

State of Oregon
Department of Environmental Quality

**Industrial Stormwater Advisory Committee
Meeting 9- June 15, 2010**

**Jenine Camilleri, Stormwater Coordinator
Surface Water Management, Water Quality Division**

Subject: Discharges to Impaired Waterbodies needing TMDLs

Background:

At the April 2010 Industrial Stormwater Advisory Committee meeting, we discussed recommendations for developing new requirements for discharges to impaired waterbodies needing TMDLs. DEQ presented the following approach:

- During the first year of the permit, facilities will screen for the impairment pollutants on the 303(d) list at each outfall (except substantially similar outfalls) that discharges to the impaired waterbody. The screening levels will be based on the aquatic life, freshwater criteria (acute or chronic). Where there is no aquatic life criterion for an impairment pollutant, DEQ will use the human health criterion. Facilities must monitor 4 storm events using a grab composite sampling method. Facilities can obtain a monitoring after the first monitoring year if the pollutant(s) is not detected above background natural levels or is not expected to be present above background levels.
- Facilities that have impairment pollutants present in their discharge in concentrations about the water quality standards/criteria will implement the most effective BMPs to reduce the impairment pollutants in their discharge below these standards/criteria. Within 90 days of receiving the results from the first year of monitoring, these facilities must submit an updated Stormwater Pollution Control Plan (plan) that describes the specific BMPs that will be implemented, the anticipated BMP effluent concentrations, and the implementation schedule that includes the date the BMPs will be initiated and completed. The plan must be stamped by a licensed professional engineer, certified engineering geologist, hydrogeologist, or certified professional in stormwater quality.
- Facilities will monitor their discharge by collecting 4 grab composite samples each year for the remainder of the permit term, unless they have obtained a waiver (pollutant was not present or detected above background natural conditions).

DEQ received a wide variety of feedback from the committee. Overall, the committee thought DEQ was going in a good direction, but the approach was very stringent considering facilities have not monitored for these pollutants before and in comparison to the benchmark approach (where facilities have previously been monitoring and adjusting their BMPs). Specifically, the committee raised the following concerns:

- Monitoring should be waived after some time if the facility can show that the impairment pollutant is not present in the discharge.
- DEQ should take the geometric mean of four samples for triggering the requirement to implement more effective BMPs rather than basing this decision on one sampling event.
- If there is not an acute criterion for a specific pollutant then DEQ should not apply a different criterion (chronic or human health).
- There should be a deadline for BMP installation because there is an economic advantage to defer costs.

Recommended Changes to approach:

Based on the committee's feedback, we consulted with the DEQ regional stormwater managers and the TMDL program about potential changes to the recommended approach related to the monitoring requirements and the trigger for implementing additional BMPs to address impairment pollutants that are present in a facility's discharge. As a result, DEQ is proposing the following requirements for discharges to impaired waterbodies needing TMDLs:

- **Step 1:** During first year or two under the new permits, facilities will determine if impairment pollutants are present in their stormwater discharge.¹ If pollutants are present, facilities will evaluate data to see if there are trends and investigate the potential sources of the pollutants. Facilities should focus on eliminating pollutant sources first, if possible, and then evaluate other control measures.
 - Facilities will screen for the impairment pollutants at each outfall that discharges to the impaired waterbody (except substantially similar outfalls). The screening levels will be based on the aquatic life, freshwater criteria (acute or chronic). If a pollutant does not have an aquatic life criterion, DEQ will use the human health criterion.
 - Facilities must monitor 4 storm events per year using the grab composite method.
 - Facilities may discontinue this monitoring after the first year if:
 - A pollutant is not present in 4 consecutive sampling events above the water quality standard/criteria or quantitation level; OR
 - A pollutant is not detected above background natural levels or is not expected to be present above background levels.² Provide documentation with the DMR, including data and/or studies, supporting why the presence of the pollutant is caused solely by natural background sources.
- **Step 2:** At the end of the 2nd monitoring year, determine if impairment pollutants are present in discharge in concentrations above the water quality criteria/standards. This evaluation is based on the geometric mean average of the monitoring data collected over the last 2 years.
 - *No:* Maintain current BMPs and monitor impairment pollutants at each outfall that discharges to the impaired waterbody (except substantially similar outfalls) once per year for the remainder of the permit term using the grab sampling method.³
 - *Yes:* Follow Step 3.
- **Step 3:** Implement BMPs to control impairment pollutant(s)
 - Facilities will have 2 years to evaluate the appropriate BMPs to address the pollutant(s) of concerns, submit an updated plan and implement the new BMPs.
 - First, conduct a comprehensive review of BMPs available to address the impairment pollutant(s) present in their discharge and select the most effective BMP proven to control or eliminate the presence of the pollutant(s).
 - Second, submit an updated plan within 6 months of the end of the monitoring year (by December 31st) that includes a description of the specific BMPs that will be implemented, the anticipated BMP effluent concentrations, and the implementation schedule that includes the date the BMPs will be initiated and

¹ Facilities are not required to monitor for certain impairment pollutants (e.g., temperature, hydrologic modifications, pollutant for which no standard analytical method exists).

² EPA's permit does not include legacy pollutants from an earlier activity on the site, or pollutants in run-on from neighboring sources, which are not naturally occurring, as natural background pollutants.

³ Facilities may not have to monitor all the impairment pollutants on the 303(d) list if they obtain a monitoring waiver for some pollutants.

completed. The plan must be stamped by a registered/licensed professional engineer. DEQ will review this information for completeness, but will not verify the efficacy of the BMPs.

- Third, implement the BMPs within two years (i.e., no later than the end of the 4th monitoring year).
- Fourth, monitor impairment pollutants at each outfall that discharges to the impaired waterbody (except substantially similar outfalls) four times per year (years 3 through 5) using the grab sampling method.

Reasoning behind Changes:

Monitoring waiver

DEQ evaluated whether to allow certain facilities to obtain a monitoring waiver after the first monitoring year if the pollutants are not present in their discharge or at levels that are below water quality criteria/standards. To be consistent with EPA's permit, facilities will be required to monitor their discharge for impairment pollutants during the first year of the permit. EPA allows facilities to stop monitoring for impairment pollutant(s) after the first monitoring year, if they are not detected above background natural levels or are not expected to be present above background levels. DEQ is proposing the same language in the new permits. Also, facilities may obtain a monitoring waiver after the first monitoring year if the impairment pollutant(s) are not present in 4 consecutive sampling events above the water quality criteria/standards or quantitation level. This language is the same as the monitoring waiver requirements in DEQ's current permits that apply to benchmark monitoring.

TMDL development:

DEQ's intention with developing these requirements is to ensure that industrial facilities that are discharging impairment pollutants into a waterbody that is not meeting water quality standards are effectively controlling these pollutants. However, given that DEQ has not developed a Total Daily Maximum Loads (TMDLs) for these impaired waters, the agency has not assessed industrial stormwater's contribution to the impairment of a given waterbody. At the last committee meeting, DEQ proposed that facilities monitor their discharge frequently to gather data that can be used to develop future TMDLs (i.e., monitor 4 storm events per year using the grab composite method).

After the meeting, we discussed with the TMDL program whether the proposed monitoring would assist with evaluating industrial stormwater when future TMDLs are developed. Given the spectrum of impairment pollutants and potential pollutant pathways, it is difficult for the agency to know at this time whether this data could be used to develop TMDL Waste Load Allocations. DEQ would likely use this data to characterize whether industrial stormwater facilities discharging to a specific waterbody are contributing as a group to the impairment. DEQ does not need a robust data set to conduct this evaluation (e.g., if facilities monitored their discharge once per year that may be enough data for TMDL source characterization purposes). As a result, DEQ is proposing that facilities monitor their discharge less frequently. For example, some facilities will be allowed to reduce the amount of monitoring after the second monitoring year from 4 grab composite samples per year to one grab sample per year. In addition, some facilities may obtain a monitoring waiver after the first year of monitoring.

Trigger for Implementing Additional BMPs

Given that these are new requirements and facilities have not monitored for impairment pollutants in the past, DEQ modified its approach for when facilities will be required to implement additional BMPs if impairment pollutants are present in their discharge in

concentrations above water quality criteria/standards. Facilities will need time to evaluate whether the impairment pollutants are present in their discharge and determine the source of the pollutants. This data will assist facilities in determining the appropriate BMPs to control or eliminate the presence of the pollutants in their discharge.

DEQ is proposing that facilities collect up to two years of monitoring data to evaluate whether these pollutants are present in their discharge.⁴ DEQ is also proposing that facilities collect grab composite samples of their discharge to get a better representation of the pollutants in their discharge during a storm event. At the end of the second monitoring year, facilities will determine if the impairment pollutants are present in concentrations above the water quality criteria/standards based on a geometric mean calculation of the data. Using the geometric mean average allows DEQ to focus on those facilities that consistently have impairment pollutants present in their discharge in concentrations above water quality criteria/standards.

DEQ is proposing that facilities that have impairment pollutants present in their discharge below water quality criteria/standards based on the geometric mean evaluation monitor their discharge once per year for the remainder of the permit term. This amount of monitoring will assist DEQ in developing future TMDLs and is consistent with the requirements in EPA's permit.

BMP Requirements

For those facilities that have impairment pollutants present in their discharge in concentrations above water quality criteria/standards based on the geometric mean evaluation, DEQ is proposing that these facilities implement the most effective BMPs to control or eliminate the presence of the pollutant.

Given that these are new requirements and DEQ has not evaluated whether industrial stormwater is contributing to the impairment of the waterbody, DEQ is not requiring these facilities to ensure that the BMPs will reduce the presence of the pollutants to concentrations below water quality criteria/standards. These facilities will be required to conduct a comprehensive review of BMPs available to address the impairment pollutant(s), estimate the anticipated BMP effluent concentrations in their plan and hire a registered/licensed professional engineer to stamp their plan.⁵ DEQ believes that these requirements will ensure that facilities will control or eliminate the impairment pollutant present in their discharge.

DEQ is evaluating options/considerations for situations where the most effective BMP is not economically achievable for certain facilities. DEQ has evaluated the following options:

- Facilities apply for an individual permit and may need to request a variance.
- Facilities continue to operate under the general permit and DEQ conducts an economic feasibility analysis. However, given the current budget concerns, DEQ does not believe the agency has the expertise or resources in the general permit program to conduct this evaluation.

⁴ Some facilities may not be required to collect two years of monitoring data if they obtain a monitoring waiver (i.e., pollutant is not present in 4 consecutive sampling events above the water quality criteria/standard or quantitation level, pollutant is not detected above background natural levels or is not expected to be present above natural background levels).

⁵ There are Oregon rules and regulations regarding Professional Engineers, including Board of Examiners; code of professional conduct, and grounds for suspension, reprimand, and revocation. The requirements for certified professionals in stormwater quality are focused on pre/post construction runoff and do not address industrial stormwater issues/BMPs.

DEQ is proposing a deadline for facilities to implement the additional BMPs. Facilities must implement the BMPs within two years. This will provide the facilities will adequate time to evaluate the BMPs on the market, conduct additional monitoring if necessary to determine the source of the pollutants and install the new BMPs.

DEQ is also proposing that these facilities continue to monitor for impairment pollutants four times per year (Years 3 through 5) using the grab sampling method to ensure the BMPs they choose will effectively control the impairment pollutants present in their discharge.