

Storm Water Phase II

Controlling Pollutants in Industrial Storm Water Recommended Control Measures Based on Experiences of the City of Portland, Oregon

This information is based on requirements of the Storm Water Phase I regulations and the experiences of the City of Portland, Oregon, a Phase I municipal permittee. Therefore, the information provided is a recommendation only for those Phase II municipalities that choose to implement this aspect of the program. The guidelines that are provided may be implemented in their entirety or as needed. Each municipality should evaluate their specific circumstances when assessing any program development.

This information sheet profiles the requirements for the owner or operator of a Phase I regulated municipal separate storm sewer system (MS4) to monitor and control pollutants in storm water runoff from industrial facilities. This is not a requirement for the owner or operator of a Phase II regulated small MS4. This information sheet profiles the experiences and results of the City of Portland, Oregon, a municipality regulated under Phase I. Evidence is presented that may compel those regulated under Phase II to assess the feasibility or necessity of implementing control measures to reduce the amount of pollutants discharged to the MS4 from this source. Although recommendations are provided, the small MS4 owner or operator would have a great deal of flexibility in choosing exactly how to address this source.

What Are the Phase I Requirements?

The Phase I regulations 40 CFR 122.26(d)(2) require, in part, that the applicant (i) develop adequate legal authority, (ii) perform a source identification, and (iv) develop a management program to reduce the discharge of pollutants to the maximum extent practicable using management practices, control techniques and system design and engineering methods, and such other provisions which are appropriate. Specifically, with regards to industrial controls, the management plan shall include the following.

40 CFR 122.26(d)(2)(iv)(C), A description of a program to monitor and control pollutants in storm water discharges to municipal systems from municipal landfills, hazardous waste treatment, disposal and recovery facilities, industrial facilities that are subject to section 313 of title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA), and industrial facilities that the municipal permit applicant determines are contributing a substantial pollutant loading to the municipal storm sewer system. The program shall:

- (1) Identify priorities and procedures for inspections and establishing and implementing control measures for such discharges;
- (2) Describe a monitoring program for storm water discharges associated with industrial facilities.....

In addition to requiring permits for large and medium MS4s, the Phase I regulations, 40 CFR 122.26(a)(1)(i), require industries with storm water discharges associated with industrial activity to obtain a NPDES permit if the discharge is to a MS4 or directly conveyed to surface waters. Storm water associated with industrial activity is defined in (b)(14) of the regulations and is applied to categories of industries identified in paragraphs (b)(14)(i) through (x). These categories include landfills, hazardous waste treatment, storage, or disposal facilities, steam electric power generating facilities, and a variety of mining, manufacturing, transportation, and recycling facilities identified using Standard Industrial Classification (SIC) Codes.

Why Are Industrial Storm Water Control Measures Being Recommended?

The municipality is ultimately responsible for discharges from their MS4. Because industrial awareness of the program may not be complete, there may be facilities within the MS4 area that should be permitted but are not. In addition, the Phase I regulations that require industries to obtain permits is driven by SIC Code. This has been shown to be less than comprehensive in identifying industries that should be permitted. Another concern is that the permitting authority may not have adequate resources to provide the necessary oversight of permitted facilities. Therefore, it is in the municipality's best interest to assess

their specific situation and evaluate if an industrial program is necessary and to what extent.

What Is Being Recommended?

Recognizing that the municipality is ultimately responsible for the quality of discharges from their MS4, the owner or operator of a regulated small MS4 should evaluate the industrial base and determine their status with permit requirements. Based on this evaluation, the owner or operator of a small MS4 can identify what elements of a program, if any, that they should implement. To accomplish this, the following guidelines are provided.

- ❑ A storm sewer system map showing the location of the pipes, outfalls, and topography. (This is already a requirement for the illicit discharge BMP);
- ❑ Identify the industrial facilities that are discharging storm water to the MS4. Identify, by SIC Code, the activities that are conducted at these sites. Determine permit status through discussions with the permitting authority;
- ❑ Through an ordinance, order, or similar means, the ability to enter premises, conduct inspections, receive and review SWPCPs and monitoring results, and appropriate enforcement procedures and actions;
- ❑ A plan to address storm water discharges to the MS4 from industrial facilities.
- ❑ The education of industrial users in the MS4 about permit requirements, the concerns with storm water discharges from industrial facilities, and best management practices (BMPs) to minimize the discharge of pollutants in storm water runoff.

What Are Some Guidelines for Developing and Implementing The Recommendations?

The objectives of the industrial storm water control measures is to have the regulated small MS4 owners and operators gain a thorough awareness of who the industrial users are that discharge to the MS4 and their compliance status with Phase I regulations. This understanding will allow them to determine the type of oversight that may be necessary and what education efforts should be implemented. Some general guidance for the recommendations is provided below.

The Map

A storm sewer system map is to be developed as part of the illicit discharge detection and elimination minimum control

measure. For the purposes of industrial controls, it can be used to help identify which facilities discharge to the MS4 and the associated outfalls. Using this information, the owner and operator of a small regulated MS4 can respond to water quality concerns at outfalls due to both dry weather flow and storm water.

Identify the Industries That Discharge to the MS4

Using business licenses, surveys, and existing information from other programs, determine the industrial facilities that are located within the MS4. Use the SIC Code description to identify facilities that may be subject to Phase I regulations. Determine, through discussions with the permitting authority, the status of compliance with permitting requirements for those facilities identified. Identify other facilities that may be of concern.

Determine which facilities have discharge to the MS4. This may require reviewing building and plumbing records, and possibly on-site investigations. Because of this, the regulated small MS4 should prioritize this work based on the type of facility and/or location within an outfall basin that may be experiencing water quality issues.

Legal Authority

The permittee will be encouraged to establish and enforce an ordinance, or similar means, which prohibits illicit discharges. It is recommended that the permittee expand the scope of the ordinance to provide the necessary means to implement any industrial storm water control measures identified in an implementation plan, if developed. This could include provisions to enter and inspect the premises, review SWPCPs and other documents pertaining to permits, and require implementation of BMPs. It could also include appropriate enforcement capability.

The Plan

An assessment should be made as to whether an industrial control program is appropriate and to what extent. Any plan that the permittee implements will depend largely upon the identification of the industrial facilities that discharge to the MS4 and if adequate controls are in place. Available resources and size of staff will also influence the extent of the plan. As guidance only, the following steps are recommended in determining the extent and type of an industrial control program.

1) **Identify the Industrial Base**

Identify the industrial facilities that discharge to the MS4. Use maps, building and plumbing records, surveys, business license reviews, and information from existing programs, such as pretreatment. Identify, using SIC Codes, the type of industrial activity that is

conducted at each site. Obtain information from the permitting authority regarding the permit status for the facilities identified.

2) Determine the Extent of the Program

Use the information from identifying the industrial base to determine what, if any, control programs should be developed. At a minimum, develop a process to handle complaints by responding to the site or referring the information to the permitting authority. Develop a process to “petition” the permitting authority to issue a NPDES permit. If appropriate, develop a program to perform inspections of facilities that may contribute to a violation of a water quality standard or are significant contributors of pollutants. Prioritize the work based on the type of facilities present and/or outfall basins that are experiencing water quality concerns. Ensure that adequate legal authority exists to implement the plan. This could include Code modification or development and/or a Memorandum of Agreement with the permitting authority. The extent of the program may be determined, in part, by the amount of staff and resources available.

3) Identify Who is Responsible For Implementing the Program

Once the extent of a program has been determined, appropriate staff should be identified to implement the program. Depending on the program, this could include dedicating staff to make this their primary responsibility, or incorporating these tasks into existing programs. Existing programs such as pretreatment, hazardous materials, and the illicit discharge and elimination programs are all viable alternatives that have been used successfully by municipalities. The municipality should ensure that adequate time and resources are available to whomever the tasks are assigned to. If the program is not an assigned task, oversight can become limited when resources are limited or demands are placed on their primary responsibilities.

4) Document Procedures and Activities

Whatever the extent of the program, the municipality should formulate and document the procedures to be used when addressing storm water runoff from industrial facilities. This will provide a mechanism to respond to complaints and inquiries, and will illustrate that the municipality is progressing towards the necessary oversight of its’ MS4. If a more extensive program is developed, an implementation manual should be formulated that identifies priorities and procedures for inspections and, if included, monitoring of storm water runoff. All activities, including response to complaints, inspections, and monitoring should be documented.

Educational Outreach

Educational outreach to businesses and industries about practices that can reduce pollutants in storm water runoff will help to gain support for the permittee’s storm water program. Educational outreach is already identified as a component of the illicit discharge elimination program to inform various groups what they can do to detect and eliminate illicit discharges. Further efforts could include the following:

- Providing training programs for public employees;
- Developing informative brochures, and guidances for specific audiences (e.g., automotive shops, restaurants, recycling facilities, etc.)
- Developing informative brochures, and guidances for specific industrial practices (e.g. waste storage, sand blasting and painting, loading and unloading of materials, etc.)
- Develop partnerships with other groups and agencies to incorporate storm water educational outreach into their programs.

What Would Be Appropriate Measurable Goals?

Measurable goals will depend largely on the type and extent of the program developed and the area served by the MS4. The measurable goals are listed to address a comprehensive inspection program but include target dates for developing a program with lower commitments.

<u>Target Date</u>	<u>Activity</u>
1 year.....	Sewer system map completed as part of IDEP. Industries identified in service area that have storm water permits.
2 years.....	Ordinance in place; comprehensive listing of industries within service area; identification of program oversight and responsible staff; documentation of program procedures; training for public employees completed.
3 years.....	Best management practices brochures developed; Full implementation of an inspection program.
4 years.....	Incorporate storm water pollution control principles into other groups and agencies.

The measurable goals for this control measure could be combined with those of the Illicit Discharge Detection and Elimination and Public Education and Outreach minimum control measures.

For Additional Information

Contact

- City of Portland, Oregon, Bureau of Environmental Services; Industrial Stormwater Program
 - Phone: 503 823-5320
 - E-mail: michaelp@bes.ci.portland.or.us
 - Internet: www.enviro.ci.portland.or.us/isp.htm
 -
- U.S. EPA Office of Wastewater Management
 - Phone: 202 260-5816
 - E-mail: SW2@epa.gov
 - Internet: www.epa.gov.owm/sw/phase2/final.htm
- Your NPDES Permitting Authority. (A list of names and telephone numbers for each U.S. EPA Region, including State storm water contacts, can be obtained by contacting the U.S. EPA Office of Wastewater Management.)

Reference Documents

- Storm Water Phase II Fact Sheet Series.
 - Contact the U.S. EPA Water Resource Center at 202 260-7786 or at waterpubs@epa.gov
 - Internet: www.epa.gov.owm/sw/phase2/index.htm
 - *(at the time of printing, these were being revised)*
- Storm Water Phase II Rule, published on Dec. 8 1999 in the *Federal Register* (64 FR 68721).
 - Internet: www.epa.gov.owm/sw/phase2/final.htm

Sources

U.S. EPA Office of Water. 1992. *Developing Pollution Prevention Plans And Best Management Practices*. EPA 832-R-92-006.

U.S. EPA Storm Water Section. July 1991. Staff Analysis. *Analysis Of Implementing Permitting Activities For Storm Water Discharges Associated With Industrial Activity*.
