



Monitoring and Reporting Guidance

Phase II Municipal Stormwater Permits



May 2010
Publication no. 10-10-030

Publication and Contact Information

This report is available on the Department of Ecology's website at <http://www.ecy.wa.gov/biblio/1010030.html>

For more information contact:

Water Quality Program
P.O. Box 47600
Olympia, WA 98504-7600

Phone: 360-407-6600

Washington State Department of Ecology - www.ecy.wa.gov

Headquarters, Olympia 360-407-6000

Northwest Regional Office, Bellevue 425-649-7000

Southwest Regional Office, Olympia 360-407-6300

Central Regional Office, Yakima 509-575-2490

Eastern Regional Office, Spokane 509-329-3400

Cover Photo: Ecology Photo – An Ecology employee at the Northwest Region in Bellevue collects a water quality sample from a roadside ditch during a winter storm.

To ask about the availability of this document in a format for the visually impaired, call the Water Quality Program at 360-407-6401. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call 877-833-6341.

Monitoring and Reporting Guidance

Phase II Municipal Stormwater Permits

Municipal Stormwater Permit Team
Water Quality Program
Washington State Department of Ecology
Olympia, Washington

This page is purposely left blank

Table of Contents

	Page
Acknowledgements	iv
Introduction	1
Summary	1
Background	2
Thresholds for monitoring requirements	3
How to Prepare for Stormwater Monitoring (S8.C.1.a)	7
Existing receiving water quality concerns	7
Drainage basin characteristics	9
Practical limitations at the sampling site	10
Reporting requirements	11
How to Prepare for Program Effectiveness Monitoring (S8.C.1.b)	12
Select stormwater management plan component	12
Identify and frame the questions	12
Develop the monitoring plan	13
Reporting requirement	15
Preparation for Runoff Treatment BMP Effectiveness Monitoring (Eastern Washington S8.C.1.c)	16
Identify treatment BMPs	16
Categorize the BMPs	17
Summarize the BMPs	17
Reporting requirement	18

Acknowledgements

Members of the Municipal Stormwater Permit Team who contributed to this report are:

- Harriet Beale
- Anne Dettelbach
- Dave Duncan
- Kathleen Emmett
- Julie Lowe
- Christina Maginnis
- Rachel McCrea
- Vince McGowan
- Terry Wittmeier
- Greg Winters

Introduction

Summary

The Washington State Phase II Municipal Stormwater Permits for eastern and western Washington (Phase II permits) regulate stormwater discharges for small municipal separate storm sewer systems (MS4s) as established in Title 40 CFR, part 122.26. The Phase II permits, issued in 2007 and modified in 2009, include requirements for permittees to prepare to conduct a monitoring program in future permits.



This document provides guidance for cities, towns, and counties that are required to prepare for future long-term monitoring under Special Condition 8 (S8.C) of the Phase II permits. The Washington Department of Ecology (Ecology) does not expect that permittees will have to hire outside consultants to fulfill the monitoring report requirement. This information can be developed using local government staff, such as a water resources specialist or environmental planner.

The Phase II Monitoring Program described in Section S8.C includes three types of monitoring:

- Stormwater Monitoring (S8.C.1.a)
- Stormwater Management Program (SWMP) Effectiveness Monitoring/Targeted SWMP Effectiveness Monitoring (S8.C.1.b)
- Runoff Treatment BMP Effectiveness Monitoring (applicable to eastern Washington permittees only) (S8.C.1.c)

Stormwater Monitoring (S8.C.1.a) requires permittees to identify sites suitable for monitoring stormwater discharges based on jurisdictional size and land use types, and to set priorities based on stormwater-related pollution problems.

SWMP Effectiveness Monitoring (S8.C.1.b) requires permittees to identify questions their monitoring may answer to determine the effectiveness of specific components of the Stormwater Management Program (SWMP). The permittee must identify sites for monitoring and create monitoring plans to answer at least two questions. Two types of questions are suggested:

- How effective is a targeted action, or narrow suite of actions?
- Is the SWMP achieving a targeted environmental outcome?

The Phase II permit requires permittees in eastern Washington to prepare to monitor best management practices (BMPs) to evaluate the effectiveness of runoff treatment under S8.C.1.c. This component requires that each eastern Washington permittee, depending on population, select one or two BMPs designed and built in accordance with the *Stormwater Management Manual for Eastern Washington, 2004*, or an equivalent document. The purpose of this requirement is to provide Ecology with a report of progress in implementing BMPs that are appropriate for monitoring.

Background

The monitoring program provides a feedback loop for “adaptive management” of the permittees’ stormwater management programs and Ecology’s municipal stormwater permitting program. The 2007 Phase II permits require permittees to prepare a stormwater monitoring program, but do not require monitoring during this permit term. Further information regarding Ecology’s intent and objectives for the 2007 Phase II Permit monitoring requirements can be found in the fact sheets for each permit:

- NPDES General Permit Fact Sheet for Small Municipal Separate Storm Sewers in Western Washington, March 24, 2006:
www.ecy.wa.gov/programs/wq/stormwater/municipal/phaseIIww/wwphiiifinalfs.pdf
- Fact Sheet for NPDES and State Waste Discharge General Permit for Discharges from Small Municipal Separate Storm Sewers in Eastern Washington, March 22, 2006:
www.ecy.wa.gov/programs/wq/stormwater/municipal/phaseiiEwa/phiiiewafinalfs.pdf

To develop monitoring requirements for the next permit cycle, Ecology will consider the outcomes of three separate monitoring-related efforts currently underway:

1. Phase I Permit monitoring program implementation.
2. Stormwater Workgroup monitoring strategy and implementation recommendations.
3. Phase II Permittee monitoring preparation efforts and reports (as discussed in this guidance document).

Under the 2007 Phase I Municipal Stormwater Permit, Washington State’s six largest cities and counties and two largest ports are implementing a monitoring program that consists of the same general three monitoring components:

- Stormwater monitoring at no more than 3 locations.
- Program effectiveness monitoring.
- Treatment BMP effectiveness monitoring at no more than 4 locations (2 sites for each of 2 BMP types).

The Stormwater Workgroup, representing a broad group of interests, is developing a comprehensive stormwater monitoring strategy and implementation recommendations for Puget Sound. Find additional information about the Stormwater Workgroup at:
www.ecy.wa.gov/programs/wq/psmonitoring/swworkgroup.html.

Finally, Ecology will consider the Phase II permittee monitoring submittals in developing monitoring requirements for the next permit cycle.

Thresholds for monitoring requirements

The monitoring requirements in Special Condition S8.C.1.a through S8.C.1.c apply to cities, towns, and counties covered under a Phase II Municipal Stormwater Permit. *Secondary* permittees are not required to prepare monitoring information under Special Condition S8.C. Secondary permittees are encouraged to participate in monitoring efforts and are required to provide information, maps, and access for sampling efforts upon request.

The following monitoring components apply to both eastern and western Washington permittees:

- Requirements listed in S8.C.1.a, Stormwater Monitoring
- Requirements listed in S8.C.1.b, Targeted SWMP Effectiveness Monitoring.

The following monitoring component applies to eastern Washington permittees only:

- Requirements listed in S8.C.1.c, Runoff Treatment BMP Effectiveness Monitoring.

Population thresholds

Monitoring components S8.C.1.a and S8.C.1.c do not automatically apply to all local government permittees. These requirements apply only to jurisdictions that meet the population thresholds indicated in the permit:

- S8.C.1.a Stormwater Monitoring applies to cities with a population greater than 10,000 and counties with a population greater than 25,000 (see Table 1, below).
- S8.C.1.c Runoff Treatment BMP Effectiveness Monitoring applies to eastern Washington cities with a population greater than 25,000 and counties with a population greater than 50,000 (see Table 2, below).

To determine your accurate population size, use the 2009 annual population projections estimated by the Office of Financial Management and found at www.ofm.wa.gov/pop/estimates.asp (Select Population Density and download the Excel spreadsheets for counties or cities.)

or

Refer to the summary tables in the *2009 Populations Trends* report published in September 2009 found at www.ofm.wa.gov/pop/poptrends/poptrends.pdf

Phase II counties should use the population for the *entire unincorporated county*, not just the urbanized areas covered by the permit.

Table 1. Population Threshold Requirements for Stormwater Monitoring under S8.C.1.a

Jurisdiction Type	Population Threshold	# of Sites	Land Use Designation/Type
City	Populations greater than 75,000	3	Commercial High-Density Residential Industrial
City	Between 10,000 and 75,000	2	Commercial High-Density Residential
City	Population less than 10,000	0	Not applicable
County	Populations greater than 100,000	3	Commercial Low-Density Residential Industrial
County	Populations between 25,000 and 100,000	2	Commercial Low-Density Residential
County	Population less than 25,000	0	Not applicable

Table 2. Population Threshold Requirements for BMP Effectiveness Monitoring under S8.C.1.b (eastern Washington only)

Jurisdiction Type	Population Threshold	# of BMPs
City	Population less than 25,000	0
City	Population between 25,000 and 50,000	1
City	Population greater than 50,000	2
County	Population less than 50,000	0
County	Population between 50,000 and 100,000	1
County	Population greater than 100,000	2

Opportunities for collaboration

Phase II permittees may choose to submit a collaborative report for any monitoring component in lieu of individual reports. Western Washington permittees may collaborate in a single urbanized area or within a Water Resource Inventory Area (WRIA).

Collaboration by WRIA is not feasible in eastern Washington because a number of adjacent cities are in different WRIAs. The permit does, however, encourage eastern Washington permittees to collaborate within an urbanized area. This refers to the urbanized areas designated at the federal level. Maps of these urbanized areas are available on Ecology's website at:

www.ecy.wa.gov/programs/wq/stormwater/municipal/maps.html

How to Prepare for Stormwater Monitoring (S8.C.1.a)

Jurisdictions meeting the population thresholds should select locations for potential future long-term stormwater monitoring that provide a good opportunity to evaluate water quality improvements as a result of stormwater management actions. To do this, you will need to consider:

- Existing receiving water quality concerns.
- Drainage basin characteristics.
- Practical limitations at the sampling site.

Existing receiving water quality concerns



Ecology encourages you to select stormwater monitoring locations where you already have an interest in the water quality, or beneficial uses of the receiving water.

To find information regarding water quality problems and surface water quality data in your area, refer to the resources in Table 3. You may consult other resources.

Table 3. Resources for Water Quality Problems and Surface Water Quality Data

Data resource	Where to find it
Washington State's Water Quality Assessment (especially categories 5, 4a and 4c)	www.ecy.wa.gov/programs/wq/303d/WQAssessmentCats.html Water Quality Atlas: https://fortress.wa.gov/ecy/wqamapviewer/default.aspx
Intensively Monitored Watersheds	www.ecy.wa.gov/programs/eap/imw/index.html
Endangered Species Act/Critical Habitat Listed Waters	www.nmfs.noaa.gov/gis/data/critical.htm
Shellfish Protection Areas	http://ww4.doh.wa.gov/scripts/esrimap.dll?name=bioview&Cmd=Map&Step=1
Washington's Environmental Information Management Database (EIM)	www.ecy.wa.gov/eim/

Drainage basin characteristics

In order to evaluate drainage basin characteristics, you must be able to closely estimate drainage basin boundaries. Consult your stormwater system map (GIS, AutoCAD, etc.), topographic maps, aerial photographs, zoning maps, and any other relevant references. As you narrow down your search for a stormwater monitoring location, it may be helpful to visit the drainage basin to visually verify its boundaries.

Land use

As noted earlier, the permit requires you to identify possible stormwater monitoring locations that are representative of a particular land use.

Land use categories include:

- Low-density residential
- High-density residential
- Commercial
- Industrial

Table 4 below provides characteristics to consider for each land use. However, density definitions can vary from jurisdiction to jurisdiction and may be defined locally in codes and comprehensive plans. Report the residential density definitions you use if they differ from those in Table 4.

Table 4. Suggested Land Use Characteristics/Definitions

Land use category	Characteristics
High Density Residential	4 dwelling units per acre or greater
Medium to High Density Residential	2 to 4 dwelling units per acre
Low Density Residential	1 to 2 dwelling unit per acre
Commercial	Includes multi-family residential
Industrial	Not predominated by one facility with few operators

How you decide a particular drainage basin represents a land use will vary across jurisdictions. Calculate the percentage of each land use within the selected drainage basin. In general, the basin represents the land use with the highest single percentage. For example, a basin with 25% low-density residential, 30% medium to high-density residential, and 45% commercial could be considered representative of a commercial land use. In this example, you would report this drainage basin to be dominated by the commercial land use with contributing land uses of medium to high density and low density residential.

Size

You may consider the size of drainage basins to narrow your choices. The land area size for a good candidate drainage basin would be:

- Large enough to generate a sufficient volume of runoff in a typical storm to sample for analysis, and
- Not so large that it takes too long for the rainfall entering the MS4 at the most up-gradient part of the basin to reach the sampling site.

While these factors are a consideration, Ecology is not specifying a target drainage area size or requiring you to calculate a “time of concentration” for the potential drainage basins for stormwater monitoring.

Existing conditions

You may want to consider the presence of certain existing conditions when selecting a drainage area for monitoring.

Existing conditions at a sampling site that can complicate or preclude stormwater monitoring include:

- Tidal influence.
- Base flow (from groundwater, historical stream, seep, etc.).
- Steep slope immediately up-gradient of sampling site.
- Back water or standing water conditions.

Practical limitations at the sampling site

For candidate drainage basins, you will need to specify a down-gradient location in the MS4 for a sampling site. The sampling site could be an outfall, maintenance hole, vault, or other feature of the MS4 where the discharge flow drains the entire selected drainage area and is accessible for sample collection. Sample collection could involve grab samples collected by field staff, installation of a flow meter in the pipe or ditch, installation of intake tubing from the discharge flow to the automatic sampling device, and/or installation of a sediment trap.

Stormwater system and sampling site factors

When selecting a sampling site, consider that the intent of this stormwater monitoring requirement is to collect a sample characteristic of the quality of stormwater in the selected drainage area. Stormwater system influences or site factors that can complicate the collection of a characteristic stormwater sample include:

- Stormwater contribution by another jurisdiction’s MS4 or dominated by a single major property (such as a school, airport or industry).

- A location immediately down gradient of a stormwater treatment or detention facility (unless such stormwater treatment is characteristic of the corresponding land use in your jurisdiction).
- Inability to isolate a single stormwater flow for sampling at the sampling site (e.g., a maintenance hole or vault with multiple inlets).

Access

An appropriate sampling site for stormwater monitoring will provide:

- Safe access by field personnel throughout the year (i.e., parking, traffic control, vegetation, steep slopes, weather-related limitations, confined space entry restrictions).
- Adequate space for installing equipment and for sampling.
- Long-term access and use (i.e., if privately owned land, is it necessary to lease a parking stall?).
- Security from vandalism/theft and wildlife pests (i.e., is it possible to install an outdoor enclosure?).

Record the possible site constraints for installation of and access to monitoring equipment for each selected stormwater monitoring site. You are required to report site constraints for selected stormwater monitoring sites.

Reporting requirements

In the annual report due by March 31, 2011, Phase II permittees must report the locations selected for potential future stormwater monitoring. The report must include the following information for each selected stormwater monitoring site.

- A brief description of why each site was selected.
- A list of the possible site constraints for installation of and access to monitoring equipment that you identified for each selected site.
- A brief description of the drainage basin characteristics, including size in acreage, dominant land use and other contributing land uses. If you provide a map, label the receiving waters and monitoring locations.
- A brief description of any water quality concerns in the receiving water of each selected outfall or conveyance.

If you have not yet completed site selection, submit a description of the status of identification of sites for stormwater monitoring.

How to Prepare for Program Effectiveness Monitoring (S8.C.1.b)

Each Phase II city, town, or county must prepare to conduct monitoring to determine whether selected stormwater management activities are effective at protecting and improving water quality. Ecology encourages you to select effectiveness topics that are of interest to your community. This is an opportunity for you to evaluate and improve the effectiveness of your program by collecting and applying the results of water quality samples.

To prepare for potential future Program Effectiveness Monitoring and comply with the requirements in S8.C.1.b:

- Select stormwater management component(s) that are of interest to your jurisdiction.
- Identify and frame two question(s) you could answer through monitoring.
- Develop the monitoring plan (i.e., describe how you would conduct a monitoring study to answer the question).

Select stormwater management plan component

Each question must relate to one of the SWMP components required by the Phase II permits (Special Condition S5). You may choose to study an entire SWMP component (such as your IDDE program) or you can select a single activity or suite of activities that you perform to meet a specific requirement within a SWMP component (such as your field assessment protocols intended to detect illicit connections). As you choose the component or activity(s), consider what types of water quality sampling will provide answers regarding effectiveness.

Identify and frame the questions

The Phase II permit requires that your monitoring plan answer the following types of questions:

- How effective is a targeted action or narrow suite of actions?
- Is the SWMP achieving a targeted environmental outcome?

Examples for each type of question are provided below. In many ways, the two types of questions are very similar. Focus on framing two suitable questions that will help you determine the effectiveness of the SWMP component or set of activities. Determine why the question is worth asking and how you might adjust how you implement your SWMP depending upon the outcome of the study. As you select questions, consider what water quality parameters you would use to answer each question.

How effective is a targeted action or narrow suite of actions?

For this type of question, first identify the purpose or environmental goal of the SWMP component or activity(s). You can then frame the question in terms of the effectiveness of the action at achieving the goal. Examples include:

- Is street sweeping more cost effective than catch basin cleaning at reducing the discharge of toxic pollutants that adhere to sediments?
- Is my illicit discharge detection and elimination dry weather outfall screening effective in identifying sources of contamination?
- How effective is my community's illicit connection detection and elimination program at finding leaking septic systems?
- Is the small business education activity effective in improving implementation of source control BMPs at targeted businesses?

Is the SWMP achieving a targeted environmental outcome?

For this question type, you need to identify the environmental outcome that a chosen SWMP topic is intended to have. Examples include:

- Does the elimination of an illicit sewer connection have a measurable effect on fecal coliform counts in the receiving water?
- Does stormwater system cleaning produce a measurable improvement in the quality of stormwater discharges?
- Does an additional construction site inspection during the wet season produce a measurable improvement in sediment runoff?
- Does the implementation of pesticide application policies reduce the pesticides found in outfall discharges to fish-bearing creeks?

Develop the monitoring plan

The Phase II permit requires that you develop a monitoring plan to describe how you would evaluate the two questions to determine the effectiveness of stormwater management program activities. This monitoring plan is *not* intended to be a Quality Assurance Project Plan (QAPP) nor a detailed sampling and analysis plan.



You may prepare two separate monitoring plans (one for each question) or, if the questions are related, one monitoring plan that addresses both questions. If you decide to prepare one monitoring plan, label each section to clearly identify each distinct question.

For each selected question, you must identify the media to be monitored.

Selected media must include one or more of the following:

- Stormwater (e.g., being discharged from an outfall or collected from within the MS4).
- Sediment (e.g., solids in a catch basin sump or in-line, or sediments in the receiving water).
- Receiving water (i.e., in-stream ambient water).

Describe the specific parameters to be measured in stormwater, receiving water, or sediment. Selected parameters or attributes must be one or more of the following:

- Physical (e.g., stream characteristics such as stream bank erosion, turbidity, presence of invasive species, canopy cover, discoloration, grain size of sediments, sediment transport).
- Chemical (e.g., concentration of dissolved copper, phosphorus, PCBs, PAHs).
- Biological (e.g., benthic macroinvertebrate presence/absence and/or diversity, microinvertebrate presence/absence including fecal coliform, E. coli, viruses, algae).

You may include additional techniques for gathering information, such as surveys, focus groups or visual observations, if appropriate to help answer the question. The monitoring plan can also include an approach to collecting data in order to identify a problem or to characterize stormwater discharges for planning purposes.

Develop the monitoring plan(s) to include the following information for each question (permit language from S8.C.1.b.iii is italicized):

- *A statement of the question, an explanation of how and why the issue is significant to [your jurisdiction] and a discussion of whether and how the results of the monitoring may be significant to other MS4s.*
- *A specific hypothesis about the issue or management actions that will be tested.* The hypothesis may be the same as your statement of the question. In general, a hypothesis is the basis of a credible, testable, and actionable monitoring study. A hypothesis should make assumptions about what might happen or what is expected to happen.

An example of a question and hypothesis statement is:

- Question: Does an additional construction site inspection during the wet season produce a measurable improvement in sediment runoff?
- Hypothesis: One additional inspection of construction sites during the wet season achieves significant reduction in sediment transport to receiving waters.
- *Specific parameters or attributes to be measured.* Include the media that you have selected for monitoring and the monitoring sites and/or drainage basins where you would propose to conduct the study.
- *Expected modifications to management actions depending on the outcome of hypothesis testing.* Describe how you might change your SWMP component or

activity based on the results of the program effectiveness monitoring. For example, how would you adjust street-sweeping frequencies if this were found to be highly effective at reducing the discharge of toxic pollutants?

A monitoring plan that includes all of the above-listed items will document the proposed purpose, design, and methods sufficiently to meet the associated annual reporting requirement.

Reporting requirement

In the annual report due by March 31, 2011, Phase II permittees must report on the monitoring plan(s) for potential future program effectiveness monitoring.

If your monitoring plan(s) is completed and includes the information from the list above, you may submit that document to meet the S8.C.2.a.ii reporting requirement.

If your monitoring plan is not yet complete by the March 31 due date, you must report on the status of developing the monitoring plan(s) and include a summary of:

1. The two questions you are proposing to evaluate.
2. Purpose of the two proposed questions (i.e., how you would adjust your program in response to the findings).
3. Design for each question, including:
 - a. Types of media to be collected.
 - b. Proposed method for collecting and analyzing the media. Sampling methods can include grab samples or composite samples.
 - c. Specific parameters in the media to be analyzed.
 - d. Measurements to be done in the field by field staff or in the laboratory.
 - e. Anticipated schedule (i.e., phasing, frequency, duration, triggers) for sampling and field measurements.
 - f. Proposed location for monitoring, including maps or diagrams showing the physical boundaries of the study area as well as proposed measurement and sampling locations.

Preparation for Runoff Treatment BMP Effectiveness Monitoring (Eastern Washington S8.C.1.c)

Phase II permittees in eastern Washington that exceed population thresholds (see pages 6-7) are required to prepare to monitor the effectiveness of one or more stormwater treatment BMPs. The 2007 *Phase II Eastern Washington Municipal Stormwater General Permit* assumes that permitted cities and counties will have constructed stormwater treatment BMPs designed in accordance with the standards in the *Stormwater Management Manual for Eastern Washington* (or an approved equivalent manual). These can be either public or private facilities.



Because many eastern Washington permittees will have only recently implemented the *Stormwater Management Manual for Eastern Washington*, Ecology expects that not all jurisdictions will have treatment BMPs readily available to monitor. At this time, Ecology is requiring only that you gather and report information. Ecology is interested in the status of stormwater treatment BMPs that have been constructed in eastern Washington.

In order to prepare to conduct future treatment BMP effectiveness monitoring, qualifying eastern Washington Phase II permittees should:

- Identify the treatment BMPs installed or planned in your jurisdiction.
- Categorize the treatment BMPs.
- Summarize your findings.

Ecology has prepared a form (next page) that you may use to report your findings.

Identify treatment BMPs

The first step is to evaluate runoff treatment BMPs installed in your jurisdiction and identify the design standards under which the BMPs were built. The intent is to determine whether it was sized and designed using the standards in the current *Stormwater Management Manual for Eastern Washington* (or an equivalent document). For example, a wet pond that was built 10 years ago is unlikely to meet the current design standard.

To identify stormwater treatment facilities, you may review permit and/or engineering files, interview site plan reviewers, and review past and current capital improvement

plan(s). If you know the type of BMP for a project, include it in your research results. If you do not know the BMP type, record the project name or location as a potential future treatment BMP.

Categorize the BMPs

The eastern Washington Phase II Permit lists three treatment BMP categories: basic treatment, metals treatment, and oil treatment. Within each category are a number of different types of treatment BMPs. For each type of treatment BMP, record those you found in your research along with the relevant attributes (see the table below) and those you plan to install.

Summarize the BMPs

Ecology recommends you use the following table to summarize the information.

BMP Type	# Installed per design standard	Location(s)	# Planned per design standard	Planned Location(s)	Found at least 2 of same type? (Y/N)
Basic Treatment Category					
Biofiltration swale					
Vegetated filter strip					
Wet-pond					
Wet-vault					
Treatment wetland					
Sand filter					
Dry pond					
Extended detention dry pond					
Metals Treatment Category					
Amended sand filter					
Two facility treatment train					
Bio-infiltration swale					
Oil treatment Category					
Bio-infiltration swale					
Biofiltration swale					
Vegetated filter strip					
Linear sand filter					
Catch basin insert					
Catch basin preceded by passive oil control vault					

Note that a “Y” response in the last column indicates that the BMP type and associated locations are identified for potential future treatment BMP effectiveness monitoring.

Reporting requirement

In your fourth year annual report (due March 31, 2011), include a brief description of the status of site identification for BMP effectiveness monitoring.

The permit requires that you submit a report identifying BMP(s) selected for runoff treatment BMP effectiveness monitoring in your fifth year annual report, due March 31, 2012. You may fulfill the permit reporting requirement by submitting the table above. For reports in alternate formats, ensure you have included the following information:

- The number of BMPs built and designed in accordance with the 2004 *Stormwater Management Manual for Eastern Washington* or equivalent document.
 - Include a location description and description of the type of BMP(s).
 - Indicate whether or not one type of BMP is available at two sites.

If no BMPs have been built and designed in accordance with the 2004 manual or equivalent, in your jurisdiction, indicate this in your annual report.

If no BMPs have been built in your jurisdiction but you have plans to build BMPs in accordance with the eastern Washington manual (or equivalent document), include a brief description of the following information in your fifth-year annual report:

- Type(s) of BMPs planned for installation in your jurisdiction.
- Possible sites for installation.

Please include in your report any information regarding collaboration or coordination efforts planned or possible for BMP effectiveness monitoring.