Appendix D

NPDES Gap Analysis Spreadsheet

SWMMWW = Stormwater Management Manual for Western Washington (Ecology)
Indicates resource needs
*All page numbers are for redlined version of new Permit

New Item	Ecology Document	Pg	Section	Section Description	Permit Language	Summary of Requirement Changes	Topic	Programmatic Gaps/Actions (Work needed to eliminate the gap)	Resource Needs	Deadline
1	Phase II Permit	15	S4.F.3.e	Compliance with Standards	A TMDL or other enforceable water quality cleanup plan that has been approved and is being implemented to address the MS4's contribution to the Water Quality Standards violation supersedes and terminates the S4.F.3. implementation plan	New Permit language	TMDL plan	No action needed.	No	
2	Phase II Permit	18	S5.A.5.b.	Coordination among Permittees	The SWMP shall include coordination mechanisms among departments within each jurisdiction to eliminate barriers to compliance with the terms of this permit. Permittees shall include a written description of internal coordination mechanisms in the Annual Report due no later than March 31, 2015.	Added the deadline and requirement for written description	Annual Report	Coordination already occurs between departments, need to document for Annual Report.	No	3/31/2015
3	Phase II Permit	19	S5.C.1.a.i.a.	Public Education and Outreach	Target Area #1 General public (including school age children), and businesses (including home-based and mobile businesses) - General impacts of stormwater on surface waters - Impacts from impervious surfaces - Impacts of illicit discharges and how to report them - Low impact development (LID) principles and LID BMPs - Opportunities to become involved in stewardship activities	Added requirements about illicit discharges, LID and stewardship	Outreach	Add LID and illicit discharges to education and outreach (Betsy and Ryean-Marie) for general public	Yes- new materials?	on-going
4	Phase II Permit	19	S5.C.1.a.i.b.	Public Education and Outreach	Target Area #2 Engineers, contractors, developers and land use planners - Technical standards for stormwater site and erosion control plans - LID principles and LID BMPs - Stormwater treatment and flow control BMPs/facilities	Specified language about LID and added third bullet point	Outreach	LID principles and BMPs, technical standards education and outreach (brochures?)--Development review (Kelli, Stacey, Jenny, Betsy)	Yes- new materials	on-going
5	Phase II Permit	20	S5.C.1.a.ii.b	Public Education and Outreach	Target Area #3 Residents, landscapers and property managers/owners - Yard care techniques protective of water quality - Use and storage of pesticides and fertilizers and other household chemicals - Carpet cleaning and auto repair and maintenance - Vehicle, equipment and home/building maintenance - Pet waste management disposal - LID principles and LID BMPs - Stormwater facility maintenance - Dumpster and trash compactor maintenance	Added requirement for vehicles, pet waste and dumpsters	Outreach	LID principles and BMPS, stormwater facility maintenance (private facilities)--- Ryean-Marie (business outreach), Seppo (private facilities?)	Yes- new materials	on-going
6	Phase II Permit	20	S5.C.1.b.	Public Education and Outreach	Each Permittee shall measure the understanding and adoption of the targeted behaviors for at least one target audience in at least one subject area. No later than February 2, 2016, Permittees shall use the resulting measurements to direct education and outreach resources most effectively, as well as to evaluate changes in adoption of the targeted behaviors. Permittees may meet this requirement individually or as a member of a regional group.	Added a deadline and the flexibility of meeting the requirement individually or regionally	Outreach	Question- does the City want to meet this requirement individually or as a group?	Yes	2/2/2016
7	Phase II Permit	21	S5.C.2.b	Public Involvement and Participation	Each Permittee shall post on their website their SWMP Plan and the annual report required under S9.A no later than May 31 each year. All other submittals shall be available to the public upon request. To comply with the posting requirement, a Permittee that does not maintain a website may submit the updated SWMP in electronic format to Ecology for posting on Ecology's website.	Now mandatory to have SWMP on the website no later than May 31, starting 2014.	SWMP Plan	No changes--city already posts information on their website	No	May 31st each year

New Item	Ecology Document	Pg	Section	Section Description	Permit Language	Summary of Requirement Changes	Topic	Programmatic Gaps/Actions (Work needed to eliminate the gap)	Resource Needs	Deadline
8	Phase II Permit	21	S5.C.3	Illicit Discharge Detection and Elimination	The SWMP shall include an ongoing program designed to prevent, detect, characterize, trace and eliminate illicit connections and illicit discharges into the MS4.	Previously required just to 'remove' the illicit discharges into MS4 but now required to 'prevent, detect, characterize, trace and eliminate' illicit discharges and connections. Removed requirement of implementing illicit discharge detection/elimination 180 days prior to the expiration date.	IDDE Prevention	Do changes need to be made to IDDE program documentation---prevention (business outreach), characterization (sampling?)?	Possibly---sampling (characterization of illicit discharges?)	on-going
9	Phase II Permit	23	S5.C.3.a	Illicit Discharge Detection and Elimination	Upon request, and to the extent appropriate, Permittees shall provide mapping information to federally-recognized Indian Tribes, municipalities, and other Permittees. This permit does not preclude Permittees from recovering reasonable costs associated with fulfilling mapping information requests by federally-recognized Indian Tribes, municipalities, and other Permittees.	[Informational] Permittees shall now provide mapping information to Indian tribes as well. Permittees may recover costs associated with fulfilling mapping information requests by Indian tribes, municipalities and other Permittees.	Sharing mapping information with other entities	No changes needed. The City has good mapping available, and will share as necessary.	No	on-going
10	Phase II Permit	24	S5.C.3.b.ii	Conditionally allowable discharges	The regulatory mechanism may allow the following categories of non-stormwater discharges only if stated conditions are met: Dechlorinated swimming pool, spa and hot tub discharges. The discharges shall be dechlorinated to a total residual chlorine concentration of 0.1 ppm or less, pH-adjusted and reoxygenized if necessary, volumetrically and velocity controlled to prevent re-suspension of sediments in the MS4. Discharges shall be thermally controlled to prevent an increase in temperature of the receiving water. Swimming pool cleaning wastewater and filter backwash shall not be discharged to the MS4.	Added requirement for thermally controlled discharges from swimming pools, spas, and hot tubs.	Control discharges	Changes to education and outreach regarding illicit discharge---thermally controlled discharges?	No	on-going
11	Phase II Permit	24	S5.C.3.b.ii	Conditionally allowable discharges	The regulatory mechanism may allow the following categories of non-stormwater discharges only if stated conditions are met: Street and sidewalk wash water, water used to control dust, and routine external building washdown that does not use detergents. The Permittee shall reduce these discharges through, at a minimum, public education activities (see section S5.C.1) and/or water conservation efforts. To avoid washing pollutants into the MS4, Permittees shall minimize the amount of street wash and dust control water used.	It is no longer required to sweep the street prior to washing the street at active construction sites.	Construction WQ	No changes needed.	None	on-going
12	Phase II Permit	25	S5.C.3.b.v	IDDE Compliance Strategy	The Permittee shall implement a compliance strategy that includes informal compliance actions such as public education and technical assistance as well as the enforcement provisions of the ordinance or other regulatory mechanism.	Added informal compliance actions to the compliance strategy requirements.	IDDE	Revise IDDE ordinance	Yes	2/2/2018

New Item	Ecology Document	Pg	Section	Section Description	Permit Language	Summary of Requirement Changes	Topic	Programmatic Gaps/Actions (Work needed to eliminate the gap)	Resource Needs	Deadline
13	Phase II Permit	25	S5.C.3.b.v	IDDE Compliance Strategy	To implement an effective compliance strategy, the Permittee's ordinance or other regulatory mechanism may need to include the following tools: The application of operational and/or structural source control BMPs for pollutant generating sources associated with existing land uses and activities where necessary to prevent illicit discharges. The source control BMPs referenced in this subsection are in Volume IV of the 2012 Stormwater Management Manual for Western Washington, or an equivalent manual approved by Ecology under the 2013 Phase I Permit.	Added optional tools to implement an effective compliance strategy, including references to BMPs in the 2012 SWMMWW.	IDDE	Revise IDDE ordinance with tools listed- see above.	Yes	2/2/2018
14	Phase II Permit	25	S5.C.3.b.v	IDDE Compliance Strategy	To implement an effective compliance strategy, the Permittee's ordinance or other regulatory mechanism may need to include the following tools: The maintenance of stormwater facilities which discharge into the Permittee's MS4 in accordance with maintenance standards established under S5.C.4 and/or S5.C.5 where necessary to prevent illicit discharges.	Added optional tools to implement an effective compliance strategy, including references to O&M standards elsewhere in the Permit.	IDDE	Same as above	Yes	2/2/2018
15	Phase II Permit	25	S5.C.3.b.vi	IDDE Ordinance	The Permittee's ordinance or other regulatory mechanism in effect as of the effective date of this permit shall be revised if necessary to meet the requirements of this section no later than February 2, 2018.	Deadline for ordinance revision, if necessary.	IDDE Ordinance	Same as above	Yes	2/2/2018
16	Phase II Permit	26	S5.C.3.c.i	Procedures for investigating Permittee's MS4	The Permittee shall implement a field screening methodology appropriate to the characteristics of the MS4 and water quality concerns. Screening for illicit connections may be conducted using: Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments, Center for Watershed Protection, October 2004, or another methodology of comparable or improved effectiveness. The Permittee shall document the field screening methodology in the relevant Annual Report. All Permittees, except for the City of Aberdeen, shall complete field screening for at least 40% of the MS4 no later than December 31, 2017, 10 and on average 12% each year thereafter. The City of Aberdeen shall complete field screening for at least 40% of the system no later than June 30, 2018 and on average 12% each year thereafter.	Updated field screening requirements for illicit discharges and connections. Includes annual percentage of stormwater system requirements.	WQ	Need to determine how to interpret 40% (by area, by pipe length, etc.)	Yes. Will require additional resources to conduct field screening.	12/31/2017
16.5	Phase II Permit	26	S5.C.3.c.iii	Procedures for investigating Permittee's MS4	An ongoing training program for all municipal field staff, who, as part of their normal job responsibilities, might come into contact with or otherwise observe an illicit discharge and/or illicit connection to the MS4, on the identification of an illicit discharge and/or connection, and on the proper procedures for reporting and responding to the illicit discharge and /or connection. Follow-up training chall be prodiced as needed to address changes in procedures, techniques, requirements, or staffing. Permittees shall document and maintain records of the trainings provided and the staff trained.	Training program requirements	WQ	All staff that may come in contact with illicit discharges need to be trained.	Yes. Will require additional resources to conduct training.	on-going

New Item	Ecology Document	Pg	Section	Section Description	Permit Language	Summary of Requirement Changes	Topic	Programmatic Gaps/Actions (Work needed to eliminate the gap)	Resource Needs	Deadline
17	Phase II Permit	28	S5.C.4	Controlling Runoff from New Development, Redevelopment and Construction Sites	[Deleted the following text] This program shall be applied to all sites that disturb a land area 1 acre or greater, including projects less than one acre that are part of a larger common plan of the development or sale.	The one acre threshold for construction project exemption from many S5.C.4 requirements is no longer applicable.	Project thresholds	Revise development requirements.	Yes. Will require additional City staff time for development review.	12/31/2016
18	Phase II Permit	30	S5.C.4.a	Minimum performance measures	[Several changes in the section] Implement an ordinance or other enforceable mechanism that addresses runoff from new development, redevelopment, and construction site projects. Except for Permittees in Lewis and Cowlitz counties and the City of Aberdeen, the ordinance or other enforceable mechanism to implement (i) through (iii), below, shall be adopted and effective no later than December 31, 2016. The local program adopted to meet the requirements of S5.C.5.a(i) through (iii), below shall apply to all applications submitted on or after January 1, 2017 and shall apply to projects approved prior to January 1, 2017, which have not started construction by January 1, 2022	Revised deadline for implementing an updated runoff control ordinance.	Runoff ordinance	Update ordinance with revised minimum performance measures for runoff control (can use equivalent manual citation to meet requirement)	Yes, update ordinance (adopt equivalent manual-- new KC manual)	12/31/2016
19	Phase II Permit	31	S5.C.4.a.ii	Local requirements	The local requirements shall include the following requirements, limitations, and criteria that, when used to implement the minimum requirements in Appendix 1 (or program approved by Ecology under the 2013 Phase I Permit) will protect water quality, reduce the discharge of pollutants to the MEP, and satisfy the State requirement under chapter 90.48 RCW to apply AKART prior to discharge: a. Site planning requirements b. BMP selection criteria c. BMP design criteria d. BMP infeasibility criteria e. LID competing needs criteria f. BMP limitations	Added list of requirements, limitations, and criteria for implementation of Min Reqs. Adoption of the 2012 SWMMWW or an approved equivalent program is noted as sufficient to meet these requirements.	Local requirements	Same as above.	Same as above	Same as above
20	Phase II Permit	32	S5.C.4.a	Local requirements	[Deleted the following text] If the Permittee chooses to allow construction sites to apply the "Erosivity Waiver" in Appendix 1, Minimum Requirement #2, the ordinance or regulatory mechanism shall include appropriate, escalating enforcement sanctions for construction sites that provide notice to the Permittee of their intention to apply the waiver but do not meet the requirements (including timeframe restrictions, limits on activities that result in non-stormwater discharges, and implementation of appropriate BMPs to prevent violations of water quality standards) to qualify for the waiver.	"Erosivity Waiver" is no longer applicable	Erosivity Waiver	No change.	No.	
21	Phase II Permit	32	S5.C.4.a.iii	Maintenance inspection and enforcement	The legal authority, through the approval process for new development and redevelopment, to inspect and enforce maintenance standards for private stormwater facilities approved under the provisions of this section that discharge to the Permittee's MS4.	Added "redevelopment", "enforce maintenance standards", and "approved under the provisions of this section", which would appear to expand the scope and responsibility associated with this section.	Inspection authority	Will need to inspect and enforce maintenance standards for private stormwater facilities associated with redevelopment.	Yes, more staff time for redeveloped private stormwater facilities	12/31/2016

New Item	Ecology Document	Pg	Section	Section Description	Permit Language	Summary of Requirement Changes	Topic	Programmatic Gaps/Actions (Work needed to eliminate the gap)	Resource Needs	Deadline
22	Phase II Permit	32	S5.C.4.b.ii	Plan review and permitting	As an alternative to evaluating each site according to Appendix 7, Permittees may choose to inspect all construction sites that meet the minimum thresholds adopted pursuant to S5.C.4.a.i, above.	Allows alternative to existing Appendix 7 requirements (Allow Permittee to inspect all construction sites that meet minimum thresholds instead of evaluating sediment transport potential). Optional.	Plan review	Need to determine what approach makes sense for City staff.	Yes. Addiitonal review requirements for development review staff.	on-going
23	Phase II Permit	33	S5.C.4.c	Long term O&M program	The program shall include provisions to verify adequate long-term operation and maintenance (O&M) of stormwater treatment and flow control BMPs/facilities that are permitted and constructed pursuant to (b) above. Except for Permittees located in Lewis or Cowlitz Counties and the City of Aberdeen, these provisions shall be in place no later than December 31, 2016. For Permittees in Lewis and Cowlitz counties, the provisions shall be in place no later than June 30, 2017. For the City of Aberdeen, the provisions shall be in place no later than June 30, 2018.	Revised deadline for adequate long term O&M of stormwater treatment and flow control BMPs/facilities.	Facility inspection	None---implement ordinance	No.	12/31/2016
23.5	Phase II Permit	33	S5.C.4.c.iii	Long term O&M program	Annual inspections of all stormwater treatment and flow control BMPs/facilities that discharge to the MS4 and were permitted by the Permittee according to S5.C.4.b, including those permitted in accordance with requirments adopted pursuant to the 2007-2012 Ecology municipal stormwater permits unless there are maintenance records to justify a different frequency. Permittees may reduce the inspection frequency based on maintenance records of double the length of time of the proposed inspection frequency. In the absence of maintenance records, the Permittee may substitue written statements to docuemnt a specific less frequency inspection schedule. Written statements shall be based on actual inspection and maintenance experience adn shall be ceritifed in accordance with G19 Certification and Signature.	Revised inspection frequency	Facility inspection	Annual inspections for ALL SW facilities	Yes, additional staff needed for annual inspections.	on-going
24	Phase II Permit	34	S5.C.4.c.iv	Site inspection Requirement	Inspections of all permanent stormwater treatment and flow control BMPs/facilities and catch basins in new residential developments every six months until 90% of the lots are constructed (or when construction is stopped and the site is fully stabilized) to identify maintenance needs and enforce compliance with maintenance standards as needed.	Added the requirement of inspections until 90% of lots are constructed (or when construction is stopped and the site is fully stabilized).	Facility inspection	Increased frequency of site inspections, particularly if developments stall and take many years to complete.	Yes, additional staff needed for site inspections	On-going
25	Phase II Permit	34	S5.C.4.c.v	Site inspection Requirement	Compliance with the inspection requirements in (iii) and (iv) above shall be determined by the presence and records of an established inspection program designed to inspect all sites. Compliance during this permit term shall be determined by achieving at least 80% of scheduled inspections.	Added the requirement of at least 80% of scheduled inspections for compliance.	Inspection records	See above.	Related to above.	on-going

New Item	Ecology Document	Pg	Section	Section Description	Permit Language	Summary of Requirement Changes	Topic	Programmatic Gaps/Actions (Work needed to eliminate the gap)	Resource Needs	Deadline
26	Phase II Permit	36	S5.C.4.f.i	LID code requirements	No later than December 31, 2016, Permittees shall review, revise and make effective their local development-related codes, rules, standards, or other enforceable documents to incorporate and require LID principles and LID BMPs. For Permittees in Lewis and Cowlitz counties, the deadline for this requirement is no later than June 30, 2017; for the City of Aberdeen the deadline for this requirement is no later than June 30, 2018. The intent of the revisions shall be to make LID the preferred and commonly-used approach to site development. The revisions shall be designed to minimize impervious surfaces, native vegetation loss, and stormwater runoff in all types of development situations. Permittees shall conduct a similar review and revision process, and consider the range of issues, outlined in the following document: Integrating LID into Local Codes: A Guidebook for Local Governments (Puget Sound Partnership, 2012).	Requires updates to local program to require LID Principles and LID BMPs be completed no later than December 31, 2016.	LID	Revisions to codes, rules, standards that require LID principles and LID BMPs.	Yes, city-wide code review is needed (one-time effort).	12/31/2016
27	Phase II Permit	36	S5.C.4.f.ii	LID code requirements	Except for Permittees in Lewis and Cowlitz Counties and the City of Aberdeen, each Permittee shall submit a summary of the results of the review and revision process in (i) above with the annual report due no later than March 31, 2017 . Permittees in Lewis and Cowlitz counties shall submit the summary with the annual report due no later than March 31, 2018. The City of Aberdeen shall submit the summary with the Fifth Year annual report. This summary shall include, at a minimum, a list of the participants (job title, brief job description, and department represented), the codes, rules, standards, and other enforceable documents reviewed, and the revisions made to those documents which incorporate and require LID principles and LID BMPs. The summary shall include existing requirements for LID principles and LID BMPs in development related codes. The summary shall be organized as follows: a. Measures to minimize impervious surfaces; b. Measures to minimize loss of native vegetation; and c. Other measures to minimize stormwater runoff	Requires Permittee to submit a summary of results and review and revision process in S5.C.4.f.i. (Code incorporating LID Principles and LID BMP) with the Annual Report due on March 31, 2017.	LID revision process	Summary of code review---see above.	Yes. Section in Annual report documenting effort.	March 31, 2017
28	Phase II Permit	37	S5.C.4.g.	Watershed Planning	Watershed-scale stormwater planning requirements. [Applies only to County Permittees]	Counties are required to complete watershed planning for a selected watershed.	Watershed planning	None---not part of a larger watershed under Phase I permittee.	No.	Not applicable
29	Phase II Permit	38	S5.C.5.a	Municipal O&M	Except for Permittees located in Lewis and Cowlitz Counties and the City of Aberdeen, no later than December 31, 2016, Permittees shall update their maintenance standards as necessary to meet the requirements of this section. For Permittees in Lewis and Cowlitz counties, this requirement shall apply no later than June 30, 2017; for the City of Aberdeen this requirement shall apply no later than June 30, 2018.	Updated deadline for maintenance standard updates.	Maintenance standard update	Update maintenance standards according to facility function outlined 2012 manual (or equivalent)	Yes---or just adopt KC manual and cite reference.	12/31/2016
30	Phase II Permit	39	S5.C.5.d	Municipal O&M	Except for the City of Aberdeen, inspection of all catch basins and inlets owned or operated by the Permittee at least once no later than August 1, 2017 and every two years thereafter. For the City of Aberdeen, the deadline for this requirement shall be no later than June 30, 2018.	New deadline and frequency.	Catch basins/inlets inspection	Increased CB inspection frequency (every 2 years)	Yes. Additional maintenance staff needed.	8/1/2017

New Item	Ecology Document	Pg	Section	Section Description	Permit Language	Summary of Requirement Changes	Topic	Programmatic Gaps/Actions (Work needed to eliminate the gap)	Resource Needs	Deadline
31	Phase II Permit	39	S5.C.5.d.i	Municipal O&M	The catch basin inspection schedule of every two years may be changed as appropriate to meet the maintenance standards based on maintenance records of double the length of time of the proposed inspection frequency. In the absence of maintenance records for catch basins, the Permittee may substitute written statements to document a specific, less frequent inspection schedule. Written statements shall be based on actual inspection and maintenance experiences and shall be certified in accordance with G19 (Certification and Signature).	Alternative approach to catch basin inspection.	Catch basins/inlets inspection alternative	See above. City can determined whether to use an alternative frequency based on maintenance records.	Yes. Track records and suggest alternative if this is the route you'd like to proceed.	8/1/2017
32	Phase II Permit	40	S5.C.5.d.ii	Municipal O&M	Inspections at least once by August 1, 2017 and every two years thereafter may be conducted on a "circuit basis" whereby 25% of catch basins and inlets within each circuit are inspected to identify maintenance needs.	Added deadline and identified 25%.	Catch basins/inlets inspection	See above. City can use this alternative if desired.	Yes.	8/1/2017
33	Phase II Permit	40	S5.C.5.d.iii	Municipal O&M	The Permittee may clean all pipes, ditches, catch basins, and inlets within a circuit once during the permit term. Circuits selected for this alternative must drain to a single point.	Added pipes, ditches.	Catch basins/inlets inspection	See above. City can use this alternative if desired.	Yes.	8/1/2017
34	Phase II Permit	40	S5.C.5.f	Municipal O&M	Implement practices, policies and procedures to reduce stormwater impacts associated with runoff from all lands owned or maintained by the Permittee, and road maintenance activities under the functional control of the Permittee. Lands owned or maintained by the Permittee include, but are not limited to, streets, parking lots, roads, highways, buildings, parks, open space, road right-of-ways, maintenance yards, and stormwater treatment and flow control BMPs/facilities.	List of lands owned or maintained by Permittee updated to include buildings, parks, open spaces, road rights-of-way, maintenance yards, and stormwater facilities.	Runoff control/WQ	Review existing policies and procedures for city-owned land to determine if changes need to be made.	Yes. Review policies and procedures and implement changes if needed (one time effort).	12/31/2016
35	Phase II Permit	52	S7.A.	TMDL requirement	Each annual report shall include a summary of relevant SWMP and Appendix 2 activities conducted in the TMDL area to address the applicable TMDL parameter(s).	Now required to include in Annual Report.	TMDL reporting	None. No approved TMDLs in Kirkland	None.	NA
36	Phase II Permit	52	S8.B	Monitoring and Assessment	By December 1, 2013, notify Ecology which of the following options are to be adopted for status and trends monitoring for each permit cycle for small streams and marine nearshore status and trends monitoring in Puget Sounds: - Option 1: Pay into a collective fund to implement a Regional Stormwater Management Program (RSMP) for small streams and marine nearshore status trends due to Ecology annually beginning August 12, 2014. (Kirkland cost per Ecology: $12,116). - Option 2: Beginning July 31, 2014, conduct wadeable stream water quality, benthos, habitat, and sediment chemistry monitoring at the frequencies as specified in the Permit. In addition, beginning October 1, 2015, conduct sediment chemistry, mussel, and bacteria monitoring according to the Permit requirements. All the data and analyses should be reported annually according to the Ecology-approved Quality Assurance Project Plans (QAPPs).	[Entirely new requirement] City needs to choose between the two options for implementing RSMP for small streams and marine nearshore.	Monitoring and Assessment	Pay into monitoring program. Notify Ecology by December 1, 2013. This was completed.	Yes. $$ to pay for monitoring program	12/1/2013

New Item	Ecology Document	Pg	Section	Section Description	Permit Language	Summary of Requirement Changes	Topic	Programmatic Gaps/Actions (Work needed to eliminate the gap)	Resource Needs	Deadline
37	Phase II Permit	56	S8.C	Monitoring and Assessment	By December 1, 2013, notify Ecology which of the following options are to be adopted for SWMP effectiveness studies for each permit cycle: - Option 1: Pay into collective fund to implement RSMP effectiveness studies due to Ecology annual beginning August 14, 2014. (Kirkland cost per Ecology: $20,187) - Option 2: By February 2, 2014, submit a draft stormwater discharge monitoring QAPP to Ecology describing why selected discharge monitoring locations are of interest for monitoring and evaluations. Monitor at locations chosen and submitted in the annual reports that were due March 31, 2011.	[Entirely new requirement] City needs to choose between the two options for implementing RSMP effectiveness studies.	Monitoring and Assessment	Same as above.	Same as above.	Same as above.
38	Phase II Permit	59	S8.D	Monitoring and Assessment	Source identification and diagnostic monitoring. Each city and county Permittee listed in S1.D.2.a(i) and S1.D.2.a(ii) shall pay into a collective fund to implement the RSMP Source Identification Information Repository (SIDIR). The payments into the collective fund are due to Ecology annually beginning August 15, 2014. The payment amounts are: (Kirkland cost per Ecology: $1,872).	[Entirely new requirement] City required to participate in pay-in monitoring program.	Monitoring and Assessment	Same as above	Same as above	Same as above
39	Phase II Permit	60	S9.A	Reporting Requirements	Permittees shall submit annual reports electronically using Ecology's WQWebDMR available on Ecology's website at http://www.ecy.wa.gov/programs/wq/permits/paris/webdmr.html unless otherwise directed by Ecology. Permittees unable to submit electronically through Ecology's WQWebDMR must contact Ecology to request a waiver and obtain instructions on how to submit an annual report in an alternative format.	New electronic format for annual report (first Annual Report will be due March 31, 2015, covering activities for 2014.	Annual Report	None.	No	On-going
40	Phase II Permit	66	G9.F	Lab Accreditation	Quick methods of field detection of pollutants including nutrients, surfactants, salinity, and other parameters are exempted from this [lab accreditation] requirement when the purpose of the sampling is identification and removal of a suspected illicit discharge.	[Informational] Instances where labs are exempt from being registered or accredited under Accreditation of Environmental Laboratories, Chapter 173-50 WAC.	Monitoring	None.	No	
41	Phase II Permit	67	G10	Removed Substances	Solids generated from maintenance of the MS4 may be reclaimed, recycled, or reused when allowed by local codes and ordinances. Soils that are identified as contaminated pursuant to chapter 173-350 WAC shall be disposed at a qualified solid waste disposal facility (see Appendix 6).	Added the text to Section G10. Removed Substances.	Monitoring	None.	No	
42	Phase II Permit	71	Definitions	Definition	[Text added to the definition of AKART] See also State Water Pollution Control Act, chapter 90.48.010 RCW and chapter 90.48.520 RCW.	Revised definition	Definitions	Review Kirkland's definitions for consistency with how NPDES permit interprets the items below.	Yes. Conduct a review of City-wide definitions for consistency with permit. (one-time effort)	
43	Phase II Permit	71	Definitions	Definition	[Revised definition of Applicable TMDL to clarify which TMDL is applicable]	Revised definition	Definitions	Review Kirkland's definitions for consistency with how NPDES permit interprets the items below.	Yes. Conduct a review of City-wide definitions for consistency with permit. (one-time effort)	

New Item	Ecology Document	Pg	Section	Section Description	Permit Language	Summary of Requirement Changes	Topic	Programmatic Gaps/Actions (Work needed to eliminate the gap)	Resource Needs	Deadline
44	Phase II Permit	72	Definitions	Definition	Census defined urban area - means Urbanized Area	New definition	Definitions	Review Kirkland's definitions for consistency with how NPDES permit interprets the items below.	Yes. Conduct a review of City-wide definitions for consistency with permit. (one-time effort)	
45	Phase II Permit	72	Definitions	Definition	Circuit - means a portion of a MS4 discharging to a single point or serving a discrete area determined by traffic volumes, land use, topography or the configuration of the MS4.	New definition	Definitions	Review Kirkland's definitions for consistency with how NPDES permit interprets the items below.	Yes. Conduct a review of City-wide definitions for consistency with permit. (one-time effort)	
46	Phase II Permit	72	Definitions	Definition	[Revised definition of Component or Program Component to include element of Stormwater Management Program for S7 Compliance with Total Maximum Daily Load Requirements, and S8 Monitoring]	Revised definition	Definitions	Review Kirkland's definitions for consistency with how NPDES permit interprets the items below.	Yes. Conduct a review of City-wide definitions for consistency with permit. (one-time effort)	
47	Phase II Permit	72	Definitions	Definition	[Revised definition of Co-Permittee to mean owner or operator of an MS4 which is in a cooperative agreement with at least one other applicant for coverage under the Permit]	Revised definition	Definitions	Review Kirkland's definitions for consistency with how NPDES permit interprets the items below.	Yes. Conduct a review of City-wide definitions for consistency with permit. (one-time effort)	
48	Phase II Permit	73	Definitions	Definition	Hazardous substance - means any liquid, solid, gas, or sludge, including any material, substance, product, commodity, or waste, regardless of quantity, that exhibits any of the physical, chemical, or biological properties described in WAC 173-303-090 or WAC 173-303-100.	New definition	Definitions	Review Kirkland's definitions for consistency with how NPDES permit interprets the items below.	Yes. Conduct a review of City-wide definitions for consistency with permit. (one-time effort)	
49	Phase II Permit	73	Definitions	Definition	Highway - means a main public road connecting towns and cities.	New definition	Definitions	Review Kirkland's definitions for consistency with how NPDES permit interprets the items below.	Yes. Conduct a review of City-wide definitions for consistency with permit. (one-time effort)	
50	Phase II Permit	73	Definitions	Definition	Illicit Connection means any infrastructure connection to the MS4 that is not intended, permitted or used for collecting and conveying stormwater or non-stormwater discharges allowed as specified in this permit (S5.C.3 and S6.D.3). Examples include sanitary sewer connections, floor drains, channels, pipelines, conduits, inlets, or outlets that are connected directly to the MS4.	Revised definition	Definitions	Review Kirkland's definitions for consistency with how NPDES permit interprets the items below.	Yes. Conduct a review of City-wide definitions for consistency with permit. (one-time effort)	

New Item	Ecology Document	Pg	Section	Section Description	Permit Language	Summary of Requirement Changes	Topic	Programmatic Gaps/Actions (Work needed to eliminate the gap)	Resource Needs	Deadline
51	Phase II Permit	73	Definitions	Definition	Illicit discharge means any discharge to a MS4 that is not composed entirely of stormwater or of non-stormwater discharges allowed as specified in this permit (S5.C.3 and S6.D.3).	Revised definition	Definitions	Review Kirkland's definitions for consistency with how NPDES permit interprets the items below.	Yes. Conduct a review of City-wide definitions for consistency with permit. (one-time effort)	
52	Phase II Permit	73	Definitions	Definition	Impervious surface - means a non-vegetated surface area that either prevents or retards the entry of water into the soil mantle as under natural conditions prior to development. A nonvegetated surface area which causes water to run off the surface in greater quantities or at an increased rate of flow from the flow present under natural conditions prior to development. Common impervious surfaces include, but are not limited to, roof tops, walkways, patios, driveways, parking lots or stormwater areas, concrete or asphalt paving, gravel roads, packed earthen materials, and oiled, macadam or other surfaces which similarly impede the natural infiltration of stormwater.	New definition	Definitions	Review Kirkland's definitions for consistency with how NPDES permit interprets the items below.	Yes. Conduct a review of City-wide definitions for consistency with permit. (one-time effort)	
53	Phase II Permit	74	Definitions	Definition	Land disturbing activity - means any activity that results in a change in the existing soil cover (both vegetative and non-vegetative) and/or the existing soil topography. Land disturbing activities include, but are not limited to clearing, grading, filling and excavation. Compaction that is associated with stabilization of structures and road construction shall also be considered land disturbing activity. Vegetation maintenance practices, including landscape maintenance and gardening, are not considered land disturbing activity. Stormwater facility maintenance is not considered land disturbing activity if conducted according to established standards and procedures.	New definition	Definitions	Review Kirkland's definitions for consistency with how NPDES permit interprets the items below.	Yes. Conduct a review of City-wide definitions for consistency with permit. (one-time effort)	
54	Phase II Permit	74	Definitions	Definition	LID - means Low Impact Development	New definition	Definitions	Review Kirkland's definitions for consistency with how NPDES permit interprets the items below.	Yes. Conduct a review of City-wide definitions for consistency with permit. (one-time effort)	
55	Phase II Permit	74	Definitions	Definition	LID BMP - means low impact development best management practices	New definition	Definitions	Review Kirkland's definitions for consistency with how NPDES permit interprets the items below.	Yes. Conduct a review of City-wide definitions for consistency with permit. (one-time effort)	
56	Phase II Permit	74	Definitions	Definition	[Revised definition of Low Impact Development to be more specific] Low Impact Development- means a stormwater and land use management strategy that strives to mimic pre-disturbance hydrologic processes of infiltration, filtration, storage, evaporation and transpiration by emphasizing conservation, use of on-site natural features, site planning, and distributed stormwater management practices that are integrated into a project design.	Revised definition	Definitions	Review Kirkland's definitions for consistency with how NPDES permit interprets the items below.	Yes. Conduct a review of City-wide definitions for consistency with permit. (one-time effort)	

New Item	Ecology Document	Pg	Section	Section Description	Permit Language	Summary of Requirement Changes	Topic	Programmatic Gaps/Actions (Work needed to eliminate the gap)	Resource Needs	Deadline
57	Phase II Permit	74	Definitions	Definition	Low impact development best management practices - means distributed stormwater management practices, integrated into a project design, that emphasize pre-disturbance hydrologic processes of infiltration, filtration, storage, evaporation and transpiration. LID BMPs include, but are not limited to, bioretention/rain gardens, permeable pavements, roof downspout controls, dispersion, soil quality and depth, vegetated roofs, minimum excavation foundations, and water re-use.	New definition	Definitions	Review Kirkland's definitions for consistency with how NPDES permit interprets the items below.	Yes. Conduct a review of City-wide definitions for consistency with permit. (one-time effort)	
58	Phase II Permit	75	Definitions	Definition	MS4 - means municipal separate storm sewer system	New definition	Definitions	Review Kirkland's definitions for consistency with how NPDES permit interprets the items below.	Yes. Conduct a review of City-wide definitions for consistency with permit. (one-time effort)	
59	Phase II Permit	75	Definitions	Definition	[Revised definition of Municipal Separate Sewer System by adding the following text to clarify conveyance or a system of conveyances] (v) Which is defined as "large" or "medium" or "small" or otherwise designated by Ecology pursuant to 40 CFR 122.26	Revised definition	Definitions	Review Kirkland's definitions for consistency with how NPDES permit interprets the items below.	Yes. Conduct a review of City-wide definitions for consistency with permit. (one-time effort)	
60	Phase II Permit	76	Definitions	Definition	Native vegetation - means vegetation comprised of plant species, other than noxious weeds, that are indigenous to the coastal region of the Pacific Northwest and which reasonably could have been expected to naturally occur on the site. Examples include trees such as Douglas Fir, western hemlock, western red cedar, alder, big-leaf maple; shrubs such as willow, elderberry, salmonberry, and salal; and herbaceous plants such as sword fern, foam flower, and fireweed	New definition	Definitions	Review Kirkland's definitions for consistency with how NPDES permit interprets the items below.	Yes. Conduct a review of City-wide definitions for consistency with permit. (one-time effort)	
61	Phase II Permit	76	Definitions	Definition	New development - means land disturbing activities, including Class IV General Forest Practices that are conversions from timber land to other uses; structural development, including construction or installation of a building or other structure; creation of hard surfaces; and subdivision, short subdivision and binding site plans, as defined and applied in chapter 58.17 RCW. Projects meeting the definition of redevelopment shall not be considered new development. Refer to Appendix 1 for a definition of hard surfaces.	New definition	Definitions	Review Kirkland's definitions for consistency with how NPDES permit interprets the items below.	Yes. Conduct a review of City-wide definitions for consistency with permit. (one-time effort)	
62	Phase II Permit	76	Definitions	Definition	New Permittee means a city, town, or county that is subject to the Western Washington Municipal Stormwater General Permit and was not subject to the permit prior to August 1, 2013.	New definition	Definitions	Review Kirkland's definitions for consistency with how NPDES permit interprets the items below.	Yes. Conduct a review of City-wide definitions for consistency with permit. (one-time effort)	
63	Phase II Permit	76	Definitions	Definition	[Revised the definition of Outfall to replace "Municipal Separate Storm Sewer" with "MS4" and "waters of the State" with "surface waters". Also revised to be specific about "culverts" as the means to convey primarily surface waters.]	Revised definition	Definitions	Review Kirkland's definitions for consistency with how NPDES permit interprets the items below.	Yes. Conduct a review of City-wide definitions for consistency with permit. (one-time effort)	

New Item	Ecology Document	Pg	Section	Section Description	Permit Language	Summary of Requirement Changes	Topic	Programmatic Gaps/Actions (Work needed to eliminate the gap)	Resource Needs	Deadline
64	Phase II Permit	77	Definitions	Definition	Project site - means that portion of a property, properties, or right-of-ways subject to land disturbing activities, new hard surfaces, or replaced hard surfaces. Refer to Appendix 1 for a definition of hard surfaces.	New definition	Definitions	Review Kirkland's definitions for consistency with how NPDES permit interprets the items below.	Yes. Conduct a review of City-wide definitions for consistency with permit. (one-time effort)	
65	Phase II Permit	77	Definitions	Definition	Quality Assurance Project Plan - means a document that describes the objectives of an environmental study and the procedures to be followed to achieve those objectives.	New definition	Definitions	Review Kirkland's definitions for consistency with how NPDES permit interprets the items below.	Yes. Conduct a review of City-wide definitions for consistency with permit. (one-time effort)	
66	Phase II Permit	77	Definitions	Definition	Redevelopment - means, on a site that is already substantially developed (i.e., has 35% or more of existing hard surface coverage), the creation or addition of hard surfaces; the expansion of a building footprint or addition or replacement of a structure; structural development including construction, installation or expansion of a building or other structure; replacement of hard surface that is not part of a routine maintenance activity; and land disturbing activities. Refer to Appendix 1 for a definition of hard surfaces.	New definition	Definitions	Review Kirkland's definitions for consistency with how NPDES permit interprets the items below.	Yes. Conduct a review of City-wide definitions for consistency with permit. (one-time effort)	
67	Phase II Permit	78	Definitions	Definition	Regional Stormwater Monitoring Program means, for all of western Washington, a stormwater-focused monitoring and assessment program consisting of these components: status and trends monitoring in small streams and marine nearshore areas, stormwater management program effectiveness studies, and a source identification information repository (SIDIR). The priorities and scope for the RSMP are set by a formal stakeholder group. For this permit term, RSMP status and trends monitoring will be conducted in the Puget Sound basin only.	New definition	Definitions	Review Kirkland's definitions for consistency with how NPDES permit interprets the items below.	Yes. Conduct a review of City-wide definitions for consistency with permit. (one-time effort)	
68	Phase II Permit	78	Definitions	Definition	Sediment/Erosion-Sensitive Feature - means an area subject to significant degradation due to the effect of construction runoff, or areas requiring special protection to prevent erosion. See Appendix 7 Determining Construction Site Sediment Transport Potential for a more detailed definition.	New definition	Definitions	Review Kirkland's definitions for consistency with how NPDES permit interprets the items below.	Yes. Conduct a review of City-wide definitions for consistency with permit. (one-time effort)	
69	Phase II Permit	78	Definitions	Definition	SIDIR - means Source Identification Information Repository.	New definition	Definitions	Review Kirkland's definitions for consistency with how NPDES permit interprets the items below.	Yes. Conduct a review of City-wide definitions for consistency with permit. (one-time effort)	
70	Phase II Permit	78	Definitions	Definition	[Shortened definition of Small Municipal Separate Storm Sewer System to mean - MS4 not defined as "large" or "medium" pursuant to 40 CFR 122.26(b)(4) & (7) or designated under 40 CFR 122.26 (a)(1)(v).	Revised definition	Definitions	Review Kirkland's definitions for consistency with how NPDES permit interprets the items below.	Yes. Conduct a review of City-wide definitions for consistency with permit. (one-time effort)	

New Item	Ecology Document	Pg	Section	Section Description	Permit Language	Summary of Requirement Changes	Topic	Programmatic Gaps/Actions (Work needed to eliminate the gap)	Resource Needs	Deadline
71	Phase II Permit	79	Definitions	Definition	Source control BMP - means a structure or operation that is intended to prevent pollutants from coming into contact with stormwater through physical separation of areas or careful management of activities that are sources of pollutants. The SWMMWW (2012) 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 of the SWMMWW (2012) for details.	New definition	Definitions	Review Kirkland's definitions for consistency with how NPDES permit interprets the items below.	Yes. Conduct a review of City-wide definitions for consistency with permit. (one-time effort)	
72	Phase II Permit	79	Definitions	Definition	[Revised the definition of 'Stormwater Management Program' to highlight the components listed in S5, S6, S7, and S8.]	Revised definition	Definitions	Review Kirkland's definitions for consistency with how NPDES permit interprets the items below.	Yes. Conduct a review of City-wide definitions for consistency with permit. (one-time effort)	
73	Phase II Permit	80	Definitions	Definition	Stormwater Treatment and Flow Control BMPs/Facilities - means detention facilities treatment BMPs/facilities, bioretention, vegetated roofs, and permeable pavements that help meet Appendix 1 Minimum Requirements #6 (treatment), #7 (flow control), or both.	New definition	Definitions	Review Kirkland's definitions for consistency with how NPDES permit interprets the items below.	Yes. Conduct a review of City-wide definitions for consistency with permit. (one-time effort)	
74	Phase II Permit	80	Definitions	Definition	Tributary conveyance - means pipes, ditches, catch basins, and inlets owned or operated by the Permittee and designed or used for collecting and conveying stormwater.	New definition	Definitions	Review Kirkland's definitions for consistency with how NPDES permit interprets the items below.	Yes. Conduct a review of City-wide definitions for consistency with permit. (one-time effort)	
75	Phase II Permit	80	Definitions	Definition	Urban Grown Area - means those areas designated by a county pursuant to RCW 36.70A.110.	New definition	Definitions	Review Kirkland's definitions for consistency with how NPDES permit interprets the items below.	Yes. Conduct a review of City-wide definitions for consistency with permit. (one-time effort)	
76	Phase II Permit	80	Definitions	Definition	[Revised the definition of 'Urbanized Area' by adding the following text] Urbanized Areas are designated by the U.S. Census Bureau based on the most recent decennial census.	Revised definition	Definitions	Review Kirkland's definitions for consistency with how NPDES permit interprets the items below.	Yes. Conduct a review of City-wide definitions for consistency with permit. (one-time effort)	
77	Phase II Permit	81	Definitions	Definition	Waters of the United States refers to the definition in 40 CFR 122.2.	New definition	Definitions	Review Kirkland's definitions for consistency with how NPDES permit interprets the items below.	Yes. Conduct a review of City-wide definitions for consistency with permit. (one-time effort)	

New Item	Ecology Document	Pg	Section	Section Description	Permit Language	Summary of Requirement Changes	Topic	Programmatic Gaps/Actions (Work needed to eliminate the gap)	Resource Needs	Deadline
78	Phase II Permit Appendix 1	2	2	Definitions	[Updated definitions for terms listed in subsequent rows]	Adds new definitions, modify existing definitions. Noteworthy: new and revised definitions for impervious, hard, and pervious surfaces. See breakout in subsequent rows.	Definitions	Review Kirkland's definitions for consistency with how NPDES permit interprets the items below.	Yes. Conduct a review of City-wide definitions for consistency with permit. (one-time effort)	
79	Phase II Permit Appendix 1	2	2	Definitions	Arterial - A road or street primarily for through traffic. The term generally includes roads or streets considered collectors. It does not include local access roads which are generally limited to providing access to abutting property. See also RCW 35.78.010, RCW 36.86.070, and RCW 47.05.021.	Revised definition to more clearly define an arterial	Definitions	Review Kirkland's definitions for consistency with how NPDES permit interprets the items below.	Yes. Conduct a review of City-wide definitions for consistency with permit. (one-time effort)	
80	Phase II Permit Appendix 1	2	2	Definitions	Bioretention - Engineered facilities that treat stormwater by passing it through a specified soil profile, and either retain or detain the treated stormwater for flow attenuation. Refer to the SWMMWW 2012 Ch. 7 of Vol V for Bioretention BMP types and design specifications.	New definition	Definitions	Review Kirkland's definitions for consistency with how NPDES permit interprets the items below.	Yes. Conduct a review of City-wide definitions for consistency with permit. (one-time effort)	
81	Phase II Permit Appendix 1	3	2	Definitions	Commercial Agriculture means those activities conducted on lands defined in RCW 84.34.020(2) and activities involved in the production of crops or livestock for commercial trade. An activity ceases to be considered commercial agriculture when the area on which it is conducted is proposed for conversion to a nonagricultural use or has lain idle for more than five years, unless the idle land is registered in a federal or state soils conservation program, or unless the activity is maintenance of irrigation ditches, laterals, canals, or drainage ditches related to an existing and ongoing agricultural activity.	New definition	Definitions	Review Kirkland's definitions for consistency with how NPDES permit interprets the items below.	Yes. Conduct a review of City-wide definitions for consistency with permit. (one-time effort)	
82	Phase II Permit Appendix 1	3	2	Definitions	Converted vegetation (areas) - The surfaces on a project site where native vegetation, pasture, scrub/shrub, or unmaintained non-native vegetation (e.g., himalayan blackberry, scotch broom) are converted to lawn or landscaped areas, or where native vegetation is converted to pasture.	New definition	Definitions	Review Kirkland's definitions for consistency with how NPDES permit interprets the items below.	Yes. Conduct a review of City-wide definitions for consistency with permit. (one-time effort)	
83	Phase II Permit Appendix 1	3	2	Definitions	[text added to definition of Effective Impervious Surface (to describe ineffective impervious surfaces):] 2) residential roof runoff is infiltrated in accordance with Downspout Full Infiltration Systems in BMP T5.10A in Volume III of the SWMMWW (2012); or 3) approved continuous runoff modeling methods indicate that the entire runoff file is infiltrated.	Revised definition	Definitions	Review Kirkland's definitions for consistency with how NPDES permit interprets the items below.	Yes. Conduct a review of City-wide definitions for consistency with permit. (one-time effort)	
84	Phase II Permit Appendix 1	3	2	Definitions	Erodible or leachable materials – Wastes, chemicals, or other substances that measurably alter the physical or chemical characteristics of runoff when exposed to rainfall. Examples include erodible soils that are stockpiled, uncovered process wastes, manure, fertilizers, oily substances, ashes, kiln dust, and garbage dumpster leakage.	New definition - previously contained within definition of PGIS	Definitions	Review Kirkland's definitions for consistency with how NPDES permit interprets the items below.	Yes. Conduct a review of City-wide definitions for consistency with permit. (one-time effort)	

New Item	Ecology Document	Pg	Section	Section Description	Permit Language	Summary of Requirement Changes	Topic	Programmatic Gaps/Actions (Work needed to eliminate the gap)	Resource Needs	Deadline
85	Phase II Permit Appendix 1	3	2	Definitions	Hard Surface – An impervious surface, a permeable pavement, or a vegetated roof.	New definition	Definitions	Review Kirkland's definitions for consistency with how NPDES permit interprets the items below.	Yes. Conduct a review of City-wide definitions for consistency with permit. (one-time effort)	
86	Phase II Permit Appendix 1	3	2	Definitions	[Revised definition of Impervious surface from "hard surface area" to "non-vegetated surface area"]	Revised definition	Definitions	Review Kirkland's definitions for consistency with how NPDES permit interprets the items below.	Yes. Conduct a review of City-wide definitions for consistency with permit. (one-time effort)	
87	Phase II Permit Appendix 1	4	2	Definitions	[Revised definition of Land Disturbing Activity to clarify that landscape maintenance, gardening, and stormwater facility maintenance are not considered land disturbing activity under most conditions]	Revised definition	Definitions	Review Kirkland's definitions for consistency with how NPDES permit interprets the items below.	Yes. Conduct a review of City-wide definitions for consistency with permit. (one-time effort)	
88	Phase II Permit Appendix 1	4	2	Definitions	Low Impact Development (LID) – A stormwater and land use management strategy that strives to mimic pre-disturbance hydrologic processes of infiltration, filtration, storage, evaporation and transpiration by emphasizing conservation, use of on-site natural features, site planning, and distributed stormwater management practices that are integrated into a project design.	New definition	Definitions	Review Kirkland's definitions for consistency with how NPDES permit interprets the items below.	Yes. Conduct a review of City-wide definitions for consistency with permit. (one-time effort)	
89	Phase II Permit Appendix 1	4	2	Definitions	LID Best Management Practices – 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.	New definition	Definitions	Review Kirkland's definitions for consistency with how NPDES permit interprets the items below.	Yes. Conduct a review of City-wide definitions for consistency with permit. (one-time effort)	
90	Phase II Permit Appendix 1	4	2	Definitions	LID Principles – Land use management strategies that emphasize conservation, use of on-site natural features, and site planning to minimize impervious surfaces, native vegetation loss, and stormwater runoff.	New definition	Definitions	Review Kirkland's definitions for consistency with how NPDES permit interprets the items below.	Yes. Conduct a review of City-wide definitions for consistency with permit. (one-time effort)	
91	Phase II Permit Appendix 1	4	2	Definitions	[added the following text to the definition of Maintenance:] 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 of the SMMWW. See also Pavement Maintenance exemptions in Section 1 of this Appendix.	Revised definition	Definitions	Review Kirkland's definitions for consistency with how NPDES permit interprets the items below.	Yes. Conduct a review of City-wide definitions for consistency with permit. (one-time effort)	

New Item	Ecology Document	Pg	Section	Section Description	Permit Language	Summary of Requirement Changes	Topic	Programmatic Gaps/Actions (Work needed to eliminate the gap)	Resource Needs	Deadline
92	Phase II Permit Appendix 1	5	2	Definitions	On-site Stormwater Management BMPs: As used in this appendix, a synonym for Low Impact Development BMPs.	New definition	Definitions	Review Kirkland's definitions for consistency with how NPDES permit interprets the items below.	Yes. Conduct a review of City-wide definitions for consistency with permit. (one-time effort)	
93	Phase II Permit Appendix 1	5	2	Definitions	Permeable pavement – Pervious concrete, porous asphalt, permeable pavers or other forms of pervious or porous paving material intended to allow passage of water through the pavement section. It often includes an aggregate base that provides structural support and acts as a stormwater reservoir.	New definition	Definitions	Review Kirkland's definitions for consistency with how NPDES permit interprets the items below.	Yes. Conduct a review of City-wide definitions for consistency with permit. (one-time effort)	
94	Phase II Permit Appendix 1	5	2	Definitions	Pervious Surface – Any surface material that allows stormwater to infiltrate into the ground. Examples include lawn, landscape, pasture, native vegetation areas, and permeable pavements.	New definition	Definitions	Review Kirkland's definitions for consistency with how NPDES permit interprets the items below.	Yes. Conduct a review of City-wide definitions for consistency with permit. (one-time effort)	
95	Phase II Permit Appendix 1	5	2	Definitions	Pollution-generating hard surface (PGHS) – Those hard surfaces considered to be a significant source of pollutants in stormwater runoff. See the listing of surfaces under pollution-generating impervious surface.	New definition	Definitions	Review Kirkland's definitions for consistency with how NPDES permit interprets the items below.	Yes. Conduct a review of City-wide definitions for consistency with permit. (one-time effort)	
96	Phase II Permit Appendix 1	5	2	Definitions	Pollution-generating impervious surface (PGIS) – Those impervious surfaces considered to be a significant source of pollutants in stormwater runoff. Such surfaces include those which are subject to: vehicular use; industrial activities (as further defined in the glossary of the SWMMWW (2012)); storage of erodible or leachable materials, wastes, or chemicals, and which receive direct rainfall or the run-on or blow-in of rainfall; metal roofs unless they are coated with an inert, non-leachable material (e.g., baked-on enamel coating); or roofs that are subject to venting significant amounts of dusts, mists, or fumes from manufacturing, commercial, or other indoor activities.	Revised definition - moved text defining erodible and leachable materials to a separate new definition. Also added the final example of roofs subject to venting.	Definitions	Review Kirkland's definitions for consistency with how NPDES permit interprets the items below.	Yes. Conduct a review of City-wide definitions for consistency with permit. (one-time effort)	
97	Phase II Permit Appendix 1	5	2	Definitions	Pollution-generating pervious surfaces (PGPS) – Any non-impervious surface subject to vehicular use, industrial activities (as further defined in the glossary of the SWMMWW (2012)); or storage of erodible or leachable materials, wastes, or chemicals, and that receive direct rainfall or run-on or blow-in of rainfall, use of pesticides and fertilizers, or loss of soil. Typical PGPS include permeable pavement subject to vehicular use, lawns, and landscaped areas including: golf courses, parks, cemeteries, and sports fields (natural and artificial turf).	Revised definition - added text for additional use types and for permeable pavement subject to vehicular use.	Definitions	Review Kirkland's definitions for consistency with how NPDES permit interprets the items below.	Yes. Conduct a review of City-wide definitions for consistency with permit. (one-time effort)	

New Item	Ecology Document	Pg	Section	Section Description	Permit Language	Summary of Requirement Changes	Topic	Programmatic Gaps/Actions (Work needed to eliminate the gap)	Resource Needs	Deadline
98	Phase II Permit Appendix 1	6	2	Definitions	Rain Garden – A non-engineered shallow landscaped depression, with compost-amended native soils and adapted plants. The depression is designed to pond and temporarily store stormwater runoff from adjacent areas, and to allow stormwater to pass through the amended soil profile. Refer to the Rain Garden Handbook for Western Washington Homeowners (WSU 2007 or as revised) for rain garden specifications and construction guidance.	New definition	Definitions	Review Kirkland's definitions for consistency with how NPDES permit interprets the items below.	Yes. Conduct a review of City-wide definitions for consistency with permit. (one-time effort)	
99	Phase II Permit Appendix 1	6	2	Definitions	[add the following text to the definition of Receiving waters:] Ground water to which surface runoff is directed by infiltration.	Revised definition	Definitions	Review Kirkland's definitions for consistency with how NPDES permit interprets the items below.	Yes. Conduct a review of City-wide definitions for consistency with permit. (one-time effort)	
100	Phase II Permit Appendix 1	6	2	Definitions	Replaced hard surface: For structures, the removal and replacement of hard surfaces down to the foundation. For other hard surfaces, the removal down to bare soil or base course and replacement.	New definition	Definitions	Review Kirkland's definitions for consistency with how NPDES permit interprets the items below.	Yes. Conduct a review of City-wide definitions for consistency with permit. (one-time effort)	
101	Phase II Permit Appendix 1	8	2	Definitions	Vehicular Use – Regular use of an impervious or pervious surface by motor vehicles. The following are subject to regular vehicular use: roads, un-vegetated road shoulders, bike lanes within the traveled lane of a roadway, driveways, parking lots, unrestricted access fire lanes, vehicular equipment storage yards, and airport runways. The following are not considered subject to regular vehicular use: paved bicycle pathways separated from and not subject to drainage from roads for motor vehicles, restricted access fire lanes, and infrequently used maintenance access roads.	New definition, but was included in 2005 SWMMWW, Volume I	Definitions	Review Kirkland's definitions for consistency with how NPDES permit interprets the items below.	Yes. Conduct a review of City-wide definitions for consistency with permit. (one-time effort)	
102	Phase II Permit Appendix 1	9	3.1	Minimum Requirement Thresholds	Use the thresholds in sections 3.2 and 3.3 at the time of application for a subdivision, plat, short plat, building permit, or other construction permit. The plat or short plat approval shall identify all stormwater BMPs that are required for each lot. For projects involving only land disturbing activities, (e.g., clearing or grading), the thresholds apply at the time of application for the permit allowing or authorizing that activity. Note the exemption in Section 1 for forest practices other than Class IV General.	Clarifies types of project applications requiring application of the minimum requirements.	Thresholds	See below.	See below.	
103	Phase II Permit Appendix 1	10 11	3.2, 3.3	Minimum Requirement Thresholds	[Replaces instances of "impervious surface area" with "hard surface area" Removes "native" from converted vegetation references.]	New definition adds permeable pavement and vegetated roofs to hard surface threshold assessment.	Definitions	Review development standards and revise for consistency with new permit.	Yes. One-time effort to review and revise development standards and thresholds.	
104	Phase II Permit Appendix 1	12	3.4	Additional Requirements for Re-development Project Sites	[Add converted vegetation areas to surfaces required to meet all MRs if applicable thresholds are triggered.]	Adds "converted vegetation" to Permit language	Language change	Same as above	Same as above.	

New Item	Ecology Document	Pg	Section	Section Description	Permit Language	Summary of Requirement Changes	Topic	Programmatic Gaps/Actions (Work needed to eliminate the gap)	Resource Needs	Deadline
105	Phase II Permit Appendix 1	14	4.1	Min. Req. #1: Preparation of Stormwater Site Plans	Stormwater Site Plans shall use site appropriate development principles, as required and encouraged by local development codes, to retain native vegetation and minimize impervious surfaces to the extent feasible.	New language. Adds LID related language to Min Req #1	Site Plans	Review requirement and determine what "appropriate development principles are." Determine how development review staff will know that this has been met.	Yes. Develop criteria for development review and what is required for adequate stormwater site plans. (one-time effort, although add'l staff time may be needed)	
106	Phase II Permit Appendix 1	14	4.2	Min. Req. #2: General Requirements	Each of the thirteen elements listed below must be considered and included in the SWPPP unless site conditions render the element unnecessary and the exemption from the element is clearly justified in the narrative of the SWPPP.	Adds a new Element #13 for SWPPP preparation (Protect LID BMPs)	SWPPP/CSCP elements	Revise requirements to protect LID BMPs, and make other necessary changes according to new permit.	Yes. Revise criteria for constrution SWPPPs	
107	Phase II Permit Appendix 1	15	4.2	Min. Req. #2: General Requirements	The SWPPP shall be implemented beginning with initial land disturbance and until final stabilization. Sediment and Erosion control BMPs shall be consistent with the BMPs contained in Chapter 4 of Volume II of the Stormwater Management Manual for Western Washington (SWMMWW)(2012).	Requires use of BMPs consistent with Vol II Ch. 4 of the SWMMWW	BMPs	See above.	See above.	
108	Phase II Permit Appendix 1	17	4.2.4	Min. Req. #2: Install Sediment Control (Element #4)	Design, install, and maintain effective erosion controls and sediment controls to minimize the discharge of pollutants.	New language	General	See above	See above.	
109	Phase II Permit Appendix 1	17	4.2.4	Min. Req. #2: Install Sediment Control (Element #4)	Minimize sediment discharges from the site. The design, installation and maintenance of erosion and sediment controls must address factors such as the amount, frequency, intensity and duration of precipitation, the nature of resulting stormwater runoff, and soil characteristics, including the range of soil particle sizes expected to be present on the site.	New language regarding design of sediment controls	Sediment design criteria	See above	See above.	
110	Phase II Permit Appendix 1	18	4.2.4	Min. Req. #2: Install Sediment Control (Element #4)	Where feasible, design outlet structures that withdraw impounded stormwater from the surface to avoid discharging sediment that is still suspended lower in the water column.	New guidance language for outlet structures	Sediment outlets	See above	See above.	
111	Phase II Permit Appendix 1	18	4.2.5	Min. Req. #2: Stabilize Soils (Element #5)	Applicable BMPs include, but are not limited to: temporary and permanent seeding, sodding, mulching, plastic covering, erosion control fabrics and matting, soil application of polyacrylamide (PAM), the early application of gravel base early on areas to be paved, and dust control.	Adds guidance for BMPs	BMP guidance	See above	See above.	
112	Phase II Permit Appendix 1	18	4.2.5	Min. Req. #2: Stabilize Soils (Element #5)	Control stormwater volume and velocity within the site to minimize soil erosion.	New language	General	See above	See above.	
113	Phase II Permit Appendix 1	18	4.2.5	Min. Req. #2: Stabilize Soils (Element #5)	Control stormwater discharges, including both peak flow rates and total stormwater volume, to minimize erosion at outlets and to minimize downstream channel and stream bank erosion.	New language	Control discharges	See above	See above.	
114	Phase II Permit Appendix 1	18	4.2.5	Min. Req. #2: Stabilize Soils (Element #5)	Minimize the amount of soil exposed during construction activity.	New language	Protect soils	See above	See above.	
115	Phase II Permit Appendix 1	18	4.2.5	Min. Req. #2: Stabilize Soils (Element #5)	Minimize the disturbance of steep slopes.	New language	Protect soils	See above	See above.	
116	Phase II Permit Appendix 1	18	4.2.5	Min. Req. #2: Stabilize Soils (Element #5)	Minimize soil compaction and, unless infeasible, preserve topsoil.	New language	Protect soils	See above	See above.	

New Item	Ecology Document	Pg	Section	Section Description	Permit Language	Summary of Requirement Changes	Topic	Programmatic Gaps/Actions (Work needed to eliminate the gap)	Resource Needs	Deadline
117	Phase II Permit Appendix 1	19	4.2.6	Min. Req. #2: Protect Slopes (Element #6)	Applicable practices include, but are not limited to, reducing continuous length of slope with terracing and diversions, reducing slope steepness, and roughening slope surfaces (for example, track walking).	New language, notes practices to minimize erosion on slopes	Slopes	See above	See above.	
118	Phase II Permit Appendix 1	20	4.2.9	Min. Req. #2: Control Pollutants (Element #9)	Design, install, implement and maintain effective pollution prevention measures to minimize the discharge of pollutants.	New language	General	See above	See above.	
119	Phase II Permit Appendix 1	20	4.2.9	Min. Req. #2: Control Pollutants (Element #9)	Secondary containment means placing tanks or containers within an impervious structure capable of containing 110% of the volume contained in the largest tank within the containment structure. Double-walled tanks do not require additional secondary containment.	Adds secondary containment description	Secondary containment	See above	See above.	
120	Phase II Permit Appendix 1	21	4.2.9	Min. Req. #2: Control Pollutants (Element #9)	Assure that washout of concrete trucks is performed off-site or in designated concrete washout areas only. Do not wash out concrete trucks onto the ground, or into storm drains, open ditches, streets, or streams. Do not dump excess concrete on-site, except in designated concrete washout areas. Concrete spillage or concrete discharge to surface waters of the State is prohibited.	New language prohibiting the ability to wash concrete trucks anywhere on-site.	Concrete washout	See above	See above.	
121	Phase II Permit Appendix 1	21	4.2.10	Min Req. #2: Control De-Watering (Element #10)	[Several changes in section:] Note that "surface waters of the State" may exist on a construction site as well as off site; for example, a creek running through a site. Ecology approved on-site chemical treatment or other suitable treatment technologies.	New language Chemical or other treatment technologies change from Permittee-approved to Ecology-approved.	Dewatering	See above	See above.	
122	Phase II Permit Appendix 1	22	4.2.12	Min. Req. #2: Manage the Project (Element #12)	Maintain, update, and implement the SWPPP.	A paragraph with similar language was deleted later in this section, so not a significant change.	General	See above	See above.	
123	Phase II Permit Appendix 1	22	4.2.12	Min. Req. #2: Manage the Project (Element #12)	Project sites disturbing less than one acre may have a CESCL or a person without CESCL certification conduct inspections. By the initiation of construction, the SWPPP must identify the CESCL or inspector, who must be present on-site or on-call at all times.	Adds flexibility for small projects	CESCL requirement	See above	See above.	
124	Phase II Permit Appendix 1	22	4.2.13	Min. Req. #2: Protect LID BMPs (Element #13)	Protect all Bioretention and Rain Garden BMPs from sedimentation through installation and maintenance of erosion and sediment control BMPs on portions of the site that drain into the Bioretention and/or Rain Garden BMPs. Restore the BMPs to their fully functioning condition if they accumulate sediment during construction. Restoring the BMP must include removal of sediment and any sediment-laden Bioretention/rain garden soils, and replacing the removed soils with soils meeting the design specification.	New language, preserve the function of LID BMPs during construction	LID construction	See above	See above.	
125	Phase II Permit Appendix 1	23	4.2.13	Min. Req. #2: Protect LID BMPs (Element #13)	Prevent compacting Bioretention and Rain Garden BMPs by excluding construction equipment and foot traffic. Protect completed lawn and landscaped areas from compaction due to construction equipment	New language, preserve the function of LID BMPs during construction	LID construction	See above	See above.	
126	Phase II Permit Appendix 1	23	4.2.13	Min. Req. #2: Protect LID BMPs (Element #13)	Control erosion and avoid introducing sediment from surrounding land uses onto permeable pavements. Do not allow muddy construction equipment on the base material or pavement. Do not allow sediment-laden runoff onto permeable pavements or base materials.	New language, protect permeable pavement during construction	LID permeable pavement	See above	See above.	

New Item	Ecology Document	Pg	Section	Section Description	Permit Language	Summary of Requirement Changes	Topic	Programmatic Gaps/Actions (Work needed to eliminate the gap)	Resource Needs	Deadline
127	Phase II Permit Appendix 1	23	4.2.13	Min. Req. #2: Protect LID BMPs (Element #13)	Pavements fouled with sediments or no longer passing an initial infiltration test must be cleaned using procedures from the local stormwater manual or the manufacturer's procedures.	New language, testing/cleaning requirements for permeable pavement	LID permeable pavement	See above	See above.	
128	Phase II Permit Appendix 1	23	4.2.13	Min. Req. #2: Protect LID BMPs (Element #13)	Keep all heavy equipment off existing soils under LID BMPs that have been excavated to final grade to retain the infiltration rate of the soils.	New language, manage heavy equipment	LID construction	See above	See above.	
129	Phase II Permit Appendix 1	23	4.5	Min. Req. #5: Applicability	Except as provided below, the Permittee must require On-site Stormwater Management BMPs in accordance with the following project thresholds, standards, and lists to infiltrate, disperse, and retain stormwater runoff on-site to the extent feasible, without causing flooding or erosion impacts	Add new thresholds, performance standards, and requirements	On-site SW management	Revise development requirements to include new permit requirements for MR #5	Yes. Revise development requirements and review guidelines. Develop maps or guidance documents to assist developers.	12/31/2016
130	Phase II Permit Appendix 1	24	4.5	Min. Req. #5: Applicability	Projects qualifying as flow control exempt in accordance with Section 4.7 of this Appendix do not have to achieve the LID performance standard, nor consider bioretention, rain gardens, permeable pavement, and full dispersion if using List #1 or List #2. However, those projects must implement BMP T5.13; BMPs T5.10A, B, or C; and BMP T5.11or T5.12, if feasible.	Applicability and requirements for flow control exempt projects. Referenced BMPs include: Soil Quality and Depth Downspout Full Infiltration Downspout Dispersion Perforated Stub-out Connections Concentrated Flow Dispersion Sheet Flow Dispersion	Flow control exempt	See above	See above.	
131	Phase II Permit Appendix 1	24	4.5	Min. Req. #5: Project Thresholds (Triggering Min. Req. #1-#5)	Projects triggering only Minimum Requirements #1 through #5 shall either: - Use On-site Stormwater Management BMPs from List #1 for all surfaces within each type of surface in List #1; or -Demonstrate compliance with the LID Performance Standard. Projects selecting this option cannot use Rain Gardens. They may choose to use Bioretention BMPs as described in the SWMMWW (2012).	New requirements under existing project thresholds	Project reqs	See above	See above.	
132	Phase II Permit Appendix 1	25	4.5	Min. Req. #5: Project Thresholds (Triggering Min. Req. #1-#9)	[New Table 4.1]	New on-site stormwater management requirements for projects triggering Min. Reqs. #1-9. New requirements relative to inside/outside UGA, and greater than/less than 5 acres.	Project reqs	See above	See above.	

New Item	Ecology Document	Pg	Section	Section Description	Permit Language	Summary of Requirement Changes	Topic	Programmatic Gaps/Actions (Work needed to eliminate the gap)	Resource Needs	Deadline
133	Phase II Permit Appendix 1	25	4.5	Min. Req. #5: Low Impact Development Performance Standard (LIDPS)	Stormwater discharges shall match developed discharge durations to pre-developed durations for the range of pre-developed discharge rates from 8% of the 2-year peak flow to 50% of the 2-year peak flow. Refer to the Standard Flow Control Requirement section in Minimum Requirement #7 for information about the assignment of the pre-developed condition. Project sites that must also meet minimum requirement #7 shall match flow durations between 8% of the 2-year flow through the full 50-year flow.	New LID Performance Standard	LID performance standard	Develop maps or other useful tools to help developers determine infeasibility of LID implementation.	Yes. One-time effort to develop resources.	
134	Phase II Permit Appendix 1	25	4.5	Min. Req. #5: List#1	(See List #1: On-site Stormwater Management BMPs for Projects Triggering Minimum Requirements #1 through #5)	Consider the BMP's that are considered feasible for lawn and landscaped areas, roofs, and other hard surfaces. Feasibility shall be determined by evaluation against design requirements for BMP, feasibility criteria and competing needs criteria listed in the SWMMWW, including Volume I Appendix I-F and Chapter 5 of Volume V respectively.	List #1 BMPs	See above	See above.	
135	Phase II Permit Appendix 1	26	4.5	Min. Req. #5: List#2	(See List #2: On-site Stormwater Management BMPs for Projects Triggering Minimum Requirements #1 through #9)	Consider the BMP's that are considered feasible for lawn and landscaped areas, roofs, and other hard surfaces. Feasibility shall be determined by evaluation against design requirements for BMP, feasibility criteria and competing needs criteria listed in the SWMMWW, including Volume I Appendix I-F and Chapter 5 of Volume V respectively.	List #2 BMPs	See above	See above.	
136	Phase II Permit Appendix 1	28	4.6	Min. Req. #6: Runoff Treatment Thresholds	[Replace "impervious" references with "hard" in this section.] Projects in which the total of pollution-generating pervious surfaces (PGPS) – not including permeable pavements - is three-quarters (3/4) of an acre or more in a threshold discharge area, and from which there will be a surface discharge in a natural or man-made conveyance system from the site.	Language changes based on definition change for hard surfaces	WQ	Review development standards and revise for consistency with new permit.	Yes. One-time effort to revise standards for consistency.	
137	Phase II Permit Appendix 1	28	4.6	Min. Req. #6: Runoff Treatment Thresholds	[Delete Table 4.1 Treatment Requirements by Threshold Discharge Area.]	Deleted table summarizing treatment thresholds	WQ	None	No.	

New Item	Ecology Document	Pg	Section	Section Description	Permit Language	Summary of Requirement Changes	Topic	Programmatic Gaps/Actions (Work needed to eliminate the gap)	Resource Needs	Deadline
138	Phase II Permit Appendix 1	29	4.6	Min. Req. #6: Runoff Treatment Type Thresholds (3. Enhanced Treatment)	Except where specified below under 4. Basic Treatment, Enhanced treatment for reduction in dissolved metals is required for the following project sites that : 1) discharge directly to fresh waters or conveyance systems tributary to, fresh waters 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 fresh water designated for aquatic life use or that has an existing aquatic life use	New thresholds for Enhanced Treatment, related to changes in Basic Treatment section.	WQ	See above.	See above.	
139	Phase II Permit Appendix 1	30	4.6	Min. Req. #6: Runoff Treatment Type Thresholds (4. Basic Treatment)	Project sites that discharge to the ground, UNLESS: 1)The soil suitability criteria for infiltration treatment are met (See Chapter 3, Volume III of the SWMMWW), and alternative pretreatment is provided (Chapter 6, Vol. V)	Adds alternative pretreatment language	WQ	See above.	See above.	
140	Phase II Permit Appendix 1	30	4.6	Min. Req. #6: Runoff Treatment Type Thresholds (4. Basic Treatment)	[Basic treatment required for project sites that discharge to the ground, UNLESS:] 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	New language	WQ	See above	See above.	
141	Phase II Permit Appendix 1	30	4.6	Min. Req. #6: Runoff Treatment Type Thresholds (4. Basic Treatment)	Project sites discharging directly (or indirectly through a municipal separate storm sewer system) to Basic Treatment Receiving Waters (Appendix I-C of the SWMMWW (2012))	Language modification	WQ	See above.	See above.	
142	Phase II Permit Appendix 1	30	4.6	Min. Req. #6: Runoff Treatment Type Thresholds (4. Basic Treatment)	Project sites that drain to fresh water 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 life use or that have an existing aquatic life use.	New language	WQ	See above	See above.	
143	Phase II Permit Appendix 1	31	4.6	Min. Req. #6: Runoff Treatment Facility Sizing (Water Quality Design Storm Volume)	Size stormwater treatment facilities for the entire area that drains to them, even if some of those areas are not pollution-generating, or were not included in the project site threshold decisions (Section 3 of this appendix) or the treatment threshold decisions of this minimum requirement.	New language	WQ	See above	See above	
144	Phase II Permit Appendix 1	31	4.6	Min. Req. #6: Runoff Treatment Facility Sizing (Water Quality Design Storm Volume)	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.	New language	WQ	See above.	See above	

New Item	Ecology Document	Pg	Section	Section Description	Permit Language	Summary of Requirement Changes	Topic	Programmatic Gaps/Actions (Work needed to eliminate the gap)	Resource Needs	Deadline
145	Phase II Permit Appendix 1	31	4.6	Min. Req. #6: Runoff Treatment Facility Sizing (Water Quality Design Flow Rate)	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)	Additional clarification language	WQ	See above	See above	
146	Phase II Permit Appendix 1	32	4.6	Min. Req. #6: Runoff Treatment Facility Sizing (Water Quality Design Flow Rate)	[Delete: "Alternative methods may be used if they identify volumes and flow rates that are at least equivalent"]	Deleted language	WQ	None	No	
147	Phase II Permit Appendix 1	32	4.6	Min. Req. #6: Runoff Treatment Facility Selection	Stormwater treatment facilities shall be: • Selected in accordance with the process identified in Chapter 4 of Volume I, and Chapter 2 of Volume V of the SWMMWW (2012). [Existing references to Volume V for treatment facility design and maintenance criteria]	Adds reference to Chapter 2, Volume V of SWMMWW. Volume I now points to the step-by-step selection process contained in Volume V, rather than duplicating it. Only minor revisions in the Volume V selection process text for 2012. Revised and updated criteria and guidance throughout SWMMWW Volume V.	WQ	See above	See above	
148	Phase II Permit Appendix 1	32	4.6	Min. Req. #6: Runoff Treatment Facility Sizing (Additional Reqs)	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, Volume V and Chapter 7, Volume V of the SWMMWW (2012); or by infiltration through soils meeting the soil suitability criteria in Chapter 3 of Volume III of the SWMMWW (2012).	Adds references to 2012 SWMMWW	WQ	See above	See above	
149	Phase II Permit Appendix 1	32	4.7	Min. Req. #7: Flow Control Applicability	Update "impervious" to "hard" in this section.	Definition change	FC	Review and revise development standards for consistency with new permit.	Yes. One-time effort to revise standards for consistency.	
150	Phase II Permit Appendix 1	33	4.7	Min. Req. #7: Flow Control Thresholds	When assessing a project against the following thresholds, consider only those impervious, hard, and pervious surfaces that are subject to this minimum requirement as determined in Section 3 of this Appendix.	New language	FC	See above.	See above.	

New Item	Ecology Document	Pg	Section	Section Description	Permit Language	Summary of Requirement Changes	Topic	Programmatic Gaps/Actions (Work needed to eliminate the gap)	Resource Needs	Deadline
151	Phase II Permit Appendix 1	34	4.7	Min. Req. #7: Flow Control Thresholds	Projects that through a combination of hard surfaces and converted vegetation areas cause a 0.10 cubic feet per second (cfs) increase or greater in the 100-year flow frequency from a threshold discharge area as estimated using the Western Washington Hydrology Model or other approved model and one-hour time steps (or a 0.15 cfs increase or greater using 15-minute time steps)**. **The 0.10 cfs (one-hour time steps) or 0.15 cfs (15-minute time steps) increase should be a comparison of the post-project runoff to the existing condition runoff. For the purpose of applying this threshold, the existing condition is either the pre-project land cover, or the land cover that existed at the site as of a date when the local jurisdiction first adopted flow control requirements into code or rules. [Delete Table 4.2 Flow Control Requirements by Threshold Discharge Area]	Language changes based on definition change for hard surfaces. Adds clarification that 0.10 cfs is associated with one-hour time steps, and add new option for 0.15 cfs at 15-min time steps. Not clear whether the requirement is to evaluate both, or one or the other. Deleted flow control threshold summary table.	FC	See above	See above	
152	Phase II Permit Appendix 1	34	4.7	Min. Req. #7: Flow Control Standard Flow Control Req.	The drainage area of the immediate stream and all subsequent downstream basins have had at least 40% total impervious area since 1985. In this case, the pre-developed condition to be matched shall be the existing land cover condition. The map in Appendix I-G of the SMMWW (2012) depicts those areas which meet this criterion.	Adds new language referring to map in the SWMMWW. The reference should read "Appendix I-F"; there is no Appendix I-G.	FC	None	No.	
153	Phase II Permit Appendix 1	34	4.8	Min. Req. #8: Wetlands Protection Standard Req.	Projects shall comply with Guide Sheets 1 through 3 in Appendix I-D of the SWMMWW (2012). The hydrologic analysis shall use the existing land cover condition to determine the existing hydrologic conditions unless directed otherwise by a regulatory agency with jurisdiction.	Updated language for Guide Sheet references. [For reference, the Guide Sheets have the following titles/purposes: Guide Sheet 1: Criteria that excludes wetlands from serving as a treatment or flow control BMP/facility Guide Sheet 2: Criteria for including wetlands as a treatment or flow control BMP/facility Guide Sheet 3: Wetland protection guidelines	Wetlands	Review Kirkland's wetland and how you want to use this criteria with regard to protection of wetlands.	Yes. Review Kirkland wetlands and protection standards. Do you want to allow this element or not? Consistency with Critical areas code?	
154	Phase II Permit Appendix 1	36	4.8	Min. Req. #8: Wetlands Protection Additional Reqs.	[Stormwater treatment and flow control facilities shall not be built within a natural vegetated buffer, except for:] As allowed in wetlands approved for hydrologic modification and/or treatment in accordance with Guide Sheet 2 in Appendix I-D of the SWMMWW (2012).	Updated Guide Sheet reference	Wetlands	See above	See above	

New Item	Ecology Document	Pg	Section	Section Description	Permit Language	Summary of Requirement Changes	Topic	Programmatic Gaps/Actions (Work needed to eliminate the gap)	Resource Needs	Deadline
155	Phase II Permit Appendix 1	38	7	Basin/ Watershed Planning	[Existing reference to SWMMWW Volume I Appendix I-A]	The reference to Appendix I-A is unchanged from the previous Permit; however, the content of Appendix I-A was revised with additional guidance.	Basin/ Watershed Planning	Does Kirkland want to use Basin planning to establish different criteria? Juanita Creek retrofit study as a basin plan?	Yes. Review options around basin planning to determine if this makes sense for Kirkland.	
156	Phase II Permit Appendix 1	38	4.7	Flow Control Applicability	[Existing reference to SWMMWW Volume I Appendix I-E]	The reference to Appendix I-E is unchanged from the previous Permit; however, the listing of exempt waters was revised.	Exempt FC	None	No	
157	Phase II Permit Appendix 1	35	4.7	Additional Flow Control Reqs	[Existing reference to SWMMWW Volume III]	The reference to Volume III is unchanged from the previous Permit; however, the flow control BMPs referenced by the Permit contained in Volume III have received numerous modifications.	FC	None		
158	Phase II Permit Appendix 1	32	4.6	WQ Design Storm Volume	[Existing reference to SWMMWW Volume III Chapter 2]	The reference to Chapter 2 is unchanged from the previous Permit. While the overall Chapter experienced revisions, there are no apparent changes to the NRCS Curve Number equations, which are the context of the reference.	NRCS CN	None	No	
159	Phase II Permit Appendix 1	23	4.3	Min Req. #3: Source Control	[Existing reference to SWMMWW Volume IV]	The reference to Volume IV is unchanged from the previous Permit. The source control BMPs referenced in the Permit appear to have experienced minor revision.	Source Control	None	NO	
160	Phase II Permit Appendix 1		2	Definitions	[New reference to SWMMWW Volume V Chapter 4]	The new reference is related to requirements for stormwater facility O&M requirements. Chapter 4 was revised from the 2005 SWMMWW, with changes to O&M standards, and placeholders for LID maintenance standards.	O&M	None	No	