

Model Stormwater Management Permit

The ***[Enter your city name here]*** Phase II NPDES program will implement, and enforce a storm water management program designed to reduce discharge of pollutants from the municipal separate storm sewer system to the “maximum extent practicable” to protect water quality. Six “minimum control measures”, listed below, are required under Phase II regulations:

1. Public Participation/Involvement
2. Public Education and Outreach
3. Illicit Discharge Detection and Elimination
4. Pollution Prevention/Good Housekeeping
5. Construction Site Runoff Control
6. Post-Construction Runoff Control

In addition to identifying specific goals that will be implemented for each of the control measures identified above, information about the city, its government, population, departments, etc. are submitted with this plan. ***[Add any other descriptive text here]***

[Enter your city name here] information:

Government:

Type: [City, Township, County, etc
Address:
City:
State, Zip
City Web address:]
Responsible elected official: [Mayor's name, etc]
Contact info: Phone:
Fax:
email:]

Demographics:

Population: [Count:
Source: i.e. Census Bureau, etc]
Land Area: [Square Miles:
Source:]
Significant Local Waters: [Names of lakes, rivers or streams
That the city discharges to]

Stormwater Contacts:

Principal: [Name of individual in charge of program
Department of person, i.e. Public Works, etc
Phone:
Fax:
Email:]

Alternate: [Name of alternate point of contact
Department of person, i.e. Public Works, etc
Phone:
Fax:
Email:]

Funding Sources:

[Describe how your jurisdiction plans to finance your program, whether it will be through a special utility, levy, etc. While many cities are establishing some type of stormwater utility, you are not required to.]

The **[Enter your city name here]** Phase II NPDES management plan consists of the following six minimum control measures. Each control measure has associated goals, or BMPs, that will be implemented during the course of the permit term. It is through the implementation and evaluation of these BMPs that **[Enter your city name here]** will insure that all the objectives of the Phase II NPDES program will be met. Following is a discussion of each BMP.

Public Participation/Involvement

What is Required?:

To satisfy this minimum control measure, the operator of a regulated small MS4 must:

1. Comply with applicable State, Tribal, and local public notice requirements; and
2. Determine the appropriate best management practices (BMPs) and measurable goals for this minimum control measure.

Why is it Necessary?:

EPA believes that the public can provide valuable input and assistance to a regulated small MS4's municipal storm water management program and, therefore, suggests that the public be given opportunities to play an active role in both the development and implementation of the program. An active and involved community is crucial to the success of a storm water management program because it allows for:

1. Broader public support since citizens who participate in the development and decision making process are partially responsible for the program and, therefore, may be less likely to raise legal challenges to the program and more likely to take an active role in its implementation;
2. Shorter implementation schedules due to fewer obstacles in the form of public and legal challenges and increased sources in the form of citizen volunteers;
3. A broader base of expertise and economic benefits since the community can be a valuable, and free, intellectual resource; and
4. A conduit to other programs as citizens involved in the storm water program development process provide important cross-connections and relationships with other community and government programs. This benefit is particularly valuable when trying to implement a storm water program on a watershed basis, as encouraged by EPA.

[Hint: We have taken the liberty of checking off which year a goal will be started. A goal can span multiple years, which means you just put the 'X' after each year you will be performing these activities. A good plan will also set a start and end date for each goal.]

Summary of Goal(s) (BMPs) Associated with this Control Measure

Name: Year - 1 Create a Volunteer organization	Start Date:
Permit Years: Year 1: X Year 2: Year 3: Year 4:	End Date:
Name: Year - 1 Establish a Citizen panel	Start Date:
Permit Years: Year 1: X Year 2: Year 3: Year 4:	End Date:
Name: Year - 1 Public Meetings - Print Media	Start Date:
Permit Years: Year 1: X Year 2: Year 3: Year 4:	End Date:
Name: Year - 2 Finalize Citizen Panel Recommendations	Start Date:
Permit Years: Year 1: Year 2: X Year 3: Year 4:	End Date:
Name: Year - 2 Public Meetings - Radio Media	Start Date:
Permit Years: Year 1: Year 2: X Year 3: Year 4:	End Date:
Name: Year - 3 Community Clean-ups	Start Date:
Permit Years: Year 1: Year 2: Year 3: X Year 4:	End Date:
Name: Year - 4 Establish Citizen Watch Groups	Start Date:

[Hint: A good plan will indicate which department will be responsible for each goal.]

The following provides detail for each of the individual goals.

Goal Name: Year - 1 Create a Volunteer organization

Goal Description: Using volunteers for water quality monitoring will give citizens first-hand knowledge of the quality of local water bodies and provide a cost-effective means of collecting water quality data.

The volunteer organization created will be used to help identify outfalls, find illicit discharges and stencil storm drains.

Goal Name: Year - 1 Establish a Citizen panel

Goal Description: Use this panel for citizen discussion of various viewpoints and provide input concerning appropriate storm water management policies and BMPs.

Create a citizen panel that will be used to discuss and come up with plans for different storm water issues.

Goal Name: Year - 1 Public Meetings - Print Media

Goal Description: Notify citizens of public meetings in several different print media and bilingual flyers.

Goal Name: Year - 2 Finalize Citizen Panel Recommendations

Goal Description: Use this panel for citizen discussion of various viewpoints and provide input concerning appropriate storm water management policies and BMPs.

Finalize recommendations from citizen panel and publish the results.

Goal Name: Year - 2 Public Meetings - Radio Media

Goal Description: Radio spots aired promoting storm water program participation.

Goal Name: Year - 3 Community Clean-ups

Goal Description: Using volunteers for water quality monitoring will give citizens first-hand knowledge of the quality of local water bodies and provide a cost-effective means of collecting water quality data.

Involve a certain percentage of the community through this organization to help in community clean-ups.

Goal Name: Year - 4 Establish Citizen Watch Groups

Goal Description: Using volunteers for water quality monitoring will give citizens first-hand knowledge of the quality of local water bodies and provide a cost-effective means of collecting water quality data.

Establish citizen watch groups in a certain percentage of neighborhoods and complete outreach to every different population sector.

Public Education and Outreach

What is Required?:

To satisfy this minimum control measure, the operator of a regulated small MS4 needs to:

1. 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 local waterbodies and the steps that can be taken to reduce storm water pollution; and
2. Determine the appropriate best management practices (BMPs) and measurable goals for this minimum control measure.

Why is it Necessary?:

An informed and knowledgeable community is crucial to the success of a storm water management program since it helps to ensure the following:

1. Greater support for the program as the public gains a greater understanding of the reasons why it is necessary and important. Public support is particularly beneficial when operators of small MS4s attempt to institute new funding initiatives for the program or seek volunteers to help implement the program; and
2. Greater compliance with the program as the public becomes aware of the personal responsibilities expected of them and others in the community, including the individual actions they can take to protect or improve the quality of area waters.

Summary of Goal(s) (BMPs) Associated with this Control Measure

Name: Year - 1 Develop educational resources	Start Date:
Permit Years: Year 1: X Year 2: Year 3: Year 4:	End Date:
Name: Year - 2 Expand educational resources	Start Date:
Permit Years: Year 1: Year 2: X Year 3: Year 4:	End Date:
Name: Year - 2 Storm Drain Stenciling	Start Date:
Permit Years: Year 1: Year 2: X Year 3: Year 4:	End Date:
Name: Year - 3 Pollution Reduction	Start Date:
Permit Years: Year 1: Year 2: Year 3: X Year 4:	End Date:
Name: Year - 4 Pollution Reduction	Start Date:
Permit Years: Year 1: Year 2: Year 3: Year 4: X	End Date:

The following pages provide detail for each of the individual goals.

Goal Name: Year - 1 Develop educational resources

Goal Description: Develop an infrastructure resource to support the public education and outreach program.

Develop brochures (bilingual if necessary) to support the Public Meetings - Print Media Goal in the Public Participation and Involvement Minimum Control Measure.

Create a storm water hotline for information and for citizen reports on polluters.

Identify and train volunteer educators to be used for a Public Education Task Force.

Goal Name: Year - 2 Expand educational resources

Goal Description: This goal is for developing infra-structure resource to support your public education and outreach program.

Create an informational web site that describes your city, storm water issues, etc.

Develop school curricula that can be used to educate students about storm water issues.

Goal Name: Year - 2 Storm Drain Stenciling

Goal Description: Stencil storm drains with messages like "Do Not Dump - Drains Directly To Lake", etc.

Goal Name: Year - 3 Pollution Reduction

Goal Description: This goal is used to help in your efforts to reduce pollution being introduced into your storm water sewer system.

A certain percentage of restaurants are no longer dumping grease and other pollutants down storm sewer drains.

Goal Name: Year - 4 Pollution Reduction

Goal Description: This goal is used to help increase your efforts to reduce pollution being introduced into your storm water sewer system.

A certain percentage reduction in litter and/or animal waste detected in storm water discharges will be achieved by this year.

Illicit Discharge Detection and Elimination

What is Required?:

Recognizing the adverse effects illicit discharges can have on receiving waters, the final rule requires an operator of a regulated small MS4 to develop, implement and enforce an illicit discharge detection and elimination program. This program must include the following:

1. 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;
2. Through an ordinance, or other regulatory mechanism, a prohibition (to the extent allowable under State, Tribal, or local law) on non-storm water discharges into the MS4, and appropriate enforcement procedures and actions;
3. A plan to detect and address non-storm water discharges, including illegal dumping, into the MS4;
4. The education of public employees, businesses, and the general public about the hazards associated with illegal discharges and improper disposal of waste; and
5. The determination of appropriate best management practices (BMPs) and measurable goals for this minimum control measure.

Why is it Necessary?:

Discharges from MS4s often include wastes and wastewater from non-storm water sources. A study conducted in 1987 in Sacramento, California, found that almost one-half of the water discharged from a local MS4 was not directly attributable to precipitation runoff. A significant portion of these dry weather flows were from illicit and/or inappropriate discharges and connections to the MS4. Illicit discharges enter the system through either direct connections (e.g., wastewater piping either mistakenly or deliberately connected to the storm drains) or indirect connections (e.g., infiltration into the MS4 from cracked sanitary systems, spills collected by drain outlets, or paint or used oil dumped directly into a drain). The result is untreated discharges that contribute high levels of pollutants, including heavy metals, toxics, oil and grease, solvents, nutrients, viruses, and bacteria to receiving waterbodies. Pollutant levels from these illicit discharges have been shown in EPA studies to be high enough to significantly degrade receiving water quality and threaten aquatic, wildlife, and human health.

Summary of Goal(s) (BMPs) Associated with this Control Measure

Name: Year - 1 Implement an Information Management System for Tracking Illicit Discharges	Start Date:
Permit Years: Year 1: <input checked="" type="checkbox"/> Year 2: <input type="checkbox"/> Year 3: <input type="checkbox"/> Year 4: <input type="checkbox"/>	End Date:
Name: Year - 1 Recycling Program	Start Date:
Permit Years: Year 1: <input checked="" type="checkbox"/> Year 2: <input type="checkbox"/> Year 3: <input type="checkbox"/> Year 4: <input type="checkbox"/>	End Date:
Name: Year - 1 Sewer System Map	Start Date:
Permit Years: Year 1: <input checked="" type="checkbox"/> Year 2: <input type="checkbox"/> Year 3: <input type="checkbox"/> Year 4: <input type="checkbox"/>	End Date:
Name: Year - 2 Initial Identification of Illicit Discharge Sources	Start Date:
Permit Years: Year 1: <input type="checkbox"/> Year 2: <input checked="" type="checkbox"/> Year 3: <input type="checkbox"/> Year 4: <input type="checkbox"/>	End Date:
Name: Year - 2 Stormwater Ordinance	Start Date:
Permit Years: Year 1: <input type="checkbox"/> Year 2: <input checked="" type="checkbox"/> Year 3: <input type="checkbox"/> Year 4: <input type="checkbox"/>	End Date:
Name: Year - 2 Train Employees	Start Date:
Permit Years: Year 1: <input type="checkbox"/> Year 2: <input checked="" type="checkbox"/> Year 3: <input type="checkbox"/> Year 4: <input type="checkbox"/>	End Date:
Name: Year - 3 Detection and Elimination	Start Date:
Permit Years: Year 1: <input type="checkbox"/> Year 2: <input type="checkbox"/> Year 3: <input checked="" type="checkbox"/> Year 4: <input type="checkbox"/>	End Date:
Name: Year - 4 Continuation of Detection and Elimination Efforts	Start Date:
Permit Years: Year 1: <input type="checkbox"/> Year 2: <input type="checkbox"/> Year 3: <input type="checkbox"/> Year 4: <input checked="" type="checkbox"/>	End Date:

The following pages provide details for each of the individual goals.

Goal Name: Year - 1 Implement an Information Management System for Tracking Illicit Discharges

Goal Description: An information Management System will be used to document all important information gathered concerning illicit discharge detection, elimination and actions taken. This information will be included in annual reports and will detail the following:

1. The number of Outfalls Screened
2. The number of illicit discharges discovered during outfall screening.
3. The number of illicit discharges discovered as a result of citizen complaints.
4. The number of illicit discharges that were resolved.
5. The number of Dye or Smoke tests conducted.

Goal Name: Year - 1 Recycling Program

Goal Description: Initiate a recycling program for commonly dumped household wastes such as motor oil, antifreeze, paint, pesticides, etc.

Goal Name: Year - 1 Sewer System Map

Goal Description: The storm sewer system map is meant to demonstrate a basic awareness of the intake and discharge areas of the system. It is needed to help determine the extent of discharged dry weather flows, the possible sources of the dry weather flows, and the particular waterbodies these flows may be affecting. An existing map, such as a topographical map, on which the location of major pipes and outfalls can be clearly presented demonstrates such awareness.

EPA recommends collecting all existing information on outfall locations (e.g., review city records, drainage maps, storm drain maps), and then conducting field surveys to verify locations. It probably will be necessary to walk (i.e., wade through small receiving waters or use a boat for larger waters) the streambanks and shorelines for visual observation. More than one trip may be needed to locate all outfalls.

Goal Name: Year - 2 Initial Identification of Illicit Discharge Sources

Goal Description: Begin process of identifying potential sources from where illicit discharges can emanate. Areas to look for are:

1. Industrial parks or areas with large concentrations of industrial business (manufacturing, warehousing, trucking, etc.).
2. Areas where there are large concentrations of septic systems.
3. Areas with older sanitary sewer lines.

Goal Name: Year - 2 Stormwater Ordinance

Goal Description: Develop an ordinance or other regulatory mechanism that will prohibit (to the extent allowable under State, Tribal, or local law) all non-storm water discharges into the MS4. This ordinance will include appropriate enforcement procedures and actions such as:

1. Fines
2. Civil penalties

Goal Name: Year - 2 Train Employees

Goal Description: Design and administer a training program to employees that will help them to identify illicit discharges.

Goal Name: Year - 3 Detection and Elimination

Goal Description: Building on work performed in the previous two years a certain percentage of illicit discharges will now be detected and eliminated. Detection and elimination efforts will be documented so that an end of year report will detail all illicit discharges that were found, which ones were eliminated and what remedial actions were taken.

Goal Name: Year - 4 Continuation of Detection and Elimination Efforts

Goal Description: Building on the work begun in the year 3 goal 'Detection and Elimination' efforts will continue so that by years end most illicit discharges will have been detected and eliminated.

Pollution Prevention/Good Housekeeping

What is Required?:

Recognizing the benefits of pollution prevention practices, the rule requires an operator of a regulated small MS4 to:

1. Develop and implement an operation and maintenance program with the ultimate goal of preventing or reducing pollutant runoff from municipal operations into the storm sewer system;
2. Include employee training on how to incorporate pollution prevention/good housekeeping techniques into municipal operations such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and storm water system maintenance. To minimize duplication of effort and conserve resources, the MS4 operator can use training materials that are available from EPA, their State or Tribe, or relevant organizations;
3. Determine the appropriate best management practices (BMPs) and measurable goals for this minimum control measure.

Why is it Necessary?:

The Pollution Prevention/Good Housekeeping for municipal operations minimum control measure is a key element of the small MS4 storm water management program. This measure requires the small MS4 operator to examine and subsequently alter their own actions to help ensure a reduction in the amount and type of pollution that: (1) collects on streets, parking lots, open spaces, and storage and vehicle maintenance areas and is discharged into local waterways; and (2) results from actions such as environmentally damaging land development and flood management practices or poor maintenance of storm sewer systems. While this measure is meant primarily to improve or protect receiving water quality by altering municipal or facility operations, it also can result in a cost savings for the small MS4 operator, since proper and timely maintenance of storm sewer systems can help avoid repair costs from damage caused by age and neglect.

Summary of Goal(s) (BMPs) Associated with this Control Measure

Name: Year - 1 Develop Pollution Prevention Plan	Start Date:
Permit Years: Year 1: X Year 2: Year 3: Year 4:	End Date:
Name: Year - 1 Employee Training Materials	Start Date:
Permit Years: Year 1: X Year 2: Year 3: Year 4:	End Date:
Name: Year - 1 Information Management System	Start Date:
Permit Years: Year 1: X Year 2: Year 3: Year 4:	End Date:
Name: Year - 2 Train Employees	Start Date:
Permit Years: Year 1: Year 2: X Year 3: Year 4:	End Date:
Name: Year - 3 Incorporation of BMPs in Master Plan	Start Date:
Permit Years: Year 1: Year 2: Year 3: X Year 4:	End Date:
Name: Year - 3 Maintenance Schedule	Start Date:
Permit Years: Year 1: Year 2: Year 3: X Year 4:	End Date:
Name: Year - 4 Maintenance Program Effectiveness	Start Date:
Permit Years: Year 1: Year 2: Year 3: Year 4: X	End Date:
Name: Year - 4 Pollution Reduction	Start Date:
Permit Years: Year 1: Year 2: Year 3: Year 4: X	End Date:

The following pages provide details for each of the individual goals.

Goal Name: Year - 1 Develop Pollution Prevention Plan

Goal Description: Develop a comprehensive Pollution Prevention Plan that identifies items such as:

1. BMPs
2. Management Practices and Maintenance Schedules
3. Recycling Efforts

- 4. Waste Disposal Guidelines
- 5. Areas of Concern

Goal Name: Year - 1 Employee Training Materials

Goal Description: Develop a collection of training materials that will be used to educate staff about pollution prevention and good housekeeping. These resources will come from applicable external sources, such as the EPA, and may be supplemented with materials developed by our own organization.

Goal Name: Year - 1 Information Management System

Goal Description: An information management system will be put in place that can be used to track the inventory of stormwater facilities and outfalls. This system will be used by staff to schedule and perform inspections, maintenance activities and document any other actions taken on these inventory items.

Goal Name: Year - 2 Train Employees

Goal Description: Train staff on pollution prevention and good housekeeping using the materials collected and developed in the year one goal 'Employee Training Materials'.

Goal Name: Year - 3 Incorporation of BMPs in Master Plan

Goal Description: Identify, from the list of BMPs outlined in the year one goal 'Develop Pollution Prevention Plan', the BMPs that have been incorporated into the local Master Plan.

Goal Name: Year - 3 Maintenance Schedule

Goal Description: Finalize the maintenance plan and schedule that will be put in place for management of BMPs. Integrate this into the information management system identified in the year one goal 'Information Management System'.

Goal Name: Year - 4 Maintenance Program Effectiveness

Goal Description: Identify the number of facilities and controls that have received maintenance as a result of the year three goal 'Maintenance Schedule'. Document the overall compliance with the schedule and explain any discrepancies.

Goal Name: Year - 4 Pollution Reduction

Goal Description: Identify and estimate the percentage reduction attained in the area of floatables discharged into local waterways.

Construction Site Runoff Control

What is Required?:

The Phase II Final Rule requires an operator of a regulated small MS4 to develop, implement, and enforce a program to reduce pollutants in storm water runoff to their MS4 from construction activities that result in a land disturbance of greater than or equal to one acre.

The small MS4 operator is required to:

1. Have an ordinance or other regulatory mechanism requiring the implementation of proper erosion and sediment controls, and controls for other wastes, on applicable construction sites;
2. Have procedures for site plan review of construction plans that consider potential water quality impacts;
3. Have procedures for site inspection and enforcement of control measures;
4. Have sanctions to ensure compliance (established in the ordinance or other regulatory mechanism);
5. Establish procedures for the receipt and consideration of information submitted by the public; and
6. Determine the appropriate best management practices (BMPs) and measurable goals for this minimum control measure.

Why is it Necessary?:

Polluted storm water runoff from construction sites often flows to MS4s and ultimately is discharged into local rivers and streams. Of the pollutants listed in Table 1, sediment is usually the main pollutant of concern. Sediment runoff rates from construction sites are typically 10 to 20 times greater than those of agricultural lands, and 1,000 to 2,000 times greater than those of forest lands. During a short period of time, construction sites can contribute more sediment to streams than can be deposited naturally during several decades. The resulting siltation, and the contribution of other pollutants from construction sites, can cause physical, chemical, and biological harm to our nation's waters. For example, excess sediment can quickly fill rivers and lakes, requiring dredging and destroying aquatic habitats.

Table 1
Pollutants Commonly Discharged From Construction Sites

Sediment
Solid and sanitary wastes
Phosphorous (fertilizer)
Nitrogen (fertilizer)
Pesticides
Oil and grease
Concrete truck washout

Summary of Goal(s) (BMPs) Associated with this Control Measure

Name: Year - 1 Establish Water Quality Benchmarks	Start Date:
Permit Years: Year 1: <input checked="" type="checkbox"/> Year 2: <input type="checkbox"/> Year 3: <input type="checkbox"/> Year 4: <input type="checkbox"/>	End Date:
Name: Year - 1 Information Management System in Place	Start Date:
Permit Years: Year 1: <input checked="" type="checkbox"/> Year 2: <input type="checkbox"/> Year 3: <input type="checkbox"/> Year 4: <input type="checkbox"/>	End Date:
Name: Year - 1 Ordinance / Regulatory Mechanism	Start Date:
Permit Years: Year 1: <input checked="" type="checkbox"/> Year 2: <input type="checkbox"/> Year 3: <input type="checkbox"/> Year 4: <input type="checkbox"/>	End Date:
Name: Year - 2 Begin Inspection Program	Start Date:
Permit Years: Year 1: <input type="checkbox"/> Year 2: <input checked="" type="checkbox"/> Year 3: <input type="checkbox"/> Year 4: <input type="checkbox"/>	End Date:
Name: Year - 2 Staff Training	Start Date:
Permit Years: Year 1: <input type="checkbox"/> Year 2: <input checked="" type="checkbox"/> Year 3: <input type="checkbox"/> Year 4: <input type="checkbox"/>	End Date:

Name: Year - 3 Improved Water Quality

Permit Years: Year 1: Year 2: Year 3: **X** Year 4:

Start Date:

End Date:

Name: Year - 3 Maximum Compliance

Permit Years: Year 1: Year 2: Year 3: **X** Year 4:

Start Date:

End Date:

Name: Year - 4 Aquatic Organisms

Permit Years: Year 1: Year 2: Year 3: Year 4: **X**

Start Date:

End Date:

The following pages provide detail for each of the individual goals.

Goal Name: Year - 1 Establish Water Quality Benchmarks

Goal Description: Develop a score sheet where information such as clarity, sedimentation, presence of aquatic organisms, etc. can be tracked. Collect this data for selected local waterbodies during year one. This will become the benchmark data that will be used in years three and four of the permit.

Goal Name: Year - 1 Information Management System in Place

Goal Description: An information management system designed to track information submitted by the public and record staff inspections of construction sites will be put in place.

Develop site inspection procedures that will be used by staff in the performance of construction site inspections.

Goal Name: Year - 1 Ordinance / Regulatory Mechanism

Goal Description: Under the extent allowable by law an ordinance or other regulatory mechanism will be put in place that will provide the ability to regulate polluted runoff that emanates from construction sites.

Goal Name: Year - 2 Begin Inspection Program

Goal Description: Random inspections of construction sites will be performed to determine the overall compliance rate that is being achieved by construction operators.

Goal Name: Year - 2 Staff Training

Goal Description: Train staff in finalized inspection procedures developed in year - 1 goal, 'Information Management System'.

Goal Name: Year - 3 Improved Water Quality

Goal Description: Using the information collected in the year one goal 'Establish Water Quality Benchmarks', collect new samples and compare the results with the year one benchmarks established. Identify areas where water quality has improved. In those areas where water quality has not improved identify the potential sources of the problem and investigate them. Use this new information to adjust the plan of action.

Goal Name: Year - 3 Maximum Compliance

Goal Description: Building on year 2 efforts the inspection program will continue until the maximum compliance possible is achieved. Compliance and non-compliance will be documented through the Information Management System.

Goal Name: Year - 4 Aquatic Organisms

Goal Description: Utilizing information collected in the year one goal 'Establish Water Quality Benchmarks', collect new samples that identify the level and intensity of sensitive aquatic organisms. Document those areas where improvement has occurred. Investigate those areas where increases are not noted and identify the potential reasons for this. Use this information to develop a plan of action.

Post-Construction Runoff Control

What is Required?:

The Phase II Final Rule requires an operator of a regulated small MS4 to develop, implement, and enforce a program to reduce pollutants in post-construction runoff to their MS4 from new development and redevelopment projects that result in the land disturbance of greater than or equal to 1 acre. The small MS4 operator is required to:

1. Develop and implement strategies which include a combination of structural and/or non-structural best management practices (BMPs);
2. Have an ordinance or other regulatory mechanism requiring the implementation of post-construction runoff controls to the extent allowable under State, Tribal or local law,
3. Ensure adequate long-term operation and maintenance of controls;
4. Determine the appropriate best management practices (BMPs) and measurable goals for this minimum control measure.

Why is it Necessary?:

Post-construction storm water management in areas undergoing new development or redevelopment is necessary because runoff from these areas has been shown to significantly effect receiving waterbodies. Many studies indicate that prior planning and design for the minimization of pollutants in post-construction storm water discharges is the most cost-effective approach to storm water quality management.

There are generally two forms of substantial impacts of post-construction runoff. The first is caused by an increase in the type and quantity of pollutants in storm water runoff. As runoff flows over areas altered by development, it picks up harmful sediment and chemicals such as oil and grease, pesticides, heavy metals, and nutrients (e.g., nitrogen and phosphorus). These pollutants often become suspended in runoff and are carried to receiving waters, such as lakes, ponds, and streams. Once deposited, these pollutants can enter the food chain through small aquatic life, eventually entering the tissues of fish and humans. The second kind of post-construction runoff impact occurs by increasing the quantity of water delivered to the waterbody during storms. Increased impervious surfaces interrupt the natural cycle of gradual percolation of water through vegetation and soil. Instead, water is collected from surfaces such as asphalt and concrete and routed to drainage systems where large volumes of runoff quickly flow to the nearest receiving water. The effects of this process include streambank scouring and downstream flooding, which often lead to a loss of aquatic life and damage to property.

Summary of Goal(s) (BMPs) Associated with this Control Measure

Name: Year - 1 Identification of BMPs	Start Date:
Permit Years: Year 1: X Year 2: Year 3: Year 4:	End Date:
Name: Year - 2 Publication of BMPs	Start Date:
Permit Years: Year 1: Year 2: X Year 3: Year 4:	End Date:
Name: Year - 3 Reduced Impervious Areas	Start Date:
Permit Years: Year 1: Year 2: Year 3: X Year 4:	End Date:
Name: Year - 4 Improved Water Quality	Start Date:
Permit Years: Year 1: Year 2: Year 3: Year 4: X	End Date:

The following pages provide detail for each of the individual goals.

Goal Name: Year - 1 Identification of BMPs

Goal Description: Identify and develop a mix of Structural and Non-Structural BMPs that are appropriate for this geographic area. This BMP list will include BMPs suited for both redevelopment and new development. These BMPs will also be used in the 'Construction Site Runoff Control' minimum measure.

Using the previous years construction permit records perform conduct an analysis of development projects that compares impervious and non-impervious surface development. Use

this information to develop an average for the typical construction project that states what percentage of the project is converted into impervious area. This information should also be used to help determine your list of BMPs.

Goal Name: Year - 2 Publication of BMPs

Goal Description: Codify the BMPs identified in the year one goal 'Identification of BMPs' through regulatory or other appropriate mechanism. Publish the list of BMPs and make them available to developers, citizens and staff.

Goal Name: Year - 3 Reduced Impervious Areas

Goal Description: Perform the same analysis of construction projects identified in the year one goal, 'Identification of BMPs', this time using year three construction permit data. Identify the percent of new impervious areas that are attributable to new development projects and compare it with the baseline data developed in year one.

Goal Name: Year - 4 Improved Water Quality

Goal Description: Use the information collected in the year three goal, 'Improved Water Quality' for the minimum control measure 'Construction Site Runoff Control' and determine the effectiveness of the BMPs that were developed.