

State of Oregon
Department of Environmental Quality

**Industrial Stormwater Advisory Committee
Meeting 2- August 4, 2009**

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Subject: EPA Multi-Sector General Permit requirements and how they will guide Oregon revised permits

Introduction

This memo will provide an overview of EPA's rationale for the key federal Multi-Sector General Permit (MSGP) requirements issued in September 2008. It is DEQ's intention to revise Oregon's Industrial Stormwater Permits No. 1200-Z and 1200-COLS based on the MSGP. DEQ has noted in the settlement agreement the following areas where DEQ may deviate from the MSGP:

- Continuing with public participation requirements and DEQ plan review before approving registration under the permit
- Expanding the consequences for benchmark exceedances
- Clarifying water quality standards requirements
- Clarifying requirements for discharges to impaired waterbodies with an approved TMDL
- Clarifying plan requirements, including keeping the plan up-to-date.
- Increasing the monitoring requirements related to the monitoring waiver
- Expanding the initial characterization of stormwater discharge

In addition, there may be other areas where the revised permits will not be identical to the MSGP as explained in the Department of Justice Memorandum, dated July 24, 2009.

Technology Based Effluent Limits (Part 2.1)

The Clean Water Act (CWA) requires existing facilities to meet technology based effluent limits (TBELs). The TBELs in the MSGP correspond to required levels of technology-based control under the CWA (i.e., Best Practicable control Technology currently available for all pollutants (BPT), Best Conventional pollutant control Technologies for conventional pollutants (BCT) and Best Available Technology economically achievable for toxic pollutants (BAT)).

TBELs are usually established by EPA in effluent limit guidelines (ELGs) that apply to specific industry categories and activities. In limited number of instances where EPA developed stormwater specific ELGs, the MSGP includes numeric TBELs (see Part 2.1.3 of MSGP). Otherwise, the TBELs in the MSGP are expressed in a narrative form. EPA interprets the CWA to allow Best Management Practices (BMPs) in the place of numeric TBELs when numeric limits are infeasible. EPA believes that not always feasible to develop numeric TBELs for industrial stormwater due to the variability of stormwater discharge and best management practices (BMPs) employed at the industrial sites. The narrative TBELs are based on best professional judgment of the agency because no ELGs apply.

The narrative TBELs in the MSGP are expressed as specific pollution prevention requirements to minimize pollutants in a facility's stormwater discharge (e.g., minimize exposure, maintenance, good housekeeping, spill prevention and response procedures, erosion and sediment controls). Operators must select, design, and implement control measures (i.e., BMPs) in accordance with good engineering practices and manufacturer's specifications and evaluate a variety of factors when choosing their BMPs.

If a facility fails to meet a narrative TBEL it is a violation of the permit. For example, facilities are required to train all employees who work in areas where industrial materials or activities are exposed to stormwater. If they fail to do so, this is a permit violation.

Stormwater Pollution Prevention Requirements (Part 5)

Facilities must submit a Stormwater Pollution Prevention Plan (plan) with their application for coverage under the MSGP. The plan is intended to document the selection, design and installation of control measures as well as describe the site, industrial activities and potential pollutant sources.

EPA restructured the permit and created two separate sections for the effluent limit requirements (Part 2) and the plan requirement (Part 5) to emphasize that the plan does not contain effluent limits. The plan is a tool to meet the TBELs in the permit. The plan must document the type and location of the controls measures that are installed as well as the schedule for meeting the TBELs (e.g. schedule for training employees). Under the MSGP, if a facility fails to implement a control measure identified in their plan, this deficiency may result in a TBEL violation as well as a plan or recordkeeping violation. For example, if a non-implemented control measure results in a violation of one of the TBELs in the permit then the facility will have violated both the plan and the TBELs. Advisory Committee members raised concerns at our first meeting that it is redundant to cite violations of both the plan requirements and the TBELs. DEQ will evaluate these concerns and obtain feedback from the advisory committee on the relationship between the plan and TBELs and ways to streamline plan review during meeting 10 that will be held on April 20, 2010.

It is EPA's intent for operators to keep their plan up-to-date so that it reflects the current control measures on the site. However, the MSGP does not have an explicit requirement in Part 5 of the permit to keep the plan up-to-date. As a result, DEQ has agreed to clarify in its revised permits that operators must keep the plan up-to-date (See 6.e in settlement agreement). If an operator fails to keep the plan up-to-date, this would be considered a recordkeeping or plan violation rather than a TBEL violation (e.g. change maintenance procedures, but fail to update plan).

Water Quality Effluent Limits (Part 2.2)

The MSGP includes narrative water quality based effluent limit (WQBEL) requirements that supplement the TBELs in the permit. These limits address the following requirements:

1. Compliance with water quality standards;
2. Controlling discharges to impaired waters, and
3. Implementation of antidegradation requirements.

These WQBELs are narrative limits that are not based on a technical evaluation of specific facilities' discharge. During the development of the general permit, EPA did not have sufficient information on specific waterbodies/watersheds to develop numeric WQBELs that would apply

to a wide variety of industries. EPA has the ability under the permit to require additional, more stringent site specific requirements for individual discharges if deemed necessary to ensure compliance with water quality standards.

1. Water Quality Standards (Part 2.2.1)

The MSGP requires existing facilities to control discharges as necessary to meet water quality standards in the receiving waterbody. In the previous permit, EPA prohibited facilities from “causing or contributing” to a water quality standards violation. EPA’s reasoning for rephrasing this requirement is that the “cause or contribute” language is used when an agency is determining if WQBELs are necessary (i.e., when it is conducting a reasonable potential analysis). In the development of the 2008 MSGP, EPA determined that WQBELs are necessary so it changed the language to require facilities to control their discharge as necessary to meet water quality standards pursuant to 40 CFR 122.44(d)(1)(i) and (ii).

EPA believes that if existing facilities are complying with other requirements in the permit (TBELs, corrective actions, inspections and monitoring) then their stormwater discharge should be controlled as necessary to meet water quality standards. However, if a facility or EPA determines that the discharge causes or contributes to a water quality standards violation, the facility must take corrective actions. The MSGP requires in Part 3.4 that the facility identify the reason for the violation within 24 hours and identify the corrective actions within 14 days. This information is summarized in a corrective action report and submitted to the agency on an annual basis.

There are two areas where DEQ has identified that clarifications to the MSGP are necessary. First, it is EPA’s intent that failing to control discharge as necessary to meet water quality standards is a violation of the permit. However, the permit language in Part 2.2 is not clear that even if a facility takes corrective actions, if they fail to meet water quality standards, it is a violation of the permit. As a result, DEQ has agreed to clarify in its revised permits that failure to meet water quality standards is a violation of the permit in and of itself even if the violation is corrected (see 6.b in settlement agreement).

Second, EPA does not provide requirements in the MSGP or guidance on how facilities will determine whether they are complying with water quality standards. Because water quality standards adopted by DEQ in OAR 340 Division 41 are developed for ambient stream conditions, the question arises where the point of compliance is for determining whether stormwater discharge meets water quality standards in the receiving waterbody. Based on conversations with EPA, the agency does not have a consistent approach for establishing water quality standards violations under the MSGP and did not define the point of compliance. It is also not clear what information EPA or the facility will base its determination on that a discharge caused or contributed to a water quality standard violation, which is the impetus for the facility to take corrective actions. The current DEQ permits require the collection of coincident samples of the discharge and at upstream and downstream locations in the receiving stream to establish a water quality standards violation. However it is difficult for facilities to determine whether they are complying with water quality standards, because DEQ or facilities do not routinely collect these instream water quality samples.

DEQ will be seeking feedback from the advisory committee on developing permit language or guidance to assist facilities with determining compliance with water quality standards in meeting 8 that will be held on February 16, 2010. The following are options that DEQ has considered for evaluating site specific factors that can be used to determine compliance:

- Whether a facility directly discharges to a receiving stream or commingles with other sources before it enters the receiving stream.
- Whether a facility is discharging a pollutant of concern to an impaired waterbody (e.g., the stream is 303(d) listed for PCBs and it is likely that the facility's discharge contains PCBs). Requiring new and existing discharges to characterize their stormwater discharge for any impairment pollutant before applying for or renewing their permit coverage to determine if meeting water quality standard (see 7.c of settlement agreement).
- Where the proper location is for collecting samples (i.e. where is the point of compliance?). Since it is difficult to collect instream samples, should a facility collect samples at the end of their pipe before it leaves the site to determine compliance with water quality standards? This approach would be much more stringent than collecting samples in the receiving stream.

In addition, further clarification on the relationship between benchmark monitoring and compliance with water quality standards may be necessary because many of the MSGP benchmarks concentrations are based on the acute aquatic life freshwater water quality standards. EPA believes that the benchmarks are conservative and that although they are based on the water quality standard for the receiving stream without any allowance for dilution, an exceedance of a benchmark does not necessarily indicate that the discharge is causing or contributing to a water quality standards violation.

2. Discharges to Impaired Waterbodies (Part 2.2.2)

The MSGP includes new, more stringent requirements for new and existing discharges to impaired waterbodies that do not meet water quality standards (i.e. waters listed on the state's 303(d) list that include waters with an approved or established Total Maximum Daily Load (TMDL) and those where a TMDL has not yet been developed). EPA developed a Water Locator Tool that facilities can use to determine whether they are discharging to an impaired waterbody. Facilities are required to notify EPA in the permit application whether they are discharging to an impaired waterbody and if their discharge contains any pollutants for which the stream is not meeting water quality standards (i.e. pollutants of concern). EPA will evaluate this information on a site by site basis and determine whether additional, more stringent requirements are necessary to meet any applicable TMDL Waste Load Allocations (WLA) or further control discharges to impaired waterbodies without a TMDL.

New Discharges:

The MSGP includes in Part 1.1.4.7 an eligibility requirement for new discharges to impaired waterbodies pursuant to 40 CFR 122.4(i), which prohibits the issuance of permits to new discharges that will cause or contribute to water quality standards violation. Facilities that are discharging pollutants of concern for which the waterbody is impaired will not be eligible for permit coverage unless they submit data that establishes that the discharge will not cause or contribute to a water quality standards violation at the point of discharge to the waterbody or there is remaining WLA in the TMDL. New dischargers may also obtain permit coverage if they can establish that they have eliminated all exposure to stormwater of the pollutants of concern or that the pollutants of concern are not present at their site.

DEQ's current permits do not include eligibility requirements for new discharges to impaired waterbodies. Due to the Pinto Creek decision that was issued in December 2007, DEQ has been conducting case by case evaluations of new discharges to impaired waters without TMDLs before granting permit coverage. However, DEQ does not have a protocol for evaluating the monitoring data that facilities submit to DEQ to establish whether these new discharges will

meet water quality standards. DEQ is proposing to develop a monitoring protocol for facilities to follow when collecting data to support that the discharge will meet water quality standards. DEQ will be seeking feedback from the advisory committee on this proposal in meeting 7 that will be held on January 19, 2010.

Existing Discharges:

The MSGP requirements for existing discharges to impaired waterbodies distinguish between discharges to waters with an approved or established TMDL and those without a TMDL.

Existing Discharges to impaired waterbodies with TMDLs:

EPA is implementing a new review process for existing discharges to impaired waterbodies with TMDLs. In the past, WLAs for stormwater were developed in many different formats so EPA's intent with this new process is to clarify how facilities will comply with the TMDLs.

During the application process, if a facility indicates that it is discharging a pollutant of concern to an impaired waterbody, EPA will evaluate the TMDL to determine if it applies to a specific facility or industrial sector and whether more stringent, site specific permit requirements are necessary to comply with the WLA. EPA may determine that additional monitoring requirements are necessary to comply with the assumptions of the TMDL and WLA (see Part 6.2.4.2). If additional more stringent requirements are necessary, EPA will solicit public comment on the site specific requirements that will be incorporated as general permit requirements for the specific facility.

The MSGP is not clear about requirements for stormwater discharges in TMDL basins where the TMDL is silent with respect to stormwater or does not specify a WLA for stormwater sources. DEQ has agreed to add clarifying language to the revised permit regarding how discharges to these waterbodies will meet the provisions in the MSGP (see 6.c in settlement agreement). DEQ anticipates that there are numerous TMDLs around the state that do not address stormwater and are not clear about whether stormwater is a significant source of pollution causing water quality impairments. DEQ is currently in the process of reviewing the TMDLs to determine whether they address stormwater discharges. DEQ will evaluate these TMDLs to determine if stormwater discharges were considered in the source assessment of the TMDL, whether stormwater was identified as a significant source and if there is any reserve capacity for future growth or new sources. Based on this information, DEQ will evaluate whether additional site specific requirements are necessary to comply with the TMDLs and seek feedback from the advisory committee on options for developing these additional requirements in meeting 7 that will be held on January 19, 2010.

Existing Discharges to impaired waterbodies without a TMDL:

Existing discharges to impaired waterbodies without a TMDL are required to notify EPA in the permit application whether they are discharging to an impaired waterbody and if their discharge contains any pollutants of concern for which the waterbody is impaired. EPA will review the information in the permit application and notify the facilities which pollutants of concern they must monitor for on an annual basis (see Part 6.2.4 of MSGP). It is EPA's intent that this data will provide additional information on the impact of industrial stormwater on impaired waters which may also be useful when developing future TMDLs.

The monitoring requirements only apply to facilities that discharge stormwater directly to an impaired waterbody. It is not clear in the permit whether facilities that discharge to a conveyance system that directly discharges to an impaired waterbody are considered a direct discharge. DEQ will be seeking additional clarification from EPA on this issue.

The facilities must monitor the pollutants of concern where standard analytical methods exist. If a pollutant of concern is an indicator or surrogate pollutant then the indicator pollutant must be monitored. Facilities are not required to conduct monitoring for the impairment pollutants if a waterbody's biologic communities are impaired, but a pollutant or indicator or surrogate pollutant is not identified, or it is impaired due to hydrologic modifications or temperature.

Facilities may cease monitoring for the pollutant of concern after the first year, if the pollutant of concern is not detected in the discharge or the presence of the pollutant is caused by natural background conditions (does not include legacy pollutants or run-on from neighboring sources). If the pollutant is detected, facilities are required to continue the annual monitoring for the remainder of the permit term.

In addition, these facilities must comply with the water quality provisions in Part 2.2.1 of MSGP and control their discharge as necessary to meet water quality standards. EPA's intent with impairment pollutant monitoring is ensure that facilities are not causing or contributing to further impairment of the receiving stream. However, the MSGP is not clear if the monitoring results show that pollutant of concern is present in their discharge in concentrations above the water quality standards whether the facility is in violation of water quality standards. This issue is also related to the discussion above on how often and where a facility would collect samples to determine compliance with water quality standards. DEQ may seek feedback from the advisory committee on clarifying language in the revised permits that will explain how these two provisions (Part 2.2.1 and 6.2.4) work together. One option DEQ has considered is adding language that would clarify that DEQ can require additional site specific requirements (i.e. water quality based limitations) to ensure that these discharges comply with water quality standards.

3. Implementation of Antidegradation requirements (Part 2.2.3)

The MSGP requires new discharges and existing discharges that plan to increase their discharge in Tier 2 waters (i.e., high quality waters where existing conditions are better than the necessary to support water quality standards fishable/swimmable use) to notify EPA. EPA will notify the facilities if any additional requirements are necessary to comply with state and federal antidegradation requirements. EPA may also notify a facility with unique discharge characteristics that they are not eligible for coverage under the general permit.

The approach that EPA took relies on the expectation that the permit conditions in the MSGP will be sufficient to protect Tier 2 waters. EPA based this determination on the following reasons: (1) facilities will select, design and implement site controls to meet the TBELs; (2) the site controls the facilities choose in light of best industry practice and are equivalent to the required levels of technology-based control under the CWA (i.e. BAT/BCT/BPT); (3) where EPA determines that facility is not meeting the TBELs this is a violation of the permit and they are required to take corrective actions required, and (4) facilities also subject to WQBELs.

DEQ will be evaluating how these requirements relate to Oregon's antidegradation requirement in OAR 340-041-0026 that requires a review of discharges to surface waters to determine if existing water quality will be protected and maintained. In addition, DEQ has agreed to conduct an antidegradation study (see 4.d. in settlement agreement). DEQ will gather additional information to support to support DEQ' rationale that the revised permits will not cause a lowering of water quality by looking at permitting trends as to number of facilities assigned to the permit and researching studies on BMP effectiveness over time resulting in the reduction in pollution.

Monitoring Requirements (Part 6)

Monitoring Procedures

The MSGP requires facilities to conduct monitoring during a qualified storm event that generates runoff. The permit does not specify the amount of precipitation that must occur to produce enough runoff to take a sample. The storm event must occur at least 72 hours following the previous storm event.

First Flush

Facilities must collect at least one grab sample collected during the first 30 minutes of discharge. If a facility is conducting composite sampling, only those aliquots collected during the first 30 minutes are acceptable. If it is impractical for a facility to collect a sample within the first 30 minutes, they can collect a sample in the first hour, but they must document the reason for failing to collect the sample within the first 30 minutes of the storm event.

EPA is requiring facilities to sample during the first 30 minutes of a storm event to account for first flush. EPA believes that during the first 30 minutes of a storm event stream flows are at their lowest and the pollutant loading from stormwater runoff presents the greatest potential for adverse impacts to aquatic species at this time. Also, by requiring facilities to collect their samples at similar times during the storm event, EPA believes that the facilities will have a better ability to evaluate their monitoring results and determine if additional site controls are necessary to reduce pollutant concentrations in their discharge.

Advisory committee members have raised concerns about whether first flush requirements are appropriate for the pacific northwest. DEQ will discuss these concerns as well as the implementation issues facilities may have such as tracking storm events and collecting samples during working hours as well as, issues DEQ may have evaluating whether it was impractical for a facility to collect a sample during the first 30 minutes of a storm event in meeting 4, that will be held on October 20, 2009.

Substantially Similar Outfalls

Samples must be collected from each outfall unless the facility qualifies for the substantially identical outfall exception. Substantially similar outfalls are two or more outfalls that have similarities in industrial activities, control measures, exposed materials, and runoff coefficients. To reduce the number of outfalls that the facility will monitor, they must document its reasoning as to why two or more outfalls are substantially similar. EPA does not approve this determination, but may later determine that the outfalls are not substantially identical and request that the facilities monitor all its outfalls.

The substantially similar outfall requirements in the MSGP are similar to those in the current DEQ permits. However, Oregon facilities currently must describe the outfalls in the plan and include data or analysis supporting that the outfalls are similar. DEQ currently reviews this information as part of granting coverage under the permits. DEQ agreed that it will grant prior approval before a facility can discontinue monitoring an outfall because it is substantially similar (see 6.d of settlement agreement). In addition, DEQ will gather feedback from the advisory committee on whether facilities should characterize all their outfalls and submit data supporting that the outfalls are substantially similar in order to reduce the number of outfalls that they will monitor in meeting 4 that will be held on October 20, 2009.

Monitoring Types

The types of monitoring required by the MSGP include benchmark monitoring, effluent limitations monitoring, state or tribal provisions monitoring, discharges to impaired waters monitoring (discussed above), additional monitoring required by the EPA, and visual assessment.

Benchmark Monitoring

Benchmark monitoring must occur on a quarterly basis in the first year of permit coverage. If the four samples' average concentration of any monitored parameter is less than the corresponding benchmark, the benchmark monitoring commitment for that parameter has been fulfilled for the remainder of the permit period (i.e. monitoring waiver). If significant changes occur at a facility, the facility is required to notify EPA, who may request that facility resume benchmark monitoring on a quarterly basis. In meeting 4, DEQ will be obtaining input from the advisory committee on the appropriate time period for the monitoring waiver and requiring all facilities to monitor their discharge on an annual basis unless they can establish that they do not discharge a particular pollutant (see 7.a of settlement agreement).

For purposes of averaging, non-detect analytical results must have an assumed value to be used. A parameter with a result less than the method detection limit (MDL) concentration can be assumed to be zero. Results between the MDL and the quantitation level concentration will be represented by an average of the two concentrations.

Numeric effluent limits

Numeric effluent limit monitoring must be conducted once yearly for the duration of the permit from each outfall. Effluent limit monitoring does not allow flexibility to reduce the number of monitored outfalls through conditions of substantially identical outfalls as allowed in benchmark monitoring. Where applicable, obligatory State or Tribe numeric effluent limits must be monitored at least once a year unless an alternative monitoring frequency is specified by the State or Tribe. Exceedances of numeric effluent limits, including those limits established by the State and Tribe, constitute permit violations requiring corrective actions and quarterly follow-up monitoring until the facility is back in compliance.

Additional monitoring requirements for water quality based effluent limits

EPA has the ability to request additional monitoring if EPA determines that it is necessary to protect a receiving water quality. EPA will then notify the facility of why additional monitoring is requested and the additional monitoring expectations (e.g. parameters, locations, frequency, and reporting).

Visual Assessment

As part of the inspection procedures in Part of the MSGP, facilities are required to conduct a visual assessment of their discharge on a quarterly basis within the first 30 minutes of the storm event. It is likely that this assessment will occur when facilities are conducting their quarterly benchmark monitoring. Facilities are not required to submit these findings to EPA, but they must document them in the plan.

Benchmarks (Part 8):

In most cases, EPA has not revised the benchmarks since they were first published in the 1995 MSGP. It is EPA's intent that the benchmark monitoring serve as an indicator of the effectiveness of the site controls that are used to meet the narrative TBEL and WQBEL in the permit. EPA acknowledges that given the small number of stormwater grab samples and the

variability of the discharge, it may be difficult to confirm that a facility's discharge is causing a water quality problem. However, results that exceed a benchmark are a good indicator that the site controls need to be re-evaluated and pollutant loads reduced.

During the development of the 2008 MSGP, EPA evaluated whether changes to the benchmarks and monitoring requirements were necessary and whether benchmark exceedances are a useful indicator of BMP effectiveness or potential water quality problems. However, EPA did not complete this analysis before the issuance of the 2008 MSGP and was awaiting the National Research Council (NRC) report on Urban Stormwater Management in the United States, which was issued shortly after EPA finalized the 2008 MSGP. DEQ will provide an overview to the advisory committee on the NRC's recommendations on stormwater monitoring and discuss the feasibility of incorporating some of the NRC recommendations into the revised permits in meeting 3 that will be held on September 15, 2009.

Benchmark Values

Benchmark values in the 2008 MSGP are based on either national water quality criteria, stormwater runoff studies, or technology based standards. Generally, EPA used the following approach to select the benchmark values:

1. Use the acute, aquatic life, freshwater national water quality criteria.
2. Use the chronic, aquatic life, freshwater national water quality criteria where no national acute criteria is established.
3. Use stormwater runoff studies or technology-based standards where no national acute or chronic criterion is established.

Please refer to the Appendix I for more information on the sources for the benchmark values.

Benchmark Parameters

EPA's sector specific benchmarks apply to 29 industrial sectors or subsectors. The sector specific benchmark parameters were originally developed by EPA for the 1995 MSGP. The benchmarks were based on group applications that were submitted in two parts by facilities with common industrial practices. Part 1 contained information on industrial practices, materials and processes exposed to precipitation, and activities conducted to manage exposed materials. Part 2 was comprised of stormwater monitoring data collected from facilities representing a variety of industrial sectors.

EPA considered monitoring data from these facilities if at least three different facilities within a sector or subsector submitted data on similar pollutants. EPA then evaluated the data from each sector on a pollutant by pollutant basis by comparing the median concentrations against the 1995 benchmarks and assessing whether the source of high pollutant concentrations was from industrial activities and not from natural background sources.

If facilities submitted insufficient data, EPA did not identify any benchmark parameters for these sectors or require these sectors to conduct any monitoring. There were exceptions made to this approach for the high priority sectors (hazardous waste treatment facilities, storage and disposal facilities, auto salvage yards, and airports). EPA based the benchmarks for these sectors on the amount and type of exposed materials and gathered additional data from other sources besides the group applications.

The amount of benchmark parameters that a facility must sample varies amongst the industrial sectors and subsectors (see the attached chart on the MSGP benchmarks and how they compare to Oregon current benchmarks). Aside from Sector G, Metal Mining, the number of benchmark parameters that these sectors must sample ranges from as few as one and up to

seven benchmark parameter. Of the 29 industrial sectors, 12 are required to conduct benchmark monitoring throughout the sector, 8 have some required benchmark monitoring including some subsectors with no required benchmark monitoring, and 9 have no required benchmark monitoring. Under the MSGP, approximately 690 (77%) facilities currently permitted Oregon facilities would conduct benchmark monitoring for fewer pollutants. 130 (14%) would be monitoring for only one or two pollutants and 360 (40%) would not be required to perform benchmark monitoring.

Considering the number of facilities in Oregon that would have a significant reduction in benchmark monitoring under the MSGP approach, DEQ is considering options for ensuring that the facilities do not reduce the number of parameters that they currently monitor under the 1200-Z and 1200-COLS permits. DEQ will be seeking feedback from the advisory committee on this issue in meeting 6 that will be held on December 15, 2009, after DEQ has evaluated the approach for the consequences for benchmark exceedances (discussed in meeting 5 that will be held on November 17, 2009).

One option DEQ has considered is retaining the current benchmark parameters in Oregon's permits and requiring additional sector specific benchmark parameters identified in the MSGP. For example, in the MSGP facilities that fall under Sector AA (Fabricated Metal Products) are required to monitor for aluminum, iron, zinc, and nitrate. These facilities in Oregon would also monitor for copper, lead, pH, Total Suspended Solids (TSS), oil and grease, and if located in the Columbia Slough watershed, biological oxygen demand (BOD5), E.coli and phosphorus. Given the problems with DEQ's historical record on the development of the benchmarks, DEQ will need to have sufficient information in the record to support retaining the current benchmarks parameters in Oregon's permits. DEQ is also proposing to use the benchmark values in the MSGP. An exception may be where DEQ has sufficient information to support a different value (i.e., benchmarks in the 1200-COLS benchmarks that were based on the Columbia Slough TMDL).

Response to Benchmark Exceedance (Part 3.2)

The MSGP includes requirements for taking corrective actions if a facility exceeds the benchmarks in Part 8 of the permit. If the average of four quarterly samples exceeds a benchmark(s), facilities are required to take conduct an evaluation to determine what corrective actions are necessary and identify potential modifications to site controls to effect an improvement in runoff quality to below benchmark concentrations. Due to high variability of stormwater monitoring results, EPA does not require facilities to take corrective actions each time benchmarks are not met. However, if one sample is very high, such as four times the benchmark concentration, then the facility is required to take corrective actions at that time. Facilities are required to document deficiencies within 24 hours and corrective actions within 14 days and make any necessary changes before the next storm event, if possible.

Facilities are required to summarize the actions they took to correct the problem in an annual report. In the report they must explain if the changes to the BMPs were needed; if the exceedance was due to background natural conditions; or if additional data is needed to identify cause of exceedance. However, if it is infeasible to modify the control measures either due to limited available technology or financial constraints, facilities may discontinue benchmark monitoring and record the rationale in their plan.

The MSGP does not include any additional requirements for facilities that have a history of exceeding the benchmarks. However, Oregon's current permits require facilities during the 4th

year of permit coverage to evaluate the last four samples collected and if the geometric mean of these 4 samples exceeds benchmark(s), the department will require an individual permit with site specific numeric effluent limits. The Department has not implemented this permit provisions because the facilities are not operating under their 4th year of permit coverage until 2010 at the earliest. In addition, every time facilities exceed a benchmark exceedance they are required to submit an Action Plan to DEQ within 30 days that explains the steps they took to investigate the cause of the elevated pollutant levels and corrective actions they will take to improve the quality of its stormwater discharge.

DEQ has agreed to seek feedback from the advisory committee on developing permit requirements for facilities that repeatedly fail to meet benchmarks (see 7.b of settlement agreement). DEQ will gather input from the advisory committee on the appropriate consequences for benchmark exceedances in meeting 5 that will be held on November 17, 2009. DEQ has considered the following options:

- Developing escalating consequences based on regularity and intensity of the exceedances.
- Requiring facilities to conduct additional monitoring such as increasing frequency of monitoring or collecting composite samples to more accurately evaluate the reason for the elevated pollutant loads in their discharge.
- Gathering more samples to conduct the geometric mean evaluation (e.g. basing the evaluation on 12 samples rather than 4 samples).
- Developing criteria for when industries will not be eligible for permit coverage. Based on the evaluation of the benchmark data collected by the facilities under the current permits, DEQ may identify certain industries that have routinely failed to meet benchmarks that will not be eligible for coverage under the general permits and will be required to obtain an individual permit.

Appendix 1: 2008 MSGP Benchmark Values

Pollutant	Benchmark	Source	Different from '05 Permit
Ammonia*	2.14 mg/L	14	No
Biochemical Oxygen Demand (5 day)	30 mg/L	4	No
Chemical Oxygen Demand	120 mg/L	5	No
Total Suspended Solids	100 mg/L	7	No
Turbidity	50 NTU	9	Yes
Nitrate + Nitrite Nitrogen	0.68 mg/L	7	No
Phosphorus	2.0 mg/L	6	No
pH	6.0 – 9.0 s.u.	4	No
Aluminum (T) (pH 6.5 - 9)	0.75 mg/L	1	No
Antimony (T)	0.64 mg/L	12	No
Arsenic (T)	0.15 mg/L	3	Yes
Beryllium (T)	0.13 mg/L	2	No
Cadmium (T)†	0.0021 mg/L	1	Yes
Copper (T)*†	0.014 mg/L	1	Yes
Cyanide	0.022 mg/L	1	Yes
Iron (T)	1.0 mg/L	3	No
Lead (T)*†	0.082 mg/L	3	No
Magnesium (T)	0.064 mg/L	8	No
Mercury (T)	0.0014 mg/L	1	No; criteria updated^
Nickel (T)†	0.47 mg/L	1	No; criteria updated^
Selenium (T)*	0.005 mg/L	3	Yes
Silver (T)*†	0.0038 mg/L	1	Yes
Zinc (T)†	0.12 mg/L	1	No; criteria updated^

Key and Sources for 2008 MSGP Benchmark Values

Key:

(T) Total recoverable

* New criteria are currently under development, but values are based on existing criteria.

† These pollutants are dependent on water hardness. The benchmark value listed is based on a hardness of 100 mg/L. When a facility analyzes water samples for hardness, the permittee must use the hardness ranges provided in Table 1 of this fact sheet and in the appropriate tables in Part 7 of this permit to determine the applicable benchmark value for that facility.

^ The values for these pollutants do not have a new basis. They are still based on the water quality criteria, but the "National Recommended Water Quality Criteria" was updated in 2002.

Sources:

1. "National Recommended Water Quality Criteria." Acute Aquatic Life Freshwater (EPA-822-F-04-010 2006-CMC)
2. "EPA Recommended Ambient Water Quality Criteria for Beryllium." LOEL Acute Freshwater (EPA-440-5-80-024 October 1980)
3. "National Recommended Water Quality Criteria." Chronic Aquatic Life Freshwater (EPA-822-F-04-010 2006-CCC)
4. Secondary Treatment Regulations (40 CFR 133)
5. Factor of 4 times BOD5 (5 day biochemical oxygen demand) concentration - North Carolina Benchmark
6. North Carolina stormwater Benchmark derived from NC Water Quality Standards
7. National Urban Runoff Program (NURP) median concentration
8. Minimum Level (ML) based upon highest Method Detection Limit (MDL) times a factor of 3.18
9. Combination of simplified variations on Stormwater Effects Handbook, Burton and Pitt, 2001 and water quality standards in Idaho, in conjunction with review of DMR data.
10. "National Ambient Water Quality Criteria." Acute Aquatic Life Freshwater. This is an earlier version of the criteria document that has subsequently been updated. (See source #1)
11. "National Ambient Water Quality Criteria." Chronic Aquatic Life Freshwater. This is an earlier version of the criteria document that has subsequently been updated. (See source #3)
12. "National Ambient Water Quality Criteria." Human Health For the Consumption of Organism Only (EPA-822-F-01-010 2006)
13. Consistent with many state numeric Water Quality Criteria. This Benchmark was agreed to in negotiations for the 1998 modification to the 1995 MSGP (63 FR 42534).
14. "Guidelines for Deriving Numerical National Water Quality Criteria for the Protection of Aquatic Organisms and their Uses." USEPA Office of Water (PB85-227049 January 1985).