

National Pollutant Discharge Elimination System (NPDES)

Storm Water Management Program Site Registration Form for Municipal Separate Storm Sewer Systems (MS4s) General Permit

The site registration application (SRA) is for local governments or other regulated entities to submit the required information necessary detailing their Storm Water Management Program for compliance under the National Pollutant Discharge Elimination System (NPDES) MS4 General Permit to discharge storm water runoff from a Phase II municipal separate storm sewer system (MS4s).

An authorized signature as required under 47CSR10 is needed to complete the application. All information should be included on this form or if needed, additional information can be attached at the end of the SRA.

Two (2) copies of the site registration application form shall be mailed to the following office below.

**West Virginia Department of Environmental Protection
Division of Water and Waste Management
601 57th Street, SE
Charleston, WV 25304**

Part I. General Information

1. MS4 Operator

Name of city, county, or other public entity: Berkeley County
Street Address: 400 West Stephens Street, Suite 202
City, State, Zip: Martinsburg, WV 25401
Ownership status: Federal State Public Other Entity

2. Local staff contact (person responsible for program implementation and coordination):

Name: William J. Teach, PA **Phone:** 304-264-1966
Title: County Engineer **E-mail:** wteach@berkeleycountycomm.org

3. Operator Type

- City
- County
- Town
- Other (list):

4. Description of Storm Sewer System

A. Area of land served by your MS4 (in acres):

If city, town, or other give:

If county give:

Area within current corporate boundaries _____ Area in acres 204,800
 Area that is urbanized (2000 Census) _____ Area that is urbanized _____

For all MS4s, give 2000 Census population for area served 75904

B. Storm Drainage Infrastructure:

Please provide estimates, using the most accurate information available at this time, for the following storm drainage infrastructure features owned or operated by the MS4.

Conveyance system:		Flow Control system:		Regional Facilities: 0
Open ditches (miles or feet)	<u>8250'</u>	Detention facilities (estimate number operated by MS4)	<u>0</u>	
Storm sewers (miles or feet)	<u>0</u>	Retention facilities (estimate number operated by MS4)	<u>0</u>	
Outfalls (estimate number)	<u>1</u>	Treatment system:		
Catch basins (estimate number)	<u>0</u>	Treatment facilities (estimate number operated by MS4)	<u>0</u>	

5. Map Requirements:

Include a map or maps that identifies:

- City, county, or other boundaries
- State or Federal vocational/technical/college/university campuses and military institutions
- Urban area (as defined by the 2000 Census)
- Municipal/county wastewater treatment plants, outfalls, uncontrolled sanitary landfills, vehicle fleet maintenance centers, power plants, airports, and other municipally owned or operated industrial activities
- Arterial city or state roads, (additional roads if needed),
- Receiving waters and discharge points
- Streams and waterways and drainage basins within the MS4

Please assure that information is legible. Multiple maps must be of the same scale, 1:1000 or 1:2000. Submit paper maps folded to 8.5 x 11.”

6. Co-Permit application status information:

(Complete this item only if co-permitting)

- Name of MS4 Operator: _____
- Contact Person: _____ Telephone: _____
- Address: _____
- City: _____ State: _____ Zip Code: _____
- Have legal agreements been finalized between the co-permittees? ____ Yes ____ No
(If “yes” provide agreement and Label as “Attachment 6”)

Part II. Your Proposed Storm Water Management Program

This application requires you to identify Best Management Practices (BMPs) currently performed by your MS4, and provide information on your planned storm water management program and proposed BMPs. The following six sections correspond to the six minimum control measures for a Phase II storm water quality management program.

Minimum Control Measures

The National Pollutant Discharge Elimination System (NPDES) Phase II Rule defines a storm water management program composed of six minimum control measures that, when implemented together, are expected to reduce pollutants discharged into receiving water bodies to the Maximum Extent Practicable (MEP). The six control measures include:

1. Public Education and Outreach on Storm Water Impacts
2. Public Involvement/Participation
3. Illicit Discharge Detection and Elimination
4. Construction Site Runoff Control
5. Post-Construction Storm Water Management in New Development and Redevelopment
6. Pollution Prevention/Good Housekeeping for Municipal Operations

Each minimum control measure requires the selection and implementation of BMPs that comprehensively address the specific storm water issues in your area.

The minimum requirements are provided in Appendix I as the minimum level necessary to comply with 40 CFR 122.34. Regulatory guidance from 40 CFR 122.34 is also provided for each minimum control measure.

Additional guidance on selecting BMPs and developing measurable goals can be found at the following EPA website: www.epa.gov/npdes/stormwater/measurablegoals/index.htm

Instructions:

For each minimum control measure, state your control objective and describe BMPs selected for implementation in your jurisdiction. For each BMP, include a brief description, measurable goal, and milestones as appropriate towards achieving that goal. Indicate if the BMP is part of an existing program, and if another entity will share responsibility for implementing the BMP.

In cases where another entity will perform one or more BMPs or components thereof on behalf of the permittee, specifically describe the activities each entity will conduct, and include reference to legal agreement where appropriate.

List as many BMPs as necessary to fulfill the requirements of the General Permit . If you have more than 2 BMPs for a control measure, copy/paste additional tables as necessary.

1. Public Education and Outreach on Storm Water Impacts

Does your MS4 presently perform public education and outreach activities on storm water impacts?	<input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No
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Minimum Measure Objective 1:	To create and implement a public education program for the community. We plan to do this by compiling stormwater management information pertinent to our County, including the impacts of stormwater discharges on water bodies, why controlling the discharge is important, and steps the public can take to reduce pollutants in the stormwater runoff. The information will then be published as a brochure and a special link on the County webpage.
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BMP 1(a):	The County will publish the educational brochure and include it in the annual tax bills that are mailed to all property owners. The brochure will include County contact information, including the website, for citizens who have questions and/or comments.
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Is this part of an existing program?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is another entity involved in BMP implementation?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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Measurable Goal:	The County will document all brochures that are mailed and document calls and emails that are received about the stormwater management program as a result of the brochure. A copy of the brochures and a record of contacts will be included in our annual report to WV DEP.
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Milestones:	The County will send out the brochure in approximately 33% of the resident tax bills each year for the next 3 years, starting with the July 2007 mailing. By 2010, each property owner will have received a copy. Additional brochures will go out the following year to new residents.
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BMP 1(b):	To create and implement a series of educational sessions and open discussions for industry professionals to raise awareness and understanding of stormwater impacts and the benefits of BMPs.
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Is this part of an existing program?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is another entity involved in BMP implementation?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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Measurable Goal:	The County will create a series of educational sessions and open discussions for developers, design engineers, contractors, and other industry professionals.
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Milestones:	The County started yearly educational meetings in mid-2005. The County will create the education series plan, and conduct the first session in June 2007. Industry professionals will be given printed notes and contact information, including the website, in case they have questions or comments.
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2. Public Involvement/Participation

Does your MS4 presently provide opportunity for the public to be involved or participate in the development or implementation of a storm water management program?	<input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No
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Minimum Measure Objective 2:	To involve the citizens in stormwater management decisions, and encourage input and feedback.
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BMP 2(a):	The County will ensure the residents have the opportunity to ask questions and provide input and feedback on any Ordinance adoption or revision. Public meetings will be held with adequate notice.
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Is this part of an existing program?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is another entity involved in BMP implementation?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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Measurable Goal:	Before requirements change, drafts of new regulations will be made public through the county webpage and the Engineering Office. Meetings will be held (with appropriate notice) for the public's input and comment. Engineering staff will be available to answer questions, accept feedback, and help residents understand the stormwater program.
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Milestones:	Three meetings were held in 2003-2004. Meetings will be scheduled in 2007 to handle questions, concerns, and feedback regarding the new draft of the Subdivision Regulations.
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BMP 2(b):	The County will organize Community Watch Groups for different regions of the County. The Community Watch Groups will be encouraged to pay attention to the pollution and stormwater situation in their region, and advise the County and stormwater maintainers of problems and potential problems. With cooperation, the problems will be improved or eliminated.		
Is this part of an existing program?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is another entity involved in BMP implementation?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Measurable Goal:	The County will evaluate how many regions are necessary for this to be an effective BMP. The County will also gauge the interest of residents at public meetings, and with a "call to action" in published materials, including the educational brochure, by Dec 2007.		
Milestones:	County will evaluate how many regions are necessary, how many people would be willing to participate, and how to structure the program by Dec 2007. Committees will be formed in 2008.		

3. Illicit Discharge Detection and Elimination

Does your MS4 presently have a program for the detection and elimination of illicit discharges to the storm sewer?	<input type="checkbox"/> Yes / <input checked="" type="checkbox"/> No
Does your MS4 presently have an ordinance in place that enables you to prevent and eliminate illicit discharges to the storm sewer?	<input type="checkbox"/> Yes / <input checked="" type="checkbox"/> No

Minimum Measure Objective 3:	To improve methods of illicit discharge detection and develop efforts to eliminate pollutants caused by illicit discharge.
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BMP 3(a):	The County will produce and maintain a storm sewer system map to demonstrate awareness of the intake and discharge areas of the County system. Map is attached to this application.		
Is this part of an existing program?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is another entity involved in BMP implementation?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Measurable Goal:	A COOP Program was established to map existing facilities and compile discharge data. Complete 2005.		
Milestones:	The County will keep the map current by verifying changes to the County system once per year. The map will be updated, and a new copy of the revised map will be included in the annual report to DEP.		

BMP 3(b):	The County will monitor water quality for various pollutants, including heavy metals, toxins, oil and grease, solvents, nutrients, viruses, and bacteria. Once sources of these pollutants are determined, DEP will be notified, and the offender will be directed by the County to correct the problem.		
Is this part of an existing program?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is another entity involved in BMP implementation?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Measurable Goal:	The County will determine the most effective areas for testing by Dec 2007. In addition to randomly selected locations, areas downstream of non-stormwater discharges will be considered priority areas, including areas downstream of old sanitary lines, fire stations, car washes, farms, and drain outlets. These problem areas will be determined by visual screening, water sampling from manholes and outfalls, and public complaints.		
Milestones:	The most effective areas will be specified by Dec 2007. Testing will begin in 2008. All actions and observations will be documented and a log will be included in the annual report to DEP.		

4. Construction Site Run-off Control

In the following spaces, indicate if your MS4 presently performs these activities related to construction site runoff control.	
Activities:	Existing?
Construction site plan review	<input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No
Responding to public input and complaints	<input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No
Enforcement and inspection procedures	<input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No
Training and education	<input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No
Does your MS4 presently have an ordinance or are you working on one addressing construction site run-off control?	<input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No
Are you working on a sediment control ordinance addressing construction site run-off control?	<input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No
What is the status of your Ordinance? Active - SWM and Sediment & Erosion Control Ordinance	

Minimum Measure Objective 4:	To improve methods of controlling construction site run-off.
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BMP 4(a):	The County will inspect construction sites to ensure that the site operators are controlling waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality.		
Is this part of an existing program?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is another entity involved in BMP implementation?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Measurable Goal:	By June 2007, the County will finalize a checklist of pollution items for the use of the building inspectors, including discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste. The County inspectors will be advised to perform a "Pollution Inspection" at each construction site inspection, from the first Erosion and Sediment Control inspection to the Final Inspection on the finished structures.		
Milestones:	The County will finalize the list in June 2007, and educate the inspectors of the new inspection items. The inspectors will start on-site inspections immediately after, and notify DEP of violations.		

BMP 4(b):	The County adopted the "Stormwater Management and Sediment and Erosion Control Ordinance for Berkeley County, WV" in order to, among many other things, improve methods of controlling construction site run-off. The Ordinance outlines proper procedures for controlling stormwater during construction, which are enforced throughout the process of plan approval and construction.		
Is this part of an existing program?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is another entity involved in BMP implementation?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Measurable Goal:	Before any construction occurs, developers submit complete design drawings to the County for review and comment. The engineering staff reviews the plans for compliance with the Subdivision Regulations and the Ordinance, and offers comments back to the developer. The developer must comply with all regulations pertaining to construction site runoff control in order to get approval from the Engineering Department. Once approval is granted and construction begins, County inspectors monitor the construction site for compliance with the approved plan. If the contractor is not in compliance, and does not correct issues immediately, a "STOP WORK" order is issued. At that time, the site must be stabilized and the construction activity must stop until the problem is resolved.		
Milestones:	Starting immediately, the County will log all "STOP WORK" orders filed against construction activity. A summary of the violation, action, and resolution will be recorded. A copy of this record will be included in our annual report to WV DEP.		

5. Post-Construction Storm Water Management in New Development and Redevelopment

Please answer the following questions regarding post-construction storm water management in new development and redevelopment.	
Does your MS4 presently have a development permit process in place?	<input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No
Does your MS4 presently have a storm water management technical manual?	<input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No
Does your MS4 presently have a plan review process for new development and redevelopment?	<input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No
Does your MS4 presently inspect new storm water facilities?	<input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No
Does your MS4 presently inspect existing storm water facilities?	<input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No
Does your MS4 presently have a storm water ordinance addressing post construction storm water controls?	<input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No
Are you working on a storm water ordinance addressing post construction storm water controls?	<input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No
What is the status of your Ordinance? Active - SWM and Sediment & Erosion Control Ordinance	
Does your MS4 presently promote and/or provide incentives for Low Impact Development?	<input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No

Minimum Measure Objective 5:	To improve methods of enforcing proper post-construction stormwater management.
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BMP 5(a):	Implement a consistent schedule of inspection of all existing private stormwater management facilities (ponds, infiltration areas, underground detention systems, bioretention areas, rain gardens), and a procedure for correcting problems when they are observed.		
Is this part of an existing program?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is another entity involved in BMP implementation?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Measurable Goal:	To implement a schedule of inspections of existing private stormwater management facilities. Documented inspections to begin in June 2007, and will be ongoing. At minimum, private stormwater facilities will be inspected one year after construction, and then once every 2 years after that. A copy of the inspection report will be placed in each project file, and a summary of all inspection dates and results will be included in our annual report to WV DEP.		
Milestones:	Documented inspections to begin June 2007, and will be ongoing. Inspections started 2005.		

BMP 5(b):	Develop an award incentive to Home Owners Associations (HOA) in the way of an 'Excellence in Stormwater Management Community Award'. The program will publicly recognize HOAs for maintaining excellent stormwater management facilities at a County Commission Meeting, in the local newspaper, and in County publications. This is an opportunity for the residents to take pride in their efforts, and be an inspiration to others.		
Is this part of an existing program?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is another entity involved in BMP implementation?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Measurable Goal:	The County will obtain updated contact information for each HOA in Berkeley County with a stormwater management facility. The County will determine criteria for the award, and start drafting rules and regulations for the award program, by July 2007. Awards can be issued to communities who have actively responded to complaints downstream, and improved/maintained drainage in their community.		
Milestones:	First award(s) will be granted after March, 2008. Each year, the inspection results will be analyzed and judged by the Engineering Department.		

6. Pollution Prevention/Good Housekeeping for Municipal Operations

Does your MS4 presently have a program in place to promote pollution prevention and good housekeeping for municipal operations?

Yes / No

List municipally owned or operated facilities that would reasonably be expected to discharge contaminated runoff and are not covered under a NPDES permit: for example – vehicle maintenance garages, waste transfer operations, golf courses, salt or other materials storage, municipal construction activities or open landfills. Also, indicate if there is a documented pollution prevention plan in place.

Facility or type of facilities/operation:

Pollution Prevention Plan?

Judicial Center/Public Offices

Yes / No

Pikeside Waterway

Yes / No

Yes / No

Yes / No

Yes / No

Minimum Measure Objective 6:

To promote pollution prevention and good housekeeping for municipal operations.

BMP 6(a):

The County has constructed a raingarden at the new Judicial Center, which was designed by DEP. The County will maintain the stormwater system, by making certain it operates correctly and it is clear of debris and litter.

Is this part of an existing program?

Yes
 No

Is another entity involved in BMP implementation?

Yes
 No

Measurable Goal:

Design completed 2006, Installed 2006. The County will clear any debris that is found in our around the raingarden on a monthly basis. The system will be checked for effectiveness during considerable rain events. In the event that the system needs repair, DEP will be contacted immediately and steps will be taken to return the system to working order immediately.

Milestones:

Field testing was complete 2006, it was designed and constructed in 2006. It will be monitored monthly for litter and debris, starting July 2007. It will also be monitored during heavy rain events for effectiveness. A log will be kept, and included in the annual report to DEP.

BMP 6(b):

The County will maintain Pikeside Waterway, and make certain that the grassy waterway is clear of debris and litter, and is void of any obstructions. The waterway will also be monitored for erosion and sediment control, and illicit discharge, and steps will be taken immediately to correct the situations as they arise.

Is this part of an existing program?

Yes
 No

Is another entity involved in BMP implementation?

Yes
 No

Measurable Goal:

Starting July 2007, County staff will walk the length of the Pikeside Waterway twice per year to observe it's effectiveness, clean it of debris and litter, and note any suspect discharges.

Milestones:

Inspections are ongoing. Logs will be kept and included in the annual report to DEP, starting July 2007.

Part III. Record keeping and Reporting

The permittee will comply with record keeping and reporting requirements per *40 CFR 122.34(g)*

Record keeping—*40 CFR 122.34(g)(2)*

You must keep records required by the NPDES permit for at least three years. You must submit your records to the NPDES permitting authority only when specifically asked to do so. You must make your records, including a description of your storm water management program, available to the public at reasonable times during regular business hours (see *122.7* for confidentiality provision). (You may assess a reasonable charge for copying. You may require a member of the public to provide advance notice.)

Reporting—*40 CFR 122.34(g)(3)*

Unless you are relying on another entity to satisfy your NPDES permit obligations under *122.35(a)*, you must submit annual reports in year two and four unless the NPDES permitting authority requires more frequent reports. Your report must include:

- (i) The status of compliance with permit conditions, an assessment of the appropriateness of your identified best management practices and progress towards achieving your identified measurable goals for each of the minimum control measures;
- (ii) Results of information collected and analyzed, including monitoring data, if any, during the reporting period;
- (iii) A summary of the storm water activities you plan to undertake during the next reporting cycle;
- (iv) A change in any identified best management practices or measurable goals for any of the minimum control measures; and
- (v) Notice that you are relying on another governmental entity to satisfy some of your permit obligations (if applicable).

Part IV. Certification

BY COMPLETING AND SUBMITTING THIS APPLICATION, I HAVE REVIEWED AND UNDERSTAND AND AGREE TO THE TERMS AND CONDITIONS OF THE GENERAL PERMIT ISSUED ON MARCH 7, 2003. I UNDERSTAND THAT PROVISIONS OF THE PERMIT ARE ENFORCEABLE BY LAW. VIOLATION OF ANY TERM AND CONDITION OF THE GENERAL PERMIT AND/OR OTHER APPLICABLE LAW OR REGULATIONS CAN LEAD TO ENFORCEMENT ACTION.

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED ON THIS FORM AND ALL ATTACHMENTS AND THAT, BASED ON MY INQUIRING OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT.

Authorized Representative Name: _____

Title: _____

Signature: _____

Date: _____

Part III. Record keeping and Reporting

The permittee will comply with record keeping and reporting requirements per *40 CFR 122.34(g)*

Record keeping—*40 CFR 122.34(g)(2)*

You must keep records required by the NPDES permit for at least three years. You must submit your records to the NPDES permitting authority only when specifically asked to do so. You must make your records, including a description of your storm water management program, available to the public at reasonable times during regular business hours (see *122.7* for confidentiality provision). (You may assess a reasonable charge for copying. You may require a member of the public to provide advance notice.)

Reporting—*40 CFR 122.34(g)(3)*

Unless you are relying on another entity to satisfy your NPDES permit obligations under *122.35(a)*, you must submit annual reports in year two and four unless the NPDES permitting authority requires more frequent reports. Your report must include:

- (i) The status of compliance with permit conditions, an assessment of the appropriateness of your identified best management practices and progress towards achieving your identified measurable goals for each of the minimum control measures;
- (ii) Results of information collected and analyzed, including monitoring data, if any, during the reporting period;
- (iii) A summary of the storm water activities you plan to undertake during the next reporting cycle;
- (iv) A change in any identified best management practices or measurable goals for any of the minimum control measures; and
- (v) Notice that you are relying on another governmental entity to satisfy some of your permit obligations (if applicable).

Part IV. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Authorized Representative Name: _____

Title: _____

Signature: _____

Date: _____

APPENDIX I.

Minimum Control Measure Requirements (*source: 40 CFR 122.34(b)*)

1. Public Education & Outreach on Storm Water Impacts

Minimum Requirements – 40 CFR 122.34(b)(1)(i)

You must implement a public education program to distribute educational materials to the community or conduct equivalent outreach activities about the impacts of storm water discharges on water bodies and the steps that the public can take to reduce pollutants in storm water runoff.

Regulatory Guidance – 40 CFR 122.34(b)(1)(ii)

You may use storm water educational materials provided by your state; tribe; EPA; environmental, public interest, or trade organizations; or other MS4s. The public education program should inform individuals and households about the steps they can take to reduce storm water pollution, such as ensuring proper septic system maintenance, ensuring the proper use and disposal of landscape and garden chemicals including fertilizers and pesticides, protecting and restoring riparian vegetation, and properly disposing of used motor oil and household hazardous wastes. EPA recommends that the program inform individuals and groups how to become involved in local stream and beach restoration activities, as well as activities that are coordinated by youth service and conservation corps or other citizen groups. EPA recommends that the public education program be tailored, using a mix of locally appropriate strategies, to target specific audiences and communities. Examples of strategies include distributing brochures or fact sheets, sponsoring speaking engagements before community groups, providing public service announcements, implementing educational programs targeted at school age children, and conducting community-based projects such as storm drain stenciling and watershed and beach cleanups. In addition, EPA recommends that some of the materials or outreach programs be directed toward targeted groups of commercial, industrial, and institutional entities likely to have significant storm water impacts. For example, providing information to restaurants on the impact of grease clogging storm drains, and to garages on the impact of oil discharges. You are encouraged to tailor your outreach program to address the viewpoints and concerns of all communities, particularly minority and disadvantaged communities, as well as any special concerns relating to children.

2. Public Involvement/Participation

Minimum Requirements – 40 CFR 122.34(b)(2)(i)

You must, at a minimum, comply with state, tribal, and local public notice requirements when implementing a public involvement/participation program.

Regulatory Guidance – 40 CFR 122.34(b)(2)(ii)

EPA recommends that the public be included in developing, implementing, and reviewing your storm water management program, and that the public participation process should make efforts to reach out and engage all economic and ethnic groups. Opportunities for members of the public to participate in program development and implementation include serving as citizen representatives on a local storm water management panel, attending public hearings, working as citizen volunteers to educate other individuals about the program, assisting in program coordination with other pre-existing programs, or participating in volunteer monitoring efforts. (Citizens should obtain approval where necessary for lawful access to monitoring sites.)

3. Illicit Discharge Detection & Elimination

Minimum Requirements – 40 CFR 122.34(b)(3)(i)

You must develop, implement and enforce a program to detect and eliminate illicit discharges (as defined at *Sec. 122.26(b)(2)*) into your small MS4.

(ii) You must:

- (A) Develop, if not already completed, a storm sewer system map, showing the location of all outfalls and the names and location of all waters of the United States that receive discharges from those outfalls;
- (B) To the extent allowable under State, Tribal or local law, effectively prohibit, through ordinance, or other regulatory mechanism, non-storm water discharges into your storm sewer system and implement appropriate enforcement procedures and actions;
- (C) Develop and implement a plan to detect and address non-storm water discharges, including illegal dumping, to your system; and
- (D) Inform public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste.

(iii) You need address the following categories of non-storm water discharges or flows (i.e., illicit discharges) only if you identify them as significant contributors of pollutants to your small MS4: water line flushing, landscape irrigation, diverted stream flows, rising ground waters, uncontaminated ground water infiltration (as defined at *40 CFR 35.2005(20)*), uncontaminated pumped ground water, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, springs, water from crawl space pumps, footing drains, lawn watering, individual residential car washing, flows from riparian habitats and wetlands, dechlorinated swimming pool discharges, and street wash water (discharges or flows from fire fighting activities are excluded from the effective prohibition against non-storm water and need only be addressed where they are identified as significant sources of pollutants to waters of the United States).

Regulatory Guidance – 40 CFR 122.34(b)(3)(iv)

EPA recommends that the plan to detect and address illicit discharges include the following four components: procedures for locating priority areas likely to have illicit discharges; procedures for tracing the source of an illicit discharge; procedures for removing the source of the discharge; and procedures for program evaluation and assessment. EPA recommends visually screening outfalls during dry weather and conducting field tests of selected pollutants as part of the procedures for locating priority areas. Illicit discharge education actions may include storm drain stenciling; a program to promote, publicize, and facilitate public reporting of illicit connections or discharges; and distribution of outreach materials.

4. Construction Site Storm Water Runoff Control

Minimum Requirements – 40 CFR 122.34(b)(4)(i)

You must develop, implement, and enforce a program to reduce pollutants in any storm water runoff to your small MS4 from construction activities that result in a land disturbance of greater than or equal to one acre. Reduction of storm water discharges from construction activity disturbing less than one acre must be included in your program if that construction activity is part of a larger common plan of development or sale that would disturb one acre or more. If the NPDES permitting authority waives requirements for storm water discharges associated with small construction activity in accordance with *Sec. 122.26(b)(15)(i)*, you are not required to develop, implement, and/or enforce a program to reduce pollutant discharges from such sites.

(ii) Your program must include the development and implementation of, at a minimum:

- (A) An ordinance or other regulatory mechanism to require erosion and sediment controls, as well as sanctions to ensure compliance, to the extent allowable under State, Tribal, or local law;
- (B) Requirements for construction site operators to implement appropriate erosion and sediment control (ESC) best management practices;
- (C) Requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality;
- (D) Procedures for site plan review which incorporate consideration of potential water quality impacts;
- (E) Procedures for receipt and consideration of information submitted by the public, and
- (F) Procedures for site inspection and enforcement of control measures.

Regulatory Guidance – 40 CFR 122.34(b)(4)(iii)

Examples of sanctions to ensure compliance include non-monetary penalties, fines, bonding requirements, and/or permit denials for non-compliance. EPA recommends that procedures for site plan review include the review of individual pre-construction site plans to ensure consistency with local (ESC) requirements. Procedures for site inspections and enforcement of control measures could include steps to identify priority sites for inspection and enforcement based on the nature of the construction activity, topography, and the characteristics of soils and receiving water quality. You are encouraged to provide appropriate educational and training measures for construction site operators. You may wish to require a storm water pollution prevention plan for construction sites within your jurisdiction that discharge into your system. See *Sec. 122.44(s)* (NPDES permitting authorities' option to incorporate qualifying State, Tribal and local erosion and sediment control programs into NPDES permits for storm water discharges from construction sites). Also see *Sec. 122.35(b)* (The NPDES permitting authority may recognize that another government entity, including the permitting authority, may be responsible for implementing one or more of the minimum measures on your behalf).

5. Post-Construction Storm Water Management in New Development & Redevelopment

Minimum Requirements – 40 CFR 122.34(b)(5)(i)

You must develop, implement, and enforce a program to address storm water runoff from new development and redevelopment projects that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale, that discharge into your small MS4. Your program must ensure that controls are in place that would prevent or minimize water quality impacts.

(ii) You must:

- (A) Develop and implement strategies which include a combination of structural and/or non-structural best management practices (BMPs) appropriate for your community;
- (B) Use an ordinance or other regulatory mechanism to address post-construction runoff from new development and redevelopment projects to the extent allowable under State, Tribal or local law;
- (C) Ensure adequate long-term operation and maintenance of BMPs.

Regulatory Guidance – 40 CFR 122.34(b)(5)(iii)

If water quality impacts are considered from the beginning stages of a project, new development and potentially redevelopment provide more opportunities for water quality protection. EPA recommends that the BMPs chosen: be appropriate for the local community; minimize water quality impacts; and attempt to maintain pre-development runoff conditions. In choosing appropriate BMPs, EPA encourages you to participate in locally-based watershed planning efforts that attempt to involve a diverse group of stakeholders including interested citizens.

When developing a program that is consistent with this measure's intent, EPA recommends that you adopt a planning process that identifies the municipality's program goals (e.g., minimize water quality impacts resulting from post-construction runoff from new development and redevelopment), implementation strategies (e.g., adopt a combination of structural and/or non-structural BMPs), operation and maintenance policies and procedures, and enforcement procedures. In developing your program, you should consider assessing existing ordinances, policies, programs and studies that address storm water runoff quality. In addition to assessing these existing documents and programs, you should provide opportunities to the public to participate in the development of the program. Non-structural BMPs are preventative actions that involve management and source controls such as: policies and ordinances that provide requirements and standards to direct growth to identified areas, protect sensitive areas such as wetlands and riparian areas, maintain and/or increase open space (including a dedicated funding source for open space acquisition), provide buffers along sensitive water bodies, minimize impervious surfaces, and minimize disturbance of soils and vegetation; policies or ordinances that encourage infill development in higher density urban areas, and areas with existing infrastructure; education programs for developers and the public about project designs that minimize water quality impacts; and measures such as minimization of percent impervious area after development and minimization of directly connected impervious areas. Structural BMPs include: storage practices such as wet ponds and extended-detention outlet structures; filtration practices such as grassed swales, sand filters and filter strips; and infiltration practices such as infiltration basins and infiltration trenches. EPA recommends that you ensure the appropriate implementation of the structural BMPs by considering some or all of the following: pre-construction review of BMP designs; inspections during construction to verify BMPs are built as designed; post-construction inspection and maintenance of BMPs; and penalty provisions for the noncompliance with design, construction or operation and maintenance. Storm Water technologies are constantly being improved, and EPA recommends that your requirements be responsive to these changes, developments or improvements in control technologies.

6. Pollution Prevention/Good Housekeeping for Municipal Operations

Minimum Requirements – 40 CFR 122.34(b)(6)(i)

You must develop and implement an operation and maintenance program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations. Using training materials that are available from EPA, your state, Tribe, or other organizations, your program must include employee training to prevent and reduce storm water pollution from activities such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and storm water system maintenance.

Regulatory Guidance – 40 CFR 122.34(b)(6)(ii)

EPA recommends that, at a minimum, you consider the following in developing your program: maintenance activities, maintenance schedules, and long-term inspection procedures for structural and nonstructural storm water controls to reduce floatables and other pollutants discharged from your separate storm sewers; controls for reducing or eliminating the discharge of pollutants from streets, roads, highways, municipal parking lots, maintenance and storage yards, fleet or maintenance shops with outdoor storage areas, salt/sand storage locations and snow disposal areas operated by you, and waste transfer stations; procedures for properly disposing of waste removed from the separate storm sewers and areas listed above (such as dredge spoil, accumulated sediments, floatables, and other debris); and ways to ensure that new flood management projects assess the impacts on water quality and examine existing projects for incorporating additional water quality protection devices or practices. Operation and maintenance should be an integral component of all storm water management programs. This measure is intended to improve the efficiency of these programs and require new programs where necessary. Properly developed and implemented operation and maintenance programs reduce the risk of water quality problems.

APPENDIX II.

ABBREVIATIONS*:

BAT Best Available Technology Economically Achievable (applies to non-conventional and toxic pollutants)

BCT Best Conventional Pollutant Control Technology (applies to conventional pollutants)

BMP Best Management Practice

BPJ Best Professional Judgment

BPT Best Practicable Control Technology Currently Available (generally applies to conventional pollutants and some metals)

CFR Code of Federal Regulations

CGP Construction General Permit

COD Chemical Oxygen Demand

CSO Combined Sewer Overflow

CWA Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972)

CZARA Coastal Zone Act Reauthorization Amendments

DO Dissolved Oxygen

DMR Discharge Monitoring Report

ELG Effluent Limitations Guidelines

EPA Environmental Protection Agency

FR Federal Register

MEP Maximum Extent Practicable

MS4 Municipal Separate Storm Sewer System

MSGP Multi Sector General Permit

NOI Notice of Intent

NOT Notice of Termination

NOV Notice of Violation

NPDES National Pollutant Discharge Elimination System

NPS Non-point Source

O&M Operation and Maintenance

OW Office of Water

OWM Office of Wastewater Management

PA Permitting Authority

POTW Publicly Owned Treatment Works

SIC Standard Industrial Classification

SWPPP Storm Water Pollution Prevention Plan

TMDL Total Maximum Daily Load

TSS Total Suspended Solids

UA Urbanized Area

DEFINITIONS*:

Authorized Representative: *For a municipality, State, Federal, or other public agency:* (a) By either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal Agency includes (i) the chief executive officer of the Agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the Agency (e.g., Regional Administrators of EPA).

(b) All reports required by permits, and or other information requested by the Director shall be signed by a person described in paragraph (a) of this section, or by a duly authorized representative of that person.

Best Available Treatment(BAT)/Best Control Technology (BCT): A level of technology based on the very best (state of the art) control and treatment measures that have been developed or are capable of being developed and that are economically achievable within the appropriate industrial category.

Best Management Practices (BMPs): Activities or structural improvements that help reduce the quantity and improve the quality of storm water runoff. BMPs include treatment requirements, operating procedures, and practices to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Category (xi) facilities: Specific facilities classified as light industry with equipment or materials exposed to storm water.

Clean Water Act (Water Quality Act): (formerly the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972). Public law 92-500; 33 U.S.C. 1251 et seq.; legislation which provides statutory authority for the NPDES program. Also known as the Federal Water Pollution Control Act.

Conveyance: The process or mechanism of moving water from one place to another.

Detention Facility: An above or below ground facility, such as a pond or tank, that temporarily stores storm water runoff and subsequently releases it at a slower rate than it is collected by the drainage facility system. There is little or no infiltration of stored storm water.

Discharge: The volume of water (and suspended sediment if surface water) that passes a given location within a given period of time.

Erosion: When land is diminished or worn away due to wind, water, or glacial ice. Often the eroded debris (silt or sediment) becomes a pollutant via storm water runoff. Erosion occurs naturally but can be intensified by land clearing activities such as farming, development, road building, and timber harvesting.

Excavation: The process of removing earth, stone, or other materials from land.

General Permit: A permit issued under the NPDES program to cover a certain class or category of storm water discharges. These permits reduce the administrative burden of permitting storm water discharges.

Grading: The cutting and/or filling of the land surface to a desired slope or elevation.

Illicit Connection: Any discharge to a municipal separate storm sewer that is not composed entirely of storm water and is not authorized by an NPDES permit, with some exceptions (e.g., discharges due to fire fighting activities).

Interconnected: See Physically Interconnected

Industrial Activity: Any activity that is directly related to manufacturing, processing or raw materials storage areas at an industrial plant.

Large Municipal Separate Storm Sewer System (MS4): An MS4 located in an incorporated place or county with a population of 250,000 or more, as determined by the latest U.S. Census.

Light Manufacturing Facilities: Described under Category (xi) of the definition of “storm water discharges associated with industrial activity” [CFR 122 26(b)(14)(i-ix and xi)]. Under the Phase I NPDES Storm Water Program, these facilities were eligible for exemption from storm water permitting requirements if certain areas and activities were not exposed to storm water. As a result of the Phase II Final Rule, these facilities must now certify to a condition of no exposure.

Low Impact Development: The integration of site ecological and environmental goals and requirements into all phases of urban planning and design from the individual residential lot level to the entire watershed. Hydrologic functions of storage, infiltration, and ground water recharge, as well as the volume and frequency of discharges are maintained through the use of integrated and distributed micro-scale storm water retention and detention areas, reduction of impervious surfaces, and the lengthening of flow paths and runoff time. Other strategies include the preservation/protection of environmentally sensitive site features such as riparian buffers, wetlands, steep slopes, valuable (mature) trees, flood plains, woodland and highly permeable soils.

Maximum Extent Practicable (MEP): A standard for water quality that applies to all MS4 operators regulated under the NPDES Storm Water Program. Since no precise definition of MEP exists, it allows for maximum flexibility on the part of MS4 operators as they develop and implement their programs.

Medium Municipal Separate Storm Sewer System (MS4): MS4 located in an incorporated place or county with a population of 100,000 or more but less than 250,000, as determined by the latest U.S. Census.

Municipal Separate Storm Sewer System (MS4): A publicly -owned conveyance or system of conveyances that discharges to waters of the U.S. and is designed or used for collecting or conveying storm water, is not a combined sewer, and is not part of a publicly-owned treatment works (POTW).

Multi-Sector General Permit (MSGP): An NPDES permit that regulates storm water discharges from eleven categories of industrial activities.

New Development: Land disturbing activities, structural development, including construction or installation of a building or other structure; creation of impervious surfaces; and subdivision, or other commercial and non-commercial land development. Projects meeting the definition of redevelopment shall not be considered new development.

No exposure: All industrial materials or activities are protected by a storm resistant shelter to prevent exposure to rain, snow, snowmelt, and/or runoff. Industrial materials or activities include, but are not limited to, material handling equipment or activities, industrial machinery, raw materials, intermediate products, by-products, final products, or waste products. Material handling activities include the storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, final product or waste product.

Non-authorized States: any State that does not have the authority to regulate the NPDES Storm Water Program.

Non-point Source (NPS) Pollutants: Pollutants from many diffuse sources. NPS pollution is caused by rainfall or snowmelt moving over and through the ground. As the runoff moves, it picks up and carries away natural and human-made pollutants, finally depositing them into lakes, rivers, wetlands, coastal waters, and even our underground sources of drinking water.

Notice of Intent (NOI): An application to notify the permitting authority of a facility's intention to be covered by a general permit;.

NPDES: "National Pollutant Discharge Elimination System" the name of the surface water quality program authorized by Congress as part of the 1987 Clean Water Act. This is EPA program to control the discharge of pollutants to waters of the United States (see 40 CFR 122.2).

O&M Expenditures: The operating and maintenance costs associated with the continual workings of a project.

Outfall: The point where wastewater or drainage discharges from a sewer pipe, ditch, or other conveyance to a receiving body of water.

Permitting Authority (PA): The NPDES-authorized state agency or EPA regional office that administers the NPDES Storm Water Program. PAs issue permits, provide compliance assistance, and inspect and enforce the program.

Physically interconnected MS4: This means that one MS4 is connected to a second MS4 in such a way that it allows for direct discharges into the second system.

Point Source Pollutant: Pollutants from a single, identifiable source such as a factory, POTW or refinery.

Pollutant Loading: The total quantity of pollutants in storm water runoff.

Qualifying local program: A local, State or Tribal municipal storm water management program that imposes, at a minimum, the relevant requirements of the sediment control and storm water management minimum control measures.

Redevelopment: On a site that is already substantially developed (i.e., has more than 35% or more of existing impervious surface coverage), the creation or addition of impervious surfaces; the expansion of a building footprint or addition or replacement of a structure; structural development including construction, installation or expansion of a building or other structure; replacement of impervious surface that is not part of a routine maintenance activity; and land disturbing activities.

Regional: An action (here, for storm water management purposes) that involves more than one discrete property.

Regional Detention Facility: A storm water quantity control structure designed to correct the existing surface water runoff problems of a basin or sub basin. The area downstream has been previously identified as having existing or predicted significant and regional flooding and/or erosion problems. This term is also used when a detention facility is sited to detain storm water runoff from a number of new developments or areas within a catchment

Regulated MS4: Any MS4 covered by the NPDES Storm Water Program (regulated small, medium, or large MS4s).

Retention: The process of collecting and holding surface and storm water runoff with no surface outflow.

Retention/detention facility (R/D): A type of drainage facility designed either to hold water for a considerable length of time and then release it by evaporation, plant transpiration, and/or infiltration into the ground; or to hold surface and storm water runoff for a short period of time and then release it to the surface and storm water management system.

Retrofit: The modification of storm water management systems through the construction and/or enhancement of wet ponds, wetland plantings, or other BMPs designed to improve water quality

Runoff: Drainage or flood discharge that leaves an area as surface flow or as pipeline flow. Has reached a channel or pipeline by either surface or sub-surface routes.

Sanitary Sewer: A system of underground pipes that carries sanitary waste or process wastewater to a treatment plant.

Sediment: Soil, sand, and minerals washed from land into water, usually after rain. Sediment can destroy fish-nesting areas, clog animal habitats, and cloud waters so that sunlight does not reach aquatic plants.

Sheet flow: The portion of precipitation that moves initially as overland flow in very shallow depths before eventually reaching a stream channel.

Site Plan: A graphical representation of a layout of buildings and facilities on a parcel of land.

Site Runoff: Any drainage or flood discharge that is released from a specified area.

Small Municipal Separate Storm Sewer System (MS4): Any MS4 of 1000 persons or greater, or other entity such a DOH located in a Urbanized Area or any city of 10,000 or more people with a population density of at least 1000/square mile.

Stakeholder: An entity that holds a special interest in an issue or program -- such as the storm water program - since it is or may be affected by it.

Standard Industrial Classification (SIC) Code: A four-digit number that is used to identify various types of industries.

Storm Drain: A slotted opening leading to an underground pipe or an open ditch for carrying surface runoff.

Storm Water: Precipitation that accumulates in natural and/or constructed storage and storm water systems during and immediately following a storm event.

Storm Water Management: Functions associated with planning, designing, constructing, maintaining, financing, and regulating the facilities (both constructed and natural) that collect, store, control, and/or convey storm water.

Storm Water Pollution Prevention Plan (SWPPP): A plan to describe a process whereby a facility thoroughly evaluates potential pollutant sources at a site and selects and implements appropriate measures designed to prevent or control the discharge of pollutants in storm water runoff.

Surface Water: Water that remains on the surface of the ground, including rivers, lakes, reservoirs, streams, wetlands, impoundments, seas, estuaries, etc.

Total Maximum Daily Load (TMDL): The maximum amount of pollutants that can be released into a water body without adversely affecting the water quality.

Tool Box: A term to describe the activities and materials that EPA plans to perform/produce to facilitate implementation of the storm water program in an effective and cost-efficient manner. The eight components include: 1) fact sheets; 2) guidance documents; 3) menu of BMPs; 4) compliance assistance; 5) information clearing house; 6) training and outreach efforts; 7) technical research; and 8) support for demonstration projects.

Treatment BMP: A BMP that is intended to remove pollutants from storm water. A few examples of treatment BMPs are detention ponds, oil/water separators, biofiltration swales, and constructed wetlands.

Uncontrolled Sanitary Landfill: a landfill or open dump, whether in operation or closed, that does not meet the requirements for run-on or runoff controls established pursuant to the **Solid Waste Control Act**.

Urbanized Area (UA): A Bureau of the Census determination of a central place (or places) and the adjacent densely settled surrounding territory that together have a minimum residential population of 50,000 people and a minimum average density of 1,000 people/square mile. This is a simplified definition of a UA; the full definition is very complex.

Urban Runoff: Storm water from urban areas, which tends to contain heavy concentrations of pollutants from urban activities and an unnatural flow regime usually consisting of lower low flows and higher and more frequent peak flows.

Watershed: That geographical area which drains to a specified point on a watercourse, usually a confluence of streams or rivers (also known as drainage area, catchment, or river basin).

Wet Weather Flows: Water entering storm drains during rainstorms/wet weather events.

*The following references were used in these sections:

- *Storm Water Phase II Compliance Assistance Guide*; United States Environmental Protection Agency, Office of Water; March 2000; Publication # EPA 833-R-00-002.
- *40 Code of Federal Regulations, part 122.22, (3)*; United States Environmental Protection Agency.
- *Storm Water Management Manual for Western Washington*; Washington State Department of Ecology; August 2001; Publication # 99-11 through 99-13.
- *Low Impact Development in Puget Sound*; Innovative Storm Water Management Practices, a conference sponsored by the Puget Sound Water Quality Action Team and King County Department of Natural Resources through a Water Works Grant.
- *Low Impact Development Design Strategies, An Integrated Design Approach*; Prince Georges County, Maryland, Department of Environmental Resources; June 1999.