stormwater runoff.

d. Stormwater Management Action Planning[3] (SMAP). Permittees shall conduct a similar process and consider the range of issues outlined in the *Stormwater Management Action Planning Guidance* (Ecology, 2019; Publication 19-10-010). Permittees may rely on another jurisdiction to meet all or part of SMAP requirements at a watershed-scale, provided a SMAP is completed for at least one priority catchment located within the Permittee's jurisdiction.

i. *Receiving Water Assessment*. Permittees shall document and assess existing information related to their local receiving waters and contributing area conditions to identify which receiving waters are most likely to benefit from stormwater management planning.

By March 31, 2022, Permittees shall submit a watershed inventory and include a brief description of the relative conditions of the receiving waters and the contributing areas. The watershed inventory shall be submitted as a table with each receiving water name, its total watershed area, the percent of the total watershed area that is in the Permittee's jurisdiction, and the findings of the stormwater management influence assessment for each basin. Indicate which

[3] New Permittees are exempt from S5.C.1.d. for this permit term.

receiving waters will be included in the S5.C.1.d.ii prioritization process. Include a map of the delineated basins with references to the watershed inventory table.

(a) Identify which basins are expected to have a relatively low Stormwater Management Influence for SMAP. See the guidance document for definition and description of this assessment.

Basins having relatively low expected Stormwater Management Influence for SMAP do not need to be included in S5.C.1.d.ii-iii.

ii. *Receiving Water Prioritization*. Informed by the assessment of receiving water conditions in (i), above, and other local and regional information, Permittees shall develop and implement a prioritization method and process to determine which receiving waters will receive the most benefit from implementation of stormwater facility retrofits, tailored implementation of SWMP actions, and other land/development management actions (different than the existing new and redevelopment requirements). The retrofits and actions shall be designed to: 1) conserve, protect, or restore receiving waters through stormwater and land management strategies that act as water quality management tools, 2) reduce pollutant loading, and 3) address hydrologic impacts from existing development as well as planned for and expected future buildout conditions.

No later than June 30, 2022, document the prioritized and ranked list of receiving waters.

(a) The Permittee shall document the priority ranking process used to identify high priority receiving waters. The Permittee may reference existing local watershed management plan(s) as source(s) of information or rationale for the prioritization.

(b) The ranking process shall include the identification of high priority catchment area(s) for focus of the Stormwater Management Action Plan (SMAP) in (iii), below.

iii. Stormwater Management Action Plan (SMAP). No later than March 31, 2023, Permittees shall develop a SMAP for at least one high priority catchment area from (ii), above, that identifies all of the following:

(a) A description of the stormwater facility retrofits needed for the area, including the BMP types and preferred locations.

(b) Land management/development strategies and/or actions identified for water quality management.

(c) Targeted, enhanced, or customized implementation of stormwater management actions related to permit sections within S5, including:

- IDDE field screening,
- Prioritization of Source Control inspections,
- O&M inspections or enhanced maintenance, or
- Public Education and Outreach behavior change programs.

Identified actions shall support other specifically identified stormwater management strategies and actions for the basin overall, or for the catchment area in particular.

(d) If applicable, identification of changes needed to local long-range plans, to address SMAP priorities.

(e) A proposed implementation schedule and budget sources for:

- Short-term actions (*i.e.*, actions to be accomplished within six years), and
- Long-term actions (*i.e.*, actions to be accomplished within seven to 20 years).

(f) A process and schedule to provide future assessment and feedback to improve the planning process and implementation of procedures or projects.

2. Public Education and Outreach

The SWMP shall include an education and outreach program designed to:

- Build general awareness about methods to address and reduce impacts from stormwater runoff.
- Effect behavior change to reduce or eliminate behaviors and practices that cause or contribute to adverse stormwater impacts.
- Create stewardship opportunities that encourages community engagement in addressing the impacts from stormwater runoff.

Permittees may choose to meet these requirements individually or as a member of a regional group. Regional collaboration on general awareness or behavior change programs, or both, includes Permittees developing a consistent message, determining best methods for communicating the message, and when appropriate, creating strategies to effect behavior change. If a Permittee chooses to adopt one or more elements of a regional program, the Permittee should participate in the regional group and shall implement the adopted element(s) of the regional program in the local jurisdiction.

The minimum performance measures are:

a. Each Permittee shall implement an education and outreach program for the area served by the MS4. The program design shall be based on local water quality information and target audience characteristics to identify high priority target audiences, subject areas, and/or BMPs. Based on the target audience's demographic, the Permittee shall consider delivering its selected messages in language(s) other than English, as appropriate to the target audience. [4]

i. ***General awareness***. To build general awareness, Permittees shall annually select at a minimum one target audience and one subject area from either (a) or (b):

(a) *Target audiences:* General public (including overburdened communities, or school age children) or businesses (including home-based, or mobile businesses). Subject areas:

[4] New Permittees shall begin implementing the requirements of S5.C.2 no later than August 1, 2021.

- General impacts of stormwater on surface waters, including impacts from impervious surfaces.
- Low impact development (LID) principles and LID BMPs.

(b) *Target audiences:* Engineers, contractors, developers, or land use planners. Subject areas:

- Technical standards for stormwater site and erosion control plans.
- LID principles and LID BMPs.
- Stormwater treatment and flow control BMPs/facilities

(c) Permittees shall provide subject area information to the target audience on an ongoing or strategic schedule.

ii. ***Behavior change***. To affect behavior change, Permittees shall select, at a minimum, one target audience and one BMP.

(a) *Target Audiences:* Residents, landscapers, property managers/owners, developers, school age children, or businesses (including home-based or mobile businesses).

BMPs:

- Use and storage of: pesticides, fertilizers, and/or other household chemicals.
- Use and storage of: automotive chemicals, hazardous cleaning supplies, carwash soaps, and/or other hazardous materials.
- Prevention of illicit discharges.
- Yard care techniques protective of water quality.
- Carpet cleaning.
- Repair and maintenance BMPs for: vehicles, equipment, and/or home/buildings.
- Pet waste management and disposal.
- LID Principles and LID BMPs.
- Stormwater facility maintenance, including LID facilities.
- Dumpster and trash compactor maintenance.
- Litter and debris prevention.
- Sediment and erosion control.
- (Audience specific) Source control BMPs (refer to S5.C.8).
- (Audience specific) Locally-important, municipal stormwater-related subject area.

(b) No later than July 1, 2020, each Permittee shall conduct a new evaluation of the effectiveness of an ongoing behavior change campaign (required under S5.C.1.a.ii and S5.C.1.c of the 2013 Permit). Permittees shall document lessons learned and recommendations for which option to select from S5.C.2.a.ii.(c).

Permittees that select option S5.C.2.a.ii.(c)3, below, may forgo this evaluation if it will not add value to the overall behavior change program.

(c) Based on the recommendation from S5.C.2.a.ii.(b), by February 1, 2021, each Permittee shall follow social marketing practices and methods, similar to community-based social marketing, and develop a campaign that is tailored to the community, including development of a program evaluation plan. Each Permittee shall: [5]

1. Develop a strategy and schedule to more effectively implement the existing campaign; or
2. Develop a strategy and schedule to expand the existing campaign to a new target audience or BMPs; or
3. Develop a strategy and schedule for a new target audience and BMP behavior change campaign.

(d) No later than April 1, 2021, begin to implement the strategy developed in S5.C.2.a.ii.(c).[6]

(e) No later than March 31, 2024, evaluate and report on:

1. The changes in understanding and adoption of targeted behaviors resulting from the implementation of the strategy; and
2. Any planned or recommended changes to the campaign in order to be more effective; describe the strategies and process to achieve the results.

(f) Permittees shall use results of the evaluation to continue to direct effective methods and implementation of the ongoing behavior change program.

iii. Stewardship. Each Permittee shall provide and advertise stewardship opportunities and/or partner with existing organizations (including non-permittees) to encourage residents to participate in activities or events planned and organized within the community, such as: stream teams, storm drain marking, volunteer monitoring, riparian plantings, and education activities.

3. Public Involvement and Participation

Permittees shall provide ongoing opportunities for public involvement and participation through advisory councils, public hearings, watershed committees, participation in developing rate-structures or other similar activities. Each Permittee shall comply with applicable state and local public notice requirements when developing elements of the SWMP and SMAP.

The minimum performance measures are:

a. Permittees shall create opportunities for the public, including overburdened communities, to participate in the decision-making processes involving the development, implementation and update of the Permittee's SMAP and SWMP.[7]

[5] No later than August 1, 2021, new Permittees shall follow social marketing practices and methods, similar to Community-Based Social Marketing, to develop a behavior change program that is tailored to the community.

[6] No later than October 1, 2021, New Permittees shall begin to implement the strategy developed in S5.C.2.a.ii.(c).

[7] New Permittees shall develop and begin to implement requirements according to S5.C.3.a no later than August 1, 2020. New Permittees are exempt from SMAP this permit term.

b. Each Permittee shall post on their website their SWMP Plan and the annual report, required under S9.A, no later than May 31 each year. All other submittals shall be available to the public upon request. To comply with the posting requirement, a Permittee that does not maintain a website may submit the updated SWMP in electronic format to Ecology for posting on Ecology's website.

4. MS4 Mapping and Documentation

The SWMP shall include an ongoing program for mapping and documenting the MS4.[8]

The minimum performance measures are:

a. *Ongoing Mapping*: Each Permittee shall maintain mapping data for the features listed below:

i. Known MS4 outfalls and known MS4 discharge points.

ii. Receiving waters, other than groundwater.

iii. Stormwater treatment and flow control BMPs/facilities owned or operated by the Permittee.

iv. Geographic areas served by the Permittee's MS4 that do not discharge stormwater to surface waters.

v. Tributary conveyances to all known outfalls and discharge points with a 24 inch nominal diameter or larger, or an equivalent cross-sectional area for non-pipe systems. The following features or attributes (or both) shall be mapped:

(a) Tributary conveyance type, material, and size where known.

(b) Associated drainage areas.

(c) Land use.

vi. Connections between the MS4 owned or operated by the Permittee and other municipalities or public entities.

vii. All connections to the MS4 authorized or allowed by the Permittee after February 16, 2007. [9,10]

b. *New Mapping*: Each Permittee shall:

i. No later than January 1, 2020, begin to collect size and material for all known MS4 outfalls during normal course of business (e.g. during field screening, inspection, or maintenance) and update records.

ii. No later than August 1, 2023, complete mapping of all known connections from the MS4 to a privately owned stormwater system.

[8] New Permittees shall meet the requirements to map the MS4 according to S5.C.4. no later than February 2, 2024, except where otherwise noted in this Section.

[9] New Permittees shall meet the requirements of S5.C.4.a.vii after August 1, 2019, for all connections to the MS4 authorized after August 1, 2019.

[10] Permittees do not need to map the following residential connections: individual driveways, sump pumps, or roof downspouts.

c. No later than August 1, 2021, the required format for mapping is electronic (e.g. Geographic Information System, CAD drawings, or other software that can map and store points, lines, polygons, and associated attributes), with fully described mapping standards.

d. To the extent consistent with national security laws and directives, each Permittee shall make available to Ecology, upon request, available maps depicting the information required in S5.C.4.a through c, above.

e. Upon request, and to the extent appropriate, Permittees shall provide mapping information to federally recognized Indian Tribes, municipalities, and other Permittees. This Permit does not preclude Permittees from recovering reasonable costs associated with fulfilling mapping information requests by federally recognized Indian Tribes, municipalities, and other Permittees.

5. Illicit Discharge Detection and Elimination

The SWMP shall include an ongoing program designed to prevent, detect, characterize, trace, and eliminate illicit connections and illicit discharges into the MS4.[11]

The minimum performance measures are:

a. The program shall include procedures for reporting and correcting or removing illicit connections, spills and other illicit discharges when they are suspected or identified. The program shall also include procedures for addressing pollutants entering the MS4 from an interconnected, adjoining MS4.

Illicit connections and illicit discharges must be identified through, but not limited to: field screening, inspections, complaints/reports, construction inspections, maintenance inspections, source control inspections, and/or monitoring information, as appropriate.

b. Permittees shall inform public employees, businesses, and the general public of hazards associated with illicit discharges and improper disposal of waste.

c. Each Permittee shall implement an ordinance or other regulatory mechanism to effectively prohibit non-stormwater, illicit discharges into the Permittee's MS4 to the maximum extent allowable under state and federal law.

i. Allowable Discharges: The regulatory mechanism does **not** need to prohibit the following categories of non-stormwater discharges:

(a) Diverted stream flows

(b) Rising groundwaters

(c) Uncontaminated groundwater infiltration (as defined at 40 CFR 35.2005(b)(20))

(d) Uncontaminated pumped groundwater

(e) Foundation drains

[11] New Permittees shall meet the requirements of S5.C.5 no later than August 1, 2021 except where otherwise noted in this Section.

(f) Air conditioning condensation

(g) Irrigation water from agricultural sources that is commingled with urban stormwater

(h) Springs

(i) Uncontaminated water from crawl space pumps

(j) Footing drains

(k) Flows from riparian habitats and wetlands

(l) Non-stormwater discharges authorized by another NPDES or state waste discharge permit

(m) Discharges from emergency firefighting activities in accordance with S2 Authorized Discharges

ii. Conditionally Allowable Discharges: The regulatory mechanism may allow the following categories of non-stormwater discharges only if the stated conditions are met:

(a) Discharges from potable water sources, including but not limited to water line flushing, hyperchlorinated water line flushing, fire hydrant system flushing, and pipeline hydrostatic test water. Planned discharges shall be dechlorinated to a total residual chlorine concentration of 0.1 ppm or less, pH-adjusted, if necessary, and volumetrically and velocity controlled to prevent re-suspension of sediments in the MS4.

(b) Discharges from lawn watering and other irrigation runoff. These discharges shall be minimized through, at a minimum, public education activities and water conservation efforts.

(c) Dechlorinated swimming pool, spa and hot tub discharges. The discharges shall be dechlorinated to a total residual chlorine concentration of 0.1 ppm or less, pH-adjusted and reoxygenized if necessary, volumetrically and velocity controlled to prevent re-suspension of sediments in the MS4. Discharges shall be thermally controlled to prevent an increase in temperature of the receiving water. Swimming pool cleaning wastewater and filter backwash shall not be discharged to the MS4.

(d) Street and sidewalk wash water, water used to control dust, and routine external building washdown that does not use detergents. The Permittee shall reduce these discharges through, at a minimum, public education activities and/or water conservation efforts. To avoid washing pollutants into the MS4, Permittees shall minimize the amount of street wash and dust control water used.

(e) Other non-stormwater discharges. The discharges shall be in compliance with the requirements of a pollution prevention plan reviewed by the Permittee, which addresses control of such discharges.

iii. The Permittee shall further address any category of discharges in (i) or (ii), above, if the discharges are identified as significant sources of pollutants to waters of the State.

iv. The ordinance or other regulatory mechanism shall include escalating enforcement procedures and actions.

d. Each Permittee shall implement an ongoing program designed to detect and identify non-stormwater discharges and illicit connections into the Permittee's MS4.[12] The program shall include the following components:

i. Procedures for conducting investigations of the Permittee's MS4, including field screening and methods for identifying potential sources. These procedures may also include source control inspections.

The Permittee shall implement a field screening methodology appropriate to the characteristics of the MS4 and water quality concerns. Screening for illicit connections may be conducted using *Illicit Connection and Illicit Discharge Field Screening and Source Tracing Guidance Manual* (Herrera Environmental Consultants, Inc.; May 2013), or another methodology of comparable or improved effectiveness. The Permittee shall document the field screening methodology in the Annual Report.

(a) All Permittees shall complete field screening for an average of 12% of the MS4 each year.[13] Permittees shall annually track total percentage of the MS4 screened beginning August 1, 2019.

ii. A publicly listed and publicized hotline or other telephone number for public reporting of spills and other illicit discharges.

iii. An ongoing training program for all municipal field staff, who, as part of their normal job responsibilities, might come into contact with or otherwise observe an illicit discharge and/or illicit connection to the MS4, on the identification of an illicit discharge and/or connection, and on the proper procedures for reporting and responding to the illicit discharge and/or connection. Follow-up training shall be provided as needed to address changes in procedures, techniques, requirements, or staffing. Permittees shall document and maintain records of the trainings provided and the staff trained.[14]

e. Each Permittee shall implement an ongoing program designed to address illicit discharges, including spills and illicit connections, into the Permittee's MS4.[15] The program shall include:

i. Procedures for characterizing the nature of, and potential public or environmental threat posed by, any illicit discharges found by or reported to the Permittee. Procedures shall address the evaluation of whether the discharge must be immediately contained and steps to be taken for containment of the discharge.

[12] New Permittees shall fully implement the requirements of S5.C.5.d no later than August 1, 2023.

[13] New Permittees shall complete S5.C.5.d.i requirements for field screening covering at least 12% of the MS4 within the Permittee's coverage area no later than December 31, 2023, and on average 12% each year thereafter.

[14] New Permittees shall develop and begin implementing the ongoing training program described in S5.C.5.d.iii no later than February 2, 2021.

[15] New Permittees shall fully develop and implement the requirements of S5.C.5.e no later than August 1, 2023.

ii. Procedures for tracing the source of an illicit discharge; including visual inspections, and when necessary, opening manholes, using mobile cameras, collecting and analyzing water samples, and/or other detailed inspection procedures.

iii. Procedures for eliminating the discharge, including notification of appropriate authorities (including owners or operators of interconnected MS4s); notification of the property owner; technical assistance; follow-up inspections; and use of the compliance strategy developed pursuant to S5.C.5.c.iv, including escalating enforcement and legal actions if the discharge is not eliminated.

iv. Compliance with the provisions in (i), (ii), and (iii), above, shall be achieved by meeting the following timelines:

(a) Immediately respond to all illicit discharges, including spills, which are determined to constitute a threat to human health, welfare, or the environment, consistent with General Condition G3.

(b) Investigate (or refer to the appropriate agency with the authority to act) within 7 days, on average, any complaints, reports, or monitoring information that indicates a potential illicit discharge.

(c) Initiate an investigation within 21 days of any report or discovery of a suspected illicit connection to determine the source of the connection, the nature and volume of discharge through the connection, and the party responsible for the connection.

(d) Upon confirmation of an illicit connection, use the compliance strategy in a documented effort to eliminate the illicit connection within 6 months. All known illicit connections to the MS4 shall be eliminated.

f. Permittees shall train staff who are responsible for identification, investigation, termination, cleanup, and reporting of illicit discharges, including spills, and illicit connections, to conduct these activities. Follow-up training shall be provided as needed to address changes in procedures, techniques, requirements or staffing. Permittees shall document and maintain records of the training provided and the staff trained.[16]

g. Recordkeeping: Each Permittee shall track and maintain records of the activities conducted to meet the requirements of this Section. In the Annual Report, each Permittee shall submit data for the illicit discharges, spills and illicit connections including those that were found by, reported to, or investigated by the Permittee during the previous calendar year. The data shall include the information specified in Appendix 12 and WQWebIDDE. Each Permittee may either use their own system or WQWebIDDE for recording this data. Final submittals shall follow the instructions, timelines, and format as described in Appendix 12.

[16] New Permittees shall meet the requirements of S5.C.5.f no later than February 2, 2021.

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

Each Permittee shall implement and enforce a program to reduce pollutants in stormwater runoff to a regulated small MS4 from new development, redevelopment and construction site activities. The program shall apply to private and public development, including transportation projects.[17]

The minimum performance measures are:

a. Implement an ordinance or other enforceable mechanism that addresses runoff from new development, redevelopment, and construction site projects.

Each Permittee shall adopt and make effective a local program, no later than June 30, 2022, that meets the requirements of S5.C.6.b(i) through (iii), below, and shall apply to all applications[18] submitted:

i. On or after July 1, 2022.

ii. Prior to January 1, 2017, that have not started construction[19] by January 1, 2022.[20]

iii. Prior to July 1, 2022, that have not started construction by July 1, 2027.

b. The ordinance or other enforceable mechanism shall include, at a minimum:

i. The Minimum Requirements, thresholds, and definitions in Appendix 1, or the 2013 Appendix 1 amended to include the changes identified in Appendix 10, or Phase I program approved by Ecology and amended to include Appendix 10, for new development, redevelopment, and construction sites. Adjustment and variance criteria equivalent to those in Appendix 1 shall be included. More stringent requirements may be used, and/or certain requirements may be tailored to local circumstances through the use of Ecology-approved basin plans or other similar water quality and quantity planning efforts. Such local requirements and thresholds shall provide equal protection of receiving waters and equal levels of pollutant control to those provided in Appendix 1.

ii. The local requirements shall include the following requirements, limitations, and criteria that, when used to implement the minimum requirements in Appendix 1 (or program approved by Ecology under the 2019 Phase I Permit) will protect

[17] For continuing Permittees, this means continuing to implement existing programs developed under previous permits until updates are made to meet the schedules defined. *New Permittees shall meet the requirements of S5.C.6 no later than December 31, 2022, except where otherwise specified in this Section.*

[18] In this context, "application" means, at a minimum a complete project description, site plan, and, if applicable, SEPA checklist. Permittees may establish additional elements of a completed application.

[19] In this context "started construction" means the site work associated with, and directly related to the approved project has begun. For example: grading the project site to final grade or utility installation. Simply clearing the project site does not constitute the start of construction. Permittees may establish additional requirements related to the start of construction.

[20] For Permittees in **Lewis and Cowlitz counties**: Prior to July 1, 2017, that have not started construction by June 30, 2022. **For Lynden, Snoqualmie**: Prior to January 1, 2018, that have not started construction by January 1, 2023. **For Aberdeen**: Prior to July 1, 2018, that have not started construction by June 30, 2023. **Shelton and Clallam County** shall adopt and make effective a local program that meets the requirements of S5.C.6.b(i) through (iii) no later than December 31, 2022. The local program shall apply to all applications submitted on or after January 1, 2023, and shall apply to applications submitted prior to January 1, 2023, which have not started construction by January 1, 2028.

water quality, reduce the discharge of pollutants to the MEP, and satisfy the State requirement under Chapter 90.48 RCW to apply AKART prior to discharge:

(a) Site planning requirements

(b) BMP selection criteria

(c) BMP design criteria

(d) BMP infeasibility criteria

(e) LID competing needs criteria

(f) BMP limitations

Permittees shall document how the criteria and requirements will protect water quality, reduce the discharge of pollutants to the MEP, and satisfy State AKART requirements.

Permittees who choose to use the requirements, limitations, and criteria, above, in the *Stormwater Management Manual for Western Washington*, or a Phase I program approved by Ecology, may cite this choice as their sole documentation to meet this requirement.

iii. The legal authority, through the approval process for new development and redevelopment, to inspect and enforce maintenance standards for private stormwater facilities approved under the provisions of this Section that discharge to the Permittee's MS4.

c. The program shall include a permitting process with site plan review, inspection and enforcement capability to meet the standards listed in (i) through (iv) below, for both private and public projects, using qualified personnel (as defined in *Definitions and Acronyms*). At a minimum, this program shall be applied to all sites that meet the minimum thresholds adopted pursuant to S5.C.6.b.i, above.

i. Review of all stormwater site plans for proposed development activities.

ii. Inspect, prior to clearing and construction, all permitted development sites that have a high potential for sediment transport as determined through plan review based on definitions and requirements in Appendix 7 – *Determining Construction Site Sediment Damage Potential*. As an alternative to evaluating each site according to Appendix 7, Permittees may choose to inspect all construction sites that meet the minimum thresholds adopted pursuant to S5.C.6.b.i, above.

iii. Inspect all permitted development sites during construction to verify proper installation and maintenance of required erosion and sediment controls. Enforce as necessary based on the inspection.

iv. Each Permittee shall manage maintenance activities to inspect all 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 has stopped and the site is fully stabilized), to identify maintenance needs and enforce compliance with maintenance standards as needed.

v. Inspect all permitted development sites upon completion of construction and prior to final approval or occupancy to ensure proper installation of permanent

stormwater facilities. Verify that a maintenance plan is completed and responsibility for maintenance is assigned for stormwater treatment and flow control BMPs/facilities. Enforce as necessary based on the inspection.

vi. Compliance with the inspection requirements in (ii) through (v), 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 required inspections. The inspections may be combined with other inspections provided they are performed using qualified personnel.

vii. The program shall include a procedure for keeping records of inspections and enforcement actions by staff, including inspection reports, warning letters, notices of violations, and other enforcement records. Records of maintenance inspections and maintenance activities shall be maintained.

viii. An enforcement strategy shall be implemented to respond to issues of non-compliance.

d. The program shall make available, as applicable, the 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.[21]

e. Each Permittee shall ensure that all staff 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, are trained to conduct these activities. 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.[22]

7. Operations and Maintenance

Each Permittee shall implement and document a program to regulate maintenance activities and to conduct maintenance activities by the Permittee to prevent or reduce stormwater impacts.[23]

The minimum performance measures are:

a. Each Permittee shall implement maintenance standards that are as protective, or more protective, of facility function than those specified in the *Stormwater Management Manual for Western Washington* or a Phase I program approved by Ecology. For facilities which do not have maintenance standards, the Permittee shall

[21] New Permittees shall meet the requirements of S5.C.6.d beginning no later than August 1, 2019.

[22] New Permittees shall meet the requirements of S5.C.6.e no later than December 31, 2022.

[23] New Permittees shall develop and implement the requirements of S5.C.7 no later than December 31, 2022 except where otherwise noted in this Section.

develop a maintenance standard. No later than June 30, 2022, Permittees shall update their maintenance standards as necessary to meet the requirements of this Section.

i. The purpose of the maintenance standard is to determine if maintenance is required. The maintenance standard is not a measure of the facility's required condition at all times between inspections. Exceeding the maintenance standard between inspections and/or maintenance is not a permit violation.

ii. Unless there are circumstances beyond the Permittee's control, when an inspection identifies an exceedance of the maintenance standard, maintenance shall be performed:

- Within 1 year for typical maintenance of facilities, except catch basins.
- Within 6 months for catch basins.
- Within 2 years for maintenance that requires capital construction of less than $25,000.

Circumstances beyond the Permittee's control include denial or delay of access by property owners, denial or delay of necessary permit approvals, and unexpected reallocations of maintenance staff to perform emergency work. For each exceedance of the required timeframe, the Permittee shall document the circumstances and how they were beyond their control.

b. Maintenance of stormwater facilities regulated by the Permittee

i. The program shall include provisions to verify adequate long-term O&M of stormwater treatment and flow control BMPs/facilities that are permitted and constructed pursuant to S.5.C.6.c and shall be maintained in accordance with S5.C.7.a.

The provisions shall include**:**

(a) Implementation of an ordinance or other enforceable mechanism that:

- Clearly identifies the party responsible for maintenance in accordance with maintenance standards established under S5.C.7.a.
- Requires inspection of facilities in accordance with the requirements in (b), below.
- Establishes enforcement procedures.

(b) Annual inspections of all stormwater treatment and flow control BMPs/facilities that discharge to the MS4 and were permitted by the Permittee according to S5.C.6.c, including those permitted in accordance with requirements adopted pursuant to the 2007-2019 Ecology municipal stormwater permits, unless there are maintenance records to justify a different frequency.

Permittees may reduce the inspection frequency based on maintenance records of double the length of time of the proposed inspection frequency. In the absence of maintenance records, the Permittee may substitute written statements to document a specific less frequent inspection schedule. Written statements shall be based on actual inspection and

maintenance experience and shall be certified in accordance with G19 – *Certification and Signature*.

ii. Compliance with the inspection requirements in (b), above, shall be determined by the presence and records of an established inspection program designed to inspect all facilities, and achieving at least 80% of required inspections.

iii. The program shall include a procedure for keeping records of inspections and enforcement actions by staff, including inspection reports, warning letters, notices of violations, and other enforcement records. Records of maintenance inspections and maintenance activities shall be maintained.

c. Maintenance of stormwater facilities owned or operated by the Permittee.

i. Each Permittee shall implement a program to annually inspect all municipally owned or operated stormwater treatment and flow control BMPs/facilities, and taking appropriate maintenance actions in accordance with the adopted maintenance standards.

Permittees may reduce the inspection frequency based on maintenance records of double the length of time of the proposed inspection frequency. In the absence of maintenance records, the Permittee may substitute written statements to document a specific less frequent inspection schedule. Written statements shall be based on actual inspection and maintenance experience and shall be certified in accordance with G19 – *Certification and Signature.*

ii. Each Permittee shall spot check potentially damaged stormwater treatment and flow control BMPs/facilities after major storm events (24 hour storm event with a 10 year or greater recurrence interval). If spot checks indicate widespread damage/maintenance needs, inspect all stormwater treatment and flow control BMPs/facilities that may be affected. Conduct repairs or take appropriate maintenance action in accordance with maintenance standards established above, based on the results of the inspections.

iii. Each Permittee shall inspect all catch basins and inlets owned or operated by the Permittee every two years.[24] Clean catch basins if the inspection indicates cleaning is needed to comply with maintenance standards established in the *Stormwater Management Manual for Western Washington*. Decant water shall be disposed of in accordance with Appendix 6 – *Street Waste Disposal*.

The following alternatives to the standard approach of inspecting all catch basins every two years may be applied to all or portions of the system:

(a) The catch basin inspection schedule of every two years may be changed as appropriate to meet the maintenance standards based on maintenance records of double the length of time of the proposed inspection frequency. In the absence of maintenance records for catch basins, the Permittee may substitute written statements to document a specific, less frequent inspection schedule. Written statements shall be based on actual inspection

[24] New Permittees shall inspect and, if needed, clean all catch basins and inlets owned or operated by the Permittee in accordance with the requirements of S5.C.7.c once during the permit term, to be completed no later than February 2, 2024.

and maintenance experiences and shall be certified in accordance with G19 – *Certification and Signature*.

(b) Inspections every two years may be conducted on a "circuit basis" whereby 25% of catch basins and inlets within each circuit are inspected to identify maintenance needs. Include an inspection of the catch basin immediately upstream of any MS4 outfall, discharge point, or connections to public or private storm systems, if applicable. Clean all catch basins within a given circuit for which the inspection indicates cleaning is needed to comply with maintenance standards established under S5.C.7.a, above.

(c) The Permittee may clean all pipes, ditches, and catch basins and inlets within a circuit once during the permit term. Circuits selected for this alternative must drain to a single point.

iv. Compliance with the inspection requirements in S5.C.7.c.i-iii, above, shall be determined by the presence of an established inspection program achieving at least 95% of required inspections.

d. Implement practices, policies, and procedures to reduce stormwater impacts associated with runoff from all lands owned or maintained by the Permittee, and road maintenance activities under the functional control of the Permittee. No later than December 31, 2022, document the practices, policies, and procedures. Lands owned or maintained by the Permittee include, but are not limited to: streets, parking lots, roads, highways, buildings, parks, open space, road right-of-ways, maintenance yards, and stormwater treatment and flow control BMPs/facilities.

The following activities shall be addressed**:**

i. Pipe cleaning

ii. Cleaning of culverts that convey stormwater in ditch systems

iii. Ditch maintenance

iv. Street cleaning

v. Road repair and resurfacing, including pavement grinding

vi. Snow and ice control

vii. Utility installation

viii. Pavement striping maintenance

ix. Maintaining roadside areas, including vegetation management

x. Dust control

xi. Application of fertilizers, pesticides, and herbicides according to the instructions for their use, including reducing nutrients and pesticides using alternatives that minimize environmental impacts

xii. Sediment and erosion control

xiii. Landscape maintenance and vegetation disposal

xiv. Trash and pet waste management

xv. Building exterior cleaning and maintenance

e. Implement an ongoing training program for employees of the Permittee whose primary construction, operations, or maintenance job functions may impact stormwater quality. The training program shall address the importance of protecting water quality, operation and maintenance standards, inspection procedures, relevant SWPPPs, selecting appropriate BMPs, ways to perform their job activities to prevent or minimize impacts to water quality, and procedures for reporting water quality concerns. Follow-up training shall be provided as needed to address changes in procedures, techniques, requirements, or staffing. Permittees shall document and maintain records of training provided. The staff training records to be kept include dates, activities or course descriptions, and names and positions of staff in attendance.

f. Implement a Stormwater Pollution Prevention Plan (SWPPP) for all heavy equipment maintenance or storage yards, and material storage facilities owned or operated by the Permittee in areas subject to this Permit that are not required to have coverage under the *Industrial Stormwater General Permit* or another NPDES permit that authorizes stormwater discharges associated with the activity. As necessary, update SWPPPs no later than December 31, 2022, to include the following information. At a minimum, the SWPPP shall include:

i. A detailed description of the operational and structural BMPs in use at the facility and a schedule for implementation of additional BMPs when needed. BMPs selected must be consistent with the *Stormwater Management Manual for Western Washington*, or a Phase I program approved by Ecology. The SWPPP must be updated as needed to maintain relevancy with the facility.

ii. At minimum, annual inspections of the facility, including visual observations of discharges, to evaluate the effectiveness of the BMPs, identify maintenance needs, and determine if additional or different BMPs are needed. The results of these inspections must be documented in an inspection report or check list.

iii. An inventory of the materials and equipment stored on-site, and the activities conducted at the facility which may be exposed to precipitation or runoff and could result in stormwater pollution.

iv. A site map showing the facility's stormwater drainage, discharge points, and areas of potential pollutant exposure.

v. A plan for preventing and responding to spills at the facility which could result in an illicit discharge.

g. Maintain records of the activities conducted to meet the requirements of this Section.

8. Source Control Program for Existing Development

a. The Permittee shall implement a program to prevent and reduce pollutants in runoff from areas that discharge to the MS4. The program shall include:

i. Application of operational source control BMPs, and if necessary, structural source control BMPs or treatment BMPs/facilities, or both, to pollution generating sources associated with existing land uses and activities.

ii. Inspections of pollutant generating sources at publicly and privately owned institutional, commercial and industrial sites to enforce implementation of required BMPs to control pollution discharging into the MS4.

iii. Application and enforcement of local ordinances at sites, identified pursuant to S5.C.8.b.ii, including sites with discharges authorized by a separate NPDES permit. Permittees that are in compliance with the terms of this Permit will not be held liable by Ecology for water quality standard violations or receiving water impacts caused by industries and other Permittees covered, or which should be covered under an NPDES permit issued by Ecology.

iv. Practices to reduce polluted runoff from the application of pesticides, herbicides, and fertilizers from the sites identified in the inventory.

b. **Minimum performance measures:**

i. No later than August 1, 2022, Permittees shall adopt and make effective an ordinance(s), or other enforceable documents, requiring the application of source control BMPs for pollutant generating sources associated with existing land uses and activities (see Appendix 8 to identify pollutant generating sources).

The requirements of this subsection are met by using the source control BMPs in the SWMMWW, or a Phase I Program approved by Ecology. In cases where the manual(s) lack guidance for a specific source of pollutants, the Permittee shall work with the owner/operator to implement or adapt BMPs based on the best professional judgement of the Permittee.

Applicable operational source control BMPs shall be required for all pollutant generating sources. Structural source control BMPs, or treatment BMPs/facilities, or both, shall be required for pollutant generating sources if operational source control BMPs do not prevent illicit discharges or violations of surface water, groundwater, or sediment management standards because of inadequate stormwater controls. Implementation of source control requirements may be done through education and technical assistance programs, provided that formal enforcement authority is available to the Permittee and is used as determined necessary by the Permittee, in accordance with S5.C.8.b.iv, below.

ii. No later than August 1, 2022, the Permittees shall establish an inventory that identifies publicly and privately owned institutional, commercial, and industrial sites which have the potential to generate pollutants to the MS4. The inventory shall include:

(a) Businesses and/or sites identified based on the presence of activities that are pollutant generating (refer to Appendix 8).

(b) Other pollutant generating sources, based on complaint response, such as: home-based businesses and multi-family sites.

iii. No later than January 1, 2023, Permittees shall implement an inspection program for sites identified pursuant to S5.C.8.b.ii, above.

(a) All identified sites with a business address shall be provided information about activities that may generate pollutants and the source control

requirements applicable to those activities. This information shall be provided by mail, telephone, electronic communications, or in person. This information may be provided all at one time or spread out over the permit term to allow for tailoring and distribution of the information during site inspections.

(b) The Permittee shall annually complete the number of inspections equal to 20% of the businesses and/or sites listed in their source control inventory to assess BMP effectiveness and compliance with source control requirements. The Permittee may count follow-up compliance inspections at the same site toward the 20% inspection rate. The Permittee may select which sites to inspect each year and is not required to inspect 100% of sites over a 5-year period. Sites may be prioritized for inspection based on their land use category, potential for pollution generation, proximity to receiving waters, or to address an identified pollution problem within a specific geographic area or sub-basin.

(c) Each Permittee shall inspect 100% of sites identified through credible complaints.

(d) Permittees may count inspections conducted based on complaints, or when the property owner denies entry, to the 20% inspection rate.

iv. No later than January 1, 2023, each Permittee shall implement a progressive enforcement policy that requires sites to comply with stormwater requirements within a reasonable time period as specified below:

(a) If the Permittee determines, through inspections or otherwise, that a site has failed to adequately implement required BMPs, the Permittee shall take appropriate follow-up action(s), which may include phone calls, reminder letters, emails, or follow-up inspections.

(b) When a Permittee determines that a site has failed to adequately implement BMPs after a follow-up inspection(s), the Permittee shall take enforcement action as established through authority in its municipal codes or ordinances, or through the judicial system.

(c) Each Permittee shall maintain records, including documentation of each site visit, inspection reports, warning letters, notices of violations, and other enforcement records, demonstrating an effort to bring sites into compliance. Each Permittee shall also maintain records of sites that are not inspected because the property owner denies entry.

(d) A Permittee may refer non-emergency violations of local ordinances to Ecology, provided, the Permittee also makes a documented effort of progressive enforcement. At a minimum, a Permittee's enforcement effort shall include documentation of inspections and warning letters or notices of violation.

v. Permittees shall train staff who are responsible for implementing the source control program to conduct these activities. The ongoing training program shall cover the legal authority for source control, source control BMPs and their proper application, inspection protocols, lessons learned, typical cases, and enforcement

procedures. Follow-up training shall be provided as needed to address changes in procedures, techniques, requirements, or staff. Permittees shall document and maintain records of the training provided and the staff trained.

S6. STORMWATER MANAGEMENT PROGRAM FOR SECONDARY PERMITTEES

A. This Section applies to all Secondary Permittees and all New Secondary Permittees, whether coverage under this Permit is obtained individually or as a Co-Permittee with a city, town, county, or another Secondary Permittee.

New Secondary Permittees subject to this Permit shall fully meet the requirements of this Section as modified in the footnotes in S6.D below, or as established as a condition of coverage by Ecology.

1. To the extent allowable under state, federal or local law, all components are mandatory for each Secondary Permittee covered under this Permit, whether covered as an individual Permittee or as a Co-Permittee.

2. Each Secondary Permittee shall develop and implement a Stormwater Management Program (SWMP). A SWMP is a set of actions and activities comprising the components listed in S6 and any additional actions necessary to meet the requirements of applicable TMDLs pursuant to S7 – *Compliance with Total Maximum Daily Load Requirements*. The SWMP shall be designed to reduce the discharge of pollutants from regulated small MS4s to the MEP and protect water quality.

3. Unless an alternate implementation schedule is established by Ecology as a condition of permit coverage, the SWMP shall be developed and implemented in accordance with the schedules contained in this Section and shall be fully developed and implemented no later than four and one-half years from the initial permit coverage date. Secondary Permittees that are already implementing some or all of the required SWMP components shall continue implementation of those components.

4. Secondary Permittees may implement parts of their SWMP in accordance with the schedule for cities, towns, and counties in S5, provided they have signed a memorandum of understanding or other agreement to jointly implement the activity or activities with one or more jurisdictions listed in S1.D.2.a or S1.D.2.b, and submitted a copy of the agreement to Ecology.

5. Each Secondary Permittee shall prepare written documentation of the SWMP, called the SWMP Plan. The SWMP Plan shall include a description of program activities for the upcoming calendar year.

B. Coordination

Secondary Permittees shall coordinate stormwater-related policies, programs and projects within a watershed and interconnected MS4s. Where relevant and appropriate, the SWMP shall coordinate among departments of the Secondary Permittee to ensure compliance with the terms of this Permit.

C. Legal Authority

To the extent allowable under state law and federal law, each Secondary Permittee shall be able to demonstrate that they can operate pursuant to legal authority which authorizes or enables the Secondary Permittee to control discharges to and from MS4s owned or operated by the Secondary Permittee.

This legal authority may be a combination of statutes, ordinances, permits, contracts, orders, interagency agreements, or similar instruments.

D. Stormwater Management Program for Secondary Permittees

The SWMP for Secondary Permittees shall include the following components:

1. **Public Education and Outreach**
   Each Secondary Permittee shall implement the following stormwater education strategies:

   a. Storm drain inlets owned or operated by the Secondary Permittee that are located in maintenance yards, in parking lots, along sidewalks, and at pedestrian access points shall be clearly labeled with a message similar to "Dump no waste – Drains to waterbody."[25]

      As identified during visual inspection and regular maintenance of storm drain inlets per the requirements of S6.D.3.d and S6.D.6.a.i below, or as otherwise reported to the Secondary Permittee, any inlet having a label that is no longer clearly visible and/or easily readable shall be re-labeled within 90 days.

   b. Each year beginning no later than three years from the initial date of permit coverage, public ports, colleges, and universities shall distribute educational information to tenants and residents on the impact of stormwater discharges on receiving waters, and steps that can be taken to reduce pollutants in stormwater runoff. Distribution may be by hard copy or electronic means. Appropriate topics may include:

      i. How stormwater runoff affects local water bodies.

      ii. Proper use and application of pesticides and fertilizers.

      iii. Benefits of using well-adapted vegetation.

      iv. Alternative equipment washing practices, including cars and trucks that minimize pollutants in stormwater.

      v. Benefits of proper vehicle maintenance and alternative transportation choices; proper handling and disposal of vehicle wastes, including the location of hazardous waste collection facilities in the area.

      vi. Hazards associated with illicit connections and illicit discharges.

      vii. Benefits of litter control of pet waste.

[25] New Secondary Permittees shall label all inlets as described in S6.D.1.a no later than four years from the initial date of permit coverage.

2. Public Involvement and Participation

Each year, no later than May 31, each Secondary Permittee shall:

a. Make the annual report available on the Permittee's website.

b. Make available on the Permittee's website, the latest updated version of the SWMP Plan.

c. A Secondary Permittee that does not maintain a website may submit the updated SWMP Plan and annual report in electronic format to Ecology for posting on Ecology's website.

3. Illicit Discharge Detection and Elimination

Each Secondary Permittee shall:

a. From the initial date of permit coverage, comply with all relevant ordinances, rules, and regulations of the local jurisdiction(s) in which the Secondary Permittee is located that govern non-stormwater discharges.

b. Implement appropriate policies prohibiting illicit discharges,[26] and an enforcement plan to ensure compliance with illicit discharge policies.[27] These policies shall address, at a minimum: illicit connections, non-stormwater discharges, including spills of hazardous materials, and improper disposal of pet waste and litter.

i. Allowable discharges: The policies do not need to prohibit the following categories of non-stormwater discharges:

(a) Diverted stream flows

(b) Rising groundwaters

(c) Uncontaminated groundwater infiltration (as defined at 40 CFR 35.2005(b)(20))

(d) Uncontaminated pumped groundwater

(e) Foundation drains.

(f) Air conditioning condensation

(g) Irrigation water from agricultural sources that is commingled with urban stormwater

(h) Springs

(i) Uncontaminated water from crawl space pumps

(j) Footing drains

(k) Flows from riparian habitats and wetlands

(l) Discharges from emergency firefighting activities in accordance with S2 – *Authorized Discharges*

(m) Non-stormwater discharges authorized by another NPDES or state waste discharge permit

[26] New Secondary Permittees shall develop and implement appropriate policies prohibiting illicit discharges, and identify possible enforcement mechanisms as described in S6.D.3.b no later than one year from the initial date of permit coverage.

[27] New Secondary Permittees shall develop and implement an enforcement plan as described in S6.D.3.b no later than 18 months from the initial date of permit coverage.

ii. Conditionally allowable discharges: The policies may allow the following categories of non-stormwater discharges only if the stated conditions are met and such discharges are allowed by local codes:

(a) Discharges from potable water sources, including but not limited to water line flushing, hyperchlorinated water line flushing,

(b) Fire hydrant system flushing, and pipeline hydrostatic test water. Planned discharges shall be dechlorinated to a total residual chlorine concentration of 0.1 ppm or less, pH-adjusted if necessary, and volumetrically and velocity controlled to prevent resuspension of sediments in the MS4.

(c) Discharges from lawn watering and other irrigation runoff. These discharges shall be minimized through, at a minimum, public education activities and water conservation efforts conducted by the Secondary Permittee and/or the local jurisdiction.

(d) Dechlorinated swimming pool, spa and hot tub discharges. The discharges shall be dechlorinated to a total residual chlorine concentration of 0.1 ppm or less, pH-adjusted and reoxygenated if necessary, and volumetrically and velocity controlled to prevent resuspension of sediments in the MS4. Discharges shall be thermally controlled to prevent an increase in temperature of the receiving water. Swimming pool cleaning wastewater and filter backwash shall not be discharged to the MS4.

(e) Street and sidewalk wash water, water used to control dust, and routine external building washdown that does not use detergents. The Secondary Permittee shall reduce these discharges through, at a minimum, public education activities and/or water conservation efforts conducted by the Secondary Permittee and/or the local jurisdiction. To avoid washing pollutants into the MS4, the Secondary Permittee shall minimize the amount of street wash and dust control water used.

(f) Other non-stormwater discharges shall be in compliance with the requirements of a pollution prevention plan reviewed by the Permittee which addresses control of such discharges.

iii. The Secondary Permittee shall address any category of discharges in (i) or (ii), above, if the discharge is identified as a significant source of pollutants to waters of the State.

c. Maintain a storm sewer system map showing the locations of all known MS4 outfalls and discharge points, labeling the receiving waters (other than groundwater) and delineating the areas contributing runoff to each outfall and discharge point. Make the map (or completed portions of the map) available on request to Ecology and to the extent appropriate, to other Permittees. The preferred format for mapping is an electronic format with fully described mapping standards. [28]

d. Conduct field inspections and visually inspect for illicit discharges at all known MS4 outfalls and discharge points. Visually inspect at least one third (on average) of all known outfalls and discharge points each year beginning no later than two years from

[28] New Secondary Permittees shall meet the requirements of S6.D.3.c no later than four and one-half years from the initial date of permit coverage.

the initial date of permit coverage. Implement procedures to identify and remove any illicit discharges. Keep records of inspections and follow-up activities.

e. Implement a spill response plan that includes coordination with a qualified spill responder.[29]

f. No later than two years from initial date of permit coverage, provide staff training or coordinate with existing training efforts to educate staff on proper BMPs for preventing illicit discharges, including spills. Train all Secondary Permittee staff who, as part of their normal job responsibilities, have a role in preventing such illicit discharges.

4. Construction Site Stormwater Runoff Control

From the initial date of permit coverage, each Secondary Permittee shall:

a. Comply with all relevant ordinances, rules, and regulations of the local jurisdiction(s) in which the Secondary Permittee is located that govern construction phase stormwater pollution prevention measures.

b. Ensure that all construction projects under the functional control of the Secondary Permittee which require a construction stormwater permit obtain coverage under the *NPDES Construction Stormwater General Permit* or an individual NPDES permit prior to discharging construction related stormwater.

c. Coordinate with the local jurisdiction regarding projects owned or operated by other entities which discharge into the Secondary Permittee's MS4, to assist the local jurisdiction with achieving compliance with all relevant ordinances, rules, and regulations of the local jurisdiction(s).

d. Provide training or coordinate with existing training efforts to educate relevant staff in erosion and sediment control BMPs and requirements, or hire trained contractors to perform the work.

e. Coordinate as requested with Ecology or the local jurisdiction to provide access for inspection of construction sites or other land disturbances which are under the functional control of the Secondary Permittee during land disturbing activities and/or construction period.

5. Post-Construction Stormwater Management for New Development and Redevelopment

From the initial date of permit coverage, each Secondary Permittee shall:

a. Comply with all relevant ordinances, rules and regulations of the local jurisdiction(s) in which the Secondary Permittee is located that govern post-construction stormwater pollution prevention measures.

b. Coordinate with the local jurisdiction regarding projects owned or operated by other entities which discharge into the Secondary Permittee's MS4, to assist the local jurisdiction with achieving compliance with all relevant ordinances, rules and regulations of the local jurisdiction(s).

[29] New Secondary Permittees shall develop and implement a spill response plan as described in S6.D.3.e no later than four and one-half years from the initial date of permit coverage.

6. Pollution Prevention and Good Housekeeping for Municipal Operations
Each Secondary Permittee shall:

a. Implement a municipal operation and maintenance (O&M) plan to minimize stormwater pollution from activities conducted by the Secondary Permittee. The O&M Plan shall include appropriate pollution prevention and good housekeeping procedures for all of the following operations, activities, and/or types of facilities that are present within the Secondary Permittee's boundaries and under the functional control of the Secondary Permittee.[30]

i. *Stormwater collection and conveyance systems*, including catch basins, stormwater pipes, open channels, culverts, and stormwater treatment and flow control BMPs/facilities. The O&M Plan shall address, at a minimum: scheduled inspections and maintenance activities, including cleaning and proper disposal of waste removed from the system. Secondary Permittees shall properly maintain stormwater collection and conveyance systems owned or operated by the Secondary Permittee and annually inspect and maintain all stormwater facilities to ensure facility function.

Secondary Permittees shall establish maintenance standards that are as protective or more protective of facility function than those specified in *Stormwater Management Manual for Western Washington*. Secondary Permittees shall review their maintenance standards to ensure they are consistent with the requirements of this Section.

Secondary Permittees shall conduct spot checks of potentially damaged permanent stormwater treatment and flow control BMPs/facilities following major storm events (24-hour storm event with a 10-year or greater recurrence interval).

ii. *Roads, highways, and parking lots*. The O&M Plan shall address, but is not limited to: deicing, anti-icing, and snow removal practices; snow disposal areas; material (e.g., salt, sand, or other chemical) storage areas; all-season BMPs to reduce road and parking lot debris and other pollutants from entering the MS4.

iii. *Vehicle fleets*. The O&M Plan shall address, but is not limited to: storage, washing, and maintenance of Secondary Permittee vehicle fleets; and fueling facilities. Secondary Permittees shall conduct all vehicle and equipment washing and maintenance in a self-contained covered building or in designated wash and/or maintenance areas.

iv. *External building maintenance*. The O&M Plan shall address, building exterior cleaning and maintenance including cleaning, washing, painting; and maintenance and management of dumpsters; and other maintenance activities.

v. *Parks and open space*. The O&M Plan shall address, but is not limited to: proper application of fertilizer, pesticides, and herbicides; sediment and erosion control; BMPs for landscape maintenance and vegetation disposal; and trash and pet waste management.

[30] New Secondary Permittees shall develop and implement the operation and maintenance plan described in S6.D.6.a no later than three years from initial date of permit coverage.

vi. *Material storage facilities and heavy equipment maintenance or storage yards*. Secondary Permittees shall develop and implement a Stormwater Pollution Prevention Plan to protect water quality at each of these facilities owned or operated by the Secondary Permittee and not covered under the *Industrial Stormwater General Permit* or under another NPDES permit that authorizes stormwater discharges associated with the activity.

vii. *Other facilities* that would reasonably be expected to discharge contaminated runoff. The O&M Plan shall address proper stormwater pollution prevention practices for each facility.

b. From the initial date of permit coverage, Secondary Permittees shall also have permit coverage for all facilities operated by the Secondary Permittee that are required to be covered under the *Industrial Stormwater General Permit* or another NPDES permit that authorizes discharges associated with the activity.

c. The O&M Plan shall include sufficient documentation and records as necessary to demonstrate compliance with the O&M Plan requirements in S6.D.6.a(i) through (vii), above.

d. No later than three years from the initial date of permit coverage, Secondary Permittees shall implement a program designed to train all employees whose primary construction, operations, or maintenance job functions may impact stormwater quality. The training shall address:

i. The importance of protecting water quality.

ii. The requirements of this Permit.

iii. Operation and maintenance requirements.

iv. Inspection procedures.

v. Ways to perform their job activities to prevent or minimize impacts to water quality.

vi. Procedures for reporting water quality concerns, including potential illicit discharges (including spills).

S7. COMPLIANCE WITH TOTAL MAXIMUM DAILY LOAD REQUIREMENTS

The following requirements apply if an applicable TMDL is approved for stormwater discharges from MS4s owned or operated by the Permittee. Applicable TMDLs are TMDLs which have been approved by EPA on or before the issuance date of this Permit or prior to the date that Ecology issues coverage under this Permit, whichever is later.

A. For applicable TMDLs listed in Appendix 2, affected Permittees shall comply with the specific requirements identified in Appendix 2. Each Permittee shall keep records of all actions required by this Permit that are relevant to applicable TMDLs within their jurisdiction. The status of the TMDL implementation shall be included as part of the annual report submitted to Ecology. Each annual report shall include a summary of relevant SWMP and Appendix 2 activities conducted in the TMDL area to address the applicable TMDL parameter(s).

B. For applicable TMDLs not listed in Appendix 2, compliance with this Permit shall constitute compliance with those TMDLs.

C. For TMDLs that are approved by EPA after this Permit is issued, Ecology may establish TMDL related permit requirements through future permit modification if Ecology determines implementation of actions, monitoring, or reporting necessary to demonstrate reasonable further progress toward achieving TMDL waste load allocations, and other targets, are not occurring and shall be implemented during the term of this Permit or when this Permit is reissued. Permittees are encouraged to participate in development of TMDLs within their jurisdiction and to begin implementation.

S8. MONITORING AND ASSESSMENT

A. Regional Status and Trends Monitoring

1. All Permittees that chose S8.B Status and Trends Monitoring Option #1 in the *Phase II Western Washington Municipal Stormwater Permit,* August 1, 2013 – July 31, 2018 (extended to July 31, 2019), shall make a one-time payment into the collective fund to implement regional small streams and marine nearshore areas status and trends monitoring in Puget Sound. This payment is due on or before December 1, 2019. Submit payment according to Section S8.D, below.

2. All City and County Permittees covered under the *Phase II Western Washington Municipal Stormwater Permit,* August 1, 2013 – July 31, 2018 (extended to July 31, 2019), except the Cities of Aberdeen and Centralia, shall notify Ecology in writing which of the following two options for regional status and trends monitoring (S8.A.2.a or S8.A.2.b) the Permittee chooses to carry out during this permit term. The written notification with G19 signature is due to Ecology no later than December 1, 2019.

a. Make annual payments into a collective fund to implement regional receiving water status and trends monitoring of either: small streams and marine nearshore areas in Puget Sound; or, urban streams in Clark and Cowlitz Counties in the Lower Columbia River basin, depending on the Permittee's location. The annual payments into the collective fund are due on or before August 15 each year beginning in 2020. Submit payments according to Section S8.D, below.

Or

b. Conduct stormwater discharge monitoring per the requirements in S8.C.

Either option will fully satisfy the Permittee's obligations under this Section (S8.A.2). Each Permittee shall select a single option for this permit term.

B. Stormwater Management Program (SWMP) Effectiveness and Source Identification Studies

1. All Permittees that chose S8.C Effectiveness Studies Option #1 in the *Phase II Western Washington Municipal Stormwater Permit,* August 1, 2013 – July 31, 2018 (extended to July 31, 2019), shall make a one-time payment into the collective fund to implement effectiveness studies and source identification studies. The payment is due on or before December 1, 2019. Submit payment according to Section S8.D, below.

2. All City and County Permittees covered under the *Phase II Western Washington Municipal Stormwater Permit,* August 1, 2013 – July 31, 2018 (extended to July 31, 2019), shall notify Ecology in writing which of the following two options (S8.B.2.a or S8.B.2.b) for effectiveness and source identification studies the Permittee chooses to carry out during this permit term. The written notification with G19 signature is due to Ecology no later than December 1, 2019.

   a. Make annual payments into a collective fund to implement effectiveness and source identification studies. The annual payments into the collective fund are due on or before August 15 each year beginning in 2020. Submit payments according to Section S8.D, below.

      Or

   b. Conduct stormwater discharge monitoring per the requirements in S8.C.

   Either option will fully satisfy the Permittee's obligations under this Section (S8.B.2). Each Permittee shall select a single option for this permit term.

3. All Permittees shall provide information as requested for effectiveness and source identification studies that are under contract with Ecology as active Stormwater Action Monitoring (SAM) projects. These requests will be limited to records of SWMP activities and associated data tracked and/or maintained in accordance with S5 – *Stormwater Management Program for Cities, Towns, and Counties* and/or S9 – *Reporting Requirements*. A maximum of three requests during the permit term from the SAM Coordinator will be transmitted to the Permittee's permit coordinator via Ecology's regional permit manager. The Permittee shall have 90 days to provide the requested information.

C. Stormwater discharge monitoring.

1. This Section applies only to Permittees who choose to conduct stormwater discharge monitoring per S8.A.2.b and/or S8.B.2.b in lieu of participation in the regional status and trends monitoring and/or effectiveness and source identification studies. These Permittees shall conduct monitoring in accordance with Appendix 9 and an Ecology-approved Quality Assurance Project Plan (QAPP) as follows:

   a. Permittees who choose the option to conduct stormwater discharge monitoring for either S8.A.2 or S8.B.2 shall monitor three independent discharge locations.

      Permittees who choose the option to conduct stormwater discharge monitoring for both S8.A.2 and S8.B.2 shall conduct this monitoring at a total of six locations; at least four locations shall be independent (one location may be nested in another basin).

   b. No later than February 1, 2020, each Permittee shall submit to Ecology a draft stormwater discharge monitoring QAPP for review and approval. The QAPP shall be prepared in accordance with the requirements in Appendix 9. The final QAPP shall be submitted to Ecology for approval as soon as possible following finalization, and before August 15, 2020 or within 60 days of receiving Ecology's comments on the draft QAPP (whichever is later).

   c. Flow monitoring shall begin no later than October 1, 2020 or within 30 days of receiving Ecology's approval of the final QAPP (whichever is later). Stormwater discharge monitoring shall be fully implemented no later than October 1, 2021.

d. Data and analyses shall be reported annually in accordance with the Ecology-approved QAPP. Each Permittee shall enter into the Department's Environmental Information Management (EIM) database all water and solids concentration data collected pursuant to Appendix 9.

D. Payments into the collective funds.

1. Each Permittee's S8.A and S8.B payment amounts are listed in Appendix 11 and in the invoices that will be sent to the Permittee approximately three months in advance of each payment due date.

2. Mail payments according to the instructions in the invoice, or via United States Postal Service to:

Department of Ecology Cashiering Unit
P.O. Box 47611
Olympia, WA 98405-7611

S9. REPORTING REQUIREMENTS

A. No later than March 31 of each year beginning in 2020, each Permittee shall submit an annual report. The reporting period for the annual report will be the previous calendar year unless otherwise specified.

Permittees shall submit annual reports electronically using Ecology's Water Quality Permitting Portal (WQWebPortal) available on Ecology's website.

Permittees unable to submit electronically through Ecology's WQWebPortal shall contact Ecology to request a waiver and obtain instructions on how to submit an annual report in an alternative format.

B. Each Permittee is required to keep all records related to this Permit and the SWMP for at least five years.

C. Each Permittee shall make all records related to this Permit and the Permittee's SWMP available to the public at reasonable times during business hours. The Permittee will provide a copy of the most recent annual report to any individual or entity, upon request.

1. A reasonable charge may be assessed by the Permittee for making photocopies of records.

2. The Permittee may require reasonable advance notice of intent to review records related to this Permit.

D. The annual report for cities, towns, and counties

Each annual report shall include the following:

1. A copy of the Permittee's current SWMP Plan, as required by S5.A.2.

2. Submittal of the annual report form as provided by Ecology pursuant to S9.A, describing the status of implementation of the requirements of this Permit during the reporting period.

3. Attachments to the annual report form including summaries, descriptions, reports, and other information as required, or as applicable, to meet the requirements of this Permit during the reporting period, or as a required submittal. Refer to Appendix 3 for annual report questions.[31]
4. If applicable, notice that the MS4 is relying on another governmental entity to satisfy any of the obligations under this Permit.
5. Certification and signature pursuant to G19.D, and notification of any changes to authorization pursuant to G19.C.
6. A notification of any annexations, incorporations or jurisdictional boundary changes resulting in an increase or decrease in the Permittee's geographic area of permit coverage during the reporting period.

E. Annual report for Secondary Permittees

Each annual report shall include the following:

1. Submittal of the annual report form as provided by Ecology pursuant to S9.A, describing the status of implementation of the requirements of this Permit during the reporting period.
2. Attachments to the annual report form including summaries, descriptions, reports, and other information as required, or as applicable, to meet the requirements of this Permit during the reporting period. Refer to Appendix 4 for annual report questions.
3. If applicable, notice that the MS4 is relying on another governmental entity to satisfy any of the obligations under this Permit.
4. Certification and signature pursuant to G19.D, and notification of any changes to authorization pursuant to G19.C.
5. A notification of any jurisdictional boundary changes resulting in an increase or decrease in the Secondary Permittee's geographic area of permit coverage during the reporting period.

[31] New Permittees refer to Appendix 5 for annual report questions.

GENERAL CONDITIONS

G1. DISCHARGE VIOLATIONS

All discharges and activities authorized by this Permit shall be consistent with the terms and conditions of this Permit.

G2. PROPER OPERATION AND MAINTENANCE

The Permittee shall at all times properly operate and maintain all facilities and systems of collection, treatment, and control (and related appurtenances) which are installed or used by the Permittee for pollution control to achieve compliance with the terms and conditions of this Permit.

G3. NOTIFICATION OF DISCHARGE, INCLUDING SPILLS

If a Permittee has knowledge of a discharge, including spills, into or from a MS4 which could constitute a threat to human health, welfare, or the environment, the Permittee shall:

A. Take appropriate action to correct or minimize the threat to human health, welfare and/or the environment.

B. Notify the Ecology regional office and other appropriate spill response authorities immediately but in no case later than within 24 hours of obtaining that knowledge.

C. Immediately report spills or other discharges which might cause bacterial contamination of marine waters, such as discharges resulting from broken sewer lines and failing onsite septic systems, to the Ecology regional office and to the Department of Health, Shellfish Program.

D. Immediately report spills or discharges of oils or hazardous substances to the Ecology regional office and to the Washington Emergency Management Division at 1-800-258-5990.

G4. BYPASS PROHIBITED

The intentional bypass of stormwater from all or any portion of a stormwater treatment BMP whenever the design capacity of the treatment BMP is not exceeded, is prohibited unless the following conditions are met:

A. Bypass is: (1) unavoidable to prevent loss of life, personal injury, or severe property damage; or (2) necessary to perform construction or maintenance-related activities essential to meet the requirements of the Clean Water Act (CWA); and

B. There are no feasible alternatives to bypass, such as the use of auxiliary treatment facilities, retention of untreated stormwater, or maintenance during normal dry periods.

"Severe property damage" means substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass.

G5. RIGHT OF ENTRY

The Permittee shall allow an authorized representative of Ecology, upon the presentation of credentials and such other documents as may be required by law at reasonable times:

A. To enter upon the Permittee's premises where a discharge is located or where any records shall be kept under the terms and conditions of this Permit.

B. To have access to, and copy at reasonable cost and at reasonable times, any records that shall be kept under the terms of the Permit.

C. To inspect at reasonable times any monitoring equipment or method of monitoring required in the Permit.

D. To inspect at reasonable times any collection, treatment, pollution management, or discharge facilities.

E. To sample at reasonable times any discharge of pollutants.

G6. DUTY TO MITIGATE

The Permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this Permit which has a reasonable likelihood of adversely affecting human health or the environment.

G7. PROPERTY RIGHTS

This Permit does not convey any property rights of any sort, or any exclusive privilege.

G8. COMPLIANCE WITH OTHER LAWS AND STATUTES

Nothing in the Permit shall be construed as excusing the Permittee from compliance with any other applicable federal, state, or local statutes, ordinances, or regulations.

G9. MONITORING

A. Representative Sampling

Samples and measurements taken to meet the requirements of this Permit shall be representative of the volume and nature of the monitored discharge, including representative sampling of any unusual discharge or discharge condition, including bypasses, upsets, and maintenance-related conditions affecting effluent quality.

B. Records Retention

The Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original recordings for continuous monitoring instrumentation, copies of all reports required by this Permit, and records of all data used to complete the application for this Permit, for a period of at least five years. This period of retention shall be extended during the course of any unresolved litigation regarding the discharge of pollutants by the Permittee or when requested by the Ecology. On request, monitoring data and analysis shall be provided to Ecology.

C. Recording of Results

For each measurement or sample taken, the Permittee shall record the following information: (1) the date, exact place and time of sampling; (2) the individual who

performed the sampling or measurement; (3) the dates the analyses were performed; (4) who performed the analyses; (5) the analytical techniques or methods used; and (6) the results of all analyses.

D. Test Procedures

All sampling and analytical methods used to meet the monitoring requirements in this Permit shall conform to the Guidelines Establishing Test Procedures for the Analysis of Pollutants contained in 40 CFR Part 136, unless otherwise specified in this Permit or approved in writing by Ecology.

E. Flow Measurement

Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated, and maintained to ensure that the accuracy of the measurements is consistent with the accepted industry standard for that type of device. Frequency of calibration shall be in conformance with manufacturer's recommendations or at a minimum frequency of at least one calibration per year. Calibration records should be maintained for a minimum of three years.

F. Lab Accreditation

All monitoring data, except for flow, temperature, conductivity, pH, total residual chlorine, and other exceptions approved by Ecology, shall be prepared by a laboratory registered or accredited under the provisions of, Accreditation of Environmental Laboratories, Chapter 173-50 WAC. Soils and hazardous waste data are exempted from this requirement pending accreditation of laboratories for analysis of these media by Ecology. Quick methods of field detection of pollutants including nutrients, surfactants, salinity, and other parameters are exempted from this requirement when the purpose of the sampling is identification and removal of a suspected illicit discharge.

G. Additional Monitoring

Ecology may establish specific monitoring requirements in addition to those contained in this Permit by administrative order or permit modification.

G10. REMOVED SUBSTANCES

With the exception of decant from street waste vehicles, the Permittee shall not allow collected screenings, grit, solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of stormwater to be resuspended or reintroduced to the MS4 or to waters of the State. Decant from street waste vehicles resulting from cleaning stormwater facilities may be reintroduced only when other practical means are not available and only in accordance with the Street Waste Disposal Guidelines in Appendix 6. Solids generated from maintenance of the MS4 may be reclaimed, recycled, or reused when allowed by local codes and ordinances. Soils that are identified as contaminated pursuant to Chapter 173-350 WAC shall be disposed at a qualified solid waste disposal facility (see Appendix 6).

G11. SEVERABILITY

The provisions of this Permit are severable, and if any provision of this Permit, or the application of any provision of this Permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this Permit shall not be affected thereby.

G12. REVOCATION OF COVERAGE

The director may terminate coverage under this General Permit in accordance with Chapter 43.21B RCW and Chapter 173-226 WAC. Cases where coverage may be terminated include, but are not limited to the following:

A. Violation of any term or condition of this general permit;

B. Obtaining coverage under this general permit by misrepresentation or failure to disclose fully all relevant facts;

C. A change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge;

D. A determination that the permitted activity endangers human health or the environment, or contributes significantly to water quality standards violations;

E. Failure or refusal of the Permittee to allow entry as required in Chapter 90.48.090 RCW;

F. Nonpayment of permit fees assessed pursuant to Chapter 90.48.465 RCW;

Revocation of coverage under this general permit may be initiated by Ecology or requested by any interested person.

G13. TRANSFER OF COVERAGE

The director may require any discharger authorized by this General Permit to apply for and obtain an individual permit in accordance with Chapter 43.21B RCW and Chapter 173-226 WAC.

G14. GENERAL PERMIT MODIFICATION AND REVOCATION

This General Permit may be modified, revoked and reissued, or terminated in accordance with the provisions of WAC 173-226-230. Grounds for modification, revocation and reissuance, or termination include, but are not limited to the following:

A. A change occurs in the technology or practices for control or abatement of pollutants applicable to the category of dischargers covered under this General Permit;

B. Effluent limitation guidelines or standards are promulgated pursuant to the CWA or Chapter 90.48 RCW, for the category of dischargers covered under this General Permit;

C. A water quality management plan containing requirements applicable to the category of dischargers covered under this General Permit is approved; or

D. Information is obtained which indicates that cumulative effects on the environment from dischargers covered under this General Permit are unacceptable.

E. Changes in state law that reference this Permit.

G15. REPORTING A CAUSE FOR MODIFICATION OR REVOCATION

A Permittee who knows or has reason to believe that any activity has occurred or will occur which would constitute cause for modification or revocation and reissuance under General Condition G12, G14, or 40 CFR 122.62 must report such plans, or such information, to Ecology so that a decision can be made on whether action to modify, or revoke and reissue this Permit will be

required. Ecology may then require submission of a new or amended application. Submission of such application does not relieve the Permittee of the duty to comply with this Permit until it is modified or reissued.

G16. APPEALS

A. The terms and conditions of this General Permit, as they apply to the appropriate class of dischargers, are subject to appeal within thirty days of issuance of this General Permit, in accordance with Chapter 43.21B RCW, and Chapter 173-226 WAC.

B. The terms and conditions of this General Permit, as they apply to an individual discharger, are appealable in accordance with Chapter 43.21B RCW within thirty days of the effective date of coverage of that discharger. Consideration of an appeal of General Permit coverage of an individual discharger is limited to the General Permit's applicability or nonapplicability to that individual discharger.

C. The appeal of General Permit coverage of an individual discharger does not affect any other dischargers covered under this General Permit. If the terms and conditions of this General Permit are found to be inapplicable to any individual discharger(s), the matter shall be remanded to Ecology for consideration of issuance of an individual permit or permits.

D. Modifications of this Permit are appealable in accordance with Chapter 43.21B RCW and Chapter 173-226 WAC.

G17. PENALTIES

40 CFR 122.41(a)(2) and (3), 40 CFR 122.41(j)(5), and 40 CFR 122.41(k)(2) are hereby incorporated into this Permit by reference.

G18. DUTY TO REAPPLY

The Permittee shall apply for permit renewal at least 180 days prior to the specified expiration date of this Permit.

G19. Certification and Signature

All formal submittals to Ecology shall be signed and certified.

A. All permit applications shall be signed by either a principal executive officer or ranking elected official.

B. All formal submittals required by this Permit shall be signed by a person described, above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

1. The authorization is made in writing by a person described, above, and submitted to Ecology, and

2. The authorization specifies either an individual or a position having responsibility for the overall development and implementation of the stormwater management program. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.)

C. Changes to authorization. If an authorization under condition G19.B.2 is no longer accurate because a different individual or position has responsibility for the overall development and implementation of the stormwater management program, a new authorization satisfying the requirements of condition G19.B.2 must be submitted to Ecology prior to or together with any reports, information, or applications to be signed by an authorized representative.

D. Certification. Any person signing a formal submittal under this Permit shall make the following certification:

"I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that Qualified Personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for willful violations."

G20. Non-compliance notification

In the event a Permittee is unable to comply with any of the terms and conditions of this Permit, the Permittee must:

A. Notify Ecology of the failure to comply with the permit terms and conditions in writing within 30 days of becoming aware that the non-compliance has occurred. The written notification must include all of the following:

1. A description of the non-compliance, including dates.
2. Beginning and end dates of the non-compliance, and if the compliance has not been corrected, the anticipated date of correction.
3. Steps taken or planned to reduce, eliminate, or prevent reoccurrence of the non-compliance.

B. Take appropriate action to stop or correct the condition of non-compliance.

G21. UPSETS

Permittees must meet the conditions of 40 CFR 122.41(n) regarding "Upsets." The conditions are as follows:

A. ***Definition.*** "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

B. ***Effect of an upset.*** An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph (C) of this condition are met. Any determination made during administrative

review of claims that noncompliance was caused by upset, and before an action for noncompliance, will not constitute final administrative action subject to judicial review.

C. ***Conditions necessary for demonstration of upset.*** A Permittee who wishes to establish the affirmative defense of upset must demonstrate, through properly signed contemporaneous operating logs, or other relevant evidence that:

1. An upset occurred and that the Permittee can identify the cause(s) of the upset;
2. The permitted facility was at the time being properly operated; and
3. The Permittee submitted notice of the upset as required in 40 CFR 122.41(l)(6)(ii)(B) (24-hour notice of noncompliance).
4. The Permittee complied with any remedial measures required under 40 CFR 122.41(d) (Duty to Mitigate).

D. ***Burden of proof.*** In any enforcement proceeding, the Permittee seeking to establish the occurrence of an upset has the burden of proof.

DEFINITIONS AND ACRONYMS

This Section includes definitions for terms used in the body of the Permit and in all the appendices except Appendix 1. Terms defined in Appendix 1 are necessary to implement requirements related to Appendix 1.

40 CFR means Title 40 of the Code of Federal Regulations, which is the codification of the general and permanent rules published in the Federal Register by the executive departments and agencies of the federal government.

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 (AKART) refers to the State Water Pollution Control Act, Chapter 90.48.010 RCW and Chapter 90.48.520 RCW.

Applicable TMDL means a TMDL which has been approved by EPA on or before the issuance date of this Permit, or prior to the date that Ecology issues coverage under this Permit, whichever is later.

Beneficial Uses means uses of waters of the State, which include but are not limited to use for domestic, stock watering, industrial, commercial, agricultural, irrigation, mining, fish and wildlife maintenance and enhancement, recreation, generation of electric power and preservation of environmental and aesthetic values, and all other uses compatible with the enjoyment of the public waters of the State.

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.

Bypass means the diversion of stormwater from any portion of a stormwater treatment facility.

Circuit means a portion of a MS4 discharging to a single point or serving a discrete area determined by traffic volumes, land use, topography or the configuration of the MS4.

Component or **Program Component** means an element of the Stormwater Management Program listed in S5 - *Stormwater Management Program for Cities, Towns, and Counties*, or S6 – S*tormwater Management Program for Secondary Permittees*, or S7 – *Compliance with Total Maximum Daily Load Requirements*, or S8 – *Monitoring and Assessment*, of this Permit.

Community-based social marketing is a social marketing methodology. It employs a systematic approach intended to change the behavior of communities to reduce their impact on the environment. Realizing that providing information is usually not sufficient to initiate behavior change, community-based social marketing uses tools and findings from social psychology to discover the perceived barriers to behavior change and ways of overcoming these barriers.

Conveyance System means that portion of the municipal separate storm sewer system designed or used for conveying stormwater.

Co-Permittee means an owner or operator of an MS4 which is in a cooperative agreement with at least one other applicant for coverage under this Permit. A Co-Permittee is an owner or operator of a regulated MS4 located within or in proximity to another regulated MS4. A Co-Permittee is only responsible for permit conditions relating to discharges from the MS4 the Co-Permittee owns or operates. See also 40 CFR 122.26(b)(1).

CWA means Clean Water Act (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*.).

Director means the Director of the Washington State Department of Ecology, or an authorized representative.

Discharge Point means the location where a discharge leaves the Permittee's MS4 through the Permittee's MS4 facilities/BMPs designed to infiltrate.

Entity means a governmental body, or a public or private organization.

EPA means the U.S. Environmental Protection Agency.

Fully Stabilized means the establishment of a permanent vegetative cover, or equivalent permanent stabilization measures (such as riprap, gabions or geotextiles) which prevents erosion.

General Permit means a permit which covers multiple dischargers of a point source category within a designated geographical area, in lieu of individual permits being issued to each discharger.

Groundwater means water in a saturated zone or stratum beneath the surface of the land or below a surface water body. Refer to Chapter 173-200 WAC.

Hazardous Substance means any liquid, solid, gas, or sludge, including any material, substance, product, commodity, or waste, regardless of quantity, that exhibits any of the physical, chemical, or biological properties described in WAC 173-303-090 or WAC 173-303-100.

Heavy Equipment Maintenance or Storage Yard means an uncovered area where any heavy equipment, such as mowing equipment, excavators, dump trucks, backhoes, or bulldozers are washed or maintained, or where at least five pieces of heavy equipment are stored on a long-term basis.

Highway means a main public road connecting towns and cities.

Hydraulically Near means runoff from the site discharges to the sensitive feature without significant natural attenuation of flows that allows for suspended solids removal. See Appendix 7 Determining Construction Site Sediment Damage Potential for a more detailed definition.

Hyperchlorinated means water that contains more than 10 mg/Liter chlorine.

Illicit Connection means any infrastructure connection to the MS4 that is not intended, permitted or used for collecting and conveying stormwater or non-stormwater discharges allowed as specified in this Permit (S5.C.5 and S6.D.3). Examples include sanitary sewer connections, floor drains, channels, pipelines, conduits, inlets, or outlets that are connected directly to the MS4.

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.5 and S6.D.3).

Impervious Surface means a non-vegetated surface area that either prevents or retards the entry of water into the soil mantle as under natural conditions prior to development. A non-vegetated surface area which causes water to run off the surface in greater quantities or at an increased rate of flow from the flow present under natural conditions prior to development. Common impervious surfaces include, but are not limited to, roof tops, walkways, patios, driveways, parking lots or stormwater areas, concrete or asphalt paving, gravel roads, packed earthen materials, and oiled, macadam or other surfaces which similarly impede the natural infiltration of stormwater.

Land Disturbing Activity means any activity that results in a change in the existing soil cover (both vegetative and non-vegetative) and/or the existing soil topography. Land disturbing activities include, but are not limited to clearing, grading, filling and excavation. Compaction that is associated with stabilization of structures and road construction shall also be considered land disturbing activity. Vegetation maintenance practices, including landscape maintenance and gardening, are not considered land disturbing activity. Stormwater facility maintenance is not considered land disturbing activity if conducted according to established standards and procedures.

LID means Low Impact Development.

LID BMP means Low Impact Development Best Management Practices.

LID Principles means land use management strategies that emphasize conservation, use of on-site natural features, and site planning to minimize impervious surfaces, native vegetation loss, and stormwater runoff.

Low Impact Development (LID) means a stormwater and land use management strategy that strives to mimic pre-disturbance hydrologic processes of infiltration, filtration, storage, evaporation and transpiration by emphasizing conservation, use of on-site natural features, site planning, and distributed stormwater management practices that are integrated into a project design.

Low Impact Development Best Management Practices (LID BMP) means distributed stormwater management practices, integrated into a project design, that emphasize pre-disturbance hydrologic processes of infiltration, filtration, storage, evaporation and transpiration. LID BMPs include, but are not limited to, bioretention, rain gardens, permeable pavements, roof downspout controls, dispersion, soil quality and depth, vegetated roofs, minimum excavation foundations, and water re-use.

Material Storage Facilities means an uncovered area where bulk materials (liquid, solid, granular, etc.) are stored in piles, barrels, tanks, bins, crates, or other means.

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.

National Pollutant Discharge Elimination System means 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.

Native Vegetation means vegetation comprised of plant species, other than noxious weeds, that are indigenous to the coastal region of the Pacific Northwest and which reasonably could have been expected to naturally occur on the site. Examples include trees such as Douglas Fir, western hemlock, western red cedar, alder, big-leaf maple; shrubs such as willow, elderberry, salmonberry, and salal; and herbaceous plants such as sword fern, foam flower, and fireweed.

New Development means land disturbing activities, including Class IV General Forest Practices that are conversions from timber land to other uses; structural development, including construction or installation of a building or other structure; creation of hard surfaces; and subdivision, short subdivision and binding site plans, as defined and applied in Chapter 58.17 RCW. Projects meeting the definition of redevelopment shall not be considered new development. Refer to Appendix 1 for a definition of hard surfaces.

New Permittee means a city, town, or county that is subject to the *Western Washington Municipal Stormwater General Permit* and was not subject to the permit prior to July 1, 2019.

New Secondary Permittee means a Secondary Permittee that is covered under a municipal stormwater general permit and was not covered by the permit prior to July 1, 2019.

NOI means Notice of Intent.

Notice of Intent (NOI) means the application for, or a request for coverage under, a General Permit pursuant to WAC 173-226-200.

Notice of Intent for Construction Activity means the application form for coverage under the *Construction Stormwater General Permit.*

Notice of Intent for Industrial Activity means the application form for coverage under the *Industrial Stormwater General Permit.*

NPDES means National Pollutant Discharge Elimination System.

Outfall means a point source as defined by 40 CFR 122.2 at the point where a discharge leaves the Permittee's MS4 and enters a surface receiving waterbody or surface receiving waters. Outfall does not include pipes, tunnels, or other conveyances which connect segments of the same stream or other surface waters and are used to convey primarily surface waters (i.e., culverts).

Overburdened Community means minority, low-income, tribal, or indigenous populations or geographic locations in Washington State that potentially experience disproportionate environmental harms and risks. This disproportionality can be as a result of greater vulnerability to environmental hazards, lack of opportunity for public participation, or other factors. Increased vulnerability may be attributable to an accumulation of negative or lack of positive environmental, health, economic, or social conditions within these populations or places. The term describes situations where multiple factors, including both environmental and socio-economic stressors, may act cumulatively to affect health and the environment and contribute to persistent environmental health disparities.

Permittee unless otherwise noted, the term "Permittee" includes city, town, or county Permittee, Co-Permittee, New Permittee, Secondary Permittee, and New Secondary Permittee.

Physically Interconnected means that one MS4 is connected to another storm sewer system in such a way that it allows for direct discharges to the second system. For example, the roads with drainage systems and municipal streets of one entity are physically connected directly to a storm sewer system belonging to another entity.

Project site means that portion of a property, properties, or right-of-ways subject to land disturbing activities, new hard surfaces, or replaced hard surfaces. Refer to Appendix 1 for a definition of hard surfaces.

QAPP means Quality Assurance Project Plan.

Qualified Personnel means someone who has had professional training in the aspects of stormwater management for which they are responsible and are under the functional control of the Permittee. Qualified Personnel may be staff members, contractors, or volunteers.

Quality Assurance Project Plan means a document that describes the objectives of an environmental study and the procedures to be followed to achieve those objectives.

RCW means the Revised Code of Washington State.

Receiving Waterbody or **Receiving Waters** means naturally and/or reconstructed naturally occurring surface water bodies, such as creeks, streams, rivers, lakes, wetlands, estuaries, and marine waters, or groundwater, to which a MS4 discharges.

Redevelopment means, on a site that is already substantially developed (i.e., has 35% or more of existing hard surface coverage), the creation or addition of hard surfaces; the expansion of a building footprint or addition or replacement of a structure; structural development including construction, installation or expansion of a building or other structure; replacement of hard surface that is not part of a routine maintenance activity; and land disturbing activities. Refer to Appendix 1 for a definition of hard surfaces.

Regulated Small Municipal Separate Storm Sewer System means a Municipal Separate Storm Sewer System which is automatically designated for inclusion in the Phase II stormwater permitting program by

its location within an Urbanized Area, or by designation by Ecology and is not eligible for a waiver or exemption under S1.C.

Runoff is water that travels across the land surface and discharges to water bodies either directly or through a collection and conveyance system. See also "***Stormwater***."

SAM means Stormwater Action Monitoring

Secondary Permittee is an operator of a regulated small MS4 which is not a city, town or county. Secondary Permittees include special purpose districts and other public entities that meet the criteria in S1.B.

Sediment/Erosion-Sensitive Feature means an area subject to significant degradation due to the effect of construction runoff, or areas requiring special protection to prevent erosion. See Appendix 7 Determining Construction Site Sediment Damage Potential for a more detailed definition.

Shared Water Bodies means water bodies, including downstream segments, lakes and estuaries that receive discharges from more than one Permittee.

Significant Contributor means a discharge that contributes a loading of pollutants considered to be sufficient to cause or exacerbate the deterioration of receiving water quality or instream habitat conditions.

Small Municipal Separate Storm Sewer System means an MS4 that is not defined as "large" or "medium" pursuant to 40 CFR 122.26(b)(4) & (7) or designated under 40 CFR 122.26 (a)(1)(v).

Source Control BMP means a structure or operation that is intended to prevent pollutants from coming into contact with stormwater through physical separation of areas or careful management of activities that are sources of pollutants. The *SWMMWW* separates source control BMPs into two types. Structural Source Control BMPs are physical, structural, or mechanical devices, or facilities that are intended to prevent pollutants from entering stormwater. Operational BMPs are non-structural practices that prevent or reduce pollutants from entering stormwater.

Stormwater means runoff during and following precipitation and snowmelt events, including surface runoff, drainage or interflow.

Stormwater Action Monitoring (SAM) is the regional stormwater monitoring program for Western Washington. This means, for all of Western Washington, a stormwater-focused monitoring and assessment program consisting of these components: status and trends monitoring in small streams and marine nearshore areas, stormwater management program effectiveness studies, and source identification projects. The priorities and scope for SAM are set by a formal stakeholder group that selects the studies and oversees the program's administration.

Stormwater Associated with Industrial and Construction Activity means the discharge from any conveyance which is used for collecting and conveying stormwater, which is directly related to manufacturing, processing or raw materials storage areas at an industrial plant, or associated with clearing, grading and/or excavation, and is required to have an NPDES permit in accordance with 40 CFR 122.26.

Stormwater facility retrofits means both: projects that retrofit existing treatment and/or flow control facilities; and new flow control or treatment facilities or BMPs that will address impacts from existing development.

Stormwater Management Program (SWMP) 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*.

Stormwater Treatment and Flow Control BMPs/Facilities means detention facilities, permanent treatment BMPs/facilities; and bioretention, vegetated roofs, and permeable pavements that help meet Appendix 1 Minimum Requirements #6 (treatment), #7 (flow control), or both.

Surface Waters includes lakes, rivers, ponds, streams, inland waters, salt waters, and all other surface waters and water courses within the jurisdiction of the State of Washington.

SWMMWW or **Stormwater Management Manual for Western Washington** means *Stormwater Management Manual for Western Washington (2019).*

SWMP means Stormwater Management Program.

TMDL means Total Maximum Daily Load.

Total Maximum Daily Load (TMDL) 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.

Tributary Conveyance means pipes, ditches, catch basins, and inlets owned or operated by the Permittee and designed or used for collecting and conveying stormwater.

UGA means Urban Growth Area.

Urban Growth Area (UGA) means those areas designated by a county pursuant to RCW 36.70A.110.

Urbanized Area is a federally-designated land area comprising one or more places and the adjacent densely settled surrounding area that together have a residential population of at least 50,000 and an overall population density of at least 1,000 people per square mile. Urbanized Areas are designated by the U.S. Census Bureau based on the most recent decennial census.

Vehicle Maintenance or Storage Facility means an uncovered area where any vehicles are regularly washed or maintained, or where at least 10 vehicles are stored.

Water Quality Standards means Surface Water Quality Standards, Chapter 173-201A WAC, Groundwater Quality Standards, Chapter 173-200 WAC, and Sediment Management Standards, Chapter 173-204 WAC.

Waters of the State includes those waters as defined as "waters of the United States" in 40 CFR Subpart 122.2 within the geographic boundaries of Washington State and "waters of the State" as defined in

Chapter 90.48 RCW which includes lakes, rivers, ponds, streams, inland waters, underground waters, salt waters and all other surface waters and water courses within the jurisdiction of the State of Washington.

Waters of the United States refers to the definition in 40 CFR 122.2.

APPENDIX 1 - Minimum Technical Requirements for New Development and Redevelopment

Section 1. Exemptions

Unless otherwise indicated in this section, the practices described in this section are exempt from the Minimum Requirements, even if such practices meet the definition of new development or redevelopment.

Forest Practices

Forest practices regulated under Title 222 WAC, except for Class IV-General forest practices that are conversions from timberland to other uses, are exempt from the provisions of the Minimum Requirements.

Commercial Agriculture

Commercial agriculture practices involving working the land for production are generally exempt. However, the conversion from timberland to agriculture, and the construction of impervious surfaces are not exempt.

Oil and Gas Field Activities or Operations

Construction of drilling sites, waste management pits, and access roads, as well as construction of transportation and treatment infrastructure such as pipelines, natural gas treatment plants, natural gas pipeline compressor stations, and crude oil pumping stations are exempt. Operators are encouraged to implement and maintain Best Management Practices to minimize erosion and control sediment during and after construction activities to help ensure protection of surface water quality during storm events.

Pavement Maintenance

The following pavement maintenance practices are exempt:

- pothole and square cut patching,
- overlaying existing asphalt or concrete pavement with asphalt or concrete without expanding the area of coverage,
- shoulder grading,
- reshaping/regrading drainage systems,
- crack sealing,
- resurfacing with in-kind material without expanding the road prism,
- pavement preservation activities that do not expand the road prism, and
- vegetation maintenance.

The following pavement maintenance practices are not categorically exempt, and are subject to the Minimum Requirements that are triggered when the thresholds identified for new or redevelopment projects are met per Section 3: Applicability of the Minimum Requirements.

- Removing and replacing an asphalt or concrete pavement to base course or lower, or repairing the pavement base: These are considered replaced hard surfaces.
- Extending the pavement edge without increasing the size of the road prism, or paving graveled shoulders: These are considered new hard surfaces.
- Resurfacing by upgrading from dirt to gravel, a bituminous surface treatment ("chip seal"), asphalt, or concrete; upgrading from gravel to chip seal, asphalt, or concrete; or upgrading from chip seal to asphalt or concrete: These are considered new impervious surfaces.

Underground Utility Projects

Underground utility projects that replace the ground surface with in-kind material or materials with similar runoff characteristics are only subject to 4.2 Minimum Requirement #2: Construction Stormwater Pollution Prevention Plan (SWPPP).

Section 2. Definitions Related to Minimum Requirements

Arterial

A road or street primarily for through traffic. The term generally includes roads or streets considered collectors. It does not include local access roads which are generally limited to providing access to abutting property. See also RCW 35.78.010, RCW 36.86.070, and RCW 47.05.021.

Bioretention BMPs

Engineered facilities that treat stormwater by passing it through a specified soil profile, and either retain or detain the treated stormwater for flow attenuation. Refer to BMP T7.30: Bioretention for Bioretention BMP types and design specifications.

Certified Erosion and Sediment Control Lead (CESCL)

An individual who has current certification through an approved erosion and sediment control training program that meets the minimum training standards established by Ecology (see BMP C160: Certified Erosion and Sediment Control Lead). A CESCL is knowledgeable in the principles and practices of erosion and sediment control. The CESCL must have the skills to assess site conditions and construction activities that could impact the quality of stormwater and, the effectiveness of erosion and sediment control measures used to control the quality of stormwater discharges. Certification is obtained through an Ecology approved erosion and sediment control course. Course listings are provided online at Ecology's website.

Commercial agriculture

Those activities conducted on lands defined in RCW 84.34.020(2), and activities involved in the production of crops or livestock for commercial trade. An activity ceases to be considered commercial agriculture when the area on which it is conducted is proposed for conversion to a nonagricultural use or has lain idle for more than five years, unless the idle land is registered in a federal or state soils conservation program, or unless the activity is maintenance of irrigation ditches, laterals, canals, or drainage ditches related to an existing and ongoing agricultural activity.

Converted vegetation (areas)

The surfaces on a project site where native vegetation, pasture, scrub/shrub, or unmaintained non-native vegetation (e.g., Himalayan blackberry, scotch broom) are converted to lawn or landscaped areas, or where native vegetation is converted to pasture.

Discharge point

The location where a discharge leaves the Permittee's MS4 through the Permittee's MS4 facilities/BMPs designed to infiltrate.

Effective impervious surface

Those impervious surfaces that are connected via sheet flow or discrete conveyance to a drainage system. Impervious surfaces are considered ineffective if:

1. The runoff is dispersed through at least one hundred feet of native vegetation in accordance with BMP T5.30: Full Dispersion;
2. Residential roof runoff is infiltrated in accordance with BMP T5.10A: Downspout Full Infiltration; or
3. Approved continuous runoff modeling methods indicate that the entire runoff file is infiltrated.

Erodible or leachable materials

Wastes, chemicals, or other substances that measurably alter the physical or chemical characteristics of runoff when exposed to rainfall. Examples include erodible soils that are stockpiled, uncovered process wastes, manure, fertilizers, oily substances, ashes, kiln dust, and garbage dumpster leakage.

Hard surface

An impervious surface, a permeable pavement, or a vegetated roof.

Highway

A main public road connecting towns and cities.

Impervious surface

A non-vegetated surface area which either prevents or retards the entry of water into the soil mantle as under natural conditions prior to development. A non-vegetated surface area which causes water to run off the surface in greater quantities or at an increased rate of flow from the flow present under natural conditions prior to development. Common impervious surfaces include, but are not limited to, roof tops, walkways, patios, driveways, parking lots or storage areas, concrete or asphalt paving, gravel roads, packed earthen materials, and oiled, macadam or other surfaces which similarly impede the natural infiltration of stormwater. Open, uncovered retention/detention facilities shall not be considered as impervious surfaces for the purposes of determining whether the thresholds for application of Minimum Requirements are exceeded. Open, uncovered retention/detention facilities shall be considered impervious surfaces for purposes of runoff modeling.

Land disturbing activity

Any activity that results in a change in the existing soil cover (both vegetative and nonvegetative) and/or the existing soil topography. Land disturbing activities include, but are not limited to clearing, grading, filling, and excavation. Compaction that is associated with stabilization of structures and road construction shall also be considered a land disturbing activity. Vegetation maintenance practices, including landscape maintenance and gardening, are not considered land-disturbing activity. Stormwater facility maintenance is not considered land disturbing activity if conducted according to established standards and procedures.

Low Impact Development (LID)

A stormwater and land use management strategy that strives to mimic pre-disturbance hydrologic processes of infiltration, filtration, storage, evaporation and transpiration by emphasizing conservation, use of on-site natural features, site planning, and distributed stormwater management practices that are integrated into a project design.

Low Impact Development Best Management Practices (LID BMPs)

Distributed stormwater management practices, integrated into a project design, that emphasize pre-disturbance hydrologic processes of infiltration, filtration, storage, evaporation and transpiration. LID BMPs include, but are not limited to:

- BMP T7.30: Bioretention,
- BMP T5.14: Rain Gardens,
- BMP T5.15: Permeable Pavements,
- BMP T5.10A: Downspout Full Infiltration,
- BMP T5.10B: Downspout Dispersion Systems,
- BMP T5.10C: Perforated Stub-out Connections
- BMP T5.30: Full Dispersion,
- BMP T5.13: Post-Construction Soil Quality and Depth,
- BMP T5.19: Minimal Excavation Foundations,
- BMP T5.17: Vegetated Roofs, and
- BMP T5.20: Rainwater Harvesting.

Low Impact Development (LID) Principles

Land use management strategies that emphasize conservation, use of on-site natural features, and site planning to minimize impervious surfaces, native vegetation loss, and stormwater runoff.

Maintenance

Repair and maintenance includes activities conducted on currently serviceable structures, facilities, and equipment that involves no expansion or use beyond that previously existing and results in no significant adverse hydrologic impact. It includes those usual activities taken to prevent a decline, lapse, or cessation in the use of structures and systems. Those usual activities may include replacement of dysfunctional facilities, including cases where environmental permits require replacing an existing structure with a different type structure, as long as the functioning characteristics of the original structure are not changed. One example is the replacement of a

collapsed, fish blocking, round culvert with a new box culvert under the same span, or width, of roadway. In regard to stormwater facilities, maintenance includes assessment to ensure ongoing proper operation, removal of built-up pollutants (i.e., sediments), replacement of failed or failing treatment media, and other actions taken to correct defects as identified in the BMP design guidance within Volume V of the SWMMWW. See also Pavement Maintenance exemptions in Section 1: Exemptions.

Native vegetation

Vegetation comprised of plant species, other than noxious weeds, that are indigenous to the coastal region of the Pacific Northwest and which reasonably could have been expected to naturally occur on the site. Examples include trees such as Douglas fir, western hemlock, western red cedar, alder, big-leaf maple, and vine maple; shrubs such as willow, elderberry, salmonberry and salal; and herbaceous plants such as sword fern, foam flower, and fireweed.

New development

Land disturbing activities, including Class IV-general forest practices that are conversions from timberland to other uses; structural development, including construction or installation of a building or other structure; creation of hard surfaces; and subdivision, short subdivision and binding site plans, as defined and applied in Chapter 58.17 RCW. Projects meeting the definition of redevelopment shall not be considered new development.

New impervious surface

A surface that is:

- changed from a pervious surface to an impervious surface (e.g. resurfacing by upgrading from dirt to gravel, a bituminous surface treatment ("chip seal"), asphalt, concrete, or an impervious structure); or
- upgraded from gravel to chip seal, asphalt, concrete, or an impervious structure; or
- upgraded from chip seal to asphalt, concrete, or an impervious structure.

  Note that if asphalt or concrete has been overlaid by a chip seal, the existing condition should be considered as asphalt or concrete.

On-site stormwater management BMPs

As used in this appendix, a synonym for Low Impact Development BMPs.

Outfall

A point source as defined by 40 CFR 122.2 at the point where a discharge leaves the Permittee's MS4 and enters a surface receiving waterbody or surface receiving waters. Outfall does not include pipes, tunnels, or other conveyances which connect segments of the same stream or other surface waters and are used to convey primarily surface waters (i.e., culverts).

Permeable pavement

Pervious concrete, porous asphalt, permeable pavers, or other forms of pervious or porous paving material intended to allow passage of water through the pavement section. It often includes an aggregate base that provides structural support and acts as a stormwater reservoir.

Pervious Surface

Any surface material that allows stormwater to infiltrate into the ground. Examples include lawn, landscape, pasture, native vegetation areas, and permeable pavements.

Pollution-generating hard surface (PGHS)

Those hard surfaces considered to be a significant source of pollutants in stormwater runoff. See the listing of surfaces under pollution-generating impervious surface.

Pollution-generating impervious surface (PGIS)

Those impervious surfaces considered to be a significant source of pollutants in stormwater runoff. Such surfaces include those which are subject to any of the following:

- vehicular use;
- industrial activities (as further defined in the glossary of the SWMMWW);
- storage of erodible or leachable materials, wastes, or chemicals, and which receive direct rainfall or the run-on or blow-in of rainfall;
- metal roofs unless they are coated with an inert, non-leachable material (e.g., baked-on enamel coating); or
- roofs that are subject to venting significant amounts of dusts, mists, or fumes from manufacturing, commercial, or other indoor activities.

Pollution-generating pervious surface (PGPS)

Any pervious surface subject to any of the following:

- vehicular use,
- industrial activities (as further defined in the glossary of the SWMMWW);
- storage of erodible or leachable materials, wastes or chemicals, and that receive direct rainfall or run-on or blow-in of rainfall,
- use of pesticides and fertilizers, or
- loss of soil.

Typical PGPS include permeable pavement subject to vehicular use, lawns and landscaped areas including: golf courses, parks, cemeteries, and sports fields (natural and artificial turf).

Pre-developed condition

The native vegetation and soils that existed at a site prior to the influence of Euro-American settlement. The pre-developed condition shall be assumed to be forested land cover unless reasonable, historic information is provided that indicates the site was prairie prior to settlement.

Project

Any proposed action to alter or develop a site.

Project site

That portion of a property, properties, or right of way subject to land disturbing activities, new hard surfaces, or replaced hard surfaces.

Rain garden

A non-engineered shallow landscaped depression, with compost-amended native soils and adapted plants. The depression is designed to pond and temporarily store stormwater runoff from adjacent areas, and to allow stormwater to pass through the amended soil profile. See BMP T5.14: Rain Gardens.

Receiving waterbody or receiving waters

Naturally and/or reconstructed naturally occurring surface water bodies, such as creeks, streams, rivers, lakes, wetlands, estuaries, and marine waters, or groundwater, to which a MS4 discharges.

Redevelopment

On a site that is already substantially developed (i.e., has 35% or more of existing hard surface coverage), the creation or addition of hard surfaces; the expansion of a building footprint or addition or replacement of a structure; structural development including construction, installation or expansion of a building or other structure; replacement of hard surface that is not part of a routine maintenance activity; and land disturbing activities.

Replaced hard surface

For structures, the removal and replacement of hard surfaces down to the foundation. For other hard surfaces, the removal down to bare soil or base course and replacement.

Replaced impervious surface

For structures, the removal and replacement of impervious surfaces down to the foundation. For other impervious surfaces, the removal down to bare soil or base course and replacement.

Site

The area defined by the legal boundaries of a parcel or parcels of land that is (are) subject to new development or redevelopment. For road projects, the length of the project site and the right-of-way boundaries define the site.

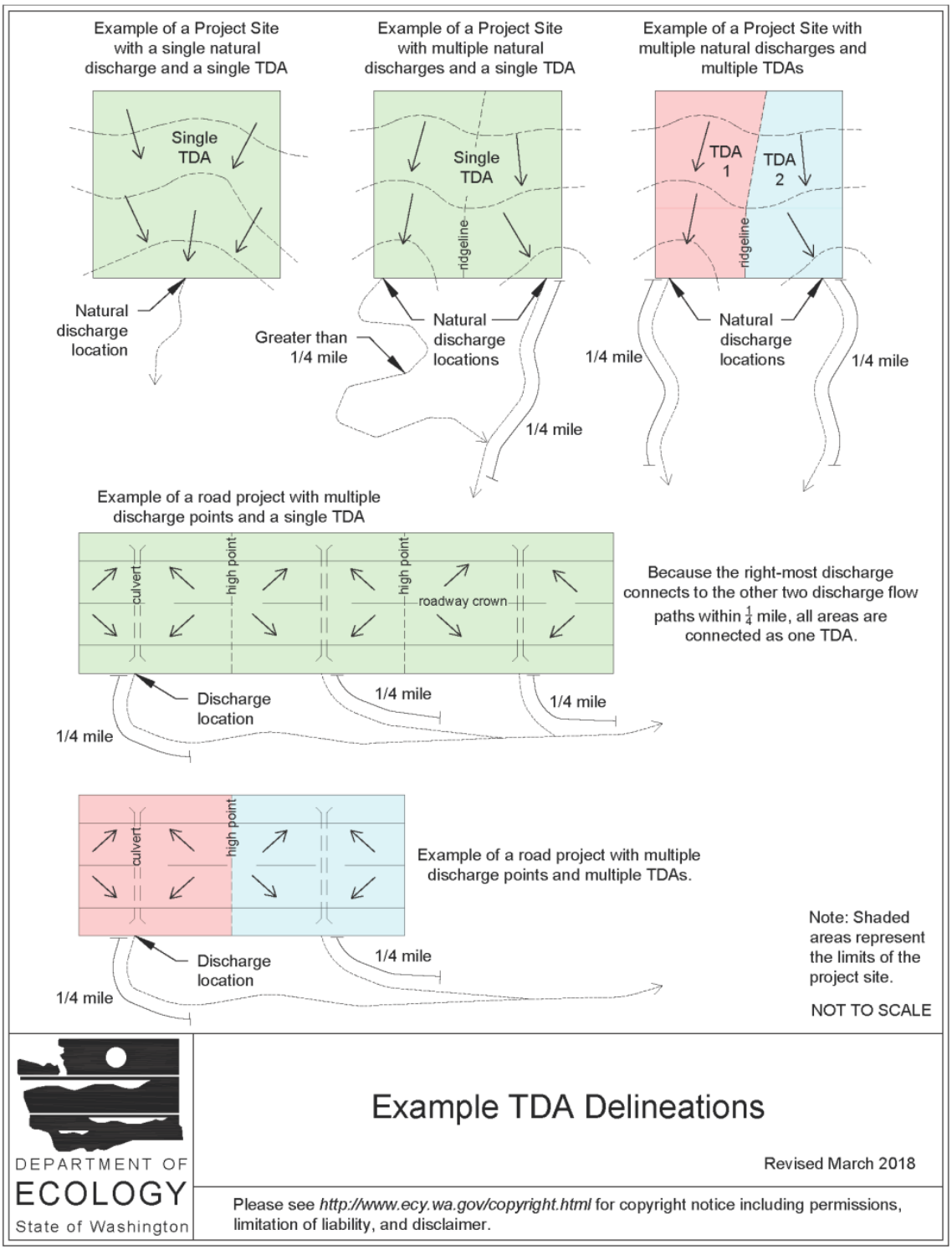
Source control BMP

A structure or operation intended to prevent pollutants from coming into contact with stormwater through physical separation of areas or careful management of activities that are sources of pollutants. The SWMMWW separates source control BMPs into two types. *Structural Source Control BMPs* are physical, structural, or mechanical devices or facilities that are intended to prevent pollutants from entering stormwater. *Operational Source Control BMPs* are non-structural practices that prevent or reduce pollutants from entering stormwater. See Volume IV of the SWMMWW for details.

Threshold Discharge Area

An area within a project site draining to a single natural discharge location or multiple natural discharge locations that combine within one-quarter mile downstream (as determined by the shortest flowpath). The examples in Figure 1: Example TDA Delineations below illustrate this definition. The purpose of this definition is to clarify how the thresholds of this appendix are applied to project sites with multiple discharge points***.***

Figure 1: Example TDA Delineations



Vehicular Use

Regular use of an impervious or pervious surface by motor vehicles. The following are subject to regular vehicular use:

- roads,
- un-vegetated road shoulders,
- bike lanes within the traveled lane of a roadway,
- driveways,
- parking lots,
- unrestricted access fire lanes,
- vehicular equipment storage yards, and
- airport runways.

The following are not considered subject to regular vehicular use:

- sidewalks not subject to drainage from roads for motor vehicles,
- paved bicycle pathways separated from and not subject to drainage from roads for motor vehicles,
- restricted access fire lanes, and
- infrequently used maintenance access roads.

Wetlands

Those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. Wetlands do not include those artificial wetlands intentionally created from non-wetland sites, including, but not limited to, irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities, or those wetlands created after July 1, 1990, that were unintentionally created as a result of the construction of a road, street, or highway. Wetlands may include those artificial wetlands intentionally created from non-wetland areas to mitigate the conversion of wetlands.

Section 3. Applicability of the Minimum Requirements

3.1 Minimum Requirement Thresholds

Not all of the Minimum Requirements apply to every new development or redevelopment project. The applicability varies depending on the project type and size. This section identifies thresholds that determine the applicability of the Minimum Requirements to projects. Use the flow charts in Figure 2: Flow Chart for Determining Whether the Permittee Must Regulate the Project, Figure 3: Flow Chart for Determining Requirements for New Development, and Figure 4: Flow Chart for Determining Requirements for Redevelopment to determine which of the Minimum Requirements apply. The Minimum Requirements themselves are presented in Section 4: Minimum Requirements.

Use the thresholds in Sections 3.2 and 3.3 at the time of application for a subdivision, plat, short plat, building permit, or other construction permit. The plat or short plat approval shall identify all stormwater BMPs that are required for each lot. For projects involving only land disturbing activities, (e.g., clearing or grading), the thresholds apply at the time of application for the permit allowing or authorizing that activity. Note the exemption in Section 1: Exemptions for Forest Practices other than Class IV General.

Figure 2: Flow Chart for Determining Whether the Permittee Must Regulate the Project

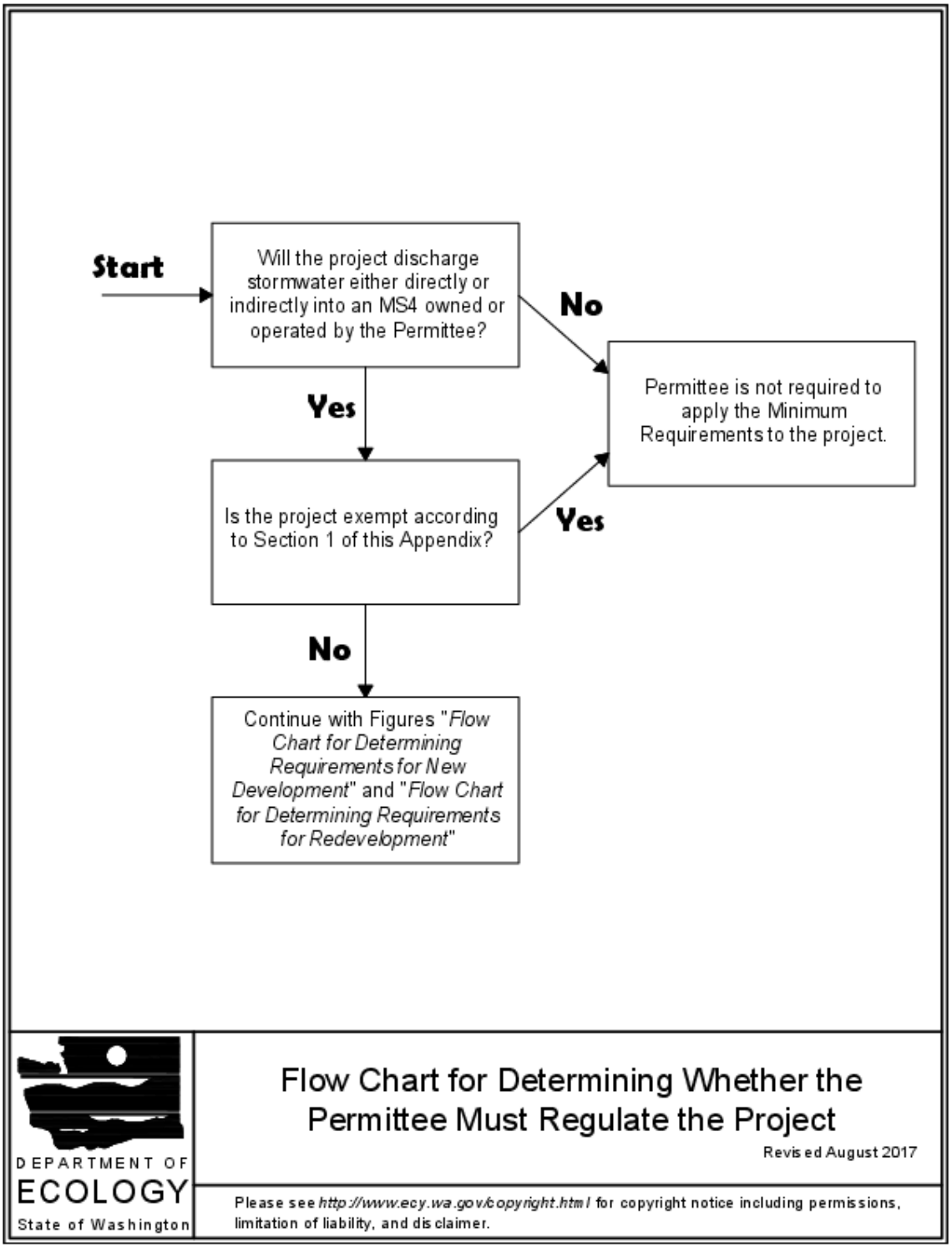


Figure 3: Flow Chart for Determining Requirements for New Development

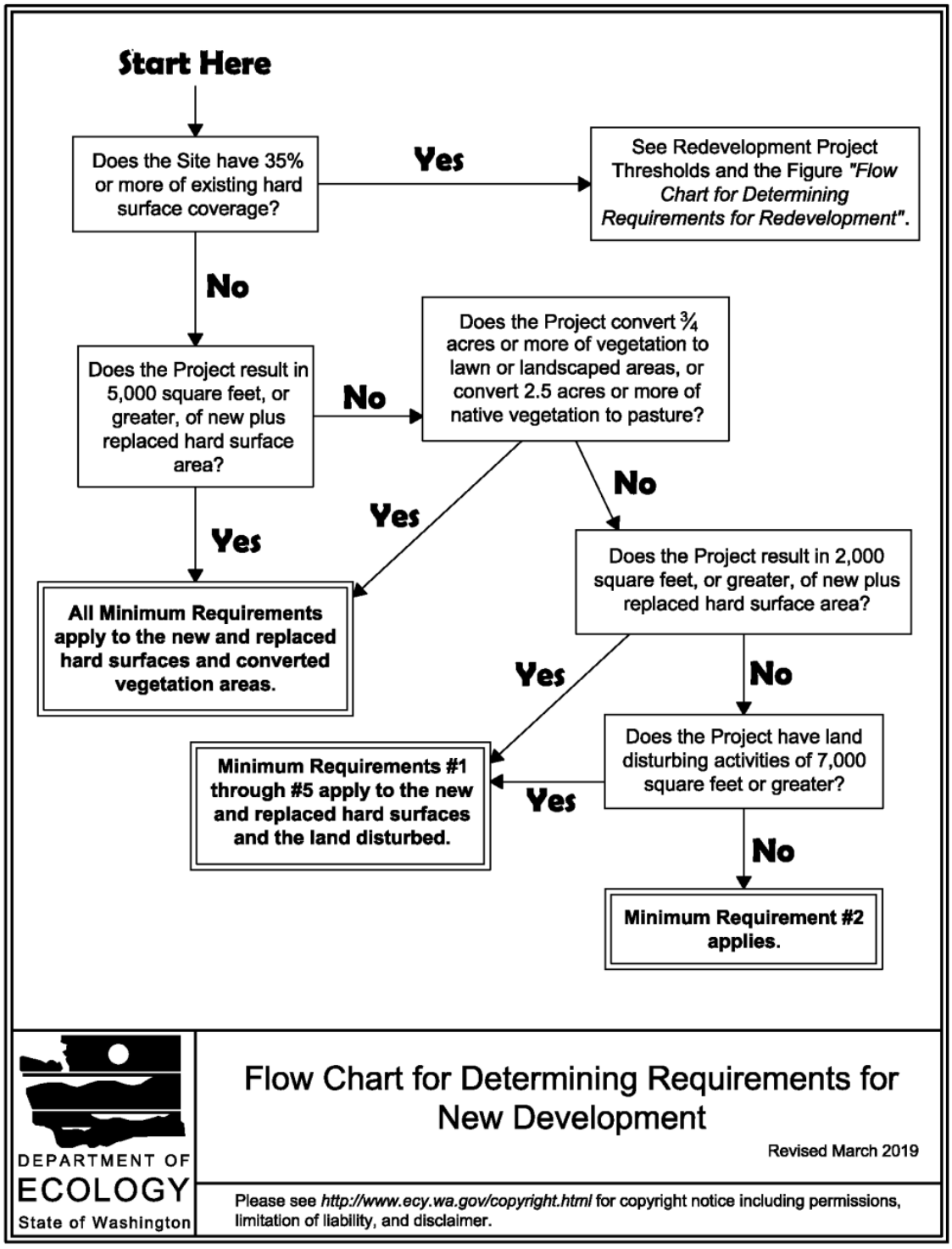
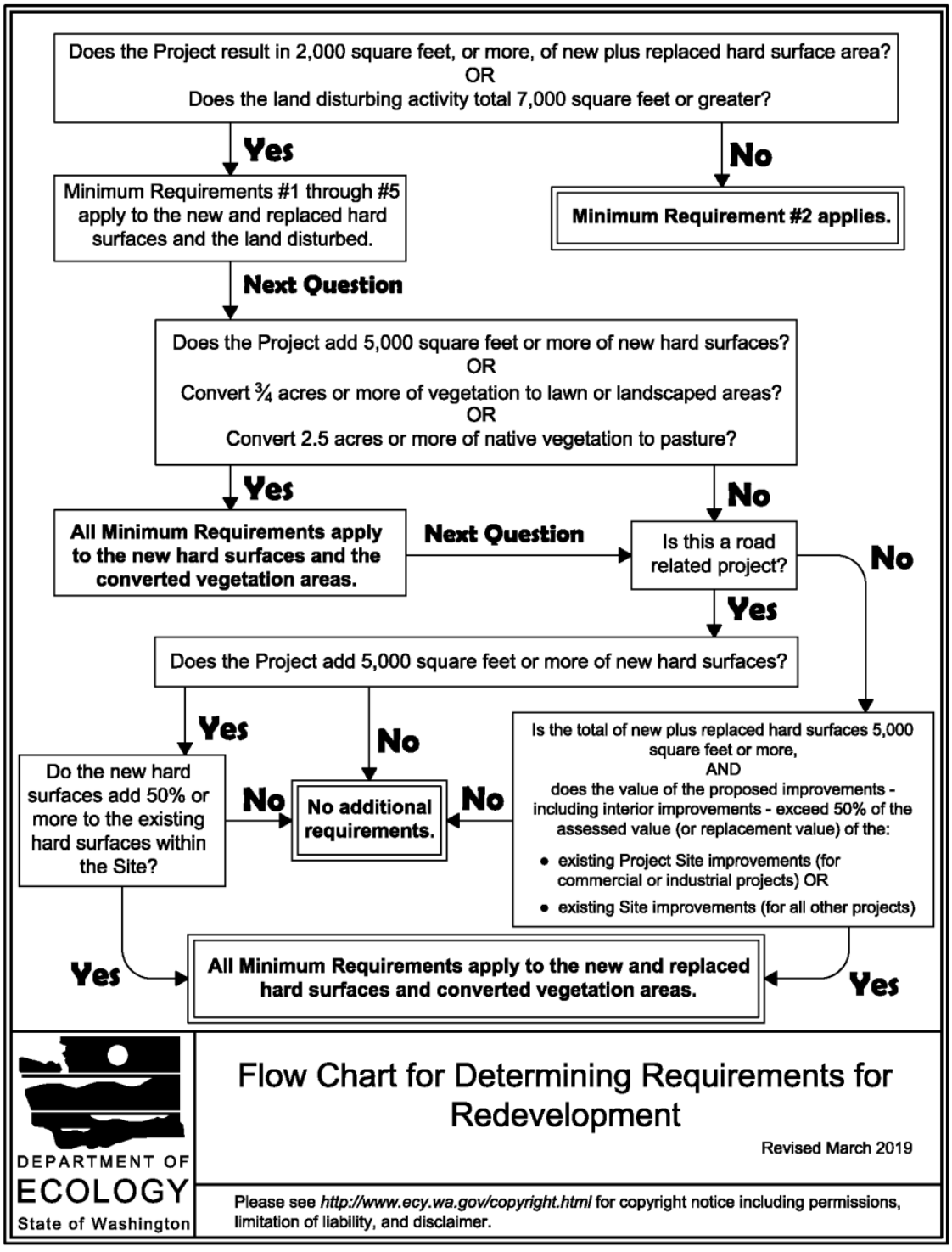


Figure 4: Flow Chart for Determining Requirements for Redevelopment



3.2 New Development Project Thresholds

All new development shall be required to comply with Minimum Requirement #2.

The following new development shall comply with Minimum Requirements #1 through #5 for the new and replaced hard surfaces and the land disturbed:

- Results in 2,000 square feet, or greater, of new plus replaced hard surface area, or
- Has land disturbing activity of 7,000 square feet or greater.

The following new development shall comply with Minimum Requirements #1 through #9 for the new and replaced hard surfaces and the converted vegetation areas:

- Results in 5,000 square feet, or greater, of new plus replaced hard surface area, or
- Converts ¾ acres, or more, of vegetation to lawn or landscaped areas, or
- Converts 2.5 acres, or more, of native vegetation to pasture.

3.3 Redevelopment Project Thresholds

All redevelopment shall be required to comply with Minimum Requirement #2.

The following redevelopment shall comply with Minimum Requirements #1 through #5 for the new and replaced hard surfaces and the land disturbed:

- Results in 2,000 square feet or more, of new plus replaced hard surface area, or
- Has land disturbing activity of 7,000 square feet or greater.

The following redevelopment shall comply with Minimum Requirements #1 through #9 for the new hard surfaces and converted vegetation areas:

- Adds 5,000 square feet or more of new hard surfaces or,
- Converts ¾ acres, or more, of vegetation to lawn or landscaped areas, or
- Converts 2.5 acres, or more, of native vegetation to pasture.

The local government may allow the Minimum Requirements to be met for an equivalent (flow and pollution characteristics) area. The equivalent area may be within the same TDA. If the equivalent area is outside the TDA, or off-site, the equivalent area must drain to the same receiving water and the guidance for equivalent facilities using in-basin transfers must be followed, as detailed in *I-D.6 Regional Facility Area Transfers* in the SWMMWW. The Permittee is responsible for maintaining tracking records for all area transfers approved by the Permittee.

3.4 Additional Requirements for Redevelopment

Road-related projects shall comply with all the Minimum Requirements for the new and replaced hard surfaces (including pavement, shoulders, curbs, and sidewalks) and the converted vegetation areas if the new hard surfaces total 5,000 square feet or more and total 50% or more of the existing hard surfaces within the site.

Other types of redevelopment projects shall comply with all the Minimum Requirements for the new and replaced hard surfaces and the converted vegetation areas if:

- the total of new plus replaced hard surfaces is 5,000 square feet or more, and
- For commercial or industrial projects: the valuation of the proposed improvements, including interior improvements, exceeds 50% of the assessed value of the existing Project Site improvements.
- For all other projects: the valuation of the proposed improvements, including interior improvements, exceeds 50% of the assessed value of the existing Site improvements.

The Permittee may exempt or institute a stop-loss provision for redevelopment projects from compliance with Minimum Requirement #5, #6, #7, and/or #8 as applied to the replaced hard surfaces if the Permittee has adopted a plan and a schedule that fulfills those requirements in regional facilities.

The Permittee may grant a variance/exception to the application of Minimum Requirement #7 to replaced impervious surfaces if such application imposes a severe economic hardship. See Section 6: Exceptions/Variances.

SECTION 4. MINIMUM REQUIREMENTS

This Section describes the Minimum Requirements for stormwater management at new development and redevelopment sites. Section 3: Applicability of the Minimum Requirements, should be consulted to determine which of the Minimum Requirements apply to any given project. Figure 3: Flow Chart for Determining Requirements for New Development and Figure 4: Flow Chart for Determining Requirements for Redevelopment, should be consulted to determine whether the Minimum Requirements apply to new surfaces, replaced surfaces, or new and replaced surfaces.

4.1 Minimum Requirement #1: Preparation of Stormwater Site Plans

The Permittee shall require a Stormwater Site Plan from all projects meeting the thresholds in Section 3.1 of this Appendix. Stormwater Site Plans shall use site-appropriate development principles, as required and encouraged by local development codes, to retain native vegetation and minimize impervious surfaces to the extent feasible. Stormwater Site Plans shall be prepared in accordance with the guidance in *III-3 Stormwater Site Plans* in the SWMMWW.

4.2 Minimum Requirement #2: Construction Stormwater Pollution Prevention Plan (SWPPP)

Permittees may choose to allow compliance with this Minimum Requirement to be achieved for an individual site if the site is covered under and fully implementing the requirements of Ecology's *Construction Stormwater General Permit - National Pollutant Discharge Elimination System (NPDES) and State Waste Discharge General Permit for Stormwater Discharges Associated with Construction Activity*.

Project Thresholds

All new development and redevelopment projects are responsible for preventing erosion and discharge of sediment and other pollutants into receiving waters.

Permittees must require a Construction Stormwater Pollution Prevention Plan (SWPPP) for all projects which result in 2,000 sq. ft. or more of new plus replaced hard surface area, or which disturb 7,000 sq. ft. or more of land.

Projects below those thresholds (listed above) are not required to prepare a Construction SWPPP, but must consider all of the Construction SWPPP Elements (listed below) and develop controls for all Construction SWPPP Elements that pertain to the project site. The Permittee may develop an abbreviated Construction SWPPP format to meet the Construction SWPPP requirement under this permit for project sites that will disturb less than 1 acre.

General Requirements

The Construction SWPPP shall include a narrative and drawings. All BMPs shall be clearly referenced in the narrative and marked on the drawings. The Construction SWPPP narrative shall include documentation to explain and justify the pollution prevention decisions made for the project. Each of the 13 Construction SWPPP Elements (listed below) must be considered and included in the Construction SWPPP unless site conditions render the Element unnecessary and the exemption from that Element is clearly justified in the narrative of the SWPPP.

Clearing and grading activities for developments shall be permitted only if conducted pursuant to an approved site development plan (e.g., subdivision approval) that establishes permitted areas of clearing, grading, cutting, and filling. These permitted clearing and grading areas and any other areas required to preserve critical or sensitive areas, buffers, native growth protection easements, or tree retention areas as may be required by local jurisdictions, shall be delineated on the site plans and the development site.

The Construction SWPPP shall be implemented beginning with initial land disturbance and until final stabilization. Sediment and Erosion control BMPs shall be consistent with the BMPs contained in *II-3 Construction Stormwater BMPs* in the SWMMWW.

Seasonal Work Limitations: From October 1 through April 30, clearing, grading, and other soil disturbing activities may only be authorized by the Permittee if silt-laden runoff will be prevented from leaving the site through a combination of the following:

1. Site conditions including existing vegetative coverage, slope, soil type and proximity to receiving waters; and
2. Limitations on activities and the extent of disturbed areas; and
3. Proposed erosion and sediment control measures.

Based on the information provided and/or local weather conditions, the Permittee may expand or restrict the seasonal limitation on site disturbance.

The following activities are exempt from the seasonal clearing and grading limitations:

1. Routine maintenance and necessary repair of erosion and sediment control BMPs,
2. Routine maintenance of public facilities or existing utility structures that do not expose the soil or result in the removal of the vegetative cover to soil, and
3. Activities where there is one hundred percent infiltration of surface water runoff within the site in approved and installed erosion and sediment control facilities.

Construction SWPPP Elements

Element 1: Preserve Vegetation / Mark Clearing Limits

a. Before beginning land disturbing activities, including clearing and grading, clearly mark all clearing limits, sensitive areas and their buffers, and trees to be preserved within the construction area.

b. Retain the duff layer, native top soil, and natural vegetation in an undisturbed state to the maximum degree practicable.

Element 2: Establish Construction Access

a. Limit construction vehicle access and exit to one route, if possible.

b. Stabilize access points with a pad of quarry spalls, crushed rock, or other equivalent BMPs, to minimize tracking of sediment onto public roads.

c. Locate wheel wash or tire baths on site, if the stabilized construction entrance is not effective in preventing tracking sediment onto roads.

d. If sediment is tracked off site, clean the affected roadway(s) thoroughly at the end of each day, or more frequently as necessary (for example, during wet weather). Remove sediment from roads by shoveling, sweeping, or picking up and transporting the sediment to a controlled sediment disposal area.

e. Conduct street washing only after sediment is removed in accordance with 2.d (above).

f. Control street wash wastewater by pumping back on site, or otherwise prevent it from discharging into systems tributary to waters of the State.

Element 3: Control Flow Rates

a. Protect properties and waterways downstream of development sites from erosion and the associated discharge of turbid waters due to increases in the velocity and peak volumetric flow rate of stormwater runoff from the project site.

b. Where necessary to comply with 3.a (above), construct stormwater infiltration or detention BMPs as one of the first steps in grading. Assure that detention BMPs function properly before constructing site improvements (e.g., impervious surfaces).

c. If permanent infiltration BMPs are used for temporary flow control during construction, protect these BMPs from siltation during the construction phase.

Element 4: Install Sediment Controls

Design, install, and maintain effective erosion controls and sediment controls to minimize the discharge of pollutants.

a. Construct sediment control BMPs (sediment ponds, traps, filters, etc.) as one of the first steps in grading. These BMPs must be functional before other land disturbing activities take place.

b. Minimize sediment discharges from the site. The design, installation and maintenance of erosion and sediment controls must address factors such as the amount, frequency, intensity and duration of precipitation, the nature of resulting stormwater runoff, and soil characteristics, including the range of soil particle sizes expected to be present on the site.

c. Direct stormwater runoff from disturbed areas through BMP C241: Sediment Pond or other appropriate sediment removal BMP, before the runoff leaves a construction site or before discharge to an infiltration facility. Runoff from fully stabilized areas may be discharged without a sediment removal BMP, but must control flow rates per Element 3: Control Flow Rates.

d. Locate BMPs intended to trap sediment on site in a manner to avoid interference with the

movement of juvenile salmonids attempting to enter off-channel areas or drainages.

e. Provide and maintain natural buffers around surface waters, direct stormwater to vegetated areas to increase sediment removal and maximize stormwater infiltration, unless infeasible.

f. Where feasible, design outlet structures that withdraw impounded stormwater from the surface to avoid discharging sediment that is still suspended lower in the water column.

Element 5: Stabilize Soils

a. Stabilize exposed and unworked soils by application of effective BMPs that prevent erosion. Applicable BMPs include, but are not limited to: temporary and permanent seeding, sodding, mulching, plastic covering, erosion control fabrics and matting, soil application of polyacrylamide (PAM), the early application of gravel base on areas to be paved, and dust control.

b. Control stormwater volume and velocity within the site to minimize soil erosion.

c. Control stormwater discharges, including both peak flow rates and total stormwater volume, to minimize erosion at outlets and to minimize downstream channel and stream bank erosion.

d. Soils must not remain exposed and unworked for more than the time periods set forth below to prevent erosion:

- During the dry season (May 1 - September 30): 7 days
- During the wet season (October 1 - April 30): 2 days

e. Stabilize soils at the end of the shift before a holiday or weekend if needed based on the weather forecast.

f. Stabilize soil stockpiles from erosion, protect with sediment trapping measures, and where possible, locate away from storm drain inlets, waterways and drainage channels.

g. Minimize the amount of soil exposed during construction activity.

h. Minimize the disturbance of steep slopes.

i. Minimize soil compaction and, unless infeasible, preserve topsoil.

Element 6: Protect Slopes

a. Design and construct cut-and-fill slopes in a manner to minimize erosion. Applicable practices include, but are not limited to, reducing continuous length of slope with terracing and diversions, reducing slope steepness, and roughening slope surfaces (for example, track walking).

b. Divert off-site stormwater (run-on) or groundwater away from slopes and disturbed areas with interceptor dikes, pipes and/or swales. Off-site stormwater should be managed separately from stormwater generated on site.

c. At the top of slopes, collect drainage in pipe slope drains or protected channels to prevent erosion. Temporary pipe slope drains must be sized to convey the flow rate calculated by one of the following methods:

- Single Event Hydrograph Method: The peak volumetric flow rate calculated using a 10-minute time step from a Type 1A, 10-year, 24-hour frequency storm.

  OR

- Continuous Simulation Method: The 10-year peak flow rate, as determined by an approved continuous runoff model with a 15-minute time step.

The hydrologic analysis must use the existing land cover condition for predicting flow rates from tributary areas outside the project limits. For tributary areas on the project site, the analysis must

use the temporary or permanent project land cover condition, whichever will produce the highest flow rates. If using the Western Washington Hydrology Model (WWHM) to predict flows, bare soil areas should be modeled as "landscaped" area.

d. Place excavated material on the uphill side of trenches, consistent with safety and space considerations.

e. Place check dams at regular intervals within constructed channels that are cut down a slope.

Element 7: Protect Drain Inlets

a. Protect all storm drain inlets made operable during construction so that stormwater runoff does not enter the conveyance system without first being filtered or treated to remove sediment.

b. Clean or remove and replace inlet protection devices when sediment has filled one-third of the available storage (unless a different standard is specified by the product manufacturer).

Element 8: Stabilize Channels and Outlets

a. Design, construct, and stabilize all on-site conveyance channels to prevent erosion from the flow rate calculated by one of the following methods:

- Single Event Hydrograph Method: The peak volumetric flow rate calculated using a 10-minute time step from a Type 1A, 10-year, 24-hour frequency storm.

  OR

- Continuous Simulation Method: The 10-year peak flow rate, as determined by an approved continuous runoff model with a 15-minute time step.

The hydrologic analysis must use the existing land cover condition for predicting flow rates from tributary areas outside the project limits. For tributary areas on the project site, the analysis must use the temporary or permanent project land cover condition, whichever will produce the highest flow rates. If using the Western Washington Hydrology Model (WWHM) to predict flows, bare soil areas should be modeled as "landscaped" area.

b. Provide stabilization, including armoring material, adequate to prevent erosion of outlets, adjacent stream banks, slopes and downstream reaches at the outlets of all conveyance systems.

Element 9: Control Pollutants

Design, install, implement and maintain effective pollution prevention measures to minimize the discharge of pollutants. The project proponent must:

a. Handle and dispose of all pollutants, including waste materials and demolition debris that occur on site in a manner that does not cause contamination of stormwater.

b. Provide cover, containment, and protection from vandalism for all chemicals, liquid products, petroleum products, and other materials that have the potential to pose a threat to human health or the environment. On-site fueling tanks must include secondary containment. Secondary containment means placing tanks or containers within an impervious structure capable of containing 110% of the volume contained in the largest tank within the containment structure. Double-walled tanks do not require additional secondary containment.

c. Conduct maintenance, fueling, and repair of heavy equipment and vehicles using spill prevention and control measures. Clean contaminated surfaces immediately following any spill incident.

d. Discharge wheel wash or tire bath wastewater to a separate on-site treatment system that prevents discharge to surface water, or to the sanitary sewer, with local sewer district approval.

e. Apply fertilizers and pesticides in a manner and at application rates that will not result in loss of chemical to stormwater runoff. Follow manufacturers' label requirements for application rates and procedures.

f. Use BMPs to prevent contamination of stormwater runoff by pH-modifying sources. The sources for this contamination include, but are not limited to: recycled concrete stockpiles, bulk cement, cement kiln dust, fly ash, new concrete washing and curing waters, waste streams generated from concrete grinding and sawing, exposed aggregate processes, dewatering concrete vaults, concrete pumping and mixer washout waters.

g. Adjust the pH of stormwater if necessary to prevent violations of water quality standards.

h. Assure that washout of concrete trucks is performed off-site or in designated concrete washout areas only. Do not wash out concrete truck drums or concrete handling equipment onto the ground, or into storm drains, open ditches, streets, or streams. Washout of small concrete handling equipment may be disposed of in a formed area awaiting concrete where it will not contaminate surface or groundwater. Do not dump excess concrete on site, except in designated concrete washout areas. Concrete spillage or concrete discharge directly to groundwater or surface waters of the State is prohibited. Do not wash out to formed areas awaiting infiltration BMPs.

i. Obtain written approval from Ecology before using chemical treatment other than CO_2, dry ice, or food grade vinegar to adjust pH.

j. Uncontaminated water from water-only based shaft drilling for construction of building, road, and bridge foundations may be infiltrated provided the wastewater is managed in a way that prohibits discharge to surface waters. Prior to infiltration, water from water-only based shaft drilling that comes into contact with curing concrete must be neutralized until pH is in the range of 6.5 to 8.5 (su).

Element 10: Control Dewatering

a. Discharge foundation, vault, and trench dewatering water, which have similar characteristics to stormwater runoff at the site, into a controlled conveyance system before discharge to BMP C240: Sediment Trap or BMP C241: Sediment Pond.

b. Discharge clean, non-turbid dewatering water, such as well-point groundwater, to systems tributary to, or directly into surface waters of the State, as specified in Element 8: Stabilize Channels and Outlets, provided the dewatering flow does not cause erosion or flooding of receiving waters. Do not route clean dewatering water through stormwater sediment BMPs. Note that "surface waters of the State" may exist on a construction site as well as off site; for example, a creek running through a site.

c. Handle highly turbid or otherwise contaminated dewatering water separately from stormwater.

d. Other dewatering treatment or disposal options may include:

   i. Infiltration

   ii. Transport off site in a vehicle, such as a vacuum flush truck, for legal disposal in a manner that does not pollute state waters.

   iii. Ecology-approved on-site chemical treatment or other suitable treatment technologies.

   iv. Sanitary or combined sewer discharge with local sewer district approval, if there is no other option.

   v. Use of a sedimentation bag that discharges to a ditch or swale for small volumes of localized dewatering.

Element 11: Maintain BMPs

a. Maintain and repair all temporary and permanent erosion and sediment control BMPs as needed to assure continued performance of their intended function in accordance with BMP specifications.

b. Remove all temporary erosion and sediment control BMPs within 30 days after achieving final site stabilization or after the temporary BMPs are no longer needed.

Element 12: Manage the Project

a. Phase development projects to the maximum degree practicable and take into account seasonal work limitations.

b. Inspect, maintain and repair all BMPs as needed to assure continued performance of their intended function.

c. Maintain, update, and implement the Construction SWPPP.

d. Projects that disturb one or more acres must have site inspections conducted by a Certified Erosion and Sediment Control Lead (CESCL). Project sites disturbing less than one acre may have a CESCL or a person without CESCL certification conduct inspections. By the initiation of construction, the Construction SWPPP must identify the CESCL or inspector, who must be present on site or on-call at all times.

Element 13: Protect Low Impact Development BMPs

The primary purpose of On-Site Stormwater Management is to reduce the disruption of the natural site hydrology through infiltration. BMPs used to meet 4.5 Minimum Requirement #5: On-Site Stormwater Management (often called LID BMPs) are permanent facilities.

a. Protect all LID BMPs (including, but not limited to BMP T7.30: Bioretention, BMP T5.14A: Rain Gardens, and BMP T5.15: Permeable Pavements) from sedimentation through installation and maintenance of erosion and sediment control BMPs on portions of the site that drain into the LID BMPs. Restore the BMPs to their fully functioning condition if they accumulate sediment during construction. Restoring the BMP must include removal of sediment and any sediment-laden Bioretention/Rain Garden soils, and replacing the removed soils with soils meeting the design specification.

b. Maintain the infiltration capabilities of LID BMPs by protecting against compaction by construction equipment and foot traffic. Protect completed lawn and landscaped areas from compaction due to construction equipment.

c. Control erosion and avoid introducing sediment from surrounding land uses onto BMP T5.15: Permeable Pavements. Do not allow muddy construction equipment on the base material or pavement. Do not allow sediment-laden runoff onto permeable pavements or base materials.

d. Permeable pavement fouled with sediments or no longer passing an initial infiltration test must be cleaned using procedures from the local stormwater manual or the manufacturer's procedures.

e. Keep all heavy equipment off existing soils under LID BMPs that have been excavated to final grade to retain the infiltration rate of the soils.

4.3 Minimum Requirement #3: Source Control of Pollution

All known, available and reasonable Source Control BMPs must be required for all projects approved by the Permittee. Source Control BMPs must be selected in accordance with *III-1.1 Choosing Your Source Control BMPs*, and designed and maintained in accordance with Volume IV of the SWMMWW.

4.4 Minimum Requirement #4: Preservation of Natural Drainage Systems and Outfalls

Natural drainage patterns shall be maintained, and discharges from the Project Site shall occur at the natural location, to the maximum extent practicable. The manner by which runoff is discharged from the Project Site must not cause a significant adverse impact to downstream receiving waters and downgradient properties. All outfalls require energy dissipation.

4.5 Minimum Requirement #5: On-Site Stormwater Management

The Permittee must require Stormwater Management BMPs in accordance with the following thresholds, standards, and lists to infiltrate, disperse, and retain stormwater runoff on site to the extent feasible without causing flooding or erosion impacts.

Compliance Options by Project Type

All projects that require Minimum Requirement #5 (as detailed in Section 3: Applicability of the Minimum Requirements) must employ Stormwater Management BMPs as detailed below. The compliance options for the project depend on the amount of improvements proposed, location of the project, size of the parcel the project is on, and whether or not the project is Flow Control exempt.

Note that the site may contain multiple parcels. The designer may choose different compliance methods for different parcels, depending on the proposed design and options for each parcel as detailed below.

Projects that Trigger Only Minimum Requirements #1 - #5

Projects that are not Flow Control exempt that trigger only Minimum Requirements #1 through #5 (per Section 3: Applicability of the Minimum Requirements) shall either:

- Use the LID BMPs from List #1 for all surfaces within each type of surface in List #1;

  or
- Use any Flow Control BMP(s) desired to achieve the LID Performance Standard, and apply BMP T5.13: Post-Construction Soil Quality and Depth.

Projects that Trigger Minimum Requirements #1 - #9

Projects that are not Flow Control exempt that trigger Minimum Requirements #1 through #9 (per Section 3: Applicability of the Minimum Requirements) have the compliance options shown in Table 1: Minimum Requirement, #5 Compliance Options for Projects Triggering Minimum Requirements #1 - #9.

Table 1: Minimum Requirement #5 Compliance Options for Projects Triggering Minimum Requirements #1 - #9

Project Location and Parcel Size	Minimum Requirement #5 Compliance Options
Projects inside the UGA, on any size parcel	• Use the LID BMPs from List #2 for all surfaces within each type of surface in List #2; or • Use any Flow Control BMPs desired to achieve the LID Performance Standard, and apply BMP T5.13: Post-Construction Soil Quality and Depth.
Projects outside the UGA, on a parcel smaller than 5 acres	
Projects outside the UGA, on a parcel 5 acres or larger	Use any Flow Control BMPs desired to achieve the LID Performance Standard, and apply BMP T5.13: Post-Construction Soil Quality and Depth.
Note: This text refers to the Urban Growth Area (UGA) as designated under the Growth Management Act (GMA) (Chapter 36.70A RCW) of the State of Washington. If the project is located in a county that is not subject to planning under the GMA, the city limits shall be used instead.	

Flow Control Exempt Projects

Projects qualifying as Flow Control exempt in accordance with the TDA Exemption in 4.7 Minimum Requirement #7: Flow Control shall either:

- Use the LID BMPs from List #3 for all surfaces within each type of surface in List #3;

  or
- Use any Flow Control BMP(s) desired to achieve the LID Performance Standard, and apply BMP T5.13: Post-Construction Soil Quality and Depth.

If the project has multiple TDAs, all TDAs must be Flow Control exempt per the TDA Exemption in 4.7 Minimum Requirement #7: Flow Control for the project to use the options listed here.

Compliance Methods

LID Performance Standard

The LID Performance Standard compliance method for Minimum Requirement #5 requires modeling the proposed Flow Control BMPs to demonstrate the flow reduction as described below.

Stormwater discharges shall match developed discharge durations to pre-developed durations for the range of pre-developed discharge rates from 8% of the 2-year peak flow to 50% of the 2-year peak flow. Refer to the Flow Control Performance Standard Section in 4.7 Minimum Requirement #7: Flow Control, for information about the assignment of the pre-developed condition. Project sites that must also meet 4.7 Minimum Requirement #7 must match flow durations between 8% of the 2-year flow through the full 50-year flow.

Designers selecting this option cannot use BMP T5.14A: Rain Gardens to achieve the LID Performance Standard. They may choose to use BMP T7.30: Bioretention to achieve the LID Performance Standard.

The List Approach

The List Approach compliance method for Minimum Requirement #5 requires evaluating the BMPs in Table 2: The List Approach for MR5 Compliance.

For each surface, evaluate the feasibility of the BMPs in the order listed, and use the first BMP that is considered feasible. The designer must document the site conditions and infeasibility criteria used to deem BMPs infeasible. Once a BMP is deemed feasible and used for a surface, no other BMP from the list is necessary for that surface.

If all BMPs in the list are infeasible, then the designer must document the site conditions and infeasibility criteria used to deem each BMP infeasible. This documentation will demonstrate compliance with Minimum Requirement #5.

Feasibility shall be determined by evaluation against:

- Design criteria, limitations, and infeasibility criteria identified for each BMP in Volume V of the SWMMWW; and
- Competing Needs Criteria as listed in *I-3.4.5 MR5: On-Site Stormwater Management* in the SWMMWW

Table 2: The List Approach for MR5 Compliance

List #1 (For MR #1 - #5 Projects That Are Not Flow Control Exempt)	List #2 (For MR #1 - #9 Projects That Are Not Flow Control Exempt)	List #3 (For Flow Control Exempt Projects)
Surface Type: Lawn and Landscaped Areas		
BMP T5.13: Post-Construction Soil Quality and Depth	BMP T5.13: Post-Construction Soil Quality and Depth	BMP T5.13: Post-Construction Soil Quality and Depth
Surface Type: Roofs		
1. BMP T5.30: Full Dispersion or BMP T5.10A: Downspout Full Infiltration	1. BMP T5.30: Full Dispersion or BMP T5.10A: Downspout Full Infiltration	1. BMP T5.10A: Downspout Full Infiltration
2. BMP T5.14A: Rain Gardens or BMP T7.30: Bioretention Cells, Swales, and Planter Boxes	2. BMP T7.30: Bioretention Cells, Swales, and Planter Boxes	2. BMP T5.10B: Downspout Dispersion Systems
3. BMP T5.10B: Downspout Dispersion Systems	3. BMP T5.10B: Downspout Dispersion Systems	3. BMP T5.10C: Perforated Stub-out Connections
4. BMP T5.10C: Perforated Stub-out Connections	4. BMP T5.10C: Perforated Stub-out Connections	
Surface Type: Other Hard Surfaces		
1. BMP T5.30: Full Dispersion	1. BMP T5.30: Full Dispersion	1. BMP T5.12: Sheet Flow Dispersion or BMP T5.11: Concentrated Flow Dispersion
2. BMP T5.15: Permeable Pavements or BMP T5.14A: Rain Gardens or BMP T7.30: Bioretention Cells, Swales, and Planter Boxes	2. BMP T5.15: Permeable Pavements	
3. BMP T5.12: Sheet Flow Dispersion or BMP T5.11: Concentrated Flow Dispersion	3. BMP T7.30: Bioretention Cells, Swales, and Planter Boxes	
	4. BMP T5.12: Sheet Flow Dispersion or BMP T5.11: Concentrated Flow Dispersion	

Notes for using the List Approach:

1. Size BMP T5.14A: Rain Gardens and BMP T7.30: Bioretention used in the List Approach to have a minimum horizontal projected surface area below the overflow which is at least 5% of the area draining to it.
2. When the designer encounters BMP T5.15: Permeable Pavements in the List Approach, it is not a requirement to pave these surfaces. Where pavement is proposed, it must be permeable to the extent feasible unless BMP T5.30: Full Dispersion is employed.

4.6 Minimum Requirement #6: Runoff Treatment

The Permittee must require Runoff Treatment BMPs in accordance with the following thresholds, standards, and requirements to remove pollutants from stormwater runoff.

TDA Thresholds

Each TDA within a project that requires Minimum Requirement #6 (as detailed in Section 3: Applicability of the Minimum Requirements) must be reviewed to determine if Runoff Treatment BMPs are required for the TDA to be in compliance with Minimum Requirement #6.

Note that it is possible for a project that requires Minimum Requirement #6 with multiple TDAs to not need Runoff Treatment BMP(s) in one or more individual TDAs. If a TDA does not trigger the TDA threshold for Runoff Treatment BMPs, then the designer must document the areas within the TDA used to determine that the TDA threshold was not met. This documentation will demonstrate compliance with Minimum Requirement #6 for the TDA.

When assessing a TDA against the following thresholds, only consider the types of surfaces (e.g. new hard surfaces, replaced hard surfaces, converted vegetation areas) that are subject to Minimum Requirement #6, per the Project Thresholds in Section 3: Applicability of the Minimum Requirements.

The following TDAs require construction of Runoff Treatment BMPs. If a TDA meets any of the following thresholds, Runoff Treatment BMPs are required. The project proponent must demonstrate that the TDA does not meet either of the following thresholds for Runoff Treatment BMPs to not be required for that TDA.

- TDAs that have a total of 5,000 square feet or more of pollution-generating hard surface (PGHS), ***or***
- TDAs that have a total of 3/4 of an acre or more of pollution-generating pervious surfaces (PGPS) – not including permeable pavements, and from which there will be a surface discharge in a natural or man-made conveyance system from the site.

Runoff Treatment Performance Goal Thresholds

1. Oil Control

Oil Control BMPs are required for areas that typically generate high concentrations of oil due to high traffic turnover or the frequent transfer of oil. These types of areas include:

- An area of a commercial or industrial site subject to an expected average daily traffic (ADT) count equal to or greater than 100 vehicles per 1,000 square feet of gross building area, or 300 total trip ends per day.
- An area of a commercial or industrial site subject to petroleum storage and transfer in excess of 1,500 gallons per year, not including routinely delivered heating oil.
- An area of a commercial or industrial site subject to parking, storage or maintenance of 25 or more vehicles that are over 10 tons gross weight (trucks, buses, trains, heavy equipment, etc.).
- A road intersection with a measured ADT count of 25,000 vehicles or more on the main roadway and 15,000 vehicles or more on any intersecting roadway, excluding projects proposing primarily pedestrian or bicycle use improvements.

2. Phosphorus Treatment

Phosphorus Treatment BMPs are required for projects (or portions of projects) within watersheds that have been determined by local governments (e.g. through a lake management plan), Ecology (e.g. through a TMDL waste load allocation), or the USEPA to be sensitive to phosphorus and are being managed to control phosphorus. The following are examples of sources that the local government can use for determining whether a water body is sensitive to phosphorus:

- Those waterbodies reported under section 305(b) of the Clean Water Act, and designated as not supporting beneficial uses due to phosphorous or other water quality criteria related to excessive phosphorus;
- Those listed in Washington State's Nonpoint Source Assessment required under section 319(a) of the Clean Water Act due to nutrients.

3. Enhanced Treatment

Enhanced Treatment BMPs are required for the types of project sites listed below that:

a. Discharge directly to fresh waters designated for aquatic life use or that have an existing aquatic life use; or

b. Discharge to conveyance systems that are tributary to fresh waters designated for aquatic life use or that have an existing aquatic life use; or

c. Infiltrate stormwater within ¼ mile of a fresh water designated for aquatic life use or that has an existing aquatic life use.

The types of project sites are:

- Industrial project sites,
- Commercial project sites,
- Multifamily residential project sites, and
- High AADT roads as follows:
    - Within Urban Growth Areas:
        - Fully controlled and partially controlled limited access highways with Annual Average Daily Traffic (AADT) counts of 15,000 or more;
        - All other roads with an AADT of 7,500 or greater.
    - Outside of Urban Growth Areas:
        - Roads with an AADT of 15,000 or greater unless the site discharges to a 4th Strahler order stream or larger;
        - Roads with an AADT of 30,000 or greater if the site discharges to a 4th Strahler order stream or larger (as determined using 1:24,000 scale maps to delineate stream order).

The following areas of the above-listed project sites do not require Enhanced Treatment BMPs:

- Areas that discharge directly, or indirectly through a municipal separate storm sewer system, to a water listed in Appendix III-A: *Basic Treatment Receiving Waters* in the SWMMWW.
- Landscaped areas of industrial, commercial, and multi-family project sites that do not involve any other pollution-generating sources (e.g., industrial activities, customer parking, storage of erodible or leachable material, wastes or chemicals).

- Parking lots of industrial and commercial project sites, dedicated solely to parking of employees' private vehicles that do not involve any other pollution-generating sources (e.g., industrial activities, customer parking, storage of erodible or leachable material, wastes or chemicals).

For TDAs with a mix of land use types, Enhanced Treatment BMPs are required when the runoff from the areas subject to the Enhanced Treatment Performance Goal comprises 50% or more of the total runoff from the TDA.

4. Basic Treatment

Areas that must provide Phosphorus Treatment BMPs or Enhanced Treatment BMPs do NOT have to provide additional Basic Treatment BMPs to meet the Basic Treatment Performance Goal.

If Phosphorus Treatment BMPs or Enhanced Treatment BMPs are not provided, Basic Treatment BMPs are required before discharging runoff off site through either infiltration or surface flow.

For TDAs with a mix of land use types, Basic Treatment BMPs are required when the runoff from the areas subject to the Basic Treatment Performance Goal comprises 50% or more of the total runoff from the TDA.

Runoff Treatment BMP Sizing

Size Runoff Treatment BMPs for the entire area that drains to them, even if some of those areas are not pollution-generating, or were not included in the Project Thresholds decisions (See Section 3: Applicability of the Minimum Requirements) or the TDA Thresholds decisions of this Minimum Requirement.

Runoff Treatment BMPs are sized by using either a volume (the Water Quality Design Volume) or a flow rate (the Water Quality Design Flow Rate), depending on the Runoff Treatment BMP selected. Refer to the selected Runoff Treatment BMP to determine whether the BMP is sized based on a volume or a flow rate. See below for details about the Water Quality Design Volume and the Water Quality Design Flow Rate used to size Runoff Treatment BMPs.

Water Quality Design Volume

The Water Quality Design Volume may be calculated by either of the following methods:

- *Continuous Simulation Method:* Using an approved continuous runoff model, the Water Quality Design Volume shall be the simulated daily volume that represents the upper limit of the range of daily volumes that accounts for 91% of the entire runoff volume over a multi-decade period of record.
- *Single Event Hydrograph Method:* The Water Quality Design Volume shall be the volume of runoff predicted by the Natural Resource Conservation Service (NRCS) curve number equations (as detailed in *III-2.3 Single Event Hydrograph Method* in the SWMMWW). The precipitation depth used in the equations shall be as predicted from a 24-hour storm with a 6-month return frequency (a.k.a., 6-month, 24-hour storm).

Water Quality Design Flow Rate

The Water Quality Design Flow Rate is dependent on the location of the Runoff Treatment BMP relative to Detention BMP(s):

- *Upstream of Detention BMPs or when there are no Detention BMPs:* The Water Quality Design Flow Rate shall be the flow rate at or below which 91% of the total runoff volume, as estimated by an approved continuous runoff model, will be treated.

Ecology has assigned design criteria for Runoff Treatment BMPs to achieve the BMP's Runoff Treatment Performance Goal (e.g., Basic Treatment Performance Goal, Enhanced Treatment Performance Goal, etc.) at the Water Quality Design Flow Rate. At a minimum, 91% of the total runoff volume, as estimated by an approved continuous runoff model, must pass through Runoff Treatment BMP(s) at or below the approved hydraulic loading rate for the BMP(s).

- *Downstream of Detention BMPs:* The Water Quality Design Flow Rate shall be the full 2-year release rate from the Detention BMP.

Runoff Treatment BMP Selection, Design, and Maintenance

Runoff Treatment BMPs shall be:

- Selected in accordance with the process identified in *III-1.2 Choosing Your Runoff Treatment BMPs* in the SWMMWW,
- Designed in accordance with the design criteria in Volume V of the SWMMWW, and
- Maintained in accordance with the maintenance criteria in Volume V of the SWMMWW.

Additional Requirements

The (direct or indirect) discharge of untreated stormwater from pollution-generating hard surfaces to groundwater must not be authorized by the Permittee, except for infiltration or dispersion of runoff through LID BMPs per The List Approach in 4.5 Minimum Requirement #5: On-Site Stormwater Management.

4.7 Minimum Requirement #7: Flow Control

The Permittee must require Flow Control BMPs in accordance with the following thresholds, standards, and requirements to reduce the impacts of stormwater runoff from hard surfaces and land cover conversions.

TDA Exemption

Flow Control is not required for TDAs that discharge directly to, or indirectly through an MS4 to a water listed in *Appendix I-A: Flow Control Exempt Receiving Waters* in the SWMMWW, subject to all of the following restrictions:

- Direct discharge to the exempt receiving water does not result in the diversion of drainage from any perennial stream classified as Types 1, 2, 3, or 4 in the State of Washington Interim Water Typing System, or Types “S”, “F”, or “Np” in the Permanent Water Typing System, or from any category I, II, or III wetland.
- If flow splitters or conveyance elements are applied to route natural runoff volumes from the TDA to any downstream Type 5 stream or category IV wetland, then:
    - Design of the flow splitters or conveyance elements must be based on approved continuous simulation modeling analysis. The design must assure that flows delivered to Type 5 stream reaches will approximate, but in no case exceed, durations ranging from 50% of the 2-year to the 50-year peak flow.
    - Flow splitters or conveyance elements that deliver flow to category IV wetlands must also be designed using approved continuous simulation modeling to preserve pre-project wetland hydrologic conditions unless specifically waived or exempted by regulatory agencies with

permitting jurisdiction.

- The TDA must be drained by a conveyance system that is comprised entirely of manmade conveyance elements (e.g., pipes, ditches, outfall protection) and extends to the ordinary high water line of the exempt receiving water.
- The conveyance system between the TDA and the exempt receiving water shall have sufficient hydraulic capacity to convey discharges from future build-out conditions (under current zoning) from contributing areas of the Site, and the existing condition from contributing off-site areas.
- Any erodible elements of the manmade conveyance system must be adequately stabilized to prevent erosion under the conditions noted above.

Permittees may petition Ecology to exempt projects in additional areas. A petition must justify the proposed exemption based upon a hydrologic analysis that demonstrates that the potential stormwater runoff from the exempted area will not significantly increase the erosion forces on the stream channel nor have near field impacts. See *Appendix I-A: Flow Control Exempt Receiving Waters* in the SWMMWW for details

TDA Thresholds

Each TDA within a project that requires Minimum Requirement #7 (as detailed in Section 3. Applicability of the Minimum Requirements) must be reviewed to determine if Flow Control BMPs are required for the TDA to be in compliance with Minimum Requirement #7.

Note that it is possible for a project that requires Minimum Requirement #7 with multiple TDAs to not need Flow Control BMP(s) in one or more individual TDAs. If a TDA does not trigger the TDA thresholds for Flow Control BMPs, then the designer must document the areas within the TDA used to determine that the TDA thresholds were not met. This documentation will demonstrate compliance with Minimum Requirement #7 for the TDA.

When assessing a TDA against the following thresholds, only consider the types of surfaces (e.g. new hard surfaces, replaced hard surfaces, converted vegetation areas) that are subject to Minimum Requirement #7, per the Project Thresholds in Section 3. Applicability of the Minimum Requirements.

The following TDAs require construction of Flow Control BMPs to achieve the Flow Control Performance Standard. If a TDA meets any of the following thresholds, Flow Control BMPs are required. The project proponent must demonstrate that the TDA does not meet any of the following thresholds for Flow Control BMPs to not be required for that TDA.

- TDAs that have a total of 10,000 square feet or more of effective impervious surfaces, or
- TDAs that convert ¾ acres or more of native vegetation, pasture, scrub/shrub, or unmaintained non-native vegetation to lawn or landscape, or convert 2.5 acres or more of native vegetation to pasture, and from which there is a surface discharge in a natural or man-made conveyance system from the TDA, or
- TDAs that through a combination of effective hard surfaces and converted vegetation areas cause a 0.15 cubic feet per second (cfs) or greater increase in the 100-year flow frequency as estimated using an approved continuous simulation model and 15-minute time steps.

  The 0.15 cfs increase should be a comparison of the post project runoff to the existing condition runoff. For the purpose of applying this threshold, the existing condition is either the pre-project land cover, or the land cover that existed at the site as of a date when the local jurisdiction first

adopted Flow Control requirements into code or rules.

Flow Control Performance Standard

Stormwater discharges shall match developed discharge durations to pre-developed durations for the range of pre-developed discharge rates from 50% of the 2-year peak flow up to the full 50-year peak flow. The pre-developed condition to be matched shall be a forested land cover unless:

- Reasonable, historic information is provided that indicates the site was prairie prior to settlement (modeled as pasture in the approved continuous simulation model); or,
- The drainage area of the immediate stream and all subsequent downstream basins have had at least 40% total impervious area (TIA) since 1985. In this case, the pre-developed condition to be matched shall be the existing land cover condition. *Figure I-3.4: Basins with 40% Total Impervious Area as of 1985* in the SWMMWW depicts those areas which meet this criterion. Where basin-specific studies determine a stream channel to be unstable, even though the above criterion is met, the pre-developed condition assumption shall be the "historic" land cover condition, or a land cover condition commensurate with achieving a target flow regime identified by an approved basin study.

Alternative Flow Control Performance Standard

An alternative Flow Control Performance Standard may be established through application of watershed-scale hydrologic modeling and supporting field observations. Possible reasons for an alternative Flow Control Performance Standard include:

- Establishment of a stream–specific threshold of significant bedload movement other than the assumed 50% of the 2-year peak flow;
- Zoning and Land Clearing Ordinance restrictions that, in combination with an alternative Flow Control Performance Standard, maintain or reduce the naturally occurring erosive forces on the stream channel; or
- A duration control standard is not necessary for protection, maintenance, or restoration of designated and existing beneficial uses or Clean Water Act compliance.

See the SWMMWW for details on how an Alternative Flow Control Performance Standard may be established.

Additional Requirement

Flow Control BMPs shall be selected in accordance with *III-1.3 Choosing Your Flow Control BMPs*, and designed and maintained in accordance with Volume V of the SWMMWW.

4.8 Minimum Requirement #8: Wetlands Protection

The Permittee must require Stormwater Management BMPs in accordance with the following thresholds, standards, and requirements to reduce the impacts of stormwater runoff to wetlands.

TDA Thresholds

This Minimum Requirement applies only to TDAs whose stormwater discharges into a wetland, either directly or indirectly through a conveyance system.

Each TDA within a project that requires Minimum Requirement #8 (as detailed in Section 3: Applicability of the Minimum Requirements), must be reviewed to determine what Level(s) of Wetland Protection must be applied to the TDA to comply with Minimum Requirement #8. The Level(s) of Wetland Protection that must be applied are dependent upon:

- The category of wetland that the TDA is discharging to,
- Whether or not the TDA triggers the requirement for Flow Control BMPs per the TDA Thresholds in 4.7 Minimum Requirement #7: Flow Control,
- Whether or not the wetland is a depressional or impounded wetland,
- Whether or not the project proponent has legal access to the wetland,
- The wetland habitat score,
- Whether or not the wetland provides habitat for rare, endangered, threatened, and/or sensitive species, and
- Presence of a breeding population of native amphibians.

Refer to Figure 5: Flow Chart for Determining Wetland Protection Level Requirements, to determine what Level(s) of Wetland Protection must be applied to comply with Minimum Requirement #8.

Levels of Wetland Protection

The following Levels of Wetland Protection are further explained in *Appendix I-C: Wetland Protection Guidelines* in the SWMMWW.

General Protection

General Protection includes general practices that benefit wetlands of all types.

Protection from Pollutants

Protection from Pollutants includes measures to protect the wetland from pollutants in stormwater runoff. Measures of protection include Construction Stormwater BMPs, Source Control BMPs, LID practices and principles, and Runoff Treatment BMPs.

Wetland Hydroperiod Protection

Wetland Hydroperiod Protection includes measures to avoid excessive hydrologic alteration of existing wetlands from development. There are two methods within Wetland Hydroperiod Protection:

- **Method 1: Monitoring and Wetland Stage Modeling**

  This method requires data collection specific to the wetland, as well as continuous simulation modeling to demonstrate that the proposed project will not negatively alter the wetland hydrology.

- **Method 2: Site Discharge Modeling**

  This method requires continuous simulation modeling of the runoff from the TDA to demonstrate that the changes in total discharge volume to the wetland will remain similar to the pre-development condition.

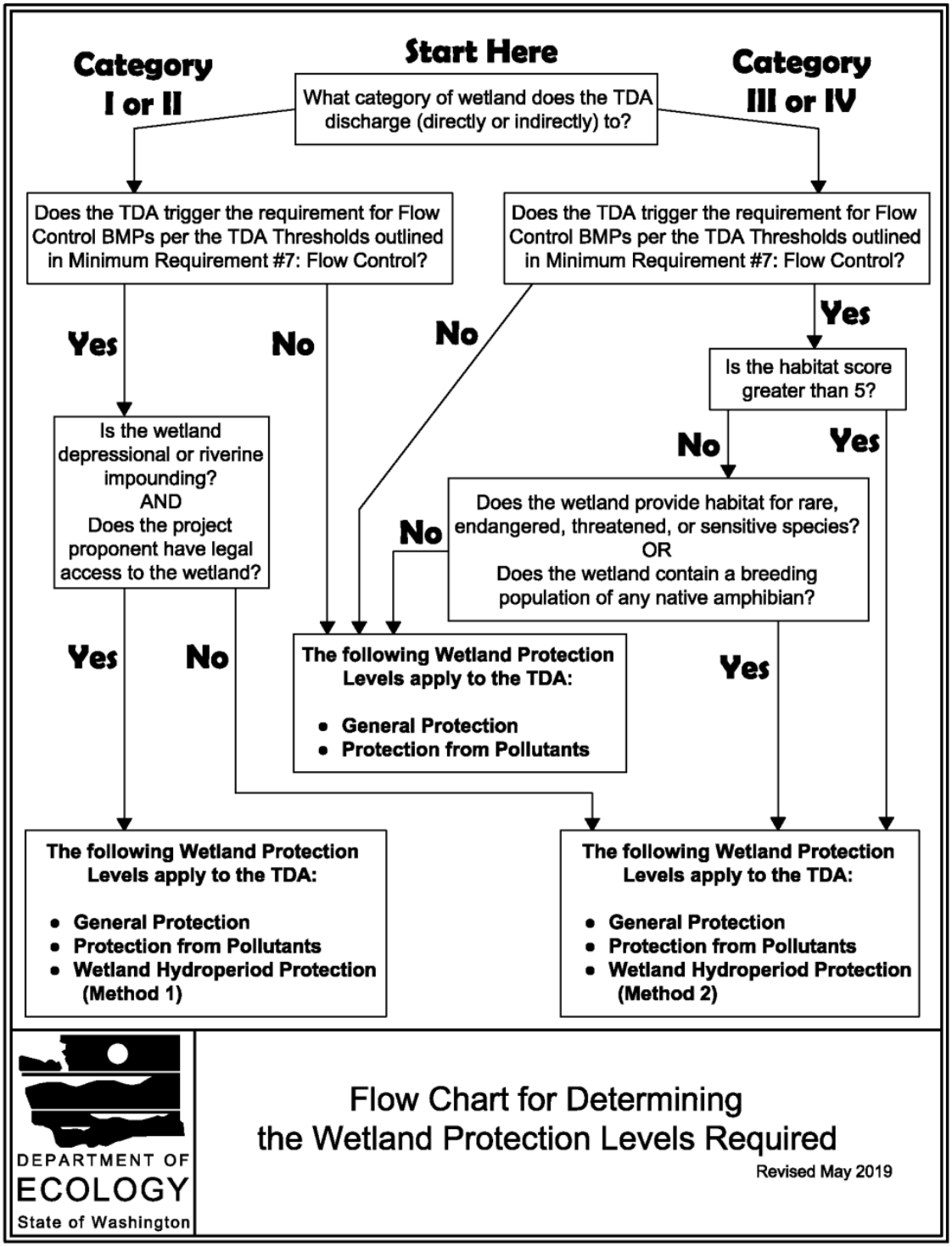
Additional Requirements

Stormwater Management BMPs shall not be built within a wetland or its buffer, except for:

- Necessary conveyance systems as approved by the Permittee; or

- As allowed in *I-C.6 Compensatory Mitigation of Wetlands* in the SWMMWW.

Figure 5: Flow Chart for Determining Wetland Protection Level Requirements



4.9 Minimum Requirement #9: Operation and Maintenance

Permittees must require an operation and maintenance manual that is consistent with the provisions in Volume V of the SWMMWW for proposed Runoff Treatment and Flow Control BMPs. The party (or parties) responsible for maintenance and operation shall be identified in the operation and maintenance manual. For private facilities approved by the Permittee, a copy of the operation and maintenance manual shall be retained on site or within reasonable access to the site, and shall be transferred with the property to the new owner. For public facilities, a copy of the operation and maintenance manual shall be retained in the appropriate department. A log of maintenance activity that indicates what actions were taken shall be kept and be available for inspection by the local government.

SECTION 5. ADJUSTMENTS

Adjustments to the Minimum Requirements may be granted by the Permittee provided that written findings of fact are prepared that address the following:

- The adjustment provides substantially equivalent environmental protection.
- Based on sound Engineering practices, the objectives of safety, function, environmental protection, and facility maintenance are met.

SECTION 6. EXCEPTIONS/VARIANCES

Exceptions/variances (exceptions) to the Minimum Requirements may be granted by the Permittee following legal public notice of an application for an exception or variance, legal public notice of the Permittee's decision on the application, and written findings of fact that document the Permittee's determination to grant an exception. Permittees shall keep records, including the written findings of fact, of all local exceptions to the Minimum Requirements.

Project-specific design exceptions based on site-specific conditions do not require prior approval from Ecology. The Permittee must seek prior approval from Ecology for any jurisdiction-wide exception.

The Permittee may grant an exception to the Minimum Requirements if such application imposes a severe and unexpected economic hardship. To determine whether the application imposes a severe and unexpected economic hardship on the project applicant, the Permittee must consider and document, with written findings of fact, the following:

- The current (pre-project) use of the Site, and
- How the application of the Minimum Requirement(s) restricts the proposed use of the Site compared to restrictions that existed prior to the adoption of the Minimum Requirements; and
- The possible remaining uses of the Site if the exception were not granted; and
- The uses of the Site that would have been allowed prior to the adoption of the Minimum Requirements; and
- A comparison of the estimated amount and percentage of value loss as a result of the Minimum Requirements versus the estimated amount and percentage of value loss as a result of requirements that existed prior to adoption of the Minimum Requirements; and

- The feasibility for the owner to alter the project to apply the Minimum Requirements.

In addition, any exception must meet the following criteria:

- The exception will not increase risk to the public health and welfare, nor be injurious to other properties in the vicinity and/or downstream, and to the quality of waters of the state; and
- The exception is the least possible exception that could be granted to comply with the intent of the Minimum Requirements.

SECTION 7. ALTERING THE MINIMUM REQUIREMENTS WITH BASIN PLANS

Basin Plans provide a mechanism by which the Minimum Requirements and implementing BMPs can be evaluated and refined based on an analysis of a basin or watershed. Basin Plans may be used to develop control strategies to address impacts from future development and to correct specific problems whose sources are known or suspected. Basin Plans can be effective at addressing both long-term cumulative impacts of pollutant loads and short-term acute impacts of pollutant concentrations, as well as hydrologic impacts to streams, wetlands, and groundwater resources.

Basin Plans may be used by the Permittee to revise the default standards of the following Minimum Requirements:

- 4.5 Minimum Requirement #5: On-Site Stormwater Management,
- 4.6 Minimum Requirement #6: Runoff Treatment,
- 4.7 Minimum Requirement #7: Flow Control, and/or
- 4.8 Minimum Requirement #8: Wetlands Protection.

In order for a Basin Plan to serve as a means of revising the standards of one or more of the Minimum Requirements listed above, the following conditions must be met:

- The Basin Plan must be formally adopted by all jurisdictions with responsibilities under the plan;
- All ordinances or regulations called for by the Basin Plan must be in effect; and
- The Basin Plan must be reviewed and approved by Ecology.

Basin Plans may also be used to demonstrate an equivalent level of Runoff Treatment, Flow Control, and/or wetland protection through the construction and use of regional stormwater facilities.

Basin Plans will require the use of continuous runoff computer models and field work to verify and support the models. Permittees who are considering the use of Basin Plans to revise the default standards of one or more of the Minimum Requirements are encouraged to contact Ecology early in the planning stage.

Some examples of how Basin Plans can alter the Minimum Requirements are given in within the guidance for each Minimum Requirement in the SWMMWW. See *I-3.4 Minimum Requirements (MRs)* in the SWMMWW.

APPENDIX 2 – Total Maximum Daily Load (TMDL) Requirements

Additional Permit requirements are based on applicable TMDLs in accordance with Special Condition S7 – Compliance with Total Maximum Daily Load Requirements.

Name of TMDL	WRIA 1 - Nooksack River Watershed Bacteria TMDL
Document(s) for TMDL	*Nooksack River Watershed Bacteria Total Maximum Daily Load*, June 2000, Ecology Publication No. 00-10-036. https://fortress.wa.gov/ecy/publications/publications/0010036.pdf *Nooksack River Watershed Bacteria Total Maximum Daily Load Detailed Implementation Plan,* January 2002, Ecology Publication No. 01-10-060. https://fortress.wa.gov/ecy/publications/publications/0110060.pdf
Location of Original 303(d) Listings	WA-01-1010, WA-01-1012, WA-01-1014, WA-01-1015, WA-01-1016, WA-01-1110, WA-01-1111, WA-01-1115, WA-01-1116, WA-01-1117, WA-01-1118, WA-01-1119, WA-01-1120, WA-01-1125, AR42TO, BX84LO, UZ70KA, LLPL
Area Where TMDL Requirements Apply	TMDL coverage includes areas served by an MS4 draining to the Nooksack River and its tributaries, Fishtrap Creek, Bertrand Creek, Double Ditch drain, Duffner Ditch, Bender road ditch, between Nugents Corner and Marine Drive.
Parameter(s)	Fecal Coliform
EPA Approval Date	August 8, 2000
MS4 Permittee	Phase II Permit: City of Ferndale WAR04-5552 Phase II Permit: City of Lynden WAR04-5719

CITY OF FERNDALE

Action Required

Continue bacteria sampling under Ecology-approved, *Stormwater Quality Monitoring for Fecal Coliform Bacteria QAPP* dated 6/19/2009.

- Once the City of Ferndale reduces fecal coliform bacteria below state water quality standards in the current outfall sampling area, the City of Ferndale should designate a new representative area for continued fecal coliform sampling at MS4 outfalls.
- City of Ferndale shall submit an updated fecal coliform Quality Assurance Project Plan (QAPP) to Ecology for review and approval by December 1, 2019. Monitoring shall be ongoing for the permit term.
- With each annual report, the City of Ferndale shall submit monitoring results from representative stormwater outfalls.
- With each annual report, the City of Ferndale shall submit an up to date Stormwater Capital Improvement plan to address existing deficiencies in the stormwater treatment and conveyance system.

CITY OF LYNDEN

Action Required

The City of Lynden shall designate a high priority area discharging to its MS4 system for fecal coliform sampling at a representative outfall location, and submit a Stormwater Capital Improvement Plan with each annual report.

- City of Lynden shall designate a high priority sampling location from an MS4 outfall.
- City of Lynden shall submit a fecal coliform Quality Assurance Project Plan (QAPP) to Ecology for review and approval by December 1, 2019. Monitoring shall be ongoing for the permit term.
- With each annual report, City of Lynden shall submit the monitoring results and an up to date Stormwater Capital Improvement Plan to address existing deficiencies in the stormwater treatment and conveyance system.

Name of TMDL	WRIA 1 - Lake Whatcom Watershed Total Phosphorus and Bacteria Total Maximum Daily Loads
EPA Approved Document(s) for TMDL	*Lake Whatcom Watershed Total Phosphorus and Bacteria Total Maximum Daily Loads. Volume 1 (Water Quality Study Findings)*, November 2008, Ecology Publication No. 08-03-024 https://fortress.wa.gov/ecy/publications/summarypages/0803024.html *Volume* 2 *(Water Quality Improvement Report and Implementation Strategy)* November 2014 revised February 2016, Ecology Publication No. 13-10-012 https://fortress.wa.gov/ecy/publications/summarypages/1310012.html
Location of Original 303(d) Listings	Whatcom Lake 5846 and 8621 (WA-01-9170) Austin Creek 9719 Anderson Creek 39036 Brannian Creek 45603 Smith Creek 39145 Olsen Creek 45589 (WA-01-3150) Carpenter Creek 45604 Euclid Creek 45618 Silver Beach Creek 45633 (WA-01-3120) Mill Wheel Creek 45652 Euclid Creek 48035
Area Where TMDL Requirements Apply	These requirements apply to areas served by MS4s within the City of Bellingham and Whatcom County
Parameter(s)	Total Phosphorus, Fecal Coliform Bacteria
EPA Approval Date	April 7, 2016
MS4 Permittee	City of Bellingham WAR04-5550 Whatcom County WAR04-5557

CITY OF BELLINGHAM

Action Required

1) Public Education, Outreach, and Engagement

a. Develop repeatable survey to measure watershed residents' beliefs, behaviors and attitudes over time related to Lake Whatcom water quality problems and solutions to inform the development of Lake Whatcom Watershed outreach programs.

b. With each annual report, report on progress developing repeatable survey.

c. No later than March 31, 2022, attach results of survey with annual report.

d. Provide to Ecology the informational packet distributed to all watershed residents, and track how many new watershed property owners received copies.

e. No later than March 31, 2020, provide to Ecology the Lake Whatcom Cooperative Management Program Five-Year Work Plan, Program Area 9 updates.

2) Stormwater Management

a. With each annual report, update and prioritize a list of new treatment and flow control Capital Improvement Projects. Each Permittee shall track all relevant steps of the project(s) including but not limited to:

   i. Land acquisition
   ii. Design
   iii. Construction
   iv. Estimated Cost
   v. Drainage Area
   vi. Treated Acres
   vii. Funding Status and Sources

b. No later than March 31, 2024, provide a list of retrofit opportunities with applicable timelines to incorporate new technology and new strategies into existing stormwater facilities.

c. With each annual report, the City shall evaluate and track phosphorus reductions in the following categories:

   i. Phosphorus treatment and flow control capital projects;
   ii. Homeowner improvements through the Homeowner Incentive Program (HIP)
   iii. Land use regulations; and
   iv. Operations and maintenance activities.

   Reductions shall be expressed as reduction in Effective Developed Acres, and may also be expressed as mass per unit time. With each annual report, the City shall provide an estimate of the mass of total phosphorus removed from roads with enhanced street sweeping and estimate the equivalent reduced effective developed acres.

3) Operational Best Practices and Good Housekeeping

No later than March 31, 2024, submit the watershed-specific appendix to the City's operational plan for managing public areas such as park, trails, rights-of-way and open spaces.

4) Water Quality Monitoring and Effectiveness Evaluation

In August 2018, the City (in coordination with the County) submitted a list of studies designed to narrow uncertainty in the lake response and watershed loading models. Items a through c are based on these studies.

a. By March 31,2020, submit Quality Assurance Project Plan (QAPP), jointly with Lake Whatcom Cooperative Management Program, for approval by Ecology for updates to models used to assess pollutant loading and lake response.

b. In annual reports starting in March 2020, the City shall track and report the status of the timelines in the QAPPs approved by Ecology.

c. By March 31, 2021, annual report the City shall provide an evaluation of the effectiveness of built stormwater treatment and flow control facilities and an assessment of overall performance in reducing phosphorus and fecal coliform.

5) Administration

a. By December 31, 2023, the City, in coordination with the County, shall submit Lake Whatcom Implementation tasks for 2024-2029.

b. With the March 2024 annual report, the City shall submit new loading capacity based on new models.

WHATCOM COUNTY

Action Required

1) Public Education, Outreach, and Engagement

a. With the March 31, 2020 annual report, provide Lake Whatcom Cooperative Management Program Five-Year Work Plan, Program Area 9 updates.

b. With each annual report, Whatcom County shall provide an evaluation of annual workshops on private stormwater facility maintenance (for residential and commercial developments), and provide/coordinate facility inspections and technical reports with maintenance guidelines and recommendations to the development. The evaluation shall include which target audiences, including residents, homeowners/condominium associations, and property managers/owners, the workshops reached, behavior changes assessed, and any adaptive management needed for workshops to more effectively reach the target audiences, and assess subject matter behavior change.

c. The County shall conduct a hazardous materials pick-up event before July 31, 2024. In the following annual report the County shall report the pounds of hazardous materials collected from all watershed participants.

2) Stormwater Management

a. With each annual report, the County shall provide a prioritized list of planned new treatment and flow control Capital Improvement Projects. The submittal shall track all relevant steps of the project(s) including but not limited to:

i. Land acquisition
ii. Design
iii. Construction

iv. Estimated Cost
v. Drainage Area
vi. Treated Acres
vii. Funding Status and Sources

b. No later than March 31, 2024, the County shall provide list of retrofit opportunities with applicable timelines to incorporate new technology and new strategies into existing County owned stormwater facilities.

c. With each annual report, the County shall provide a report on phosphorus reductions completed in the following categories:

i. Functional phosphorus treatment and flow control capital projects;
ii. Homeowner improvements through the Homeowner Incentive Program (HIP)
iii. Land use regulations; and
iv. Operations and maintenance activities.

Reductions shall be expressed as reduction in Effective Developed Acres, and may be expressed as mass per unit time.

3) Operational Best Practices and Good Housekeeping

a. With each annual report, the County shall demonstrate that publicly owned catch basins are being inspected every 18 months.

4) Water Quality Monitoring and Effectiveness Evaluation

a. With the March 31, 2020 annual report, submit a Quality Assurance Project Plan (QAPP), jointly with Lake Whatcom Cooperative Management Program, for approval by Ecology for updates to models used to assess pollutant loading and lake response.

b. In annual reports starting in March 2020, the County shall track and report the status of the timelines in the QAPPs approved by Ecology.

c. By March 31, 2021, the County shall provide an evaluation of the effectiveness of built stormwater treatment and flow control facilities, and an assessment of overall performance in reducing phosphorus and fecal coliform.

5) Administration

a. By December 31, 2023, the County, in coordination with the City, shall submit Lake Whatcom Implementation Tasks for 2024-2029.
b. With the March 31, 2024 annual report, the County shall submit new loading capacity based on new models.

Name of TMDL	WRIA 5 - Stillaguamish River
EPA Approved Document(s) for TMDL	*Stillaguamish River Watershed Fecal Coliform, Dissolved Oxygen, pH, Arsenic, and Mercury Total Maximum Daily Load (Water Cleanup Plan) - Submittal Report*, May 2005, Ecology Publication No. 05-10-044. https://fortress.wa.gov/ecy/publications/publications/0510044.pdf *Stillaguamish River Watershed Fecal Coliform, Dissolved Oxygen, pH, Arsenic, and Mercury Total Maximum Daily Load (Water Cleanup Plan) - Water Quality Implementation Plan*, June 2007, Ecology Publication No. 07-10-033. https://fortress.wa.gov/ecy/publications/documents/0710033.pdf
Location of Original 303(d) Listings	QJ28UC, HD76OJ, JU33JU, GH05SX, IJ55EP, VJ74AO, 390KRD, OT80TY, QE93BW, ZO73WL, WO38NV, SN06ZT, LU17DC
Area Where TMDL Requirements Apply	Requirements apply in all areas regulated under the Permittees' municipal stormwater permit and draining to fresh or marine waters within Water Resource Inventory Area (WRIA) 5
Parameter	Fecal Coliform, Dissolved Oxygen
EPA Approval Date	June 21, 2005
MS4 Permittee	Phase I Permit: Snohomish County Phase II Permit: Arlington

SNOHOMISH COUNTY/CITY OF ARLINGTON

Action Required

***Business Inspections**:* Each Permittee shall inspect commercial animal handling areas and commercial composting facilities to ensure implementation of source control BMPs for bacteria. *Commercial animal handling areas* are associated with Standard Industrial Code (SIC) 074 and 075 and include veterinary and pet care/boarding services, animal slaughtering, and support activities for animal production. Facilities where the degradation and transformation of organic solid waste takes place under controlled conditions designed to promote aerobic decomposition are considered *composting facilities* (definition in accordance with Chapter 173-350 WAC). Permittees shall continue to implement an ongoing inspection program to re-inspect facilities with bacteria source control problems a minimum of every three years.

***Public Education and Outreach**:* Each Permittee shall conduct public education and outreach activities to increase awareness of bacterial pollution problems and promote proper pet waste management behavior.

***Operations & Maintenance**:* Each Permittee shall install and maintain animal waste collection and/or education stations at municipal parks and other Permittee owned and operated lands reasonably

expected to have substantial domestic animal (dog and horse) use and the potential for pollution of stormwater.

***IDDE**:* Permittees conducting IDDE-related field screening under S5.C.9 of the Phase I Permit or S5.C.5 of the Western Washington Phase II Permit, shall screen for bacteria sources in any screened MS4 sub-basins which discharge to surface waters in the TMDL area.

Snohomish County shall screen previously unscreened rural MS4 basins in the TMDL area by the expiration date of the Permit unless the option to combine this requirement with the surface water monitoring requirement is selected below. Permittees shall implement the schedules and activities identified in S5.C.9 of the Phase I Permit or S5.C.5 of the Western Washington Phase II Permit, in response to any illicit discharges found.

***Surface Water Monitoring**:* Each Permittee shall conduct surface water monitoring for characterization and long term trends evaluation of fecal coliform in accordance with the QAPP approved under the 2013 Permit. If changes to surface water monitoring locations or other updates are needed, each Permittee shall submit a draft revised QAPP to Ecology for review and approval. At a minimum, the monitoring program shall:

- Collect 12 samples taken in at least one location per calendar year. For the reporting year of 2019, samples taken any time between January 01, 2019 through December 31st, 2019 may be included.
- Submit available data to the Environmental Information Management (EIM) database by May 31 of each year.
- Provide a data summaries and narrative evaluation of the data in each annual report's TMDL summary.
- Be documented in a QAPP which follows *Guidelines for Preparing Quality Assurance Project Plans for Environmental Studies*, July 2004, Ecology Publication No. 04-03-030.

Permittees shall follow Ecology-approved QAPPs unless changes are approved by Ecology. Permittees subject to multiple bacteria TMDL monitoring requirements may conduct an integrated monitoring program in accordance with an Ecology-approved QAPP.

Name of TMDL	WRIA 7 - Snohomish River Tributaries
EPA Approved Document(s) for TMDL	*Water Quality Assessment of Tributaries to the Snohomish River and Nonpoint Source Pollution TMDL*, September 1997, Ecology Publication No. 97-334. https://fortress.wa.gov/ecy/publications/SummaryPages/97334.html *Snohomish River Tributaries Fecal Coliform Total Maximum Daily Load Submittal Report*, June 2001, Ecology publication No. 00-10-087. https://fortress.wa.gov/ecy/publications/summarypages/0010087.html *Lower Snohomish River Tributaries Fecal Coliform Bacterial Total Maximum Daily Load: Detailed Implementation Plan*, June 2003, Ecology Publication No. 03-10-031. https://fortress.wa.gov/ecy/publications/documents/0310031.pdf
Location of Original 303(d) Listings	WA-07-1012, WA-07-015, WA-07-1052, WA-07-1163WA-07-1163, WA-07-1030 and WA-07-040
Area Where TMDL Requirements Apply	Requirements apply in all areas regulated under the Permittees' municipal stormwater permit and draining to the WASWIS segment number, and all upstream tributaries within the jurisdiction of the Permittee and within the geographic area covered by this Permit contributing to waterbodies: Allen Creek, YT94RF: Quilceda Creek, TH58TS: French Creek, XZ24XU: Woods Creek, FZ74HO: Pilchuck River, NF79WA: Marshland Watershed, XW79FQ.
Parameter	Fecal Coliform
EPA Approval Date	August 9, 2001
MS4 Permittee	Phase I Permit: Snohomish County Phase II Permit: Granite Falls, Lake Stevens, Monroe, Snohomish, Marysville, Arlington, Everett

SNOHOMISH RIVER TRIBUTARIES PERMITTESS

Action Required

***Business Inspections**:* Each Permittee shall inspect commercial animal handling areas and commercial composting facilities to ensure implementation of source control BMPs for bacteria. *Commercial animal handling areas* are associated with Standard Industrial Code (SIC) 074 and 075 and include veterinary and pet care/boarding services, animal slaughtering, and support activities for animal production. Facilities where the degradation and transformation of organic solid waste takes place under controlled conditions designed to promote aerobic decomposition are considered *composting facilities* (definition in accordance

with Chapter 173-350 WAC). Permittees shall continue to implement an ongoing inspection program to re-inspect facilities with bacteria source control problems a minimum of every three years.

***Targeted Source Identification & Elimination**:* By January 1, 2021, each Permittee shall review the fecal coliform data collected per approved QAPPs under the 2013 Permit, and may include any other relevant and available bacteria data. The purpose of this review is to identify a minimum of one new high priority area (such as a tributary or a stream segment) that will be the focus of source identification and elimination efforts during calendar years 2021 through 2023. Each Permittee shall prepare written documentation of this review and the identified high priority area; documentation shall be submitted with the Annual Report for 2020. Permittees shall begin to implement source identification and elimination efforts in the MS4 sub-basins discharging to the identified high priority area no later than May 1, 2021. For Permittees with more than one TMDL containing this Targeted Source Identification and Elimination requirement, those Permittees shall begin to implement Source Identification and Elimination efforts in at least one of the sub-basins discharging to the identified high priority area no later than May 01, 2021. Permittees have the flexibility to stagger the implementation of the remaining sub-basin IDDE efforts, provided all have been completed by the end of the calendar year in 2023.

Permittees are encouraged to address potential bacteria pollution sources not associated with the MS4. Stormwater quality sampling for bacteria sources is required as part of this focused source identification and elimination effort. For the purposes of Targeted Source Identification and Ellimination efforts, stormwater quality sampling is defined as obtaining grab samples of stormwater discharging to or from the MS4 or receiving waters during a storm event. Permittees shall implement the schedules and activities identified in S5.C.9 of the Phase I Permit or S5.C.5 of the Western Washington Phase II Permit, in response to any illicit discharges found. Each annual report's TMDL summary shall include qualitative and quantitative information about the source identification and elimination activities, including procedures followed and sampling results, implemented in the selected high priority area(s).

***Surface Water Monitoring**:* Each Permittee shall conduct surface water monitoring for characterization and long term trends evaluation of fecal coliform in accordance with the QAPP approved under the 2013 Permit. If changes to surface water monitoring locations or other updates are needed, each Permittee shall submit a draft revised QAPP to Ecology for review and approval. At a minimum, the monitoring program shall:

- Collect 12 samples taken in at least one location per calendar year. For the reporting year of 2019, samples taken any time between January 01, 2019 through December 31st, 2019 may be included.
- Submit available data to the Environmental Information Management (EIM) database by May 31 of each year.
- Provide data summaries and narrative evaluation of the data in each annual report's TMDL summary.
- Be documented in a QAPP which follows *Guidelines for Preparing Quality Assurance Project Plans for Environmental Studies*, July 2004, Ecology Publication No. 04-03-030.

Permittees shall follow Ecology-approved QAPPs unless changes are approved by Ecology. Permittees subject to multiple bacteria TMDL monitoring requirements may conduct an integrated monitoring program in accordance with an Ecology-approved QAPP.

Name of TMDL	WRIA 8 - North Creek
EPA Approved Document(s) for TMDL	*North Creek Watershed: Total Maximum Daily Load Evaluation for Fecal Coliform Bacteria*, June 2001, Ecology Publication No. 01-03-020. https://fortress.wa.gov/ecy/publications/summarypages/0103020.html *North Creek Fecal Coliform Total Maximum Daily Load Submittal Report*, June 2002, Ecology publication No. 02-10-020. https://fortress.wa.gov/ecy/publications/summarypages/0210020.html *North Creek Fecal Coliform Bacteria Total Maximum Daily Load: Detailed Implementation Plan*, October 2003, Ecology Publication No. 03-10-047. https://fortress.wa.gov/ecy/publications/SummaryPages/0310047.html
Location of Original 303(d) Listings	WA-08-1065
Area Where TMDL Requirements Apply	Requirements apply in all areas regulated under the Permittees' municipal stormwater permit and draining to the portion of the WASWIS segment SM74QQ starting at the confluence with the Sammamish River and including all upstream tributaries contributing to the North Creek segment of WASWIS SM74QQ.
Parameter	Fecal Coliform
EPA Approval Date	August 2, 2002
MS4 Permittee	Phase I Permit: Snohomish County Phase II Permit: Everett, Bothell, Mill Creek

SNOHOMISH COUNTY AND ASSOCIATED CITIES

Action Required

***Business Inspections**:* Each Permittee shall inspect commercial animal handling areas and commercial composting facilities to ensure implementation of source control BMPs for bacteria. *Commercial animal handling areas* are associated with Standard Industrial Code (SIC) 074 and 075 and include veterinary and pet care/boarding services, animal slaughtering, and support activities for animal production. Facilities where the degradation and transformation of organic solid waste takes place under controlled conditions designed to promote aerobic decomposition are considered *composting facilities* (definition in accordance with Chapter 173-350 WAC). Permittees shall continue to implement an ongoing inspection program to re-inspect facilities with bacteria source control problems a minimum of every three years.

***Targeted Source Identification & Elimination**:* By January 1, 2021, each Permittee shall review the fecal coliform data collected per approved QAPPs under the 2013 Permit, and may include any other relevant and available bacteria data. The purpose of this review is to identify a minimum of one new high priority area (such as a tributary or a stream segment) that will be the focus of source identification and elimination efforts during calendar years 2021 through 2023. Each Permittee shall prepare written documentation of this review and the identified high priority area; documentation shall be submitted with the Annual Report for 2020. Permittees shall begin to implement source identification and elimination efforts in the MS4 sub-basins discharging to the identified high priority area no later than May 1, 2021. For Permittees with more than one TMDL containing this Targeted Source Identification and Elimination requirement, those Permittees shall begin to implement Source Identification and Elimination efforts in at least one of the sub-basins discharging to the identified high priority area no later than May 01, 2021. Permittees have the flexibility to stagger the implementation of the remaining sub-basin IDDE efforts, provided all have been completed by the end of the calendar year in 2023.

Permittees are encouraged to address potential bacteria pollution sources not associated with the MS4. Stormwater quality sampling for bacteria sources is required as part of this focused source identification and elimination effort. For the purposes of Targeted Source Identification and Ellimination efforts, stormwater quality sampling is defined as obtaining grab samples of stormwater discharging to or from the MS4 or receiving waters during a storm event. Permittees shall implement the schedules and activities identified in S5.C.9 of the Phase I Permit or S5.C.5 of the Western Washington Phase II Permit, in response to any illicit discharges found. Each annual report's TMDL summary shall include qualitative and quantitative information about the source identification and elimination activities, including procedures followed and sampling results, implemented in the selected high priority area(s).

***Surface Water Monitoring**:* Each Permittee shall conduct surface water monitoring for characterization and long term trends evaluation of fecal coliform in accordance with the QAPP approved under the 2013 Permit. If changes to surface water monitoring locations or other updates are needed, each Permittee shall submit a draft revised QAPP to Ecology for review and approval. At a minimum, the monitoring program shall:

- Collect 12 samples taken in at least one location per calendar year. For the reporting year of 2019, samples taken any time between January 01, 2019 through December 31st, 2019 may be included.
- Submit available data to the Environmental Information Management (EIM) database by May 31 of each year.
- Provide data summaries and narrative evaluation of the data in each annual report's TMDL summary.
- Be documented in a QAPP which follows *Guidelines for Preparing Quality Assurance Project Plans for Environmental Studies*, July 2004, Ecology Publication No. 04-03-030.

Permittees shall follow Ecology-approved QAPPs unless changes are approved by Ecology. Permittees subject to multiple bacteria TMDL monitoring requirements may conduct an integrated monitoring program in accordance with an Ecology-approved QAPP.

Name of TMDL	WRIA 8 - Swamp Creek
EPA Approved Document(s) for TMDL	*Swamp Creek Fecal Coliform Bacteria Total Maximum Daily Load: Water Quality Improvement Report and Implementation Plan*, June 2006, Ecology Publication No. 06-10-021. https://fortress.wa.gov/ecy/publications/publications/0610021.pdf
Location of Original 303(d) Listings	WA-08-1060
Area Where TMDL Requirements Apply	Requirements apply in all areas regulated under the Permittees municipal stormwater permit and draining to the portion of the WASWIS segment SM74QQ starting at the confluence with the Sammamish River and including all upstream tributaries contributing to the Swamp Creek segment of WASWIS GJ57UL.
Parameter	Fecal Coliform
EPA Approval Date	August 16, 2006
MS4 Permittee	Phase I Permit: Snohomish County Phase II Permit: Everett, Bothell, Lynnwood, Brier, Mountlake Terrace, Kenmore

SNOHOMISH COUNTY AND ASSOCIATED CITIES

Action Required

***Business Inspections**:* Each Permittee shall inspect commercial animal handling areas and commercial composting facilities to ensure implementation of source control BMPs for bacteria. *Commercial animal handling areas* are associated with Standard Industrial Code (SIC) 074 and 075 and include veterinary and pet care/boarding services, animal slaughtering, and support activities for animal production. Facilities where the degradation and transformation of organic solid waste takes place under controlled conditions designed to promote aerobic decomposition are considered *composting facilities* (definition in accordance with Chapter 173-350 WAC). Permittees shall continue to implement an ongoing inspection program to re-inspect facilities with bacteria source control problems a minimum of every three years.

***Public Education and Outreach**:* Each Permittee shall conduct public education and outreach activities to increase awareness of bacterial pollution problems and promote proper pet waste management behavior.

***Operations & Maintenance**:* Each Permittee shall install and maintain animal waste collection and/or education stations at municipal parks and other Permittee owned and operated lands reasonably expected to have substantial domestic animal (dog and horse) use and the potential for pollution of stormwater.

***IDDE**:* Permittees conducting IDDE-related field screening under S5.C.9 of the Phase I Permit or S5.C.5 of the Western Washington Phase II Permit, shall screen for bacteria sources in any screened MS4 sub-basins which discharge to surface waters in the TMDL area.

***Targeted Source Identification & Elimination**:* By January 1, 2021, each Permittee shall review the fecal coliform data collected per approved QAPPs under the 2013 Permit, and may include any other relevant and available bacteria data. The purpose of this review is to identify a minimum of one new high priority area (such as a tributary or a stream segment) that will be the focus of source identification and elimination efforts during calendar years 2021 through 2023. Each Permittee shall prepare written documentation of this review and the identified high priority area; documentation shall be submitted with the Annual Report for 2020. Permittees shall begin to implement source identification and elimination efforts in the MS4 sub-basins discharging to the identified high priority area no later than May 1, 2021. For Permittees with more than one TMDL containing this Targeted Source Identification and Elimination requirement, those Permittees shall begin to implement Source Identification and Elimination efforts in at least one of the sub-basins discharging to the identified high priority area no later than May 01, 2021. Permittees have the flexibility to stagger the implementation of the remaining sub-basin IDDE efforts, provided all have been completed by the end of the calendar year in 2023.

Permittees are encouraged to address potential bacteria pollution sources not associated with the MS4. Stormwater quality sampling for bacteria sources is required as part of this focused source identification and elimination effort. For the purposes of Targeted Source Identification and Ellimination efforts, stormwater quality sampling is defined as obtaining grab samples of stormwater discharging to or from the MS4 or receiving waters during a storm event. Permittees shall implement the schedules and activities identified in S5.C.9 of the Phase I Permit or S5.C.5 of the Western Washington Phase II Permit, in response to any illicit discharges found. Each annual report's TMDL summary shall include qualitative and quantitative information about the source identification and elimination activities, including procedures followed and sampling results, implemented in the selected high priority area(s).

***Surface Water Monitoring**:* Each Permittee shall conduct surface water monitoring for characterization and long term trends evaluation of fecal coliform in accordance with the QAPP approved under the 2013 Permit. If changes to surface water monitoring locations or other updates are needed, each Permittee shall submit a draft revised QAPP to Ecology for review and approval. At a minimum, the monitoring program shall:

- Collect 12 samples taken in at least one location per calendar year. For the reporting year of 2019, samples taken any time between January 01, 2019 through December 31, 2019, may be included.
- Submit available data to the Environmental Information Management (EIM) database by May 31 of each year.
- Provide data summaries and narrative evaluation of the data in each annual report's TMDL summary.
- Be documented in a QAPP which follows *Guidelines for Preparing Quality Assurance Project Plans for Environmental Studies*, July 2004, Ecology Publication No. 04-03-030.

Permittees shall follow Ecology-approved QAPPs unless changes are approved by Ecology. Permittees subject to multiple bacteria TMDL monitoring requirements may conduct an integrated monitoring program in accordance with an Ecology-approved QAPP.

Name of TMDL	WRIA 8 - Bear-Evans Watershed
Document(s) for TMDL	*Bear-Evans Watershed Fecal Coliform Bacteria Total Maximum Daily Load, Water Quality Improvement Report*, June 2008, Ecology Publication No. 08-10-026. https://fortress.wa.gov/ecy/publications/documents/0810026.pdf *Bear-Evans Watershed Temperature, Dissolved Oxygen and Fecal Coliform Bacteria Total Maximum Daily Load, Water Quality Implementation Plan*, March 2011, Ecology Publication No. 11-10-024. https://fortress.wa.gov/ecy/publications/documents/1110024.pdf
Location of Original 303(d) Listings	Bear Creek (EW54VY, BA64JJ, WR69YU)) Cottage Lake Creek (NO74J5) Unnamed Tributary to Bear Creek (EU47RU) Evans Creek (MI67EG)
Area Where TMDL Requirements Apply	Bear Creek and Evans Creek watersheds (includes Cottage Lake watershed)
Parameter	Fecal Coliform
EPA Approval Date	August 11, 2008
MS4 Permittee	Phase I: King County Phase II: No actions identified for Phase II Permittees

KING COUNTY

Action Required

- Install and maintain animal waste education and/or collection stations at municipal parks and other Permittee owned and operated lands reasonably expected to have substantial domestic animal (dog and horse) use and the potential for pollution of stormwater.
- Designate previously unscreened areas discharging via the MS4 to the TMDL area as high priority areas for illicit discharge detection and elimination. Complete IDDE field screening for bacteria sources in these areas, including rural MS4 sub-basins, by January 1, 2022, and implement the schedules and activities identified in S5.C.9 of the Phase I Permit for response to any illicit discharges found.

Name of TMDL	WRIA 8 - Cottage Lake
EPA Approved Document(s) for TMDL	*Cottage Lake, Total Phosphorus, Total Maximum Daily Load Analysis, Submittal Report*, June 2004, Ecology Publication No. 03-10-085. https://fortress.wa.gov/ecy/publications/documents/0310085.pdf *Cottage Lake, Total Phosphorus, Total Maximum Daily Load, Water Quality Implementation Plan*, March 2007, Ecology Publication No. 06-10-066. https://fortress.wa.gov/ecy/publications/publications/0610066.pdf
Location of Original 303(d) Listings	WA-08-9070 & 49ITVC
Area Where TMDL Requirements Apply	Cottage Lake and tributaries to Cottage Lake
Parameter	Total Phosphorus
EPA Approval Date	September 2004
MS4 Permittee	Phase I: King County

KING COUNTY

Action Required

King County shall apply phosphorus control treatment requirements to new and redevelopment projects, as applicable, throughout the Cottage Lake watershed, including all tributaries to Cottage Lake. King County's Department of Permitting and Environmental Review (DPER) shall not rely on the quarter mile/15 percent distance downstream clause in King County's Surface Water Design Manual.

Name of TMDL	WRIA 8 - Issaquah Creek Basin Water Cleanup Plan for Fecal Coliform Bacteria
EPA Approved Document(s) for TMDL	*Issaquah Creek Basin Water Cleanup Plan for Fecal Coliform Bacteria: Total Maximum Daily Load Submittal Report*, June 2004, Ecology Publication No. 04-10-055. https://fortress.wa.gov/ecy/publications/documents/0410055.pdf
Location of Original 303(d) Listings	Issaquah Creek, TF310B (WA-08-1110) North Fork Issaquah Creek, CZ80NC (WA-08-1110) Tibbetts Creek, MB51QQ, EA48LQ (WA-08-1115)
Area Where TMDL Requirements Apply	These requirements apply to areas served by MS4s within the TMDL coverage area.
Parameter(s)	Fecal Coliform Bacteria
EPA Approval Date	October 1, 2004
MS4 Permittee:	Phase I Permit: King County Phase II Permit: City of Issaquah, WAR04-5518

CITY OF ISSAQUAH

Action Required

- The City of Issaquah shall screen for bacteria sources when conducting IDDE related field screening under S5.C.5 of the Western Washington Phase II Permit, in any MS4 sub-basins which discharge to surface waters in the TMDL area. Implement associated schedules and activities in S5.C.5 in response to any illicit discharges found. Install and maintain pet waste education and collection stations at municipal parks and other Permittee owned and operated lands adjacent to streams. Focus on locations where people commonly walk their dogs.

KING COUNTY

Action Required

- Install and maintain animal waste education and/or collection stations at municipal parks and other Permittee owned and operated lands reasonably expected to have substantial domestic animal (dog and horse) use and the potential for pollution of stormwater.
- Designate previously unscreened areas discharging via MS4 to the TMDL area as high priority areas for illicit discharge detection and elimination. Complete IDDE field screening for bacteria sources in these areas, including rural MS4 sub-basins, by January 1, 2023, and implement the schedules and activities identified in S5.C.9 of the Phase I Permit for response to any illicit discharges found.

Name of TMDL	**WRIA 8 - Little Bear Creek Fecal Coliform Water Quality Improvement Project**
Document(s) for TMDL	*Little Bear Creek Fecal Coliform Total Maximum Daily Load (Water Cleanup Plan),* May 2005, Ecology Publication No. 05-10-034. https://fortress.wa.gov/ecy/publications/publications/0510034.pdf
Location of Original 303(d) Listings	Little Bear Creek, UT96KR (WA-08-1085).
Area Where TMDL Requirements Apply	These requirements apply to areas served by MS4s within the TMDL coverage area.
Parameter(s)	Fecal coliform bacteria
EPA Approval Date	July 1, 2005
MS4 Permittee:	Phase I Permit: Snohomish County Phase II Permit: City of Woodinville, WAR04-5545

CITY OF WOODINVILLE

Action Required

- The City of Woodinville shall screen for bacteria sources when conducting IDDE related field screening under S5.C.5 of the Western Washington Phase II Permit, in any MS4 sub-basins which discharge to surface waters in the TMDL area. Implement associated schedules and activities in S5.C.5 in response to any illicit discharges found.
- Confirm that pet waste collection stations are installed and maintained in all public lands/parks adjacent to Little Bear Creek.

SNOHOMISH COUNTY

Action Required

- When conducting IDDE-related field screening under S5.C.9 of the Phase I Permit, Snohomish County shall screen for bacteria sources in any screened MS4 sub-basins which discharge to surface waters in the TMDL area. Implement the schedules and activities identified in S5.C.9 of the Phase I Permit for response to any illicit discharges found.

- Inspect commercial animal handling areas and commercial composting facilities to ensure implementation of source control BMPs for bacteria. *Commercial animal handling areas* are associated with Standard Industrial Code (SIC) 074 and 075 and include veterinary and pet care/boarding services, animal slaughtering, and support activities for animal production. Facilities where the degradation and transformation of organic solid waste takes place under controlled conditions designed to promote aerobic decomposition are considered *composting facilities* (definition in accordance with Chapter 173-350 WAC). Permittees shall continue to implement an ongoing inspection program to re-inspect facilities with bacteria source control problems every three years.
- Conduct public education and outreach activities to increase awareness of bacterial pollution problems and promote proper pet waste management behavior.
- Install and maintain animal waste collection and/or education stations at municipal parks and other Permittee owned and operated lands reasonably expected to have substantial domestic animal (dog and horse) use and the potential for pollution of stormwater.

Name of TMDL	WRIA 10 - Puyallup Watershed Water Quality Improvement Project
Document(s) for TMDL	*Puyallup River Watershed Fecal Coliform Total Maximum Daily Load – Water Quality Improvement Report and Implementation Plan*, June 2011, Ecology Publication No. 11-10-040. https://fortress.wa.gov/ecy/publications/publications/1110040.pdf
Location of Original 303(d) Listings	Puyallup River 16712, 7498, White River 16711, 16708, 16709, Clear Creek 7501, Swan Creek 7514, Boise Creek 16706
Area Where TMDL Requirements Apply	Requirements apply in all areas regulated under the Permittees' municipal stormwater permit and discharging to water bodies listed within the specific requirement in this TMDL section.
Parameter	Fecal Coliform
EPA Approval Date	September 2011
MS4 Permittee	Phase I Permit: King County, Pierce County Phase II Permit: Auburn, Edgewood, Enumclaw, Puyallup, Sumner

CITY OF AUBURN

Action Required

- Designate areas discharging via MS4 to the TMDL area as high priority areas for illicit discharge detection and elimination. Complete IDDE screening for bacteria sources in 100% of these sub-basins by July 31, 2024, and implement the schedules and activities identified in S5.C.5 of the Western Washington Phase II Permit in response to any illicit discharges found. The results of all bacterial screening conducted in these sub-basins shall be included in the annual reports submitted to Ecology.
- Install and maintain pet waste education and collection stations at municipal parks and other Permittee owned and operated lands adjacent to streams. Focus on locations where people commonly walk their dogs.

CITY OF EDGEWOOD

Action Required

- Designate areas discharging via the MS4 to Jovita Creek as high priority areas for illicit discharge detection and elimination. Complete IDDE screening for bacteria sources in 100% of these MS4 sub-basins by July 31, 2024, and implement the schedules and activities identified in S5.C.5 of the Western Washington Phase II Permit in response to any illicit discharges found. The results of all

bacterial screening conducted in these sub-basins shall be included in the annual reports submitted to Ecology.

CITY OF ENUMCLAW

Action Required

- Designate areas discharging via the MS4 to:
  - Boise Creek from creek mile 1.7 to 1.0.
  - The flume and laterals approximately 1 mile north of the confluence with the mainstem, north of SE 456th Street, between Highway 410 to the west and Watson Street N. to the east.

  These locations are high priority areas for illicit discharge detection and elimination. Complete IDDE screening for bacteria sources in 100% of these MS4 sub-basins by July 31, 2024, and implement the schedules and activities identified in S5.C.5 of the Western Washington Phase II Permit in response to any illicit discharges found. The results of all bacterial screening conducted in these sub-basins shall be included in the annual reports submitted to Ecology.
- Enumclaw shall inspect commercial animal handling areas and commercial composting facilities to ensure implementation of source control BMPs for bacteria. Commercial animal handling areas are associated with Standard Industrial Code (SIC) 074 and 075 and include veterinary and pet care/boarding services, animal slaughtering, and support activities for animal production. Facilities where the degradation and transformation of organic solid waste takes place under controlled conditions designed to promote aerobic decomposition are considered composting facilities (definition in accordance with Chapter 173-350 WAC). Implement an ongoing inspection program to re-inspect facilities or areas with bacteria source control problems at least every three years.
- Conduct public education and outreach activities to increase awareness of bacterial pollution problems and promote proper pet waste management behavior.
- Install and maintain animal waste collection and/or education stations at municipal parks and other Permittee owned and operated lands reasonably expected to have substantial domestic animal (dog and horse) use and the potential for pollution of stormwater.

KING COUNTY

Action Required

- When conducting IDDE-related field screening under S5.C.9 of the Phase I Permit, King County shall screen for bacteria sources in any MS4 sub-basins which discharge to surface waters in the TMDL area. Implement the schedules and activities identified in S5.C.9 of the Phase I Permit for response to any illicit discharges found.
- King County shall inspect commercial animal handling areas and commercial composting facilities to ensure implementation of source control BMPs for bacteria. Commercial animal handling areas are associated with Standard Industrial Code (SIC) 074 and 075 and include veterinary and pet care/boarding services, animal slaughtering, and support activities for animal production. Facilities

where the degradation and transformation of organic solid waste takes place under controlled conditions designed to promote aerobic decomposition are considered composting facilities (definition in accordance with Chapter 173-350 WAC). Implement an ongoing inspection program to re-inspect facilities or areas with bacteria source control problems at least every three years.

PIERCE COUNTY

Action Required

- Designate areas discharging via the MS4 to Swan Creek as high priority areas for illicit discharge detection and elimination. Complete IDDE screening for bacteria sources in 100% of these MS4 sub-basins by July 31, 2024, and implement the schedules and activities identified in S5.C.9 of the Phase I Permit, in response to any illicit discharges found. The results of all bacterial screening conducted in these sub-basins shall be included in the annual reports submitted to Ecology.
- Designate areas discharging via the MS4 to Salmon Creek as high priority areas for illicit discharge detection and elimination. Complete IDDE screening for bacteria sources in 100% of these MS4 sub-basins by July 31, 2024, and implement the schedules and activities identified in S5.C.9 of the Phase I Permit in response to any illicit discharges found. The results of all bacterial screening conducted in these sub-basins shall be included in the annual reports submitted to Ecology.
- Designate areas discharging via the MS4 to Alderton Creek as high priority areas for illicit discharge detection and elimination. Complete IDDE screening for bacteria sources in 100% of these MS4 sub-basins by the July 31, 2024, and implement the schedules and activities identified in S5.C.9 of the Phase I Permit in response to any illicit discharges found. The results of all bacterial screening conducted in these sub-basins shall be included in the annual reports submitted to Ecology.

CITY OF PUYALLUP

Action Required

- Designate areas discharging via the MS4 to Deer Creek as high priority areas for illicit discharge detection and elimination. Complete IDDE screening for bacteria sources in 100% of these MS4 sub-basins July 31, 2024, and implement the schedules and activities identified in S5.C.5 of the Phase II Permit in response to any illicit discharges found. The results of all bacterial screening conducted in these sub-basins shall be included in the annual reports submitted to Ecology.
- Designate areas discharging via the MS4 to Fennel Creek as high priority areas for illicit discharge detection and elimination. Complete IDDE screening for bacteria sources in 100% of these MS4 sub-basins July 31, 2024, and implement the schedules and activities identified in S5.C.5 of the Phase II Permit in response to any illicit discharges found. The results of all bacterial screening conducted in these sub-basins shall be included in the annual reports submitted to Ecology.
- Designate areas discharging via MS4 to Deer Creek as high priority areas for illicit discharge detection and elimination. Complete IDDE screening for bacteria sources in 100% of these MS4 sub-basins by July 31, 2024, and implement the schedules and activities identified in S5.C.5 of the Western Washington Phase II Permit in response to any illicit discharges found. The results of all

bacterial screening conducted in these sub-basins shall be included in the annual reports submitted to Ecology.

CITY OF SUMNER

Action Required

- Designate areas discharging via MS4 to Salmon Creek as high priority areas for illicit discharge detection and elimination. Complete IDDE screening for bacteria sources in 100% of these MS4 sub-basins by July 31, 2024, and implement the schedules and activities identified in S5.C.5 of the Western Washington Phase II Permit in response to any illicit discharges found. The results of all bacterial screening conducted in these sub-basins shall be included in the annual reports submitted to Ecology.

Name of TMDL	WRIA 10 - Clarks Creek Fecal Coliform TMDL
Document(s) for TMDL	*Clarks Creek Watershed Fecal Coliform Bacteria Total Maximum Daily Load (Water Quality Improvement Report)*, May 2008, Ecology Publication No. 07-10-110. https://fortress.wa.gov/ecy/publications/documents/0710110.pdf *Clarks Creek Watershed Fecal Coliform Bacteria Total Maximum Daily Load (Water Quality Implementation Plan)*, December 2009, Ecology Publication No. 09-10-081. https://test-fortress.wa.gov/ecy/publications/documents/0910081.pdf
Location of Original 303(d) Listings	Clarks Creek 7497, 7501, Meeker Creek 7508, 7507
Area Where TMDL Requirements Apply	Requirements apply in all areas regulated under the Permittees' municipal stormwater permit and discharging to water bodies listed within the specific requirement in this TMDL section.
Parameter	Fecal Coliform
EPA Approval Date	June 4, 2008
MS4 Permittee	Phase II Permit: Puyallup

CITY OF PUYALLUP

Action Required

The City of Puyallup shall designate areas discharging via MS4 to Meeker Creek as high priority areas for illicit discharge detection and elimination. Complete IDDE screening for bacteria sources in 100% of these MS4 sub-basins by July 31, 2024, and implement the schedules and activities identified in S5.C.5 of the Western Washington Phase II Permit in response to any illicit discharges found. The results of all bacterial screening conducted in these sub-basins shall be included in the annual reports submitted to Ecology.

Name of TMDL	WRIA 10 - Clarks Creek Dissolved Oxygen and Sediment Total Maximum Daily Load
Document(s) for TMDL	*Clarks Creek Dissolved Oxygen and Sediment Total Maximum Daily Load – Water Quality Improvement Report and Implementation Plan*, December 2014, Ecology Publication No. 14-10-030. https://ecology.wa.gov/Water-Shorelines/Water-quality/Water-improvement/Total-Maximum-Daily-Load-process/Directory-of-improvement-projects/Clarks-Creek
Location of Original 303(d) Listings	Clarks Creek 35407 47590 47591 47592 Meeker Creek 7510 47578 47579 Rody Creek 47593 Silver Creek
Area Where TMDL Requirements Apply	Requirements apply in all areas regulated under the Permittees' municipal stormwater permit and discharging to water bodies listed within the specific requirement in this TMDL section.
Parameter	Dissolved Oxygen and Sediment
EPA Approval Date	May 27, 2015
MS4 Permittee	Phase I Permit: Pierce County Phase II Permit: Puyallup

PIERCE COUNTY

Action Required

1. The Permittee shall operate, inspect and maintain existing[1] water quality improvement projects (WQIPs) and construct, operate, inspect, and maintain future WQIPs that achieve a combined annual average sediment reduction of 38.8 tons per year by December 31, 2021. This amount of annual sediment reduction represents 29 percent attainment of the 20-year Sediment WLA in the TMDL. The Permittee shall apply crediting methodologies described in the Restoration Plan[2] (hereafter, the Plan) or update of this Plan to determine stormwater treatment facility/BMP sediment removal rates.

2. The Permittee shall operate, inspect, and maintain existing WQIPs and construct, operate, inspect, and maintain future WQIPs that altogether treat or remove 13.7 MG of stormwater per year based

[1] Existing WQIPs are stormwater treatment facilities/BMPs constructed and operational after October 21, 2003. These include treatment facilities/BMPs implemented through retrofit or redevelopment.

[2] Refers to the *Pierce County Surface Water Management Clarks Creek Restoration Plan*, dated March 2, 2017, by Brown and Caldwell.

on the October 21, 2003 storm event, by December 31, 2021. This represents 46 percent attainment of the 20-year Dissolved Oxygen Deficit (DOD) WLA in the TMDL. The Permittee shall apply crediting methodologies described in the Plan or update of this Plan to determine volumes treated or removed by each WQIP.

3. The Permittee shall develop and submit a reporting ledger for the County Pollutant Load Reduction crediting system by March 31, 2020. This reporting ledger shall quantify annual sediment reduction (tons) credits and stormwater volume treated or reduced (MG) credits awarded to all operational WQIPs during the first three years of implementation of the Plan (i.e., 2017 – 2019). This ledger serves as the database and reporting instrument to track each year's credits and apply them toward the assigned numeric WLAs. Past retrofit or redevelopment projects constructed since October 21, 2003, may receive sediment reduction (tons) or stormwater volume treated or reduced (MG) credits for each year the project was inspected, maintained, and deemed operational. All WQIPs must be inspected, maintained, and deemed operational to receive annual sediment reduction and/or volume treated/reduced credits.

4. The Permittee shall submit an update of the Plan that includes the WQIPs proposed for the January 1, 2022 - July 31, 2024 reporting period, the sediment reduction and/or volume treated/reduced credit estimated for each WQIP proposed, as well as the crediting methodologies for crediting facility sediment removal and volumes treated or removed. This updated Plan shall be submitted to Ecology by April 1, 2021, for review and approval. Ecology reserves the right to require changes to the updated Plan. If Ecology takes longer than 90 days to provide an approval, the start of implementation of the updated Plan will be automatically extended by the number of days Ecology exceeds 90 days.

5. The Permittee shall submit an update of the Plan that includes WQIPs proposed for the five-year reporting period beginning August 1, 2024, the sediment reduction and/or volume treated/reduced credit estimated for each WQIP proposed, as well as the crediting methodologies for crediting facility sediment removal and volumes treated or removed. This updated Plan must be submitted to Ecology by November 1, 2023. Ecology reserves the right to require changes to the updated Plan. If Ecology takes longer than 90 days to provide an approval, the start of implementation of the updated Plan will be automatically extended by the number of days Ecology exceeds 90 days.

6. The Permittee shall submit a reporting ledger that quantifies annual sediment reduction (tons) credits and stormwater volume treated or reduced (MG) credits awarded to all operational WQIPs during the first six years of Plan implementation (i.e., 2017-2022) by March 31, 2023. This ledger serves as the database and reporting instrument to track each year's credits and apply them toward the assigned numeric WLAs. Past retrofit or redevelopment projects constructed since October 21, 2003, may receive sediment reduction (tons) or stormwater volume treated/reduced (MG) credits for each year the project was inspected, maintained and deemed operational. All WQIPs must be inspected, maintained and deemed operational to receive annual sediment reduction and/or volume treated/reduced credits.

7. Facilities in need of a maintenance action(s) impeding facility function cannot receive sediment reduction or stormwater volume treated credit during the period in which facility function is impeded. A crediting exception can be made for stormwater treatment facilities monitored to

determine actual removal or treatment rates in accordance with methods and procedures in an Ecology-approved QAPP and an individual facility operation and maintenance plan. Facilities/BMPs that exceed maintenance standards must perform required maintenance in accordance with schedules under S5.C.10.a.

8. Street Sweeping Program: The Permittee may draft a QAPP that outlines information gathered to calibrate their regenerative air street sweeping program's annual calculation of sediment reduction credits. This shall include a sampling program that measures the particle size distribution, organic carbon fraction and dry mass weight of the recovered material found in the hopper of the regenerative air vacuum sweeper. If the Permittee intends to credit its street sweeping program, the Permittee shall submit this draft QAPP to Ecology for review and approval, no later than July 1, 2020. The Permittee can only include sediment load reduction credit for its street sweeping program under an Ecology-approved QAPP.

9. Public Education and Outreach: The Permittee shall conduct public education and outreach activities that increase awareness among residents of the sources of polluted runoff affecting Clarks Creek and its tributaries.

CITY OF PUYALLUP

Action Required

1. The Permittee shall operate, inspect and maintain existing[3] water quality improvement projects (WQIPs) that achieve a combined average annual sediment reduction of 51.0 tons per year by December 31, 2021. This represents 31 percent of the 20-year Sediment WLA in the TMDL implementation target[4]. The Permittee shall apply crediting methodologies described in the Retrofit Plan[5] (hereafter, the Plan) or update of this Plan to determine stormwater treatment facility/BMP sediment removal rates.

2. The Permittee shall operate, inspect and maintain existing WQIPs and construct, operate, inspect, and maintain future WQIPs that altogether remove or treat 21.4 MG of stormwater per year based on the October 21, 2003 storm event by December 31, 2021. This represents 93 percent of the 20-year Dissolved Oxygen Deficit (DOD) WLA in the TMDL. The Permittee shall apply crediting methodologies described in the Plan or update of this Plan to determine volumes treated or removed by each WQIP.

3. The Permittee shall develop and submit a reporting ledger for the City's Pollutant Load Reduction crediting system by March 31, 2020. This reporting ledger shall quantify annual sediment reduction (tons) credits and stormwater volume treated or reduced (MG) credits awarded to all operational

[3] Existing WQIPs are stormwater treatment facilities/BMPs constructed and operational after October 21, 2003. These include treatment facilities/BMPs implemented through retrofit or redevelopment.

[4] The City estimates the existing 15th Street Diversion project reduces sediment loading to Clarks Creek by 49 tons per year (i.e., the City estimates this project accounts for 30 percent of the 20-year TMDL implementation target for sediment reduction).

[5] Refers to the *City of Puyallup Draft Clarks Creek Retrofit Plan*, dated September 2017, by Brown and Caldwell.

WQIPs during the first three years of implementation of the Plan (i.e., 2017 – 2019). This ledger serves as the database and reporting instrument to track each year's credits and apply them toward the assigned numeric WLAs. Past retrofit or redevelopment projects constructed since October 21, 2003, may receive sediment reduction (tons) or stormwater volume treated/reduced (MG) credits for each year the project was inspected, maintained, and deemed operational. All WQIPs must be inspected, maintained and deemed operational to receive annual sediment reduction and/or volume treated/reduced credits.

4. The Permittee shall submit an update of the Plan that includes the WQIPs proposed for the January 1, 2022 - July 31, 2024 reporting period, the sediment reduction and/or volume treated/reduced credit estimated for each WQIP proposed, as well as crediting methodologies for crediting facility sediment removal and volumes treated or removed. This updated Plan must be submitted to Ecology by April 1, 2021, for review and approval. Ecology reserves the right to require changes to the updated Plan. If Ecology takes longer than 90 days to provide an approval, the start of implementation of the updated Plan will be automatically extended by the number of days Ecology exceeds 90 days.

5. The Permittee shall submit an update of the Plan that includes the WQIPs proposed for the five-year reporting period beginning August 1, 2024, the sediment reduction and/or volume treated/reduced credit estimated for each WQIP proposed, as well as crediting methodologies for crediting facility sediment removal and volumes treated or removed. This updated Plan must be submitted to Ecology by November 1, 2023. Ecology reserves the right to require changes to the updated Plan. If Ecology takes longer than 90 days to provide an approval, the start of implementation of the updated Plan will be automatically extended by the number of days Ecology exceeds 90 days.

6. The Permittee shall submit a reporting ledger that quantifies annual sediment reduction (tons) credits and stormwater volume treated or reduced (MG) credits awarded to all operational projects during the first six years of Plan implementation (i.e., 2017-2022) by March 31, 2023. This ledger serves as the database and reporting instrument to track each year's credits and apply them toward the assigned numeric WLAs. Past retrofit or redevelopment projects constructed since October 21, 2003, may receive sediment reduction (tons) or stormwater volume treated/reduced (MG) credits for each year the project was inspected, maintained and deemed operational. All WQIPs must be inspected, maintained and deemed operational to receive annual sediment reduction and/or volume treated/reduced credits.

7. Facilities in need of a maintenance action(s) impeding facility function cannot receive sediment reduction or stormwater volume treated credit during the period in which facility function is impeded. A crediting exception can be made for stormwater treatment facilities monitored to determine actual removal or treatment rates in accordance with methods and procedures in an Ecology-approved QAPP and an individual facility operation and maintenance plan. Facilities/BMPs that exceed maintenance standards must perform required maintenance in accordance with schedules under S5.C.7.a.

8. Street Sweeping Program: The Permittee may draft a QAPP that outlines information gathered to calibrate their regenerative air street sweeping program's annual calculation of sediment reduction credits. This shall include a sampling program that measures the particle size distribution, organic carbon fraction, and dry mass weight of the recovered material found in the hopper of the regenerative air vacuum sweeper. If the Permittee intends to credit its street sweeping program, the Permittee shall submit this draft QAPP to Ecology for review and approval, no later than July 1, 2020. The Permittee can only include sediment load reduction credit for its street sweeping program under an Ecology-approved QAPP.

9. Public Education and Outreach: The Permittee shall conduct public education and outreach activities that increase awareness among residents of the sources of polluted runoff affecting Clarks Creek and its tributaries.

Name of TMDL	WRIA 10 - South Prairie Creek Water Quality Improvement Project
Document(s) for TMDL	*South Prairie Creek Bacteria and Temperature Total Maximum Daily Load (Water Cleanup Plan): Submittal Report*, June 2003, Ecology Publication No. 03-10-055. https://fortress.wa.gov/ecy/publications/publications/0310055.pdf *South Prairie Creek Bacteria and Temperature Total Maximum Daily Load (Water Cleanup Plan): Detailed Implementation Plan*, July 2006, Ecology Publication No. 06-10-018. https://fortress.wa.gov/ecy/publications/documents/0610018.pdf
Location of Original 303(d) Listings	South Prairie Creek VC19MO (WA-10-1085), Wilkeson Creek NX07HW (WA-10-1087)
Area Where TMDL Requirements Apply	Requirements apply in all areas regulated under the Permittees' municipal stormwater permit and discharging to water bodies listed within the specific requirement in this TMDL section.
Parameter	Fecal Coliform
EPA Approval Date	August 6, 2003
MS4 Permittee	Phase I Permit: Pierce County Phase II Permit: Buckley

PIERCE COUNTY

Action Required

- Designate areas discharging via the MS4 to Tributary 1 upstream of SR162 as high priority areas for illicit discharge detection and elimination. Complete IDDE screening for bacteria sources in 100% of these sub-basins by July 31, 2024, and implement the schedules and activities identified in S5.C.9 of the Phase I Permit in response to any illicit discharges found. Investigation must include activities for both the dry season (May through September) and the wet season (October through April). The results of all bacterial screening conducted in these sub-basins shall be included in the annual reports submitted to Ecology.
- Designate areas discharging via the MS4 upstream of SR165 along Spiketon Road, Mundy Loss Road, and Spiketon Ditch Road as high priority areas for illicit discharge detection and elimination. Complete IDDE screening for bacteria sources in 100% of these sub-basins by July 31, 2024, and implement the schedules and activities identified in S5.C.9 of the Phase I Permit, in response to any illicit discharges found. Investigation must include activities for both the dry season (May through

September) and the wet season (October through April). The results of all bacterial screening conducted in these sub-basins shall be included in the annual reports submitted to Ecology.

CITY OF BUCKLEY

Action Required

- Designate areas discharging via the MS4 to Spiketon Creek as high priority areas for illicit discharge detection and elimination. Complete IDDE screening for bacteria sources in 100% of these sub-basins July 31, 2024, and implement the schedules and activities identified in S5.C.5 of the Western Washington Phase II Permit, in response to any illicit discharges found. Investigation must include activities for both the dry season (May through September) and the wet season (October through April). The results of all bacterial screening conducted in these sub-basins shall be included in the annual reports submitted to Ecology.

Name of TMDL	WRIA 11 - Nisqually River Basin Water Quality Improvement Project
EPA Approved Document(s) for TMDL	*Nisqually Watershed Bacteria and Dissolved Oxygen Total Maximum Daily Load (Water Cleanup Plan): Submittal Report*, May 2005, Ecology Publication No. 05-10-040. https://fortress.wa.gov/ecy/publications/documents/0503002.pdf *Nisqually River Basin Fecal Coliform Bacteria and Dissolved Oxygen Total Maximum Daily Load: Water Quality Implementation Plan (WQIP)*, June 2007, Ecology Publication No. 07-10-016. https://fortress.wa.gov/ecy/publications/documents/0710016.pdf
Location of Original 303(d) Listings	Nisqually Reach 390KRD (WA-PS-0290), Nisqually River OE72JI (WA-11-1010), McAllister Creek LD26OX (WA-11-2000), Ohop Creek MW64EV (WA-11-1024), Red Salmon Creek NoID (WA-PS-0290)
Area Where TMDL Requirements Apply	Requirements apply in all areas regulated under the Permittees' municipal stormwater permit and discharging to water bodies listed within the specific requirement in this TMDL section.
Parameter	Fecal Coliform, Dissolved Oxygen
EPA Approval Date	August 5, 2005
MS4 Permittee	Phase I Permit: Pierce County Phase II Permit: Thurston County

PIERCE COUNTY AND THURSTON COUNTY

Action Required

- Designate areas discharging via the MS4 to Ohop Creek and Lynch Creek as high priority areas for illicit discharge detection and elimination. Complete IDDE screening for bacteria sources in 100% of these sub-basins by July 31, 2024, and implement the schedules and activities identified in S5.C.9 of the Phase I Permit in response to any illicit discharges found. Investigation must include activities for both the dry season (May through September) and the wet season (October through April). The results of all bacterial screening conducted in these sub-basins shall be included in the annual reports submitted to Ecology.

THURSTON COUNTY

Action Required

- Annually implement the following best management practices for reducing fecal coliform bacteria in areas discharging to the Nisqually Reach via the MS4 in accordance with S5.C.2 and S5.C.7 of the Western Washington Phase II Permit:
  - Reach households in targeted watershed through mailings, door hangers etc. to increase awareness of the sources of bacteria pollution.
  - Adequately maintain vegetation around stormwater facilities, ditches, and ponds.

Name of TMDL	WRIA 13 - Henderson Inlet Watershed Fecal Coliform Bacteria Water Quality Improvement Project
Document(s) for TMDL	*Henderson Inlet Watershed Fecal Coliform Bacteria, Dissolved Oxygen, pH, and Temperature Total Maximum Daily Load Study*, March 2006, Ecology Publication No. 06-03-012. https://fortress.wa.gov/ecy/publications/documents/0603012.pdf *Henderson Inlet Watershed Fecal Coliform Bacteria, Dissolved Oxygen, and pH Total Maximum Daily Load: Water Quality Improvement Report Implementation Strategy*, October 2006, Ecology Publication No. 06-10-058. https://fortress.wa.gov/ecy/publications/documents/0610058.pdf *Henderson Inlet Watershed Fecal Coliform Bacteria Total Maximum Daily Load: Water Quality Implementation Plan*, July 2008, Ecology Publication No. 08-10-040. https://fortress.wa.gov/ecy/publications/documents/0810040.pdf
Location of Original 303(d) Listings	Henderson Inlet (WA-13-0010), Dobbs Creek (WA-13-1400), Sleepy Creek (WA-13-1700), Woodard Creek (WA-13-1600), Woodland Creek (WA-13-1500)
Area Where TMDL Requirements Apply	Requirements apply in all areas regulated under the Permittees municipal stormwater permit and discharging to water bodies listed within the specific requirement in this TMDL section.
Parameter	Fecal Coliform, Dissolved Oxygen, pH, Temperature
EPA Approval Date	January 8, 2007
MS4 Permittee	Phase II Permit: Lacey, Olympia, Thurston County

THURSTON COUNTY

Action Required

1. Annually implement the following best management practices in areas discharging to the Henderson Inlet via the MS4 in accordance with S5.C.6 of the Western Washington Phase II Permit:
    a. Require phosphorus control for new and redevelopment projects that discharge via the MS4 to Woodard Creek and meet the project thresholds in Appendix 1, Minimum Requirement #6: Runoff Treatment of the Western Washington Phase II Permit.

2. Annually implement the following best management practices for reducing fecal coliform in areas discharging to the Henderson Inlet via the MS4 in accordance with S5.C.5 of the Western Washington Phase II Permit:
    a. Enhance screening in Henderson Inlet in areas of concern. Investigation shall include stormwater ponds and on-site septic systems as potential fecal coliform sources, and sampling of wet-weather discharges (November through April).
3. Annually implement the following best management practices for reducing fecal coliform in areas discharging to the Henderson Inlet via the MS4 in accordance with S5.C.2 of the Western Washington Phase II Permit.
    a. Continue offering public education and outreach efforts for fecal coliform reduction such as brochures, signage, and pet waste stations to homeowner associations.
4. Annually produce a report that details all actions completed as part of Appendix 2 requirements.

CITY OF LACEY

Action Required

1. Annually implement the following best management practices in areas discharging to the Henderson Inlet via the MS4 in accordance with S5.C. 2 of the Western Washington Phase II Permit:
    a. Continue the Private Stormwater Facilities Maintenance Program, providing commercial and residential stormwater facility/BMP owners educational resources for facility function and maintenance requirements.
    b. Offer bacteria pollution reduction brochures, signage, and pet waste stations to homeowners associations.
    c. Maintain pet waste bag dispenser units in city parks.
    d. Install educational signage at City facilities/property.
    e. Submit a summary of actions completed with each annual report.
2. Implement the Fecal Coliform Bacteria Wet Weather Sampling Program for the College Regional Stormwater Facility in accordance with the illicit discharge detection and elimination efforts and activities identified in S5.C.5 of the Western Washington Phase II Permit.
    a. Continue to use the Fecal Coliform Wet Weather Sampling Plan. The sampling program shall establish a regularly scheduled sampling schedule (at least two times per year), during the wet season (November through April), specific sampling locations, sampling protocols, parameters, analytical methods, and timelines for implementation.
    b. If sampling results indicate potential illicit discharges, conduct an investigation in accordance with S5.C.5 of the Western Washington Phase II Permit.
    c. Submit a summary of sampling and investigations with each annual report.

3. Revise the City's coordinated plan with the City of Olympia to monitor and reduce fecal coliform bacteria discharges from the Fones/Taylor wetland treatment facilities by December 31, 2019, in accordance with S5.C.5 of the Western Washington Phase II Permit.
    a. Submit a revised program plan to Ecology that includes a timeline for implementation, sampling frequencies, and identifies, at the minimum, who will be responsible for sampling, investigations, and enforcement by December 31, 2019.
    b. If sampling results indicate potential illicit discharges, conduct an investigation in accordance with S5.C.5 of the Western Washington Phase II Permit.
    c. Submit a summary of the coordinated efforts with sampling, investigation, and enforcement actions taken with the annual reports.
4. Annually implement the following best management practices in areas discharging to the Henderson Inlet via the MS4 in accordance with S5.C.7 of the Western Washington Phase II Permit:
    a. Continue re-vegetation and nuisance vegetation management along Woodland Creek and its tributaries. Submit a summary of actions completed with each annual report.

CITY OF OLYMPIA

Action Required

1. Annually implement the following BMPs in areas discharging to the Henderson Inlet via the MS4 in accordance with S5.C.6 of the Western Washington Phase II Permit:
    a. Require phosphorus control for new and redevelopment projects that discharge via MS4 to Woodard Creek and meet the project thresholds in Appendix 1, Minimum Requirement #6: Runoff Treatment of the Western Washington Phase II Permit.
2. Revise the City's coordinated plan with the City of Lacey to monitor and reduce fecal coliform bacteria discharges from the Fones/Taylor wetland treatment facilities by December 31, 2019 in accordance with S5.C.5 Illicit Discharge Detection and Elimination of the Western Washington Phase II Permit.
    a. Submit a revised program plan to Ecology that includes a timeline for implementation, sampling frequencies, and identifies, at the minimum, who will be responsible for sampling, investigations, and enforcement by December 31, 2019.
    b. If sampling results indicate potential illicit discharges, conduct an investigation in accordance with S5.C.5 of the Western Washington Phase II Permit.
    c. Submit a summary of the coordinated efforts with sampling, investigation and enforcement actions taken with each annual report.

Name of TMDL	WRIA 13 - Deschutes River Watershed
Document(s) for TMDL	*Deschutes River, Percival Creek, and Budd Inlet Tributaries Temperature, Fecal Coliform Bacteria, Dissolved Oxygen, pH, and Fine Sediment Total Maximum Daily Load Technical Report: Water Quality Study Findings.* Ecology Publication No. 12-03-008. https://fortress.wa.gov/ecy/publications/documents/1203008.pdf *Deschutes River, Percival Creek, and Budd Inlet Tributaries Temperature, Fecal Coliform Bacteria, Dissolved Oxygen, pH, and Fine Sediment Total Maximum Daily Load: Water Quality Improvement and Implementation Plan.* Ecology Publication No. 15-10-012. https://fortress.wa.gov/ecy/publications/documents/1510012.pdf
Location of Original 303(d) Listings	Deschutes River 6576 7590 48710 48711 48712 48713 48714 48715 48717 48718 9439 7588 7592 7593 7595 48720 48721 48724 48726. Huckleberry Creek 3757. Reichel Creek 48666. Tempo Lake Outlet 48696. Unnamed Creek (Trib to Deschutes River) 7591. Unnamed Spring (Trib to Deschutes River) 48923. Black Lake Ditch 48733 48734 48735. Percival Creek 42321 48249 48727 48729.
Area Where TMDL Requirements Apply	Requirements apply in all areas regulated under the Permittees municipal stormwater permit and discharging to water bodies listed within the specific requirement in this TMDL section.
Parameter	Temperature
EPA Approval Date	Temperature approved: June 29, 2018
MS4 Permittee	Phase II Permit: Thurston County, Olympia, Lacey, Tumwater

CITY OF OLYMPIA

Actions Required

- Annually report on temperature reduction measures in the watershed.

CITY OF LACEY

Actions Required

- Annually report on temperature reduction measures in the watershed.

CITY OF TUMWATER

Actions Required

- Annually report on temperature reduction measures in the watershed.

THURSTON COUNTY

Actions Required

- Annually report on temperature reduction measures in the watershed.

Name of TMDL	WRIA 14 - Oakland Bay, Hammersley Inlet, and Selected Tributaries Fecal Coliform TMDL
Document(s) for TMDL	*Oakland Bay, Hammersley Inlet, and Selected Tributaries Fecal Coliform Bacteria Total Maximum Daily Load (Water Quality Improvement Report)*, June 2011, Ecology Publication No. 11-10-039. https://test-fortress.wa.gov/ecy/publications/SummaryPages/1110039.html
Location of Original 303(d) Listings	Campbell Creek 24239 7596 Uncle John Creek 40618 Malaney Creek 24237 Goldsborough Creek 6659 Shelton Creek 6660 Inner Shelton Harbor 6658 Oakland Bay 39857 39861 39862 39872 45159 45215 53164 Hammersley Inlet/mouth of Mill Creek 39800 Hammersley Inlet 39801 39803 39804 39810 45220 45915 53178
Area Where TMDL Requirements Apply	Requirements apply in all areas regulated under the Permittees' municipal stormwater permit and discharging to water bodies listed within the specific requirement in this TMDL section.
Parameter	Fecal Coliform
EPA Approval Date	August 18, 2011
MS4 Permittee	Phase II Permit: Shelton

CITY OF SHELTON

Actions Required

- Designate areas discharging via MS4 to Goldsborough Creek, Inner Shelton Harbor and Oakland Bay as high priority areas for illicit discharge detection and elimination and implement the schedules and activities identified in S5.C.5 of the Western Washington Phase II Permit. Bacterial screening results shall be included in annual reporting submitted to Ecology.
- Conduct public education and outreach activities to increase awareness of bacterial pollution problems and promote proper pet waste management behavior.
- Install and maintain animal waste collection and/or education stations at municipal parks and other Permittee owned and operated lands reasonably expected to have substantial domestic animal (dog and horse) use and the potential for pollution of stormwater.

Name of TMDL	WRIA 15 - Sinclair and Dyes Inlets Fecal Coliform Bacteria Total Maximum Daily Load
Document(s) for TMDL	*Sinclair and Dyes Inlets Fecal Coliform Bacteria Total Maximum Daily Load (TMDL) Water Quality Implementation Plan*, In Draft, Ecology Publication No. 11-10-051. https://fortress.wa.gov/ecy/publications/publications/1110051.pdf
Location of Original 303(d) Listings	Dyes Inlet & Port Washington Narrows (WA-15-0020) Gorst Creek (WA-15-4000) Blackjack Creek (WA-15-4200) Annapolis Creek (WA-15-4400) Beaver Creek (WA-15-4900) Clear Creek (WA-15-5000) Barker Creek (WA-15-5100) Sinclair Inlet (WA-15-0040)
Area Where TMDL Requirements Apply	These requirements apply to areas served by MS4s listed below within the TMDL coverage area.
Parameter(s)	Fecal coliform bacteria
EPA Approval Date	July 5, 2012
MS4 Permittee	Phase II Permit: City of Bainbridge Island, WAR04-5503; City of Bremerton, WAR04-5507; City of Port Orchard, WAR04-5536; Kitsap County, WAR04-5546

CITY OF BAINBRIDGE ISLAND

Action Required

- Designate any previously unscreened areas discharging via the MS4 to the TMDL area as the highest priority for illicit discharge detection and elimination routine field screening. Screen for bacteria sources when conducting illicit discharge detection and elimination field screening activities in these areas. Implement the schedules and activities identified in S5.C.5 of the Western Washington Phase II Permit for response to any illicit discharges found.
- Install and maintain pet waste education and collection stations at Permittee owned and operated lands adjacent to stream and marine shorelines. Focus on locations where people commonly walk their dogs.

CITY OF BREMERTON

Action Required

- Designate any previously unscreened areas discharging via the MS4 to the TMDL area as the highest priority for illicit discharge detection and elimination routine field screening. Screen for bacteria sources when conducting illicit discharge detection and elimination field screening activities in these areas. Implement the schedules and activities identified in S5.C.5 of the Western Washington Phase II Permit for response to any illicit discharges found.
- Install and maintain pet waste education and collection stations at municipal parks and other Permittee owned and operated lands adjacent to stream and marine shorelines. Focus on locations where people commonly walk their dogs.

CITY OF PORT ORCHARD

Action Required

- Designate any previously unscreened areas discharging via the MS4 to the TMDL area as the highest priority for illicit discharge detection and elimination routine field screening. Screen for bacteria sources when conducting illicit discharge detection and elimination field screening activities in these areas. Implement the schedules and activities identified in S5.C.5 of the Western Washington Phase II Permit for response to any illicit discharges found.
- Install and maintain pet waste education and collection stations at municipal parks and other Permittee owned and operated lands adjacent to stream and marine shorelines. Focus on locations where people commonly walk their dogs.

KITSAP COUNTY

Action Required

- Designate any previously unscreened areas discharging via the MS4 to the TMDL area as the highest priority for illicit discharge detection and elimination routine field screening. Screen for bacteria sources when conducting illicit discharge detection and elimination field screening activities in these areas. Implement the schedules and activities identified in S5.C.5 of the Western Washington Phase II Permit for response to any illicit discharges found.
- Install and maintain pet waste education and collection stations at municipal parks and other Permittee owned and operated lands adjacent to stream and marine shorelines. Focus on locations where people commonly walk their dogs.

Name of TMDL	WRIA 22 - Grays Harbor/Chehalis Watershed Fecal Coliform Bacteria Total Maximum Daily Load
Document(s) for TMDL	*Grays Harbor/Chehalis Watershed Fecal Coliform Bacteria Total Maximum Daily Load Submittal Report*, December 2001, Ecology Publication No. 01-10-025. https://fortress.wa.gov/ecy/publications/documents/0110025.pdf *Quality Assurance Project Plan: Grays Harbor Fecal Coliform Bacteria Monitoring to Characterize Water Quality in Urban Stormwater Drains*, October 2010, Ecology Publication No. 10-10-066. https://fortress.wa.gov/ecy/publications/documents/1010066.pdf
Location of Original 303(d) Listings	Outer Grays Harbor (WA-22-0020), Inner Grays Harbor (WA-22-030), Inner Grays Harbor (WA-22-0030), Chehalis River (WA-22-4040)
Area Where TMDL Requirements Apply	Requirements apply in all areas regulated under the Permittees' municipal stormwater permit and discharging to water bodies listed within the specific requirement in this TMDL section.
Parameter	Fecal Coliform
EPA Approval Date	December 2002
MS4 Permittee	Phase II Permit: Aberdeen

CITY OF ABERDEEN

Actions Required

1. Implement the schedules and activities identified in S5.C.2 of the Western Washington Phase II Permit. Continue to implement the Public Education and Outreach and Involvement Plan (Plan). The Plan shall target the reduction of fecal coliform pollution by increasing public awareness, effecting behavior changes and shall include: goals, target audiences, messages, format, distribution, and evaluation methods.
    a. The Plan shall include at least the following elements and be fully implemented prior to the expiration date of the Permit:
        i. Target the residents of the three high priority water bodies identified under the 2019-2024 Permit.
        ii. Reach households in targeted watersheds through mailings, door hangers, or similar outreach tools.
        iii. Reach 4-6th grade students.
    b. Continue program which notifies residents, in a timely manner, when bacteria pollution that poses a public health concern (such as a wastewater overflow) reaches the MS4.

c. Conduct two public education surveys gauging 4-6th grade student knowledge of general stormwater knowledge, the sources of bacteria and preventing bacteria pollution. One survey should measure resident's knowledge of bacteria pollution before outreach and the other should measure knowledge and likelihood of action after outreach.

d. Continue to implement the City's stream team program and work cooperatively with Grays Harbor Stream Team.

e. Maintain pet waste bag dispenser units and explanatory signs in public areas with dog usage.

f. Maintain an inventory of sources that have potential for bacteria runoff such as manure-composting facilities, stables, kennels.

   i. Continue to use the City's targeted manure management educational plan for such facility owners. Send one letter annually that outlines compliance requirements. Maintain a resource webpage on the City's website. Submit a summary of actions completed with each annual report.

2. Designate areas discharging to the MS4 urban drains identified in the TMDL, as the highest priority areas for illicit discharge detection and elimination routine field screening efforts and implement the schedules and activities identified in S5.C.5 of the Western Washington Phase II Permit. Field screening and source tracing methodology (see S5.C.5.d) must be consistent with the *Quality Assurance Project Plan: Grays Harbor Fecal Coliform Bacteria Monitoring to Characterize Water Quality in Urban Stormwater Drains,* October 2010.

   a. Enforce the City's regulatory mechanism to control pet waste.

   b. Designate areas discharging via MS4 to the following discharge points: 501-ABDN, 510-MST, and 514-MST as high priority areas for illicit discharge detection and elimination efforts.

      i. Complete field screening and implement the schedules and priority area for illicit discharge detection and elimination field screening identified in S5.C.5 of the Western Washington Phase II Permit. Investigation must include activities for both the dry season (May through October) and the wet season (November through April).

      ii. Conduct twice monthly wet weather sampling of the discharge points 501-ABDN, 510-MST, and 514-MST to determine if specific discharges from Aberdeen's MS4 exceed the water quality criteria for fecal coliform bacteria.

         - Data shall be collected for two wet seasons.
         - Data shall be collected in accordance with an Ecology-approved QAPP.
         - Samples must be analyzed using an Ecology accredited lab.
         - If sampling results indicate potential illicit discharges, conduct an investigation in accordance with S5.C.5 – *Illicit Discharge Detection and Elimination* of the Western Washington Phase II Permit.
         - Data shall be submitted to Ecology in an approved format with the annual reports.

APPENDIX 3 - Annual Report Questions for Cities, Towns, and Counties

Permittees are required to submit the following information in an online annual report form, or an alternative format provided by Ecology if requested, pursuant to Special Condition S9.A.

Reporting Requirements and SWMP

1. **Attach** a copy of any annexations, incorporations, or boundary changes resulting in an increase or decrease in the Permittee's geographic area of permit coverage during the reporting period per S9.D.6.
2. **Attach** updated annual Stormwater Management Program Plan (SWMP Plan). (S5.A.2)
3. Implemented an ongoing program to gather, track, and maintain information per S5.A.3, including costs or estimated costs of implementing the SWMP.
4. Coordinated among departments within the jurisdiction to eliminate barriers to permit compliance. (S5.A.5.b)

    4a. **Attach** a written description of internal coordination mechanisms. (S5.A.5.b)

Stormwater Planning

5. Have you convened an interdisciplinary team to inform and assist in the development, progress, and influence of the stormwater planning program? (S5.C.1.a. – Required by August 1, 2020)

Coordination with long-range plan updates

6. List the relevant land use planning efforts that have taken place in your jurisdiction (land use plans that are used to accommodate growth, stormwater management, or transportation). (S5.C.1.b.i(a) and (b) – Required by March 31, 2021 & January 1, 2023)
7. List of stormwater capital projects (currently in or slated for future design and construction) that resulted from this planning. (S5.C.1.b.i(a) and (b) – Required by March 31, 2021 & Jan 1, 2023)
8. Describe of watershed protection measures associated with stormwater management and land use planning actions that resulted from this planning. (S5.C.1.b.i(a) and (b) – Required by March 31, 2021 & January 1, 2023)
9. Were land acquisitions identified (or are planning ahead for) that are useful for stormwater facilities to: accommodate growth or to better serve an existing developed area? (S5.C.1.b.i(a) and (b) – Required by March 31, 2021 & January 1, 2023)

    9a.If yes, for what purpose?

10. Identified corrective actions, in addition to the minimum requirements of the Municipal Stormwater Permits to control or treat municipal stormwater discharges that pollute waters of the State (e.g. Limits to impervious cover added to any zoning districts, regional facility planning, minimization of vegetation loss, etc.)? (S5.C.1.b.i(a) and (b) – Required by March 31, 2021 & January 1, 2023)

10a. If yes, briefly describe and list relevant plan or code sections, if applicable.

11. Updates to goals and policies related to investment in stormwater management facilities/BMPs? (yes/no) (S5.C.1.b.i(a) and (b) – Required by March 31, 2021 & January 1, 2023)

    11a. If yes, briefly describe.

12. Does the long-range plan identify the location and existing capacity of the stormwater facilities owned or operated by the Permittee and show which of those stormwater facilities have unused capacity? (S5.C.1.b.i(a) and (b) – Required by March 31, 2021 & January 1, 2023)

    12a. Do these stormwater facility locations impact where housing, or other types of development, are projected to be located or influence the acquisition of land? (If yes, how?)

    12b. Does the long-range plan identify a lack of facilities and the potential impacts of existing or new development to those areas and receiving waters?

    12c. Any new proposed locations and capacities of stormwater facilities needed for the timeframe of the plan?

13. Based on the projected population densities and distribution of growth over the planning period, describe how stormwater runoff impacts are forecasted. Does stormwater management information (including water quality) direct where growth is directed? (S5.C.1.b.i(a) and (b) – Required by March 31, 2021 & January 1, 2023)

14. Did you submit a report as described in S5.C.1.b.i(b)? (Required no later than January 1, 2023)

Low impact development code-related requirements

15. Continue to design and implement local development-related codes, rules, standards, or other enforceable documents to minimize impervious surfaces, native vegetation loss, and stormwater runoff, where feasible? See S5.C.1.c.i. (Required annually)

16. From the assessment described in S5.C.1.c.i(a), did you identify any administrative or regulatory barriers to implementation of LID Principles or LID BMPs? (Required annually)

    16a. If yes, describe the barrier(s) and the measures taken to address them**.** (S5.C.1.c.i(a))

Stormwater Management Action Planning

17. Developed a watershed inventory as outlined in S5.C.1.d.i? (Submitted by March 31, 2022)

    17a. **Attach** watershed inventory as described in S5.C.1.d.i.

18. Developed a receiving water prioritization method and process as described in S.5.C.1.d.ii(a)-(c)? (Required by June 30, 2022.)

    18a. **Attach** receiving water priority ranking process as described in S.5.C.1.d.ii(a)-(c).

19. Developed a Stormwater Management Action Plan (SMAP) for at least one high priority area? (S.5.C.1.d.iii – Required by March 31, 2023)

19a. **Attach** SMAP(s).

Education and Outreach

20. Did you choose to adopt one or more elements of a regional program? (S5.C.2)

    20a. If yes, list the elements, and the regional program.

21. **Attach** a description of general awareness efforts conducted, including your target audiences and subject areas, per S5.C.2.a.i.
22. Conducted an evaluation of the effectiveness of the ongoing behavior change program and documented recommendations as outlined in S.5.C.2.a.ii.(b). (Required no later than July 1, 2020)

    22a. If not, explain

23. Developed a behavior change campaign that is tailored to the community in accordance with S5.C.2.a.ii.(c)? (Required no later than February 1, 2021)

    23a. **Attach** the strategy and schedule developed in accordance with S5.C.2.a.ii.(c).

24. Began implementing strategy outlined in S.5.C.2.a.ii(c) (S5.C.2.a.ii.(d) – Required by April 1, 2021)
25. **Attach** the report developed in accordance with S5.C.2.a.ii.(e), which evaluated the changes in understanding and adoption of targeted behaviors resulting from the implementation of the strategy and any planned or recommended changes to the program in order to be more effective. (Required no later March 31, 2024)
26. Promoted stewardship opportunities (or partnered with others) to encourage resident participation in activities such as those described in S5.C.2.a.iii.

    26a. **Attach** a list of stewardship opportunities promoted.

Public Involvement and Participation

27. Describe in *Comments* field the opportunities created for the public, including overburdened communities, to participate in the decision-making processes involving the development, implementation, and updates of the Permittee's SWMP and the SMAP. (S5.C.3.a)
28. Posted the updated SWMP Plan and latest annual report on your website no later than May 31 of each year?. (S5.C.3.b)

    28a. List the website address in *Comments* field.

MS4 Mapping and Documentation

29. Maintained a map of the MS4 including the requirements listed in S5.C.4.a.i-vii?
30. Started mapping outfall size and material in accordance with S5.C.4.b.i? (Required no later than January 1, 2020)

    30a. **Attach** a spreadsheet that lists the known outfalls' size and material(s).

31. Completed mapping connections to private storm sewers in accordance with S5.C.4.b.ii? (Required no later than August 1, 2023)

32. Developed an electronic format for map, with fully described mapping standards in accordance with S5.C.4.c? (Required no later than August 1, 2021)

Illicit Discharges Detection and Elimination

33. Informed public employees, businesses, and the general public of hazards associated with illicit discharges and improper disposal of waste. Describe actions in *Comments* field. (S5.C.5.b)

34. Implemented an ordinance or other regulatory mechanism to effectively prohibit non-stormwater, illicit discharges as described in S5.C.5.c.

35. Implemented procedures for conducting illicit discharge investigations in accordance with S5.C.5.d.i.

    35a. Cite field screening methodology in *Comments* field.

36. Percentage of MS4 coverage area screened in the reporting year per S5.C.5.d.i. (Required to screen 12% on average each year.)

    36a. Cite field screening techniques used to determine percent of MS4 screened.

37. Percentage of total MS4 screened from permit issuance through the end of the reporting year. (S5.C.5.d.i.)

38. Describe how you publicized a hotline telephone number for public reporting of spills and other illicit discharges in the *Comments* field. (S5.C.5.d.ii)

39. Implemented an ongoing illicit discharge training program for all municipal field staff per S5.C.5.d.iii.

40. Implemented an ongoing program to characterize, trace, and eliminate illicit discharges into the MS4 per S5.C.5.e.

41. Municipal illicit discharge detection staff trained to conduct illicit discharge detection and elimination activities as described in S5.C.5.f.

42. **Attach** a report with data describing the actions taken to characterize, trace, and eliminate each illicit discharge reported to, or investigated by, the Permittee as described in S5.C.5.g. The submittal must include all of the applicable information and must follow the instructions, timelines, and format described in Appendix 12.

Controlling Runoff from New Development, Redevelopment, and Construction Sites

43. Implemented an ordinance or other enforceable mechanism to effectively address runoff from new development, redevelopment, and construction sites per the requirements of S5.C.6.b.i-iii.

44. Revised ordinance or other enforceable mechanism to effectively address runoff from new development, redevelopment, and construction sites per the requirements of S5.C.6.b.i-iii. (Required no later than June 30, 2022)

    44a. Cite code reference in *Comments* field.

45. Number of adjustments granted to the minimum requirements in Appendix 1. (S5.C.6.b.i. and Section 5 of Appendix 1)

46. Number of exceptions/variances granted to the minimum requirements in Appendix 1. (S5.C.6.b.i, and Section 6 of Appendix 1)

47. Reviewed *Stormwater Site Plans* for all proposed development activities that meet the thresholds adopted pursuant to S5.C.6.b.i. (S5.C.6.c.i)

    47a. Number of site plans reviewed during the reporting period.

48. Inspected, prior to clearing and construction, permitted development sites per S5.C.6.c.ii, that have a high potential for sediment transport as determined through plan review based on definitions and requirements in Appendix 7 – *Determining Construction Site Sediment Damage Potential*?

    48a. If no, inspected prior to clearing and construction, all construction sites meeting the minimum thresholds (S5.C.6.c.ii)?

49. Inspected permitted development sites during construction to verify proper installation and maintenance of required erosion and sediment controls per S5.C.6.c.iii.

    49a. Number of construction sites inspected per S5.C.6.c.iii.

    49b.Inspected stormwater treatment and flow control BMPs/facilities and catch basins in new residential developments every 6 months per S5.C.6.c.iv?

50. Inspected all permitted development sites upon completion of construction and prior to final approval or occupancy to ensure proper installation of permanent stormwater facilities. (S5.C.6.c.v)

51. Verified a maintenance plan is completed and responsibility for maintenance is assigned for projects prior to final approval and occupancy being granted. (S5.C.6.c.v)

52. Number of enforcement actions taken during the reporting period (based on construction phase inspections at new development and redevelopment projects per S5.C.6.c.ii-iv). (S5.C.7.c.viii)

53. Achieved at least 80% of scheduled construction-related inspections. (S5.C.6.c.vi)

54. Made Ecology's Construction Stormwater General Permit Notice of Intent and the Industrial Stormwater General Permit Notice of Intent available to representatives of proposed new development and redevelopment? (S5.C.6.d)

55. All staff 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 are trained to conduct these activities? (S5.C.6.e)

Operations and Maintenance

56. Implemented maintenance standards that are as protective, or more protective, of facility function than those specified in the *Stormwater Management Manual for Western Washington* or a Phase I program approved by Ecology per S5.C.7.a.?

57. Updated maintenance standards specified in *Stormwater Management Manual for Western Washington* per S5.C.7.a? (Required no later than June 30, 2022)

58. Applied a maintenance standard for a facility or facilities which do not have maintenance standards specified in the *Stormwater Management Manual for Western Washington*? If so, note in the *Comments* field what kinds of facilities are covered by this alternative standard. (S5.C.7.a)

59. Verified that maintenance was performed per the schedule in S5.C.7.a.ii, when an inspection identified an exceedance of the maintenance standard.

    59a. **Attach** documentation of maintenance time frame exceedances that were beyond the Permittee's control.

60. Implemented an ordinance, or other enforceable mechanisms, to verify long-term operation and maintenance of stormwater treatment and flow control BMPs/facilities regulated by the Permittee per S5.C.7.b.i(a)?

61. Annually inspected stormwater treatment and flow control BMPs/facilities regulated by the Permittee per S5.C.7.b.i(b).

    61a. If using reduced inspection frequency for the first time during this permit cycle, **attach** documentation per S5.C.7.b.i(b).

62. Achieved at least 80% of scheduled inspections to verify adequate long-term O&M. (S5.C.7.b.ii)

63. Annually inspected all municipally owned or operated stormwater treatment and flow control BMPs/facilities? (S5.C.7.c.i)

    63a. Number of known stormwater treatment and flow control BMPs/facilities owned or operated by the Permittee.

    63b. Number of facilities inspected during the reporting period.

    63c. Number of facilities for which maintenance was performed during the reporting period.

64. If using reduced inspection frequency for the first time during this permit cycle, **attach** documentation per S5.C.7.c.i.

65. Conducted spot checks and inspections, if necessary, of potentially damaged stormwater facilities after major storms as per S5.C.7.c.ii.

66. Inspected catch basins owned or operated by the Permittee every two years or used an alternative approach? (S.5.C.7.c.iii)

    66a. Number of known catch basins?

    66b. Number of catch basins inspected during the reporting period?

66c. Number of catch basins cleaned during the reporting period?

67. **Attach** documentation of alternative catch basin inspection approach for those owned or operated by the Permittee if used. (S5.C.7.c.iii)

68. Implemented practices, policies, and procedures to reduce stormwater impacts associated with runoff from all lands owned or maintained by the Permittee, and road maintenance activities under the functional control of the Permittee. (S5.C.7.d)

69. Documented practices, policies, and procedures to reduce stormwater impacts associated with runoff from all lands owned or maintained by the Permittee, and road maintenance activities under the functional control of the Permittee. (S5.C.7.d – Required by December 31, 2022)

69a. Cite documentation in *Comments.*

70. Implemented an ongoing training program for Permittee employees whose primary construction, operations or maintenance job functions may impact stormwater quality. (S5.C.7.e)

71. Implemented a *Stormwater Pollution Prevention Plan* (SWPPP) for all heavy equipment maintenance or storage yards, and material storage facilities owned or operated by the Permittee in areas subject to this Permit that are not required to have coverage under an NPDES permit that covers stormwater discharges associated with the activity. (S5.C.7.f)

72. Updated, if needed, SWPPPs according to S5.C.7.f no later than December 31, 2022.

Source Control Program for Existing Development

73. Adopted ordinance(s), or other enforceable documents, requiring the application of source control BMPs for pollutant generating sources associated with existing land uses and activities per S.5.C.8.b.i. Cite ordinance in *Comments* field. (Required by August 1, 2022)

74. Established an inventory per S5.C.8.b.ii. (Required by August 1, 2022)

74a. Number of total sites identified for the inventory.

75. Implemented an inspection program per S5.C.8.b.iii. (Required by January 1, 2023)

76. Implemented a progressive enforcement policy per S5.C.8.b.iv. (Required by January 1, 2023)

77. **Attach** a summary of actions taken to implement the source control program per S5.C.8.b.iii and S5.C.8.b.iv.

78. **Attach** a list of inspections, per S5.C.8.b.iii, organized by the business category, noting the number of times each business was inspected and if enforcement actions were taken.

79. Implemented an ongoing source control training program per S5.C.8.b.v?

Compliance with Total Maximum Daily Load Requirements

80. Complied with the Total Maximum Daily Load (TMDL)-specific requirements identified in Appendix 2. (S7.A)

    80a. List any requirements that were not met.

81. For TMDLs listed in Appendix 2: **Attach** a summary of relevant SWMP and Appendix 2 activities to address the applicable TMDL parameter(s). (S7.A)

Monitoring and Assessment

82. Submitted payment for cost-sharing for Stormwater Action Monitoring (SAM) status and trends monitoring no later than December 1, 2019 (S8.A.1); and no later than August 15 of each subsequent year. (S8.A.2.a)

83. Notified Ecology by December 1, 2019, which option you selected: S8.A.2.a or S8.A.2.b.

84. Submitted payment for cost-sharing for SAM effectiveness and source identification studies no later than December 1, 2019 (S8.B.1); and no later than August 15 of each subsequent year. (S8.B.2.a or S8.B.2.b)

85. Notified Ecology by December 1, 2019, which option you selected: S8.B.2.a or S8.B.2.b.

86. If conducting stormwater discharge monitoring in accordance with S8.C.1., submitted a QAPP to Ecology no later than February 1, 2020? (S8.C.1.b and Appendix 9)

87. If conducting stormwater discharge monitoring in accordance with S8.C.1., **attach** a data and analysis report per S8.C.1 and Appendix 9. (Due annually beginning March 31, 2021)

General Conditions and Compliance with Standards

88. Notified Ecology in accordance with G3 of any discharge into or from the Permittees MS4 which could constitute a threat to human health, welfare, or the environment. (G3)

89. Took appropriate action to correct or minimize the threat to human health, welfare, and/or the environment, per G3.A.

90. Notified Ecology within 30 days of becoming aware that a discharge from the Permittee's MS4 caused or contributed to a known or likely violation of water quality standards in the receiving water. (S4.F.1)

91. If requested, submitted an *Adaptive Management Response* report in accordance with S4.F.3.a.

92. **Attach** a summary of the status of implementation of any actions taken pursuant to S4.F.3 and the status of any monitoring, assessment, or evaluation efforts conducted during the reporting period. (S4.F.3.d)

93. Notified Ecology of the failure to comply with permit terms and conditions within 30 days of becoming aware of the non-compliance. (G20)

94. Number of non-compliance notifications (G20) provided in reporting year. List permit conditions described in non-compliance notification(s) in *Comments* field.

APPENDIX 4 – Annual Report Questions for Secondary Permittees

Permittees are required to submit annual reports online or in a format provided by Ecology, pursuant to permit condition S9.A.

S6.D Stormwater Management Program

1. **Attach** a notification of any jurisdictional boundary changes resulting in an increase or decrease in the Secondary Permittee's geographic area of coverage during the reporting period. (Required annually, S9.E.5)

S6.D.1 Public Education and Outreach

2. Labeled all storm drain inlets owned or operated by the Secondary Permittee that are located in maintenance yards, in parking lots, along sidewalks, and at pedestrian access points. (New Secondary Permittees - Required no later than four years from initial date of permit coverage, S6.D.1.a)
3. Re-labeled all storm drain inlets with labels when no longer clearly visible and/or easily readable within 90 days. (Required no later than four years from initial date of permit coverage, S6.D.1.a)
4. (Public ports, colleges, and universities only) Distributed educational information to tenants and residents about the impact of stormwater discharges on receiving waters and steps that can be taken to reduce pollutants in stormwater runoff. (Required no later than three years from initial date of permit coverage, S6.D.1.b)

S6.D.2 Public Involvement and Participation

5. Made the annual report and SWMP Plan available on website. (Required no later than May 31, annually, S6.D.2.a and b.)

S6.D.3 Illicit Discharge Detection and Elimination

6. Complied with all relevant ordinances, rules, and regulations of the local jurisdiction(s) that govern non-stormwater discharges. (Required after initial date of permit coverage, S6.D.3.a)
7. Implemented policies to prohibit illicit discharges, and identified enforcement mechanisms. (New Secondary Permittees - Required no later than one year from initial date of permit coverage, S6.D.3.b)
8. Implemented an enforcement plan to ensure compliance with policies to prohibit illicit discharges. (New Secondary Permittees - Required no later than 18 months from initial date of permit coverage, S6.D.3.b)
9. Developed a map of the storm sewer system showing all known storm drain outfalls, receiving waters, and areas contributing runoff to each outfall. (New Secondary Permittees - Required no later than four and one half years from initial date of permit coverage, S6.D.3.c)

10. Maintained a map of the MS4 showing all known storm drain outfalls, receiving waters, and areas contributing runoff to each outfall. Made the map available on request to Ecology or others. (Required no later than four and one half years from initial date of permit coverage, S6.D.3.c)
11. Conducted field inspections and visually inspected for illicit discharges at approximately one third of all known MS4 outfalls. (Required no later than two years from initial date of permit coverage, S6.D.3.d)
12. Implemented procedures to identify and remove illicit discharges. (Required no later than two years from initial date of permit coverage, S6.D.3.d)
13. Attach a summary of each illicit discharge discovered and actions taken to eliminate each of the discharges. (S6.D.3.d).
14. Implemented a spill response plan that includes coordination with a qualified spill responder. (Required no later than four and one-half years from initial date of permit coverage, S6.D.3.e)
15. Provided staff training or coordinated with existing training to educate staff on proper BMPs for preventing illicit discharges, including spills as described in S6.D.3.f. (Required no later than two years from initial date of permit coverage)

S6.D.4 Construction Site Stormwater Control

16. Complied with all relevant ordinances, rules, and regulations of the local jurisdiction(s) that govern construction phase stormwater pollution prevention activities, if applicable. (Required after initial date of permit coverage, S6.D.4.a)
17. Ensured that all applicable construction projects under the functional control of the Secondary Permittee obtained NPDES permit coverage. (Required after initial date of permit coverage, S6.D.4.b)
18. Coordinated with local jurisdictions on construction projects owned or operated by other entities that discharge into Secondary Permittee's MS4 as per S6.D.4.c. (Required after initial date of permit coverage)
19. Provided training for relevant staff in erosion and sediment control BMPs and requirements, or hired trained contractors to perform the work for all construction projects owned and operated by the Secondary Permittee. (Required after initial date of permit coverage, S6.D.4.d)
20. Provided access, as requested, for inspection of construction sites under the control of the Secondary Permittee during the land disturbing activity and/or construction period. (Required after initial date of permit coverage, S6.D.4.e)

S6.D.5 Post-Construction Stormwater Management for New Development and Redevelopment

21. Complied with all relevant ordinances, rules, and regulations of the local jurisdiction(s) that govern post-construction stormwater pollution prevention activities, including proper operation and maintenance of the MS4. (Required after initial date of permit coverage, S6.D.5.a)

22. Coordinated with local jurisdiction regarding projects owned or operated by other entities which discharge into the Secondary Permittee's MS4. (Required after initial date of permit coverage, S6.D.5.b)

S6.D.6 Pollution Prevention and Good Housekeeping for Municipal Operations

23. Implemented an Operation and Maintenance program. (New Secondary Permittees - Required no later than three years from initial date of permit coverage, S6.D.6.a)
24. Established and implemented maintenance standards for stormwater collection and conveyance systems as described in S6.D.6.a.i. (New Secondary Permittees - Required no later than three years from initial date of permit coverage.)
25. Conducted spot checks of potentially damaged stormwater treatment and flow control BMPs/facilities after major storms. (New Secondary Permittees - Required no later than three years from initial date of permit coverage, S6.D.6.a.i)
26. Developed and implemented a Stormwater Pollution Prevention Plan (SWPP) for material storage areas, heavy equipment maintenance or storage yards not covered by another NPDES permit that authorizes stormwater discharges associated with the activity. (New Secondary Permittees - Required no later than three years from initial date of permit coverage, S6.D.6.a.vi)
27. Have NPDES permit coverage for *Industrial Stormwater General Permit* for all applicable industrial facilities operated by the Permittee, or another NPDES permit that authorizes surface water discharges associated with the activity. (Required after initial date of permit coverage, S6.D.6.b)
28. Implemented a program designed to train staff to carry out the Operations and Maintenance plan as described in S6.D.6.d. (Required no later than three years from initial date of permit coverage)

S7. Compliance with Total Maximum Daily Load Requirements

29. Is there an approved Total Maximum Daily Load (TMDL) applicable to stormwater discharges from a MS4 owned or operated by the Permittee? (S7)
30. Complied with the specific requirements identified in Appendix 2. (S7.A)
31. **Attach** status report of TMDL implementation. (S7.A)

General Conditions

32. Notified Ecology of the failure to comply with the permit terms and conditions within 30 days of becoming aware of the non-compliance. (G20)
33. Notified Ecology immediately in cases where the Permittee becomes aware of a discharge into or from the Permittee's MS4 which may constitute a threat to human health, welfare, or the environment. (G3)
34. Took appropriate action to correct or minimize discharges into or from the MS4 which could constitute a threat to human health, welfare, or the environment. (G3.A)

S4 Compliance with Standards

35. If applicable, **attach** a summary of the status of implementation of any actions taken pursuant to S4.F, and the status of any monitoring, assessment, or evaluation efforts conducted during the reporting period. (S4.F.3.d)

APPENDIX 5 – Annual Report Questions for New Permittees

New Permittees that are Cities, Towns, or Counties are required to submit the following information in an online annual report form, or an alternative format provided by Ecology if requested, pursuant to Special Condition S9.A.

Reporting Requirements and SWMP

1. **Attach** annual Stormwater Management Program Plan (SWMP). (S5.A.2)
2. **Attach** a notification of any annexations, incorporations, or boundary changes resulting in an increase or decrease in the Permittee's geographic area of permit coverage during the reporting period per S9.D.6.
3. Implemented an ongoing program to gather, track, and maintain information per S5.A.3, including costs or estimated costs of developing and implementing the SWMP. (Required to begin no later than August 1, 2021)
4. Coordinated among departments within the jurisdiction to eliminate barriers to permit compliance. (S5.A.5.b)

    4a. **Attach** a written description of internal coordination mechanisms. (S5.A.5.b– Required no later than March 31, 2021)

Stormwater Planning

5. Have you convened an interdisciplinary team to inform and assist in the development, progress, and influence of the stormwater planning program? (S.5.C.1.a– Required by August 1, 2020)

Coordination with long-range plan updates

6. List the relevant land use planning efforts that have taken place in your jurisdiction (land use plans that are used to accommodate growth, stormwater management, or transportation). (S5.C.1.b.i(a) and (b) – Required by March 31, 2021 and January 1, 2023)
7. List of stormwater capital projects (currently in or slated for future design and construction) that resulted from this planning. (S5.C.1.b.i(a) and (b) – Required by March 31, 2021 and January 1, 2023)
8. Describe watershed protection measures associated with stormwater management and land use planning actions that resulted from this planning. (S5.C.1.b.i(a) and (b) – Required by March 31, 2021 and January 1, 2023)
9. Were land acquisitions identified (or are planning ahead for) that are useful for stormwater facilities to accommodate growth or to better serve an existing developed area? (S5.C.1.b.i(a) and (b) – Required by March 31, 2021 and January 1, 2023)

    9a.If yes, for what purpose?

10. Identified corrective actions, in addition to the minimum requirements of the Municipal Stormwater Permits, to control or treat municipal stormwater discharges that pollute waters of the State (e.g. Limits to impervious cover added to any zoning districts, regional facility planning, minimization of vegetation loss, etc.)? (S5.C.1.b.i(a) and (b) – Required by March 31, 2021 and January 1, 2023)

10a. If yes, briefly describe and list relevant plan or code sections, if applicable.

11. Updates to goals and policies related to investment in stormwater management facilities/BMPs? (yes/no) (S5.C.1.b.i(a) and (b) – Required by March 31, 2021 and January 1, 2023)

    11a. If yes, briefly describe.

12. Does the long-range plan identify the location and existing capacity of the stormwater facilities owned or operated by the permittee and show which of those stormwater facilities have unused capacity? (yes/no) (S5.C.1.b.i(a) and (b) – Required by March 31, 2021 and January 1, 2023)

    12a. Do these stormwater facility locations impact where housing, or other types of development, are projected to be located or influence the acquisition of land? (if yes, how?)

    12b. Does the long-range plan identify a lack of facilities and the potential impacts of existing or new development to those areas and receiving waters?

    12c. Any new proposed locations and capacities of stormwater facilities needed for the timeframe of the plan?

13. Based on the projected population densities and distribution of growth over the planning period, describe how stormwater runoff impacts are forecasted. Does stormwater management information (including water quality) direct where growth is directed? (S5.C.1.b.i(a) and (b) – Required by March 31, 2021 and January 1, 2023)

14. Did you submit a report as described in S5.C.1.b.i(b)? (Required to submit no later than January 1, 2023)

Low impact development code-related requirements

15. Reviewed, revised and made effective the low impact development-related enforceable documents per S5.C.1.c.ii. (Required by December 31, 2023)

    15a. Attach a summary of the LID review and revision process that includes the requirements listed in S.5.C.1.c.ii. (Required no later than March 31, 2024)

Education and Outreach

16. **Attach** a description of general awareness efforts conducted per S5.C.2.a.i, including what, if any, regional program you are participating in. (Required to begin no later than August 1, 2021)

17. Developed a behavior change program that is tailored to the community in accordance with S5.C.2.a.ii(c)? (Required no later than August 1, 2021)

    17a. **Attach** the strategy and schedule developed in accordance with S5.C.2.a.ii(c).

18. Provided stewardship opportunities (or partnered with others) to encourage resident participation. (S5.C.2.a.iii – Required to begin no later than August 1, 2021)

19. Began implementing strategy outlined in S.5.C.2.a.ii(c). (Required by April 1, 2021)

Public Participation

20. Describe in *Comments* field the opportunities created for the public, including overburdened communities, to participate in the decision making processes involving the development, implementation, and updates of the Permittee's SWMP. (S5.C.3.a – Required to begin no later than August 1, 2020)

21. Posted the updated SWMP Plan and latest annual report on your website no later than May 31. List the website address in *Comments* field. (S5.C.3.b – Required to begin posting no later than May 31, 2021)

MS4 Mapping and Documentation

22. Developed a map of the MS4 that includes the requirements listed in S5.C.4.a.i-vi. (Required no later than February 2, 2024)

23. Met the requirements of S5.C.4.a.vii for all connections to the MS4 authorized after August 1, 2019. (Required to begin no later than August 1, 2019)

Illicit Discharge Detection and Elimination

24. Informed public employees, businesses, and the general public of hazards associated with illicit discharges per S.5.C.5.b? (Required no later than August 1, 2021)

25. Adopted and implemented an ordinance or other regulatory mechanism to effectively prohibit illicit discharges per the requirements in S5.C.5.c.i-iv. (Required no later than August 1, 2021)

    25a. Cite reference for ordinance or other regulatory mechanism to meet this requirement in *Comments* field.

26. Developed and implemented procedures for conducting illicit discharge investigations in accordance with S5.C.5.d.i? Cite methodology used in the *Comments* sections. (Required no later than August 1, 2023)

27. Screened on average 12% of MS4 within coverage area each year in accordance with S5.C.5.d.i.(a) (Required to screen 12% no later than December 31, 2023; 12% on average each year thereafter)

    27a. Percentage of total MS4 screened from permit issuance through end of reporting year?

28. How are you publicizing your hotline? (S5.C.5.d.ii – Required to be available no later than August 1, 2021)

29. Developed and implemented an ongoing illicit discharge training program for all municipal field staff per S5.C.5.d.iii. (Required to begin no later than February 2, 2021)

30. Developed and implemented a program to characterize, trace, and eliminate illicit discharges into the MS4 found by or reported to the Permittee. (S5.C.5.e. – Required no later than August 1, 2023)

31. Trained municipal illicit discharge detection staff to conduct illicit discharge detection and elimination activities referenced in S5.C.5.f. (Required no later than February 2, 2021)

32. **Attach** a report with data describing the actions taken to characterize, trace, and eliminate each illicit discharge reported to, or investigated by, the Permittee as described in S5.C.5.g. The submittal must include all of the applicable information and must follow the instructions, timelines, and format described in Appendix 12.

Controlling Runoff from New Development, Redevelopment and Construction Sites

33. Developed and implemented a program to reduce pollutants in stormwater runoff to the MS4 from new development, redevelopment and construction site activities. (S5.C.6 – Required no later than December 31, 2022)

34. Adopted and implemented an ordinance or other enforceable mechanism to address runoff from new development, redevelopment and construction sites per the requirements of S5.C.6.a. (Required no later than December 31, 2022)

    34a. Cite the jurisdiction code reference used to meet this requirement in *Comments* field.

35. Number of exceptions/variances granted to the minimum requirements in Appendix 1. (S5.C.6.b.i and Section 6 of Appendix 1– Required no later than December 31, 2022)

36. Number of adjustments granted to the minimum requirements in Appendix 1. (S5.C.6.b.i and Section 6 of Appendix 1– Required no later than December 31, 2022)

37. Reviewed Stormwater Site Plans for all proposed development activities that meet the thresholds adopted pursuant to S5.C.6.b.ii. (S5.C.6.c.i – Required no later than December 31, 2022)

    37a. Number of site plans reviewed during the reporting period.

38. Inspected, prior to clearing and construction, all permitted development sites per S5.C.6.c.ii. (Required no later than December 31, 2022)

39. Inspected all permitted development sites during construction to verify proper installation and maintenance of required erosion and sediment controls. (S5.C.6.c.iii – Required no later than December 31, 2022)

    39a. Inspected new residential stormwater treatment and flow control BMPs/facilities and catch basins every 6 months per S5.C.6.c.iv to identify maintenance needs and enforce compliance with maintenance standards.

40. Number of enforcement actions taken during the reporting period based on construction phase inspections at new development and redevelopment projects. (S5.C.6.c.ii-iv – Required no later than December 31, 2022)

41. Inspected all permitted development sites upon completion of construction and prior to final approval or occupancy to ensure proper installation of stormwater facilities. (S5.C.6.c.v – Required no later than December 31, 2022)

42. Verified a maintenance plan is completed and responsibility for maintenance is assigned for projects. (S5.C.6.c.v – Required no later than December 31, 2022)

43. Achieved at least 80% of scheduled construction-related inspections. (S5.C.6.c.vi – Required no later than December 31, 2022)

44. Made Ecology's Construction Stormwater General Permit *Notice of Intent* and Industrial Stormwater General Permit *Notice of Intent* available to representatives of proposed new development and redevelopment? (S5.C.6.d – Required no later than August 1, 2019)

45. All staff whose primary job duties are implementing the program to control stormwater runoff from new development, redevelopment, and construction sites are trained to conduct these activities? (S5.C.6.e – Required no later than December 31, 2022)

Operation and Maintenance

46. Developed and implemented maintenance standards as protective, or more protective, of facility function as those specified in the *Stormwater Management Manual for Western Washington*. (S5.C.7.a – Required no later than December 31, 2022)

47. Applied a maintenance standard for a facility or facilities which do not have maintenance standards specified in the *Stormwater Management Manual for Western Washington*. (S5.C.7.a – Required to report, if applicable, no later than December 31, 2022)

    47a. Note in the *Comments* field what kinds of facilities are covered by this alternative maintenance standard.

48. Verified that maintenance was performed per the schedule in S5.C.7.a.ii when an inspection identified an exceedance of the maintenance standard. (December 31, 2022)

    48a. **Attach** documentation of any maintenance delays.

49. Implemented an ordinance or other enforceable mechanisms to verify long-term operation and maintenance of stormwater treatment and flow control BMPs/facilities regulated by the permittee per S5.C.7.b.i?

50. Annually inspected stormwater treatment and flow control BMPs/facilities regulated by the permittee per S5.C.7.b.i.(b).

    50a. If using reduced inspection frequency for the first time during this permit cycle, **attach** documentation per S5.C.7.b.i.(b)

51. Achieved at least 80% of scheduled inspections to verify adequate long-term O&M. (S5.C.7.b.ii)

52. Annually inspected all municipally owned or operated permanent stormwater treatment and flow control BMPs/facilities. (S5.C.7.c.i – Required no later than December 31, 2022)

    52a. Number of known municipally owned or operated stormwater treatment and flow control BMPs/facilities.

    52b. Number of facilities inspected during the reporting period.

    52c. Number of facilities for which maintenance was performed during the reporting period.

53. If used a reduced inspection frequency, **attach** documentation as per S5.C.7.c.i. (Required, if applicable, no later than December 31, 2022)

54. Conducted spot checks and inspections (if necessary) of potentially damaged stormwater facilities after major storms. (S5.C.7.c.ii – Required no later than December 31, 2022)

55. Inspected all municipally owned or operated all catch basins and inlets owned or operated by the Permittee at least once during the permit term, or used an alternative approach. (S5.C.7.c.iii – Required no later than February 2, 2024)

    55a. Number of known catch basins.

    55b. Number of catch basins inspected.

    55c. Number of catch basins cleaned.

56. **Attach** documentation of alternative catch basin cleaning approach, if used. (S5.C.7.c.iii – Required, if applicable, no later than February 2, 2024)

57. Developed and implemented practices, policies, and procedures to reduce stormwater impacts associated with runoff from all lands owned or maintained by the Permittee, and road maintenance activities under the functional control of the Permittee. (S5.C.7.d – Required no later than December 31, 2022)
58. Developed and implemented an ongoing training program for Permittee employees whose primary construction, operations or maintenance job functions may impact stormwater quality. (S5.C.7.e – Required no later than December 31, 2022)
59. Developed and implemented a Stormwater Pollution Prevention Plan (SWPPP) for all heavy equipment maintenance or storage yards, and material storage facilities owned or operated by the Permittee in areas subject to this Permit as described in (S5.C.7.f. -Required no later than December 31, 2022)

Source Control Program for Existing Development

60. Adopted ordinance(s), or other enforceable documents, requiring the application of source control BMPs for pollutant generating sources associated with existing land uses and activities per S.5.C.8.b.i. (Required by August 1, 2022)

    60a. Cite ordinance in *Comments* field.

61. Established an inventory per S5.C.8.b.ii. (Required by August 1, 2022)

    61a. Number of total sites identified for the inventory.

62. Implemented an inspection program per S5.C.8.b.iii. (Required by January 1, 2023)
63. Implemented a progressive enforcement policy per S5.C.8.b.iv. (Required by January 1, 2023)
64. **Attach** a summary of actions taken to implement the source control program per S5.C.8.b.iii and S5.C.8.b.iv. (January 1, 2023)

    64a. **Attach** a list of inspections, per S5.C.8.b.iii, organized by the business category, noting the amount of times each business was inspected, and if enforcement actions were taken.

65. Implemented an ongoing source control training program per S5.C.8.b.v.

Compliance with Total Maximum Daily Load Requirements

66. Complied with the Total Maximum Daily Load (TMDL) - specific requirements identified in Appendix 2, if applicable. (S7.A)

    66a. List and requirements that were not met.

67. For TMDLs listed in Appendix 2, **attach** a summary of relevant SWMP and Appendix 2 activities to address the applicable TMDL parameter. (S7.A)

General Conditions and Compliance with Standards

68. Notified Ecology in accordance with G3 of any discharge into or from the Permittee's MS4 which could constitute a threat to human health, welfare, or the environment. (G3)
69. Took appropriate action to correct or minimize the threat to human health, welfare, and/or the environment per G3.A.

70. Notified Ecology within 30 days of becoming aware that a discharge from the Permittee's MS4 caused or contributed to a known or likely violation of water quality standards in the receiving water. (S4.F.1)
71. If requested, submitted an Adaptive Management Response report in accordance with S4.F.3.a.
72. **Attach** a summary of the status of implementation of any actions taken pursuant to S4.F.3 and the status of any monitoring, assessment, or evaluation efforts conducted during the reporting period? (S4.F.3.d)
73. Notified Ecology of the failure to comply with the permit terms and conditions within 30 days of becoming aware of the non-compliance? (G20)
74. Number of non-compliance notifications (G20) provided in reporting year. List permit conditions described in non-compliance notification(s) in *Comments* field.

APPENDIX 6 – Street Waste Disposal

Street Waste Liquids General Procedures

Street waste collection should emphasize retention of solids in preference to liquids. Street waste solids are the principal objective in street waste collection and are substantially easier to store and treat than liquids.

Street waste liquids require treatment before their discharge. Street waste liquids, which include, but are not limited to, eductor and street sweeping truck decant and drainage from piles and containers, usually contain high amounts of suspended and total solids, and absorbed metals. Treatment requirements depend on the discharge location.

Discharges to sanitary sewer and storm sewer systems must be approved by the entity responsible for operation and maintenance of the system. Ecology will not generally require waste discharge permits for discharge of stormwater decant to sanitary sewers or to stormwater treatment BMPs constructed and maintained in accordance with Ecology's *Stormwater Management Manual for Western Washington*.

The following order of preference, for disposal of catch basin decant liquid and water removed from stormwater treatment facilities, is ***required***.

1. Discharge of street waste decant liquids to a municipal sanitary sewer connected to a Public Owned Treatment Works (POTW) is the *preferred disposal option*. Discharge to a municipal sanitary sewer requires the approval of the sewer authority. Approvals for discharge to a POTW will likely contain pretreatment, quantity, and location conditions to protect the POTW.

2. Discharge of street waste decant liquids may be allowed into a Basic or Enhanced Stormwater Treatment BMP, if option 1 is not available. Street waste liquid may be discharged back into the storm sewer system under the following conditions only:

- The preferred disposal option of discharge to sanitary sewer is not reasonably available, ***and***
- The discharge is to a Basic or Enhanced Stormwater Treatment Facility. If pretreatment does not remove visible sheen from oils, the treatment facility must be able to prevent the discharge of oils causing a visible sheen, ***and***
- The discharge from the educator truck is as near to the inlet of the treatment facility as is practical, to minimize contamination or recontamination of the collection system, ***and***
- The storm sewer system owner/operator has granted approval and has determined that the stormwater treatment facility will accommodate the increased loading. Pretreatment conditions to protect the stormwater treatment BMP may be issued as part of the approval process. Following local pretreatment conditions is a requirement of this Permit.

- Flocculants for the pretreatment of street waste liquids must be non-toxic under the circumstances of use and must be approved in advance by the Department of Ecology.

The reasonable availability of sanitary sewer discharge will be determined by the Permittee, by evaluating such factors as distance, time of travel, load restrictions, and capacity of the stormwater treatment facility.

3. Water removed from stormwater ponds, vaults and oversized catch basins may be returned to the storm sewer system. Stormwater ponds, vaults, and oversized catch basins contain substantial amounts of liquid, which hampers the collection of solids and pose problems if the removed waste must be hauled away from the site. Water removed from these facilities may be discharged back into the pond, vault, or catch basin provided:

- Clear water removed from a stormwater treatment structure may be discharged directly to a down gradient cell of a treatment pond or into the storm sewer system.
- Turbid water may be discharged back into the structure it was removed from if:
  - The removed water has been stored in a clean container (eductor truck, Baker tank or other appropriate container or facility used specifically for handling stormwater or clean water); ***and***
  - There will be no discharge from the treatment structure for at least 24 hours.
- The discharge must be approved by the storm sewer system owner/operator.

Street Waste Solids

Soils generated from maintenance of the MS4 may be reclaimed, recycled or reused when allowed by local codes and ordinances. Soils that are identified as contaminated, pursuant to Chapter 173-350 WAC, shall be disposed of at a qualified solid waste disposal facility.

APPENDIX 7 – Determining Construction Site Sediment Damage Potential

The following rating system allows objective evaluation of a particular development site's potential to discharge sediment. Permittees may use the rating system below or develop alternative process designed to identify site-specific features which indicate that the site must be inspected prior to clearing and construction. Any alternative evaluation process must be documented and provide for equivalent environmental review.

Step 1 is to determine if there is a sediment/erosion sensitive feature downstream of the development site. If there is such a site downstream, complete Step 2, assessment of hydraulic nearness. If there is a sediment/erosion sensitive feature and it is hydraulically near the site, go to Step 3 to determine the construction site sediment transport potential.

STEP 1 – Sediment/Erosion Sensitive Feature Identification

Sediment/erosion sensitive features are areas subject to significant degradation due to the effect of sediment deposition or erosion. Special protection must be provided to protect them. Sediment/erosion sensitive features include but are not limited to:

i. Salmonid bearing fresh water streams and their tributaries or freshwater streams that would be Salmonid bearing if not for anthropogenic barriers;
ii. Lakes;
iii. Category I, II, and III wetlands;
iv. Marine near-shore habitat;
v. Sites containing contaminated soils where erosion could cause dispersal of contaminants; and
vi. Steep slopes (25% or greater) associated with one of the above features.

Identify any sediment/erosion sensitive features, and proceed to Step 2. If there are none, the assessment is complete.

STEP 2 – Hydraulic Nearness Assessment

Sites are hydraulically near a feature if the pollutant load and peak quantity of runoff from the site will not be naturally attenuated before entering the feature. The conditions that render a site hydraulically near to a feature include, but are not limited to, the following:

i. The feature or a buffer to protect the feature is within 200 feet downstream of the site.
ii. Runoff from the site is tight-lined to the feature or flows to the feature through a channel or ditch.

A site is not hydraulically near a feature if one of the following takes place to provide attenuation before runoff from the site enters the feature:

i. Sheet flow through a vegetated area with dense ground cover
ii. Flow through a wetland not included as a sensitive feature

iii. Flow through a significant shallow or adverse slope, not in a conveyance channel, between the site and the sensitive feature.

Identify any of the sediment/erosion sensitive features from Step 1 that are hydraulically near the site, and proceed to Step 3. If none of the sediment/erosion sensitive features are hydraulically near the site the assessment is complete.

STEP 3 – Construction Site Sediment Transport Potential

Using the worksheet below, determine the total points for each development site. Assign points based on the most critical condition that affects 10% or more of the site.

If soil testing has been performed on site, the results should be used to determine the predominant soil type on the site. Otherwise, soil information should be obtained from the county soil survey to determine Hydrologic Soil Group (Table of Engineering Index Properties for step 1.D) and Erosion Potential (Table of Water Features for step 1.E).

When using the county soil survey, the dominant soil type may be in question, particularly when the site falls on a boundary between two soil types or when one of two soil types may be present on a site. In this case, the soil type resulting in the most points on the rating system will be assumed unless site soil tests indicate that another soil type dominates the site.

Use the point score from Step 3 to determine whether the development site has a high potential for sediment transport off of the site.

Total Score	**Transport Rating**
<100	Low
≥100	High

A high transport rating indicates a higher risk that the site will generate sediment contaminated runoff.

Construction Site Sediment Transport Potential Worksheet

A. Existing slope of site (average, weighted by aerial extent): Points

2% or less 0

>2-5% 5

>5-10% 15

>10-15% 30

>15% 50

B. Site Area to be cleared and/or graded:

<5,000 sq. ft. 0

5,000 sq. ft. – 1 acre 30

>1 acres 50

C. Quantity of cut and/or fill on site:

<500 cubic yards 0

500 – 5,000 cubic yards 5

>5,000 – 10,000 cubic yards 10

>10,000 – 20,000 cubic yards 25

>20,000 cubic yards 40

D. Runoff potential of predominant soils (Soil Conservation Service):

Hydrologic soil group A 0

Hydrologic soil group B 10

Hydrologic soil group C 20

Hydrologic soil group D 40

E. Erosion Potential of predominant soils (Unified Classification System):

GW, GP, SW, SP soils 0

Dual classifications (GW-GM, GP-GM, GW-GC,

GP-GC, SW-SM, SW-SC, SP-SM, SP-SC) 10

GM, GC, SM, SC soils 20

ML, CL, MH, CH soils 40

F. Surface or Groundwater entering site identified and intercepted[1]:

Yes 0

No 25

G. Depth of cut or height of fill >10 feet:

Yes 25

No 0

H. Clearing and grading will occur in the wet season (October 1 – May 1):

Yes 50

No 0

TOTAL POINTS..... _____

[1] If no surface or ground water enters the site, assign 0 points.

APPENDIX 8 – Businesses and Activities that are Potential Sources of Pollutants

Use this appendix to help identify businesses and/or activities with potential outdoor pollutant-generating sources that discharge to the MS4 and should be included in the Permittee's source control inventory, developed pursuant to S5.C.8.b.ii. The Standard Industrial Code (SIC), Major Group, and NAICS numbers are provided for reference. Permittees may include additional outdoor pollutant-generating sources that are located within their jurisdictions.

Group Description	SIC Major Group	SIC Industry Group No.	NAICS Major Group
Support Activities for Animal Production		074, 075	1152xx,
Construction of Buildings	15		236
Heavy and Civil Engineering Construction	16		237
Specialty Trade Contractors	17		238
Beverage, Food, and Tobacco Manufacturing	20		311, 312
Wood Product Manufacturing	24		321
Paper Manufacturing	26		3221xx, 3222xx
Printing and Related Support Activities	27		323
Chemical Manufacturing	28		325
Petroleum and Coal Products Manufacturing	29		3241xx
Plastics and Rubber Product Manufacturing	30		326
Leather and Allied Product Manufacturing	31		316
Nonmetallic Mineral Product Manufacturing	32		327
Primary Metal Manufacturing	33		331
Fabricated Metal Product Manufacturing	34		332
Machinery, Computer, and Electronic Product manufacturing	35		333, 334
Electrical Equipment, Appliance, and Component Manufacturing	36		335
Transportation Equipment Manufacturing	37		336
Rail Transportation	40		482

Group Description	SIC Major Group	SIC Industry Group No.	NAICS Major Group
Transit and Ground Passenger Transportation	41		485
Truck Transportation and Warehousing	42		484, 493
Support Activities for Transportation		473, 474, 478	4881xx, 4882xx, 4884xx, 4889xx,
Utilities	49		2211xx
Wholesale Trade – Durable Goods		501, 503, 505, 506, 507, 509	423140, 423930, 423110, 4233xx, 4237xx, 4238xx,
Wholesale Trade – Nondurable Goods		514, 515, 516, 517, 518, 519	424930, 4244xx, 4246xx, 4247xx, 4248xx,
Building Materials, Hardware, Garden Supplies Dealers		521, 523, 526	444
Food and Beverage Stores	54		445
Automotive Dealers and Gasoline Service Stations	55		441, 447
Food Services and Drinking Places	58		722
Rental and Leasing Services		735	5321xx, 5324xx
Repair and Maintenance	75		811192, 8111xx, 8112xx, 8113xx, 8114xx,
Ambulatory Health Care Services and Hospitals		806, 807	621910,
Educational Services	82		6111xx, 6112xx, 6113xx, 6115xx
Museums, Historical Sites, and Similar Institutions		842	712

APPENDIX 9 – Stormwater Discharge Monitoring

This Appendix applies to Phase I and II Permittees with requirements pursuant to Special Condition S8.C – Stormwater *Discharge Monitoring*.

Stormwater discharge monitoring is intended to characterize stormwater runoff quantity and quality at a limited number of locations in a manner that allows analysis of loadings and changes in conditions over time and generalization across the Permittee's jurisdiction.

QAPP Preparation

Permittees shall prepare a Quality Assurance Project Plan (QAPP) in accordance with *Quality Assurance Project Plan Guidance*, Special Condition S8.D, *Phase I Municipal Stormwater Permit,* December 2010 (Ecology Publication no. 10-10-075, https://fortress.wa.gov/ecy/publications/documents/1010075.pdf). The QAPP shall be developed by qualified staff or contractors with experience in applying Ecology or U.S. Environmental Protection Agency (EPA) QAPP Guidelines. Ecology guidelines can be found at https://ecology.wa.gov/; search for 'QA project plan'.

A stormwater discharge monitoring QAPP shall be submitted to Ecology in accordance with the deadlines in S8.C. The QAPP shall describe field collection methods and sample preparation methods appropriate to each group of analytes, reporting limits, and field conditions.

Permittees are responsible for maintaining an up-to-date approved QAPP for stormwater discharge monitoring. Significant changes shall be reviewed by Ecology and reflected in a revised QAPP. Significant changes include, but are not limited to:

- Land disturbing activities over 10 acres in size within the sampled drainage area.
- Relocating a monitoring station.
- Introducing new sampling equipment.
- Unanticipated back water conditions, base flow, or tidal influences.
- Changes in laboratories, analytical methods, or reporting limits.

Permittees continuing their stormwater monitoring discharge programs from prior permits are required to update their QAPP to reflect the changes of this Appendix and extend the timeframe. Locations, methodology, and laboratory techniques previously approved by Ecology should be discussed in the QAPP.

Discharge Monitoring Location Selection

Stormwater monitoring discharge monitoring locations shall have mapped tributary conveyance systems and drainage areas, and be suitable for permanent installation and operation of flow-weighted composite sampling equipment. Additional monitoring location selection guidance and information about how to estimate a rainfall to runoff relationship is available in *Standard Operating Procedure for Automatic Sampling for Stormwater Monitoring*, WQP002, https://fortress.wa.gov/ecy/publications/SummaryPages/1810024.html.

Permittees may identify a discharge monitoring location upstream in the conveyance system (*i.e.*, up-gradient of the outfall) in order to achieve the desired land use, to accommodate the installation of sampling equipment, and/or to avoid or minimize back water or tidal interference.

The QAPP shall describe each stormwater discharge monitoring location and associated drainage basin in detail. The QAPP must describe how each discharge monitoring location was selected, the size of the drainage basin, and the percentage of area in the drainage basin representing the following land uses: high density residential, low density residential, commercial, industrial, agriculture, and transportation right-of-way. Table A9-1, below, provides characteristics to consider for some of these land uses. However, density definitions can vary from jurisdiction to jurisdiction and may be defined locally in codes and comprehensive plans. Report the residential density definitions used if they differ from these.

Table A9-1 Land Use Selection Characteristics

Land use category	Characteristics
High density residential	4 dwelling units per acre or greater
Medium to high density residential	2 to 4 dwelling units per acre
Low density residential	1 to 2 dwelling units per acre
Commercial	Includes multi-family residential
Industrial	Not predominated by one facility with a few operators

Flow Monitoring

Discharge monitoring locations must be evaluated for a rainfall to runoff relationship in order to ensure that the discharge monitoring location will receive enough runoff for sufficient sample volume. This rainfall to runoff relationship will also assist in programming the automatic sampling equipment. In order to establish the rainfall to runoff relationship, one year of continuous flow recording (including base flow and all storm events) is necessary.

Monitoring Frequency

Permittees shall sample each stormwater discharge monitoring location according to the frequency described below. Documented good faith efforts with good professional practice by the Permittee which do not result in collecting a successful sample for the full number of required storms may be considered as contributing toward compliance with this requirement.

For each location, the Permittee shall sample and analyze a minimum of eleven (11) qualifying storm events per water year. Qualifying storm event sampling must be distributed throughout the year, approximately reflecting the distribution of rainfall between the wet and dry seasons (with a goal of 60-80% of the samples collected during the wet season and a goal of 20-40% of the samples collected in the dry season).

Ecology may approve a reduced sampling frequency if the Permittee provides a statistical analysis demonstrating that monitoring and reporting goals can be met with fewer samples.

Qualifying Storm Event Criteria

The wet season is from October 1 through April 30. A qualifying wet season storm event is defined as follows:

- Rainfall volume: 0.20" minimum, no fixed maximum
- Rainfall duration: No fixed minimum or maximum
- Antecedent dry period: Less than or equal to 0.05" rain in the previous 6 hours, unless more time is needed to return to baseflow at the sampling point
- Inter-event dry period: 6 hours

The dry season is from May 1 through September 30. A qualifying dry season storm event is defined as follows:

- Rainfall volume: 0.20" minimum, no fixed maximum
- Rainfall duration: No fixed minimum or maximum
- Antecedent dry period: less than or equal to 0.02" rain in the previous 24 hours
- Inter-event dry period: 6 hours

Types of Sampling

Storm events shall be sampled using flow-weighted composite sampling techniques. Automatic samplers shall be programmed to begin sampling as early in the runoff event as practical and to continue sampling past the longest estimated time of concentration for the tributary area. Refer to *Standard Operating Procedure for Automatic Sampling for Stormwater Monitoring,* WQP002, https://fortress.wa.gov/ecy/publications/SummaryPages/1810024.html.

For storm events lasting less than 24 hours, samples shall be collected for at least 75% of the storm event hydrograph. For storm events lasting longer than 24 hours, samples shall be collected for at least 75% of the hydrograph of the first 24 hours of the storm.

Each composite sample shall be targeted to contain at least 10 aliquots. Composite samples with 7 to 9 aliquots are acceptable if they meet the other sampling criteria and help achieve a representative balance of wet season/dry season events and storm sizes.

Continuous flow recording of all storm events (not just sampled storm events) is necessary for at least one complete water year to establish a baseline rainfall/runoff relationship. Ongoing continuous flow monitoring is required for each of the sampled storm events as necessary to properly conduct the flow-weighted composite sampling. Precipitation data shall be collected from the nearest rain gauge reporting at least hourly rainfall amounts.

Grab samples are necessary for some parameters (table A9-2) and shall be collected early in the storm event. Refer to *Standard Operating Procedure for Grab Sampling for Stormwater Monitoring,* WQP001, https://fortress.wa.gov/ecy/publications/SummaryPages/1810023.html.

Stormwater solids samples shall be collected twice per water year at each stormwater discharge monitoring location, or in the vicinity of each stormwater monitoring location. Ecology may approve reducing this requirement to a once per year frequency if the Permittee provides evidence demonstrating that insufficient material is present in the conveyance. In-line conveyance system

locations are the target for stormwater solids sampling (e.g. catch basin sumps), not receiving waters nor BMPs where soils could be inadvertently sampled.

Use of in-line traps or similar collection system is needed for stormwater solids sampling; refer to *Standard Operating Procedure for Collection of Stormwater Solids using In-Line Traps,* WQP003*,* https://fortress.wa.gov/ecy/publications/SummaryPages/1810025.html. The QAPP will need to specify the sampling approach for the selected sampling sites.

Parameters

Flow-weighted composite samples shall be analyzed for the following parameters utilizing an Ecology- or EPA-accredited laboratory and the methods and reporting limits as provided in table A9-2 or otherwise approved by Ecology.

- Conventional parameters
- Methylene blue activating substances (MBAS)
- Nutrients
- Metals
- Organics:
  - Polycyclic aromatic hydrocarbons (PAHs)
  - Pesticides
  - Phthalates

If the volume of the stormwater sample collected from a qualifying storm is insufficient to allow analysis for all of the parameters listed above, the sample shall be analyzed for as many parameters as possible in the following priority order: (1) metals and hardness; (2) conductivity; (3) TSS; (4) nutrients; (5) organics: PAHs, phthalates, insecticide, and herbicides; (6) BOD_5; and (7) remaining conventional parameters. If insufficient sample exists to run the next highest priority pollutant, that analysis may be bypassed and analyses run on lower priority pollutants in accordance with the remaining priority order to the extent possible. Parameters that are below reporting limits after two years of data may be dropped from the analysis.

Grab samples shall be analyzed for the following parameters utilizing an Ecology- or EPA-accredited laboratory and the methods and reporting limits listed in Table A9-2 at the end of this Appendix.

- Fecal coliform bacteria
- Total petroleum hydrocarbons – diesel fraction

Stormwater solids samples shall be analyzed for the following parameters utilizing an Ecology- or EPA-accredited laboratory and the methods and reporting limits listed in table A9-3 or otherwise approved by Ecology.

- Conventional parameters
- Metals
- Organics:
  - Pesticides
  - PAHs
  - Phthalates

- Phenolics
- Polychlorinated biphenyls (PCBs)
- Polybrominated diphenyl ethers (PBDEs)
- Total petroleum hydrocarbon – diesel fraction (TPH-Dx)

If the stormwater solids sample volume is insufficient to analyze for all of the parameters listed below, the sample shall be analyzed for as many parameters as possible in the following priority order: (1) conventional parameters; (2) metals; (3) TPH-Dx; (4) Phenolics; (5) PAHs and phthalates; (6) pesticides; (7) PBDEs; and (8) PCBs. If insufficient sample exists to run the next highest priority pollutant, that analysis may be bypassed and analyses run on lower priority pollutants in accordance with the remaining priority order to the extent possible. Additional samples shall be collected if insufficient sample exists from a single sample to run all of the organic pollutants listed above. A visual, qualitative determination of grain size shall be reported for all stormwater solids samples (in addition to the quantitative analysis for all samples with sufficient volume). Parameters that are below reporting limits after two years of data may be dropped from the analysis.

Recordkeeping and Reporting

An "Annual Stormwater Discharge Monitoring Report" shall be submitted with each Annual Report beginning in 2021. Each report shall summarize all monitoring data collected during the preceding water year (October 1 – September 30). The first annual monitoring report submitted will include data from a partial water year. Each report shall integrate data from earlier years into the analysis of results, as appropriate. Permittees continuing their stormwater monitoring discharge programs at the same locations will continue summarizing data from prior permit periods.

Annual Monitoring Reports

Annual Stormwater Discharge Monitoring Reports shall provide all monitoring data collected during the preceding water year (October 1 – September 30). Concentration data shall be provided in the same units that are specified for Reporting Limits in Tables A9-2 and A9-3. Flow data shall be provided in gallons per minute. Loading data for each water year shall be provided in total pounds and in pounds per acre. Annual Stormwater Discharge Monitoring Reports shall consist of a narrative report, an Excel spreadsheet with concentration data (summary statistics: minimum, maximum, mean, median and standard deviation), pollutant loading calculations, and a submittal to Ecology's Environmental Information Management (EIM) database for applicable data. For the Annual Stormwater Discharge Monitoring Report to be considered on time, the EIM data submission process must be initiated before April 1 of each relevant year, and completed by June 15 of each relevant year.

The report shall include:

- A brief summary of each monitored drainage basin (full details of the monitoring drainage basin shall be in the QAPP), including any changes within the contributing drainage area or changes to the monitoring station that could affect hydrology and/or pollutant loading.
- A description of each flow-weighted composite and grab sampled storm event, including:
  - General summary about storm event criteria, including:
    - Precipitation data (in inches) including antecedent dry period and rainfall distribution throughout the event.

        - Flow and hydrograph data including sampled and total runoff time periods and volumes.
        - Total number of qualifying storm events captured and analyzed at each monitoring location.
        - Distribution of storms collected between wet and dry seasons (permit goals include 60-80% of storms during the wet season and 20-40% of storms during the dry season).
        - Logistical problems associated with any storm event criterion.
    - A hyetograph and a hydrograph for each sampled storm event. Include properly labeled graphs that display the following:
        - Date of the storm event.
        - Time of day versus precipitation information.
        - Time versus flow rate (in gallons per minute).
        - Time versus aliquot collection.
        - Display the total duration of the storm event, not just the duration when samples were collected (remember your pollutant load calculation must include flow for the entire storm event, not just the water quality sampled portion).
    - A summary of (or in the graph) the total runoff volume in gallons.
    - A rainfall/runoff relationship table used to estimate the un-sampled storm events (when water quality samples were not collected). This is used for future estimations of annual and seasonal loads.
    - Whether or not any chemicals were removed from the list of analysis due to two years of non-detect data.
    - A brief summary with storm event dates where insufficient volumes were collected. Include the parameters analyzed.
- A description of the stormwater solids sampling event, including:
    - Timeframe for the sampling event.
    - A summary of stormwater solids sampling (including dates) where insufficient volumes were collected. Include the parameters analyzed.
    - Whether or not any chemicals were removed from the list of analysis due to two years of non-detect data.
- Event Mean Concentrations (EMCs)
- The wet and dry season pollutant loads and annual pollutant load based on water year for each discharge monitoring location expressed in total pounds, and pounds per acre. The loadings must take into account potential pollutant load from base flow. Loadings shall be calculated following *Standard Operating Procedure for Calculating Pollutant Loads for Stormwater Discharges, WQP004* https://fortress.wa.gov/ecy/publications/SummaryPages/1810026.html. Pollutant loading calculations and reporting are required only for the nutrients, metals, and organics parameters in stormwater. Include the following:
    - For storm events where water quality samples were collected, the load in pounds per day for each parameter for each sampled storm event, include date of storm events.
    - An estimated seasonal pollutant load for each parameter at each discharge monitoring location. This is calculated using all storm events (when water quality samples were collected and when samples were not collected).

  - A total annual pollutant load (wet season load + dry season load) for each parameter (include estimated events).
  - The rainfall/runoff relationship including your pollutant load estimates for un-sampled events.
  - Note that if any data is unavailable to effectively estimate your rainfall to runoff relationship due to an incomplete water year, submit this information in the next year's stormwater monitoring report.
- Quality Assurance/Quality Control information for each successfully sampled qualifying storm event at each discharge monitoring location and solids sample collection event at each discharge monitoring location, including:
  - A narrative summary of your field and laboratory verification, validation results and quality control checks performed.
  - A narrative analysis of your field and laboratory quality control sample results and how they compare with your data quality objectives/indicators in your QAPP.
  - Corrective actions reported/taken.
- An explanation and discussion of results from each successfully sampled qualifying storm event at each discharge monitoring location and solids sample collection event collected at each discharge monitoring location, including:
  - A statistical analysis of the event mean concentrations for each parameter and a narrative description of significant findings from this analysis.
  - Any conclusions based on data from this study including analyses of previously collected data from these discharge monitoring locations.
- A description of activities currently taking place or planned within the monitoring station's drainage area that may have affected or may potentially affect future monitoring results.

If the Permittee monitors any pollutant more frequently at the stormwater discharge monitoring locations, the results of this monitoring shall be included in the annual monitoring report reflecting the water year in which the monitoring occurred.

After three (3) water years of data, the Annual Monitoring Report shall include:

- Trend analyses,
- An evaluation of the data as it applies to the Stormwater Management Program (SWMP), and
- Any stormwater management activities the Permittee has identified that can be implemented or adjusted to respond to this data.

Laboratory Methods

The Permittee's stormwater discharge monitoring program shall use the following analytical methods or other methods approved by the U.S. Environmental Protection Agency or Ecology with similar reporting limits, unless alternative methods are approved by Ecology. Any alternative method proposed by a Permittee must have a similar reporting limit, or must be justified as adequate for the likely, expected range of concentrations. Permittees are not guaranteed approval of alternative methods or reporting limits.

In cases where smaller volumes of water are expected to be collected, or to save analytical costs, Permittees may propose that some of the analyses be optimized for specific parameters or groups. The Permittee must, in consultation with a qualified chemist, define the exact volumes and optimization steps and include them in the QAPP.

The QAPP shall identify Ecology- or EPA-approved methods with appropriate reporting limits. An individual sample that could not be run at a reporting limit because of matrix interference or other such reasons would not be called into question for compliance purposes. All results shall be reported. This includes positive detections between the method detection limit (MDL) and the reporting limit (RL), with the appropriate lab qualifier, and the non-detected concentrations at the value of the MDL or lower limit of quantitation (LLOQ) with the appropriate lab qualifier of "U" for undetected at that concentration. Non-detections must be reported and analyzed in the dataset. Results must be evaluated and censored for blank contamination (e.g. organic parameters should consider a censor threshold of less than 5x the laboratory blank contamination). All data gathering and data handling approaches should be explained in the QAPP.

Table A9-2 Analytical Procedures in Stormwater

Analyte	Method in Water	Method Detection Limit Target[a]	Reporting Limit or Lower Limit of Quantitation (LLOQ)[b]
Conventional Parameters			
Total suspended solids[c]	SM2540B or SM2540D		1.0 mg/L
Turbidity	EPA Method 180.1 or SM2130B		± 0.2 NTU
Conductivity	EPA Method 120.1 or SM2510B		± 1 µmhos/cm
Chloride	EPA Method 300.0, EPA Method 325.2, or SM4110B or SM4500 Cl-B, SM4500 Cl-C, SM4500 Cl-D, SM4500 Cl-EPAHS		0.2 mg/L
BOD_5	SM5210B		2.0 mg/L
pH	EPA Method 150.2 or SM4500H+ B		0.2 units
Hardness as CaCO3	EPA Method 200.7, SM2340B(ICP), SM2340C (titration), or SM3120B		1.0 mg/L
Methylene blue activated substances (MBAS)	CHEMetrics Colorimetric or SM5540C		0.025 mg/L

Analyte	Method in Water	Method Detection Limit Target[a]	Reporting Limit or Lower Limit of Quantitation (LLOQ)[b]
Bacteria			
Fecal Coliform	SM9221E		2-2x10^6 CFU
Nutrients			
Orthophosphate as P	EPA Method 365.3, EPA Method 365.4, SM4500-P E, SM4500-P F, or SM4500-P G	0.003 mg/L	0.01 mg/L
Total phosphorus as P	EPA Method 365.3, EPA Method 365.4, or SM4500-P-B followed by SM4500-P E or P F	0.003 mg/L	0.01 mg/L
Total Kjeldahl nitrogen as N	EPA Method 351.2, EPA Method 351.1, SM4500 Norg-B, SM4500 Norg-C, SM4500 NH3-D, SM4500 NH3-G, SM4500 NH3-E, SM4500 NH3-F, SM4500 NH3-G, or SM4500 NH3-H		0.3 mg/L
Nitrate-Nitrite as N	EPA Method 353.2, SM4500 -$NO3^-$ E, SM4500 -$NO3^-$ F, or SM4500 -$NO3^-$ H		0.1 mg/L
Metals			
Total zinc	EPA Method 200.8 or SM 3125B		5.0 µg/L
Dissolved zinc	EPA Method 200.8 or SM 3125B		1.0 µg/L
Total lead, copper and cadmium	EPA Method 200.8 or SM 3125B		0.1 µg/L, 0.5 µg/L, and 0.2 µg/L
Dissolved lead, copper, and cadmium	EPA Method 200.8 or SM 3125B	0.05, 0.02, and 0.03 µg/L	0.1 µg/L
Organics			
PAHs[d]	EPA Method 8270D SIM or EPA 8270E SIM		0.1 µg/L
Pesticides: Bifenthrin (pyrethroid insecticide) and dichlobenil (herbicide)	EPA Method 8270D SIM, EPA 8270E SIM, or EPA Method 625.1	0.02 µg/L	0.05 µg/L
Phthalates[e]	EPA Method 8270D SIM or EPA 8270E SIM	0.5 µg/L	1 µg/L

Petroleum Hydrocarbons			
NWTPH-Dx (diesel, heavy oil, and summed total)	Ecology, 1997	0.1 mg/L	0.25-0.5 mg/L

NA – Not applicable

SM – Standard Methods

SIM – Selective Ion Monitoring mode

a. If a value is not present in this column then the target MDL is not published or not different from reporting limit target.

b. The QAPP shall identify Ecology- or EPA-approved methods with appropriate reporting limits. An individual sample that could not be run at a reporting limit because of matrix interference or other such reasons would not be called into question for compliance purposes.

c. Research results indicate that errors may be introduced by decanting a subsample, care and use of tools like a funnel splitter may help.

d. Polycyclic aromatic hydrocarbons (PAH), total and these individual compounds: acenaphthene, acenaphthylene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(ghi)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, naphthalene, phenanthrene, pyrene, and retene. Report the individual compound concentrations, and their summed total.

e. Phthalates, total and these individual compounds: bis(2-ethylhexyl)phthalate, butyl benzyl phthalate, di-n-octyl phthalate, dibutyl phthalate, and diethyl phthalate. Report the individual compound concentrations, and their summed total.

Table A9-3 Analytical Procedures in Stormwater Solids

Analyte	**Method for Solid/Sediment**	**Reporting Limit or LLOQ[a]**
Conventional Parameters		
Percent solids	SM 2540G	0.1 %
Total organic carbon	Puget Sound Estuary Protocols (PSEP 1997), SM5310B, SM5310C, SM5310D, or EPA Method 9060	0.1%
Grain size	Sieve and Pipette (ASTM 1997), ASTM F312-97, ASTMD422, or PSEP 1986/2003	Not Applicable
Total phosphorus	EPA Method 365.3, EPA Method 365.4, SM4500 P E, or SM4500 P F	0.01 mg/kg
Total volatile solids	EPA Method 160.4 or SM2540G	0.1%

Analyte	Method for Solid/Sediment	Reporting Limit or LLOQ[a]
Metals, dry weight		
Total zinc	EPA Method 200.8, EPA Method 6010D, EPA Method 6020B, or SM3125B	5.0 mg/kg
Total lead	EPA Method 200.8, EPA Method 6010D, EPA Method 6020B, or SM 3125B	0.1 mg/kg
Total copper	EPA Method 200.8, EPA Method 6010D, EPA Method 6020B, or SM 3125B	0.1 mg/kg
Total cadmium	EPA Method 200.8, EPA Method 6010D, EPA Method 6020B, or SM 3125B	0.1 mg/kg
Organics, dry weight		
Pesticides: Bifenthrin and dichlobenil	EPA Method 8270D, EPA 8270E, or EPA Method 1660	1.0 µg/kg
PAHs[b]	EPA Method 8270D or EPA 8270E SIM	70 µg/kg
Phthalates[c]	EPA Method 8270D or EPA 8270E SIM	70 µg/kg Except di-n-octlyphthalate (250 µg/kg)
Phenolics[d]	EPA Method 8270D or EPA 8270E SIM	660 µg/kg
PCBs[e]	EPA Method 608.3 or EPA Method 8082A	0.195 µg/kg or 5-20 ng/kg
PBDEs[f]	EPA Method 1614	5-10 ng/kg Except PBDE 209: (200 ng/kg)
Petroleum Hydrocarbons		
TPH-Dx (diesel, heavy oil, and summed total)	Ecology, 1997 or EPA Method 8015B	25-100 mg/kg

NA – Not applicable

SM – Standard Methods

SIM – Selective Ion Monitoring mode

a. The QAPP shall identify Ecology- or EPA-approved methods with appropriate reporting limits. An individual sample that could not be run at a reporting limit because of matrix interference or other such reasons would not be called into question for compliance purposes.

b. Polycyclic aromatic hydrocarbon (PAH) compounds, total and these individual compounds: acenaphthene, acenaphthylene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(ghi)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, naphthalene, phenanthrene, pyrene, and retene. Report the individual compound concentrations, and their summed total.

c. Phthalates: bis(2-ethylhexyl)phthalate, butyl benzyl phthalate, di-n-octyl phthalate, dibutyl phthalate, and diethyl phthalate. Report the individual compound concentrations, and their summed total.

d. Phenolics: pentachlorophenol, p-cresol, and o-cresol. Report the individual compound concentrations.

e. PCBs. EPA Methods 608.3 or EPA Method 8082A for Aroclors: 1016, 1221, 1232, 1242, 1248, 1254, 1260, 1262, 1268) are suitable starting points for stormwater solids characterization. If a more sensitive congener analysis is conducted (EPA Method 8082A or EPA Method 1668C) then those individual compound concentrations should also be reported in the annual report.

f. Polybrominated diphenyl ethers (PBDEs): congener numbers 47, 49, 66, 71, 99, 100, 138, 153, 154, 183, 184, 191, and 209. Report the individual compound concentrations, and their summed total.

References

ASTM. 1997. *Standard test methods for determining sediment concentration in water samples. Method D 3977.* American Society for Testing and Materials, Philadelphia, PA.

PSEP. 1986. *Recommended Protocols for measuring conventional sediment variables in Puget Sound.* Prepared by Tetra Tech, Inc. for U.S. Environmental Protection Agency and Puget Sound Water Quality Authority. Tetra Tech Inc., Bellevue, WA.

Ecology, 1997. *Analytical Methods for Petroleum Hydrocarbons*. Washington State Department of Ecology, Toxics Cleanup Program. Olympia, WA. Publication No. 97-602.

APPENDIX 10 – Equivalent Programs for Runoff Controls for New and Redevelopment and Construction Sites

Ecology determined that the following list shall be used to amend any enforceable documents, including codes, ordinances, director's rules, public rules and/or manuals, to be functionally equivalent to Appendix I in the *Western Washington Phase II Municipal Stormwater Permit* (effective August 1, 2019) and the required portions of Ecology's 2019 *Stormwater Management Manual for Western Washington.*

1. **Continuous Simulation Modeling:** Text throughout the SWMMWW has been updated to require continuous simulation models that include:
    - The ability to directly model BMPs that may be used in LID applications, such as bioretention, permeable pavement, and green roofs.
    - 15-minute time steps
    - Incorporation of the van Genuchten algorithm to model bioretention.
2. **Replaced Hard Surfaces Redevelopment Threshold:** The Minimum Requirement Thresholds for non-road related commercial or industrial redevelopment projects have been updated to require the project proponent to compare the value of the proposed improvements to the value of the Project Site (the limits of disturbance) improvements, rather than the Site (the entire parcel) improvements.
3. **Equivalent Areas:** The Redevelopment Project Thresholds have been updated to allow a project proponent to provide Stormwater Management BMPs for an equivalent area. The equivalent area may be on-site, or off-site if the area drains to the same receiving water and the guidance for in-basin transfers is followed.
4. **Minimum Requirement 2:** The 13 Elements in Minimum Requirement 2 (Construction Stormwater Pollution Prevention) have been updated to incorporate changes that were made to the 2015-2020 Construction Stormwater General Permit.
5. **Minimum Requirement 5:** Minimum Requirement 5 (On-Site Stormwater Management) has been updated to require BMP T5.13 (Soil Quality and Depth) when choosing to use the LID Performance Standard to meet Minimum Requirement 5 for Minimum Requirement 1-5 projects.
6. **Minimum Requirement 7:** Minimum Requirement 7 (Flow Control) has been updated to ensure that a TDA discharging to a marine waterbody meets all exemption requirements before it can be determined to be Flow Control exempt.
7. **Concrete Washout BMP:** BMP C154 (Concrete Washout Area) has been updated to clarify that auxiliary concrete truck components and small concrete handling equipment may be washed into formed areas awaiting concrete pour, while concrete truck drums must be washed either off-site or into a concrete washout area.

8. **Source Control BMPs:** Volume IV (Source Control BMP Library) has been updated with Source Control BMPs for activities not listed in previous versions of the manual. The new activities with Source Control BMPs are:
    - S434 BMPs for Dock Washing
    - S441 BMPs for Potable Water Line Flushing, Water Tank Maintenance, and Hydrant Testing
    - S435 BMPs for Pesticides and an Integrated Pest Management Program
    - S444 BMPs for the Storage of Dry Pesticides and Fertilizers
    - S449 BMPs for Nurseries and Greenhouses
    - S450 BMPs for Irrigation
    - S445 BMPs for Temporary Fruit Storage
    - S439 BMPs for In-Water and Over-Water Fueling
    - S436 BMPs for Color Events
    - S438 BMPs for Construction Demolition
    - S440 BMPs for Pet Waste
    - S442 BMPs for Labeling Storm Drain Inlets On Your Property
    - S443 BMPs for Fertilizer Application
    - S446 BMPs for Well, Utility, Directional and Geotechnical Drilling
    - S447 BMPs for Roof Vents
    - S451 BMPs for Building, Repair, Remodeling, Painting, and Construction
    - S452 BMPs for Goose Waste
9. **Wetlands Guidance**: Appendix I-C (Wetland Protection Guidelines) and Minimum Requirement 8 (Wetlands Protection) have been updated to require monitoring and modeling of high value wetlands, if the project proponent has legal access to them. The 2014 wetland guidance is retained, but refined, for modeling requirements for lower value wetlands (and high value wetlands that the project proponent does not have legal access to).

APPENDIX 11 – Annual Contribution Amounts for Regional Monitoring

These are the required annual contribution amounts for Phase I and Phase II Permittees that choose to participate in Stormwater Action Monitoring (SAM), the regional stormwater monitoring program, for either or both option(s) S8.A – *Regional Status And Trends Monitoring* and S8.B – *Stormwater Management Program* (SWMP) *Effectiveness and Source Identification Studies*. Expected annual contribution amounts from the Washington State Department of Transportation (WSDOT) for permit requirement S7.E, are included at the end of the table.

Permittee *Permittees are grouped by County and listed alphabetically*	**Population used for cost allocation** [1]	**Annual amount for S8.A**	**Annual amount for S8.B**
Clallam			
Port Angeles	19,370	$ 3,204	$ 5,855
Clark			
Unincorporated [2]	223,160	$ 54,496	$ 67,458
Battle Ground [2]	20,370	$ 4,974	$ 6,158
Camas [2]	23,080	$ 5,636	$ 6,977
Vancouver [2]	176,400	$ 43,077	$ 53,323
Washougal [2]	15,760	$ 3,849	$ 4,764
Cowlitz			
Unincorporated [1,2]	13,059	$ 3,189	$ 3,948
Kelso [2]	11,980	$ 2,926	$ 3,621
Longview [2]	37,510	$ 9,160	$ 11,339
Grays Harbor			
Aberdeen	16,740	N/A	$ 5,060
Island			
Oak Harbor	22,840	$ 3,778	$ 6,904
King			
Unincorporated	247,060	$ 40,865	$ 74,683
Algona	3,180	$ 526	$ 961
Auburn	78,960	$ 13,060	$ 23,868

Permittee	Population	S8.A	S8.B
Bellevue	140,700	$ 23,273	$ 42,532
Black Diamond	4,335	$ 717	$ 1,310
Bothell	44,370	$ 7,339	$ 13,412
Burien	50,680	$ 8,383	$ 15,320
Clyde Hill	3,015	$ 499	$ 911
Covington	19,850	$ 3,283	$ 6,000
Des Moines	30,860	$ 5,104	$ 9,329
Duvall	7,500	$ 1,241	$ 2,267
Enumclaw	11,450	$ 1,894	$ 3,461
Federal Way	96,350	$ 15,937	$ 29,125
Issaquah	36,030	$ 5,960	$ 10,891
Kenmore	22,580	$ 3,735	$ 6,826
Kent	127,100	$ 21,023	$ 38,421
Kirkland	86,080	$ 14,238	$ 26,021
Lake Forest Park	12,990	$ 2,149	$ 3,927
Maple Valley	24,900	$ 4,119	$ 7,527
Medina	3,205	$ 530	$ 969
Mercer Island	24,210	$ 4,004	$ 7,318
Newcastle	11,280	$ 1,866	$ 3,410
Normandy Park	6,595	$ 1,091	$ 1,994
Pacific	6,910	$ 1,143	$ 2,089
Port of Seattle [1]	18,700	$ 3,093	$ 5,653
Redmond	62,110	$ 10,273	$ 18,775
Renton	102,700	$ 16,987	$ 31,045
Sammamish	62,240	$ 10,295	$ 18,814
SeaTac	28,850	$ 4,772	$ 8,721
Seattle	713,700	$ 118,050	$ 215,741
Shoreline	55,060	$ 9,107	$ 16,644
Snoqualmie [3]	13,210	$ 2,185	$ 3,993
Tukwila	19,660	$ 3,252	$ 5,943

Permittee	Population	S8.A	S8.B
Woodinville	11,660	$ 1,929	$ 3,525
Kitsap			
Unincorporated [1]	74,623	$ 12,343	$ 22,557
Bainbridge Island	23,950	$ 3,961	$ 7,240
Bremerton	40,630	$ 6,720	$ 12,282
Port Orchard	13,990	$ 2,314	$ 4,229
Poulsbo	10,510	$ 1,738	$ 3,177
Lewis			
Centralia	16,940	N/A	$ 5,121
Pierce			
Unincorporated	400,480	$ 66,242	$ 121,059
Bonney Lake	20,500	$ 3,391	$ 6,197
Buckley	4,670	$ 772	$ 1,412
DuPont	9,385	$ 1,552	$ 2,837
Edgewood	10,420	$ 1,724	$ 3,150
Fife	10,100	$ 1,671	$ 3,053
Fircrest	6,640	$ 1,098	$ 2,007
Gig Harbor	9,560	$ 1,581	$ 2,890
Lakewood	59,280	$ 9,805	$ 17,919
Milton	7,900	$ 1,307	$ 2,388
Orting	7,835	$ 1,296	$ 2,368
Port of Tacoma [1]	18,700	$ 3,093	$ 5,653
Puyallup	40,500	$ 6,699	$ 12,243
Steilacoom	6,410	$ 1,060	$ 1,938
Sumner	9,920	$ 1,641	$ 2,999
Tacoma	208,100	$ 34,421	$ 62,906
University Place	32,610	$ 5,394	$ 9,858
Skagit			
Unincorporated [1]	11,396	$ 1,885	$ 3,445

Permittee	Population	S8.A	S8.B
Burlington	8,715	$ 1,442	$ 2,634
Anacortes	16,780	$ 2,776	$ 5,072
Mount Vernon	34,360	$ 5,683	$ 10,387
Sedro-Woolley	10,950	$ 1,811	$ 3,310
Snohomish			
Unincorporated [1]	349,800	$ 57,859	$ 105,740
Arlington	18,690	$ 3,091	$ 5,650
Brier	6,560	$ 1,085	$ 1,983
Edmonds	41,260	$ 6,825	$ 12,472
Everett	109,800	$ 18,162	$ 33,191
Granite Falls	3,485	$ 576	$ 1,053
Lake Stevens	31,740	$ 5,250	$ 9,595
Lynnwood	36,950	$ 6,112	$ 11,169
Marysville	65,900	$ 10,900	$ 19,921
Mill Creek	19,960	$ 3,302	$ 6,034
Monroe	18,350	$ 3,035	$ 5,547
Mountlake Terrace	21,290	$ 3,521	$ 6,436
Mukilteo	21,240	$ 3,513	$ 6,421
Snohomish	10,010	$ 1,656	$ 3,026
Thurston			
Unincorporated [1]	50,611	$ 8,371	$ 15,299
Lacey	48,700	$ 8,055	$ 14,721
Olympia	52,160	$ 8,628	$ 15,767
Tumwater	23,210	$ 3,839	$ 7,016
Whatcom			
Birch Bay UGA [1,3]	8,064	$ 1,334	$ 2,438
Unincorporated [1]	16,401	$ 2,713	$ 4,958
Bellingham	86,720	$ 14,344	$ 26,214
Ferndale	13,470	$ 2,228	$ 4,072

Permittee	Population	S8.A	S8.B
Lynden [3]	13,620	$ 2,253	$ 4,117
WSDOT			
Lower Columbia [1,2]	37,510	$ 9,160	N/A
Puget Sound [1]	127,100	$ 21,172	N/A
Totals	5,128,504	$ 886,615 [4]	$ 1,500,004

[1] Populations are based on Office of Financial Management data for 2017, accessed on April 5, 2018. The derivation of the populations used to calculate the cost allocations for Phase II counties, Ports of Seattle and Tacoma, and WSDOT are explained in the permit fact sheet.

[2] The first S8.A annual payment is not due until the second year of permit (2020) for permittees in Clark and Cowlitz Counties and for WSDOT for Lower Columbia.

[3] The first S8.A and S8.B payments are not due until the second year of permit (2020) for Lynden, Snoqualmie, and the Birch Bay UGA in Whatcom County. These were new permittees/permit coverage areas in the 2013-2018 Western Washington Phase II permit (extended to 2019).

[4] The total annual S8.A amount for Lower Columbia is $136,467 and the total annual S8.A amount for Puget Sound is $750,148. These pooled funding contributions will be managed in separate accounts.

APPENDIX 12 – IDDE Reporting Data and Format

Permittees are required to submit the following information with the online annual report form, pursuant to Special Condition S9.A.

This is the complete list of information that all Permittees are required to report for each IDDE incident found, reported to, or investigated by the Permittee. Each Permittee may use either their own system or the WQWebIDDE form for recording this data.

Permittees may begin using the form to report as soon as March 31, 2020. The form is *required* for reporting by March 31, 2021, unless you are using your own tracking system. If using your own tracking system, this information must be provided in an electronic format that follows the data schema provided at the end of this document and is easily transferred to a database. For the March 31, 2020 annual report, permittees are required to submit as much of this information as possible, and in a format that is as close to this as feasible. For the March 31, 2021 annual report, Ecology would prefer a zipped .xml file that follows the schema, but it is acceptable to submit an Excel spreadsheet, .csv, or tab-delimited (.txt) file that includes all of this information. For annual reports due on March 31, 2022 and beyond, a zipped .xml that follows the schema is required.

A complete report will include a separate entry (even if left blank) for every line below and must use the precise verbiage and spelling below. For all incidents where the answer to #6 is no, #7-12 are not required. All dates are in MM/DD/YYYY format.

1. Jurisdiction name and permit number
2. Date incident discovered or reported to you
3. Date of beginning your response
4. Date of end of your response
5. How was the incident discovered or reported to you? *(select **all** that apply)*
    - Pollution hotline (phone, web, app)
    - Direct report to your staff
    - Staff referral
    - Other agency referral
    - ERTS referral
    - Business inspection
    - Construction inspection
    - MS4 inspection or screening
    - Other *(Explanation required)*
6. Discharge to MS4? *(select **one**)*
    - Yes – notified Ecology
    - Yes – notified DOH and Ecology

- Yes – did not notify
- Yes – allowable or conditionally allowable
- No – none found
- No – cleaned up before reached MS4
- No – discharge to Underground Injection Control (UIC) well
- Unknown
- Other *(Explanation required)*

7. Incident Location

- Address/Intersection
- City
- Zip *(optional)*

And/Or

- Latitude
- Longitude

8. Pollutants Identified *(select **all** that apply)*

- Unconfirmed, unspecified, or not identified
- Fuel and/or vehicle related fluids
- Food-related oil/grease
- Sediment/soil
- Solid waste/trash
- Sewage/septage/pet waste/human waste
- Other wastewater
- Paint
- Firefighting foam
- Soap or cleaning chemicals
- Other *(Explanation required)*

9. Source or Cause *(select **all** that apply)*

- Unconfirmed, unspecified, or not identified
- Vehicle-related business
- Food-related business
- Landscape-related business
- Mobile business
- Construction activity
- Other commercial/industrial activity
- Vehicle collision
- Other accident/spill
- Intentional dumping

- Illicit connection
- Other *(Explanation required)*

10. Source tracing approach(es) used *(select **all** that apply)*

- Not applicable
- Observation (color/sheen/turbidity/floatables/odor)
- Map analysis
- Dye, smoke, or pressure testing
- Field indicator measurements
- Analytical laboratory indicators
- Other *(Explanation required)*

11. Correction/elimination methods used *(select **all** that apply)*

- Clean-up
- Education/technical assistance
- Add or modify operational source control BMP
- Add or modify structural source control BMP
- Add or modify treatment BMP
- Enforcement
- Referred to other agency or department
- Other *(Explanation required)*

12. Field notes, explanations, and/or other comments

IDDE XML Schema Document (IDDE.xsd)

```
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="IDDEEvents">
    <xs:complexType>
      <xs:sequence>
        <xs:element maxOccurs="unbounded" name="IDDEEvent"
type="IDDEEvent" />
      </xs:sequence>
    </xs:complexType>
  </xs:element>

  <xs:complexType name="IDDEEvent">
    <xs:annotation>
      <xs:documentation>One particular IDDE event</xs:documentation>
    </xs:annotation>
    <xs:all>
      <xs:element maxOccurs="1" minOccurs="0" name="Jurisdiction">
        <xs:annotation>
          <xs:documentation>Permit Number</xs:documentation>
          <xs:documentation>If omitted, all IDDEs will be imported to
a permit selected through the UI</xs:documentation>
        </xs:annotation>
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:maxLength value="9"/>
          </xs:restriction>
```

```
        </xs:simpleType>
      </xs:element>
      <xs:element maxOccurs="1" minOccurs="0" name="IncidentId">
        <xs:annotation>
          <xs:documentation>Incident ID</xs:documentation>
          <xs:documentation>If omitted, WQWebIDDE can't identify IDDEs
to update and will simply insert all IDDEs as fresh
records</xs:documentation>
        </xs:annotation>
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:maxLength value="30"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element maxOccurs="1" minOccurs="0" name="DateReported"
type="SqlDate">
        <xs:annotation>
          <xs:documentation>Date incident reported</xs:documentation>
        </xs:annotation>
      </xs:element>
      <xs:element maxOccurs="1" minOccurs="0" name="DateResponseBegin"
type="SqlDate">
        <xs:annotation>
          <xs:documentation>Date incident response
began</xs:documentation>
        </xs:annotation>
      </xs:element>
```

```
      <xs:element maxOccurs="1" minOccurs="0" name="DateResponseEnd"
type="SqlDate">

        <xs:annotation>

          <xs:documentation>Date incident response
ended</xs:documentation>

        </xs:annotation>

      </xs:element>

      <xs:element maxOccurs="1" minOccurs="0" name="Discovereds"
type="Discovered">

        <xs:annotation>

          <xs:documentation>How was the incident
discovered?</xs:documentation>

        </xs:annotation>

      </xs:element>

      <xs:element maxOccurs="1" minOccurs="0" name="MS4Discharge"
type="Discharge">

        <xs:annotation>

          <xs:documentation>Did the incident discharge to the
MS4?</xs:documentation>

        </xs:annotation>

      </xs:element>

      <xs:element maxOccurs="1" minOccurs="0" name="Location"
type="Location">

        <xs:annotation>

          <xs:documentation>Location of the
incident</xs:documentation>

        </xs:annotation>

      </xs:element>

      <xs:element maxOccurs="1" minOccurs="0" name="Pollutants"
type="Pollutant">
```

```
        <xs:annotation>
          <xs:documentation>Pollutants identified</xs:documentation>
        </xs:annotation>
      </xs:element>
      <xs:element maxOccurs="1" minOccurs="0" name="Sources"
type="Source">
        <xs:annotation>
          <xs:documentation>Source or cause</xs:documentation>
        </xs:annotation>
      </xs:element>
      <xs:element maxOccurs="1" minOccurs="0" name="Traces"
type="Trace">
        <xs:annotation>
          <xs:documentation>Source Tracing</xs:documentation>
        </xs:annotation>
      </xs:element>
      <xs:element maxOccurs="1" minOccurs="0" name="Corrections"
type="Correction">
        <xs:annotation>
          <xs:documentation>Correction or elimination
methods</xs:documentation>
        </xs:annotation>
      </xs:element>
      <xs:element maxOccurs="1" minOccurs="0" name="Notes"
type="xs:string">
        <xs:annotation>
          <xs:documentation>Field notes, explanations, and/or other
comments</xs:documentation>
        </xs:annotation>
```

```
      </xs:element>
    </xs:all>
  </xs:complexType>
  <xs:simpleType name="SqlDate">
    <xs:annotation>
      <xs:documentation>xs:date limited to SQL Server's operating
range</xs:documentation>
    </xs:annotation>
    <xs:restriction base="xs:date">
      <xs:minInclusive value="1753-01-01" />
      <xs:maxInclusive value="9999-12-31" />
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="Discharge">
    <xs:choice>
      <xs:element name="YesNotifiedECY"
type="YesNotifiedECYDischarge"/>
      <xs:element name="YesNotifiedDOH"
type="YesNotifiedDOHDischarge"/>
      <xs:element name="YesNoNotice" type="YesNoNoticeDischarge"/>
      <xs:element name="YesAllowable" type="YesAllowableDischarge"/>
      <xs:element name="NoNoneFound" type="NoNoneFoundDischarge"/>
      <xs:element name="NoCleanedUp" type="NoCleanedUpDischarge"/>
      <xs:element name="NoToUIC" type="NoToUICDischarge"/>
      <xs:element name="Unknown" type="UnknownDischarge"/>
      <xs:element name="Other" type="OtherDischarge"/>
    </xs:choice>
  </xs:complexType>
```

```
  <xs:complexType name="Discovered">
    <xs:sequence>
      <xs:element maxOccurs="unbounded" name="Discovered">
        <xs:complexType>
          <xs:sequence>
            <xs:element maxOccurs="1" minOccurs="0" name="Explain"
type="xs:string"/>
          </xs:sequence>
          <xs:attribute name="type" type="DiscoveredType"/>
        </xs:complexType>
      </xs:element>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="Location">
    <xs:all>
      <xs:element maxOccurs="1" minOccurs="0" name="Address"
type="AddressType" />
      <xs:element maxOccurs="1" minOccurs="0" name="LatLong"
type="LatLongType" />
    </xs:all>
  </xs:complexType>
  <xs:complexType name="Pollutant">
    <xs:sequence>
      <xs:element maxOccurs="unbounded" name="Pollutant">
        <xs:complexType>
          <xs:sequence>
            <xs:element maxOccurs="1" minOccurs="0" name="Explain"
type="xs:string"/>
```

```
          </xs:sequence>
          <xs:attribute name="type" type="PollutantType"/>
        </xs:complexType>
      </xs:element>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="Source">
    <xs:sequence>
      <xs:element maxOccurs="unbounded" name="Source">
        <xs:complexType>
          <xs:sequence>
            <xs:element maxOccurs="1" minOccurs="0" name="Explain"
type="xs:string"/>
          </xs:sequence>
          <xs:attribute name="type" type="SourceType"/>
        </xs:complexType>
      </xs:element>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="Trace">
    <xs:sequence>
      <xs:element maxOccurs="unbounded" name="Trace">
        <xs:complexType>
          <xs:sequence>
            <xs:element maxOccurs="1" minOccurs="0" name="Explain"
type="xs:string"/>
          </xs:sequence>
```

```
          <xs:attribute name="type" type="TraceType"/>
        </xs:complexType>
      </xs:element>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="Correction">
    <xs:sequence>
      <xs:element maxOccurs="unbounded" name="Correction">
        <xs:complexType>
          <xs:sequence>
            <xs:element maxOccurs="1" minOccurs="0" name="Explain"
type="xs:string"/>
          </xs:sequence>
          <xs:attribute name="type" type="CorrectionType"/>
        </xs:complexType>
      </xs:element>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="YesNotifiedECYDischarge">
    <xs:annotation>
      <xs:documentation>Discharge reached MS4, Notified
Ecology</xs:documentation>
    </xs:annotation>
  </xs:complexType>
  <xs:complexType name="YesNotifiedDOHDischarge">
    <xs:annotation>
      <xs:documentation>Discharge reached MS4, Notified Ecology and
Health</xs:documentation>
```

```
    </xs:annotation>
  </xs:complexType>
  <xs:complexType name="YesNoNoticeDischarge">
    <xs:annotation>
      <xs:documentation>Discharge reached MS4, Did not notify
Ecology</xs:documentation>
    </xs:annotation>
  </xs:complexType>
  <xs:complexType name="YesAllowableDischarge">
    <xs:annotation>
      <xs:documentation>Discharge reached MS4, but it was
allowable</xs:documentation>
    </xs:annotation>
  </xs:complexType>
  <xs:complexType name="NoNoneFoundDischarge">
    <xs:annotation>
      <xs:documentation>No discharge found</xs:documentation>
    </xs:annotation>
  </xs:complexType>
  <xs:complexType name="NoCleanedUpDischarge">
    <xs:annotation>
      <xs:documentation>Discharge cleaned up and did not reach
MS4</xs:documentation>
    </xs:annotation>
  </xs:complexType>
  <xs:complexType name="NoToUICDischarge">
    <xs:annotation>
```

```
      <xs:documentation>Discharge to Underground Injection Control
(UIC) well</xs:documentation>

    </xs:annotation>

  </xs:complexType>

  <xs:complexType name="UnknownDischarge">

    <xs:annotation>

      <xs:documentation>Unknown if discharge reached
MS4</xs:documentation>

    </xs:annotation>

  </xs:complexType>

  <xs:complexType name="OtherDischarge">

    <xs:annotation>

      <xs:documentation>Something else happened, tell us
what</xs:documentation>

    </xs:annotation>

    <xs:sequence>

      <xs:element maxOccurs="1" minOccurs="0" name="Explain"
type="xs:string"/>

    </xs:sequence>

  </xs:complexType>

  <xs:simpleType name="DiscoveredType">

    <xs:annotation>

      <xs:documentation>Responses for How was this incident discovered
or reported to you?</xs:documentation>

    </xs:annotation>

    <xs:restriction base="xs:string">

      <xs:enumeration value="0">

        <xs:annotation>
```

```
          <xs:documentation>Pollution hotline (phone, web,
app)</xs:documentation>
        </xs:annotation>
      </xs:enumeration>
      <xs:enumeration value="1">
        <xs:annotation>
          <xs:documentation>Direct report to your
staff</xs:documentation>
        </xs:annotation>
      </xs:enumeration>
      <xs:enumeration value="2">
        <xs:annotation>
          <xs:documentation>Staff referral</xs:documentation>
        </xs:annotation>
      </xs:enumeration>
      <xs:enumeration value="3">
        <xs:annotation>
          <xs:documentation>Other agency referral</xs:documentation>
        </xs:annotation>
      </xs:enumeration>
      <xs:enumeration value="4">
        <xs:annotation>
          <xs:documentation>ERTS referral</xs:documentation>
        </xs:annotation>
      </xs:enumeration>
      <xs:enumeration value="5">
        <xs:annotation>
```

```
          <xs:documentation>Business inspection</xs:documentation>
        </xs:annotation>
      </xs:enumeration>
      <xs:enumeration value="6">
        <xs:annotation>
          <xs:documentation>Construction inspection</xs:documentation>
        </xs:annotation>
      </xs:enumeration>
      <xs:enumeration value="7">
        <xs:annotation>
          <xs:documentation>MS4 inspection or
screening</xs:documentation>
        </xs:annotation>
      </xs:enumeration>
      <xs:enumeration value="8">
        <xs:annotation>
          <xs:documentation>Other</xs:documentation>
          <xs:appinfo>Explain</xs:appinfo>
        </xs:annotation>
      </xs:enumeration>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="AddressType">
    <xs:annotation>
      <xs:documentation>Conventional Street Address or Nearest
Intersection</xs:documentation>
    </xs:annotation>
```

```
    <xs:sequence>
      <xs:element name="Address" type="xs:string" />
      <xs:element name="City" type="xs:string" />
      <xs:element maxOccurs="1" minOccurs="0" name="PostalCode"
type="xs:string" />
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="LatLongType">
    <xs:annotation>
      <xs:documentation>Latitude Longitude pair, 6 decimal
digits.</xs:documentation>
    </xs:annotation>
    <xs:sequence>
      <xs:element name="Latitude" type="LatNumber" />
      <xs:element name="Longitude" type="LongNumber" />
    </xs:sequence>
  </xs:complexType>
  <xs:simpleType name="LatNumber">
    <xs:annotation>
      <xs:documentation>Latitude, 6 decimal digits.</xs:documentation>
    </xs:annotation>
    <xs:restriction base="xs:decimal">
      <xs:totalDigits value="8" />
      <xs:fractionDigits value="6" />
      <xs:minInclusive value="-90" />
      <xs:maxInclusive value="90" />
    </xs:restriction>
```

```
  </xs:simpleType>
  <xs:simpleType name="LongNumber">
    <xs:annotation>
      <xs:documentation>Longitude, 6 decimal
digits.</xs:documentation>
    </xs:annotation>
    <xs:restriction base="xs:decimal">
      <xs:totalDigits value="9" />
      <xs:fractionDigits value="6" />
      <xs:minInclusive value="-180" />
      <xs:maxInclusive value="180" />
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="PollutantType">
    <xs:restriction base="xs:string">
      <xs:enumeration value="0">
        <xs:annotation>
          <xs:documentation>Unconfirmed, unspecified, or not
identified</xs:documentation>
        </xs:annotation>
      </xs:enumeration>
      <xs:enumeration value="1">
        <xs:annotation>
          <xs:documentation>Fuel and/or vehicle related
fluids</xs:documentation>
        </xs:annotation>
      </xs:enumeration>
      <xs:enumeration value="2">
```

```
        <xs:annotation>
          <xs:documentation>Food-related oil/grease</xs:documentation>
        </xs:annotation>
      </xs:enumeration>
      <xs:enumeration value="3">
        <xs:annotation>
          <xs:documentation>Sediment/soil</xs:documentation>
        </xs:annotation>
      </xs:enumeration>
      <xs:enumeration value="4">
        <xs:annotation>
          <xs:documentation>Solid waste/trash</xs:documentation>
        </xs:annotation>
      </xs:enumeration>
      <xs:enumeration value="5">
        <xs:annotation>
          <xs:documentation>Sewage/septage/pet waste/human
waste</xs:documentation>
        </xs:annotation>
      </xs:enumeration>
      <xs:enumeration value="6">
        <xs:annotation>
          <xs:documentation>Other wastewater</xs:documentation>
        </xs:annotation>
      </xs:enumeration>
      <xs:enumeration value="7">
        <xs:annotation>
```

```
          <xs:documentation>Paint</xs:documentation>
        </xs:annotation>
      </xs:enumeration>
      <xs:enumeration value="8">
        <xs:annotation>
          <xs:documentation>Firefighting foam</xs:documentation>
        </xs:annotation>
      </xs:enumeration>
      <xs:enumeration value="9">
        <xs:annotation>
          <xs:documentation>Soap or cleaning
chemicals</xs:documentation>
        </xs:annotation>
      </xs:enumeration>
      <xs:enumeration value="10">
        <xs:annotation>
          <xs:documentation>Other</xs:documentation>
          <xs:appinfo>Explain</xs:appinfo>
        </xs:annotation>
      </xs:enumeration>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="SourceType">
    <xs:restriction base="xs:string">
      <xs:enumeration value="0">
        <xs:annotation>
```

```
          <xs:documentation>Unconfirmed, unspecified, or not
identified</xs:documentation>

        </xs:annotation>

      </xs:enumeration>

      <xs:enumeration value="1">

        <xs:annotation>

          <xs:documentation>Vehicle-related
business</xs:documentation>

        </xs:annotation>

      </xs:enumeration>

      <xs:enumeration value="2">

        <xs:annotation>

          <xs:documentation>Food-related business</xs:documentation>

        </xs:annotation>

      </xs:enumeration>

      <xs:enumeration value="3">

        <xs:annotation>

          <xs:documentation>Landscape-related
business</xs:documentation>

        </xs:annotation>

      </xs:enumeration>

      <xs:enumeration value="4">

        <xs:annotation>

          <xs:documentation>Mobile business</xs:documentation>

        </xs:annotation>

      </xs:enumeration>

      <xs:enumeration value="5">

        <xs:annotation>
```

```
          <xs:documentation>Construction activity</xs:documentation>
        </xs:annotation>
      </xs:enumeration>
      <xs:enumeration value="6">
        <xs:annotation>
          <xs:documentation>Other commercial/industrial
activity</xs:documentation>
        </xs:annotation>
      </xs:enumeration>
      <xs:enumeration value="7">
        <xs:annotation>
          <xs:documentation>Vehicle collision</xs:documentation>
        </xs:annotation>
      </xs:enumeration>
      <xs:enumeration value="8">
        <xs:annotation>
          <xs:documentation>Other accident/spill</xs:documentation>
        </xs:annotation>
      </xs:enumeration>
      <xs:enumeration value="9">
        <xs:annotation>
          <xs:documentation>Intentional dumping</xs:documentation>
        </xs:annotation>
      </xs:enumeration>
      <xs:enumeration value="10">
        <xs:annotation>
          <xs:documentation>Illicit connection</xs:documentation>
```

```
        </xs:annotation>
      </xs:enumeration>
      <xs:enumeration value="11">
        <xs:annotation>
          <xs:documentation>Other</xs:documentation>
          <xs:appinfo>Explain</xs:appinfo>
        </xs:annotation>
      </xs:enumeration>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="TraceType">
    <xs:restriction base="xs:string">
      <xs:enumeration value="0">
        <xs:annotation>
          <xs:documentation>Not applicable</xs:documentation>
        </xs:annotation>
      </xs:enumeration>
      <xs:enumeration value="1">
        <xs:annotation>
          <xs:documentation>Observation
(color/sheen/turbidity/floatables/odor)</xs:documentation>
        </xs:annotation>
      </xs:enumeration>
      <xs:enumeration value="2">
        <xs:annotation>
          <xs:documentation>Map analysis</xs:documentation>
        </xs:annotation>
```

```
      </xs:enumeration>
      <xs:enumeration value="3">
        <xs:annotation>
          <xs:documentation>Dye, smoke, or pressure
testing</xs:documentation>
        </xs:annotation>
      </xs:enumeration>
      <xs:enumeration value="4">
        <xs:annotation>
          <xs:documentation>Field indicator
measurements</xs:documentation>
        </xs:annotation>
      </xs:enumeration>
      <xs:enumeration value="5">
        <xs:annotation>
          <xs:documentation>Analytical laboratory
indicators</xs:documentation>
        </xs:annotation>
      </xs:enumeration>
      <xs:enumeration value="6">
        <xs:annotation>
          <xs:documentation>Other</xs:documentation>
          <xs:appinfo>Explain</xs:appinfo>
        </xs:annotation>
      </xs:enumeration>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="CorrectionType">
```

```
    <xs:restriction base="xs:string">
      <xs:enumeration value="0">
        <xs:annotation>
          <xs:documentation>Clean-up</xs:documentation>
        </xs:annotation>
      </xs:enumeration>
      <xs:enumeration value="1">
        <xs:annotation>
          <xs:documentation>Education/technical
assistance</xs:documentation>
        </xs:annotation>
      </xs:enumeration>
      <xs:enumeration value="2">
        <xs:annotation>
          <xs:documentation>Add or modify operational source control
BMP</xs:documentation>
        </xs:annotation>
      </xs:enumeration>
      <xs:enumeration value="3">
        <xs:annotation>
          <xs:documentation>Add or modify structural source control
BMP</xs:documentation>
        </xs:annotation>
      </xs:enumeration>
      <xs:enumeration value="4">
        <xs:annotation>
          <xs:documentation>Add or modify treatment
BMP</xs:documentation>
```

```
        </xs:annotation>
      </xs:enumeration>
      <xs:enumeration value="5">
        <xs:annotation>
          <xs:documentation>Enforcement</xs:documentation>
        </xs:annotation>
      </xs:enumeration>
      <xs:enumeration value="6">
        <xs:annotation>
          <xs:documentation>Referred to other agency or
department</xs:documentation>
        </xs:annotation>
      </xs:enumeration>
      <xs:enumeration value="7">
        <xs:annotation>
          <xs:documentation>Other</xs:documentation>
          <xs:appinfo>Explain</xs:appinfo>
        </xs:annotation>
      </xs:enumeration>
    </xs:restriction>
  </xs:simpleType>
</xs:schema>
```