

State of Oregon
Department of Environmental Quality

Memorandum

Date: Sept. 26, 2011

To: Environmental Quality Commission

From: Dick Pedersen, Director

Subject: Agenda item G, Rule adoption: Revision of Division 045 Initiation Level Rule
340-045-0100
Oct. 20-21, 2011, EQC meeting

Why this is important Under the Initiation Level rule and based upon sampling conducted in 2010, municipal wastewater treatment plants routinely exceed initiation levels for cholesterol and coprostanol, pollutants with no feasible municipal pollution prevention activities or cost-effective treatment options. In February 2011, the Environmental Quality Commission adopted a temporary rule to remove the requirement for municipalities to develop reduction plans for cholesterol and coprostanol. That rule, like all temporary rules, expired after six months. A permanent rule is needed to ensure that municipalities subject to the Initiation Level rule in the future will not be required to develop reduction plans for cholesterol and coprostanol, two naturally-occurring human digestion by-products. Additional provisions are also included in this rule to clarify when a permittee is no longer subject to the monitoring and reduction plan requirement.

DEQ recommendation and EQC motion The Department of Environmental Quality recommends that EQC permanently revise rule 340-045-0100, Initiation Level Rule, to suspend municipalities' requirement to develop Persistent Pollutant Reduction Plans for cholesterol and coprostanol, and to clarify when a municipality is no longer subject to the monitoring and reduction plan requirement, as presented in attachment A.

Background and need for rulemaking In June 2010, EQC adopted the Plan Initiation Level Rule, which required Oregon's 52 largest municipal wastewater treatment plants to develop Persistent Pollutant Reduction Plans for pollutants present above Plan Initiation Levels. Senate Bill 737 requires that DEQ incorporate these plans into National Pollutant Discharge Elimination System and Water Pollution Control Facilities permits on renewal. EQC adopted a temporary rule suspending the reduction plan requirement for cholesterol and coprostanol in February 2011, and it expired Sept. 11, 2011.

The two sampling events in 2010 revealed Plan Initiation Level exceedances at nearly every municipal location for cholesterol and coprostanol, and few other exceedances for other persistent pollutants. Based on these results, 47 of the 52 permittees would have been required to prepare a reduction plan for both pollutants, and in the future, it is likely that additional municipalities would similarly exceed initiation levels for cholesterol and coprostanol. While toxicity models concluded that cholesterol and coprostanol are toxic and persist in aquatic ecosystems, meeting the criteria for inclusion on the Priority Persistent Pollutant List, there is limited published scientific data on toxicological effects to corroborate the model estimates. Further, there are no feasible municipal pollution prevention activities or cost-effective treatment options to reduce cholesterol or coprostanol. DEQ views development of Persistent Pollutant Reduction Plans for cholesterol and coprostanol a disproportionate response for these types of pollutants.

Stakeholder input and public comments indicated that additional clarification was needed to inform municipalities when they would no longer be subject to the monitoring and reduction plan requirement. The proposed rule now clearly states the circumstances under which permittees will no longer be subject to the monitoring and reduction plan requirements.

Effect of rule

This proposed permanent revision to the Initiation Level rule would suspend municipalities' requirement to develop Persistent Pollutant Reduction Plans for cholesterol and coprostanol. In addition, the proposed revision clarifies when a permittee is no longer subject to the monitoring and reduction plan requirement. These circumstances include: if sampling demonstrates that the pollutant concentration is lower than the initiation level; if DEQ determines that there are no analytical laboratories available to perform the necessary analysis; if a permittee is subject to duplicative or more stringent requirements addressing the same pollutant; or, for permittees that become subject to the rule in the future, if DEQ determines a pollutant is unlikely to be present in effluent based on a review of available effluent data at the facility or similar facilities in the state. The proposed rule revision is presented in attachment A.

Commission authority

The commission has authority under ORS 468.020 and 468B.141 to take this action in the implementation of ORS 468B.140.

Stakeholder involvement

During development of both the temporary and permanent rules, DEQ met with a volunteer stakeholder sounding board in October 2010, January 2011 and May 2011 for discussion and input regarding options to address widespread exceedance of the cholesterol and coprostanol initiation levels.

At the October 2010 meeting, DEQ informed sounding board members that it was considering two options for addressing pollutants with no feasible municipal pollution prevention activities or treatment options: minimal reduction plans focused on maintaining or optimizing existing treatment; or a rule revision to suspend permittees' requirement to develop Persistent Pollutant Reduction Plans for these pollutants. DEQ offered sounding board members an informal opportunity to provide input on these two options, and evaluated input received.

In advance of the January 2011 stakeholder sounding board meeting, DEQ indicated its intent to pursue a revised rule and shared draft rulemaking materials for the temporary rulemaking. DEQ responded to clarifying questions at the stakeholder sounding board meeting and accepted information from members that improved the documents' accuracy. DEQ held an additional meeting with interested sounding board members in May 2011 to review the proposed permanent rulemaking materials. The meeting resulted in further clarifications regarding when a development and implementation of a Persistent Pollutant Reduction Plan will be considered complete.

A list of sounding board members who participated in these meetings is located in attachment D.

Public comment

DEQ held a public comment period for the revised Initiation Level Rule from June 1 to June 30, 2011. DEQ held one hearing in Portland, Oregon, June 15, 2011. One person attended the hearing and provided oral testimony, and DEQ received three letters with comments on the proposed changes to the rule language. A summary of the public comments received and responses from DEQ is included in attachment B.

Key issues

DEQ considered six key issues during the development of the temporary rulemaking and subsequent proposed final rule.

1. What information exists regarding the potential environmental and human health threats of discharging cholesterol and coprostanol into Oregon's waters?
 - A model estimate of toxicity warranted listing these pollutants on the Priority Persistent Pollutant List. DEQ relied heavily on public comment both during list development and plan initiation level selection processes. DEQ did not receive any comments during either public comment period refuting model estimates for cholesterol and coprostanol. After detection of these two pollutants above Plan Initiation Levels at nearly all facilities, DEQ performed a focused evaluation of available information on these pollutants, as summarized in the Oct. 25, 2010, technical memo "Aquatic Toxicity of Sterols and Stanols," available on request. Based on the investigation, DEQ concluded that there are few studies regarding the potential environmental and human health threats of discharging cholesterol and coprostanol into Oregon's waters, and existing studies do not present conclusive information about their potential harmful effects on the humans, fish or wildlife.
2. What are the available pollution prevention activities to reduce sterols and stanols?
 - Cholesterol and coprostanol are two naturally occurring byproducts of human digestion. DEQ performed an independent analysis and was not able to identify feasible potential pollution prevention activities for these pollutants.
3. Are there cost-effective treatment technologies for reducing cholesterol and coprostanol?
 - DEQ received input from stakeholders regarding the availability and cost-effectiveness of treatment technologies. DEQ reviewed relevant literature and affirmed that cost-effective treatment is not available, as outlined in the Dec. 20, 2010, technical memo "Treatment of Sterols and Stanols," available on request.
 - These are the only two pollutants on the Priority Persistent Pollutant List for which model estimates cannot be corroborated with scientific literature. They also lack municipal pollution prevention activities or cost-effective treatment options.

4. Is it possible for municipalities to comply with Senate Bill 737's statutory requirements without a rule revision?
 - DEQ considered whether minimal reduction plans could meet municipalities' requirements under Senate Bill 737. DEQ determined that incorporating brief reduction plans into permits for pollutants with no feasible reduction activities would yield a resource-intensive administrative process with little or no environmental benefit.
5. What is the effect of the temporary rule expiration?
 - At the time of the proposed rulemaking, municipalities raised concern about the need for permittees to prepare a reduction plan addressing cholesterol or coprostanol if DEQ failed to follow through with a timely permanent rule or a revision of the P3 list after expiration of the temporary rule.
 - The temporary rule expired Sept. 11, 2011. All five communities required to develop a Persistent Pollutant Reduction Plan submitted their plans by the July 1, 2011 deadline. DEQ sent letters to the five communities approving their plans prior to the expiration of the temporary rule. Based on advice from the Department of Justice, these communities have complied with the applicable requirements.
 - The permanent revisions are needed to address any permittee that becomes subject to the statute and rule requirements in the future.
6. Are changes needed to clarify when a permittee is no longer subject to the monitoring and reduction plan requirement?
 - Based on stakeholder input and staff review, DEQ proposed additional provisions to clarify when a permittee is no longer subject to the monitoring and reduction plan requirement. These circumstances are noted above in the "Effect of rule" section.
 - During the public comment period, the Association of Clean Water Agencies requested that DEQ amend the rule to limit required sampling to those pollutants for which there are commercially available analytical laboratories in Oregon. DEQ elected to include an additional exemption to the monitoring and reduction plan requirement if DEQ determines that there are no available laboratories capable of performing the analysis for the specific pollutant that would otherwise

trigger the reduction plan requirement.

Next steps If adopted, DEQ will file the proposed permanent rule revision with the Secretary of State. DEQ will notify all affected permittees and stakeholder sounding board members via email, and other interested stakeholders via an email message posted to the Senate Bill 737 GovDelivery listserv. This rulemaking will also use education and outreach via the project website, www.deq.state.or.us/wq/SB737 to communicate DEQ's revised requirements.

Attachments

- A. Proposed rule revisions, redlined version
- B. Response to comments
- C. Statement of Need and Fiscal and Economic Impact
- D. Senate Bill 737 Stakeholder Sounding Board List
- E. Relationship to Federal Requirements questions
- F. Land Use Evaluation Statement

Available upon request

- 1. Compiled information about persistent pollutants detected above Plan Initiation Level (1/18/11)
- 2. Technical Memo: Aquatic Toxicity of Sterols and Stanols (10/25/10)
- 3. Technical Memo: Treatment of Sterols and Stanols (12/20/10)
- 4. Legal memo on effect of expiration of temporary rule (1/27/2011)
- 5. Rule Implementation Plan

Approved:

Division: _____

Section: _____

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