

**DETAILED COMMENTS REGARDING OREGON'S PROPOSED REVISIONS
TO HUMAN HEALTH CRITERIA, VARIANCE PROVISION, BACKGROUND
POLLUTANT ALLOWANCE PROVISION, INTAKE CREDIT RULE AND
NONPOINT SOURCE REGULATIONS**

March 21, 2011

Public Notice of Proposal Dated January 3, 2011

U.S. Environmental Protection Agency, Region 10

According to the January 3, 2011, Public Review Draft of the revised regulations, DEQ is proposing modifications in the following five categories.

- I. Human Health Toxics Criteria (OAR 340-041-0033 and associated tables)
- II. Intake Credits (OAR 340-045-0105)
- III. Background Pollutant Allowance (OAR 340-041-003(6))
- IV. Variances (OAR 340-041-0059)
- V. WQS and TMDL Regulations to Address Nonpoint Sources (OAR 340-041-0007(5), OAR 340-041-0061(11) and (12), OAR 340-042-0040, OAR 340-042-0080)

Each of these five categories are summarized below along with EPA's detailed comments on areas where additional clarity or changes would lead to a more approvable or defensible rule. Due to the size of this rule and the magnitude of excellent work done by ODEQ, these comments speak only briefly to the many positive elements of the proposed rule.

Please note that the positions described in our comments below, regarding the proposed water quality standards, are preliminary in nature and do not constitute an approval, disapproval or determination by EPA under the Clean Water Act (CWA) Section 303(c). Approval and disapproval decisions will be made by EPA following adoption of the new and revised standards by the State of Oregon and submittal of revisions to EPA.

I. Human Health Toxics Criteria (OAR 340-041-0033 and associated revised tables)

1. Summary of Proposed Revisions

- ODEQ is proposing human health criteria revisions for toxic pollutants based on a fish consumption rate of 175 grams per day, which will serve as the basis for NPDES permit limits and other regulatory decisions. These revised criteria will be placed in a new table called Table 40. ODEQ's intent is that the revised criteria will remedy EPA's June 1, 2010 disapproval of ODEQ's 2004 human health criteria based on 17.5 grams per day.

- ODEQ is proposing to place all the human health criteria into a new table called Table 40. Therefore, ODEQ is proposing to consolidate the human health criteria currently contained in Tables 20, 33A and 33B and to move those criteria to Table 40. Additional proposed revisions to the human health criteria include:
 - 43 additional pollutants are proposed which previously did not have human health values in Oregon's water quality standards consistent with EPA additions to the 304(a) criteria.
 - The removal of 11 pollutants is proposed that is consistent with EPA's removal of 304(a) values. Most of these criteria are being withdrawn since EPA developed individual criteria for the most toxic of chemicals in that family of chemicals.
 - Several new and revised footnotes are proposed for clarification.
- ODEQ is proposing revisions to the water quality standards provision at OAR 340-041-0033 which provides narrative language explaining the human health and aquatic life criteria tables.

2. EPA Comments

EPA has worked closely with ODEQ in the development of the revised human health criteria. During the past six months, EPA and ODEQ staff have worked together to review the accuracy of ODEQ's proposed human health criteria based on 175 grams per day, current Integrated Risk Information System (IRIS) values and EPA's 304(a) guidance. EPA strongly supports the adoption of the new and revised criteria in Table 40 which contains all of Oregon's human health criteria.

EPA believes that Oregon's adoption of human health criteria, consistent with Oregon's EQC directive to develop criteria using a fish consumption rate of 175 grams per day, would address EPA's disapproval of the new and revised human health criteria adopted in 2004. Such a rule would also adequately address EPA's disapproval of footnotes I, R, and U.

EPA understands that ODEQ has undergone a separate rulemaking to address the human health criteria for iron and manganese and has proposed a separate rule to revise the human health criteria for arsenic. These changes are needed to fully address EPA's June 2010 disapproval, but since they are a separate rulemaking process, EPA is not addressing them in these comments.

Methylmercury

Based on our review of your submission, EPA is assuming that the methylmercury criterion of 0.040 mg/kg will be implemented using the fish tissue residue concentration without a water column translation. As the proposed methylmercury criterion is expressed as a fish tissue concentration as opposed to a water column value, EPA has specific comments regarding the implementation of ODEQ's proposed methylmercury criterion. If ODEQ does not have such a plan at the time of submission, we recommend that your submittal contain information on how ODEQ plans to implement the criterion.

EPA encourages ODEQ to develop an implementation plan for tissue based criterion for methylmercury. When ODEQ develops implementation guidance, EPA recommends that ODEQ take public comment on their draft plan for implementation of the methylmercury criterion. This is consistent with pages 21-22 of EPA's April 2010 *Guidance for Implementing the January 2001 Methylmercury Water Quality Criterion* which states:

"... EPA encourages states and authorized tribes to develop a methylmercury criterion implementation plan to ensure environmentally protective and effective administration of all water quality related programs with respect to methylmercury. Developing a methylmercury implementation plan can facilitate adoption of the tissue-based criterion and provide transparency on state or tribal approaches to the numerous implementation issues associated with this type of criterion. This benefits not only the state or tribe but the regulated community and the public."

EPA's guidance also states, "if a state or tribe develops a methylmercury implementation plan during adoption of its criterion, the state or tribe should submit the plan to EPA with the state's new criterion. Although the plan itself is not subject to EPA review and approval, the plan could facilitate EPA's review of the new criterion."

II. Intake Credits (OAR 340-045-0105)

1. Summary of Proposed Revisions

- ODEQ is proposing to add a new provision which provides regulatory relief relative to National Pollutant Discharge Elimination System (NPDES) permit requirements for point sources that do not increase the mass or concentration of a background pollutant above their intake water levels. This language is patterned after the language that was used in the Great Lakes Initiative.

2. EPA Comments

EPA is not reviewing this new section as a water quality standard since it is an NPDES permitting implementation provision and not a water quality standard under CWA section 303(c). The NPDES program has provided input to ODEQ staff during the development of the rule and has no further comments at this time.

III. Background Pollutant Allowance (OAR 340-041-003(6))

1. Summary of Proposed Revisions

- ODEQ is proposing to add a new provision to the State's water quality standards for NPDES permitted discharges which would allow carcinogenic background pollutants in intake waters to be concentrated up to 3% as long as there is no increase in the mass of the pollutant and it does not exceed a 10^{-4} risk level in the receiving waterbody.

2. EPA Comments

The comments below are divided into two categories, (1) substantive concerns and (2) implementation concerns. We note that ODEQ, in response to comments received, has

made significant changes to this rule since the October, 2010 version shared with EPA and the NPDES workgroup. These changes have helped clarify the provision and addressed some of EPA's concerns with that version of the draft provision. In our substantive comments below, we have identified several issues that will need to be addressed if this provision is to be approved by EPA under Section 303(c) of the CWA. We have also identified two approaches for addressing these concerns and provided details on elements that would need to be included in the second approach. If ODEQ chooses to make further modifications to this provision in order to address these concerns, EPA is willing to provide technical assistance during this process if needed.

Even if ODEQ makes the suggested changes and develops a provision consistent with the CWA and its implementing regulations, EPA recognizes that this is a new type of provision and thus many details regarding its implementation still need to be defined. This lack of clarity leaves us with many questions as reflected in the second portion of our comments. We look forward to working closely with you as you implement this provision in permits.

A. Substantive Concerns

Several concerns must be addressed either through revisions or clarification in the regulation and the supporting information (technical justification and/or other documents provided to EPA at the time of submission) prior to EPA being able to approve this provision as a WQS under section 303(c).

As currently written, this provision authorizes site-specific criteria changes to human health criteria for carcinogens without providing for appropriate Clean Water Act (CWA) 303(c) and 40 CFR 131 review since the provision allows a change to the intended level of protection for human health in the waterbody. Site-specific criteria are allowed by regulation but are subject to EPA review and approval. The federal water quality standards regulation at section 131.11(b)(1)(ii) provides states with the opportunity to adopt water quality criteria that are "...modified to reflect site-specific conditions." Site-specific criteria, as with all water quality criteria, must be based on a sound scientific rationale in order to protect the designated use. Site-specific criteria are most commonly used for aquatic life protection. A site-specific criterion is intended to come closer than the national criterion to providing the intended level of protection to the aquatic life at the site, usually by taking into account the biological and/or chemical conditions (i.e., the species composition and/or water quality characteristics) at the site (*EPA WQS Handbook 1994*).

The background allowance provision, as written, contemplates later establishing site-specific human health criteria (i.e., "background pollution allowances") for carcinogenic compounds, up to a 10^{-4} risk level. Yet it is unclear on what basis EPA can be assured that these later site-specific criteria will be based on a sound scientific rationale, protective of the designated use consistent with 40 CFR 131.11 along with appropriate opportunity for public participation.

One approach to resolving this issue would be to add additional text to the provision, making clear that implementation of this provision requires submitting each individual background pollutant allowance for EPA review and approval consistent with the requirements for criteria changes in CWA 303(c) and 40 CFR 131.

A performance-based approach may also be a viable alternative. EPA has provided guidance for developing a performance-based approach consistent with the CWA and EPA's implementing regulations. This approach may be used to streamline state and tribal adoption of criteria (*EPA Review and Approval of State and Tribal Water Quality Standards*, 65 FR 24648). EPA's guidance explains that a performance-based approach relies on the state adopting detailed implementation procedures (criteria development methodologies, minimum data requirements, and decision thresholds) with suitable safeguards consistent with 40 CFR 131.11 and 40 CFR 131.13 into its water quality standards regulations. Adopting sufficiently detailed implementation procedures directly into the WQS regulations establishes a structure or decision-making framework that is binding, clear, predictable and transparent. It is also important that a performance-based approach includes the public participation steps that will be followed when using the approach and making site-by-site decisions publicly available when using the procedures. These requirements for using a performance-based approach in the context of the background pollutant allowance are described in further detail below. These same requirements would also need to be addressed on an individual level if ODEQ chooses to submit each change to EPA as a site specific criterion.

If Oregon is to apply the performance-based approach, ODEQ must first develop a process in its water quality standards regulation to ensure that designated uses are protected when lowering the protection from a 10^{-6} risk level, potentially all the way to a 10^{-4} risk level, in the waterbody. *EPA's 2000 Human Health Methodology* says that states should "...ensure that the risk to more highly exposed subgroups (sport fishers or subsistence fishers) does not exceed the 10^{-4} level." Without a process or analytical methodology adopted in regulation and submitted to EPA, the protection of designated uses cannot be ensured, even if a risk level up to 10^{-4} is consistent with EPA guidance for sensitive subpopulations.

Secondly, to apply the performance-based approach the rule also needs to specify that there will be a public process which will include review and participation similar to that contained in the variance language. This public process could potentially fall under public notification of the permit issuance. In addition, ODEQ does not have a process designed for the public to find out what risk level applies to which reaches of specific waterbodies of the State if the background pollutant allowance provision is applied as currently written. Without this process in regulation, it is unclear what actual criteria would apply for a given waterbody which creates a lack of transparency for the public and affected water quality programs such as NPDES permits and Total Maximum Daily Loads (TMDLs). ODEQ would need to maintain a publically available, comprehensive list of all site-by-site decisions made using the background pollutant allowance provision.

Third, to apply the performance-based approach, ODEQ needs to share with EPA a scientific or technical justification that adequately demonstrates that criteria changes resulting from this provision are protective of human health. In order to consider approval of this provision under the performance-based approach, EPA would need to understand why ODEQ thinks that an increase in concentration of a pollutant up to 3% does not constitute “significant change in human health protection”. Furthermore, EPA would need an explanation of the scientific basis for calculating the background concentrations based on the harmonic mean flow values of 25% for the Willamette and Columbia Rivers and 100% for all other waters and how using these would ensure protection of the use. These numbers appear arbitrary and to require a less rigorous analysis than would occur for a mixing zone analysis under a typical permit issuance.

Finally, for either approach, the rule language needs to be clear that the rule will be implemented on a facility-by-facility basis in association with a NPDES permit and identify the extent to which the criteria apply to the remainder of the waterbody. Although this is arguably implied from the current language, it must be clearly stated in the rule language itself. Additional clarifications in the rule language should include a statement in the introductory provision of section (6) that states the 3% increase will not exceed the 10^{-4} risk level for carcinogenic human health criteria. The language in section (6)(b)(C) should be revised to clarify that the waterbody value shall not exceed a 10^{-4} risk level. As written, it could be interpreted that a discharger is allowed a 3% increase in concentration beyond the 10^{-4} risk level which EPA understands is not ODEQ’s intent.

B. Implementation Concerns

In addition, we request that ODEQ consider the implementation concerns outlined in this section.

ODEQ limits the use of the background pollutant allowance provision to carcinogens up to a risk level of 10^{-4} . It is possible that a similar situation will occur for non-carcinogens or discharges that would exceed the 10^{-4} limit and will need to be addressed by ODEQ. For this reason, EPA recommends using other implementation tools already in the CWA, such as a variance, for both carcinogens and non-carcinogens since a variance could be used for all pollutants and allows short term flexibility while requiring incremental improvement toward meeting the underlying water quality criteria. The background pollutant allowance does not require such consideration and therefore a facility granted the allowance would not be required to work toward meeting underlying water quality standards.

The implementation of the background pollutant allowance provision leads to numerous concerns regarding its interaction with other water programs, namely NPDES permitting, TMDLs, and 303(d) impaired waters listing. A general concern across all water programs is whether this provision would be applicable to new sources and, if so, whether measures will be used to ensure the facility evaluates all potential alternatives prior to using this provision. In addition, how will ODEQ address cumulative impacts in a manner that the protection of human health is ensured?

NPDES

What water quality criteria will ODEQ use to write NPDES permits? ODEQ should clarify how the increase in concentration will be implemented in NPDES permits. It is not clear if a facility that is given authorization to use the background pollutant allowance provision will automatically be given a three percent increase (not to exceed 10^{-4}) or ODEQ will issue permits that only allow as much increase as the facility needs (i.e., somewhere between a 0-3% increase).

Potentially, different water quality criterion would apply to the same waterbody based on either a 10^{-4} or 10^{-6} risk level in individual NPDES permits. It is unclear when permits will be written to the values contained in Table 40 versus the values that could be authorized through the background pollutant allowance provision. ODEQ needs to explain how this process would work when writing NPDES permits.

In addition, ODEQ should clarify that the background pollutant allowance requires that the mass of the specified pollutants contributed from the discharger result solely from its presence in the discharger's intake water. As written, the provision requires a "no net increase" and therefore a discharger could add mass of a pollutant to its wastestream as long as its discharge contains no more mass of the pollutant than was contained in the intake water.

ODEQ should also clarify what instream criteria will need to be met by dischargers that are not eligible to use the background pollutant allowance provision but located nearby a facility that is given the authorization to use the allowance. A multiple discharger implementation issue that ODEQ should clarify is how the three percent allowance will be allocated among dischargers in the same area that are eligible and ask to use the allowance.

Finally, EPA recommends that ODEQ revise the background pollutant allowance provision to ensure a facility does not alter the identified intake pollutant chemically or physically in a manner that would cause adverse water quality impacts to occur that would not otherwise if the pollutants were left in the waterbody. Furthermore, the timing and location of a facility's discharge should not cause adverse water quality impacts to occur that would not otherwise if the pollutants were left in the waterbody.

TMDLs

Similar to NPDES permits, what value will ODEQ use to write TMDLs in areas that the background pollutant allowance is being utilized? As written, the background pollutant allowance provision discourages the use of a TMDL, even though a TMDL could also be used to address this situation while leading to reductions in other sources. Unlike a TMDL, using a permit based adjustment for intake pollutants imposes an allocation scheme without the assurance that other sources contributing to an exceedance of the water quality standards will be controlled so that the standard is attained.

303(d) Impaired Waters Listing

How will ODEQ implement this provision in the context of the 303(d) impaired waters listing? It is unclear which values the waterbody would be assessed against. In addition, implementing the background pollutant allowance provides a disincentive for impaired waters to be cleaned up since facilities given authorization to use the provision would not need to meet water quality standards. Instead, any increase in concentration allowed would exacerbate the non-attainment of water quality standards by allowing further degradation of impaired waters.

IV. Variances (OAR 340-041-0059)

1. Summary of Proposed Revisions

- ODEQ is proposing to remove the current variance language found at OAR 340-041-0061(2) and replace it with new language which would ensure progress toward meeting underlying water quality standards, streamline the administrative process, require pollutant reduction plans with milestones that will result in water quality improvement and add general clarification to the rule.

2. EPA Comments

EPA has worked closely with ODEQ as it has developed these proposed revisions to the State's variance provision. In general, EPA is supportive of the proposed language. In particular, EPA recognizes that this provision adds more definition to what is required as part of a variance, streamlines the process so that it can more efficiently align with the NPDES program and issuance of permits, and requires the applicant to develop a schedule for improvements by implementing a pollution reduction plan. These all will assist in meeting the goal of making improvements in water quality standards to attain the underlying criteria.

The comments regarding sections (1) and (4) are minor clarifications. However, our concerns under section (3) are more significant and ODEQ should consider clarifying and/or revising the language accordingly.

As ODEQ continues to develop internal guidance for implementing this provision and begins to address variance applications, EPA remains available to provide assistance. We view the successful implementation of variances to be key to the success of this rule and remain committed to dedicating the resources needed to make that happen. We are ready to assist in the review of individual variances, work in partnership with ODEQ and a discharger on a pilot variance, and/or develop an efficient method to address multiple facilities with similar needs relative to a specific pollutant. We believe this proposed rule and ODEQ's work to date provide a solid foundation for implementing the provision once a variance is requested by a discharger.

Section (1)

Section (1)(b)(D) allows the department or commission to consider granting variances for new dischargers. EPA believes this may be appropriate under very specific and limited circumstances and that analysis would need to be done on an individual variance basis.

In general, caution should be used in issuing variances for new sources. The variance request would need to meet the requirements in section (1)(b)(D) and other alternatives for addressing the pollutant should be considered before beginning the variance process.

Section (3)

The purpose of adding this new section is unclear. It appears to provide that if an applicant for a variance can satisfy the terms of the provision, the applicant will automatically be deemed to have established one component of the variance submittal requirements: the showing, under (5)(a), that “attaining the water quality standard . . . is not feasible,” either under the rubric of (2)(b)(A) or (2)(b)(C). Is this the intent of the rule, or is ODEQ simply stating that it *might* conclude that (5)(a) has been satisfied, under the rubric of (2)(b)(A) or (2)(b)(C), if (3) is satisfied? If the intent of (3) is not to automatically satisfy (5)(a) under certain defined circumstances, why does ODEQ believe it is necessary? Does ODEQ intend that satisfying the terms of section (3) would automatically establish any of the other variance submittal requirements under section (5)? For purposes of the following discussion, EPA assumes that satisfying section (3) would automatically establish that (5)(a) has been met, but would not automatically satisfy the other components of the variance analysis.

ODEQ should clarify whether the language “background concentration” in sections (3)(a) and (3)(b) refers to natural condition or ambient condition. Does the language “background concentration” include anthropogenic contributions? If ODEQ does define “background concentration” to include anthropogenic contributions, it is unclear how a variance based on (2)(b)(A), “naturally occurring pollutant concentrations prevent the attainment of the use,” would be applicable.

In addition, EPA has concerns about how section (3) can be reconciled with the phrase “cannot be remedied” in (2)(b)(C), which is the same language found in 40 CFR 131.10(g)(3). If section (3) is applied using anthropogenic background concentration and not natural conditions, it embodies a conclusion that if enforceable controls are not likely to achieve water quality standards by controlling upstream nonpoint sources out of the discharger’s control, than ODEQ can conclude that water quality standards exceedances from nonpoint sources “cannot be remedied.” EPA is concerned that this interpretation would weaken the meaning of “cannot be remedied” in (2)(b)(C), and that it would be inconsistent with EPA’s interpretation of the same phrase in 40 CFR 131.10(g)(3).

From an implementation standpoint, EPA also has concerns regarding the manner in which section (3) will apply to NPDES dischargers in impaired waters. For example, if a facility is discharging to a waterbody that is impaired for nutrients, would section (3) allow the facility to avoid installing advance treatment for nutrients? This scenario exemplifies the same concerns above regarding the interpretation of “background concentration” and “cannot be remedied” which ODEQ should clarify and address appropriately.

In addition, EPA suggests the following clarifications. First, ODEQ should clarify the meaning of the phrase “are not likely to” in section (3)(c)? EPA recommends replacing

this phrase with “will not” for clarity. Secondly, does ODEQ consider State BMPs to be included as part of “enforceable controls” in section (3)(c)?

Section (4)

EPA supports the language in section (4) regarding the duration of variances. Although we realize this is ODEQ’s intent, EPA would like to note that individual variances submitted by ODEQ for approval will need to specify the duration of the variance.

V. WQS and TMDL Regulations to Address Nonpoint Sources (OAR 340-041-0007(5), OAR 340-041-0061(11) and (12), OAR 340-042-0040, OAR 340-042-0080)

1. Summary of Proposed Revisions

- ODEQ is proposing revisions to explain how the mechanisms for forestry and agricultural nonpoint sources work to meet water quality standards and the TMDL load allocations under the Forest Practices Act (FPA) and Agriculture Water Quality Management Act (AgWQM).
- ODEQ is also proposing changes to the Total Maximum Daily Load (TMDL) regulations to clarify ODEQ’s authority to identify and assign individual load allocations to significant air and land sources in TMDLs.

2. EPA Comments

EPA is not reviewing these revisions as water quality standards since they are nonpoint source and TMDL provisions and not water quality standards under CWA section 303(c). However, EPA has reviewed these revisions and finds that they are helpful in clarifying how nonpoint sources will be addressed in TMDLs and how ODEQ will interact with the Departments of Forestry and Agriculture to ensure needed programs are in place to address these sources of pollution. Therefore, EPA encourages Oregon to adopt the changes.