



## **Draft General Permit Summary for Residually Designated Discharges in Milford, Bellingham, and Franklin, Massachusetts**

**U.S. Environmental Protection Agency – Region 1  
Revised August 18, 2010**

### **What is the draft General Permit?**

The U.S. Environmental Protection Agency (EPA) recently released for public comment a proposed *Draft General Permit for Residually Designated Discharges in Milford, Bellingham, and Franklin, Massachusetts* (Draft Permit). The Agency will accept comments from the public on this draft permit until September 30, 2010.

The proposed permit will regulate storm water runoff from sites with two or more acres of “impervious surfaces” (such as parking lots, driveways, and rooftops) that drain directly or indirectly to the Charles River and are within the municipalities of Milford, Franklin, and Bellingham. The Draft Permit requires permittees (entities covered by the permit) to use Best Management Practices (BMPs) to control pollution from storm water. BMPs are measures that include pollution prevention activities and structural controls that reduce the amount of pollutants such as phosphorus in storm water runoff. An example of a pollution prevention measure sometimes referred to as a non-structural BMP is a street sweeping program that removes dust, dirt oil and other substances from pavement before it is washed off by rainwater and conveyed to surface water. An example of a structural BMP is a rain garden, which is a planted area that is designed to capture rainfall and filter it through the underlying soil.

### **Why is EPA requiring permits for these storm water discharges?**

EPA issues permits under the Clean Water Act to control the discharge of pollutants into waters of the United States. Storm water runoff carries a number of pollutants into the Charles River. Of particular concern is phosphorus, a pollutant that is degrading water quality conditions, limiting recreational uses such as boating and swimming, and harming aquatic life in the river system. The federal Clean Water Act, passed in 1972, to protect the nation’s waters, sets as a minimum goal that all surface waters be safe for swimming and support fish and other aquatic life. Excess phosphorus in storm water discharging to the Charles River is currently keeping the river from meeting those basic goals.

### **Why does phosphorus need to be reduced?**

Phosphorus is an essential nutrient for plant growth. However, when there is too much phosphorus, as is the case for the Charles River, it fuels excessive plant and algal growth in surface waters. Excessive plant and algal growth limits recreational use, harms aquatic life and can present a human health risk when certain types of algae known as “blue greens” are present.

### **How does EPA know that storm water is contributing too much phosphorus to the Charles River?**

EPA and DEP conducted studies on excessive algal and plant growth throughout the Charles River. These studies, referred to as Total Maximum Daily Load (TMDL) studies, determined how much pollution the Charles River system can handle while fully supporting recreational uses and healthy aquatic life in the river. The TMDL studies identified phosphorus as the pollutant responsible for the excessive algal and plant growth in the Charles. These TMDL studies relied on extensive sampling and analysis of water quality in the river and of pollutant sources to identify and quantify the sources of phosphorus to the Charles River. Storm water runoff was identified and quantified to be a major source of excess phosphorus. Other sources of phosphorus to the Charles River such as waste water treatment facilities and combined sewer overflows were also quantified. These sources are currently controlled by permits issued under the Clean Water Act.

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## **What are the sources of phosphorus in Charles River watershed?**

There are many sources of phosphorus in a developed watershed (i.e., the land area that drains to a surface-water). These sources include waste water (sewage) treatment facilities, eroding soils, leaf litter, grass clippings, fertilizers, pet wastes, untreated sewage discharges, vehicle emissions, de-icing chemicals, many types of detergents, failing septic systems, and power plant emissions. Like many other pollutants, phosphorus accumulates on impervious surfaces by a variety of mechanisms including direct deposition from the atmosphere during dry and wet weather conditions, sand and salt applications, blow-on of organic materials (e.g. leaves), direct vehicle exhaust, vehicle washing, uncollected pet waste, and wash-on of soils, organic materials and fertilizers from adjacent land areas. When it rains, the pollutants are collected by storm water and conveyed either directly or indirectly (through the storm sewer system) to the Charles River and its tributaries.

## **If impervious surfaces themselves are not the source of phosphorus, why is it necessary to control storm water runoff from them?**

Impervious surfaces are important for controlling storm water runoff for two primary reasons. First, impervious surfaces have a very limited capacity to hold pollutants such as phosphorus and consequently, these accumulated pollutants are readily washed off by runoff. Also, any phosphorus falling directly on impervious surface during rainfall is carried downstream by runoff. In contrast, permeable surfaces have a much higher capacity to capture pollutants like phosphorus. Soils and vegetation in permeable areas are effective filters for removing phosphorus. Also, many soils have a high affinity to absorb phosphorus as water infiltrates into the soils. Second, an impervious surface generates a much greater volume of runoff than a permeable area of the same size. Combining the greater accumulation of pollutants that are available for wash-off with the greater runoff volume, impervious surfaces result in more phosphorus being carried to waters.

## **How does the public provide input on the Draft Permit?**

Written comments are accepted by EPA throughout the public comment period and oral comments are accepted at an EPA scheduled Public Hearing. For this Draft Permit, the public comment period closes on September 30, 2010. A public hearing was held on June 22, 2010.

## **What happens after the close of the public comment period?**

After the close of the comment period, EPA will review the comments received during the public comment period, make appropriate changes to the Draft Permit and issue a Final General Permit. EPA will at the same time issue a response to comments that explains what changes were made to the document in response to public comments.

## **What happens after the Final General Permit is issued?**

As currently proposed, those parties that own (and in limited circumstances parties that operate) Residually Designated Discharge Sites (DD Sites), must submit a Notice of Intent (NOI) for coverage under the general permit to EPA **within 180 days** of the date that the permit becomes final. For DD Sites that are eligible for permit coverage and that have submitted a NOI, EPA will respond with an authorization letter. Receipt of an EPA authorization letter signifies the official start of coverage under the Final General Permit

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### **Summary of Proposed Draft Permit Requirements**

#### **What is the environmental objective of the proposed Draft Permit?**

The objective of the permit is to manage storm water runoff from large impervious surfaces to effectively reduce annual phosphorus loading to the Charles River and its tributaries by 65% using non-structural BMPs, infiltration practices, where feasible, and other structural BMPs if infiltration is not feasible. Another objective is to help control bacterial contamination to surface waters.

#### **Why should infiltration practices be used when feasible?**

Infiltration practices are structural BMPs that are designed to collect and temporarily store runoff so that it can soak (i.e., infiltrate) into the ground. Infiltration practices are among the most effective BMPs for capturing phosphorus in runoff. Infiltration practices provide the additional benefits of being highly effective at removing bacteria in runoff, and replenishing underground aquifers that serve as the source of water supplies and base flow in local streams.

#### **What are the requirements in the Draft Permit?**

The Draft Permit proposes two major groups of requirements to address pollution in storm water from DD Sites: (1) Baseline Performance Standards and (2) Phosphorus Reduction Requirements. Following is a list of these requirements. This list is not all-inclusive, but is intended to provide a brief summary of required actions and compliance timelines. Other procedural and reporting requirements are not presented in this summary. Please consult the Draft Permit and Appendices for the complete list of requirements. Figure 1 at the end of this document presents the compliance timeframes for the major permit output requirements.

**Proposed Baseline Performance Standards:** Within 30 days of receiving the EPA authorization letter, the permittee must develop and begin implementing a Storm Water Management Plan (SMP) to manage storm water runoff from the DD Site. The SMP includes a number of pollution prevention activities referred to as the Baseline Performance Standards. These Standards are designed to prevent and/or minimize avoidable discharges of pollutants and ensure that storm water systems are maintained and operated properly. These Baseline Performance Standards include, but are not limited to:

- ❖ formalizing a team to oversee the Program;
- ❖ sweeping paved surfaces at least two times per year;
- ❖ managing snow, deicing chemicals, trash, waste (including from animals and humans), and erosion;
- ❖ storing, using, and disposing of fertilizers, pesticides, and herbicides;
- ❖ managing landscaping activities and leaf litter;
- ❖ storing materials and equipment and preventing spills of harmful materials;
- ❖ managing vehicle and building washing;
- ❖ maintaining storm system and structural BMPs;
- ❖ maintaining a logbook; and
- ❖ executing illicit discharge detection and elimination measures.

**Proposed Phosphorus Reduction Requirements:** The Draft Permit requires permittees to achieve the equivalent of a 65% reduction in annual phosphorus load from the developed portion of the DD Site through implementation of any one or combination of the following:

- 1) Enhanced non-structural BMPs at the DD Site (e.g., increased sweeping, no phosphorus fertilizer use, leaf litter collection);
- 2) Structural BMPs (e.g., infiltration practices at the DD Site); and

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3) Participation in a Certified Municipal Phosphorus Program (CMPP).

A CMPP is a municipal administered program designed to achieve phosphorus load reductions throughout the community. At present, CMPPs do not exist in the host municipalities but the draft permit allows for the possibility that such programs will be developed during the next few years. When compared to individuals implementing controls on a site by site basis, implementing a municipal-wide program offers many collective benefits to both individuals and their municipalities. These benefits include substantial cost savings, fewer BMPs and reduced overall administrative burden.

**Proposed Phosphorus Reduction Requirement Outputs:** Under the draft permit, the permittee must undertake a number of steps in its phosphorus reduction plan according to a schedule, as follows:

- Develop a “**Preliminary Phosphorus Reduction Plan**” and submit to the local municipality **within two (2) years** of receiving the EPA authorization letter. This Plan includes either (1) conducting a **Site Suitability Analysis**, which involves an assessment of the DD Site for implementing BMPs to achieve designated phosphorus reductions or, instead, (2) fulfilling the **One Inch Storm Water Control Provision**, which would require demonstrating that controls are in place that would capture and not discharge one inch of rainfall for the entire impervious area of the DD Site. If the permittee conducts the Site Suitability Analysis, then a Preliminary Phosphorus Reduction Plan must include a statement of intent indicating how the permittee intends to achieve the required phosphorus load reduction.
- Develop a “**Final Phosphorus Reduction Plan**” and submit to the local municipality **within three (3) years** of receiving the EPA authorization letter. This Plan presents how the permittee proposes to achieve the required phosphorus load reduction of 65 %.
- If planning **structural BMPs at the DD Site**, the permittee must develop all design plans and construction specifications for each BMP and obtain all local, state, and federal permits needed for construction **within four (4) years** of receiving the EPA authorization letter.
- If planning structural BMPs, the permittee must construct and operate the BMPs **within five (5) years** of receiving the EPA authorization letter.
- If relying on participation in a CMPP, the permittee must commence participation in the CMPP **within five (5) years** of receiving the EPA authorization letter.
- If relying on participation in a CMPP and not planning structural BMPs, the permittee will have the benefit of the longer implementation schedule of the CMPP (**within ten (10) years**).

Throughout the permit term, each permittee must develop and maintain an **Operation and Maintenance (O&M) plan** for all structural and non-structural BMPs constructed, used, or implemented as required by the permit, and ensure they are all properly operated and maintained.

Each year, by February 15, regulated entities must submit a report to EPA documenting all permit activities completed during the previous year (the “Annual Certification of Compliance”).

**For Further Information**, including copies of the Draft Permit, Attachments, and Fact Sheet, as well as helpful information and links, visit EPA’s website (<http://www.epa.gov/ne/npdes/charlesriver/index.html>) or contact Mark Voorhees via email ([voorhees.mark@epa.gov](mailto:voorhees.mark@epa.gov)) or via telephone (617-918-1537).

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