United States Environmental Protection Agency
Region 10
1200 Sixth Avenue, Suite 900
Seattle, Washington 98101

Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems

Authorization to Discharge Under the National Pollutant Discharge Elimination System

In compliance with the provisions of the Clean Water Act, 33 U.S.C. §1251 *et seq*., as amended by the Water Quality Act of 1987, P.L. 100-4, the "Act," the

Joint Base Lewis-McChord
(hereinafter "Permittee")

is authorized to discharge from all municipal separate storm sewer system (MS4) outfalls existing as of the effective date of this permit to waters of the United States, including Murray Creek, Clover Creek, Puget Sound and other associated waters of the United States, in accordance with the conditions and requirements set forth herein. In addition, pursuant to Ecology's certification and CWA Section 401(d), 33 U.S.C. § 1341(d), this permit also authorizes discharges from the MS4 to groundwater of the State of Washington.

This permit shall become effective on October 1, 2013.

This permit and the authorization to discharge shall expire at midnight, September 30, 2018.

The Permittee must reapply for permit reissuance on or before April 3, 2018, 180 days before the expiration of this permit if the Permittee intends to continue operations and discharges from the MS4 beyond the term of this permit.

Signed this 22nd day of August, 2013

Paula VanHaagen, Acting Director
Office of Water and Watersheds

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I. Applicability

A. Permit Area. This permit covers all geographic areas of the military installation located within Pierce and Thurston Counties, Washington, which are owned or operated by the Joint Base Lewis-McChord (JBLM), hereafter also referred to as "Permittee." The Permit Area includes but is not limited to the cantonment areas (comprised of and referred to as JBLM-Main, JBLM-North, and/or JBLM-McChord Field) and all military training areas. See Appendix D.

B. Discharges Authorized Under This Permit. During the effective dates of this permit, the Permittee is authorized to discharge stormwater to waters of the United States and to groundwater of the State of Washington from all portions its municipal separate storm sewer system (MS4) located within the boundaries the Permit Area described in Part I.A, subject to the conditions set forth herein. This permit also authorizes the discharge of flows categorized as allowable non-stormwater discharges in Part I.C.1.d of this permit.

C. Limitations on Permit Coverage

1. Non-Stormwater Discharges. The Permittee is authorized to discharge non-stormwater from the MS4, only where such discharges satisfy one of the following conditions:

a) The non-stormwater discharges are in compliance with a separate NPDES permit;

b) The discharges originate from emergency fire fighting activities;

c) The non-stormwater discharges result from a spill and:

- are the result of an unusual and severe weather event where reasonable and prudent measures have been taken to minimize the impact of such discharge; or
- consist of emergency discharges required to prevent imminent threat to human health or severe property damage, provided that reasonable and prudent measures have been taken to minimize the impact of such discharges;

or

d) The non-stormwater discharges consist of one or more flows listed below, and such flows are managed by the Permittee in accordance with Parts II.B.3.c and II.B.6 of this permit.

- potable water sources, including but not limited to, water line flushing, hyperchlorinated water line flushing, fire hydrant flushing, and pipeline hydrostatic test water;
- Landscape watering and other irrigation runoff;

- Dechlorinated swimming pool, spa, and hot tub discharges;
- Street and sidewalk wash water, water used to control dust, and routine external building wash down that does not use detergents;
- Diverted stream flows;
- Rising ground waters;
- Uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20));
- Uncontaminated pumped ground water;
- Foundation drains;
- Air conditioning condensation;
- Irrigation water from agricultural sources that is commingled with urban stormwater;
- Springs;
- Uncontaminated water from crawl space pumps;
- Footing drains; and/or
- Flows from riparian habitats and wetlands.

2. **Discharges Threatening Water Quality**. The Permittee is not authorized to discharge stormwater that will cause, or have the reasonable potential to cause or contribute to an exceedance above the State of Washington water quality standards [including, but not limited to, those standards contained in Chapters 173-201A (surface water quality), 173-204 (sediment management) and 173-200 (groundwater) of the Washington Administrative Code]. The required response to such exceedances of these standards is defined in Part II.D.

3. **Snow Disposal to Receiving Waters.** The Permittee is not authorized to dispose of snow directly to waters of the United States or directly to the MS4(s). Discharges from Permittee-owned or operated snow disposal sites, and the Permittee's snow management practices, are authorized under this permit when such sites/practices are operated using Best Management Practices (BMPs) as required in Part II.B.6. Such BMPs must be designed to prevent pollutants in the runoff and prevent violations of the applicable water quality standards.

4. **Stormwater Discharges Associated with Industrial and Construction Activity.** The Permittee is authorized to discharge stormwater associated with industrial and construction activity through the MS4, only when such discharges are otherwise authorized under an appropriate NPDES permit.

II. Stormwater Management Program (SWMP) Requirements

A. General Requirements

1. **Implement a SWMP**. The Permittee must develop, implement and enforce a Stormwater Management Program (SWMP) designed to reduce the discharge of pollutants from the MS4 to the maximum extent practicable, and protect water

quality in receiving waters. The SWMP must be implemented throughout the permit area described in Part I.A.

2. **Control Discharges of Pollutants from the MS4 to the Maximum Extent Practicable**. The Permittee must comply with the SWMP actions and activities outlined in Parts II.B and II.C, the required response provisions of Part II.D, and the assessment/monitoring requirements described in Part IV. The SWMP actions and activities require the Permittee to use BMPs, control measures, system design, engineering methods, and other provisions appropriate to control discharges of pollutants from the MS4 to the maximum extent practicable.

3. **SWMP Document.** The Permittee must prepare written documentation of its SWMP within one year from the effective date of this permit. The SWMP documentation must be organized according to the program components in Parts II.B and II.C, and the assessment/monitoring requirements of Part IV. The SWMP document must be updated at least annually and submitted as part of the Permittee's Annual Report. The SWMP document must include:

   a) A summary of the legal authorities which enable the Permittee to control discharges to and from the Permittee's MS4 as required by this Permit;
   b) A description of each minimum program control measure in Parts II.B and II.C;
   c) Any additional actions implemented by the Permittee pursuant to Parts II.B and II.C; and
   d) A description of the monitoring activity pursuant to Part IV.

4. **SWMP Information.** The Permittee's SWMP must include an on-going means for gathering, tracking, maintaining, and using information in order to evaluate SWMP development and implementation, permit compliance, and to set priorities.

   a) No later than one year from permit effective date, the Permittee must track the cost, or estimated cost, to develop and implement each program component of the SWMP. A summary of costs and funding sources, by program component, must be included in each Annual Report.
   b) The Permittee must track the number of inspections, official enforcement actions, types of public education activities, etc., as stipulated by the respective program component. Information summarizing these activities during the previous reporting period must be included in the Annual Report(s).

5. **SWMP Modification.** Modifications to the SWMP requirements must be made in accordance with Part II.E of this permit.
6. **Shared Implementation**. Implementation of one or more of the minimum control measures may be shared with, or delegated to, another entity other than the Permittee. The Permittee may rely on another entity only if:

   a) The other entity, in fact, implements the control measure;

b) The control measure, or component of that control measure, is at least as stringent as the corresponding permit requirement; and

c) The other entity agrees to implement the control measure on the Permittee's behalf. A binding written acceptance of this obligation is required. The Permittee must maintain this written obligation as part of the SWMP. If the other entity agrees to report on the minimum control measure, the Permittee must supply the other entity with the reporting requirements in Part IV.C of this permit. The Permittee remains responsible for compliance with the permit obligations if the other entity fails to implement the control measure

7. Equivalent Documents, Plans or Programs.

The Permittee may submit to EPA any existing documents, plans, or programs existing prior to the effective date of this Permit which the Permittee deems to fulfill a required SWMP minimum control measure or component as specified by this Permit. Such pre-existing documents, plans or programs must be individually submitted to EPA pursuant to Part IV.D for review and approval at least six months prior to the compliance date of the required SWMP minimum control measure. Where EPA determines, in writing, that the Permittee's pre-existing document, plan or program complies with the required SWMP minimum control measure, the Permittee is not required to develop of a separate SWMP document, plan or program for that control measure. A copy of EPA's written approval of each equivalent document, plan or program must be maintained within the SWMP document required in Part II.A.3 and referenced in subsequent Annual Reports. The Permittee must submit to EPA as specified in Part IV.D the following documentation with each individual request for review:

a) A complete copy of the relevant document, plan or program, (or applicable section of such documentation, provided the Permittee provides the full citation of the source material); and

b) A detailed written overview identifying the required SWMP program component addressed by the submittal, and the reasons, citations and references sufficient to demonstrate that the submitted material meets or exceeds the required SWMP program component.

B. Minimum Control Measures. The following minimum control measures must be accomplished through the Permittee's Stormwater Management Program:

1. Education and Outreach on Stormwater Impacts.

a) Within two years of the effective date of this permit, the Permittee must develop, implement, and evaluate an on-going program to educate targeted audiences about the adverse impacts of stormwater discharges on local water bodies and the steps that they can take to reduce pollutants in stormwater runoff. The Permittee must target its education and outreach program activities to reach the following audiences as appropriate:

- project managers;
- contractors;
- tenants;
- environmental staff; and
- business owners and operators.

b) The primary goal of the education and outreach program is to reduce or eliminate behaviors and practices that cause or contribute to adverse stormwater impacts. Using the topics listed in Part II. B.1.c, the Permittee may develop a prioritized schedule and plan to reach the target audiences through the on-going education effort.

c) The Permittee must select from the following topics to affect behavior change through its education and outreach program:

- Proper use, storage and disposal of household hazardous waste;
- Proper recycling;
- Appropriate stormwater management practices for commercial, food service, and automotive activities, including carpet cleaners, home-based or mobile businesses;
- Appropriate yard care techniques for protecting water quality, including proper timing and use of fertilizers;
- Proper pet waste management;
- Appropriate spill prevention practices;
- Proper management of street, parking lot, sidewalk, and building wash water;
- Proper methods for using water for dust control;
- Proper design and use of Low Impact Development (LID) techniques at new development and redevelopment sites; and

- Impacts of illicit discharges and how to report them.

d) Beginning two years from the effective date of this permit, the Permittee must measure and document the understanding and adoption of the targeted behavior[s] for at least one audience in at least one subject area listed above. The resulting measurements must be used to direct education and outreach resources most effectively through the remainder of the Permit term, The Permittee must evaluate and summarize resulting changes in adoption of the targeted behavior(s). The Permittee may meet this requirement individually or through cooperation with other entities.

e) The Permittee must document the specific education program goals, and track and maintain records of public education and outreach activities in the SWMP document.

2. Public Involvement/Participation.

a) The Permittee must comply with applicable federal, state and local public notice requirements when implementing a public involvement/participation program.

b) Within six months of the effective date of this permit, and at a regular schedule at least annually thereafter, the Permittee must conduct at least one of the following activities within the permit area throughout the permit term:

- Convene meeting(s) with the Environmental Division Chief & Environmental Compliance Program Manager, and/or other JBLM organizations as appropriate, to discuss and coordinate effective SWMP implementation, or
- Convene a JBLM Water Council or organize other means to provide opportunity for the military community to participate in development and implementation of SWMP activities.

c) No later than one year from the permit effective date, and annually thereafter, the Permittee must make the updated SWMP document required by Part II.A.3 available to the public on the Permittee's website.

d) At least once per year, the Permittee must provide one or more on-going volunteer activities as practicable to help actively engage residents and personnel at JBLM in understanding water resources and how their activities can affect water quality. In the SWMP document, the Permittee must maintain a log of public participation activities performed.

- Volunteer activities may include, but are not limited to, storm drain stenciling or marking program; establishing a website, email address and/or hotline for citizens to report pollution concerns; establishing a pet waste management program at American Lake or other resource areas.

3. Illicit Discharge Detection and Elimination (IDDE).

An illicit discharge is any discharge to a MS4 that is not composed entirely of stormwater as defined in 40 CFR § 122.26(b)(2). The Permittee's SWMP must include an on-going program to detect and remove illicit connections and discharges into the MS4. The Permittee must include a written description of the program in the SWMP document. No later than 180 days prior to the expiration date of this permit, the Permittee must implement an IDDE program which fully addresses each of the following components:

a) **Map of Cantonment Areas.** Within two years from the effective date of this permit, the Permittee must update and maintain a map of the MS4 located within the JBLM cantonment area. At a minimum, the cantonment area map must be periodically updated and include the following information:

- jurisdictional boundaries;
- known MS4 outfalls,
- receiving waters, other than groundwater;
- Tributary conveyances for all known MS4 outfalls. The following attributes must be mapped for all known outfalls:

  (i) tributary conveyances (type, material and size where known);

  (ii) associated drainage areas; and

  (iii) land use;
- Stormwater treatment and flow control BMPs/facilities owned, or operated, by the Permittee, including information about type, and design capacity.
- Geographic areas served by the Permittee's MS4 that do not discharge stormwater to surface waters;
- Points at which the Permittee's MS4 is interconnected with other MS4s or other storm/surface water conveyances; and
- Locations of all Permittee owned or operated industrial facilities, maintenance/storage facilities and snow disposal sites that discharge directly to the Permittee's MS4, and/or waters of the State.

The Permittee must maintain updated cantonment area MS4 maps. As necessary the Permittee must add data regarding any new connections to the MS4 which are allowed by the Permittee after the effective date of this permit. A copy of the completed MS4 map, as both a report and as an electronic file via Arc GIS compatible format, must be submitted to EPA upon request and as part of the Permit renewal application required in Part IV.B.

Consistent with national security laws and directives, the Permittee must provide mapping information to operators of adjacent regulated MS4s upon request.

b) **Map of Training Areas.** No later than 180 days prior to the expiration date of this permit, the Permittee must develop and submit to EPA a preliminary map identifying the presence of MS4 infrastructure located outside the cantonment area. The Permittee must prioritize the development of a training area MS4 map within the Muck Creek watershed/basin. The map must include the information items listed in Part II.B.3.a. A copy of the preliminary map, as both a report and as an electronic file via Arc GIS compatible format, must be submitted to EPA as part of the permit renewal application required in Part IV.B.

c) **Ordinance**. The Permittee must effectively prohibit, through ordinance or other regulatory mechanism, all illicit discharges into the MS4 to the maximum extent allowable under the legal authorities of JBLM. The ordinance or regulatory mechanism must be adopted, or existing mechanism amended, to comply with this Permit no later than thirty months from the effective date of this Permit.

The Permittee must implement appropriate enforcement procedures and actions associated with the ordinance or regulatory mechanism, including a written policy of enforcement escalation procedures for recalcitrant or repeat offenders.

Allowable Discharges: The regulatory mechanism does <u>not</u> need to prohibit the following categories of non-stormwater discharges, consistent with Part I.C.1.d:

- Diverted stream flows;
- Rising ground waters;
- Uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20));
- Uncontaminated pumped ground water;
- Foundation drains;
- Air conditioning condensation;
- Irrigation water from agricultural sources that is commingled with urban stormwater;
- Springs;
- Uncontaminated water from crawl space pumps
- Footing drains;
- Flows from riparian habitats and wetlands;
- Non-stormwater discharges covered by another NPDES permit; and/or
- Discharges from emergency fire fighting activities in accordance with Part 1.C.b.

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

- *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 must be dechlorinated to a total residual chlorine concentration of 0.1 parts per million (ppm) or less, pH-adjusted, if necessary, and volumetrically and velocity controlled to prevent resuspension of sediments in the MS4.

- *Discharges from lawn watering and other irrigation runoff:* These discharges must be minimized through, at a minimum, public education activities (see Part II.B.2.a) and water conservation efforts.
- *Dechlorinated swimming pool, spa, and hot tub discharges:* The discharges must be dechlorinated to a total residual chlorine concentration of 0.1 ppm or less, pH-adjusted and reoxygenized if necessary, and volumetrically and velocity controlled to prevent re-suspension of sediments in the MS4. Discharges must be thermally controlled to prevent an increase in temperature of the receiving waters. Swimming pool cleaning wastewater and filter backwash must not be discharged to the MS4.
- *Street and sidewalk wash water, water used to control dust, and routine external building wash down that does not use detergents*: The Permittee must reduce these discharges through, at a minimum, public education activities (see Part II.B.2.a) and/or water conservation efforts. To avoid washing pollutants into the MS4, the Permittee must minimize the amount of street wash and dust control water used. At active construction sites, street sweeping must be performed prior to washing the street.
- *Other non-stormwater discharges.* The discharges must be in compliance with the requirements of a pollution prevention plan reviewed by the Permittee which addresses control of such discharges.

d) **Detection and Elimination.** No later than thirty months from the effective date of this permit, the Permittee must develop and implement an on-going program to detect and address non-stormwater discharges, spills, and illicit connections into their MS4. This program must be described within the SWMP document and include:

- *Procedures for locating priority areas likely to have illicit discharges,* including areas where complaints have been recorded in the past, and areas with storage of large quantities of materials that could result in spills;
- *Field assessment activities,* including visual inspection of outfalls draining priority areas during dry weather and for the purposes of verifying outfall locations, identifying previously unknown outfalls, and detecting illicit discharges. The dry weather screening activities

may include field tests of parameters selected by the Permitee as being indicators of discharge sources. The Permittee may utilize less expensive "field test kits," and test methods not approved by EPA under 40 CFR Part 136, provided the manufacturer's published detection ranges are adequate for the illicit discharge detection purposes;

i) No later than thirty months from the effective date of this permit, the Permittee must begin dry weather field screening for non-stormwater flows from stormwater outfalls.

ii) No later than 180 days prior to the permit expiration date, the Permittee must complete field screening of at least 75% of all MS4 outfalls located within the cantonment area;

iii) Screening for illicit connections may be conducted in accordance with *Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments*, Center for Watershed Protection, October 2004, or another methodology of comparable effectiveness;

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

  i) Compliance with this provision will be achieved by immediately responding to all illicit discharges including spills which are determined to be constitute a threat to human health or the environment; investigating (or referring to the appropriate agency), within seven (7) days, any complaints, reports or monitoring information that indicates a potential illicit discharge, including spills; and immediately investigating (or referring) problems and violations determined to be emergencies or otherwise judged to be urgent or severe;

- *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; and

- *Procedures for eliminating the discharge*; including notification of appropriate authorities; notification of the responsible operator or organization; technical assistance; follow-up inspections; and escalating enforcement and legal actions if the discharge is not eliminated.

i) Compliance with this provision will be achieved by initiating an investigation within twenty one (21) days of a 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. Upon confirmation of the illicit nature of a storm drain connection, the Permittee must take action in a documented effort to eliminate the illicit connection within forty five (45) days.

e) **Tracking.** The Permittee must implement a means of program evaluation and assessment which tracks the number and type of illicit discharges identified, dry weather screening efforts, and the location and any remediation efforts to address identified illicit discharges.

f) **Education**. Within two years from the effective date of this permit, the Permittee must inform employees, businesses, and the general public within the permit area of hazards associated with illegal discharges and improper disposal of waste. This program must be conducted in concert with the public education requirements outlined in Part II.B.1.

- No later than one year from the effective date of this permit, the Permittee must list and publicize a hotline or other local means for the public and JBLM personnel to report spills and other illicit discharges. The Permittee must maintain a record of calls received and follow-up actions taken in accordance with II.B.3.d above and include a summary in the Annual Report.

g) **Training.** Within two years of the effective date of this permit, the Permittee must ensure that all staff responsible for the identification, investigation, termination, clean up and reporting of illicit discharges, including spills and illicit connections, are trained to conduct these activities. Follow-up training must be provided as necessary to address changes in procedures, techniques or requirements. The Permittee must maintain records of relevant training provided or obtained, and the staff members trained. A summary of this training must be included in each Annual Report.

4. Construction Site Stormwater Runoff Control. Throughout the permit area, the Permittee must implement and enforce a program to reduce pollutants in stormwater runoff to the MS4 from construction activities resulting in land disturbance of greater than or equal to 5,000 square feet or more. The Permittee must include a written description of the construction site runoff control program in the SWMP document. At a minimum the program must include the following components:

a) **Oversight**. The Permittee must provide adequate direction and oversight to ensure that entities responsible for regulated construction activities within the permit area obtain authorization to discharge as necessary under the NPDES General Permit for Stormwater Discharges for Construction Activity for Federal Facilities in Washington, Permit #WAR12000F (Construction General Permit or CGP).

b) **Ordinance**. The Permittee must use an ordinance or other regulatory mechanism available under the legal authorities of JBLM to require erosion and sediment controls, onsite materials management and sanctions to ensure compliance with the terms of the SWMP and the CGP.

c) **Enforcement.** The Permittee must maintain a list of policies and procedures which can be used to enforce construction site compliance within JBLM independent of EPA staff directly enforcing the CGP. No later than two years from the effective date of this permit, the Permittee must include this list of policies and procedures in the SWMP document, and must update the list as necessary at least annually. The Permittee must summarize in each Annual Report any enforcement actions taken at construction sites during the previous reporting period.

d) **Construction Site BMPs.** The Permittee must maintain (or incorporate by reference) a list of appropriate construction site BMPs in the SWMP document; such a list must include associated criteria for maintenance and installation of each specific practice.

e) **Contractual Language.** The Permittee must work with other responsible organizations to ensure that all Requests For Proposal (RFPs) and construction contracts for new construction proje**c**ts which will disturb 5,000 square feet or more within the permit area include specifications requiring compliance with the SWMP and, when applicable, the CGP. An example of such contract language must be included within the SWMP document.

f) **Pre-construction Site Plan Review**. The Permittee must implement procedures for reviewing all pre-construction site plans for potential water quality impacts, appropriate erosion and sediment controls, and appropriate control of other construction site materials. These procedures must include provisions for receipt and consideration of information submitted by the public. Information summarizing the number of site plans reviewed during the previous reporting period must be submitted as part of the corresponding Annual Report.

g) **Construction Site Inspection Plan**. Within six months of the permit effective date, the Permittee must develop and implement a construction site inspection plan. The construction site inspection plan must describe the criteria which triggers a site inspection, and must include a mandatory timeframe within which construction sites meeting the criteria will be inspected by the Permittee's staff or its representatives.

- The Permittee must develop methods for its staff or representatives to stop work on construction sites deemed to be in non-compliance with the construction site runoff control program.
- The Permittee must develop and utilize a construction site inspection form to document all construction site inspections.
- The written construction site inspection plan, and associated inspection form, must be included in the SWMP document.

- Information summarizing the site inspections conducted by the Permittee during the previous reporting period, including the location and total number of such inspections, must be submitted as part of the corresponding Annual Report.
- At a minimum, all sites addressed by plan must be inspected by the Permittee or their representatives at least quarterly.

h) **Training**. Throughout the permit term, the Permittee must ensure that all staff responsible for preconstruction site plan review, construction site inspections (or are otherwise implementing the construction site runoff control program) are adequately trained to conduct such activities. Follow-up training must be provided as necessary to address changes in procedures, techniques or requirements. The Permittee must maintain records of relevant training provided or obtained, and the staff members trained. A summary of this training occurring within the reporting period must be included in each Annual Report.

5. Stormwater Management for Areas of New Development and Redevelopment. Not later than one year from the effective date of this permit, the Permittee must implement a program to manage stormwater from developed areas in a manner that preserves and restores the area's predevelopment hydrology. The Permittee must use an ordinance (or other regulatory mechanism available under the legal authorities available to JBLM) to implement and enforce a program to control stormwater runoff from all public and private new development or redevelopment project sites that will disturb 5,000 square feet or more of land area.

The Permittee must include a written description of the program within the SWMP document. In each Annual Report, the Permittee must summarize the implementation status of these requirements for all new development and redevelopment project sites occurring during the relevant reporting period.

Certain projects may be exempt from specific provisions of this Part, as defined in Appendix C.

At a minimum, within one year of the permit effective date, the Permittee must implement the following program components as described in Part II.B.5.a through k.

a) **Site Planning Procedures.** For all new development and redevelopment project sites disturbing 5,000 square feet or more, the Permittee must adopt and implement a project site planning process, including criteria for BMP selection and design; the site planning procedures must be implemented to protect water quality, and reduce the discharge of pollutants to the maximum extent practicable.

b) **Preparation of a Stormwater Site Plan.** For all new development and redevelopment project sites disturbing 5,000 square feet or more, the Permittee must require a project-specific Stormwater Site Plan. Stormwater Site Plans must be prepared consistent with Chapter 3, Volume 1-*Minimum Technical*

Requirements and Site Planning of the 2012 *Stormwater Management Manual for Western Washington;* and with Chapter 3 of the *Low Impact Development Technical Guidance Manual for the Puget Sound (2012).* For new development or redevelopment sites disturbing 5,000 square feet or more within Airport Operations Areas (AOA), stormwater site plans must be prepared consistent with the *Aviation Stormwater Design Manual (2008).*

c) **Source Control of Pollution**. The Permittee must require the use of available and reasonable source control BMPs at all new development and redevelopment project sites disturbing 5,000 square feet or more. Source control BMPs must be selected, designed, and maintained in accordance with Volume IV-*Source Control BMP*s of the 2012 *Stormwater Management Manual for Western Washington.)* For new development or redevelopment sites disturbing 5,000 square feet or more within Airport Operations Areas (AOA), source control BMPs must be selected, designed and maintained in accordance with the *Aviation Stormwater Design Manual (2008).*

d) **New Development and Redevelopment Site Design to Minimize Impervious Areas, Preserve Vegetation, and Preserve Natural Drainage Systems**. For all new development and redevelopment project sites disturbing 5,000 square feet or more, the Permittee must ensure such projects are designed to minimize impervious surfaces, retain vegetation, restore native vegetation, and preserve natural drainage systems, to the maximum extent feasible.

- The Permittee must require site design that minimizes the project's roadway surfaces and parking areas, incorporates clustered development, and ensures that vegetated areas are designed to receive stormwater dispersion from all developed project areas.
- To the maximum extent feasible, the Permittee must ensure that natural drainage patterns of the project site are maintained, and that discharge from the new development or redevelopment project site occurs at the natural location.
- The Permittee must ensure that the manner by which runoff is discharged from the new development project site does not cause a significant adverse impact to downstream receiving waters and/or down gradient properties.
- The Permittee must ensure that all outfalls utilize dissipation devices.

e) **Hydrologic Performance Requirement for On-site Stormwater Management.** For all new development or redevelopment project sites disturbing 5,000 square feet or more, the Permittee must require the use of on-site stormwater management practices intended to infiltrate, disperse, retain, and/or harvest and reuse stormwater runoff to the maximum extent technically feasible.

- *For lawn and landscape areas on the new development or redevelopment project site,* the Permittee must ensure the soil quality

meets the specifications within BMP T5.13 (Post-Construction Soil Quality and Depth) in Chapter 5 of Volume V-*Runoff Treatment BMPs* of the 2012 *Stormwater Management Manual for Western Washington (2012).* Lawn and landscape areas associated with project sites occurring within Airport Operations Areas must ensure the soil quality meets specifications of source control BMPs must be selected, designed and maintained in accordance with the *Aviation Stormwater Design Manual (2008).*

- *For new or redevelopment project sites creating or replacing 2,000 ≥ 4,999 square feet of hard surfaces,* the Permittee must ensure that stormwater dispersion or infiltration BMPs are used consistent with those specified in the 2012 *Stormwater Management Manual for Western Washington* and/or the *Low Impact Development Technical Guidance Manual for the Puget Sound (2012).* Such project sites within Airport Operations Areas must ensure that stormwater dispersion or infiltration BMPs are used consistent with those specified in the *Aviation Stormwater Design Manual (2008).*
- *For new development or redevelopment project sites creating or replacing 5,000 square feet or more of hard surfaces,* the Permittee must ensure stormwater controls are designed to retain on-site the volume of stormwater produced from the 95th percentile rainfall event.

  As an alternative, the Permittee may instead comply with this requirement to manage stormwater runoff from new or replaced hard surfaces ≥5,000 square feet by ensuring the post-development stormwater discharge flows from the project site do not exceed the pre-development discharge flows for the range of 8% of the 2-year peak flow to 50% of the 2-year peak flow, as calculated by using the Western Washington Hydrology Model (or other continuous runoff model).
- For the purposes of this permit, the modeled pre-development condition for all new development and redevelopment project sites must be "forested land cover" (with applicable soil and soil grade), unless reasonable historic information indicates the site was prairie prior to settlement (and may be modeled as "pasture" when using the Western Washington Hydrology Model).

f) **Hydrologic Performance Requirement for Flow Control**. The Permittee must ensure that the following new development and redevelopment project sites are designed to control post development discharge flows: sites which create ≥10,000 square feet effective impervious surface area; sites which convert ¾ acres or more from native vegetation to lawn/landscaping, and from which there is a surface discharge to a natural or manmade conveyance system; and, sites

which convert 2.5 acres or more of native vegetation to pasture, and from which there is a surface discharge to a natural or manmade conveyance system.

For these new development or redevelopment project sites, post-development stormwater discharge flows must not exceed the pre-development discharge flows for the range of 50% of the 2-year peak flow to 100% of the 50-year peak flow, as calculated by using the Western Washington Hydrology Model (or other continuous runoff model).

- For the purposes of this permit, the modeled pre-development condition for all new development and redevelopment project sites must be "forested land cover" (with applicable soil and soil grade), unless reasonable historic information indicates the site was prairie prior to settlement (and may be modeled as "pasture" when using the Western Washington Hydrology Model).
- The Permittee must prioritize the use of small scale dispersion or infiltration practices, or other appropriate Low Impact Development practices to meet this flow control requirement. The Permittee may not design new development or redevelopment sites to meet this hydrologic performance requirement for flow control solely through the use of large scale retention or detention practices.
- New development or redevelopment project sites that will discharge directly to the JBLM Canal, or indirectly through Outfalls #OF-4 or #OF-5, are exempt from this hydrologic performance requirement for flow control.

g) **Runoff Treatment.** The Permittee must ensure the proper construction of stormwater treatment facilities for all new development or redevelopment sites in accordance with Appendix B of this permit.

h) **Wetlands Protection.** The Permittee must ensure that discharges to wetlands from new development or redevelopment project sites maintain the hydrologic conditions, hydrophytic vegetation, and substrate characteristics necessary to support existing and designated uses. The hydrologic analysis must use the existing land cover condition to determine the existing hydrologic conditions, unless directed otherwise by a regulatory agency with jurisdiction.

i) **Inspections**. Within 14 months of the permit effective date, the Permittee must develop an inspection program intended to verify that the permanent stormwater facilities used for onsite management, flow control and treatment as required by this Part are properly installed and operational. The inspection plan must describe the criteria which the Permittee will use to trigger a post-construction site inspection, timeframes within which sites meeting the criteria will be inspected, and the anticipated response to address any deficiencies identified.

- The Permittee must develop and utilize a site inspection form to document all post-construction site inspections required by this subpart.

- The written post-construction site inspection plan, and associated inspection form, must be included in the SWMP document no later than two years from the effective date of this permit.
- Beginning with the 2nd Year Annual Report, and annually thereafter, information summarizing all inspections conducted by the Permittee during the previous reporting period, including the locations and total number of such site inspections, and resulting actions to address any deficiencies, must be submitted as part of the corresponding Annual Report.

j) **Operation and Maintenance.** The Permittee must ensure long term operation and maintenance (O&M) of all permanent stormwater facilities used for onsite management, flow control, and treatment. No later than three years from the effective date of this permit, the Permittee must implement O&M standards (in the form of a manual or other specific reference[s]) to address all permanent stormwater facilities used for onsite stormwater management, flow control and treatment and which are installed at new development and redevelopment project sites after the effective date of this permit. The O&M standards for all permanent stormwater facilities must be consistent with Chapter 4, Volume V-*Runoff Treatment BMPs* of the 2012 *Stormwater Management Manual for Western Washington (2012)*

- To ensure long term O&M of stormwater facilities, the Permittee must require all entities responsible for such O&M to use the referenced maintenance standards/manual required in this Part.
- The Permittee must maintain an inventory of all permanent stormwater facilities which are used for onsite stormwater management, flow control, and treatment, consistent with Part II.B.3.a of this permit, and must maintain records of all related maintenance activity.
- A summary of anticipated annual maintenance activity, by type and number of facilities, must be included in the SWMP documentation.
- A summary of facility maintenance activity accomplished during the previous reporting period must be included in the corresponding Annual Report

k) **Training**. No later than one year from the effective date of this permit, the Permittee must ensure all staff responsible for plan review, hydrologic modeling, site inspections and enforcement necessary to implement the program outlined in Part II.B.5, are adequately trained to conduct these activities. Follow-up training must be provided as necessary to address changes in procedures, techniques or requirements. The Permittee must maintain records of relevant training provided, or obtained, and the staff members trained. A summary of this training occurring within the reporting period must be included in each Annual Report.

6. **Pollution Prevention and Good Housekeeping for Municipal Operations & Maintenance.** Within two years from the effective date of this permit, the Permittee must update and implement its operations and maintenance (O&M) program to prevent or reduce pollutants in runoff from the Permittee's MS4 and from ongoing municipal operations. The written description of the program must be included in the SWMP document. At a minimum, the O&M program must address each of the following program components:

    a) **Maintenance Standards for Permanent Stormwater Facilities**. The Permittee must establish maintenance standards for its permanent stormwater facilities used for onsite management, flow control and treatment that are protective of facility function. The purpose of a maintenance standard is to determine if maintenance of a stormwater facility 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 is not a permit violation.

    Unless there are circumstances beyond the Permittee's control, if an inspection required in Part II.B.6.b identifies that a facility's maintenance standard has been exceeded, the Permittee must perform appropriate maintenance as follows:

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

    Where circumstances beyond the Permittee's control prevent the maintenance activity from occurring, the Permittee must document within the corresponding Annual Report the circumstances and how they were outside the Permittee's control. Circumstances beyond the Permittee's control may include, but are not limited to: denial or delay of access by property owners; denial or delay of necessary permit approvals; and unexpected reallocations of maintenance staff or resources to perform emergency work.

    b) **Inspection of Permanent Stormwater Facilities**. No later than two years from the effective date of this permit, the program must include annual inspection of all Permittee owned or operated permanent stormwater facilities used for flow control and treatment, other than catch basins. The Permittee must take appropriate maintenance actions in accordance with its adopted maintenance standards.

    - The Permittee 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

included within the SWMP document and certified in accordance with Part VI.E.

- As part of the 2nd Year Annual Report, the Permittee must document the total number of Permittee-owned or operated permanent stormwater facilities used for flow control and treatment to be inspected in compliance with this Part. Subsequent Annual Reports must document summarize the Permittee's inspection and maintenance of those permanent stormwater facilities.

c) **Spot Check Inspection of Permanent Stormwater Facilities**. The Permittee must conduct spot checks of potentially damaged permanent stormwater control facilities (other than catch basins) after major storm events. For the purposes of this permit, a major storm event is rainfall greater than the 24-hour, 10 year recurrence interval. The Permittee must conduct repairs or take appropriate maintenance action in accordance with maintenance standards established above, based on the results of the spot check inspections.

d) **Inspections of Catch Basins**. The Permittee must inspect all catch basins and inlets owned or operated by the Permittee at least once before the end of the permit term. The Permittee must clean catch basins if inspection indicates cleaning is needed. Decant water and solids must be disposed of in accordance with Appendix A of this permit.

- As part of the 2nd Year Annual Report, the Permittee must report the total number of Permittee-owned or operated catchbasins to be inspected annually in compliance with this Part; subsequent Annual Reports must document the Permittee's progress toward inspecting and maintaining all catchbasins prior to the permit expiration date.

e) **Compliance**. Compliance with the inspection requirements in Parts II.B.6.b, c. and d. above will be determined by evaluating Permittee records of an established stormwater facility inspection program. The Permittee must inspect at least 95% of the total universe of identified permanent stormwater facilities used for flow control and treatment, and 95% of all catchbasins, by the expiration date of the permit

f) **Maintenance Practices.** The Permittee must document and implement maintenance practices to reduce stormwater impacts associated with runoff from streets, parking lots, roads or highways, parks, open space, road right-of- way, maintenance yards, stormwater facilities used for flow control and treatment and from road maintenance activities located or conducted within the permit area by the Permittee or other entities. The Permittee must ensure that the following activities are conducted in a manner that is protective of receiving water quality:

- Pipe cleaning;
- Cleaning of culverts that convey stormwater in ditch systems;
- Ditch maintenance;
- Street cleaning;

- Road repair and resurfacing, including pavement grinding;
- Snow and ice control;
- Utility installation;
- Pavement striping maintenance;
- Maintaining roadside areas, including vegetation management; and
- Dust control.
- Application of fertilizer, pesticides, and herbicides, including the development of nutrient management and integrated pest management plans;
- Sediment and erosion control;
- Landscape maintenance and vegetation disposal;
- Trash management; and
- Building exterior cleaning and maintenance.

g) **Training.** The Permittee must develop and implement an on-going training program for JBLM facility maintenance staff, contracted companies, environmental project officers, or other staff whose construction, operations or maintenance job functions may impact stormwater quality. The training program must address the importance of protecting water quality; the requirements of this permit; operation and maintenance standards, inspection procedures; selection of appropriate BMPs as required in this Part; ways to perform their job activities to prevent or minimize impacts to water quality; and procedures for reporting water quality concerns, including potential illicit discharges. Follow-up training must be provided as needed to address changes in procedures, techniques, or requirements. The Permittee must maintain records of relevant training provided or obtained, and the staff members trained. A summary of this training must be included in each Annual Report.

h) **Stormwater Pollution Prevention Plans for Equipment Maintenance /Material Storage Yards.** Within two years of the effective date of this permit, the Permittee must develop and implement Stormwater Pollution Prevention Plans (SWPPP) for all heavy equipment maintenance or storage yards, and/or material storage facilities owned or operated by the Permittee within the permit area, which are not already regulated under the NPDES Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activities, #WAR05-000F or another NPDES permit. Implementation of non-structural BMPs must begin immediately after the SWPPP is developed. A schedule for installation of any necessary structural BMPs must be included in the SWPPP. The Permittee may use generic SWPPPs that can be tailored to multiple similar activity sites to comply with this requirement. The SWPPP(s) must include a summary of BMPs expected to be utilized at the site and periodic visual observation of discharges from the facility by responsible staff to verify the effectiveness of BMPs used to reduce pollutants in runoff.

i) **Documentation.** Records of all permanent stormwater facility inspections, catch basin inspections, maintenance, or repair activities conducted by the Permittee must be maintained in accordance with Part IV.C of this permit, and summarized for the preceding reporting period within the corresponding Annual Report.

C. Stormwater Retrofits to Reduce Discharges to Impaired and Degraded Receiving Waters.

1. The Permittee must conduct stormwater discharge, water quality and biological assessment monitoring as required in Part IV.

2. Within three years of the permit effective date, the Permittee must develop a stormwater retrofit plan to reduce flows and associated pollutant loadings from existing effective impervious surfaces into Clean Water Act Section 303(d) listed and other degraded water bodies. The retrofit plan must be consistent with the recommendations contained in the March 2007 *Murray/Sequalitchew Watershed Management Plan* and the 2008 *Chambers-Clover Creek Watershed Action Plan.*

a) At a minimum, the Permittee's retrofit plan must analyze potential locations to reduce both stormwater flow volume and pollutant loadings from cantonment area sub-basins draining to American Lake; Clover Creek; Murray Creek; and the Bell-McKay-Hamer Marshes near Sequalitchew Creek and the JBLM Canal.

b) For each potential location, the retrofit plan must evaluate the feasible use of low impact development techniques, and other controls that infiltrate, evapotranspire, harvest and re-use stormwater runoff, or which otherwise eliminate stormwater flow volume and pollutant loadings from existing surfaces discharging to waters listed in Part II.C.2.a.

c) The Permittee must evaluate and prioritize existing building locations where the disconnection of existing flows from rooftop downspouts into the MS4 and/or into waters of the United States could be accomplished. The Permittee must accomplish such retrofits as soon as practicable, with priority given to roof disconnection projects within the Clover Creek subbasin. The Permittee may consider using such techniques as full dispersion; downspout full infiltration systems; rain gardens; and/or other appropriate practices, as described in the 2012 *Stormwater Management Manual for Western Washington*.

d) The retrofit plan must include a prioritized list of potential projects and project locations for waterbodies listed in Part II.C.2.a. The Permittee must prioritize identified project locations through an evaluation and ranking process that includes the following considerations:
- Efficacy of eliminating stormwater flows to the receiving water;
- Feasibility;
- Cost effectiveness;

- Pollutant removal effectiveness;
- Effective impervious surface area potentially mitigated; and
- Long term maintenance requirements.

e) The Permittee must submit the retrofit plan to EPA as part of the 3rd Year Annual Report. In addition to the prioritized list of potential retrofit projects, the plan must include a summary of the Permittee's rooftop downspout disconnection evaluation and the total number of buildings/total square footage of rooftop disconnected from the MS4 or receiving waters after the Permit effective date.

f) Prior to the expiration date of this permit, the Permittee must initiate or complete one or more structural retrofit project(s) sufficient to disconnect and infiltrate discharges from identified effective impervious surfaces equal to five (5) acres of cumulative area. Calculation of the cumulative total effective impervious surface area to be retrofitted may not include the amount of roof area mitigated through the roof downspout disconnection effort required in Part II.C.2.c. The Permittee must submit a comprehensive retrofit implementation status report to EPA with the 5th Year Annual Report.

D. Required Response to Violations of Water Quality Standards.

1. The Permittee must notify EPA in writing at the EPA address listed in Part IV.D within 30 days of becoming aware that, based on credible site-specific information, 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 Part must, at a minimum, identify the source of the site-specific information; describe the location, nature and extent of the known or likely water quality standard violation in the receiving water; and explain the reasons why the MS4 discharge is believed to be causing or contributing to the problem. For on-going or continuing violations, a single written notification to EPA will fulfill this requirement.

2. In the event that EPA determines, based on a notification from the Permittee as provided under Part II.D.1 or through any other means, that a discharge from the MS4 owned or operated by the Permittee is causing or contributing to a violation of water quality standards in a receiving water, EPA will notify the Permittee in writing that an adaptive management response outlined in Part II.D.4 below is required.

3. EPA may elect not to require an adaptive management response from the Permittee if:

a) EPA determines that the violation of water quality standards is already being addressed by a Total Maximum Daily Load (TMDL) implementation plan or other enforceable water quality cleanup plan; or

b) EPA concludes the MS4 contribution to the violation will be eliminated through implementation of other permit requirements, regulatory requirements, or Permittee actions.

4. Adaptive Management Response:

a) Within 60 days of receiving a notification under Part II.D.2, or by an alternative date established by EPA, the Permittee must review its Stormwater Management Program and submit a report to EPA. The Adaptive Management Response Report must include:

- A description of the operational and/or structural BMPs that are currently being implemented at the location 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 BMP.
- A description of potential additional operational and/or structural BMPs that will or may be implemented in order to prevent or reduce to the maximum extent practicable any pollutants that are causing or contributing to the violation of water quality standards.
- 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.
- A schedule for implementing the additional BMPs including, as appropriate: funding, training, purchasing, construction, monitoring, and other assessment and evaluation components of implementation.

b) EPA will, in writing, acknowledge receipt of the Adaptive Management Response Report within a reasonable time and notify the Permittee when it expects to complete its review of the report. EPA will either approve the additional BMPs and implementation schedule or require the Permittee to modify the report as needed. If modifications are required, EPA will specify a reasonable time frame in which the Permittee must submit and EPA will review the revised report.

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

d) The Permittee must 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 Part, EPA determines that modification of the BMPs or a specific implementation schedule is necessary EPA will notify the Permittee in accordance with Parts II.E.4, II.E.5 and/or VI.A.

E. Reviewing and Updating the SWMP

1. The Permittee must annually review their SWMP actions and activities as part of the preparation of the Annual Report required in Part IV.C
2. The Permittee may request changes to any SWMP action or activity specified in this permit in accordance with the following procedures:

    a) Changes to delete or replace an action or activity specifically identified in this permit with an alternate action or activity may be requested at any time. Modification requests to EPA must include:

        - An analysis of why the original actions or activity is ineffective, infeasible, or cost prohibitive;
        - Expectations on the effectiveness of the replacement action or activity; and
        - An analysis of why the replacement action or activity is expected to better achieve the permit requirements.

    b) Change requests must be made in writing and signed by the Permittee in accordance with Part VI.E.

3. The Permittee may request EPA review and approval of any existing program or document deemed to be equivalent to a specific SWMP program component required by this permit in accordance with Part II.A.7.

4. Documentation of any of the actions or activities required by this permit must be submitted to EPA upon request.

    a) EPA may review and subsequently notify the Permittee that changes to the SWMP are necessary to:

        - Address discharges from the MS4 that are causing or contributing to adverse water quality impacts;
        - Include more stringent requirements necessary to comply with new federal or state statutory or regulatory requirements; or
        - Include other conditions deemed necessary by EPA to comply with water quality standards, and/or other goals and requirements of the CWA.

    b) If EPA notifies the Permittee that changes to the SWMP are necessary pursuant to Part II.E.4.a, the notification will offer the Permittee an opportunity to propose alternative program changes to meet the objectives of the requested modification. Following this opportunity, the Permittee must implement any required changes according to the schedule set by EPA.

5. Any formal modifications to this permit will be accomplished according to Part VI.A of this permit.

F. Transfer of Ownership, Operational Authority, or Responsibility for SWMP Implementation. The Permittee must implement the actions and activities of the SWMP in all areas which are added or transferred to the Permittee's MS4 (or for which the Permittee becomes responsible for implementation of stormwater quality/quantity controls) as expeditiously as practicable, but not later than one year from the date upon which the new areas were added. A summary of areas added to the Permittee's MS4, and schedules for SWMP implementation, must be documented in the next Annual Report following the transfer.

G. SWMP Resources. The Permittee must provide adequate finances, staff, equipment and other support capabilities to implement the SWMP actions and activities outlined in this permit. Consistent with Part II.A.4.a, the Permittee must provide a summary of estimated SWMP implementation costs in each Annual Report. Provisions herein should not be interpreted to require obligations or payment of funds in violation of the Anti-Deficiency Act, 31 U.S.C. § 1341.

III. Schedule for Implementation and Compliance.

This table summarizes required compliance dates as contained in this permit. The Permittee must complete SWMP actions, and/or submit documentation to EPA, as summarized below. Annual Reports must document interim and completed status of required activities, and include program summary statistics, copies of interim or final documents, etc. relevant to the reporting period.

Table III. Schedule for Implementation and Compliance

Permit Citation	Description of Action	Due Date	Include in the SWMP Document?	Include In Annual Report (AR)?
General Requirements				
II.A.3; IV.C.2	SWMP documentation	1 year from permit effective date	Yes, Update annually	Yes; Submit with each AR
II.A.4	Track SWMP info, costs & statistics	1 year from PED	Update SWMP annually	Submit w/each AR
II.A.7	Submit equivalent documents for EPA review & approval	6 months prior to required	Include EPA approvals in SWMP	
VI.B	Reapply for continued permit coverage	Not later than 180 days prior to permit expiration date		
II.E.1, IV.A.1, IV.C.2	Review SWMP actions for compliance with Permit	Annually		Document compliance in each AR
II.F	Implement SWMP in all newly acquired areas	1 year from date of acquisition		Summarize in subsequent AR
II.G	Summarize SWMP implementation costs	Annually		Summarize costs in each AR
Public Education and Outreach				
II.B.1	Conduct targeted education program; Document audience understanding & behavior adoption	2 years from permit effective date	Document goals, record education activities	Summarize activity in each AR
Public Involvement and Participation				
II.B.2.b	Convene coordination meetings to ensure effective SWMP implementation	6 months from permit effective date	Describe coordination activity	Summarize activity in each AR
II.B.2.c	Make SWMP available to public via website	1 year from permit effective date	Document website in SWMP	Document website in AR
II.B.2.d	Coordinate volunteer activities	At least 1x per year	Maintain log of activities	Summarize activity in AR
Illicit Discharge Detection and Elimination (IDDE)				
II.B.3	Implement comprehensive IDDE program	Not later than 180 days prior to permit expiration date	Describe program in SWMP	Summarize activity in each AR
II.B.3.a	Update & maintain MS4 map of cantonment areas	2 years from permit effective date	Include reference in SWMP	Submit upon request and/or w/ permit renewal application
II.B.3.b	Map the presence of any MS4 in the training area, particularly in Muck Creek watershed	180 days prior to permit expiration date		Submit map with renewal application
II.B.3.d	Detect & address illicit discharges into the MS4 through dry weather screening	30 months from permit effective date	Describe in SWMP	Summarize screening efforts in AR

Table III. Schedule for Implementation and Compliance				
Permit Citation	**Description of Action**	**Due Date**	**Include in the SWMP Document?**	**Include In Annual Report (AR)?**
Illicit Discharge Detection and Elimination (IDDE) continued				
II.B.3.d	Complete field screening of 75% of all MS4 outfalls	180 days prior to permit expiration date	Describe in SWMP	
II.B.3.d	Procedures to characterize illicit discharges	Respond to spills Immediately;& investigate complaints, reports within 7 days		Summarize efforts in AR
II.B.3.d	Procedures for source tracing, and elimination of illicit discharge	Initiate investigation within 21 days; take action to eliminate illicit connection within 45 days		
II.B.3.f	Educate employees businesses and public; publicize hotline/reporting	1 year from permit effective date		Summarize # of calls, follow-up action taken
II.B.3.g	Train responsible staff	2 years from permit effective date		Summarize training in AR
Construction Site Stormwater Runoff Control				
II.B.4	Construction Site Runoff Control Program	Ongoing	Describe in SWMP	
II.B.4.c	Maintain policies/ procedures used to enforce site controls	2 years from permit effective date	List policies and procedures	Summarize actions in AR
II.B.4.d	Maintain list of construction site BMPs to be used		Reference construction BMPs	
II.B.4.e	Include appropriate language in all contracts and requests for proposals		Provide example contract language in SWMP	
II.B.4.f	Conduct preconstruction review	Ongoing	Describe in SWMP	Summarize activity in AR
II.B.4 g	Construction site inspection plan; inspect prioritized sites at least quarterly	6 months from permit effective date	Include site inspection plan in SWMP	Summarize # of sites inspected and
II.B.4.h	Train responsible staff	Ongoing		Summarize in each AR
Stormwater Management for Areas of New Development and Redevelopment				
II.B.5	Manage SW from developed areas& new/redevelopment sites disturbing 5,00 sq feet or more	1 year from permit effective date	Describe in SWMP	Summarize status of required program
II.B.5.i	Develop site inspection program to verify proper installation of permanent SW facilities	14 months from permit effective date	Summarize inspection program in updated SWMP	Summarize inspections & actions beginning in 2nd Year AR
II.B.5.j	Ensure long term operation and maintenance of new permanent SW facilities	3 years from permit effective date	Summarize anticipated annual maintenance activity in SWMP	Summarize activity in AR
II.B.5.k	Train responsible staff	1 year from permit effective date		Summarize training in AR
II.B.5.e, Appendix C	Notify EPA of sites exempted from hydrologic performance standards per Appendix C	Annually		Summarize projects in Annual Report
II.B.5.f, Appendix C	Notify EPA of sites exempted from the hydrologic flow control standard, per Appendix C	Within 15 days of decision to exempt site		

Table III. Schedule for Implementation and Compliance

Permit Citation	Description of Action	Due Date	Include in the SWMP Document?	Include In Annual Report (AR)?
Pollution Prevention and Good Housekeeping for Municipal Operations & Maintenance				
II.B.6	Update and Implement O&M program	2 years from permit effective date	Describe O&M program in SWMP	Yes
II.B.6.a	Maintain SW facilities according to schedule established in permit	2 years from permit effective date	Document standards in SWMP	Yes; document circumstances preventing maintenance
II.B.6.b & c & d	Inspect 95% of permanent SW facilities/conduct spot checks after major storms; Inspect 95% all catch basins	No later than permit expiration date	Document schedules in SWMP document	Document # of facilities/catch basins in 2nd year AR; Summarize activity
II.B.6.g	Train responsible staff	Ongoing	Describe training in SWMP	Summarize training in AR
II.B.6.h	Develop SW pollution prevention plans for equipment maintenance/material storage areas not addressed by other permits	2 years year from permit effective date	Document areas by type/locations in SWMP	Summarize activities in AR
Stormwater Retrofits to Reduce Discharges to Impaired and Degraded Receiving Waters				
II.C	Develop SW Retrofit Plan, including roof downspout disconnection opportunities	3 yearsfrom permit effective date	Summarize program plan in SWMP	Submit Retrofit Plan with 3rd Year Annual Report
II.C.2.f	Initiate or complete retrofits from effective impervious surface of 5 acres cumulative area	No later than permit expiration date		Submit plan with 5th Year AR
Required Response to Violations of Water Quality Standards				
II.D	Notify EPA when a discharge is causing or contributing to a violation of water quality standards	Within 30 days of Permittee knowledge		Summarize in each AR
Monitoring, Recordkeeping, and Reporting Requirements				
IV.A.2, IV.A.8	Develop monitoring and quality assurance plan	1 year from permit effective date	Describe monitoring plan in in SWMP	Submit plan with 1st Year AR
IV.A.5, IV.C.1	Begin sampling stormwater discharge into American Lake	18 months from permit effective date		Submit data in 3nd Year AR, annually thereafter
IV.A.6.a, IV.C.1	Begin water quality sampling in JBLM Canal	1 year from permit effective date		Submit data in 3nd Year AR, annually thereafter
IV.A.6.b, IV.C.1	Begin water quality sampling in Clover and Murray Creeks	1 year from permit effective date		Submit data in 3nd Year AR, annually thereafter
IV.A.7, IV.C.1	Collect two (2) benthic macroinvertebrate samples in Clover Creek / two (2) samples in Murray Creek	180 days prior to permit expiration date		Submit data in 5th Year Annual Report
IV.A.9	Notify EPA regarding Permittee decision to monitor per the permit or participate in the RSMP	120 days from permit effective date		
IV.C.1, IV.C.2, IV.C.3	Submit Monitoring Reports and Annual Reports	Annually, on January 30th of each year beginning in 2015		

IV. Monitoring, Recordkeeping, and Reporting Requirements

A. Monitoring

1. **Compliance Evaluation**. At least once per year, the Permittee must evaluate its compliance with these permit conditions and progress toward achieving the minimum control measures. This evaluation of permit compliance must be documented in each Annual Report required as described in Part IV.C.2.

2. **Monitoring Objectives.** The Permittee must monitor stormwater discharges, surface water quality and stream biology to assess the effectiveness of the SWMP to minimize the impacts from MS4 discharges. The Permittee must conduct monitoring to estimate phosphorus loading from its MS4 discharges into American Lake; characterize water quality discharging through the JBLM Canal; characterize water quality in Clover Creek and Murray Creek; and assess baseline biological conditions in Clover Creek and Murray Creek. Within one year from the effective date of this permit, the Permittee must develop a monitoring plan to address these objectives, including the quality assurance requirements as defined in Part IV.A.8. The monitoring plan must be submitted as part of the 1st year Annual Report.

3. **Representative Sampling.** Samples and measurements taken for the purpose of monitoring must be representative of the monitored activity.

4. **Monitoring Procedures.** Monitoring must be conducted according to test procedures approved under 40 CFR Part 136. Where an approved 40 CFR Part 136 method does not exist, and other test procedures have not been specified, any available method may be used after approval from EPA.

5. **Stormwater Discharge Monitoring.** No later than eighteen (18) months from the effective date of this permit, the Permittee must sample at least quarterly from at least one stormwater outfall discharging to American Lake. This monitoring must include stormwater flow measurements collected using automated or manual sampling methods. Samples must be analyzed for total phosphorus as summarized in Table IV.A. Beginning with the 3rd Year Annual Report, any data collected from the selected stormwater outfall(s) discharging to American Lake must be summarized and reported to EPA annually as part of the corresponding Annual Report. The Permittee may elect to opt out of this monitoring requirement, as described below in Part IV.A.9.

Table IV.A: Stormwater Discharge Monitoring For American Lake

Parameter	Monitoring requirements	
	Sample location[1]	Sample frequency[2]
Flow (cfs)	See below	Quarterly
Total Phosphorus (mg/L)	See below	Quarterly

[1]At least one (1) MS4 outfall discharging into American Lake, location(s) to be selected by Permittee.
[2] Samples must be collected at least quarterly during a storm event sufficient to produce a discharge.

6. Water Quality Monitoring.

a) **Water Quality in the JBLM Canal**. No later than one year from the effective date of this permit, the Permittee must begin a water quality monitoring program within the JBLM Canal. Over a period of 24 consecutive months, the Permittee must collect water quality samples at least quarterly, for a total of eight (8) quarterly samples. In addition, the Permittee must also collect at least five (5) individual samples during "high flow" storm events, at a frequency to be determined by the Permittee. This monitoring must include flow measurement(s) using automated or manual sampling methods. All samples collected must be analyzed for the parameters listed in Table IV.B. All monitoring of water quality within the JBLM Canal, comprised of the minimum thirteen (13) sampling events described above, must be completed no later than 180 days prior to the expiration date of the permit. Beginning with the 3nd Year Annual Report, any monitoring data representing water quality discharging through the JBLM Canal must be summarized and reported to EPA annually as part of the corresponding Annual Report.

b) **Water Quality in Clover Creek and Murray Creek**. No later than one year from the effective date of this permit, the Permittee must begin a water quality monitoring program in both Murray Creek and Clover Creek. This monitoring must include flow measurement(s) using automated or manual sampling methods. All samples must be analyzed for the parameters identified in Tables IV.C and IV.D, respectively. Beginning with the 3nd Year Annual Report, any monitoring data representing water quality in Clover Creek and Murray Creeks must be summarized and reported to EPA annually as part of the corresponding Annual Report

Table IV.B: Water Quality Monitoring Requirements for JBLM Canal

Parameter	Monitoring requirements	
	Sample location[1]	Sample frequency[2]
Flow (cfs)	See below	See below
Temperature (C°)	See below	See below
Dissolved Oxygen (mg/L)	See below	See below
pH (s.u.)	See below	See below
Fecal coliform bacteria (cfu/100mL)	See below	See below
Total Nitrogen (mg/L)	See below	See below
Total Phosphorus (mg/L)	See below	See below
Total Suspended Solids (mg/L)	See below	See below
Turbidity (NTU)	See below	See below
Total and Dissolved Copper(µ/L)	See below	See below
Total and Dissolved Zinc(µ/L)	See below	See below
Hardness (mg/L)	See below	See below

[1] Samples must be collected from at least one (1) location within the JBLM Canal, downstream of all MS4 discharges/other flows entering the Canal, and prior to discharge into Puget Sound.
[2] Over a period of twenty four (24) consecutive months, the Permittee must collect samples quarterly, for a minimum of four samples per year, resulting in a minimum total of eight quarterly samples. An additional five (5) individual samples must be collected during "high flow" storm events, at a frequency to be determined by the Permittee.

Table IV.C: Water Quality Monitoring Requirements for Murray Creek

Parameter	Monitoring requirements	
	Sample location[1]	**Sample frequency[2]**
Flow (cfs)	See below	Quarterly
Temperature (C°)	See below	Quarterly
Dissolved Oxygen (mg/L)	See below	Quarterly
pH (s.u.)	See below	Quarterly
Fecal coliform bacteria (cfu/100mL)	See below	Quarterly
Total Nitrogen (mg/L)	See below	Quarterly
Total Phosphorus (mg/L)	See below	Quarterly
Total Suspended Solids (mg/L)	See below	Quarterly
Turbidity (NTU)	See below	Quarterly
Total and Dissolved Copper(µ/L)	See below	Quarterly
Total and Dissolved Zinc(µ/L)	See below	Quarterly
Hardness (mg/L)	See below	Quarterly

[1] A minimum of one location in Murray Creek, to be selected by the Permittee.
[2] A minimum of four (4) samples must be collected in each calendar year.

Table IV.D: Water Quality Monitoring Requirements for Clover Creek

Parameter	Monitoring requirements	
	Sample location[1]	**Sample frequency[2]**
Flow (cfs)	See below	Quarterly
Temperature (C°)	See below	Quarterly
Dissolved Oxygen (mg/L)	See below	Quarterly
pH (s.u.)	See below	Quarterly
Fecal coliform bacteria (cfu/100mL)	See below	Quarterly
Total Nitrogen (mg/L)	See below	Quarterly
Total Phosphorus (mg/L)	See below	Quarterly
Total Suspended Solids (mg/L)	See below	Quarterly
Turbidity (NTU)	See below	Quarterly
Total and Dissolved Copper(µ/L)	See below	Quarterly
Total and Dissolved Zinc(µ/L)	See below	Quarterly
Hardness (mg/L)	See below	Quarterly

[1] A minimum of one location in Clover Creek as it exits Permit Area, to be selected by the Permittee.
[2] A minimum of four (4) samples must be collected in each calendar year.

7. **Biological Monitoring.** No later than 180 days prior to the expiration date of this permit, the Permittee must collect at least two (2) benthic macroinvertabrate samples in Murray Creek and at least two (2) benthic macroinvertabrate samples in Clover Creek. One sampling event per waterbody must be conducted between the months August-October within any calendar year of the permit term. Sample locations should be in close proximity to the water quality monitoring locations identified by the Permittee to comply with Part IV.A.6.b. The Permittee must use benthic macroinvertebrate monitoring protocols which are consistent with the Pierce County Watershed Health

Monitoring Project, Thurston County's Water Resources Monitoring Program, and/or other contemporaryWestern Washington benthic macroinvertebrate monitoring programs. Each sample must be analyzed and scored using the Puget Sound Lowlands benthic index of biological integrity (B-IBI), as described at http://pugetsoundstreambenthos.org/SiteMap.aspx. The Permittee may elect to opt out of this monitoring requirement, as described below in Part IV.A.9.

8. Quality Assurance Requirements. The Permittee must develop a quality assurance plan (QAP) for all monitoring required in this Part. The QAP must be developed concurrent with the monitoring plan as described in Part IV.A.2**.** Any existing QAPs may be modified to meet the requirements of this section. Upon completion of the monitoring plan and QAP, the Permittee must submit the combined document to EPA with the 1st year Annual Report.

a) The QAP must be designed to assist in planning for the collection and analysis of stormwater discharge, water quality and biological/benthic macroinvertebrate samples in support of the permit, and in explaining data anomalies when they occur.

b) Throughout all sample collection and analysis activities, the Permittee must use the EPA-approved QA/QC and chain-of-custody procedures described in the following documents:

- *EPA Requirements for Quality Assurance Project Plans EPA-QA/R-5* (EPA/240/B-01/003, March 2001). A copy of this document can be found electronically at: http://www.epa.gov/quality/qs-docs/r5-final.pdf
- *Guidance for Quality Assurance Project Plans EPA-QA/G-5*, (EPA/600/R-98/018, February, 1998). A copy of this document can be found electronically at: http://www.epa.gov/r10earth/offices/oea/epaqag5.pdf

c) At a minimum, the QAP must reflect the content specified in the EPA documents listed in Part IV.A.8.b, and include the following information:

- Details on the number of samples, type of sample containers, preservation of samples, holding times, analytical methods, analytical detection and quantitation limits for each target compound, type and number of quality assurance field samples, precision and accuracy requirements, sample preparation requirements, sample shipping methods, and laboratory data delivery requirements;
- Map(s) indicating the location of each sampling point;
- Qualification and training of personnel; and
- Name(s), address(es) and telephone number(s) of the laboratories, used by or proposed to be used by the Permittee.

d) The Permittee must amend the QAP whenever there is a modification in sample collection, sample analysis, or other procedure addressed by the QAP.

e) Copies of the QAP must be maintained by the Permittee and made available to EPA upon request.

9. Optional Participation in the Puget Sound Regional Stormwater Management Program (RSMP) Status and Trends Monitoring.

a) The purpose of this part is to allow the Permittee the option to contribute to the Regional Stormwater Management Program (RSMP) Status and Trends Monitoring of small streams and marine nearshore in Puget Sound. The RSMP Status and Trends monitoring is described in Part S.8.b of the Washington Department of Ecology-issued *Western Washington Phase II Municipal Stormwater Permit* (effective August 1, 2013) through other sources.[1] The Permittee may elect to participate in the RSMP Status and Trends Monitoring program in lieu of the monitoring requirements specified in Part IV.B.5 and IV.B.7 of this permit. The Permittee's decision to participate in the RSMP will be considered binding through the duration of the permit term. The Permittee is solely responsible for discussing and arranging its potential in the RSMP with the program organizers prior to the EPA notification deadline in Part IV.A.9.c.

b) This optional "participation in the RSMP" requires the Permittee to make a monetary payment, or series of annual payments, based on a per capita calculation to be assessed by the RSMP organizers in a manner similar to the calculated contributions from other municipal RSMP participants.

c) Not later than 120 days from the effective date of this permit, the Permittee must inform EPA in writing of its decision to either conduct the monitoring described in Parts IV.A.5 and IV.A.7, or to participate in the Puget Sound RSMP. The notification letter must be submitted to the EPA address indicated in Part IV.D.

B. Recordkeeping

1. Retention of Records. The Permittee must retain records and copies of all information (including all monitoring, calibration and maintenance records and all original strip chart recordings for any continuous monitoring instrumentation, copies of all reports required by this permit, a copy of the NPDES permit, and records of all data used to complete the application for this permit) for a period of at least five years from the date of the sample, measurement, report or application, or for the term of this permit, whichever is longer. This period may be extended at the request of the EPA at any time. Records include all information used in the development of the SWMP, all monitoring data, copies of all reports, and all data used in the development of the permit application.

[1] See *Western Washington Phase II Municipal Stormwater Permit* available online at http://www.ecy.wa.gov/programs/wq/stormwater/municipal/phaseIIww/wwphiipermit.html; and the RSMP website at http://www.ecy.wa.gov/programs/wq/stormwater/municipal/rsmp.html

2. **Availability of Records.** The Permittee must submit the records referred to in Part IV.B.1 to EPA only when such information is requested. The Permittee must retain all records comprising the SWMP required by this permit (including a copy of the permit language and all Annual Reports) at a location accessible to the EPA. The Permittee must make records (including the permit application, Annual Reports and the SWMP document) available to the public if requested to do so in writing pursuant to the Freedom of Information Act. The public must be able to request and view the records during normal business hours, and the Permittee must make all reasonable efforts to comply with such requests. As allowed by the Freedom of Information Act, the Permittee may charge fees for copies of documents provided in response to written requests from the public.

C. Reporting Requirements

1. **Stormwater Discharge, Water Quality and Biological Monitoring Reports**. Beginning two years from the effective date of this permit, and at least once per year thereafter, all available stormwater discharge and water quality monitoring data collected during the prior reporting period(s) must be submitted as part of the corresponding Annual Report. If the Permittee conducts more frequent monitoring than is required by this Permit, the results of such monitoring must also be submitted. All biological monitoring data and corresponding Puget Sound Lowlands I-IBI scores must be submitted as part of the subsequent Annual Report following the sample collection. At a minimum, thisReport must include:
    a) Dates of sample collection and analyses;
    b) Results of analytical samples collected;
    c) Location of sample collection;
    d) Summary analysis of data collected.
2. **Annual Report.** No later than January 30, 2015, and annually thereafter, the Permittee must submit an Annual Report to EPA. The reporting periods and associated due dates for each Annual Report are specified in Table IV.E. Copies of all Annual Reports must be made available to the public, at a minimum, upon written request to the Permittee pursuant to the Freedom of Information Act.

Table IV.E - Annual Report Deadlines

Annual Report	Reporting Period	Due Date
1st Year Annual Report	October 1, 2013–September 30, 2014	January 30, 2015
2nd Year Annual Report	October 1, 2014-September 30, 2015	January 30, 2016
3rd Year Annual Report	October 1, 2015-September 30, 2016	January 30, 2017
4th Year Annual Report	October 1, 2016-September 30, 2017	January 30, 2018
5th Year Annual Report	October 1, 2017-September 30, 2018	January 30, 2019

3. **Contents of the Annual Report.** The following information occurring during the relevant reporting period must be summarized or included within each Annual Report:

    a) An updated SWMP document, as required in Part II.A.3;

    b) A report or assessment of compliance with this permit and progress towards achieving the identified actions and activities for each minimum control measure in Parts II.B and II.C. Status of each program area must be addressed, even if activity has previously been completed or has not yet been implemented;

    c) Results of any information collected and analyzed during the previous 12 month reporting period, including summaries of program costs and descriptions of funding sources, information used to assess the success of the program at improving water quality to the maximum extent practicable, or other relevant information;

    d) Stormwater Discharge, Water Quality and Biological Monitoring Reporting, as required in Part IV.C.1;

    e) A summary of the number and nature of all inspections, formal enforcement actions, and/or other similar activities performed by the Permittee;

    f) A summary of all public and private new development or redevelopment project sites that disturb 5,000 square feet or more of land area commencing during the reporting period, including project name, project location, total acreage of new development or redevelopment, and all documentation related to any project sites exempted by JBLM or its counterparts from the provisions of Part II.B.5 pursuant to Permit Appendix C;

    g) A summary list of any water quality compliance-related enforcement actions received from regulatory agencies other than EPA. Such actions include, but are not limited to, formal warning letters, notices of violation, field citations, or similar actions. This summary should include dates, project synopsis, and actions taken to address the compliance issue(s);

    h) Copies of completed or revised Monitoring & Quality Assurance Plan(s), retrofit plans, education materials, ordinances (or other regulatory mechanisms), equivalent documents or program materials, inventories, guidance materials, maps, or other products produced as required by this permit;

    i) A general summary of the activities the Permittee plans to undertake during the next reporting cycle (including an implementation schedule) for each minimum control measure;

    j) A description and schedule for implementation of additional BMPs that may be necessary, based on monitoring results, to ensure compliance with applicable water quality standards;

    k) Notice if the Permittee is relying on another entity to satisfy any of the permit obligations, if applicable; and

l) A description of the location, size, receiving water, and drainage area of any new MS4 outfall(s) owned or operated by the Permittee added to the system since the previous annual reporting period.

D. Addresses. Reports and other documents to be submitted as required by this permit must be signed and certified in accordance with Part VI.E.

a) If EPA provides the Permittee of an alternative means of submitting reports during the permit term other than the manner described herein, the Permittee may use that alternative reporting mechanism in lieu of this provision.

b) One hard copy and one electronic copy (on CD ROM, or through prearranged transmission by Email as indicated below) of any submittal must be provided the following address:

EPA Region 10: United States Environmental Protection Agency
Region 10
Attention: Municipal Stormwater Program Contact
NPDES Compliance Unit
1200 6th Avenue, Suite 900 (OCE-133)
Seattle, WA 98101

c) Prior to the electronic submittal of any required documents to EPA, the Permittee must contact the EPA Region 10 NPDES MS4 Permit Program Coordinator at (206) 553-6650 or (800) 424-4372, and obtain appropriate Email contact information.

V. Compliance Responsibilities

A. Duty to Comply. The Permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action, for permit termination, revocation and reissuance, or modification, or for denial of a permit renewal application.

B. Penalties for Violations of Permit Conditions

1. **Civil and Administrative Penalties**. Pursuant to 40 CFR Part 19 and the Act, any person who violates Section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402 of the Act, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed the maximum amounts authorized by Section 309(d) of the Act and the Federal Civil Penalties Inflation Adjustment Act (28 U.S.C. § 2461) as amended by the Debt Collection Improvement Act (31 U.S.C. § 3701) (currently $37,500 per day for each violation).

2. **Administrative Penalties**. Any person may be assessed an administrative penalty by the Administrator for violating Section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under Section 402 of this Act. Pursuant to 40 CFR Part 19 and the Act, administrative penalties for Class I violations are not to exceed the maximum amounts authorized by Section 309(g)(2)(A) of the Act and the Federal Civil Penalties Inflation Adjustment Act (28 U.S.C. § 2461) as amended by the Debt Collection Improvement Act (31 U.S.C. § 3701) (currently $16,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed $37,500). Pursuant to 40 CFR Part 19 and the Act, penalties for Class II violations are not to exceed the maximum amounts authorized by Section 309(g)(2)(B) of the Act and the Federal Civil Penalties Inflation Adjustment Act (28 U.S.C. § 2461) as amended by the Debt Collection Improvement Act (31 U.S.C. § 3701) (currently $16,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed $177,500).

3. **Criminal Penalties.**

   a) **Negligent Violations**. The Act provides that any person who negligently violates Sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under Section 402 of the Act, or any requirement imposed in a pretreatment program approved under Section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of $2,500 to $25,000 per day of violation, or imprisonment of not more than one year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than $50,000 per day of violation, or by imprisonment of not more than two years, or both.

   b) **Knowing Violations**. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of $5,000 to $50,000 per day of violation, or imprisonment for not more than three years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than $100,000 per day of violation, or imprisonment of not more than six years, or both.

   c) **Knowing Endangerment**. Any person who knowingly violates Section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than $250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than $500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in Section 309(c)(3)(B)(iii) of the Act, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than $1,000,000 and can be fined up to $2,000,000 for second or subsequent convictions.

d) **False Statements**. The Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than two years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than four years, or both. The Act further provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than six months per violation, or by both.

C. Need to Halt or Reduce Activity not a Defense. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with this permit.

D. Duty to Mitigate. The Permittee must take all reasonable steps to minimize or prevent any discharge or disposal in violation of this Permit that has a reasonable likelihood of adversely affecting human health or the environment.

E. Proper Operation and Maintenance. The Permittee must at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by the Permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

F. Bypass of Treatment Facilities.

1. **Bypass not exceeding limitations**. The Permittee may allow any bypass to occur that does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs 2 and 3 of this Part.
2. **Notice**.
    a) Anticipated bypass. If the Permittee knows in advance of the need for a bypass, it must submit prior written notice, if possible at least 10 days before the date of the bypass.
    b) Unanticipated bypass. The Permittee must submit notice of an unanticipated bypass as required under Part V.K of this Permit.
3. **Prohibition of bypass.** 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, and the Director of the Office of Compliance and Enforcement may take enforcement action against the Permittee for such bypass, unless:

a) The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

b) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated stormwater, or maintenance during normal dry weather. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of dry weather or preventive maintenance; and

c) The Permittee submitted notices as required under paragraph 2 of this Part.

4. EPA's Director of the Office of Compliance and Enforcement may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed above in paragraph 3.a. of this Part.

G. Upset Conditions

1. 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 Permittee meets the requirements of G.2 of this Part. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

2. Conditions necessary for a demonstration of upset. To establish the affirmative defense of upset, the Permittee must demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

a) An upset occurred and that the Permittee can identify the cause(s) of the upset;

b) The permitted facility was at the time being properly operated;

c) The Permittee submitted notice of the upset as required under Part V.K; and

d) The Permittee complied with any remedial measures required under Part V.D.

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

H. Toxic Pollutants. The Permittee must comply with effluent standards or prohibitions established under Section 307(a) of the Act for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

I. Planned Changes. The Permittee must give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility whenever:

1.The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source as determined in 40 CFR §122.29(b); or

2.The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in the permit.

J. Anticipated Noncompliance. The Permittee must give advance notice to the Director of any planned changes in the permitted facility or activity that may result in noncompliance with this permit.

K. Twenty-Four Hour Reporting.

1. The Permittee must report the following occurrences of noncompliance by telephone within 24 hours from the time the Permittee becomes aware of the circumstances:

a) any discharge to or from the MS4 which could result in noncompliance that endangers health or the environment;

b) any unanticipated bypass that exceeds any effluent limitation in the permit (See Part V.F);

c) any upset that exceeds any effluent limitation in the permit (See Part V.G);

2. A written submission must also be provided within five days of the time you become aware of the circumstances. The written submission must contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

3. The following shall be included as information which must be reported within 24 hours under this paragraph.

a) Any unanticipated bypass which exceeds any effluent limitation in the permit. (See 40 CFR §122.41(g).)

b) Any upset which exceeds any effluent limitation in the permit (See 40 CFR 122.41(n)(1).)

4. The Director of the Office of Compliance and Enforcement may waive the written report on a case-by-case basis if the oral report has been received within 24 hours by the NPDES Compliance Hotline in Seattle, Washington, by telephone, (206) 553-1846.

5. Reports must be submitted to the addresses in Part IV.D.

L. Other Noncompliance. The Permittee must report all instances of noncompliance, not required to be reported within 24 hours, as part of each Annual Report as required in Part IV.C.2. Noncompliance reports must contain the information listed in Part V.K. of this permit

VI. General Provisions

A. Permit Actions. This permit may be modified, revoked and reissued, or terminated for cause as specified in 40 CFR §§ 122.62, 122.64, or 124.5. The filing of a request by the Permittee for a permit modification, revocation and reissuance, termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

B. Duty to Reapply. If the Permittee intends to continue an activity regulated by this permit after the expiration date of this permit, the Permittee must apply for and obtain a new permit. In accordance with 40 CFR §122.21(d), and unless permission for the application to be submitted at a later date has been granted by the Director, the Permittee must submit a new application at least 180 days before the expiration date of the permit, or in conjunction with the fourth Annual Report. The reapplication package must contain the information required by 40 CFR §122.21(f) which includes: name and mailing address(es) of the Permittee(s) that operate the MS4(s), and names and titles of the primary administrative and technical contacts for the municipal Permittee(s). In addition, the Permittee must identify the identification number of the existing NPDES MS4 permit; any previously unidentified water bodies that receive discharges from the MS4; a summary of any known water quality impacts on the newly identified receiving waters; a description of any changes to the number of applicants; and any changes or modifications to the Stormwater Management Program. The re-application package may incorporate by reference the fourth Annual Report when the reapplication requirements have been addressed within that report.

C. Duty to Provide Information. The Permittee must furnish to the Director, within the time specified in the request, any information that the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The Permittee must also furnish to the Director, upon request, copies of records required to be kept by this permit.

D. Other Information. When the Permittee becomes aware that it failed to submit any relevant facts in a permit application, or that it submitted incorrect information in a permit application or any report to the Director, the Permittee must promptly submit the omitted facts or corrected information.

E. Signatory Requirements. All applications, reports or information submitted to the Director must be signed and certified as follows.

1. All permit applications must be signed as follows:

a) For a corporation: by a responsible corporate officer.

b) or a partnership or sole proprietorship: by a general partner or the proprietor, respectively.

c) For a municipality, state, federal, or other public agency: by either a principal executive officer or ranking elected official.

2. All reports required by the permit and other information requested by the Director must 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:

a) The authorization is made in writing by a person described above;

b) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the organization; and

c) The written authorization is submitted to the Director.

3. Changes to authorization. If an authorization under Part VI.E.2 is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Part VI.E.2 must be submitted to the Director prior to or together with any reports, information, or applications to be signed by an authorized representative.

4. **Certification.** Any person signing a document under this Part must 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 gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of 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 knowing violations."

F. Availability of Reports. In accordance with 40 CFR Part 2, information submitted to EPA pursuant to this permit may be claimed as confidential by the Permittee. In accordance with the Act, permit applications, permits and effluent data are not considered confidential. Any confidentiality claim must be asserted at the time of submission by stamping the words “confidential business information” on each page containing such information. If no claim is made at the time of submission, EPA may make the information available to the public without further notice to the Permittee. If a claim is asserted, the information will be treated in accordance with the procedures in 40 CFR Part 2, Subpart B (Public Information) and 41 Fed. Reg. 36902 through 36924 (September 1, 1976), as amended.

G. Inspection and Entry. The Permittee must allow the Director or an authorized representative (including an authorized contractor acting as a representative of the Director), upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

4. Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the Act, any substances or parameters at any location.

H. Property Rights. The issuance of this permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to persons or property or invasion of other private rights, nor any infringement of state or local laws or regulations.

I. Transfers. This permit is not transferable to any person except after notice to the Director. The Director may require modification or revocation and reissuance of the permit to change the name of the Permittee and incorporate such other requirements as may be necessary under the Act. (See 40 CFR §122.61; in some cases, modification or revocation and reissuance is mandatory.)

J. State/Tribal Environmental Laws

1. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the Permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State/Tribal law or regulation under authority preserved by Section 510 of the Act.

2. No condition of this permit releases the Permittee from any responsibility or requirements under other environmental statutes or regulations.

K. Oil and Hazardous Substance Liability. Nothing in this permit shall be constructed to preclude the institution of any legal action or relieve the Permittee from any responsibilities, liabilities, or penalties to which the Permittee is or may be subject under Section 311 of the CWA or Section 106 of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA).

L. 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 the circumstances, and the remainder of this permit shall not be affected thereby.

VII. Definitions and Acronyms

All definitions contained in Section 502 of the Act and 40 CFR Part 122 apply to this permit and are incorporated herein by reference. For convenience, simplified explanations of some regulatory/statutory definitions have been provided but, in the event of a conflict, the definition found in the statute or regulation takes precedence.

"Administrator" means the Administrator of the EPA, or an authorized representative.

"Air Operations Areas" or AOAs, is defined in the *Aviation Stormwater Design Manual - Managing Wildlife Hazards Near Airports* (December 2008). For the purposes of this Permit, the term AOA means any area of an airport used or intended to be used for landing, takeoff, or surface maneuvering of aircraft. This includes such paved or unpaved areas that are used or intended to be used for the unobstructed movement of aircraft in addition to associated runways, taxiways, or aprons. For the purposes of this permit, the term AOA also includes the following unique subareas as defined in the *Aviation Stormwater Design Manual - Managing Wildlife Hazards Near Airports* (December 2008) and described in this Part: Clearway, Object-Free Area, Runway Protection Zone, Runway Safety Area, and Taxiway Safety Areas. See: http://www.wsdot.wa.gov/aviation/AirportStormwaterGuidanceManual.htm

"AKART" means all known, available and reasonable methods of prevention, control and treatment, and refers to the State of Washington Water Pollution Control Act, Chapter 90.48.010 and 90.48.520 RCW.

"Best Management Practices (BMPs)" means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States and waters of the State. BMPs also include treatment requirements, operating procedures, and practices to control runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. See "stormwater control measure (SCM)."

"Bioretention" is the water quality and water quantity stormwater management practice using the chemical, biological and physical properties of plants, microbes and soils for the removal of pollution from stormwater runoff. Biorentention, for the purpose of this permit, means engineered facilities that store and treat stormwater by passing it through a specified soil profile, and either retain or detain the treated stormwater for flow attenuation. Refer to the 2012 *Stormwater Management Manual for Western Washington,* Chapter 7 of *Volume V – Runoff Treatment BMPs* for Bioretention BMP types and design specifications.

"Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. See 40 CFR §122.41(m)(1)(i).

"Canopy Interception**"** is the interception of precipitation, by leaves and branches of trees and vegetation that does not reach the soil.

"Clearway," as defined in the *Aviation Stormwater Design Manual - Managing Wildlife Hazards Near Airports* (December 2008), means a defined rectangular area beyond the end of a runway cleared or suitable for use in lieu of runway to satisfy takeoff distance requirements. This is the region of space above an inclined plane that leaves the ground at the end of the runway. See: http://www.wsdot.wa.gov/aviation/AirportStormwaterGuidanceManual.htm

"Construction General Permit or CGP" means the current version of the U.S. Environmental Protection Agency's *NPDES General Permit for Stormwater Discharges from Construction Activities in Washington, Permit No.WAR12-000F*. The permit is posted on EPA's website at *www.epa.gov/npdes/stormwater/cgp*.

"Common Plan of Development**"** is a contiguous construction project where multiple separate and distinct construction activities may be taking place at different times on different schedules but under one plan. The "plan" is broadly defined as any announcement or piece of documentation or physical demarcation indicating construction activities may occur on a specific plot; included in this definition are most subdivisions and industrial parks.

"Construction Activity" includes, but is not limited to, clearing, grading, excavation, and other site preparation work related to construction of residential buildings and non-residential buildings, and heavy construction (e.g., highways, streets, bridges, tunnels, pipelines, transmission lines and industrial non-building structures). See "Stormwater Discharge Associated with Construction Activity."

"Control Measure" as used in this permit, refers to any Best Management Practice or other method used to prevent or reduce the discharge of pollutants to waters of the United States and waters of the State.

"Converted vegetation" or converted vegetation areas, means 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.

"CWA" or "The Act" means the 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 by Pub. L. 95-217, Pub. L. 95-576, Pub. L. 96-483 and Pub. L. 97-117, 33 U.S.C. 1251 et seq.

"Director" means the Environmental Protection Agency Region 10 Regional Administrator, the Director of the Office of Water and Watersheds, the Director of the Office of Compliance and Enforcement, or an authorized representative.

"Discharge" when used without a qualifier, refers to "discharge of a pollutant" as defined at 40 CFR §122.2.

"Discharge of a pollutant" means (a) any addition of any "pollutant" or combination of pollutants to "waters of the United States" from any "point source," or (b) any addition of any pollutant or combination of pollutants to the waters of the "contiguous zone" or the ocean from any point source other than a vessel or other floating craft which is being used as a means of transportation. This definition includes additions of pollutants into waters of the United States from: surface runoff which is collected or channeled by man; discharges through pipes, sewers, or other conveyances owned by a State, municipality, or other person which do not lead to a treatment works; and discharges through pipes, sewers, or other conveyances, leading into privately owned treatment works. This term does not include an addition of pollutants by any "indirect discharger."

"Discharge-related Activities" include: activities which cause, contribute to, or result in stormwater point source pollutant discharges, and measures to control such stormwater discharges, including the siting, construction, and operation of best management practices to control, reduce or prevent stormwater pollution.

"Discharge Monitoring Report or DMR" means the EPA uniform national form, including any subsequent additions, revisions or modification for the reporting of self monitoring results by the Permittee. See 40 CFR §122.2.

"Disconnect" for the purposes of this permit, means the change from a direct discharge into receiving waters to one in which the discharged water flows across a vegetated surface, through a constructed water or wetlands feature, through a vegetated swale, or other attenuation or infiltration device before reaching the receiving water.

"Effective impervious surfaces" are 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 BMT T55.30 – "Full Dispersion" as described in Chapter 5 of Volume V of the 2012 *Stormwater Management Manual for Western Washington*; or 2) residential roof runoff is infiltrated in accordance with Downspout Full Infiltration Systems in BMP T5.10A in Volume III –*Hydrologic Analysis and Flow Control BMPs* of the 2012 *Stormwater Management Manual for Western Washington;* or 3) approved continuous runoff modeling methods indicate that the entire runoff file is infiltrated.

"Engineered Infiltration" is an underground device or system designed to accept stormwater and slowly exfiltrates it into the underlying soil. This device or system is designed based on soil tests that define the infiltration rate.

"Erodible or leachable materials" means 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.

"Erosion" means the process of carrying away soil particles by the action of water.

”Evaporation” means rainfall that is changed or converted into a vapor.

“Evapotranspiration” means the sum of evaporation and transpiration of water from the earth’s surface to the atmosphere. It includes evaporation of liquid or solid water plus the transpiration from plants.

“Extended Filtration” is a structural stormwater device which filters stormwater runoff through a soil media and collects it an under drain which slowly releases it after the storm is over.

“EPA” means the Environmental Protection Agency Regional Administrator, the Director of the Office of Water and Watersheds, or an authorized representative.

“Facility or Activity” means any NPDES “point source” or any other facility or activity (including land or appurtenances thereto) that is subject to regulation under the NPDES program.

“Green infrastructure” means runoff management approaches and technologies that utilize, enhance and/or mimic the natural hydrologic cycle processes of infiltration, evapotranspiration and reuse.

“Hard surface” means an impervious surface, a permeable pavement, or a vegetated roof.

“Hydromodification” means changes to the stormwater runoff characteristics of a watershed caused by changes in land use.

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

“Illicit Connection” means any man-made conveyance connecting an illicit discharge directly to a municipal separate storm sewer.

“Illicit Discharge” is defined at 40 CFR §122.26(b)(2) and means any discharge to a municipal separate storm sewer that is not entirely composed of stormwater, except discharges authorized under an NPDES permit (other than the NPDES permit for discharges from the MS4) and discharges resulting from fire fighting activities.

“Impaired Water**”** (or “Water Quality Impaired Water”) for purposes of this permit means any water body identified by the State of Washington or EPA pursuant to Section 303(d) of the Clean Water Act as not meeting applicable State water quality standards. Impaired waters include both waters with approved or established Total Maximum Daily Loads (TMDLs), and those for which a TMDL has not yet been approved or established.

“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. “Impervious surface” also means a non-vegetated surface area which causes water to run off the surface in greater quantities (or at an increased rate of flow) than 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 must be considered impervious surfaces for purposes of runoff modeling.

"Industrial Activity" as used in this permit refers to the eleven categories of industrial activities included in the definition of discharges of stormwater associated with industrial activity at 40 CFR §122.26(b)(14).

"Industrial Stormwater" as used in this permit refers to stormwater runoff from industrial activities, such as those defined in 40 CFR 122.26(b)(14)(i-xi).

"Infiltration" is the process by which stormwater penetrates into soil.

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

"LID Best Management Practices" or "LID practices," means the 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, minimal excavation foundations, vegetated roofs, and water re-use.

"LID Principles" means the 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.

"Major storm event" as used in this permit, refers to rainfall greater than the 24 hour- 10 year-recurrence interval.

"Maintenance" means the 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 maintenance standards of Chapter 4, Volume V- *Runoff Treatment BMPs* of the 2012 *Stormwater*

Management Manual for Western Washington. See also Road Pavement Maintenance exemptions in Appendix C of this Permit.

"MEP" or "maximum extent practicable," means the technology-based discharge standard for municipal separate storm sewer systems to reduce pollutants in stormwater discharges that was established by CWA Section 402(p). EPA's discussion of MEP as it applies to regulated small MS4s is found at 40 CFR §122.34.

"Measurable Goal" means a quantitative measure of progress in implementing a component of a stormwater management program.

"Minimize" means to reduce and/or eliminate to the extent achievable using control measures (including best management practices) that are technologically available and economically practicable and achievable in light of best industry practices.

"MS4" means "municipal separate storm sewer system" and is used to refer to a Large, Medium, or Small Municipal Separate Storm Sewer System regulated under the federal NPDES permit program. The term, as used within the context of this permit, refers to separate storm sewer system owned or operated within the permit area by JBLM. See "municipal separate storm sewer" below and definitions at 40 CFR 122.26(b)(18), (19)

"Municipality" means a city, town, borough, county, parish, district, association, or other public body created by or under State law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under Section 208 of the CWA.

"Municipal Separate Storm Sewer" is defined at 40 CFR 122.26(b)(8) and means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made 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 sewage, industrial 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 the United States; (ii) Designed or used for collecting or conveying stormwater; (iii) Which is not a combined sewer; and (iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR §122.2.

"Seattle Urbanized Area" means the greater Seattle, Washington, area delineated by the Year 2000 Census by the U.S. Bureau of the Census according to the criteria defined by the Bureau on March 15, 2002 (67 FR 11663) namely, the area consisting of contiguous, densely settled census block groups and census blocks that meet minimum population density requirements, along with adjacent densely settled census blocks that together encompass a population of at least 50,000 people.

"National Pollutant Discharge Elimination System" or "NPDES" 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 CWA. The term includes an "approved program" delegated to a State agency.

"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, and vine maple; shrubs such as willow, elderberry, salmonberry, and salal; and herbaceous plants such as sword fern, foam flower, and fireweed.

"Object-Free Area," as defined in the *Aviation Stormwater Design Manual - Managing Wildlife Hazards Near Airports* (December 2008), means an area on the ground centered on a runway, taxiway, or taxilane centerline provided to enhance the safety of aircraft operations by having the area free of aboveground objects protruding above the Runway Safety Area (RSA, defined below) edge elevation, except for objects that need to be located in the OFA for air navigation or aircraft ground maneuvering purposes. See:
http://www.wsdot.wa.gov/aviation/AirportStormwaterGuidanceManual.htm

"On-site Stormwater Management BMPs" as used in this Permit, means Low Impact Development BMPs or practices.

"Outfall" means a point source (defined below) at the point where a municipal separate storm sewer discharges to waters of the United States and does not include open conveyances connecting two municipal separate storm sewers or pipes, tunnels, or other conveyances which connect segments of the same stream or other waters of the United States and are used to convey waters of the United States.

"Owner or operator" means the owner or operator of any "facility or activity" subject to regulation under the NPDES program.

"Permitting Authority" means U.S. Environmental Protection Agency, or EPA.

"Permeable pavement" means 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" means any surface material that allows stormwater to infiltrate into the ground. Examples include lawn, landscape, pasture, native vegetation areas, and permeable pavements.

"Permeable pavement" or "permeable paving" means surfaces which are designed to accommodate pedestrian, bicycle, and vehicle traffic while allowing infiltration, treatment, and storage of stormwater. General categories of permeable paving systems include: open-graded concrete or hot-

mix asphalt pavement; aggregate or plastic pavers; and plastic grid systems, as discussed in the *Low Impact Development Technical Guidance Manual for Puget Sound* (December 2012).

“Permanent stormwater management controls” see “post-construction stormwater management controls.”

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

"Pollutant" is defined at 40 CFR §122.2. A partial listing from this definition includes: dredged spoil, solid waste, sewage, garbage, sewage sludge, chemical wastes, biological materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial or municipal waste.

“Pollutant(s) of concern" includes any pollutant identified as a cause of impairment of any water body that will receive a discharge from a MS4 authorized under this permit.

“Pollution-generating hard surface (PGHS)” means 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)” means those hard surfaces or impervious surfaces considered to be a significant source of pollutants in stormwater runoff. Such surfaces include those which are subject to: vehicular use; industrial activities; or 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 of manufacturing, commercial, or other indoor activities.

“Pollution-generating pervious surface (PGPS)” means any non-impervious surface subject to use vehicle use, industrial activities; or storage of erodible or leachable materials, wastes, or chemicals, and that receive direct rainfall or run-on or blow-in of rainfall, 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). .

“Post-construction stormwater management controls” or “permanent stormwater management controls” means those controls designed to treat or control runoff on a permanent basis once construction is complete, including stormwater treatment and flow control BMPs /facilities, including detention facilities, bioretention, vegetated roofs, permeable pavements, etc.
“Predevelopment hydrologic condition” and/or “predevelopment hydrology” means the combination of runoff, infiltration and evapotranspiration rates and volumes that typically existed on a site before original development on the site, i.e., a natural stable hydrologic condition.

"QA/QC" means quality assurance/quality control.

"QAP" means Quality Assurance Plan, or Quality Assurance Project Plan.

"Rainfall and Rainwater Harvesting**"** is the collection, conveyance, and storage of rainwater. The scope, method, technologies, system complexity, purpose, and end uses vary from rain barrels for garden irrigation in urban areas, to large-scale collection of rainwater for all domestic uses.

"Rain Garden" means 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. Refer to the Rain Garden Handbook for Western Washington Homeowners (WSU 2007 or as revised) for rain garden specifications and construction guidance.

"Receiving waters" means bodies of water or surface water systems to which surface runoff is discharged via a point source of stormwater or via sheet flow. Ground water to which surface runoff is directed by infiltration. See also "waters of the state" and "waters of the United States."

"Redevelopment" for the purposes of this permit, means the alteration, renewal or restoration of any developed land or property that results in the land disturbance of 5,000 square feet or more, and that has one of the following characteristics: land that currently has an existing structure, such as buildings or houses; or land that is currently covered with an impervious surface, such as a parking lot or roof; or land that is currently degraded and is covered with sand, gravel, stones, or other non-vegetative covering.

"Regional Administrator" means the Regional Administrator of Region 10 of the EPA, or the authorized representative of the Regional Administrator.

"Regulated Construction Activities" include clearing, grading or excavation that results in a land disturbance of greater than or equal to one acre, or that disturbs less than one acre if part of a larger common plan of development or sale that would disturb one acre or more. See "Stormwater Discharge Associated with Construction Activity."

"Road maintenance" and/or "Repair of Public Streets, Roads and Parking Lots" means repair work on Permittee-owned or Permittee managed streets and parking lots that involves land disturbance including asphalt removal or re- grading of 5,000 square feet or more. This definition excludes the following activities: pot hole and square cut patching; overlaying existing asphalt or concrete pacing with asphalt or concrete without expanding the area of coverage; shoulder grading; reshaping or regrading drainage ditches; crack or chip sealing; resurfacing with in-kind material without expanding the road prism, and vegetative maintenance.

"Runoff"see "stormwater."

"Runoff Reduction Techniques" means the collective assortment of stormwater practices that reduce the volume of stormwater from discharging off site.

"Runway Protection Zone," as defined in the *Aviation Stormwater Design Manual - Managing Wildlife Hazards Near Airports* (December 2008), means an area off the runway end to enhance the protection of people and property on the ground. See: http://www.wsdot.wa.gov/aviation/AirportStormwaterGuidanceManual.htm

"Runway Safety Area," as defined in the *Aviation Stormwater Design Manual - Managing Wildlife Hazards Near Airports* (December 2008), means a defined surface surrounding the runway prepared or suitable for reducing the risk of damage to aircraft in the event of an undershoot, overshoot, or excursion from the runway. See: http://www.wsdot.wa.gov/aviation/AirportStormwaterGuidanceManual.htm

"Severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes 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. Severe property damage does not mean economic loss caused by delays in production. See 40 CFR §122.41(m)(1)(ii).

"Sewershed" means, for the purposes of this permit, all the land area that is drained by a network of municipal storm sewer system conveyances to a single point of discharge to a water of the United States

"Significant contributor of pollutants" means any discharge that causes or could cause or contribute to an excursion above any Washington water quality standard.

"Small Municipal Separate Storm Sewer System" is defined at 40 CFR §122.26(b)(16) and refers to all separate storm sewers that are owned or operated by the United States, 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 sewage, industrial 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 the United States, but is not defined as "large"' or "medium" municipal separate storm sewer system. This term includes systems similar to separate storm sewer systems in municipalities such as systems at military bases, large hospital or prison complexes, and highways and other thoroughfares. The term does not include separate storm sewers in very discrete areas such as individual buildings.

"Snow management" means the plowing, relocation and collection of snow and ice.

"Soil amendments" are components added *in situ* or native soils to increase the spacing between soil particles so that the soil can absorb and hold more moisture. The amendment of soils changes various other physical, chemical and biological characteristics so that the soils become more effective in maintaining water quality.

"Source control" means stormwater management practices that control stormwater *before* pollutants have been introduced into stormwater; 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 2012 *Stormwater Management Manual for Western Washington* 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. See Volume IV-*Source Control BMPs* of the 2012 *Stormwater Management Manual for Western Washington* for details.

"Storm event" or "measurable storm event" for the purposes of this permit means a precipitation event that results in an actual discharge from the outfall and which follows the preceding measurable storm event by at least 48 hours (2 days).

"Storm water," "stormwater" and "stormwater runoff" as used in this permit means runoff during and following precipitation and snow melt events, including surface runoff and drainage, as defined at 40 CFR §122.26(b)(13). Stormwater means that portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, channels, or pipes into a defined surface water channel or a constructed infiltration facility.

"Stormwater Control Measure" means physical, structural, and/or managerial measures that, when used singly or in combination, reduce the downstream quality and quantity impacts of stormwater. Also, SCM means a permit condition used in place of or in conjunction with effluent limitations to prevent or control the discharge of pollutants. This may include a schedule of activities, prohibition of practices, maintenance procedures, or other management practices. SCMs may include, but are not limited to, treatment requirements; operating procedures; practices to control plant site runoff, spillage, leaks, sludge, or waste disposal; or drainage from raw material storage. See "best management practices (BMPs)."

"Stormwater Discharge Associated with Construction Activity" as used in this permit, refers to a discharge of pollutants in stormwater runoff from areas where soil disturbing activities (*e.g.*, clearing, grading, or excavation), construction materials or equipment storage or maintenance (*e.g.*, fill piles, borrow areas, concrete truck washout, fueling) or other industrial stormwater directly related to the construction process are located. (See 40 CFR §122.26(b)(14)(x) and 40 CFR §122.26(b)(15) for the two regulatory definitions of stormwater associated with construction sites.)

"Stormwater Discharge Associated with Industrial Activity" as used in this permit, refers to the discharge from any conveyance that is used for collecting and conveying stormwater and that is directly related to manufacturing, processing or raw materials storage areas at an industrial activity included in the regulatory definition at 40 CFR §122.26(b)(14).

"Stormwater Facility" means a constructed component of a stormwater drainage system, designed or constructed to perform a particular function or multiple functions. Stormwater facilities include, but are not limited to, pipes, swales, ditches, culverts, street gutters, detention basins, retention basins, constructed wetlands, infiltration devices, catch basins, oil/water separators, sediment

basins, and modular pavement. See also “permananent stormwater management controls” and/or “post-construction stormwaer management controls.”

“Stormwater Management Practice**”** or “Storm Water Management Control” means practices that manage stormwater, including structural and vegetative components of a stormwater system.

“Stormwater Management Program (SWMP)” refers to a comprehensive program to manage the quality of stormwater discharged from the municipal separate storm sewer system.

“Stormwater Pollution Prevention Plan (SWPPP)” means a site specific plan designed to describe the control of soil or other materials to prevent pollutants in stormwater runoff, generally developed for a construction site, or an industrial facility. For the purposes of this permit, a SWPPP means a written document that identifies potential sources of pollution, describes practices to reduce pollutants in stormwater discharges from the site, and identifies procedures that the operator will implement to comply with applicable permit requirements.

“Taxiway Safety Area,” as defined in the *Aviation Stormwater Design Manual - Managing Wildlife Hazards Near Airports* (December 2008), means a defined surface alongside the taxiway prepared or suitable for reducing the risk of damage to an aircraft unintentionally departing the taxiway. See: http://www.wsdot.wa.gov/aviation/AirportStormwaterGuidanceManual.htm

“TMDL” means Total Maximum Daily Load, an analysis of pollutant loading to a body of water detailing the sum of the individual waste load allocations for point sources and load allocations for non-point sources and natural background. See 40 CFR §130.2.

“Treatment” means storm water management practices that ‘treat’ storm water after pollutants have been incorporated into the stormwater.

“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. See 40 CFR §122.42(n)(1)

“Waters of the State” includes those waters as defined as "waters of the United States" in 40 CFR § 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. See also “receiving waters.”

“Waters of the United States” means:

1. All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;

2. All interstate waters, including interstate "wetlands";

3. All other waters such as interstate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:

a. Which are or could be used by interstate or foreign travelers for recreational or other purposes;
b. From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
c. Which are used or could be used for industrial purposes by industries in interstate commerce;

4. All impoundments of waters otherwise defined as waters of the United States under this definition;

5. Tributaries of waters identified in paragraphs 1 through 4 of this definition;

6. The territorial sea; and

7. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs 1 through 6 of this definition.

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of the CWA (other than cooling ponds for steam electric generation stations per 40 CFR Part 423) which also meet the criteria of this definition are not waters of the United States. Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA.

“Watershed” is defined as all the land area that is drained by a water body and its tributaries.

“Wetlands” means 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.

Appendix A – Street Waste Disposal (Part II.B.6.d)

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 Washington Administrative Code (WAC) Chapter 173-350 shall be disposed at a qualified solid waste disposal facility.

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 usually contain high amounts of suspended and total solids and adsorbed 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. Neither Washington Department of Ecology nor EPA will generally require waste discharge permits for discharge of stormwater decant to sanitary sewers or to stormwater treatment BMPs that are constructed and maintained in accordance with Department of Ecology's 2012 *Stormwater Management Manual for Western Washington*.

For disposal of catch basin decant liquid and water removed from stormwater treatment facilities, EPA recommends the following, in order of preference:

1. **Discharge of catch basin 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 catch basin decant liquids may be allowed into a Basic or Enhanced Stormwater Treatment BMP, if option 1 is not available.** Decant liquid collected from cleaning catch basins and stormwater treatment wet vaults may be discharged back into the storm sewer system under the following conditions:
   - 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 as described by Department of Ecology's 2012 *Stormwater Management Manual For Western Washington*. If pretreatment does not remove visible sheen from oils, the treatment facility must be able to prevent the discharge of oils causing a sheen; and

- The discharge is as near to 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 catch basin decant liquids must be non-toxic under the circumstances of use and must be approved in advance by EPA Region 10.

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 used specifically for handling stormwater or clean water); and

     - There will be no discharge from the treatment structure for at least 24 hours. If discharging to a pond, vault or catch basin that is not owned or operated by the Permittee,

   - The discharge must be approved by the storm sewer system owner/operator.

Appendix B - Runoff Treatment Requirements for New Development and Redevelopment Project Sites (Part II.B.5.g)

Project Thresholds

The following projects require the construction of stormwater treatment facilities:

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

Treatment-Type Thresholds

1. Oil Control:

Treatment to achieve Oil Control applies to projects that have "high-use sites." High-use sites are those that typically generate high concentrations of oil due to high traffic turnover or the frequent transfer of oil. High-use sites include:

a. 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;

b. 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;

c. 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.);

d. 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:

The requirement to provide phosphorous control is determined by the Department of Ecology (for example, through a waste load allocation as part of an EPA approved Total Maximum Daily Load [TMDL] analysis). There is currently no EPA approved TMDL for American Lake, although it is a water body reported under section 305(b) of the Clean Water Act, and is designated by the State of Washington as not supporting beneficial uses due to phosphorous. The Permittee should consider phosphorus treatment for any

discharges from new development or redevelopment projects that will discharge to American Lake.

3. Enhanced Treatment:

Except where specified under Appendix B4, *Basic Treatment*, enhanced treatment for reduction in dissolved metals is required for the following project sites that 1) discharge directly to freshwaters or conveyance systems tributary to freshwaters designated for aquatic life use or that have an existing aquatic life use; or 2) use infiltration strictly for flow control – not treatment- and the discharge is within ¼ mile of a freshwater designated for aquatic life use or that has an existing aquatic life use:

Industrial project sites,
Commercial project sites,
Multi-family project sites, and
High AADT roads as follows:

- Roads with an AADT of 15,000 or greater unless discharging to a 4th Strahler order stream or larger;

- Roads with an AADT of 30,000 or greater if discharging to a 4th Strahler order stream or larger (as determined using 1:24,000 scale maps to delineate stream order).

Any areas of the above-listed project sites that are identified as being subject to Basic Treatment requirements (below) are not also subject to Enhanced Treatment requirements. For developments with a mix of land use types, the Enhanced Treatment requirement shall apply when the runoff from the areas subject to the Enhanced Treatment requirement comprise 50% or more of the total runoff.

4. Basic Treatment:

Basic Treatment is required for each of the following circumstances:

- Project sites that discharge to the ground, UNLESS:

  1) The soil suitability criteria for infiltration treatment are met; (see Chapter 3 of Volume III-*Hydrologic Analysis and Flow Control BMPs* of the 2012 *Stormwater Management Manual for Western Washingto*n) and alternative pretreatment is provided (see Chapter 6, Volume V-*Runoff Treatment BMPs* of the 2012 *Stormwater Management Manual for Western Washingto*n) or

  2) The project site uses infiltration strictly for flow control – not treatment - and the discharge is within ¼-mile of a phosphorus sensitive lake (use a Phosphorus Treatment facility), or

3) The project site is industrial, commercial, multi-family residential, or a high AADT road (consistent with the Enhanced Treatment-type thresholds listed above) and is within ¼ mile of a fresh water designated for aquatic life use or that has an existing aquatic life use.(use an Enhanced Treatment facility).

- Residential projects not otherwise needing phosphorus control as designated by USEPA, the Department of Ecology, or by the Permittee;

- Project sites discharging directly (or indirectly through a MS4) to Basic Treatment Receiving Waters (Appendix I-C of the 2012 *Western Washington Stormwater Management Manual*)

- Project sites that drain to freshwater that is not designated for aquatic life use, and does not have an existing aquatic life use; and project sites that drain to waters not tributary to waters designated for aquatic use or that have an existing aquatic life use;

- Landscaped areas of industrial, commercial, and multi-family project sites, and parking lots of industrial and commercial project sites that do not involve pollution-generating sources (e.g., industrial activities, customer parking, storage of erodible or leachable material, wastes or chemicals) other than parking of employees' private vehicles. For developments with a mix of land use types, the Basic Treatment requirement shall apply when the runoff from the areas subject to the Basic Treatment requirement comprise 50% or more of the total runoff.

Treatment Facility Sizing

Size all stormwater treatment facilities for the entire area that drains to them, even if some of those areas are not pollution-generating.

Water Quality Design Storm Volume: The volume of runoff predicted from a 24-hour storm with a 6-month return frequency (a.k.a., 6-month, 24-hour storm). Wetpool facilities are sized based upon the volume of runoff predicted through use of the Natural Resource Conservation Service curve number equations in Chapter 2 of Volume III-*Hydrologic Analysis and Flow Control BMPs* of the 2012 *Stormwater Management Manual for Western Washington,* for the 6-month, 24-hour storm. Alternatively, when using an -approved continuous runoff model, the water quality design storm volume shall be equal to 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.

Water Quality Design Flow Rate

1. Preceding Detention Facilities or when Detention Facilities are not required:

   The flow rate at or below which 91% of the runoff volume, (as estimated by an approved continuous runoff model) will be treated. Design criteria for treatment facilities are assigned to achieve the applicable performance goal (e.g., 80% TSS removal) 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 the treatment facility(ies) at or below the approved hydraulic loading rate for the facility(ies).

2. Downstream of Detention Facilities:

   The water quality design flow rate must be the full 2-year release rate from the detention facility.

Treatment Facility Selection, Design, and Maintenance

Stormwater treatment facilities must be:

- Selected in accordance with the process identified in Chapter 4 of Volume I, and Chapter 2 of Volume V-*Runoff Treatment BMPs* of the 2012 *Stormwater Management Manual for Western Washington* ,
- Designed in accordance with the design criteria in Volume V- *Runoff Treatment BMPs* of the 2012 *Stormwater Management Manual for Western Washington*, and
- Maintained in accordance with the maintenance schedule in Volume V- *Runoff Treatment BMPs* of the 2012 *Stormwater Management Manual for Western Washington.*

Additional Requirements

The discharge of untreated stormwater from pollution-generating hard surfaces to ground water must not be authorized by the Permittee, except for the discharge achieved by infiltration or dispersion of runoff through use of On-site Stormwater Management BMPs in accordance with Chapter 5, and Chapter 7, Volume V-*Runoff Treatment BMPs* of the 2012 *Stormwater Management Manual for Western Washington*; or by infiltration through soils meeting the soil suitability criteria in Chapter 3 of Volume III-*Hydrologic Analysis and Flow Control BMPs* of the 2012 *Stormwater Management Manual for Western Washington*.

Appendix C - Exemptions from the New Development and Redevelopment Requirements of Part II.B.5

Unless otherwise indicated in this Appendix the practices described in this Appendix are exempt from the New Development and Redevelopment Requirements of Part II.B.5, even if such practices meet the definition of new development or redevelopment site disturbance thresholds.

1. Forest practices:

Forest practices regulated under Title 222 WAC, except for Class IV General forest practices that are conversions from timber land to other uses, are exempt from the provisions of Part II.B.5.

2. 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. *Commercial Agriculture* means those activities conducted on lands defined in Revised Code of Washington (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.

3. 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.

4. 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 – they are considered redevelopment. The extent to which Part II.B.5 applies is explained for each circumstance.

- *Removing and replacing a paved surface to base course or lower, or repairing the pavement base:* If impervious areas are not expanded, the requirements of Part II.B.5.a through B.5.e apply.

- *Extending the pavement edge without increasing the size of the road prism, or paving graveled shoulders:* These are considered new impervious surfaces and are subject to the requirements of Part II.B.5.

- *Resurfacing by upgrading from dirt to gravel, asphalt, or concrete; upgrading from gravel to asphalt, or concrete; or upgrading from a bituminous surface treatment ("chip seal") to asphalt or concrete*: These are considered new impervious surfaces and are subject to the requirements of Part II.B.5.

5. Underground utility projects:

Underground utility projects that replace the ground surface with in-kind material or materials with similar runoff characteristics are not subject to the requirements of Part II.B.5.

6. Exemptions from the Hydrologic Performance Standard for Onsite Stormwater Management (Part II.B.5.e):

The Permittee may exempt a new development or redevelopment project site from retaining the total volume of runoff calculated to meet the hydrologic performance standard for onsite stormwater management in Part II.B.5.e , provided the Permittee fully documents its determination that compliance with the performance standard is not technically feasible.

The Permittee must keep written records of all exempt project determinations. The following information regarding each exempt project identified during an annual reporting period must be included in the corresponding Annual Report.

- Name, location and identifying project description.
- For projects where the Permittee determines it is technically infeasible to use stormwater management strategies to fully infiltrate, evapotranspirate, and/or harvest and reuse 100% of the runoff volumes calculated to meet the performance standard in Part II.B.5.e, the Permittee must document the reasons for such conclusion.
- The Permittee must use all reasonably available stormwater management techniques. to the maximum extent practicable, and must document both the estimated annual runoff volume that can/will be successfully managed on site and the remaining annual runoff volume for which it is deemed technically infeasible to successfully manage onsite.

Documentation supporting the Permittee's determination of technical infeasibility must include, but is not limited to, reference to the infeasibility criteria for onsite stormwater management practices contained in Volume V- *Runoff Treatment BMPs* of Ecology's 2012 *Stormwater Management Manual for Western Washington*,; and all relevant engineering calculations, geologic reports, and/or hydrologic analysis. Examples of site conditions which may be recognized by the Permittee as preventing management of 100% of the runoff volumes calculated to meet the performance standard in Part II.B.5.e may include, but are not limited to: low soil infiltration capacity; high groundwater; contaminated soils; non-potable water demand is too small to warrant harvest and reuse systems; downgradient erosion; steep slopes and/or slope failure; or flooding.

7. Exemptions from the Hydrologic Performance Requirement for Flow Control (Part II.B.5.f):

The Permittee may exempt a new development or redevelopment project from managing the total runoff flow volume calculated to meet the hydrologic performance standard in Part II.B.5.f, provided the Permittee fully documents its determination that compliance with the hydrologic performance requirement for flow control cannot be attained due to severe economic project costs.

The Permittee must manage as much of the calculated flow volume as possible, and must keep written records of all such project determinations.

No later than 15 days from the date the Permittee makes a determination that a project should be exempt from the hydrologic performance requirement for flow control due to severe economic costs, the Permittee must provide a written summary of the following information describing each new development and/or redevelopment project site exempted from the flow control requirement. and submit such information to EPA via certified mail and via electronic mail to the EPA Region 10 address listed in Part IV.D of this permit:

- Name, location and identifying project description, including a brief synopsis of the project purpose, and a detailed description of the underlying facts supporting the Permittee's determination.
- For projects where managing the total runoff flow volume calculated to meet the hydrologic performance requirement for flow control in Part II.B.5. f. is deemed by the Permittee to be unattainable due to severe economic costs, the Permittee must document, and quantify that appropriate stormwater control strategies will be deployed to manage as much of the calculated flow volume as possible; the marginal cost of full attainment must be documented along with a justification on why full attainment of the flow control requirement at the site would result in severe economic cost.

Appendix D - Vicinity Map of JBLM Installation