

King County Comments on 2012 Draft Municipal NPDES Permit

Page	Line	Section	Issue/Concern	Comment/Edits	Resolution
7	4-7	S1.F	Clarity for King County activities, properties and faculties in other jurisdictions.	This provision creates duplicate permit coverage for facilities, like transfer stations, park & ride lots, maintenance facilities, office buildings, and others that may be owned or operated by one permittee in the jurisdiction of another. It means that two jurisdictions will be responsible for inspecting the drainage facilities on these sites and potentially two jurisdictions will be responsible for source control for these sites. As cost control is critical to the success of stormwater management, we recommend that this section be re-written to put the responsibility on one of the two jurisdictions. Add language to address design, construction, maintenance, and enforcement. The permit should facilitate coordination between jurisdictions to reduce or eliminate redundancies in meeting SWMP requirements including construction (SSC.5) and source control (S5.C.7).	Add the following language "A permittee owning or operating facilities or properties, or conducting activities, in another municipality operating under a municipal stormwater permit, is responsible for complying with the permittee's permit obligations. This does not excuse the owner/operator permittee from complying with all the codes and ordinances of the other municipality."
7	7	S1.G	King County properties or facilities that are covered under an Industrial Stormwater NPDES should not be required to also meet Municipal NPDES permit requirements	County properties or action already under stormwater permit coverage should not be covered under this permit. New language "Any permittee property, action or facility authorized to discharge stormwater under an existing individual or other general NPDES permit has coverage under that permit. "	New language "Property, facilities, or actions covered under another individual or general stormwater permit are not included in the coverage of this permit. "
7	26	S2.B.2.	Clarification	Discharges to/from the MS4 related to emergency fire fighting activities may occur well after fire fighting activities have ceased, but proposed language only authorizes discharges "during" fire fighting activities (pg 7, line 26).	The discharge occurred during <u>resulting from</u> emergency fire fighting activities
8	5-7	S3.A.1.	Permittee responsibility for MS4 compliance with Permit	It may be possible that an MS4 is not subject to permit as it may have discharges to waters that are not subject to state jurisdiction. Clarify by adding " <u>that are covered by this Permit.</u> "	"Each Permittee, Co-Permittee and Secondary Permittee is responsible for complying with the terms of this Permit for the municipal separate storm sewers it owns or operates <u>that are covered by this Permit.</u> "
9	31-40	S4.F	There is overlap between the requirements found in S4F and the IC/IDDE program	There should be a clear delineation between the IC/IDDE (S5.C.8) program as reported in accordance with General Condition G3 and the reporting and response requirements found in Section S4F. The IC/IDDE program responds to discharges that "constitutes a threat" and the S4F program addresses "a discharge is causing or contributing to a known or likely violation of Water Quality standards in receiving waters." It would appear that the IC/IDDE program is addressing a single event or a single source while the S4F section of the permit an ongoing discharge that is systemic to the catchment.	Edit the Following text: "A Permittee shall notify Ecology in writing within 30 days of becoming aware, based on credible site-specific information, that <u>an ongoing discharge from the municipal separate storm sewer owned or operated by the Permittee is causing or contributing to a known or likely violation of Water Quality Standards in the receiving water. Pollutant discharges that are a one-time event (illicit discharge) or are coming from a single source (illicit connection) are addressed by the Permittees Illicit Connections and Illicit Discharges Detection and Elimination (S5.C.8) program and shall be reported in accordance with General Condition G3.</u> Written notification provided under this subsection shall, at a minimum, identify the source of the site-specific information, describe the nature and extent of the known or likely violation in the receiving water, and explain the reasons why the MS4 discharge is believed to be causing or contributing to the problem. For ongoing or continuing violations, a single written notification to Ecology will fulfill this requirement."
11	After Line 13	S4.F.3.d(1)	A TMDL or water quality cleanup plan should take precedence over a S4F Implementation plan when the pollutants of concern are the same.	Once a Total Maximum Daily Load or other enforceable water quality cleanup plan is developed for the pollutant of concern the S4F Implementation Plan will sunset.	Add the Following Text: "Once a Total Maximum Daily Load or other enforceable water quality cleanup plan has been developed for the impacted water body for the pollutant of concern, the S4F implementation plan will be terminated in lieu of the requirements of the cleanup plan."
11	31-35	S5.A.1	Ecology Edit	Definition of SWMP moved to definitions section, removes clarity from the section	Restore deleted text
12	18-20	S5.B	Ecology acknowledges that the SWMP is MEP and AKART but does not provide clarity to the permittee that this is the case.	Add language "Implementation of the permittee's SWMP constitutes compliance with S4.C and S4.D" (see fact sheet page 29)	Add the following language "Implementation of the permittee's SWMP constitutes compliance with S4.C and S4.D"
12	21-22	S5.B	Ecology requiring that Permittees keep mandates that exceed permit requirements. Brought over from the Phase II permit.	Purpose is unclear. Edit section "Permittees that are already implementing some or all of the SWMP components in this section shall continue implementation of those components of their SWMP <u>that are necessary to the implementation of this permit.</u> "	Add the following text "Permittees that are already implementing some or all of the SWMP components in this section shall continue implementation of those components of their SWMP that are <u>necessary to the implementation of this permit.</u> "
12	26-28	S5.B	Ecology requiring that Permittees keep mandates that exceed permit requirements. Brought over from the Phase II permit.	The section requires that permittees not repeal existing local requirements to control stormwater that goes beyond the requirements of this permit for prohibiting non-stormwater discharges and for new development and redevelopment sites. – This language appears to set requirements that are outside the permit and may be legally challenged as it constitutes a unwarranted intrusion upon and interference with local government legislative discretion and funding decisions. It also does not allow for adaptive management and it is not required by the federal Clean Water Act and its related regulations.	Remove the added text.

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13	16-19	S.5.B.1.b.iv	Section is unnecessary	Original intent of this section was to establish interagency agreements between co-applicant. Ecology has deleted the co-applicant language and this removal has obscured the intent of this section. Please clarify. If this provision is intended to require agreements among county agencies, it constitutes make-work, is unnecessary and constitutes a needless interference with local government operations and organization. There is not a need to have an agreement between King County agencies to prevent discharge of pollution from one portion of the MS4 to another – Recommend removing this section.	Remove Section
12	29-32	S5.B	Ecology has removed the description of the SWMP coverage	The section edited clearly delineated the function and coverage of the SWMP and added value to the permit. The deleted text should be restored.	Restore text
13	32-36	S5.C.2.a	Updates completed within 6 months of discovery	Due to existing workloads, the backlog of data needed to be entered into data management systems, and diminishing resources, the six-month window is insufficient for all updates of additional features. Recommend adding one more year to the deadline.	Suggest requesting 18 months to map additional features
13	32-36	S5.C.2.a	Ongoing Mapping need clarification	Clarify that this only applies to the 50% of HDR basins that were mapped under the current permit.	Add the following text <i>"Each Permittee shall continue mapping the features found in the urban/higher density rural sub-basins mapped under the previous permit that are listed below..."</i>
14	4-5	S.5.c.2.a.iii	Mapping LID using permanent stormwater control plans	Recommend adding a definition of "permanent stormwater control plans to the permit." From Volume 1, section 3.15 of the 2012 Stormwater Management Manual for Western Washington .	Recommend adding a definition of "permanent stormwater control plans to the permit." From Volume 1, section 3.15 of the 2012 Stormwater Management Manual for Western Washington.
15	1-4	S5.C.2.b	New Mapping need clarification	Clarify that this applies to the other 50% of HDR basins not mapped under the current permit.	Add the following text <i>"Each Permittee shall complete the following mapping updates by August 1, 2017. These features are found in the sections of urban/higher density rural sub-basins not mapped under the previous permit."</i>
15	2	S5.C.2.b	Completion date	Due to limited resources, we need the full permit term to complete mapping requirements in this section. Please change deadline from August 1, 2017 to August 1, 2018.	Change the following section: Each Permittee shall complete the following mapping updates by August 1, 2017 <u>the end of this permit term.</u>
15	11-21	S5.C.2.b.i & S5.C.2.b.ii	Errata	These sections appear duplicative and could be combined using the following language in ii. <i>"Each permittee shall map existing, known connections equal to <u>or greater than</u> 8 inches in nominal diameter..."</i>	These sections appear duplicative and could be combined using the following language in ii. <i>"Each permittee shall map existing, known connections equal to <u>or greater than</u> 8 inches in nominal diameter..."</i>
15	11-16	S.5.C.2.b.i-ii	Because of the mapping and outfall sampling required by the TMCLs included in Appendix 2, King County's mapping and outfall effort is significantly increased. In additional the mapping and outfall all occur in areas that are targeted for eventual incorporation. King County should have flexibility in focusing these programs where the greatest long-term need and use will be.	Urban/Higher density rural sub-basins – This requirement, for counties, drives the mapping program into areas that will eventually be annexed to other jurisdictions and leaves counties with no maps of the MS4 left to them after annexations. The ongoing mapping program should allow counties the option to focus more of their efforts in rural areas that will be retained by the counties over the long term and shift the level of effort away in the Urban/Higher density rural sub-basins. Most of the sub-basins contained the TMDLs contained in Appendix 2 are rural and the MS4s, for the most part, still need to be mapped. The County's mapping and outfall monitoring efforts are effectively doubled because of the focus of the mapping and outfall recon is in the Urban/HDRS in the body of the permit and the focus of the mapping and outfall recon in rural areas required by the TMDL Appendix.	Allow Counties the flexibility to determine focus of mapping program with an assurance of a comparable level of effort.
16	16	S5.C.3.a.	Supply Names of Key Personnel	King County does not agree with the permit requirement to supply an organizational chart specifying key personnel by name. All organizations have ongoing turnover and reorganization that will render the chart obsolete. There is no need to supply individual names. King County supports supplying a chart that contains titles or positions only.	<i>"... identify all departments and agencies within the Permittee's jurisdiction that conduct stormwater-related activities and their roles and responsibilities under this permit and a current organizational chart specifying these department's key positions responsible for permit implementation ."</i>
16	17-26	S5.C.3.b.i & ii	The effort to rewrite the intergovernmental coordination requirement to include new secondary permittees has created confusion in the section's requirements.	King County understands Ecology's effort to describe the interjurisdictional coordination requirement succinctly and to add in the requirements for new secondary permittees. Unfortunately the rewrite has created confusion and focuses too much on the new Secondary Permittees. Edit as follows:	Edit as follows: "Implement: i. Coordination mechanisms clarifying roles and responsibilities for the control of pollutants between physically interconnected MS3s of the Permittee and any other Permittee or Secondary Permittee covered by a municipal stormwater permit. These coordination mechanisms should include the handling of duplicative or conflicting permit requirements for properties, facilities, or actions or one permittee located in the jurisdiction of another. These coordination mechanisms should include the handling of duplicative or conflicting permit requirements for properties, facilities, or actions or one permittee located in the jurisdiction of another. ii. Coordinating stormwater management activities for shared waterbodies, among Permittees and Secondary Permittees, as necessary to avoid conflicting plans, policies and regulations. Permittees shall have 2 years following the addition of a new Secondary Permittee to establish and begin implementing coordination mechanisms and activities with that Secondary Permittee."

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17	4-12	S5.C.4.b	Web Posting of deliverables	Website postings--"required by this Permit " should be deleted.	Rewrite as follows: "Each Permittee shall post both their SWMP and their annual report for this permit on their website concurrent with their submittal to Ecology. The SWMPs and annual reports from the prior year may be removed when the new SWMP and annual report is posted. All other submittals shall be available to the public upon request. "
18	17-24	S5.C.5.a.iii	"The local program adopted to meet the requirements of S5.C.5.b.i through ii, above, shall apply to all applications submitted after January 1, 2015 and shall apply to projects approved prior January 1, 2015, which have not started construction by January 1, 2018.	This requirement appears to conflict with established State of Washington property and land use law commonly referred to as the "vested rights doctrine". Washington's vested rights doctrine entitles a property owner to have most types of land development applications processed and determined under the zoning and land use regulations in effect on the date the complete application is submitted. Local jurisdictions are authorized to determine in their regulations what constitutes completeness for the purposes of the application. Washington courts have expressly held that critical areas regulations and stormwater drainage regulations are "land use regulations" to which the vested rights doctrine applies. For these reasons, it is unlikely that the County nor any other Permittee can legally implement this Permit provision without violating state law. And in its footnote 4, the Permit appears to override state law and local jurisdiction discretionary authority in establishing the threshold for when the vested rights doctrine begins to apply.	Delete section
19	1-8	S5.C.5.a.iii	Controlling runoff from new development, redevelopment and construction sites. Schedule of adoption	The current requirement for Manual Equivalency & Code update has a deadline of December 31, 2014. This includes the requirement to submit enforceable documents for review by December 31, 2013, 6 months after effective date of the permit. It is unlikely that King County can achieve the dates listed in the permit.	Change the deadline date to at least December 31, 2015
19	9 thru 12	S5.C.5.a.III	In the case of circumstances beyond the Permittee's control, such as litigation or administrative appeals that may result in noncompliance with the requirements of this section, the Permittee shall promptly notify Ecology and submit a written request for an extension.	In the event of appeals related to the terms of this Section S5 and before Permittees begin expending limited resources to respond to requirements under this section, Ecology should have the explicit authority under this Permit to unilaterally extend Permit deadlines under such circumstances.	Replace with the following text; "In the event of an appeal of any provision of this section S5, and for the duration of such appeal, Ecology shall have the authority and discretion to unilaterally extend any compliance deadline respecting any one or more of the challenged Permit provisions for a reasonable period of time, not to exceed the duration of the appeal. Any Permittee may request that Ecology extend one or more Permit deadlines under this Section. No Permittee shall be penalized, nor shall any type of compensatory mitigation be required due to an extension issued pursuant to this Section ."
19	18-21	S5.C.5.a.v & S5.C.5.a.v (4) & S5.C.7.b.v. & Definitions	Qualified Personnel	Qualified personnel — The requirements to use qualified personnel to perform the review, inspection, and enforcement tasks of S5.C.5 and the source control program implementation of S5.C.7 are problematic. They imply that permittees' own internal processes for hiring and training do not ensure that the staff occupying these roles are qualified to do them, and thus that the processes are ineffective. In addition, the requirement that these personnel have professional training, as per the definition, creates confusion. The word "professional" suggests a line of work that is regulated and requires certificates, degrees, or passed examinations for membership. We are not aware of professional training for plan review, site inspection, or code enforcement jobs, unless Ecology is suggesting that staff in these positions be engineers and/or lawyers. In the absence of traditional professional training for these bodies of work, how are permittees to satisfy these requirements? We recommend deleting the references to "qualified personnel" and the definition of "Qualified Personnel and Consultant" in the definitions section. Parenthetically, the only time the word "consultant" appears in the permit or appendices is in the "Qualified Personnel and Consultant" definition. If for any reason the definition stays, "or consultant" should be removed.	Remove the term Qualified Personnel from the permit and remove the definition of Qualified Personnel and Consultant.
19	9-12	S5.C.5.a.iii.	Enabling King County to meet permit deadlines.	In light of the PCHB's decision in the Rosemere Appeal, Ecology should have the permit explicitly authorize Ecology to grant extensions to permit deadlines for individual permittees without formally modifying the permit, upon request by the permittees and for good cause shown. "Good cause" could include demonstrations by the permittee that it has diligently undertaken actions to meet the permit deadline, but due to circumstances beyond the permittee's control, it is unable to meet the deadline.	Edit Text to the following: " In the case of circumstances beyond the Permittee's control, such as litigation, administrative appeals, <u>or for good cause shown that may result in noncompliance with the requirements of this section, the Permittee shall promptly notify Ecology and submit a written request for an extension, which Ecology is hereby authorized to grant. For the purposes of this section, 'good cause' means a demonstration by the Permittee that it has diligently undertaken actions to meet the Permit deadline, but due to circumstances beyond the Permittee's control, is unable to meet the deadline.</u> "

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20	36-41	S5.C.5.b.i	Code Adoption	The comprehensive revisions of regulatory documents required by this condition are best done as part of the cyclic comprehensive plan updates required by the Growth Management Act. Cities and counties will need to make sure their county-wide planning policies and comprehensive plans reflect the required changes before the actual code changes may occur, though we have found it works well to package the plan and code changes together once the new county-wide policies have been agreed on. King, Pierce, and Snohomish counties, and the cities within them are required to complete review and revision of their comprehensive plans and development regulations by June 30, 2015. All other counties and cities are scheduled farther out. We recommend that the LID required LID changes be synched with the GMA comp plan schedule in RCW 36.70A.130.	"No later than December 31, 2014 <u>the date of their next major comprehensive plan and development code revision established in RCW 36.70A.130</u> , Permittees shall..."
20 & 21	36-41 & 8-16	S5.C.5.b.i & ii	LID Principles	Watershed planning directs the Phase I permittees to develop a watershed scale stormwater basin plan that has the goal of accommodating growth and maintaining beneficial use and includes assessment of receiving water, and an evaluation of strategies to encourage redevelopment and infill. The County supports Ecology's effort to integrate land use and stormwater management through the application of LID principles in the permit. However, in some instances the use of prescribed LID methods appear to be the equivalent of direct land use control. Please clarify if it is the intent to mandate certain land use practices or development standards under these permits. Land use management is a critical component to effective stormwater management but should not supersede all other considerations, including the need to meet the goals and requirements of the Growth Management Act, Shoreline Management Act, and federal Clean Water Act.	Clarify extent that LID Principles mandate land use management under the Municipal NPDES permit
20	36-41	S5.C.5.b.i	Defining intent of LID codes	The permit neglects to include that the LID approach must have a feasibility element. <i>"The intent of the revisions shall be to make LID the preferred and commonly- used approach ,where feasible, to site development ."</i>	Edit Text to the following: <i>"The intent of the revisions shall be to make LID the preferred and commonly- used approach ,where feasible, to site development ."</i>
21	8-16	S5.C.5.b.ii	LID code revisions	<i>"Each Permittee shall submit a summary of the results of the review and revision process in I above with the Second Year Annual Report. This summary shall include, at a minimum, a list of participants, participating agencies, the codes, rules, standards, and other enforceable..."</i> King County does not agree with the permit requirement to supply a list of participants to Ecology. The list of participating agencies should be adequate and there is no need to supply individual names in this submission. Given the timeframe needs to effectively accomplish this important task, rather than require that results be reported, the County believes it to be more reasonable to require a status report.	Edit Text to the following: <i>"Each Permittee shall submit a summary of the results <u>describing the status</u> of the <u>Permittee's LID related code</u> review and revision process with the Second Year Annual Report. This summary shall include, at a minimum, a list of participants <u>participating agencies</u>, the codes, rules, standards, and other enforceable..."</i>
21	After Line 19	New Section S5.5.b.ii	Enabling King County to meet permit deadlines.	In light of the PCHB's decision in the Rosemere Appeal, Ecology should have the permit explicitly authorize Ecology to grant extensions to permit deadlines for individual permittees without formally modifying the permit, upon request by the permittees and for good cause show. "Good cause" could include demonstrations by the permittee that it has diligently undertaken actions to meet the permit deadline, but due to circumstances beyond the permittee's control, it is unable to meet the deadline.	Edit Text to the following: <i>" In the case of circumstances beyond the Permittee's control, such as litigation, administrative appeals, or for good cause shown, that may result in noncompliance with the requirements of this section, the Permittee shall promptly notify Ecology and submit a written request for an extension, which Ecology is hereby authorized to grant. For the purposes of this section, 'good cause' means a demonstration by the Permittee that it has diligently undertaken actions to meet the Permit deadline, but due to circumstances beyond the Permittee's control, is unable to meet the deadline. "</i>
21	25-26	S5.C.5.c.i	To allow King County the opportunity to propose an alternative basin	If, in the judgment of King County, a different basin would present a better opportunity for effective basin planning, there should be a process that allows the county a chance to petition Ecology for an alternative basin.	Add the following text: <i>"Ecology will consider proposals from the permittee that provide an alternative basin that has an equivalent level of effort and impact "</i>
21-23	20-38	S5.C.5.c	Watershed planning costs are a significant and will require additional time for the budgeting process.	Based on the county's past planning efforts, we anticipate significant issues in complying with this requirement in the areas of a) developing funding sources, b) coordinating among county agencies and other jurisdictions, c) adequately performing the required analyses, and d) facilitating appropriate levels of public input. We need at least an additional year to accommodate these issues. This requirement places the County's compliance obligation at risk from third parties. We also recommend that this section be revised to invite and encourage other entities to participate in this process.	Add an additional year to each of the stages within the Watershed scale stormwater planning requirements section S5.C.5.c Recommend that this section be revised to invite and encourage other entities to participate in this process.

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22	11	S5.C.5.c.ii (4)	Errata	Change "predicated" to "predicted"	Change "predicated" to "predicted"
22	16	S5.C.5.c.ii (5)	Errata	Change "statues" to "statutes"	Change "statues" to "statutes"
23	7 & 8	S5C.5.c.iv. (4)	The plan shall include a schedule of actions, responsible parties, estimated costs, and funding strategies.	The plans should not be viewed as creating mandates that then become matters of permit compliance. The term "propose" is more appropriate here.	"The plan shall include <u>propose</u> a schedule of actions, responsible parties, estimated costs, and funding strategies."
23	After Line 8	New Section S5.C.5.c.v	Enabling King County to meet permit deadlines.	In light of the PCHB's decision in the Rosemere Appeal, Ecology should have the permit explicitly authorize Ecology to grant extensions to permit deadlines for individual permittees without formally modifying the permit, upon request by the permittees and for good cause show. "Good cause" could include demonstrations by the permittee that it has diligently undertaken actions to meet the permit deadline, but due to circumstances beyond the permittee's control, it is unable to meet the deadline.	Edit Text to the following: " In the case of circumstances beyond the Permittee's control, such as litigation, administrative appeals, <u>or for good cause shown</u> , that may result in noncompliance with the requirements of this section, the Permittee shall promptly notify Ecology and submit a written request for an extension, <u>which Ecology is hereby authorized to grant</u> . For the purposes of this section, 'good cause' means a demonstration by the Permittee that it has diligently undertaken actions to meet the Permit deadline, but due to circumstances beyond the Permittee's control, is unable to meet the deadline. "
23	25	S5.C.6.a.i (1)	Defining New Flow Control Facilities	The permit states that new flow control facilities do not have to be regional and that they do not have to meet standard flow control requirements. King County appreciates that Ecology is introducing flexibility into what can be credited as a new water quality facility per the fact sheet. We do recommend that Ecology establish a minimum bar that will reduce over reporting. We suggest that the lower cutoff could be the post-1990 standards. We don't want to be placed in a position where we would be required to report minor, incidental structures	Recommend a lower bar be included in defining new flow control facilities such as post-1990 standards.
23	26	S5.C.6.a.i (2)	Defining New Water Quality Treatment Facilities	The permit states that water quality treatment facilities include facilities that provide oil control, phosphorus treatment, enhanced (dissolved metals) treatment, and basic treatment and that these facilities do not have to meet runoff treatment requirements. King County appreciates that Ecology is introducing flexibility into what can be credited as a new flow control facility per the fact sheet. We do recommend that Ecology establish a minimum bar that will reduce over reporting. We suggest that the lower cutoff could be the 40% removal rate of TSS. We don't want to be placed in a position where we would be required to report minor, incidental structures.	Recommend a lower bar be included in defining new water quality facilities such as 40% targeted TSS removal standards.
23	31	S5.C.6.a.i (6)	Defining enhanced maintenance.	Add a new bullet on enhanced maintenance. King County would like to apply capital-based funding to facility repairs that meet bullet (6) but would also like to credit projects that apply area-wide or system-wide efforts.	Add the following text: "(7) Maintenance projects that exceed standards with costs > \$25,000 within the project area. "
26	4-6	S5.C.7. a.iv	IPM Program	Recommend changing "Reduction of" to "Efforts to reduce"	Recommend changing "Reduction of" to "Efforts to reduce"
27	6-7	S5.C7.b.ii. (2)	Errata	"Complaint-based response to identify..." This is unnecessary because there is already a requirement to respond to complaints in b.iii (3)	Delete this section as the requirement is duplicative of S5.C.7.b.iii. (3)
27	11-19	S5.C7.b.iii (1)	Business Mailing	All indentified sites with a business address.....Providing information by mail and phone is extremely inefficient for King County. While we might have a taxpayer name and address, we don't necessarily know the business address, or even the business on the site until we inspect it. In addition, many sites have more than one business with more than one address and may be managed by a property management firm. The taxpayer name and address is very often not even the property owner, let alone the business entity or owner. King County doesn't have phone numbers associated with parcels information or businesses. Commercially produced business lists are inaccurate. Mailers are not an effective way to provide information, as time and recent focus groups research tells. In person distribution and visits are the best way to convey information, along with an effective public website on the topic.	Recommend eliminating this requirement
27	20-30	S5.C7.b.iii (2)	Business Inventory	"The Permittee shall inspect 20%..." Change the phrase "listed sites annually" to "source control inventory annually".	Change the phrase "listed sites annually" to "source control inventory annually".

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27	20-30	S5.C7.b.iii (2)	Business Inspection Follow-up	The limitation of follow-up compliance inspections is problematic. There may be different businesses on the same site with different owners or managers and problems. By limiting the number of follow-up inspections allowed by site the counted level of effort reported in the annual report will not match the actual body of work. Follow-up inspections are a good use of the County's time because a) we know there is a pollution problem that needs addressing and b) repeat inspections and assistance are often the best way to gain compliance. We achieve more pollution control by fixing known problems, rather than trying to inspect businesses just to inspect them.	Eliminate "up to two "
27	31-32	S5.C7.b.iii (3)	Errata	"Each Permittee shall inspect 100% of sites identified through legitimate complaints ." Insert "and relevant " after legitimate. Barking dogs is a legitimate complaint for a resident, but it is not relevant to the permit.	Edit the following text: "Each Permittee shall inspect 100% of sites identified through legitimate <u>and relevant</u> complaints. "
28	20-30	S5.C7.b.v	Source Control Inspector Training Program	This training requirement exceeds the level of training requirement found elsewhere in the permit. All of the Phase I permittees have employee training of some form or another and their employees doing the work are by definition qualified and trained. King County was not aware the source control inspectors were a problem in need of such a level of accountability as is found in this section. Most of the topics listed in (1) are things discussed in team meetings. Staff evaluation in (2) (3) trends into employment challenges that are not necessary for this permit.	This appears to establish a much higher standard of training than found elsewhere in the permit. King County was unaware that the staff implementing the source control program were needing a higher level of training. Recommend restoring original language.
29	1-3	S5.C.8	"The SWMP shall include an ongoing program to identify, detect, remove and prevent illicit connections and illicit discharges, into the MS4."	Moved "detection" to become the first word in Line 1. Also, added "location" and "characterization" because "identify" could mean either or both: find the location of; and conclusively (analytically) characterize the material. Illicit connections, such as sanitary sewer cross connections, are straight-forward to identify; however, some illicit discharges may be difficult to impossible to identify either the location of the source or the exact material. Given KC's limited time and resources, it's unreasonable to assume that all known or suspected IC/ID will be either located or definitively characterized as to exact substances. Within realistic constraints, attempts will be made to both locate IC/ID sources, and characterize the substances in them.	Edit the following text: "The SWMP shall include an ongoing program <u>designed for the detection, location, characterization, removal, and prevention of illicit connections and illicit discharges...</u> "
29	18-22	S5.C.8.b	"to effectively prohibit nonstormwater , illicit discharges . . .into the system	The wording of this provision suggests that legislation can "effectively prohibit" the actions of third parties in a way that is impossible. Suggest revising as per suggested text.	No later than February 2, 2018, each Permittee shall evaluate, and, if necessary update existing ordinances or other enforceable documents to effectively prohibit non-stormwater illicit discharges, including spills, into the MS4s owned or operated by <u>the Permittee that are covered by this Permit.</u>
29	23	S5.C.8.b.i	Clarification	It is unclear where roof drains fit into the list of allowable discharges. Please clarify.	Please clarify: It is unclear where roof drains fit into the list of allowable discharges.
29	32	S5.C.8.b.i (6)	Allowable Discharges	Air conditioner condensation could contain high levels of copper, as a consequence of contact with copper tubing used in the condensing heat exchanger.	Ecology should investigate and reconsider this allowance.
29	33-34	S5.C.8.b.i (7)	Allowable Discharges	Irrigation water from agricultural sources that is comingled with urban stormwater: Irrigation water – assuming this is in reference to tail water – may contain high levels of suspended solids, fertilizers and/or pesticides.	Ecology should investigate and reconsider this allowance.
29	37	S5.C.8.b.i (10)	Allowable Discharges	Some homes may have roof drains tied to footing drains. There is some evidence that other roofing types besides zinc may be pollution generating. Also, building finishes (paints and stains) may erode and/or leach pollutants that would collect at footings.	Ecology should investigate the potential for roof and roof drainage systems and erosion and leaching from siding to pollute water collected in footing drains, and should reconsider this allowance.
29	37	S5.C.8.b.i (10)	Allowable Discharges	Internal consistency	Discharges occurred during <u>resulting from</u> emergency fire fighting activities
30	10-16	S5.C.8.b.ii (1)	Conditionally allowable discharges	(1) Discharges from potable water sources, including, but not limited to, water line flushing, hyperchlorinated water line flushing, fire hydrant system flushing, and pipeline hydrostatic test water. Ecology gives criteria for de-chlorination and pH adjustment, but leaves out important details required for implementation. Also left out is consideration of: a) impact of potential high flows on flow and hydraulic capacities of receiving waters, b) potential effects on sensitive life stages of salmonids and benthic macroinvertebrates, and c) consideration of the fact that potable water supplies may contain heavy metals that may be far below both drinking water standards and groundwater quality standards, but that may at the same time exceed freshwater quality standards.	These issues and details should be presented in the Stormwater Management Manuals for Western and Eastern Washington. The permit should point to that once the material is included. We will be providing detailed comments on this subject with our SWMMWW review.
30	10-16	S5.C.8.b.ii (3)	Conditionally allowable discharges	(3) Dechlorinated swimming pool, spa, and hot tub discharges. Same comments as for (1) immediately above. King County will be providing detailed comments with our SWMMWW review comments.	These issues and details should be presented in the Stormwater Management Manuals for Western and Eastern Washington. The permit should point to that once the material is included. We will be providing detailed comments in these regards with our SWMMWW review.
29	21-28	S5.C.8.b.i & b.ii	Errata	Discharges....The allowable and conditionally allowable discharges sections should be moved to S2 Authorized Discharges instead of inserting it in this section.	The allowable and conditionally allowable discharges sections should be moved to S2 Authorized Discharges.
29	31 & 37	S5.C.8.b.i	Clarification	Footing drains and a foundation drains are cited differently but have the same function. Please clarify.	Replace "footing drain " and "foundation drain " with "footing/foundation drain " .

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31	32	S5.C.8.c.i	Errata	Because conveyances/conveyance systems are a discrete object as used in the section as a numeric object, a definition should be included.	Add a definition of "Conveyance and Conveyances"
31	39-42	S5.C.8.c.i (2)	Outfall Screening Program	Urban/Higher density rural sub-basins – This requirement, for counties, drives the outfall screening program into areas that will eventually be annexed to other jurisdictions and leaves counties with no maps of the MS4 left to them after annexations. The ongoing program should allow counties the option to focus more of their efforts in rural areas that will be retained by the counties over the long term and shift the level of effort away in the Urban/Higher density rural sub-basins. Most of the sub-basins contained the TMDLs contained in Appendix 2 are rural and the MS4s, for the most part, still need to be mapped. This would indicate that pollution potential should not be a metric used to determine the basin types needing mapping. The County's mapping and outfall monitoring efforts are effectively doubled because of the focus of the mapping and outfall recon is in the Urban/HDRS in the body of the permit and the focus of the mapping and outfall recon in rural areas required by the TMDL Appendix.	Allow Counties the flexibility to determine focus of outfall screening program with an assurance of a comparable level of effort..
31	39-42	S5.C.8.c.i (2)	Urban/higher density rural sub-basins..”	The hyphenation of urban and higher density rural sub-basins with the slash compile these two different categories of sub-basins into one. This is not useful and has created some confusion that there is a kind of sub-basin that is both urban and high density rural.	Change from “...urban/higher density rural sub-basins..” to “ <i>urban and higher density rural sub-basins</i> ”. Throughout the permit
32	26-37	S5.C.8.b.iii	Training for IC/IDDE Program	Training for Incidental IDDE Program Implementers—The “which” in the first sentence should be changed to “who” and the preceding comma deleted.	The “ <i>which</i> ” in the first sentence should be changed to “ <i>who</i> ” and the preceding comma deleted.
33	31-32	S5.C.8.cii	IC/IDDE	Requirement for “ <i>detailed instructions for evaluating whether a discharge must be immediately contained...</i> ” is prescriptive and does not allow for the variety of conditions and substances addressed by a spill response program. The variables involved in making that evaluation are far too varied to document in detailed instructions. Replace “ <i>Procedures shall include detailed instruction for evaluating...</i> ” with “ <i>Procedures shall address evaluation of...</i> ”	Replace the following text: “ <i>Procedures shall include detailed instructions for evaluating...</i> ” with “ <i>Procedures shall address the evaluation of...</i> ”
33	39-42	S5.C.8.d	Errata	Please fix the numbering of this subsection (I change to iii and ii change to iv)	Please fix the numbering of this subsection (I change to iii and ii change to iv)
33	39	S5.C.8.d	Errata	Change subsection c reference from “i” to “iii”	Change subsection c reference from “i” to “iii”
34	1	S5.C.8.d	Errata	Change subsection c reference from “ii” to “iv”	Change subsection c reference from “ii” to “iv”
33 34	39-34 3-6	S5.C.8.d.i S5.C.8.d.iv. (1) (corrected citation)	“Procedures for characterizing the nature of, and potential public or environmental threat posed by, any illicit discharges found by or reported to the Permittee. Procedures shall include detailed instructions for evaluating whether the discharge must be immediately contained and steps to be taken for containment of the discharge.”	Permittees need guidance from Ecology as to what “constitutes a threat to human health, welfare, or the environment”. Also applies to G3 (pg 74, beginning on line 10). “Environmental threat” is an especially broad category encompassing any non-stormwater, non-authorized discharge. Ecology could consider limiting the Permit definition of “environmental threat” to specific substances in specific amounts that have been proven to negatively impact surface waters of the state. Alternatively, if an “environmental threat” is a discharge of anything NOT listed in section S5.C.8.b.i (allowable discharges), then this section should clearly state that. Because there are orders of magnitude in “threat” difference between a gallon of milk and 50,000 gallons of gasoline, both discharged into a manhole; if “environmental threat” is defined as anything not listed in Allowable Discharges “ <i>Immediately respond to all illicit discharges, including spills, which are determined to constitute a threat to human health, welfare, or the environment in accordance with General Condition G3, or are otherwise judged to be urgent.</i> ”	Provide guidance on the meaning of threat to human health, welfare, or the environment, including specific substances and amounts that constitute threat level, with accompanying examples and actual case history citations (web links would be preferred) for illustrative purposes in the permit fact sheet.
34	7-10	S5.C.8.d.iv (2) (corrected citation)	Spills	Please clarify that spills as described in S5.C.8.b.iv (1) do not automatically trigger an investigation.	Please clarify that spills as discussed in S5.C.8.b.iv. (1) do not trigger an investigation.
34	16-19	S5.C.8.d.iv (4) (corrected citation)	All illicit connections	modify as per comment	“ <i>All known illicit connections to the MS4 shall be eliminated.</i> ”
35	19-21	S5.C.9.	Errata	delete “ <i>The program shall include:</i> ”	Delete the following text: “ <i>The program shall include:</i> ”
35	21	S5.C.9.	Clarify intent of O&M program	Permit is seeking to reduce <i>adverse</i> impact - “ <i>to prevent or reduce stormwater impacts</i> ”	“ <i>to prevent or reduce adverse stormwater impacts.</i> ”
36	8-10	S5.C.9.a.ii	Being required to do non-function critical repairs in the turn around time listed in this section	King County should not have non function critical repairs held to the same schedule as function critical repairs; the text should be edited to allow that flexibility “...when an inspection identifies an exceedences of a function critical maintenance standard,...”	Edit the following text: “...when an inspection identifies an exceedence of a function critical maintenance standard,...”
36	11-15	S5.C.9.a.ii	Meeting Maintenance Schedule Requirements	Move the maintenance schedule to the design manual. Defer the schedule to the local jurisdiction. The design manual can be more descriptive and specific about various maintenance turn around times, based on threat level, for various types of maintenance, types of facilities and ownership.	Delete schedule listed in section ii. Page 36, lines 11-15. Move the scheduling requirements to the jurisdiction's design manual and allow jurisdictions to develop appropriate schedules for public and private facilities assuring environmental protection through the equivalency process. Replace with the following text. “ <i>Maintenance shall be performed in accordance with the requirements found in the maintenance standards developed to meet S5.C.9.a or this permit.</i> ”

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36	16-21	S5.C.9.a.ii	Meeting Maintenance Schedule Requirements	Include a weather restriction to the maintenance schedule. We have had several situations where we were unable perform the needed maintenance because of high flows, full ponds, etc... due to weather.	Edit the following text: "Circumstances beyond the Permittee's control include denial or delay of access by property owners, denial or delay of necessary permit approvals, <u>major weather events</u> , and unexpected reallocations of maintenance staff to perform emergency work."
36	30-40	S5.C.9.b.i	Enforcement on private facilities	add back "The permittee will continue a program that enforces compliance with maintenance standards on facilities that the permittee regulates"	Add the following text back into S5.C.9.b.i "The permittee will have a program that enforces compliance with maintenance standards on facilities that the permittee regulates"
37	18-24	S5.C.9.b.iv	Heightened construction inspection program for developments during peak building activities.	We recommend that Ecology defer the schedule to the jurisdictions. Each jurisdiction address this program differently. King County currently has in place a 2-year maintenance/defect bond program (MDB) for new permanent stormwater facilities in residential developments. Once the stormwater facilities and other plat infrastructure are complete, the developer is given the approval to start building homes, and this is when the MDB kicks in. King County did a study in the early 90's that showed that after the first two years of homebuilding, the need for stormwater facility maintenance dropped off dramatically. We also found that the 2-year period gave us sufficient monitoring time to make sure the facilities were working properly. Hence the 2-year period for the bond. During the 2-year bond period, we have found that inspection and maintenance of the stormwater facilities should occur quarterly—it is commonly a period of very intense building and site disturbance while lots are being graded. At the end of the 2-year period, we inspect the facilities and once we approve them, the bond is released and they are accepted into the county's MS3 to be inspected consistent with the schedule for established facilities. Ecology's proposed permit requirement completely upends the county's time-tested approach. Further, it could result in unnecessary inspections during extended lags in construction, such as those that have occurred during the current economic downturn. A development may not build out to 90 percent for a significant number of years and no minimum level of action or size is identified to qualify a residential development. We recommend a change that will correlate inspection frequency with actual on-site activity.	Reword section to defer to the jurisdiction's schedule or program that has comparable coverage. OR Move section S5.b.iv to S5.c. iv. Edit the following text: "Each Permittee shall manage maintenance activities to inspect all permanent stormwater treatment and flow control BMPs/facilities, including catch basins, in new residential developments every 6 months, until 90% of the lots are constructed <u>more frequently during the periods of heaviest impact from development</u> to identify maintenance needs and enforce compliance with maintenance standards as needed.
37	25-28	S5.C.9.b.v	Currently to meet the maintenance permit requirement, must achieve 100 percent compliance. Allowances should be made for maintenance programs that are comparable to the allowances made for the inspection programs.	Currently to meet the maintenance permit requirement, must achieve 100 percent compliance. Allowances should be made for maintenance programs that are comparable to the allowances made for the inspection programs.	Add the following text: "Compliance with the inspection requirements of S5.C.9.b.ii. and iv. Above shall be determined by the presence of an established maintenance program designed to inspect all sites and achieving inspection of 80%. Compliance with the maintenance requirements of S5.C.9.a.ii shall be determined by the presence of an established maintenance program designed to maintain all sites and achieving maintenance of 90%."
37	29-37	S5.C.9.b.vi	Maintenance and enforcement of private catch basins	The current inspection program for regulated facilities is on an annual basis and King County has no way to confirm that the catch basin maintenance schedule for privately-owned structures is met if the maintenance schedule is held to the six month standard developed for permittee owned or operated structures. We recommend extending the maintenance schedules out to 1-year for private catch basins.	Add the following text at the end of the section. "The maintenance schedule for regulated catch basins will be confirmed to be held to one-year to be concurrent with the regulated facility inspection schedule unless required by other permit requirements."
37	29-37	S5.C.9.b.vi	Currently to meet the maintenance permit requirement, must achieve 100 percent compliance. Allowances should be made for maintenance programs that are comparable to the allowances made for the inspection programs.	The permit contains a compliance standard by inspections, this would establish a compliance standard for maintenance. "Compliance with these maintenance requirements of shall be determined by the presence of an established an inspections and the initiations of a progressive enforcement program designed to maintain all sites and achieving maintenance of 90% of the sites."	Add the following text: Compliance with these maintenance requirements shall be determined by the presence of an established a progressive enforcement program designed to address all non-compliant catch basins and achieving compliance at 90% of the sites."
37	37	S5.C.9.b.vi	LID BMP inspection program	The information is collected for the purpose of understanding their effectiveness and functionality and will be use to form future decisions.	Add Subsection vii. Permittees shall develop and implement and on-going inspection program to inspect, at least once during the permit term, all LID required through permits to meet minimum requirement 5 (On-site Stormwater Management). The inspection program is limited to LID BMPs to which the Permittee can legally gain access and noncompliance will be addressed through technical assistance and public education.
38	22-27	S5.C.9.c.iii	Maintenance. of stormwater facilities owned or operated by permittee	Since spot checks are conducted on an "as-needed" basis that may change from storm to storm, they should not be included in determining compliance with requirement to "inspect all sites" (pg 38, line 24). Compliance standard of 95% of inspections is overly stringent. Recommend changing to 80% to be consistent with inspection requirement for facilities regulated by permittee.	Remove reference to subsection ii in this requirement.
38	22-27	S5.C.9.c.iii	Maintenance. of stormwater facilities owned or operated by permittee	Compliance standard of 95% of inspections is overly stringent.	Recommend changing to 80% to be consistent with inspection requirement for facilities regulated by permittee.

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38	22-27	S5.C.9.ciii	Currently to meet the maintenance permit requirement, must achieve 100 percent compliance. Allowances should be made for maintenance programs that are comparable to the allowances made for the inspection programs.	The permit contains a compliance standard by inspections, this would establish a compliance standard for maintenance. <i>"Compliance with the inspection requirements of S5.C.9.c.i. and ii. above shall be determined by the presence of an established maintenance program designed to inspect all sites and achieving at least 95% of required inspections. Compliance with the maintenance requirements of S5.C.9.a.ii shall be determined by the presence of an established maintenance program designed to maintain all sites and achieving maintenance of 95% of the sites"</i>	Add the following text: <i>"Compliance with the inspection requirements of S5.C.9.c.i. and ii. above shall be determined by the presence of an established maintenance program designed to inspect all sites and achieving at least 95% of required inspections. Compliance with the maintenance requirements of S5.C.9.a.ii shall be determined by the presence of an established maintenance program designed to maintain all sites and achieving maintenance of 95% of the sites"</i>
38	28	S5.C.9.d.i	Maintenance. of CBs owned or operated by permittee	Item i states that the default frequency for inspecting CBs is annually (pg 38, line 30). However, item i also states "...the standard approach of inspecting catch basins every two years..." (pg 39, lines 9-10), which conflicts with previous statement about annual requirement.	Edit the following text: Change line 10 from "every two years" to "every year".
38	28	S5.C.9.d.i	Maintenance. of CBs owned or operated by permittee	The alternative listed in i(2) adds further confusion. As written, this item requires cleaning <i>"the entire MS4 within a circuit"</i> . It is not clear what constitutes cleaning the entire MS4, since some elements of the MS4 do not have associated maintenance standards (e.g., roads). The reference to a circuit implies that circuit-based inspections (such as those described in i(2)) are involved in this option, but it is not clear what Ecology's vision of this looks like. Therefore, it would be difficult for a permittee to determine if their program was compliant with this requirement.	Edit the following text: Change i(2) to <i>"The Permittee may clean all catch basins and associated conveyances once during the permit term."</i>
39	23-25	S5.C.9.d.i.(2)	Defining conveyances	An alternative is cleaning the entire MS4 within a circuit, once during the permit term but includes <u>all conveyance</u> and catch basins. The term conveyance is being used within the permit as a countable metric in programs such as the outfall reconnaissance program. This term needs to be defined to be able to count the metrics	Define "Conveyance"
39	28-31	S5.C.9.d.iii	Maintenance of CBs owned or operated by permittee	Permit contains a Compliance standard of 95% of inspections for catch basins.	Recommend changing to compliance standard to 80% to be consistent with inspection requirement for facilities regulated by permittee.
39	28-31	S5.C.9.d.iii	Currently to meet the maintenance permit requirement, must achieve 100 percent compliance. Allowances should be made for maintenance programs that are comparable to the allowances made for the inspection programs.	The permit contains a compliance standard by inspections, this would establish a compliance standard for maintenance. <i>"Compliance with the inspection requirements of S5.C.9.d.i. above shall be determined by the presence of an established inspection program designed to inspect all catch basins and achieving at least 95% of required inspections. Compliance with the maintenance requirements of S5.C.9.a.ii shall be determined by the presence of an established maintenance program designed to maintain all catch basins and achieving maintenance of 95% of the sites"</i>	Add the following text: <i>"Compliance with the inspection requirements of S5.C.9.d.i. above shall be determined by the presence of an established inspection program designed to inspect all catch basins and achieving at least 95% of required inspections. Compliance with the maintenance requirements of S5.C.9.a.ii shall be determined by the presence of an established maintenance program designed to maintain all catch basins and achieving maintenance of 95% of the sites"</i>
39	36-40	S5.C.9.e.	reduction of stormwater impacts from all properties owned by Permittee	This provision is overly broad and includes facilities on lands that may not be connected to an MS4. Modify as per comment	Edit the following text: <i>"Each Permittee shall implement practices, policies, and procedures to reduce stormwater impacts associated with runoff from real property owned or operated by the Permittee that discharges to an MS4 that is owned or operated by a Permittee and is covered by this Permit."</i>
40	13	S5.C.9.e.vi	Snow and Ice control and removal	Clarify whether addition of "and disposal" refers to disposal of snow or disposal of sand for traction purposes.	Edit the following text: <i>"Snow and ice control and disposal of the material used for control"</i>
41	5-15	S5.C.9.f	Training for O & M Program Implementers— The deletion of the word primary from the first sentence	This change applies this requirement to an increasingly large number of municipal employees. It places the onus of determining which secondary and tertiary construction, operations, or maintenance job functions "could" impact stormwater quality.	Edit the following text: <i>"...who have construction, operations or maintenance job functions that could impact stormwater quality." Replace with "... whose primary job functions of construction operations or maintenance impact stormwater quality."</i>
41	5-15	S5.C.9.f	Training for O & M Program Implementers— The deletion of the word primary from the first sentence	As written, the draft training requirement suggests that all <i>"employees of the Permittee who have construction, operations or maintenance job functions that could impact stormwater quality"</i> must be trained on all of the training topics listed. We concur that a comprehensive training program includes all of the elements listed; however, we believe that it is not necessarily advantageous to train all qualifying personnel on all of those elements. Rather, permittees should have the flexibility to identify which personnel are in need of which training and train accordingly. For example, if an employee's job functions doesn't include conducting inspections, it is not productive to train that employee on how to conduct an inspection. It is more important for that employee to know how to recognize a problem and know how to respond accordingly.	Add the following text to the end of the section: <i>"Training shall address those elements that are directly applicable to an employee's job functions."</i>
41	31-32	S5.C.9.h	Maintenance Records	Record requirement is very broad.	Please specify exactly which types of records must be maintained
42	9-12	S5.C.10.b	Stewardship	Clarifying intent	Edit the following text: <i>"Create stewardship opportunities and/or partner with build on existing organizations to encourage residents to participate in activities such as stream teams, storm drain stenciling, volunteer monitoring, riparian plantings and education activities."</i>
42	15-36	S5.C.10.c.	Public Education	Add elected officials and policy makers to the targeted audiences and clarify the areas of understanding. Ties back to opening paragraph of S5.C.10	Add public officials and policy makers to the targeted audiences and clarify the areas of understanding.

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42	13-14	S5.C.10.c.	Public Education	Have requirement in alignment with Phase II language and allow programs to be focused where effective	Edit the following text: "Education and outreach efforts shall <u>be prioritized to target the following audiences and subject areas as appropriate</u> "
43	1	S5.C.10.c.	Public Education	Clarity and consistency	Edit the following text: BMPs for Dumpster maintenance for property owners. Move to S5.C.10.c.ii
43	14-21	S5.C.10.d	Public Education	It is not effective to target the evaluation to only "new" audiences and new subject areas. The evaluation of existing programs can provide valuable information that can be used to adapt programs and target audiences in different ways.	Edit the following text: "No later than February 2, 2015, Each Permittee shall begin measuring the understanding and adoption of the targeted behaviors for at least one new targeted audience in at least one new priority subject area. No later than February 2, 2016 the resulting measurements shall be used 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. "
64	2 & 19	S8.C.1	Fee Payment	The Phase I jurisdictions are given until December 1, 2013 to notify Ecology which option they will use for status and trends monitoring. However, the first payment due date under option #1 is October 15, 2013, which is before the date when notification is needed.	We recommend switching these dates so the notification date occurs before the first payment is due if option #1 is selected.
65	3-4	S8.C.1.b.i	Annexations and Incorporations	Due to ongoing annexations and incorporations, King County has limited area within its unincorporated jurisdiction that is defined as urban according to the urban grown boundary. As a result, it may prove difficult to identify four urban stream sites in unincorporated King County for status and trends monitoring. If King County were to choose this option,	We recommend allowing for choosing sites in rural King County, as this area is covered by permit, and long-term, we expect that all urban areas will be annexed or incorporated.
65	5-12	S8.C.1.b.ii	Marine Shorelines	King County's only marine shoreline is along Vashon-Maury Island, which is defined as rural according to the urban growth boundary. As such, if King County were to choose this option, the potential sampling sites listed in the QAPP would need to include rural areas, not just urban areas.	Include rural areas in the QAPP for marine shorelines.
63	15-22	S8.B.	Reporting other Stormwater Studies	Requesting reporting on stormwater monitoring or stormwater-related studies that were done outside the scope of the permit	This should be optional as these studies were not done as part of a permit requirement. Replace "shall provide" with "are requested to provide"
64	5	S8.C	Clarify timeframe of monitoring program and payment schedule. Use consistent and clear terminology	Ecology uses term "permit cycle" and "duration of this permit term" interchangeably For clarity and consistency and the issues that may result from any administrative extension of this permit it is important to have surety of what will constitute a "permit cycle." King County prefers the use of dates or reference to duration of this permit.	Edit the following text: "this permit cycle" with for the "duration of this permit"
65	36	S8.D	Clarify timeframe of monitoring program and payment schedule. Use consistent and clear terminology	Ecology uses term "permit cycle" and "duration of this permit term" interchangeably For clarity and consistency and the issues that may result from any administrative extension of this permit it is important to have surety of what will constitute a "permit cycle." King County prefers the use of dates or reference to duration of this permit.	Edit the following text: "this permit cycle" with for the "duration of this permit"
68	22	S8.D	Clarify timeframe of monitoring program and payment schedule. Use consistent and clear terminology	Ecology uses term "permit cycle" and "duration of this permit term" interchangeably For clarity and consistency and the issues that may result from any administrative extension of this permit it is important to have surety of what will constitute a "permit cycle." King County prefers the use of dates or reference to duration of this permit.	Edit the following text: "this permit cycle" with for the "duration of this permit"
General Conditions					
74	24-26	G3	Referencing the definition of Hazardous Substance	check term "hazardous substances" to be in alignment with Chapter 173-303 WAC	Add the Following text: "Immediately report spill or discharges of oils or hazardous substances <u>as defined in Chapter 173-303 WAC</u> to the..."
76	41-42	G10	Defining appropriate uses and disposal requirements for soils generated from MS4 maintenance activities	Proposed change to G10 (page 76, lines 41-42) is as follows . Solids resulting from cleaning stormwater facilities may be reused or delivered to a solid waste disposal site qualified to receive the material (see Appendix 6). Propose either deleting or restating to "Soils generated from maintenance of the MS4 may be reclaimed, recycled or reused when in alignment with local codes and ordinances. Soils that are identified as contaminated, per WAC 173-350, shall be disposed at a qualified solid waste disposal facility."	Delete added text or change text as follows: "Soils generated from maintenance of the MS4 may be reclaimed, recycled or reused when consistent with state and local codes and ordinances. Soils that are identified as solid waste per Chapter 173-350 WAC or as hazardous or dangerous waste per Chapter 173-303 WAC, shall be disposed at a qualified solid waste disposal facility."
76	41-42	G10	Clarifying term "street waste vehicle"	What all constitutes a "street waste vehicle"? Some clarification would be useful so as to preclude confusion with the likes of garbage and dump trucks. This is likely defined in other documents, but not here, not even in Appendix 6.	Define "Street waste vehicle"
Definitions					
81	1	Definitions	Add definition of permanent stormwater control plans	Add definition of "permanent stormwater control plans" As required in Appendix 1, detailed in Volume 1, section 3.1.5 of the 2012 Stormwater Management Manual for Western Washington. These plans or final corrected plans are, commonly referred to as "as-builts."	"Permanent stormwater control plans are defined as stormwater site plans as detailed in Volume 1, section 3.1.5 of the 2012 Stormwater Management Manual for Western Washington. These plans or final corrected plans are commonly referred to as "as-builts"."
81	1	Definitions	Add definition of connection	The term connection is used in the mapping program. A definition describing what a connection means and entails would be useful.	Provide definition of "connection"
81	1	Definitions	Add definition of conveyance	The term conveyance is being used within the permit as a countable metric in programs such as the outfall reconnaissance program. This term need to be defined to count the metrics	Provide definition of "conveyance"

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81	18-21	Definitions: Best Management Practices	Most King County BMPs are related to controlling flow which is not mentioned in the definition	Add " <i>controlling flow</i> " to the definition	"the release of pollutants, <u>control flow</u> and ..."
82	15-18	Definitions: Circuit	Need clarity and flexibility in the definition of "circuit"	The "circuit" definition is out of order alphabetically. The definition contained for "circuit is narrowly defined and therefore too limiting. King County is looking for flexibility to define circuits based on land use type and activity. Recommend changing to "discharging to a single point <i>or</i> serving a discrete area..."	"...means a portion of a municipal separate storm sewer system (MS4) discharging to a single point or <i>and</i> serving a discrete area determined by both topography and the configuration of the MS4"
81	32-40	Definitions: Common plan of development		The term "common plan of development" is not used in permit requirements. May make sense for a private development but runs counter to some municipal projects. There is a lack of clarity in the use of linear projects with no limit on time, distance or location, this could create a planning problem for the jurisdictions	Definition should be moved to appendix 1 since it isn't referenced in permit. Remove element 4) linear projects such as roads
83	1-4	Definitions: Heavy equipment maintenance or storage yard	This term is only used to defined the sites needing stormwater pollution prevention plans (SWPPPs). This should not be applied to short term or temporary actions that are now included under this definition	Ecology deleted " <i>on a long term basis.</i> " Because SWPPPs are not and should not be needed for temporary or short term vehicle storage Ecology should replace the concept of permanent or long term storage	Restore deletion " <i>on a long term basis</i> "
83	15-Oct	Definitions: Illicit connection	Clarifying an illicit connection	The definition of "illicit connection" needs to clarify that designed doesn't mean engineered (means intended; no engineering design plan required). Definition too complex, recommend changing to "anything that conveys an illicit discharge".	"means any infrastructure connection <i>structure that conveys an illicit discharge to the MS4 that is not intended, designed, permitted, or used for collection and conveying stormwater or other allowed discharges as specified in this permit. Examples include sanitary sewer connections, floor drains, pipelines, conduits, inlets, or outlets that are connected directly to the municipal separate storm sewer system .</i> "
83	16-22	Definitions: Illicit discharge	Due to the many uses of illicit discharge in numerous permit and regulation, this definition should be permit specific	Add " <i>for the purposes of this permit</i> " at the start of the definition to make this definition specific to this permit	Add " <i>for the purposes of this permit</i> " at the start of the definition
83	16-22	Definitions: Illicit discharge	For the consistency Ecology is attempting to achieve throughout the permit.	Replace "Municipal separate storm sewer" with "MS4"	Replace " <i>Municipal separate storm sewer</i> " with "MS4"
83	16-22	Definitions: Illicit discharge	It is unclear if "pipe bedding is part of the MS4. For clarity define that the issue is discharges into or from the MS4	For clarity that the discharge is into or out of the MS4 delete "in the pipe bedding" and replace with " <u>takes places into conveyance structures such as pipes or ditches</u> "	Delete " <i>in the pipe bedding</i> " and replace with " <u><i>in conveyance structures such as pipes or ditches</i></u> "
83	16-22	Definitions: Illicit discharge	It is unclear if "pipe bedding is part of the MS4. For clarity define that the issue is discharges into or from the MS4	"illicit discharge" – remove "or from"...puts municipalities on the hook for conveying & discharging substances we can't always control. Remove "and infiltration/exfiltration of non-stormwater that takes place in pipe bedding."	Delete " <i>in the pipe bedding</i> " and replace with " <u><i>in conveyance structures such as pipes or ditches</i></u> "
83	16-22	Definitions: Illicit discharge	It is unclear if "pipe bedding is part of the MS4. For clarity define that the issue is discharges into or from the MS4	The language used for the definition of an "illicit discharge" related to the "infiltration/exfiltration of non-stormwater that takes place in pipe bedding" is not very helpful.	Delete " <i>in the pipe bedding</i> " and replace with " <u><i>in conveyance structures such as pipes or ditches</i></u> "
83	16-22	Definitions: Illicit discharge	Specify section of the permit Ecology is referring.	Change the language to specify permit section " <i>as specified in S5.C.8.b.i and b.ii of this Permit</i> "	Change to " <i>as specified in S5.C.8.b.i and b.ii of this Permit</i> "
83	23-42	Definitions: Industrial or construction activity & IPM	The definition for "Industrial or construction activity" & "IPM" were deleted from the definitions section	The definition for "Industrial or construction activity" & "IPM" were deleted from the definitions section. Please provide explanation of why these definitions were removed.	The definition for "Industrial or construction activity" & "IPM" were deleted from the definitions section. Please provide explanation of why these definitions were removed.
85	9-37	Definitions: Municipal Separate Storm Sewer	Removing the definition of MS3	Deleted the definition of MS3 and folded it into MS4. This is a removal of a definition found in 40 CFR 122.26(b)(8). This permit has been reviewed to remove this term. The use of the term MS3 has value for the operation and understanding of this permit and should be restored.	Restore definition
85	9-37	Definitions: Municipal Separate Storm Sewer System	Changing the definiton of MS4	Suggest returning the definition of an MS3 to the MS3 defintion and restoring the orginal defintion	Restore definition to original version
86	10-14	Definitions: Outfall	Outfall Definition	Outfall is defined in 40 CFR 122.2 as a point source at the point where the MS4 discharges to surface or ground waters of the state. Additional language does not clarify the term.	Maintain cosistency with the definition found in 40 CFR 122.2
86	18-22	Definitions: Physically Interconnected	Physically Interconnected	Physically Interconnected - Clarify that this definition is describing the connections between two MS4s	means that one MS4 is connected to another second MS4 storm sewer system in such a way that it allows for direct discharges
86	23-26	Definitions: Qualified Personnel or Consultant	The term Qualified Personnel	Delete this definition as per the comment in S5.C.5.a.v (and a.v.4)	

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86	23-26	Definitions: Qualified Personnel or Consultant	Qualified Consultant	"Qualified Personnel or Consultant" – remove consultant, the term is not used in the permit	"Qualified Personnel or Consultant" – remove consultant, the term is not used in the permit
87	1-4	Definitions: Sediment/Erosion-Sensitive Feature	Errata	Sediment/Erosion-Sensitive Feature - references Appendix 6 - should reference Appendix 7	Sediment/Erosion-Sensitive Feature - references Appendix 6 - should reference Appendix 7
87	5-6	Definitions: Stormwater	Should interflow be regulated under this permit	Stormwater - define interflow	Add the definition of interflow as follows: "The near-surface groundwater that moves laterally through the soil horizon following the hydraulic gradient of underlying relatively impermeable soils. When interflow is expressed on the surface, it is called a spring or seepage.
87	16-19	Definitions: Stormwater Management Manual for Western Washington	Clarify the role of the Stormwater Management Manual for Western Washington	Clarify the role of the Stormwater Management Manual for Western Washington as providing guidance only.	Add the following text: "This manual provides guidance on the measures necessary to control the quantity and quality of stormwater produced by new development and redevelopment so they comply with water quality standards and contribute to the protection of the beneficial uses of receiving waters. The Stormwater Management Manual for Western Washington is not a regulation. The Manual does not have any independent regulatory authority and it does not establish new regulatory requirements."
87	25-27	Definitions: Stormwater Treatment and Flow Control BMPs/Facilities	Defining the term Stormwater Treatment and Flow Control BMPs/Facilities	Stormwater Treatment and Flow Control BMPs/Facilities means <u>permanent structural</u> detention. King County defines the retention of forested conditions on a development as a flow control facility. Temporary erosion and sediment control structures should be excluded from this definition as well as behavioral and operational best management practices. The changes in the definition will accomplish this.	Change the following text: "means <u>permanent structural</u> detention facilities ..."
87	25-30	Definitions: Stormwater Flow Control and Treatment BMPs/Facilities	Impacts of new definition of Stormwater Treatment and Flow Control BMPs/Facilities	Requirement to inspect features that meet MR #6 or 7 means permittees must know which BMPs/facilities were installed to meet which MR's. Significant tracking burden involved. Also, the term BMP is overused and widely varying uses of the term lead to confusion. Append with "and does not include BMPs/facilities that help meet minimum requirement 5."	Add Following text: "and does not include BMPs/facilities constructed to meet Minimum Requirement 5."
87	25-27	Definitions: Stormwater Treatment and Flow Control BMPs/Facilities	Reference location of Stormwater Treatment and Flow Control BMPs/Facilities	Add reference to the Western Washington Stormwater Guidance Manual or equivalent enforceable document found in Appendix 10	Add the following text: " ...means detention facilities, treatment BMPs/facilities, bioretention, vegetated roofs, and permeable pavements <u>as found in the 2005 Stormwater Management Manual for Western Washington or equivalent enforceable documents found in Appendix 10</u> that help meet minimum requirement 6 (treatment), 7 (flow control), or both."
87	40-42	Definitions: Urban/higher density rural sub-basins	Clarifying usage of Urban/higher density rural sub-basins to Urban and higher density rural subbasins	The hyphenation of urban and higher density rural sub-basins with the forward slash combine these two different categories of sub-basins into one. This is not useful and has created some confusion that there is a kind of sub-basin that is both urban and high density rural.	For clarity throughout the permit change the term "Urban/higher density rural sub-basins" to "Urban and higher density rural subbasins"
Appendices					
		Appendix	Phase I Annual Report not included in the Appendices as are the Phase II and Secondary Permittees Annual Reports	Include the Phase I Annual Report in the permit as an appendix as has been done for other annual reports	Include the Phase I Annual Report in the permit as an appendix as has been done for Phase II and Secondary Permittees
2	N/A	Appendix 1	Define "abandoned landfill"	What constitutes an "abandoned" landfill? Does this include closed landfill from which most solid waste was subsequently removed.	Does the term "abandoned landfill" include closed landfill from which most solid waste was subsequently removed.
4	N/A	Appendix 1	Errata	Flowchart 3.3 => the middle box should read "convert ¾ acres or more of vegetation to lawn or landscaped areas" as in Figure 3.2;	Flowchart 3.3 => the middle box should read "convert ¾ acres or more of vegetation to lawn or landscaped areas" as in Figure 3.2;
37	N/A	Appendix 1	Permeable pavement should not be considered for multilevel parking structures and pavement over structures such as culverts and bridges.	Is permeable pavement really a good requirement for a lot situated on top of a parking garage (present at our North Operating Base, a site soon to undergo redevelopment). I imagine this would be a similar situation to a road going over a large culvert.	Add a feasibility exemption for permeable pavement. It should not be considered for multilevel parking structures and pavement over structures such as culverts and bridges.
29	N/A	Appendix 1	Insufficient time to review LID Guidance Manual.	LID Guidelines Manual was not to be available until March – after the permit comment period. (Fact Sheet page 41). It has recently been released without sufficient time to provide effective comments. In addition sections are missing or incomplete.	Delay release of the LID Guidelines until complete, extend the comment period to allow appropriate review. Include in the permit as a guidance document, not as a <i>defacto</i> regulatory requirement
1	N/A	App 1, Section 1	Exemptions	The basis for exemption is stated for forest practices. The basis for exemptions for commercial agriculture and oil and gas field activities or operations should also be stated.	The basis for exemption is stated for forest practices. The basis for exemptions for commercial agriculture and oil and gas field activities or operations should also be stated.

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2	N/A	App 1, Section 2	Definitions Related to Minimum Requirements	<p>Converted Pervious Surface: Need to add "sports fields" ; i.e.: Converted Pervious Surface - The surfaces on a project site where native vegetation is converted to lawn, landscaped areas, or sports fields, or where native vegetation is converted to pasture. Sports fields are already included under the definition of PGPS</p>	<p>Converted Pervious Surface: Need to add "sports fields" ; i.e.: Converted Pervious Surface - The surfaces on a project site where native vegetation is converted to lawn, landscaped areas, or sports fields, or where native vegetation is converted to pasture.</p>
2	N/A	App 1, Section 2	Definitions Related to Minimum Requirements	<p>Effective Impervious Surface With respect to 2) in this definition; residential roof runoff should not be infiltrated without treatment. As written, 2) refers to SMMWW Vol III, 3.1.1 Downspout Infiltration Systems: "Downspout infiltration systems are trench or drywell designs intended only for use in infiltrating runoff from roof downspout drains. They are not designed to directly infiltrate runoff from pollutant-generating impervious surfaces." This statement assumes that roof runoff is not pollution-generating; yet zinc (or galvanized) roofing is recognized has been and is recognized as pollution-generating. Roof runoff should be more broadly re-categorized as PGIS, with the possibility of some exceptions if they can be substantiated. Recent related reports from Ecology indicate that zinc is not the only chemical of concern from roof runoff. , . Therefore, infiltrated roof runoff should require the same treatment or specified soil treatment layer prior to infiltration as is required of any other stormwater. We must even consider the possibility that green roofs may discharge pollutants, as infiltrated rainwater will then be sheeting down across a surface that is likely treated with biocides to prevent roofing damage from the green layer above. Gutters and downspouts may leach or erode pollutants as well. Recommend changing the terminology from roofs/roofing to 'roof systems including gutters and downspouts. With respect to 3); it should be stipulated here that infiltrated runoff from PGIS must be treated prior to infiltration, or infiltrative soil must meet soil treatment criteria. Must also consider how to incorporate spill control (where needed) where runoff from PGIS subject to vehicular traffic is dispersed or infiltrated. Roberts T, Serdar D, Maroncelli J, Davies H, 2011. Control of Toxic Chemicals in Puget Sound: Phase 3: Primary Sources of Selected Toxic Chemicals and Quantities Released in the Puget Sound Basin, Pub. No. 11-03-024. Washington State Department of Ecology, Olympia, WA, p. 202 + app (297 total) Norton D, Serdar D, Colton J, Jack R, Lester D, 2011. Control of Toxic Chemicals in Puget Sound: Assessment of Selected Toxic Chemicals in the Puget Sound Basin, 2007-2011, Pub. No. 11-03-055. Washington State Department of Ecology, Olympia, WA, p. 193 + app (295 total)</p>	See Comments/Edits
2	N/A	App 1, Section 2	Definitions Related to Minimum Requirements	<p>Erodible or leachable materials The examples are strongly suggestive that only essentially loose materials are considered erodible or leachable. It seems like the definition should be broadened to more literally include at least some forms of PGIS and PGPS. On one hand, pavement is considered PGIS because it conveys vehicular pollutants (noting that sidewalks and fenced off fire lanes are not considered pollution-generating); in fact, this suggests another category for more specificity; i.e., pollution conveying impervious surface (PCIS). Zinc, copper, and other substances are erodible or leachable from roofing systems (impervious surfaces, including gutters and downspouts). Zinc and copper may erode/leach from other weather-exposed architectural uses, e.g. flashing, decorative use, and fencing, and exposed treated lumber and wood finishes may erode or leach pollutants into stormwater. Ironically, fencing – e.g. galvanized chain-link fencing – used to fence off a fire lane (see above) makes the fire lane non PGIS, yet zinc leaching from the fencing could exceed the amount of zinc that might be generated by unrestricted but in frequent vehicular use on the pavement. It seems prudent to note that PGIS and PGPS are pollution-generating because they erode (wear) or leach chemicals of concern; i.e. the erodible or leachable and PG_S definitions should cross-refer each other. In summary, erodible or leachable materials should be considered umbrella terminology that includes as subcategories: <input type="checkbox"/> PGIS <input type="checkbox"/> PGPS <input type="checkbox"/> Loose materials that can be responsible for discharge of pollutants, e.g. including but not limited to those materials already listed in the definition, plus synthetic sports fields and applied pesticides and fertilizers.</p>	See Comments/Edits
2	N/A	App 1, Section 2	Definitions Related to Minimum Requirements	<p>Maintenance With the new emphasis on LID, the definition should be expanded beyond structures, facilities, and equipment, and should include maintenance of LID BMPs, e.g. but not limited to rain gardens, soil treatment layers, permeable pavement, and green roofs.</p>	See Comments/Edits

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2	N/A	App 1, Section 2	Definitions Related to Minimum Requirements	<p>Permeable Pavement How will this be evaluated to see if it's still functional from a permeability point of view? How can one tell if/when the system (pavement and underlying media) is loaded with some pollutants to a degree that breakthrough occurs (need to define, since it's not really an absolute 'ok now, now not ok' situation) and maintenance is required? How will the system be maintained? Will underlying media need replacement at some point, and if so, when? How will spill control be achieved? Need to consider whether permeable asphalt may itself leach some pollutants (e.g. PAHs) when freshly poured, and as it ages. At least, the definition should incorporate the word 'maintained', i.e.: Permeable Pavement - Maintained 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.</p> <p>And it would be best to include a section detailing the maintenance issues noted above. Please see the attached memo from King County, Road Services Division dated June 13, 2011 that was originally submitted to Ecology during the request for comments on the preliminary draft sections of this permit on Low Impact Development and Regional Stormwater Monitoring.</p>	See Comments/Edits
2	N/A	App 1, Section 2	Definitions Related to Minimum Requirements	<p>Pesticide Not currently defined. Recommended including a definition, e.g.: Pesticide - Includes insecticide, nematodecide, rodenticide, fungicide, and herbicide including algaecide and moss-killer.</p>	See Comments/Edits
2	N/A	App 1, Section 2	Definitions Related to Minimum Requirements	<p>Pollution-generating impervious surface (PGIS) Need to cross reference to Erodible and leachable materials What is the potential of heavy metals and/or organic compounds to leach or erode from treated lumber (decking, fencing) or architectural metals, e.g. flashing, downspouts, decorative siding or other features, metal fencing, other roofing impregnated, e.g. with copper or zinc particles for moss control, or organic biocides for moss or rot control, or e.g. zinc strips added for moss control)? What about materials that aren't included in impervious surface area calculations, e.g. fencing and building siding and decorative elements that may contain erodible or leachable heavy metals or organic biocides? Currently says: " . . . Metal roofs are also considered to be PGIS unless they are coated with an inert, non-leachable material (e.g., baked-on enamel coating)." Need to be clear about the definition of "enamel coating". If this means true enamel, which is melted glass, it is likely to be fairly inert (although it could contain heavy metals if colored, leaching would be expected to be very slow); it is also very unlikely that conventional 'enamel' coated roofing is glass coated. The term 'enamel' is also used to describe some paints, and in this case likely refers to baked on 'powder coat'.</p>	See Comments/Edits
2	N/A	App 1, Section 2	Definitions Related to Minimum Requirements	<p>(continued from last cell) While this will coat the underlying metal, whether the plastic itself contains leachable or erodible chemicals of concern, their potential to erode or leach at levels of concern, are questions that need to be addressed. More generally, recent related reports from Ecology suggest that zinc is not the only chemical of concern from roof runoff[1], [2]. Consequently, Ecology should consider whether only uncoated metal roofing should be considered PGIS, or if additional roofing should be considered PGIS. Going one step further, Ecology should consider if for some land uses or proximity to some land uses and or industries, aerial deposition – either dry period buildup and storm wash-off, or precipitation-borne pollutants – may be high enough to be of concern and cause runoff to require treatment. [1] Roberts T, Serdar D, Maroncelli J, Davies H, 2011. Control of Toxic Chemicals in Puget Sound: Phase 3: Primary Sources of Selected Toxic Chemicals and Quantities Released in the Puget Sound Basin, Pub. No. 11-03-024. Washington State Department of Ecology, Olympia, WA, p. 202 + app (297 total) [2] Norton D, Serdar D, Colton J, Jack R, Lester D, 2011. Control of Toxic Chemicals in Puget Sound: Assessment of Selected Toxic Chemicals in the Puget Sound Basin, 2007-2011, Pub. No. 11-03-055. Washington State Department of Ecology, Olympia, WA, p. 193 + app (295 total)</p>	

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2	N/A	App 1, Section 2	Definitions Related to Minimum Requirements	<p>Pollution-generating pervious surface (PGPS) Recommend the following changes: Pollution-generating pervious surfaces (PGPS) – Any non-impervious surface subject to vehicular use, industrial activities (as further defined in the glossary of the Stormwater Management Manual for Western Washington (2012)); or generation, use, or storage of erodible or leachable materials, wastes, or chemicals, that receive direct rainfall or run-on or blow-in of rainfall; or use of pesticides and/or fertilizers, or loss of soil. Typical PGPS include permeable paved roads, driveways and parking lots, lawns, landscaped areas, golf courses, parks, cemeteries, and sports fields. Comment: What about surfaces that are permeable at the surface – e.g. porous pavement and high-infiltration-rate sports field surfaces – but where the underlying soil has a low infiltration rate, requiring an underdrain system, which needs to be plumbed to a conventional facility; i.e. where the underlying soil is functionally impervious, at least when saturated. Is there not some point at which from a runoff modeling point of view the system is functionally PGIS rather than PGPS?</p>	
2	N/A	App 1, Section 2	Definitions Related to Minimum Requirements	<p>Vehicular Use RE: as written: "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, fenced fire lanes, and infrequently used maintenance access roads." It makes sense to not consider these uses subject to regular vehicular use, but need to reconsider pollution-generating potential if fencing is made of or coated with an erodible or leachable metal, or contains erodible or leachable metal(s) or organic compound(s), e.g. galvanized chain link fencing or treated lumber fencing.</p>	
23	N/A	App 1, Section 4.5	Min Rqrmt #5: On-site Stormwater Management	<p>Preface Recommend the following text modification: 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 onsite to the maximum extent feasible without causing flooding, erosion, landslide, or public health or safety impacts.</p>	See Comments/Edits
23	N/A	App 1, Section 4.5	Min Rqrmt #5: On-site Stormwater Management	<p>Mandatory List #1 Comment RE: Other Hard Surfaces – and the overall list categories Why is permeable pavement preferred over rain gardens? In fact, why is there a preferred order at all? If there is to be a preferred order, given concerns about permeable pavement would not recommend it before rain gardens. Concerns about permeable pavement include lack of maintenance standards and especially maintenance methods for private individuals, challenges regarding assessment of performance (how can one tell when pollutant breakthrough is a concern?), insufficient knowledge of under-pavement treatment layer interaction with pollutants – with reason to suspect that it will not be equivalent to uncovered treatment layer media, and remediation cost when failure does occur. We recommend not requiring an order of preference; rather, to allow design flexibility, with consideration for maintainability. Suggest dividing the Mandatory List categories from two (Roofs, Other Hard Surfaces) to three (Roofs, Pavement, and Other Hard Surfaces). While it makes some sense to consider permeable pavement where feasible when paving, by breaking into three categories, the footnote ("This is not a requirement to pave these surfaces") can be eliminated for Other Hard Surfaces.</p>	See Comments/Edits

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23	N/A	App 1, Section 4.5	Min Rqrmt #5: On-site Stormwater Management	<p>Mandatory List #2 Comment RE: Other Hard Surfaces – and the overall list categories</p> <p>Same as comment for Mandatory List #1 above (except talking about bioretention here instead of rain gardens).</p> <p>Comment RE: Other Hard Surfaces</p> <p>Line item 3.) Why does this say "do not use this option unless the hard surface is categorized as pollution-generating. Why is it not OK to use this option with non-pollution-generating surface runoff? i.e., why impose the < 0.3 in/hr limitation at all for bioretention BMPs? A low infiltration rate means less credit should be given to the BMP for flow control, and that will affect neighborhood or regional FC facility sizing; but assuming a bioretention underdrain in these circumstances, water quality treatment should still be a benefit.</p>	See Comments/Edits
26	N/A	App 1, Section 4.6	Minimum Requirement #6: Runoff Treatment	<p>Treatment Thresholds Comments</p> <ul style="list-style-type: none"> - The order of presentation is confusing. It seems more straightforward to start with basic treatment requirements, and then indicate where more robust or additional treatment is required. - The strategy of presenting treatment-type thresholds individually is confusing. It muddles the message that anywhere enhanced (in the broad sense of the term; i.e. oil control, phosphorus, and/or enhanced metals) treatment is required, basic treatment is also required. That phosphorus and/or enhanced metals treatment may also provide basic treatment does not mean basic treatment is not being provided nor that is not required. The solution is to state where basic treatment is required, then to state where additional or enhanced (broad sense again) treatment is required. A statement to the effect that per the SMMWW treatment facility menu(s), and depending on facility(ies) chosen, a treatment train may be required, or a single facility may provide multiple treatments. 	See Comments/Edits
26	N/A	App 1, Section 4.6.1	Minimum Requirement #6: Runoff Treatment	<p>Treatment-Type Thresholds, Oil Control Comments</p> <p>RE: b. Needs to be edited to make it clear that the exemption for routinely delivered heating oil is only at the point of delivery for end use, not at commercial or industrial storage or transfer sites for heating oil.</p> <p>RE: c. The list of examples should include aircraft and aircraft servicing and towing equipment</p>	See Comments/Edits
27	N/A	App 1, Section 4.6.2	Minimum Requirement #6: Runoff Treatment	<p>Phosphorus Treatment Comment</p> <p>- With respect to infiltration, the "within ¼-mile of a phosphorus sensitive lake (use a Phosphorus Treatment facility)" statement in the Basic Treatment section should be stated in the Phosphorus Treatment section.</p>	See Comments/Edits
27	N/A	App 1, Section 4.6.3	Minimum Requirement #6: Runoff Treatment	<p>Enhanced Treatment Comments</p> <ul style="list-style-type: none"> - Recommend changing the term from 'enhanced' to 'enhanced metals' treatment. The way 'enhanced' has been used in the past for stormwater treatment is specific to enhanced metals removal only. The word 'enhanced' should be freed as an adjective in its traditional broader sense, to describe any enhanced treatment, e.g. phosphorus, heavy metals, oil treatment, or for the future, e.g. but not limited to phthalate, phenol, PAH, and PPCPs. - Recommend for the list of applicable sites; delete the word 'project', as it is at least redundant to the preceding narrative; e.g. 'Industrial sites', not 'Industrial project sites'. Further, as written, the list creates new concepts requiring definition; i.e. what exactly is a commercial or industrial project other than a development on a commercial or industrial site? However, that also begs the question of the definition of commercial and industrial sites. These should not be defined by zoning alone, as land uses are not always in concert with zoning. For example, areas zoned rural residential or even agricultural may have commercial businesses, e.g. furniture, boat, or lawnmower repair, cabinet making or boat making, pet kennels, general contractor or plumber or electrician shops and staging areas, etc. - With respect to infiltration, the "within ¼ mile of a fish bearing stream, or a lake (use an Enhanced Treatment facility)" statement in the Basic Treatment section should be stated in the Enhanced Treatment section. <p>Comment Recommend adding sports fields to the list.</p>	See Comments/Edits

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28	N/A	App 1, Section 4.6.4	Minimum Requirement #6: Runoff Treatment	<p>Basic Treatment Comments</p> <ul style="list-style-type: none"> - The bulleted order is confusing. It would be more straightforward to start with the most all-encompassing / general application; i.e. the third bullet: • "Project sites discharging directly (or indirectly through a municipal separate storm sewer system) to Basic Treatment Receiving Waters (Appendix I-C of the Stormwater Management Manual for Western Washington (2012))." should be the first bullet. - 2) is confusing. • If the project uses infiltration strictly for flow control, not for treatment, then it would seem that either treatment is required prior to infiltration; either by facility or soil treatment layer, or the runoff must be from non-pollution-generating surface (NPGS). If the runoff is NPGS, then why is there any need to consider sensitive lakes (phosphorus) or fish-bearing streams or lakes (metals)? • Please clarify: does "and the discharge is within ¼ mile" mean "and the infiltration is within ¼ mile"? 	See Comments/Edits
36	N/A	App 1, Section 8.1.A	Minimum Requirement #6: Runoff Treatment, Bioretention BMP and Rain Gardens are considered infeasible (where)	"Within 10 feet of small on-site sewage systems and greywater reuse systems" Within 10 feet of the tank, leach lines, or either? Locating especially leach lines for older systems may range from expensive to infeasible. Many older septic systems do not have as-builts on file with municipalities. Getting an after-the-fact as-built drawing will be expensive at best, and may not be feasible as leach lines may be subject to damage by digging for location. Ground-penetrating radar may be costly. Does knowledge that e.g. a septic system exists, coupled with lack of knowledge of the leach field and/or tank footprint add a feasibility limitation?	See Comments/Edits
36	N/A	App 1, Section 8.1.A	Minimum Requirement #6: Runoff Treatment, Bioretention BMP and Rain Gardens are considered infeasible (where)	"Within 10 feet of an underground storage tank." May be expensive to locate. Possibility of damage by digging. Ground-penetrating radar may be costly. Does lack of knowledge of location and footprint add a feasibility limitation?	See Comments/Edits
36	N/A	App 1, Section 8.1.A	Minimum Requirement #6: Runoff Treatment, Bioretention BMP and Rain Gardens are considered infeasible (where)	"The drainage area is less than 5,000 sq. ft. of pollution-generating impervious surface, or less than 10,000 sq. ft. of impervious surface; or less than ¼ acres of pervious surface, and the minimum vertical separation of 1 foot to the seasonal high water table, bedrock, or other impervious layer is not achieved." How is a small project applicant to make determinations of distance to groundwater and bedrock or other impervious layer? This could be expensive. Does expense to a small project applicant constitute a feasibility limitation?	See Comments/Edits
36	N/A	App 1, Section 8.1.A	Minimum Requirement #6: Runoff Treatment, Bioretention BMP and Rain Gardens are considered infeasible (where)	"Where the drainage area is more than any of the above amounts, and cannot reasonably be broken down into amounts smaller than those designated above, and the minimum vertical separation of 3 feet to seasonal high water table, bedrock, or other impervious layer is not achieved". On one hand, same question as given in the previous comment, regarding cost and feasibility, especially near the cutoff point (greater than 5K/10K, but not by much). On the other hand, is this saying that an applicant can break up a large project into small zones and use the less protective vertical distances?	See Comments/Edits
36	N/A	App 1, Section 8.1.A	Minimum Requirement #6: Runoff Treatment, Bioretention BMP and Rain Gardens are considered infeasible (where)	"Where the field testing indicates potential bioretention/rain garden sites have a short term (a.k.a., initial) native soil saturated hydraulic conductivity less than 0.30 inches per hour. In these instances bioretention/rain gardens serving pollutant-generating surfaces can be built with an underdrain, preferably elevated within the underlying gravel layer, unless other feasibility restrictions apply." We appreciate that Ksat has been changed from 0.15 to 0.3 in/hr; presumably to add a margin of safety for measurement uncertainty and possibly uncertainty that 0.15 itself would be sufficient. However, Ksat should not be based on 'initial native', as this implies uncompacted pre-development soil condition, whereas by definition rain gardens are going to be placed where native plants have been removed and grading with unavoidable compaction has occurred. Ksat should be measured in the post-development soil at the location and excavation depth where the bioretention/rain garden is going to be placed.	See Comments/Edits
37	N/A	App. 1, Section 8.1.B	Permeable Pavements are considered infeasible where	"For protection of groundwater quality, should add: Within a critical aquifer recharge area (CARA) or sole source aquifer area."	"Within a critical aquifer recharge area (CARA) or sole source aquifer area."
37	N/A	App. 1, Section 8.1.B	Permeable Pavements are considered infeasible where	"For other competing uses should add: Where the primary function or designated-use safety of the paved surface is impaired by use of a non-standard paving surface (e.g. a tennis court)"	"Where the primary function or designated-use safety of the paved surface is impaired by use of a non-standard paving surface (e.g. a tennis court)."

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Page	Line	Section	Issue/Concern	Comment/Edits	Resolution
37	N/A	App. 1, Section 8.1.B	"In the drive aisles of parking lots as long as runoff is directed to pervious pavement parking spaces"	"While this makes sense from a pavement wear point of view, a vehicle with a leak will deposit more in the parking stall during the time parked than in the short transit over the aisle area. Further, some vehicular leaks occur at a higher rate when the vehicle is stopped than when it is in motion, or occur primarily when the engine stops or the vehicle stops moving."	See Comments/Edits
37	N/A	App. 1, Section 8.1.B	"Where the native soils below a road or parking lot do not meet the soil suitability criteria for providing treatment. Note: In these instances, the local government has the option of requiring a six-inch layer of media meeting the soil suitability criteria or the sand filter specification as a condition of construction."	" It's unclear the local gov't option is robust enough re treatment, or what the media longevity will be. Re media depth, sand filter design calls for media depth of 18 inches. Note that these are used to treat concentrated flow, and that a linear sand filter to be used for less concentrated sheet flow requires a minimum 12 in depth, one might presume that if all that matters is the degree of flow concentration, then 6 inches might be OK for non-concentrated flow; i.e., if the pavement only collects direct precipitation and not sheet flow runoff from adjacent area, or piped flow from a nearby area. However, the only difference between these different scenarios is the load per unit time. There is no reason to expect pollutant concentrations to differ. That said, consider minimum/optimal depth required for pollutant removal/treatment: 12 to 18 inches are required for imported stormwater; same should be required for porous pavement, even without imported flow. We might assume that filter media under porous pavement will last longer before failure than in the other cases, because of lesser flow. However, we must also consider that a media filter buried under pavement will likely not behave the same as one exposed to air; at the very least, redox conditions are likely to differ. We expect this to affect both chemical pollutant removal mechanisms and microbiological mechanisms. For example, diesel, motor oil, & PAHs broken down in an open-air sand filter, by aerobic bacteria and possibly some fungi. It's reasonable to expect some oxygen deficiency below porous pavement and few or no anaerobic fungi; microbial anaerobic breakdown of oil and PAH will be at a much lower rate than aerobic." (continued in next cell)	See Comments/Edits
37	N/A	App. 1, Section 8.1.B	"Where the native soils below a road or parking lot do not meet the soil suitability criteria for providing treatment. Note: In these instances, the local government has the option of requiring a six-inch layer of media meeting the soil suitability criteria or the sand filter specification as a condition of construction."	(continued from last cell) " We should also consider that while TSS clogging of the media may not be an issue (but clogging of the pavement may), the only way to replace the media if/when unacceptable pollutant breakthrough occurs, will be to tear up the pavement. This begs the question of how to evaluate when unacceptable breakthrough is occurring. We should also consider that with amended treatment soils (e.g. compost amended) in a bioretention system, as fibrous plant materials break down over time, they may be replenished by leaf litter, decay of plant roots, and if necessary, top dressing. These are not feasible with media under pavement. Last but not least, we must consider that soil amended with organic matter is likely to settle over time, which is not good for the bearing surface above." (continued in next cell)	See Comments/Edits
37	N/A	App. 1, Section 8.1.B	"Where the native soils below a road or parking lot do not meet the soil suitability criteria for providing treatment. Note: In these instances, the local government has the option of requiring a six-inch layer of media meeting the soil suitability criteria or the sand filter specification as a condition of construction."	(continued from last cell) " Last, if some pollutant removal credit is being assumed for the porous pavement itself, we must consider whether asphaltic concrete (AC) and Portland cement concrete (PCC) have the same pollutant removal profiles, or if, e.g. AC is better at trapping hydrocarbons and PCC is better at trapping metals. In either event, we must consider how TSS and other pollutants trapped in the pavement pores are to be cleaned out periodically by a landowner, the toxicity and fate of the removed material, and how to determine when the sub-pavement media needs replacing, noting that the only way to replace it is to tear up the pavement. This will be true whether the sub-pavement media is imported sand or native soil meeting soil treatment criteria." (continued in next cell)	See Comments/Edits
37	N/A	App. 1, Section 8.1.B	"Where the native soils below a road or parking lot do not meet the soil suitability criteria for providing treatment. Note: In these instances, the local government has the option of requiring a six-inch layer of media meeting the soil suitability criteria or the sand filter specification as a condition of construction."	(continued from last cell) " If we ignore our other concerns for the moment, and now assume an under-pavement media lifespan in the range of 20 to 50 years, we must still ask the question – are we protecting surface waters at the expense of creating acres to square miles of contaminated soils? And if we add the breakthrough question, are we protecting surface waters at the expense of groundwater quality? And if we go that route, we need to ask to what extent groundwater contamination may wind up in surface water streams.."	See Comments/Edits
19	N/A	Appendix 2	Clarks Creek TMDL using surrogate flow metric	Clarks Creek is currently listed as an impaired water body for dissolved oxygen. A TMDL is being developed using a surrogate flow metric. The intent is to return flow to a geomorphic flow mimicking presettlement conditions. The current estimated costs to meet the stormwater portion of this TMDL range from \$35 to 60 million not including land purchase costs. We have serious concerns on the relationship and level of confidence between flow and the pollutant of concern, the modeling, and the sampling dataset being used to create this TMDL. A cost of this magnitude will strip the permittee of any flexibility to do capital work in any other location, regardless of value or effectiveness, with no surety that the actions mandated by the TMDL will address the pollutant of concern. In addition, using a flow surrogate has the potential to set a precedent for TMDLs that may not be technically defensible. So for both reasons we question the inclusion of the Clarks Creek TMDL in this permit. More robust analysis and a sub-basin evaluation should be done first.	Do not include in Appendix 2 of this Draft permit. Work with the City of Puyallup and Pierce County to evaluate the use of flow surrogate and the propose remedies to control the pollutants of concern by testing on a sub-basin. This evaluation should include studies of the effectiveness of both capital and non-capital approaches to return the receiving water to beneficial uses.

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Page	Line	Section	Issue/Concern	Comment/Edits	Resolution
14	2-8	App.2, Cottage Lake TMDL	"King County shall apply phosphorus control treatment requirements to new and redevelopment projects, as applicable, throughout the Cottage Lake watershed, including all tributaries to Cottage Lake. King County's Department of Development and Environmental Services (DDES) shall not rely on the quarter mile/15% distance downstream clause in King County's Surface Water Design Manual."	"Core Requirement 2 (Offsite Analysis) of the SWDM has always been applied as a way to mitigate impacts to downstream problems that are not otherwise addressed by Core Requirement 3 (Flow Control) and Core Requirement 8 (Water Quality). The intent of the offsite analysis is to look downstream for a quarter mile to see if there are any flooding, erosion, or water quality problems that need flow or treatment mitigation above and beyond what is already prescribed in Core Requirements 3 and 8. When a project comes in for full drainage review, it has to meet all of the Core Requirements. It doesn't stop at Core Requirement 2, so just because Cottage Lake is more than a quarter mile downstream from a particular project, doesn't mean the project gets excused from Sensitive Lake Treatment. The Cottage Lake watershed has been designated a Sensitive Lake WQ Treatment Area since the 1998 SWDM was adopted, long before we added water quality problems to Core Requirement 2. See the 2009 King County Surface Water Design Manual, page 1-71, B. Sensitive Lake WQ Treatment Areas for the Sensitive Lake requirements."	"King County shall apply Sensitive Lake WQ Treatment Areas requirements to new and redevelopment projects, as applicable, throughout the Cottage Lake watershed, including all tributaries to Cottage Lake."
13	N/A	Appendix 2	Incorrect URL	Update the Bear-Evans reference link so that it shows the correct WQIP. The correct link to Bear-Evans Fecal, DO and Temp WQIP is: http://www.ecy.wa.gov/biblio/1110024.html .	Please update the Bear-Evans reference link so that it shows the correct WQIP. The correct link to Bear-Evans Fecal, DO and Temp WQIP is: http://www.ecy.wa.gov/biblio/1110024.html .
1	N/A	Appendix 2	MS4 Basin	Have not seen the term "MS4 basin" used elsewhere in the permit, the intent is unclear, please clarify. If the usage is based on topography i.e. natural drainage use the term sub-basin. If the intent is to base it on structure i.e. the MS4 use the "MS4 service area". These classifications are not the same.	Replace the term "MS4 basin" with either the term "sub-basin" or "MS4 service area"
1	24	Appendix 6	King County does not allow discharge of decant water back to the MS4 except under very specific circumstances. This appears to be a global change error	the term "municipal sanitary sewer" has been replaced with "MS4" This is an incorrect replacement	the term "municipal sanitary sewer" has been replaced with "MS4" This is an incorrect replacement
2	28	Appendix 6	Accurate Title	Replace "Street Waste Solids" with "Solids Generated from Stormwater Maintenance Activities"	Replace "Street Waste Solids" with "Solids generated from Stormwater maintenance activities"
2	28-31	Appendix 6	Regulating solids generating by MS4 maintenance activities should be regulated by appropriate state regulations.	Contaminated soils are considered solid waste and are regulated by local health departments and districts and laws/regulations governing the disposal of solid waste and hazardous waste. Propose either deleting or restating to "Soils generated from maintenance of the MS4 may be reclaimed, recycled or reused when in alignment with local codes and ordinances. Soils that are identified as contaminated, per WAC 173-350, shall be disposed at a qualified solid waste disposal facility."	Delete section or restate to "Soils generated from maintenance of the MS4 may be reclaimed, recycled or reused when in alignment with local codes and ordinances. Soils that are identified as contaminated, per WAC 173-350, shall be disposed at a qualified solid waste disposal facility."
1	4-5	Appendix 7	Clarity	Replace "potential to discharge sediment" with "potential to negatively impact nearby features that are sensitive to sediment discharge."	Replace "potential to discharge sediment" with "potential to negatively impact nearby features that are sensitive to sediment discharge."
1	1	Appendix 8	Not needed	The source control program is focused on inspecting pollution-generating sites. The list of sources contained in Appendix does not contribute to the effectiveness of the Source Control program and should be removed	Delete Appendix 8
1,2		App.11, Structural Stormwater Controls Project List	Reporting Format, "Status"	" Do we need to inform when facilities are absorbed from the county by city annexation (i.e. no longer our jurisdiction), and if so, how would that be reflected here? What about the reverse case, i.e., what if a city disincorporates and we inherit facilities?"	See Comments/Edits
1,2		App.11, Structural Stormwater Controls Project List	Reporting Format, "Hydro Benefit"	" This reports % flow reduction only. Are we not also concerned with peak flow reduction? (. . . and possibly flow duration?)"	See Comments/Edits
1,2		App.11, Structural Stormwater Controls Project List	Reporting Format, "Lat/Long"	" Need to specify which geodetic system (datum) lat/long is based on; either prescriptively, or as a reporting requirement."	See Comments/Edits
1,2		App.11, Structural Stormwater Controls Project List	Reporting Format, Water Quality Benefit footnote"	" Water Quality Benefit footnote should more closely match the reporting form table and calculation page title."	See Comments/Edits
1,2		App.11, Structural Stormwater Controls Project List	Retrofit Incentive Table and Example Calculation	" Is there a modeled or other mathematical basis for the incentive factors (see bullet below), or are these judgment calls?"	See Comments/Edits
1,2		App.11, Structural Stormwater Controls Project List	Retrofit Incentive Table and Example Calculation	" Use of percent in the table and decimal fraction in the calculations is awkward, as is syntax in the 'Incentive Points' column. Recommend splitting the Incentive Points column into two columns. The first becomes 'Incentive Factor' and is simply the factor multiple that goes in the calculation; e.g. what was 175 (percent) becomes 1.75, as that's the value that goes into the equation. The second column becomes 'Applicable Area (acres)'"	See Comments/Edits

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1,2		App.11, Structural Stormwater Controls Project List	Retrofit Incentive Table and Example Calculation	"Recommend including the formula before the example calculation. "	See Comments/Edits
1		App.11, Structural Stormwater Controls Project List	Retrofit Incentive Table and Calculation	"For treated runoff from surfaces, why is treatment from PGPS runoff not considered a benefit?"	See Comments/Edits
1	n/a	Appendix 11	Retrofit Incentive Table and Calculation	In table, in retrofit incentive column heading: Add term "unitless" to the column heading retrofit incentive cell	In table, in retrofit incentive column heading: Add term "unitless" to the column heading retrofit incentive cell
1	n/a	Appendix 11	Retrofit Incentive Table and Calculation	In table footnote 3: Delete term "Estimated total suspended solids (TSS) reduction"; replace with "WQ Benefit"	In table footnote 3: Delete term "Estimated total suspended solids (TSS) reduction"; replace with "WQ Benefit"
1	n/a	Appendix 11	Retrofit Incentive Table and Calculation	In table footnote 3: Replace "below" with "on page 3."	In table footnote 3: Replace "below" with "on page 3."
1	n/a	Appendix 11	Retrofit Incentive Table and Calculation	In table footnote 4: Replace "below" with "on pages 3 - 4."	In table footnote 4: Replace "below" with "on pages 3 - 4."
1	n/a	Appendix 11	Retrofit Incentive Table and Calculation	In table footnote 5: Replace "Calculate the incentive points as shown in the table and example below." with "Calculate the incentive points as shown in the Retrofit Incentive table and example on page 2 ."	In table footnote 5: Replace "Calculate the incentive points as shown in the table and example below." with "Calculate the incentive points as shown in the Retrofit Incentive table and example on page 2 ."
1,2	n/a	App.11, Structural Stormwater Controls Project List	Water Quality Benefit (TSS) reduction: Calculation	"In the Form table (page 1), and in the table's footnotes, WQ benefit and Hydro Benefit come before Retrofit Incentive. It's a bit awkward that the calculation examples don't appear in the same order. However, the table's landscape orientation somewhat dictates its location. Recommend changing "below" references to specific page numbers. "	See Comments/Edits
1,2	n/a	App.11, Structural Stormwater Controls Project List	Water Quality Benefit (TSS) reduction: Calculation	Overview, general process: Why is TSS from PGPS being ignored in the calculation?"	See Comments/Edits
1,2	n/a	App.11, Structural Stormwater Controls Project List	Water Quality Benefit (TSS) reduction: Calculation	"The Formula following the general process list is not clear that the land use area excludes PGPS. If intent is actually to exclude PGPS, then the first block of text (on the left) should say, 'Land use category PGIS contributing to project (acres). "	See Comments/Edits
1,2	n/a	App.11, Structural Stormwater Controls Project List	Water Quality Benefit (TSS) reduction: Calculation	"In other respects the calculation seems reasonable in principle, albeit crude (high degree of uncertainty), but usefulness of the result metric is not clear. "	See Comments/Edits
2	n/a	Appendix 11		Add title above table on Page 2: "Retrofit Incentive Table"	Add title above table on Page 2: "Retrofit Incentive Table"
2	n/a	Appendix 11		Insert immediately below table on Page 2: "Retrofit Incentive Formula: Retrofit Incentive = incentive factor * applicable area (acres, <i>but drop units</i> ."	Insert immediately below table on Page 2: "Retrofit Incentive Formula: Retrofit Incentive = incentive factor * applicable area (acres, <i>but drop units</i> ."
2	n/a	Appendix 11		Replace "Example of Incentive Computation:" with "Example:"	Replace "Example of Incentive Computation:" with "Example:"
2	n/a	Appendix 11		In formula: Replace "= .23 x 1.5 (150%) = 0.345" with "1.5 x 0.23 = 0.345"	In formula: Replace "= .23 x 1.5 (150%) = 0.345" with "1.5 x 0.23 = 0.345"
4	45	App.11, Structural Stormwater Controls Project List	Hydro Benefit: Calculation	"Why should there be a hydro benefit if "the volume ratio of the projects is" less than 25%? According to this, if the volume ratio is nil, it still gets a 25% hydro benefit. Please explain why this makes sense rather than a straight [hydro benefit = project's volume ratio]?"	See Comments/Edits
4	52	App.11, Structural Stormwater Controls Project List	Hydro Benefit: Calculation	"What is the benefit of routing roof runoff below permeable pavement as opposed to e.g. a rain garden or some other infiltration system? "	See Comments/Edits
4	52	App.11, Structural Stormwater Controls Project List	Hydro Benefit: Calculation	"Why is there need to incur the cost of routing below permeable pavement as opposed to less costly dispersion onto permeable pavement?"	See Comments/Edits
4	52	App.11, Structural Stormwater Controls Project List	Hydro Benefit: Calculation	"Shouldn't there be some roof area to infiltrative criteria spelled out here, or at least a pointer to criteria given elsewhere?"	See Comments/Edits

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Page	Line	Section	Issue/Concern	Comment/Edits	Resolution
1	27-29	Appendix 12	Add additional agreement purpose	The effect of payment needs to be specified in the contract.	". . . monitoring program" and to acknowledge that upon payment of the amounts in S8.C.1.a., S8.D.1.a., S8.D.3., and S8.E.1. the Permittee will be in compliance with the monitoring requirements contained in these sections.
2 & 3	42-44 1-4	Appendix 12	Merger clause is inaccurate as contract is part of permit	Remove lines 42-44 on page 2 and lines 1 and 2 on page 3.	Retain "each party, by signature below . . ."
12-16		App.12, Funding Agreement between Ecology and Municipal Stormwater Permittees	Attachment C - Recommended list of stormwater effectiveness study topics and questions; overall comment	As we understand it at this point, the list is not actually ranked. As such, we recommend removing the word "Rankings". If the list is in fact ranked, the greatest difficulty in critiquing the rankings is that many of the effectiveness questions are equally important, yet they are ranked. Given the new emphasis on LID in this draft permit, we recommend that LID effectiveness studies be elevated in the rankings. Following the rankings discussion is a discussion of some areas of concern with respect to LID treatment media. These are given under Addenda RE: LID (Rank 7) below.	Remove word "Rankings" if not ranked. If ranked, elevate LID effectiveness studies.
12-16		App.12, Funding Agreement between Ecology and Municipal Stormwater Permittees	Attachment C - Recommended list of stormwater effectiveness study topics and questions; Fecal coliform comment	Several of the studies ask questions about effectiveness of decreasing fecal coliform. We feel that a more important question to first answer is whether fecal coliform is the best indicator of pathogenic risk.	We recommend studies designed to determine availability and effectiveness of better indicators of pathogenic risk than fecal coliforms testing.
12-16		App.12, Funding Agreement between Ecology and Municipal Stormwater Permittees	Attachment C - Recommended list of stormwater effectiveness study topics and questions; Caveat RE LID (Ranks 6 and 7)	There is risk in assigning LID for flow control a higher ranking than LID for pollutant control. We feel these questions must be answered concurrently. Otherwise there is risk of moving forward on the basis of flow control findings, only to possibly later find out that we are cleaning up streams at some expense to groundwater quality.	We recommend ranking LID studies for flow control and pollutant control equivalently.
12-16		App.12, Funding Agreement between Ecology and Municipal Stormwater Permittees	Attachment C - Recommended list of stormwater effectiveness study topics and questions; Addenda RE LID (Rank 7)	We recommend the following observations and additions to LID and effectiveness at reducing pollutant loads: <ul style="list-style-type: none"> • Compost is an overly generalized term. Its physical characteristics and chemical composition both depend on feedstocks, which themselves are variable in content. Degree of pre-processing, i.e. chipping/shredding also affects physical characteristics, as the composting process itself. The physical and chemical processes that are involved in pollutant removal and/or potential leaching are complex and are affected not only by the physical and chemical characteristics of any particular batch of compost, but also by redox state, runoff pH, temperature, micro and macro organisms present, and concentration of other substances in runoff, e.g. de-icing salts. • With regard to chemical composition, all compost contains some pollutants, some of which may leach out at higher levels than influent concentrations. Some of these pollutants are naturally occurring (e.g. part of plant matter or natural animal waste), and some are not (e.g. application of pesticides containing metals and/or organic toxins, or inclusion of biosolids containing e.g. heavy metals, pharmaceuticals, phenols, and/or personal care products). This suggests that for compost to be used for stormwater filtration/infiltration, it would be prudent to develop acceptable pollutant levels more stringent than and covering a wider spectrum of pollutants than are specified in Ecology's current compost standard for land application." (continued in next cell) 	None
12-16		App.12, Funding Agreement between Ecology and Municipal Stormwater Permittees	Attachment C - Recommended list of stormwater effectiveness study topics and questions; Addenda RE LID (Rank 7)	(continued from last cell) <p style="text-align: center;">Comment "Nutrients"</p> <ul style="list-style-type: none"> • For example, in its approval of compost-amended bioswales for enhanced treatment (metals removal), Ecology's TAPE review states, "The compost-amended biofiltration swale generally exported total phosphorus (TP) whereas the control biofiltration swale did not. Both the compost-amended biofiltration swale and control biofiltration swale exported soluble reactive phosphorus (SRP)". Among questions from Ecology and answers from the Board of External Reviewers : - Question: "Is there any concern that the treatment technology materials could unintentionally contribute pollutants (e.g., nutrients, toxicity, and high pH) to stormwater?" - Answer #1 – "Yes there is. The report clearly showed that nutrients, both N and P, were released from the compost-amended swale. Although it is probably beyond the scope of the study, a more long-term analysis of these releases would be interesting in order to determine if there is a time where this treatment technique no longer releases N and P but instead treats it. A side note, the report clearly states that there are no TAPE requirements for treating nitrogen, but there is a phosphorus treatment criteria. This report did not address this directly. It may be that this technology is not being developed for its phosphorus treatment, but some more discussion of this might be warranted. If there is export of phosphorus from this technology, there may be limitations on where you can install the technology." (continued in next cell) 	None

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12-16		App.12, Funding Agreement between Ecology and Municipal Stormwater Permittees	Attachment C - Recommended list of stormwater effectiveness study topics and questions; Addenda RE LID (Rank 7)	(continued from last cell) Comment RE: "- Answer #2 – "Yes. The compost releases relatively high concentrations of P. This is known in the literature and can be problematic if this technology is employed near nutrient sensitive waters. In addition, N is leached from the compost." This suggests looking more closely at the possibility that where compost media filtration may remove some pollutants, it ought not be used where phosphorus loading is an issue, e.g. in a sensitive lakes (phosphorus impaired) watershed. Some raw material may contain less phosphorus than others; e.g. compost made entirely of senesced leaves (possibly limited species as well) leaches less phosphorus than compost made of other vegetative matter."	None
12-16		App.12, Funding Agreement between Ecology and Municipal Stormwater Permittees	Attachment C - Recommended list of stormwater effectiveness study topics and questions; Addenda RE LID (Rank 7)	Comment RE: "Toxic substances • Type of feedstocks can affect preponderance and levels of toxic chemicals of concern; e.g.: - Yard waste may harbor some elevated heavy metals from pesticides (including moss killer), and/or organic pesticides, or even e.g. lawn clippings where roof runoff has been dispersed from roof runoff. - Roof runoff -> vegetation -> compost: Recent related reports from Ecology suggest that zinc may not be the only chemical of concern from roof runoff. Other chemicals of concern in roof runoff are arsenic, cadmium, copper, lead, and diethylhexylphthalate (DEHP). Some pollutants that are dispersed into vegetation may be adsorbed to or taken up by vegetation; if this vegetation is then composted, these pollutants may be pre-loading the compost, rendering it less effective as a filter." (continued in next cell)	None
12-16		App.12, Funding Agreement between Ecology and Municipal Stormwater Permittees	Attachment C - Recommended list of stormwater effectiveness study topics and questions; Addenda RE LID (Rank 7)	(continued from last cell) Comment RE: "- Biosolids: While wastewater treatment plants (WTPs) now usually require pretreatment of wastewater they accept from industrial and perhaps commercial sources, biosolids addition as a compost feedstock may still introduce elevated copper levels from domestic plumbing erosion (and zinc from older houses with galvanized plumbing). Other pollutants of concern from WTPs include pharmaceuticals and personal care products (PPCPs). The degree to which these degrade in composting is a needed area of study, as is the question of what are the degradation products and what risks do they pose? Some PPCP components don't degrade; e.g. dandruff shampoos may contain selenium or zinc, neither of which are biodegradable; and others may degrade into forms that are more toxic and/or persistent than the sources." (continued in next cell)	None
12-16		App.12, Funding Agreement between Ecology and Municipal Stormwater Permittees	Attachment C - Recommended list of stormwater effectiveness study topics and questions; Addenda RE LID (Rank 7)	(continued from last cell) Comment RE: "• Are there conditions where there is risk that stormwater infiltrating to ground may meet groundwater quality standards, yet still pose a threat by subsurface travel to an open stream? e.g. copper and zinc criteria for groundwater are much higher than surface water quality standards. • What is the leachability of a variety of pollutants when relatively clean runoff goes through compost filter media? To what degree? • Using compost as filter media, akin to a filter cartridge, but applied as a landscape feature, how does compost quality – with respect to a broad variety of pollutants – affect its pollutant-removal characteristics both in the short term and the long term? i.e., what is compost's potential, depending on feedstocks and to: • be less effective than cleaner compost • be ineffective at removal of some pollutants • leach some pollutants at higher concentrations than influent levels • leach some chemicals of concern that are not currently addressed by the NPDES stormwater permit? • Again, analogous to a filter cartridge, what is the required replacement cycle for compost media used for filtration?"	None
4	14-15	Appendix 12 - Attachment A-Scope of Work:	Monitoring funding flexibility	Since it is possible that some jurisdictions may participate in only one or two elements of the regional program, and not in other elements, switching funds between tasks becomes difficult to accomplish from an accounting perspective. We recommend that this issue be addressed by clarifying how funds may be moved between tasks to ensure that each jurisdiction's payments are applied to those elements that it has chosen to fund.	Clarify how funds may be moved between tasks.

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Page	Line	Section	Issue/Concern	Comment/Edits	Resolution
5	12-17	Appendix 12 - Attachment A-Scope of Work, Ecology Tasks	Status and trends monitoring	We recommend that the competitive process for the status and trends monitoring be limited to local jurisdictions and state and federal agencies. We believe that this will ensure maximum cost competitiveness while leveraging existing capacities at the public agencies. We recommend that these projects be contracted as interagency agreements, not as grant awards	Limit status and trends monitoring to local jurisdictions and state and federal agencies.
5	12-17	Appendix 12 - Attachment A-Scope of Work, Ecology Tasks	Effectiveness monitoring	We recommend that the competitive process for the effectiveness studies be limited to local jurisdictions, state and federal agencies, tribes, universities, and ports. We also recommend that this process be run as a grant program that encourages partnerships and regional applicability of the study.	Under a grant program, limit the competitive process for the effectiveness studies to local jurisdictions, state and federal agencies, tribes, universities, and ports.
6	13-19	Appendix 12 - Attachment A-Scope of Work, Contractor Tasks Status and Trends Monitoring in Small Streams, streamflow gauging: Page 6, lines 13-19.	Streamflow gauging	The Stormwater Work Group recommended in October 2010 (page 5, recommendation 2i) "a collaborative system for stream gauge data management should be created and utilized." This recommendation is not reflected in this scope of work for streamflow gauging data. King County recommends that this task be included in the scope of work for this permit term.	Include a system for collaborative stream gauge data management in the scope of work.
5-Apr		Appendix 12 - Monitoring Costs Allocation Spreadsheet	Stream benthos data management budget	The budget for stream benthos support is shown as \$60,000 per year for four years. This was calculated by using an estimate of \$240,000 for five years and allocating this over a four year period. While an annual budget of \$60,000 would allow for the addition of more features to the system, it is likely excessive for operation and maintenance of the stream benthos data management system. We recommend that the budget be set at \$48,000 per year for five years to maximize long-term support of this regional data management system.	Set the budget for operation and maintenance of the stream benthos data management system at \$48,000 per year for five years.
General Comments					
N/A	N/A	N/A	Staff Training and Education	King County supports the participation of local jurisdictions in the development of certification programs for various stormwater management related jobs such as IDDE, maintenance, and retrofit construction. A university or community college or other entity focused on professional training and development would be designated as a Center of Excellence for stormwater program development and used to convene stormwater training providers. Certifications of completion could then be used to meet various training requirements a part of the next permit cycle	
N/A	N/A	N/A	Monitoring	EIM in its current configuration does not seem to be structured well for stormwater data. There are two deficiencies; the inability to include continuous data and the lack of fields for specific storm sampling information so that data must be put into comment fields. Numerous pieces of information (antecedent dry period, inter-storm dry period, number of sample aliquots, sampled stormflow - as opposed to total stormflow - to name a few specifics - there are others) that are specific to a stormwater sample (a laboratory sampled identified by a lab sample number) - are currently lumped together in a "Field Activity Comment" field that is copied for every analytical result for that sample. This means that while this information is available for viewing, it is not available for querying (for example: to determine the effects of antecedent dry period on results a user would have to pull that data out manually from the comment fields).	
Fact Sheet Comments					
N/A	N/A	N/A	General	The Fact Sheet is not part of the permit and has no regulatory standing. While the county appreciates the clarifications made by the fact sheet, statements that add clarity or specify actions or requirements need to be included in the permit.	
1-year permit Phase I comments					

King County Comments on 2012 Draft Municipal NPDES Permit

Page	Line	Section	Issue/Concern	Comment/Edits	Resolution
51-52	24-37 1-18	S8.C	Monitoring	The draft one-year Phase 1 permit contains a requirement to continue the outfall characterization monitoring begun under the existing permit until 3 water years (October 1 through September 30) of data have been collected. This requirement, if implemented, would necessitate us conducting another water year of monitoring since King County will have collected 2.25 years of data by the end of 2011. Continuing the monitoring from January 2012 through October 2012 is estimated to cost \$340,000. Other important customer service and water quality programs would be at risk if the monitoring requirement is included in the one-year permit. King County has made a significant investment in the Stormwater Monitoring Work Group (SWG) and does not support continuing the outfall monitoring in the one-year draft permit. The monitoring intended to characterize stormwater runoff in the 2007 permit (S8.D) should end at the expiration date of the current permit (February 2012). The results of the SWG's research show that continuation of this monitoring will not improve current information and data used to manage stormwater. Thus its continuation does not seem to be a good use of public funds, as it will simply duplicate information that has already been generated and other more pressing programs would have to be sacrificed. We would like to meet with you to discuss this particular draft requirement in late February.	Remove the section requirement.
		S5.C.2	Deadlines and Due Dates	The one year permit has been issued without changes to deadlines or timelines to the 2007 permit. We appreciate that Ecology was mandated by the Fiscal Relief to Cities and Counties Bill to reissue the permit to Phase IIs without changes but these date changes are needed to ensure that the permit requirements make sense.	Change effective dates impacting Municipal Separate Storm Sewer System Mapping and Documentation sections below: S5.C.2.b.i, S5.C.2.b.ii, S5.C.2.b.iii, S5.C.2.b.iv, S5.C.2.b.v, S5.C.2.b.ii
		S5.C.3	Deadlines and Due Dates	The one year permit has been issued without changes to deadlines or timelines to the 2007 permit. We appreciate that Ecology was mandated by the Fiscal Relief to Cities and Counties Bill to reissue the permit to Phase IIs without changes but these date changes are needed to ensure that the permit requirements make sense.	Change effective dates impacting Coordination sections below: S5.C.3.b.i, S5.C.3.b.ii
		S5.C.4	Deadlines and Due Dates	The one year permit has been issued without changes to deadlines or timelines to the 2007 permit. We appreciate that Ecology was mandated by the Fiscal Relief to Cities and Counties Bill to reissue the permit to Phase IIs without changes but these date changes are needed to ensure that the permit requirements make sense.	Change effective dates impacting Public Involvement and Participation sections below: S5.C.4.b.i
		S5.C.5	Deadlines and Due Dates	The one year permit has been issued without changes to deadlines or timelines to the 2007 permit. We appreciate that Ecology was mandated by the Fiscal Relief to Cities and Counties Bill to reissue the permit to Phase IIs without changes but these date changes are needed to ensure that the permit requirements make sense.	Change effective dates impacting Controlling Runoff from New Development, Redevelopment and Construction Sites sections below: S5.C.5.b.iv, S5.C.5.b.v, S5.C.5.b.vi, S5.C.5. b.vii, S5.C.5.b.viii
		S5.C.6	Deadlines and Due Dates	The one year permit has been issued without changes to deadlines or timelines to the 2007 permit. We appreciate that Ecology was mandated by the Fiscal Relief to Cities and Counties Bill to reissue the permit to Phase IIs without changes but these date changes are needed to ensure that the permit requirements make sense.	Change effective dates impacting Structural Stormwater Controls sections below: S5.C.6.b.i
		S5.C.7	Deadlines and Due Dates	The one year permit has been issued without changes to deadlines or timelines to the 2007 permit. We appreciate that Ecology was mandated by the Fiscal Relief to Cities and Counties Bill to reissue the permit to Phase IIs without changes but these date changes are needed to ensure that the permit requirements make sense.	Change effective dates impacting Source Control Program for Existing Development sections below: S5.C.7.b.i, S5.C.7.b.ii, S5.C.7.b.iii, S5.C.7.b.iv, S5.C.7.b.v
		S5.C.8	Deadlines and Due Dates	The one year permit has been issued without changes to deadlines or timelines to the 2007 permit. We appreciate that Ecology was mandated by the Fiscal Relief to Cities and Counties Bill to reissue the permit to Phase IIs without changes but these date changes are needed to ensure that the permit requirements make sense.	Change effective dates impacting Illicit Connections and Illicit Discharges Detection and Elimination sections below: S5.C.8.b.i, S5.C.8.b.ii, S5.C.8.b.iii, S5.C.8.b.iv, S5.C.8.b.viii
		S5.C.9	Deadlines and Due Dates	The one year permit has been issued without changes to deadlines or timelines to the 2007 permit. We appreciate that Ecology was mandated by the Fiscal Relief to Cities and Counties Bill to reissue the permit to Phase IIs without changes but these date changes are needed to ensure that the permit requirements make sense.	Change effective dates impacting Operation and Maintenance Program sections below S5.C.9.b.i, S5.C.9.b.ii(1), S5.C.9.b.ii(2), S5.C.9.b.ii(3), S5.C.9.b.ii(4), S5.C.9.b.iii(1), S5.C.9.b.iii(2), S5.C.9.b.iv(1), S5.C.9.b.vi, S5.C.9.b.vii, S5.C.9.b.viii, S5.C.9.b.ix
		S5.C.10	Deadlines and Due Dates	The one year permit has been issued without changes to deadlines or timelines to the 2007 permit. We appreciate that Ecology was mandated by the Fiscal Relief to Cities and Counties Bill to reissue the permit to Phase IIs without changes but these date changes are needed to ensure that the permit requirements make sense.	Change effective dates impacting Education and Outreach Program sections below: S5.C.10.b.i
		S8.G	Deadlines and Due Dates	The one year permit has been issued without changes to deadlines or timelines to the 2007 permit. We appreciate that Ecology was mandated by the Fiscal Relief to Cities and Counties Bill to reissue the permit to Phase IIs without changes but these date changes are needed to ensure that the permit requirements make sense.	Change effective dates impacting Monitoring sections below: S8.G.2.a, S8.G.2.b, S8.G.2.c