



City of Seattle
Seattle Public Utilities

June 17, 2011

Municipal Stormwater Permit Comments
WA Department of Ecology
Water Quality Program
P.O. Box 47696
Olympia, WA 98504-7696

Subject: NPDES Phase I Municipal Stormwater NPDES Permit – Monitoring
Preliminary Draft Permit Language

Dear Ecology:

Thank you for the opportunity to comment on Washington State Department of Ecology's preliminary draft language for the monitoring section of the NPDES Phase I Municipal Stormwater NPDES Permit (Permit). The City of Seattle (Seattle) appreciates the work of Ecology and the Stormwater Work Group (SWG) to develop Permit requirements that are both meaningful and practical for protecting our region's valuable water resources. To help achieve these goals, Seattle has provided comments in the following attachments:

- Attachment 1. Detailed comments related to the monitoring preliminary draft Permit language.
- Attachment 2. A tracked-changes version of the preliminary draft monitoring Permit language that includes suggested alternative language.
- Attachment 3. Recommended schedule for program effectiveness monitoring.
- Attachment 4. Table of updated permittee payments based on corrected errors in cost allocation spreadsheet.

Seattle appreciates efforts to develop an improved approach to Permit-required monitoring to better utilize limited monitoring resources. Seattle recognizes that a regional approach is beneficial for some elements of Permit-required monitoring; however, Seattle also recognizes that program effectiveness monitoring may best be accomplished at the local level in some instances, and it is a regional benefit for permittees to have this flexibility. Seattle appreciates Ecology stepping up to lead the Regional Stormwater Monitoring Program (RSMP), but Seattle continues to have concerns that heavy workloads at Ecology and the SWG may inhibit successful implementation of the effectiveness and source ID monitoring parts of the RSMP. Seattle also supports Ecology's stated expectations for equitable cost-sharing and no

net increase in monitoring costs to Phase I permittees given the current economic conditions and the competing funding needs for stormwater management program (SWMP) implementation. However, permittee payments presented in the preliminary draft do not meet these objectives due to the cost allocation methodology and, potentially, the total RSMP costs. Seattle is working with WSAC/AWC and other permittees to recommend an alternative cost-allocation methodology that would better meet Ecology's expectations regarding allocation. If a cost allocation methodology cannot be achieved that meets objectives, Seattle recommends reducing total RSMP costs or finding non-permittee funding sources for the RSMP.

In addition, Ecology requested input on a two-Permit approach for the Phase I Permit. Seattle defers to Ecology on this issue and, as such, supports the approach outlined in Ecology's May 2011 *Focus on Legislative Change* flyer.

Seattle will be providing our comments on Ecology's preliminary draft language for the low impact development (LID) section of the Permit in a separate letter.

Thank you for your consideration of Seattle's comments. We look forward to working with Ecology and other jurisdictions, organizations, and the public to protect and improve our aquatic ecosystems. If you have any questions regarding this letter, please feel free to contact Ingrid Wertz (206-386-0015) of my staff.

Cordially,



Nancy Ahern, Director
Utility System Management Branch
Seattle Public Utilities (SPU)

cc: Martin Baker, SPU
Bruce Bachen, SPU
Ingrid Wertz, SPU
Kevin Buckley, SPU
Jonathan Frodge, SPU
Louise Kulzer, SPU
Doug Hutchinson, SPU
Susan Saffery, SPU
Theresa Wagner, Seattle Attorney's Office

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SUMMARY

Seattle appreciates Ecology and Stormwater Work Group (SWG) efforts to develop an improved approach to permit-required monitoring to better utilize limited monitoring resources. Seattle recognizes that a regional approach is beneficial for some elements of Permit-required monitoring. However, Seattle also recognizes that, in some instances, program effectiveness may best be accomplished at the local level, and it is a regional benefit for permittees to have this flexibility. Seattle appreciates Ecology stepping up to lead the Regional Stormwater Monitoring Program (RSMP). However, Seattle is concerned that heavy workloads at Ecology and the SWG may inhibit successful implementation of the effectiveness and source ID monitoring parts of the RSMP. Seattle's concern is in part due to the relative lack of information about the scope of these efforts (especially compared to the relatively robust RSMP Puget Sound status and trends scope) and due to Seattle's experience implementing large monitoring programs. It would be better for all involved to scale-back the RSMP effectiveness monitoring and source ID monitoring efforts in the first permit cycle and be successful than to have the RSMP be unsuccessful as a result of resources being spread too thin. Seattle also supports Ecology's stated expectations for equitable cost sharing and no net increase in monitoring costs to Phase I permittees given the current economic condition and the competing funding needs for SWMP implementation. However, permittee payments presented in the preliminary draft do not meet these objectives due to the cost allocation methodology and, potentially, the total RSMP costs. Seattle is working with WSAC/AWC and other permittees to recommend an alternative cost-allocation methodology that would better meet Ecology's expectations regarding allocation. If a cost allocation methodology cannot be achieved that meets objectives, Seattle recommends reducing total RSMP costs or finding non-permittee funding sources for the RSMP.

Seattle is also providing more detailed comments on the following topics:

- Total Costs / Cost Allocation (Comment #1)
- Effectiveness Local Needs Option (Comment #2)
- S8.A.3 & Funding Agreement – clarification of cost-based requirements (Comment #3)
- S8.A.1 & S8.A.2 – clarification of requirements (Comment #4)
- RSMP Scope & Deliverables (Comment #5)
- Responses to Ecology's "Note to Reviewers" (Comment #6)

COMMENTS

Comment #1. Seattle agrees with Ecology's recognition that NPDES-required monitoring is a component of a permittee's SWMP that must be balanced with SWMP implementation and other monitoring needs. In light of this and current economic conditions, Ecology indicated that the RSMP "is expected to reduce Phase I permittees' overall expenditures on monitoring" and is "as fair and equitable as possible" (Explanatory Notes). To meet Ecology's expectations, Seattle supports a total RSMP cost and cost allocation methodology that:

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- (1) Results in annual Phase I permittee payments each year that are no greater than current annual Phase I permittee expenditures for NPDES required monitoring,
- (2) Results in annual Phase II permittee payments which reflect a minimum level of effort that would be required to conduct monitoring independently (without RSMP) to meet new Phase II monitoring requirements and are affordable, and
- (3) Is based on an equitable cost-allocation method with the following principles:
 - Source ID & effectiveness costs are shared between all Western WA permittees
 - Puget Sound (PS) status & trends costs are shared between PS permittees. Southwest (SW) status & trend costs are shared between SW permittees
 - All permittees are required to contribute a base amount to both source ID & effectiveness monitoring and a base amount to status & trends monitoring. These base amounts should reflect a minimum level of effort that would be required to conduct monitoring independently (without RSMP) to meet new Phase II monitoring requirements. Ecology should identify what level would be appropriate. As a starting point, 50% of the total cost for source ID & effectiveness monitoring could be evenly split as a base (approx. \$10,900/yr/permittee) and 25% of the total costs for status and trends could be evenly split (within regions) as a base (approx. \$9,400/yr/PS permittee and \$7,600/yr/SW permittee during implementation).
 - Non-base allocations should not be based solely on population as other factors (e.g., land area) are significant contributors to stormwater impacts and management needs. This could be accomplished by also considering land area or, in the case of Phase I permittees, evenly splitting Phase I costs (with 1/3 shares for Ports).

Unfortunately, the RSMP as proposed does not meet the above expectations. This is a result of the cost allocation methodology and, potentially, the total RSMP costs. Seattle is working with WSAC/AWC and other permittees to recommend an alternative cost-allocation methodology to Ecology that would better meet Ecology's expectations regarding allocation. There are potentially promising proposals that will be shared with Ecology once more fully developed. If a cost allocation methodology cannot be achieved that meets objectives 1 and 2 above, Seattle recommends evaluating total RSMP costs and scaling back components or finding non-permittee funding sources for the RSMP.

Additionally, permittee payment amounts shown in table in S8.C.2 in Phase I and II permits are erroneously low due to errors in allocating RSMP costs for the various options. As a result, individual permittee payments indicated in the tables are lower than what would be required to fully fund the RSMP at the level indicated in the Explanatory Notes. In Attachment 4, Seattle has provided updated payment costs based on errors identified in cost-allocation spreadsheet to date. Seattle appreciates Ecology's transparency in providing cost-allocation spreadsheet which

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allowed these errors to be identified; however, Seattle requests that Ecology update spreadsheet to accurately distribute costs.

Comment #2. Seattle believes program effectiveness monitoring is the most valuable element of the proposed monitoring as it provides information on the effectiveness of an aspect of the permittee's SWMP that allows for direct adaptive management of the SWMP. Seattle recognizes the need for a shared resources approach to program effectiveness monitoring, especially for Phase II jurisdictions and for studies that are best conducted by multiple jurisdictions. However, Seattle also recognizes the need for a "local needs" option whereby permittees are allowed to meet their NPDES permit obligations for program effectiveness monitoring by conducting Ecology-approved effectiveness studies outside of the RSMP rather than paying some portion of funds into the RSMP. The local needs option is in everyone's best interest for the following reasons:

- **allows permittees to maximize limited resources (funding and staff) to address priority local issues and to focus effectiveness monitoring on projects that will lead to implementable changes within their jurisdiction.**
- **assures that studies are conducted most efficiently and cost-effectively.** Conducting a particular study via the local needs option may be more cost effective than conducting it through the RSMP, with its associated additional layers of administration and costs.
- **supports the initial success of the RSMP effectiveness monitoring by:**
 - **focusing limited Ecology and SWG staff resources on fewer studies and those that are best conducted regionally.** It will require significantly fewer Ecology and SWG resources to review and approve a QAPP for a local needs option than to develop, approve, and oversee the implementation of each RSMP effectiveness monitoring project, which will require the development and management of RFPs for DQOs, study design, QAPPs, technical review, and reporting. This savings is especially true in the case of the permittees most likely to use a local needs option: Phase I jurisdictions with experience developing and implementing effectiveness monitoring studies.
 - **requiring that permittees using the local needs option still contribute a base amount of funding to RSMP effectiveness monitoring.** For example, 50% of the total cost for source ID & effectiveness monitoring could be evenly split as a base (approx. \$10,900/yr/permittee) that would still be a required payment for permittees utilizing the local needs option.
- **Don't fix what isn't broken and currently provides regional benefit.** The local needs options leverages the success of the effectiveness monitoring programs that some permittees have developed over the past permit cycles and are implementing to meet local needs and provide feedback on SWMP effectiveness. Although locally focused, these efforts provide information to the larger stormwater community. For example, King County's effectiveness study for S8.E in the 2007 NPDES Phase I permit, *Roadside*

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Ditch Flow Control Study was featured in the June 2011 (Vol. 18, No. 4) issue of the *Journal Erosion Control*, and the City of Tacoma received a 2011 National Environmental Achievement Award from the National Association of Clean Water Agencies (NACWA) for their stormwater management program effectiveness monitoring.

In addition, the local needs option should be included for the following reasons:

- **There is a high level of uncertainty about the process, priorities, and ability of Ecology and SWG to successfully define and implement the effectiveness monitoring element of the RSMP.** Seattle is concerned that heavy workloads at Ecology and the SWG may inhibit successful implementation of the effectiveness monitoring and source ID parts of the RSMP. This is currently reflected in the relatively sparse information available about the effectiveness schedule, process, and scope of work to date (especially compared to the amount of effort and information to date on the Puget Sound status and trends monitoring).
- **Given economic realities, valuable existing local needs monitoring may need to be discontinued due to budget pressure without this option.** RSMP funding should not negatively impact existing non-NPDES required monitoring programs.

A proposal by Seattle for the process and administration of the local needs option for effectiveness monitoring is presented below. Recommended changes to preliminary permit language are shown in Attachment 2, and Attachment 3 consists of a table which outlines the steps and schedule for RSMP and Local Needs Effectiveness Monitoring. Permittees would be provided the opportunity to indicate to Ecology that they will propose a local needs study within 30 days of the publishing of the prioritized list of effectiveness studies recommended by the SWG for the RSMP (expected to coincide with July 2012 Phase I permit issuance). This timing will allow each permittee to evaluate whether the selected proposals meet the jurisdiction's needs or there is a more pressing local need that must be addressed. Once a permittee has decided to use the local needs option, the permittee would be required to develop a monitoring proposal and Quality Assurance Project Plans (QAPP) for Ecology approval. This approach is similar to the current NPDES Phase I permit requirement S8.G.2.a. Ecology would approve the effectiveness monitoring proposal for a local needs study if it met the following criteria:

- The Permittee has identified a specific local stormwater management issue.
- The monitoring provides direct feedback on the effectiveness of the Permittee's SWMP element(s) directed toward management of the specific local stormwater management issue.
- The Permittee would be required to expend at least as much in resources to conduct the local needs study as its non-base contribution would be under the RSMP.
- Permittee demonstrates how results of monitoring study will be shared with the other Permittees in the region.

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Including a local needs option will not compromise the success of the RSMP effectiveness monitoring because it is anticipated that few permittees will select the local needs option and that there will be sufficient funding for a meaningful RSMP effectiveness monitoring component. The table below provides scenarios of RSMP funding assuming 50% of RSMP effectiveness and source ID monitoring costs are split evenly as a base contribution (~\$10,900/Phase I and II permittee) and various combinations of Phase I jurisdictions utilizing the local needs option while still paying base contribution.

RSMP Funding Scenarios	RSMP Effectiveness Monitoring Funding
Scenario 1 –no local needs option	\$1,855,000 / year
Scenario 2 – Seattle, Tacoma, Pierce, and Clark utilize local needs option	\$1,595,000 / year
Scenario 3 – all Phase I’s utilize local needs option	\$1,445,000 / year

Comment #3. Seattle understands that to fully comply with S8.C (RSMP), a permittee must only (1) pay Ecology the dollar amounts identified in the Permit on time, and (2) enter into a standard form funding agreement with Ecology that establishes that Ecology will expend the funds to implement the RSMP, within available resources. Seattle also understands that the status of the RSMP monitoring program implementation and completion shall have no effect on any permittee’s compliance with the Permit.

Seattle requests that Ecology clarify the proposed Permit language, the draft funding agreement, and the current permit language in S3.B (which is anticipated to be carried over into the next permit) to reflect that paying on time and entering into the funding agreement with Ecology constitutes compliance with the Permit. Suggestions to clarify Permit language are indicated in Attachment 2 and include making the funding agreement an appendix to the Permit. Significant work is needed on the funding agreement form, including incorporating the scope attachments into the funding agreement. Suggestions for the funding agreement are provided below as a starting point for further discussions between Ecology and permittees and are by no means comprehensive.

- Page 1, Background, second paragraph. Recommended change “... (approximately ~~84~~ 91 local jurisdiction and two ports), limited to the dollar amounts required by and stated in NPDES Permits.”
- Page 1, Background, second paragraph. Recommend replacing the term “share” with “payment”.
- Page 1, Agreement Purpose. Recommended change: “The purpose of this Agreement is to provide a share of the funding ~~required~~ to conduct a regional stormwater monitoring program under the NPDES Municipal Stormwater Permit, and to set forth Ecology’s responsibilities regarding funds paid by [jurisdiction].”

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- Page 2. Billing Procedure, second paragraph. Recommended change: “Payments will be due to Ecology ~~with 45 days of receipt of the invoice~~ as required by the NPDES Permit and mailed to the following address:”

Suggestions for updating current S3.B permit language anticipated to be carried over into next permit is as follows:

“Permittees may rely on another *entity* to satisfy one or more of the requirements of this permit. Permittees that are relying on another entity to satisfy one or more of their permit obligations remain responsible for permit compliance if the other entity fails to implement the permit conditions. However, when Permittees provide RSMP funding as required in S8.C, Permittees have fully satisfied that Permit obligations and do not remain responsible for further monitoring compliance if any entity fails in any way to implement the RSMP monitoring program.”

Comment #4. Clarify requirements under S8.A.1 and S8.A.2. Please clarify that “required” under S8.A.1 means water quality monitoring listed as required in S7 or Appendix 2. Please clarify that “required” under S8.A.2 means sampling or testing “that the Permittee determines is necessary to undertake” for characterizing illicit discharges pursuant to section S5.C8, S6.D.3, or S6.E.3. Recommended permit language changes are indicated in Attachment 4.

Comment #5. More information is needed about the scope and deliverables of the proposed RSMP so that Seattle can adequately evaluate the proposal to provide comments. This is especially true for the effectiveness and source identification monitoring elements. Understanding that the scope of the scope of the RSMP is still in development, specific information needs related to each monitoring element are as follows:

Puget Sound Status & Trends

Additional contractor or Ecology tasks need to be identified in “Attachment A – Scope of Work” in the Funding Agreement to ensure the quality and reporting of the status and trends portion of the monitoring program. These tasks include, but are not limited to, identifying technical review processes/deliverables, reporting process/deliverables, and addressing data management and analysis.

Source Identification and Diagnostic Monitoring Information Repository

It is difficult to understand the intent of this aspect of the RSMP since the language in the draft funding agreement and the explanatory notes is vague. From the information available, it is not clear that all aspects of this proposal have regional benefit. Seattle is concerned that without detailed tasks, this proposal may divert scarce permittee staff resources away from on-the-ground source identification to database entry for little regional benefit. In its comments Seattle has assumed that this monitoring element is focused on the IDDE program based on description on page 19 of the Explanatory Notes; if this is not the case, Ecology should clarify.

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Seattle has the following comments/concerns on the elements of the Source ID monitoring as presented in the Draft Funding Agreement Attachment A – Scope of Work:

1. Literature review. Seattle recommends that this task focus on case studies of other regions' programs or new methods (e.g., continuous flow or temperature monitoring) as there is a lack of literature. Scope of work for this task needs to be better described.
2. QAPP library. Example QAPPs tailored to the specific IDDE tasks would be helpful for jurisdictions initiating the development of an IDDE program. More information is needed on what the library would be – a website?
3. Information to evaluate source identification programs and share information. More information is needed in the scope of work and explanatory notes to provide constructive comments on this task: what types of information are to be evaluated, how are they to be evaluated, and what is the venue for sharing information? Seattle's initial thoughts are that sharing information on methods is a good idea and that evaluating the applicability of different types of source identification programs worthwhile but better done as an effectiveness study.
4. Database to support regional-scale analyses to identify problems best addressed by broad initiatives. Seattle recommends that this task be eliminated as a database repository of dry-weather field screening data would have questionable benefit and would not identify large-scale or regional problems. Seattle recognizes the importance of addressing ubiquitous pollutants by controlling their original sources (e.g., reducing copper in brake pads). However, Seattle fails to see how sharing of local IDDE dry-weather screening data would be useful in identifying these regional pollutants such as copper, phthalates, and PCBs for the following reasons:
 - These are not the types of pollutants that are tracked in local IDDE programs.
 - IDDE methods of analysis are geared to quick detection of pollutants in the field. Often the resolution of the tests is low and precision, though adequate to locate sources, is much lower than for more analytical monitoring work.
 - usefulness of IDDE screening data for regional scale analysis is limited because IDDE is focused on dry-weather flows in stormdrains which consists primarily of intermittent streams that were previously underground, shallow interflow, lawn & irrigation water, foundation drain discharges, construction dewatering, air conditioner condensate, and discharges for illicit sources.

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Effectiveness Monitoring

As indicated in Comment #2, Seattle strongly recommends inclusion of a local needs option. However, for studies to be conducted as part of the RSMP, Seattle has the following comments on the tasks included in the draft funding agreement consultant scope of work.

1. Literature Review. Won't this task be already completed by issuance of Permit?
2. Competitive Process. This should not be in the contractor SOW as it is an Ecology responsibility.
3. SOPs. Task should be clarified to indicate that SOPs should be for prioritized studies for which there is available funding. As with status and trend SOW comments above, tasks need to be identified for developing QAPPs, identifying technical review processes/deliverables, reporting process/deliverables, and addressing data management and analysis.
4. # Studies conducted. Regardless of whether the local needs option is included, the RSMP effectiveness monitoring draft funding agreement should indicate that contractor will develop and deliver prioritized effectiveness studies as funding allows. The tasks should indicate what deliverables will be required regardless of studies selected (e.g., DQO, QAPP, implementation, technical review, data management/analysis, annual and final reporting).

Annual Review of Information and Results

Overall, Seattle recommends that the tasks indicated in this section should be more fully developed and located in the respective components of the draft funding agreement consultant scope of work. Specifically:

1. Summary of findings. It is not necessary to summarize the various RSMP components (PS Status and Trends, SW Status & Trends, Effectiveness, and Source ID) together. Instead summaries for each component should be included under that component.
2. Western WA small stream status and trend analysis. This is the type of analysis which should be included as a task under the Status and Trends section of the scope of work, not here.
3. Cross-walk. Not clear what the objective of this task is, what a cross-walk is, or what other key monitoring programs are being referred to. Add objective and additional detail or delete.
4. New standard protocols. Recommendations for development of new protocols should be included under each monitoring element, not here.

Comment #6. Responses to Ecology's "Note to Reviewers"

Note to Reviewers #1. How much time do local governments need to incorporate these requirements into their budgets? What month of the year works best for payment due dates for local governments? If there are no net increase in costs associated with permit-required monitoring compared to existing permit requirement, no lag time is needed. However, if there is a significant increase in costs, a rate proposal to adjust funding would be required which is

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typically done on a 2-year cycle. For example, for an increase cost in 2013 or 2014, Seattle would need to have information on the increase by February 2012. Seattle recommends quarterly payments of annual amounts.

Note to Reviewers #2. What do you think is the best method to equitably allocate monitoring costs among permittees, and why? Refer to Comment #1.

Note to Reviewers #3. Do you think there should be such an option (aka local needs)? If so, what would it look like? How would Ecology administer it? What would be the assurances that having some permittees opt out of the RSMP efforts would not compromise its chances for success? Refer to Comment #2, for recommendation for local needs effectiveness monitoring option.

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Monitoring Preliminary Draft Language

Note to Reviewers:

The Department of Ecology is soliciting comments on the preliminary draft language in this document for reissuance of the Phase I Municipal Stormwater General Permit. The preliminary draft language in this section is intended to implement S8 Monitoring requirements.

The draft language for review in this document addresses only the implementation of monitoring requirements in S8. We ask that you limit your comments to the monitoring-related requirements in this section. Ecology will issue a complete draft permit with all proposed changes to permit language in October 2011 for formal public comment.

S8. Monitoring

A. All Permittees, including Primary Permittees and Secondary Permittees, are only required to conduct water sampling or other testing during the effective term of this permit under the following conditions:

1. Any water quality monitoring listed as required for compliance with TMDLs, pursuant to in section *S7 Compliance with Total Maximum Daily Load Requirements* or and Appendix 2 of this permit; and
2. Any sampling or testing required that the Permittee determines is necessary to undertake for characterizing illicit discharges pursuant to sections S5.C8, S6.D.3, or S6.E.3 of this permit; and
3. Permittees, including the Port of Seattle and Port of Tacoma, shall continue to implement and complete monitoring studies required under S8.D, S8.E, S8.F and S8.F.7 of the previous permit cycle (Phase I Municipal Stormwater Permit, Feb. 16, 2007 - Feb. 15, 2012).
 - a. For S8.D, *Stormwater Monitoring* is complete when the permittee has collected three complete water years of data.
 - b. For S8.E, *Targeted Stormwater Management Program Effectiveness Monitoring* is complete when the permittee meets Quality Assurance Project Plan (QAPP) schedules, goals, and objectives.
 - c. For S8.F, *Stormwater Treatment and Hydrologic Management Best Management Practice (BMP) Evaluation Monitoring* is complete when the permittee has collected a minimum of 12 samples from both the influent and effluent

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monitoring stations at each BMP type monitored. In addition, one of the following conditions must also be met:

- i. Statistical goals (determine mean effluent concentrations and mean percent removals with 90-95% confidence and 75-80% power) are met for each monitored parameter.
 - ii. A maximum of 35 samples are collected from both the influent and effluent monitoring stations for each BMP type monitored (Ecology's Guidance for Evaluation of Emerging Stormwater Treatment Technologies, 2008).
- d. For S8.F.7, *Flow Reduction Strategy*, this program is complete in accordance with approved QAPP schedules, goals and objectives.
 - e. Each Permittee is required to submit an Annual Stormwater Monitoring Report for the previous water year with each Annual Report until monitoring programs are completed.
- B. All Permittees shall provide, in each annual report: a description of any stormwater monitoring or stormwater-related studies conducted by the Permittee during the reporting period. Permittees are not required to provide descriptions of any monitoring, studies, or analyses conducted as part of the regional stormwater monitoring program (RSMP) in annual reports. If other stormwater monitoring or stormwater related studies were conducted on behalf of the Permittee, or if stormwater-related investigations conducted by other entities were reported to the Permittee, a brief description of the type of information gathered or received shall be included in the annual report(s) covering the time period(s) during which the information was received.
- C. The cities of Seattle and Tacoma, and Snohomish, King, Pierce, and Clark counties, and the Ports of Seattle and Tacoma shall pay into a collective fund and enter into an agreement with the Department ~~to implement~~ regarding a regional stormwater monitoring program (RSMP). Each agreement shall be in substantially the form of Appendix XX to this Permit. The Department ~~will~~ shall administer the collective fund and implement the monitoring program within available resources in accordance with the ~~arrangements~~ agreements between the Department and each Permittee. The agreements will specify the tasks and deliverables of the RSMP, which shall be subject to available resources. The status of RSMP implementation and completion shall have no effect on any Permittee's compliance with this Permit.

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The cities of Seattle and Tacoma, and Snohomish, King, Pierce, and Clark counties, and the Ports of Seattle and Tacoma shall each notify the Department within 30 days of the effective date of the permit issued in 2012 and effective in 2012 of its intention to conduct an independent effectiveness monitoring study under the local needs option.

For Permittees selecting to fully participate in the RSMP, the Permittee shall pay according to the schedule detailed in S8.C.1 below. For Permittees selecting to conduct an independent effectiveness monitoring study, the Permittee will pay according to the schedule detailed in S8.C.2 below. Each Permittee shall pay the amounts prescribed in this section, according to the following schedule:

1. Pay the amounts prescribed in this section, according to the following schedule:

The first payment is due October 15, 2012~~2013~~, and subsequent payments are due on annually beginning August 15, 2013~~2014~~ (second payment), August 15, 2015 (third payment), August 14, 2016 (fourth payment), and August 15, 2017 (fifth payment). The payment amounts are:

[NOTE TO ECOLOGY: Dates indicated in S8.C.1 and S8.C.2 reflect an effective date August 2013 for a 5-year permit that would result from a two permit approach for the reissuance of the Phase I permit.]

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Note to reviewers:

1. The proposed payment dates above correspond roughly with SWG recommendations. How much time do local governments need to incorporate these requirements into their budgets? What month of the year works best for payment due dates for local governments?

2. The payment amounts are:

[NOTE TO ECOLOGY: Permittee payments in below table do not meet Ecology objectives of equitable allocation and reducing Phase I permittee costs. In addition, Permittee payment amounts in below tables are erroneously low due to errors in allocating RSMP costs for the various options. Refer to Attachment 1. Monitoring Comments and Attachment 4. Updated Permittee Payments for additional detail.]

Permittee	First payment	Second and Third Payments (option 1)	Second and Third Payments (option 2)	Second and Third Payments (option 3)	Fourth and Subsequent Payments (option 1)	Fourth and Subsequent Payments (option 2)	Fourth and Subsequent Payments (option 3)
Clark County	\$ 15,000	\$ 80,195	\$ 75,802	\$ 23,845	\$119,449	\$ 88,742	\$ 63,099
King County	\$ 15,000	\$116,411	\$107,788	\$ 28,112	\$290,544	\$216,854	\$202,245
Pierce County	\$ 15,000	\$144,928	\$133,654	\$ 30,764	\$361,716	\$265,374	\$247,552
Port of Seattle	\$ 5,000	\$ 47,667	\$ 45,434	\$ 21,722	\$118,970	\$ 99,888	\$ 93,024
Port of Tacoma	\$ 5,000	\$ 28,600	\$ 28,140	\$ 19,949	\$ 71,382	\$ 67,447	\$ 62,731
City of Seattle	\$ 15,000	\$233,379	\$213,884	\$ 38,987	\$582,477	\$415,871	\$388,085
Snohomish County	\$ 15,000	\$114,712	\$106,247	\$ 27,955	\$286,304	\$213,963	\$199,546
City of Tacoma	\$ 15,000	\$ 77,869	\$ 72,829	\$ 24,529	\$194,349	\$151,276	\$141,009

2. Permittees who choose to conduct and independent effectiveness study will meet the following schedule:

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- a. Pay the amounts prescribed in this section, according to the following schedule:
The first payment is due October 15, 2013, and subsequent payments are due on annually beginning August 15, 2014 (second payment), August 15, 2015 (third payment), August 14, 2016 (fourth payment), and August 15, 2017 (fifth payment). The payment amounts are:

[NOTE TO ECOLOGY: A table similar to that in Section S8.C.1 would be inserted here to indicate Permittee total payments for RSMP PS status & trends, source ID, and a effectiveness base amount.]

- b. Provide the Department with a detailed monitoring proposal that includes a description of the independent effectiveness study and how the study meets the RSMP criteria to the Department within 30 days after the effective date of this permit. The proposal will be submitted in both electronic and paper form.
- c. Upon approval of the monitoring proposal, Permittees shall prepare and submit a Quality Assurance Project Plan (QAPP) to the Department no later than 90 days after the effective date of this permit. The QAPP shall be submitted in both electronic and paper form.
- d. Approval or final QAPP shall be completed no later than 6 months after the effective date of this permit, provided that this deadline shall be extended by the number of days by which Ecology exceeds 90 days for QAPP review.
- e. Full implementation of independent monitoring program shall begin no later than (insert agreed deadline) after QAPP approval.
- f. A report on the status of the independent effectiveness monitoring conducted under the local needs option shall be submitted with the annual report each year beginning in the second year of the permit effective in 2013. Reports shall be submitted in both paper and electronic form and shall include:
- i. A summary of the purpose, design, and methods of the monitoring program,
 - and
 - ii. The status of implementing the monitoring program.
- g. Final Reports on independent effectiveness monitoring program(s) shall be submitted to Ecology with the fifth year annual report. Reports shall be submitted in both paper and electronic form and shall include:
- i. A comprehensive data and QA/QC report for each part of the monitoring program, with an explanation and discussion of the results of each monitoring project.

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- ii. An analysis of the results of each part of the monitoring program.
- iii. Recommended future actions based on the findings, and
- iv. A description of how the findings are being shared with the stormwater community.

Note to Reviewers:

3. What do you think is the best method to equitably allocate monitoring costs among permittees, and why? The costs proposed in the three options above were generated by:
- a. *Option 1*: distributing all RSMP costs among Phase I and II permittees according to population;
 - b. *Option 2*: evenly dividing **half** of the total costs of the Puget Sound receiving water monitoring among the permittees located in Puget Sound, and **all** of the southwest Washington receiving water monitoring costs among the permittees in southwest Washington, and then distributing the remaining RSMP costs among Phase I and Phase II western Washington permittees according to population; and
 - c. *Option 3*: evenly dividing and distributing costs for effectiveness studies and the source identification information repository among all permittees and dividing the remaining RSMP costs according to population.
- See the explanatory notes for more information.

Note to reviewers:

4. The SWG recommended that there be an option for permittees to decline to participate in the regional effectiveness studies component of the RSMP, but **not** the other components (the status and trends monitoring and the source identification data repository). Ecology has not included an option in this preliminary draft permit for permittees to opt out of the effectiveness study component of the RSMP.
- a. Do you *think* there should be such an option?
 - b. If so, what would it look like?
 - c. How would Ecology administer it?
 - d. What would be the assurances that having some permittees opt out of the RSMP efforts would not compromise its chances for success?

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Note to reviewers:

5. The proposed payment amounts in S8.C.2 for Clark County include a placeholder for a receiving water monitoring program in southwest Washington. Ecology will work with Phase I and Phase II permittees and other stakeholders in southwest Washington to develop a receiving water monitoring program to include in the October formal draft permit. See the explanatory notes for more information.

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Attachment 4. Updated Permit Required Payments from Preliminary Draft Language											
(Note: Option 2 costs were not updated due to difficulty understanding allocation description)											
Phase I	First Payment	2nd & 3rd Payments					4th & Subsequent Payments				
Phase II		1st & 2nd Payments					3rd & Subsequent Payments				
	10/15/2012	8/15/2013 & 8/15/2014					8/15/2015 & annually				
Municipality		Opt 1 - Updated	Opt 1 - Ecol	Opt 2	Opt 3-Updated	Opt 3 - Ecol	Opt 1 - Updated	Opt 1 - Ecol	Opt 2	Opt 3-Updated	Opt 3 - Ecol
Clallam											
Port Angeles		\$8,643	\$7,390		\$22,544	\$17,977	\$21,125	\$18,445		\$35,026	\$29,032
Clark											
Unincorporated	\$15,000	\$94,948	\$80,195		\$30,450	\$23,845	\$232,070	\$119,449		\$167,573	\$63,099
Battle Ground		\$7,760	\$6,554		\$22,464	\$17,826	\$18,967	\$9,762		\$33,670	\$21,034
Camas		\$7,675	\$6,483		\$22,456	\$17,820	\$18,759	\$9,656		\$33,540	\$20,993
Vancouver		\$73,812	\$62,343		\$28,514	\$22,386	\$180,409	\$92,859		\$135,112	\$52,092
Washougal		\$6,266	\$5,292		\$22,327	\$17,723	\$15,315	\$7,883		\$31,376	\$20,313
Cowlitz											
Unincorporated		\$18,862	\$15,931		\$23,481	\$18,592	\$46,103	\$23,730		\$50,721	\$26,390
Kelso		\$5,254	\$4,437		\$22,234	\$17,653	\$12,841	\$6,609		\$29,821	\$19,825
Longview		\$16,100	\$13,598		\$23,227	\$18,401	\$39,350	\$20,254		\$46,478	\$25,057
Grays Harbor											
Aberdeen		\$7,336	\$6,196		\$22,425	\$17,796	\$17,931	\$9,229		\$33,020	\$20,829
Island											
Oak Harbor		\$10,445	\$8,931		\$22,709	\$18,120	\$25,529	\$22,290		\$37,793	\$31,480
King											
Unincorporated	\$15,000	\$136,141	\$116,411		\$34,224	\$28,112	\$332,755	\$290,544		\$230,837	\$202,245
Algona		\$1,238	\$1,058		\$21,866	\$17,388	\$3,025	\$2,641		\$23,653	\$18,971
Auburn		\$30,892	\$26,415		\$24,583	\$19,746	\$75,507	\$65,928		\$69,197	\$59,259
Bellevue		\$54,810	\$46,866		\$26,773	\$21,647	\$133,965	\$116,971		\$105,929	\$91,752
Black Diamond		\$1,869	\$1,598		\$21,924	\$17,439	\$4,567	\$3,988		\$24,622	\$19,829
Bothell		\$14,909	\$12,748		\$23,118	\$18,475	\$36,440	\$31,817		\$44,649	\$37,544
Burien		\$20,524	\$17,550		\$23,633	\$18,922	\$50,166	\$43,802		\$53,274	\$45,174
Clyde Hill		\$1,269	\$1,085		\$21,869	\$17,391	\$3,101	\$2,708		\$23,701	\$19,014
Covington		\$7,867	\$6,727		\$22,473	\$17,915	\$19,228	\$16,789		\$33,835	\$27,978
Des Moines		\$13,062	\$11,169		\$22,949	\$18,328	\$31,927	\$27,877		\$41,814	\$35,036
Duvall		\$2,671	\$2,284		\$21,997	\$17,502	\$6,529	\$5,701		\$25,855	\$20,919
Enumclaw		\$5,124	\$4,382		\$22,222	\$17,697	\$12,524	\$10,936		\$29,622	\$24,251
Federal Way		\$39,584	\$33,848		\$25,379	\$20,437	\$96,751	\$84,478		\$82,546	\$71,067
Issaquah		\$12,113	\$10,357		\$22,862	\$18,253	\$29,605	\$25,850		\$40,355	\$33,746
Kenmore		\$9,209	\$7,875		\$22,596	\$18,022	\$22,509	\$19,654		\$35,896	\$29,801
Kent		\$50,118	\$42,855		\$26,344	\$21,274	\$122,498	\$106,959		\$98,724	\$85,378
Kirkland		\$22,129	\$18,922		\$23,780	\$19,049	\$54,087	\$47,226		\$55,738	\$50,313
Lake Forest Park		\$5,726	\$4,896		\$22,277	\$17,745	\$13,996	\$12,221		\$30,547	\$25,069
Maple Valley		\$10,315	\$8,820		\$22,698	\$18,110	\$25,212	\$22,014		\$37,595	\$31,304
Medina		\$1,329	\$1,136		\$21,874	\$17,396	\$3,248	\$2,836		\$23,794	\$19,096
Mercer Island		\$10,208	\$8,729		\$22,688	\$18,101	\$24,951	\$21,786		\$37,430	\$31,158
Newcastle		\$4,440	\$3,796		\$22,159	\$17,643	\$10,851	\$9,475		\$28,571	\$23,321
Normandy Park		\$2,917	\$2,494		\$22,020	\$17,522	\$7,129	\$6,225		\$26,232	\$21,252
Pacific		\$2,812	\$2,404		\$22,010	\$17,514	\$6,873	\$6,001		\$26,071	\$21,110
Port of Seattle	\$5,000	\$55,746	\$47,667		\$26,859	\$21,722	\$136,254	\$118,970		\$107,367	\$93,024
Redmond		\$24,005	\$20,526		\$23,952	\$19,198	\$58,673	\$51,230		\$58,620	\$49,902
Renton		\$38,456	\$32,883		\$25,275	\$20,347	\$93,994	\$82,070		\$80,813	\$69,535
Sammamish		\$18,316	\$15,622		\$23,430	\$18,746	\$44,768	\$39,089		\$49,882	\$42,173
SeaTac		\$11,546	\$9,873		\$22,810	\$18,208	\$28,221	\$24,641		\$39,485	\$32,976
Seattle	\$15,000	\$272,934	\$233,379		\$46,754	\$38,987	\$667,101	\$582,477		\$440,921	\$388,085
Shoreline		\$24,341	\$20,813		\$23,982	\$19,225	\$59,494	\$51,947		\$59,135	\$50,359
Tukwila		\$8,117	\$6,941		\$22,496	\$17,935	\$19,840	\$17,323		\$34,219	\$28,318
Woodinville		\$5,062	\$4,328		\$22,216	\$17,692	\$12,372	\$10,802		\$29,526	\$24,167
Kitsap											
Unincorporated		\$75,309	\$64,395		\$28,651	\$23,277	\$184,069	\$160,719		\$137,411	\$119,601
Bainbridge Island		\$10,427	\$8,916		\$22,708	\$18,119	\$25,485	\$22,252		\$37,766	\$31,455
Bremerton		\$16,140	\$13,801		\$23,231	\$18,573	\$39,448	\$34,444		\$46,540	\$39,217
Port Orchard		\$4,866	\$4,160		\$22,198	\$17,677	\$11,892	\$10,384		\$29,225	\$23,900
Poulsbo		\$3,994	\$3,415		\$22,119	\$17,607	\$9,761	\$8,523		\$27,886	\$22,716
Lewis											
Centralia		\$6,944	\$5,865		\$22,389	\$17,769	\$16,972	\$8,736		\$32,417	\$20,640
Pierce											
Unincorporated	\$15,000	\$169,491	\$144,928		\$37,279	\$30,674	\$414,267	\$361,716		\$282,055	\$247,552
Bonney Lake		\$7,443	\$6,365		\$22,435	\$17,882	\$18,193	\$15,885		\$33,184	\$27,402
Buckley		\$2,063	\$1,764		\$21,942	\$17,454	\$5,041	\$4,402		\$24,920	\$20,092
DuPont		\$3,537	\$3,024		\$22,077	\$17,571	\$8,644	\$7,547		\$27,184	\$22,095
Edgewood		\$4,292	\$3,670		\$22,146	\$17,631	\$10,492	\$9,161		\$28,345	\$23,122
Fife		\$3,661	\$3,131		\$22,088	\$17,581	\$8,949	\$7,814		\$27,376	\$22,264
Fircrest		\$2,830	\$2,420		\$22,012	\$17,515	\$6,916	\$6,039		\$26,098	\$21,134
Gig Harbor		\$3,354	\$2,868		\$22,060	\$17,557	\$8,197	\$7,157		\$26,903	\$21,846
Lakewood		\$26,241	\$22,438		\$24,156	\$19,376	\$64,138	\$56,002		\$62,053	\$52,940
Milton		\$2,917	\$2,494		\$22,020	\$17,522	\$7,129	\$6,225		\$26,232	\$21,252
Orting		\$2,785	\$2,381		\$22,008	\$17,511	\$6,807	\$5,944		\$26,030	\$21,074
Port of Tacoma	\$5,000	\$33,448	\$28,600		\$24,817	\$19,949	\$81,753	\$71,382		\$73,121	\$62,731
Puyallup		\$17,348	\$14,834		\$23,342	\$18,699	\$42,402	\$37,023		\$48,396	\$40,858
Steilacoom		\$2,810	\$2,402		\$22,010	\$17,612	\$6,867	\$5,996		\$26,068	\$21,107
Sumner		\$4,049	\$3,463		\$22,124	\$24,529	\$9,898	\$8,642		\$27,972	\$22,791
Tacoma	\$15,000	\$91,067	\$77,869		\$30,095	\$24,529	\$222,585	\$194,349		\$161,613	\$141,009
University Place		\$14,070	\$12,031		\$23,042	\$18,409	\$34,391	\$30,028		\$43,362	\$36,405
Skagit											
Unincorporated		\$22,356	\$19,116		\$23,801	\$19,067	\$54,643	\$47,712		\$56,088	\$47,662
Burlington		\$4,007	\$3,426		\$22,120	\$17,609	\$9,794	\$8,552		\$27,907	\$22,734
Anacortes		\$7,492	\$6,406		\$22,439	\$17,886	\$18,313	\$15,990		\$33,259	\$27,469
Mount Vernon		\$13,834	\$11,829		\$23,020	\$18,390	\$33,813	\$29,524		\$42,999	\$36,084
Sedro-Woolley		\$4,478	\$3,829		\$22,163	\$17,646	\$10,944	\$9,556		\$28,629	\$23,373
Snohomish											
Unincorporated	\$15,000	\$134,155	\$114,712		\$34,042	\$27,955	\$327,899	\$286,304		\$227,786	\$199,546
Arlington		\$7,706	\$6,590		\$22,459	\$17,903	\$18,836	\$16,446		\$33,588	\$27,760
Brier		\$2,894	\$2,475		\$22,018	\$17,520	\$7,074	\$6,177		\$26,198	\$21,222
Edmonds		\$18,240	\$15,597		\$23,424	\$18,740	\$44,582	\$38,927		\$49,766	\$42,070
Everett		\$46,426	\$39,697		\$26,005	\$20,981	\$113,473	\$99,078		\$93,052	\$80,361
Granite Falls		\$1,505	\$1,287		\$21,891	\$17,410	\$3,679	\$3,212		\$24,064	\$19,335
Lake Stevens		\$11,894	\$10,170		\$22,842	\$18,236	\$29,071	\$25,383		\$40,019	\$33,449
Lynnwood		\$16,126	\$13,789		\$23,230	\$18,572	\$39,416	\$34,416		\$46,519	\$39,198
Marysville		\$25,884	\$22,133		\$24,124	\$19,348	\$63,266	\$55,240		\$61,505	\$52,455
Mill Creek		\$8,340	\$7,131		\$22,517	\$17,953	\$20,384	\$17,798		\$34,561	\$28,620
Monroe		\$7,439	\$6,361		\$22,434	\$17,881	\$18,182	\$15,875		\$33,177	\$27,369
Mountlake Terrace		\$9,348	\$7,993		\$22,609	\$18,033	\$22,847	\$19,949		\$36,109	\$29,989
Mukilteo		\$8,986	\$7,684		\$22,576	\$18,004	\$21,964	\$19,178		\$35,554	\$29,498
Snohomish		\$4,156	\$3,554		\$22,133	\$17,620	\$10,159	\$8,870		\$28,136	\$22,937
Thurston											
Unincorporated		\$62,480	\$53,425		\$27,476	\$22,257	\$152,714	\$133,342		\$117,709	\$102,173
Lacey		\$17,897	\$15,303		\$23,392	\$18,713	\$43,743	\$38,194		\$49,238	\$41,604
Olympia		\$20,292	\$17,351		\$23,611	\$18,903	\$49,597	\$43,305		\$52,916	\$44,857
Tumwater		\$7,479	\$6,395		\$22,438	\$17,885	\$18,280	\$15,961		\$33,239	\$27,451
Whatcom											
Unincorporated		\$38,017	\$32,508		\$25,235	\$20,312	\$92,921	\$81,134		\$80,139	\$68,938
Bellingham		\$34,585	\$29,573		\$24,921	\$20,039	\$84,532	\$73,809		\$74,868	\$64,276
Ferndale		\$4,999	\$4,275		\$22,211	\$17,687	\$12,219	\$10,669		\$29,431	\$24,082
TOTAL	\$100,000	\$2,227,000	\$1,901,650		\$2,227,000	\$1,948,500	\$5,443,200	\$4,538,113		\$5,443,200	\$4,420,985