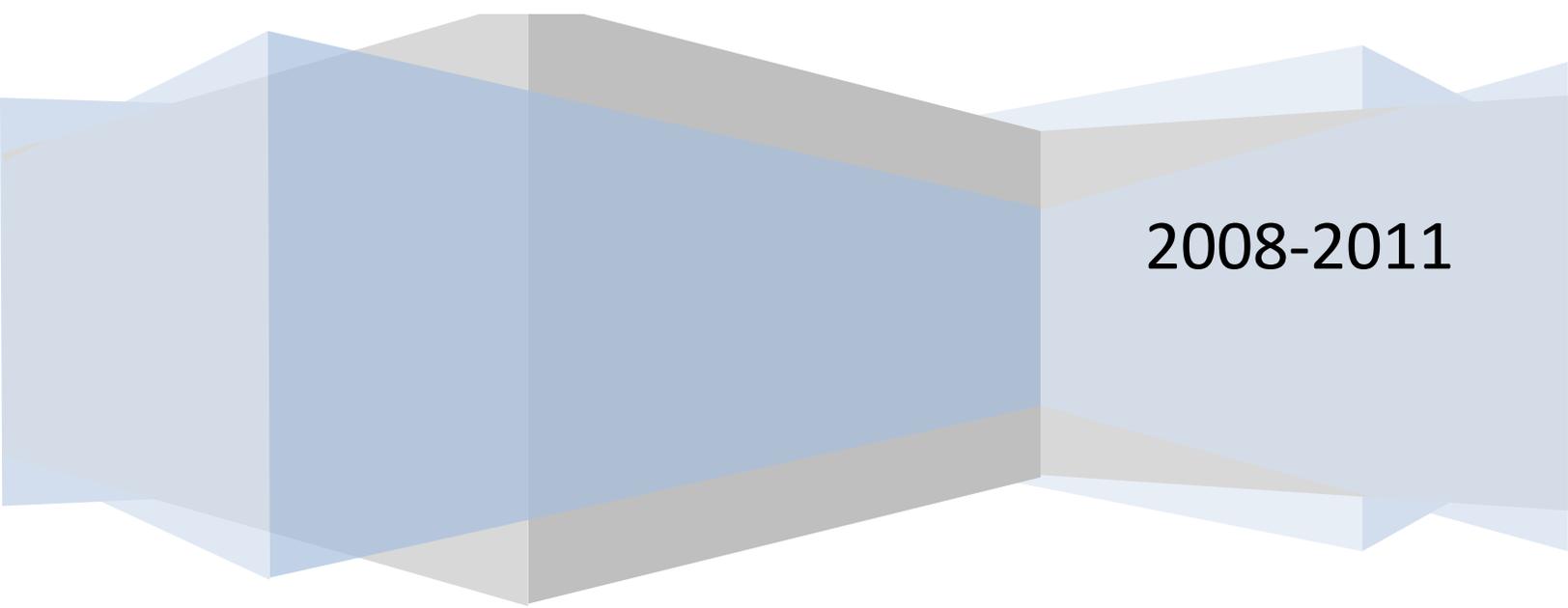


State of Oregon Department of Environmental Quality

**Issue Paper: Evaluating the
Antidegradation Policy as a Means to
Reduce Nonpoint Sources of Toxic
Pollutants to Oregon Waters**

Human Health Toxics Rulemaking

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I. Introduction

A. Context

The Environmental Quality Commission (EQC) directed DEQ to consider what rules or implementation strategies would reduce toxics in Oregon waters that come from nonpoint sources and other sources not permitted under section 402 of the federal Clean Water Act (CWA). Under the CWA, DEQ directly regulates discharges from point sources through individual and general National Pollutant Discharge Elimination System (NPDES) permits. Pursuant to the EQC directive, DEQ considered a number of elements for inclusion in the toxics standards rulemaking package to reduce nonpoint sources of toxic pollutants, including revisions to the antidegradation policy (contained in the water quality standards regulation) or the implementation plan (contained in DEQ's antidegradation Internal Management Directive). DEQ is also considering many more suggestions to address the reduction of toxic pollutants from nonpoint sources as it develops an agency-wide Toxics Reduction Strategy.

B. Purpose, Why we are doing this now

The purpose of considering a revision to the antidegradation policy or the related implementation plan is to determine whether such revisions would further the goal of reducing toxic pollutants in waters of the state. As part of the 2009-2010 review of Oregon's human health toxics criteria, DEQ worked with a stakeholder group. Members of this group asked DEQ to consider revising the antidegradation policy in order to reduce toxics from nonpoint sources. DEQ agreed to consider whether antidegradation policy revisions or implementation procedures would provide an appropriate and effective means to accomplish that goal.

II. Background

A. History

Every State is required by federal regulation to have an antidegradation policy in its water quality standards and an associated implementation plan. Oregon has had an antidegradation policy for many years. DEQ last revised its policy and plan in 2003, and it was approved by EPA in 2004. The current implementation plan describes how Oregon will implement its antidegradation policy through the CWA permitting (NPDES) and water quality certification (section 401) programs.

B. Problem Description

The public and the Environmental Quality Commission have expressed concerns about the level and variety of toxics that may be in Oregon waters. Toxic pollutants may be associated with many

sources, including industry, municipal wastewater treatment plants and nonpoint sources. Toxic pollutants potentially associated with nonpoint sources include current use pesticides, metals, legacy pesticides, and others. Some are applied by land managers and others get into the soil through air deposition and then travel to water bodies with erosion when the soil is disturbed.

C. Oregon's Antidegradation Policy

Oregon's antidegradation policy is consistent with EPA recommendations and was most recently approved by EPA in 2004. Oregon's antidegradation rule includes a purpose statement and a growth policy. The purpose of Oregon's antidegradation policy is to:

...guide decisions that affect water quality such that unnecessary further degradation from new or increased point and nonpoint sources of pollution is prevented, and to protect, maintain and enhance existing surface water quality to ensure the full protection of all existing beneficial uses. [OAR 340-041-0004(1)]

The antidegradation rule describes how the policy will be implemented when an antidegradation review is required and what that review entails. It also specifies sources or activities that are exempt from conducting an antidegradation review due to the limited impact or duration of the activity. It is common for states to define "insignificant" impacts on water quality that do not require an antidegradation review.

The complete antidegradation rule (OAR 340-041-0004) is provided in Attachment A.

DEQ has developed an implementation document titled: "State of Oregon Antidegradation Policy Implementation Internal Management Directive for NPDES Permits and Section 401 Water Quality Certifications" (March 2001). This document may be found at the following URL: <http://www.deq.state.or.us/wq/pubs/imds/antideg.pdf>. The IMD includes directions to DEQ staff for implementing the policy for individual NPDES permits and water quality certifications and includes some discussion of implementation in general permits. A portion of the IMD is incorporated into the antidegradation policy rule by reference.

D. Federal Antidegradation Regulation

States are required to include in their water quality standards both an antidegradation policy and antidegradation policy implementation methods, referred to collectively as "antidegradation requirements." The federal regulations require that state antidegradation policies be consistent with the following objectives:

- Maintain and protect existing instream uses and the level of water quality necessary to protect the existing uses. Existing uses are defined as "those uses actually attained in the water body on or after November 28, 1975, whether or not they are included in the water quality standards."

- Protect and maintain high quality waters unless the State decides to allow a lowering of water quality through a deliberative review and decision-making process, including public participation. High quality waters being “where the quality of the waters exceeds levels necessary to support propagation of fish, shellfish and wildlife and recreation in and on the water.”

40 CFR 131.12 (a) (2) states, “... Further, the State shall assure that there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint source control.”

The complete federal antidegradation regulation is provided in Attachment B.

Chapter 4 of EPA’s Water Quality Standards Handbook (second Edition, 1994) provides information and guidance on the antidegradation policy. The handbook may be found at <http://www.epa.gov/waterscience/standards/handbook/>. The following sections are of particular relevance to this discussion:

Section 4.3: The antidegradation implementation procedures specify how the State will determine on a case-by-case basis whether, and to what extent, water quality may be lowered.

Section 4.5: Discusses the high quality waters protection policy and requirements for conducting an antidegradation review, including EPA’s interpretation of requirements related to BMPs to control nonpoint sources.

EPA’s guidance states that 40 CFR 131.12 (a) (2) does not mandate that States establish controls on nonpoint sources, stating “... Section 131.12 (a) (2) does not require that States adopt or implement best management practices for nonpoint sources prior to allowing point source degradation of a high quality water. However, States that have adopted nonpoint source controls must assure that such controls are properly implemented before authorization is granted to allow point source degradation of water quality.”

III. DEQ Recommendations for Application of the Antidegradation Policy to Nonpoint Sources

DEQ considered several alternatives for modifying its antidegradation policy and/or implementation plan to address nonpoint sources. Options for revisions to both the “water quality limited waters” and the “high quality waters” policies are discussed in section IV below. DEQ considered the following important questions in evaluating nonpoint source antidegradation proposals:

- Would the approach be a cost-effective means to reduce toxic pollutant loading to streams from nonpoint sources?

- Are other current programs a more efficient means to reduce toxics from nonpoint sources?
- Does the EQC have the authority to adopt the provision and does DEQ have the authority to implement it?
- Does DEQ have the capability to implement the new requirements, considering the resources that would be required?

If DEQ pursued changes to its antidegradation policy in rule, DEQ would need to develop guidance on the interpretation of the policy and how it would be implemented in order to meet the federal requirement to have an antidegradation implementation plan and to ensure that the policy is understood and implemented consistently by DEQ staff across the state.

As a result of this analysis, DEQ recommends the two actions described in detail below.

Recommendation 1: Clarify existing rule language regarding the implementation of water quality standards related to agriculture and forest activity and land owner responsibilities. See DEQ's proposed revisions to the water quality standards regulation (Division 41) nonpoint source implementation provisions (OAR 340-041-0061) as described in the Division 41 and 42 Issue Paper.

Description

Revise the water quality standards rules to clarify that forest practices and agricultural water quality management plans must be developed to meet water quality standards, which include the antidegradation policy. Oregon's antidegradation policy is a water quality standard. Oregon's forest practices statute (ORS 527) requires that the Oregon Department of Forestry (ODF) develop practices to meet water quality standards; therefore, this rule clarification would be consistent with the statute. Oregon's statute on agricultural water quality management (ORS 568) takes a similar though somewhat different approach and is more fully described in the issue paper on "Division 41 and 42" related to nonpoint source provisions.

The Washington Department of Ecology (DOE) has a similar approach for applying antidegradation to forest practices. In Washington, forest practices must be conducted to meet water quality standards and high quality waters requirements. The difference is that DOE states in their implementation document that Tier 2 antidegradation analysis and review is only required for actions over which DOE has specific regulatory oversight. A key difference between Oregon DEQ and Washington DOE is that DOE administers the forest practices requirements.

Policy objectives

- Make DEQ rule language consistent with the state statutes.
- Clarify that agricultural plans and forest practices must be designed to meet Oregon's water quality standards, including the antidegradation policy.

Policy evaluation

Advantages

- Clarify the intent of existing rule language and make DEQ rules consistent with state statutes.
- Works within existing administrative and regulatory framework.
- Continue to work with the Oregon Department of Agriculture (ODA) and ODF to meet the objectives as both agencies have essential expertise needed to accomplish the goal.

Disadvantages

- May not be viewed as a significant change or one that will lead to accelerated progress in attaining water quality goals.
- The current process may be viewed as having a high burden of proof that current practices are not sufficient to meet water quality standards before improvements are adopted.
- It is not clear what practices would be required to meet antidegradation requirements. Determining whether “all reasonable and cost-effective BMPs are being implemented” is a subjective exercise and one that could require significant resources.
- DEQ does not currently have resources dedicated to doing this evaluation; the Agency would need additional resources or would need to use existing staff for this work in place of other current work.

Recommendation 2. DEQ recommends that the department review the Antidegradation Implementation IMD (2001) and add a chapter describing how DEQ will implement the antidegradation policy for nonpoint sources. DEQ commits to develop a draft chapter by the date the EQC adopts the revised human health toxics criteria rulemaking package and finalize the revised IMD within six months of the EQC action.

Description

DEQ proposes to review the current antidegradation policy and implementation plan and evaluate what actions or measures are needed to implement the antidegradation policy for nonpoint sources. DEQ proposes to add a chapter to its existing internal management directive describing the process or actions the department will take to implement the antidegradation policy for nonpoint sources, including actions that involve working with other state, federal and local agencies.

EPA’s regulations and guidance (EPA memo, February 22, 1994) suggest that the antidegradation policy is met if “reasonable and cost-effective” best management practices are implemented. DEQ would need to work with ODA and ODF to identify reasonable and cost-effective BMPs related to agricultural and forestry operations and to provide data on whether those BMPs are being implemented. As an alternative, performance measures, such as those adopted in Agricultural Water Quality Area Management plans, could be identified rather than the actual BMPs, which can vary by farm operation and location.

In the IMD, DEQ would also identify the steps that would be taken to remedy a situation where the antidegradation policy is not being met by nonpoint sources, and how that determination is made.

Applicability/Scope

DEQ will look at each type or sector of activity that qualifies as “nonpoint source” and is not regulated by CWA permits to evaluate how the antidegradation policy could be applied. In some cases, this would involve working with the resource management agencies or local governments that have the expertise or authority to identify and promote or require reasonable and cost effective best management practices.

If DEQ included the identification of practices or measures that would meet the definition of “reasonable and cost-effective BMPs” for different types of nonpoint source activities as part of the scope of this review (either on our own in cooperation with other agencies), that process would require additional time.

Policy objective

Implement Oregon’s antidegradation policy for nonpoint sources of toxic pollutants in order to protect water quality and to ensure that all reasonable and cost effective practices and controls are employed where they would be effective at reducing the loading of toxic pollutants to Oregon waters.

Policy evaluation

Advantages

- DEQ has the authority to review and revise the antidegradation implementation IMD.
- Through this action, DEQ would work with other agencies to identify where possible, the cost effective and reasonable BMPs that would be expected, if implemented, would prevent the degradation of water quality from nonpoint sources related to toxics and would be important in the “maintenance and protection” of existing water quality.

Disadvantages

- It would require significant DEQ staff resource to revise the antidegradation IMD and then work with other agencies to implement the requirements for a variety of land uses and resource management activities. If additional resources are not provided, using staff resources for this activity would be at the cost of accomplishing other work, and thus should be evaluated against other work priorities.
- DEQ has limited expertise in evaluating whether land management practices constitute “cost effective and reasonable BMPs.”
- DEQ has limited authority to directly regulate private and federal land managers and require them to implement BMPs for specific land management activities. See DEQ’s paper describing DEQ’s authorities with regard to nonpoint sources

(December 2010).

- DEQ's Internal Management Directives allow DEQ to provide direction to its program staff to implement specific elements of its regulatory programs; they do not create binding requirements on the sources or parties external to DEQ.

IV. Alternatives Considered for Antidegradation Revisions

In addition to the two recommendations described in the preceding section, DEQ evaluated several different approaches to modifying its antidegradation policy and/or implementation approach to address nonpoint sources. Some of the options considered were developed and proposed by a subgroup of rulemaking workgroup members. This subgroup, termed the "Mixed Media Subgroup" proposed options to DEQ and the larger workgroup for consideration. Options for revisions to both the "water quality limited waters" and the "high quality waters" policies were considered. The options described below were evaluated and discussed with the rulemaking workgroup and are not recommended by DEQ.

1. Mixed media draft proposal for revisions to the impaired waters policy (Mixed Media memo, 2009). The underlined new language was suggested to the rulemaking workgroup as a proposed revision to the current regulation addressing antidegradation.

Proposed rule language considered

340-041-0004(1) (Antidegradation) "Purpose. The purpose of the Antidegradation Policy is to guide decisions that affect water quality such that unnecessary further degradation from new or increased point and existing or new nonpoint sources of pollution is prevented, and to protect, maintain, and enhance existing surface water quality to ensure the full protection of all existing beneficial uses."

340-041-0004(7) (Antidegradation) "Water Quality Limited Waters Policy:

(a) Water quality limited waters may not be further degraded except in accordance with section (9)(a)(B), (C) and (D) of this rule.

(b) Management practices employed to control sheet erosion and surface runoff from nonpoint sources to water quality limited waters must be sufficient to assure protection of existing uses and the water quality necessary to support the existing uses."

Scope

The above draft language broadens the applicability of the antidegradation policy beyond new or increased sources to include existing sources. In addition, the proposed statement in -0004(7) (b) would require the use of management practices to control sheet erosion and surface runoff to protect existing uses and water quality.

DEQ Recommendation

DEQ does not recommend pursuing these revisions. With regard to expanding the antidegradation policy and implementation to extend to existing sources, DEQ does not

agree that these revisions are needed to meet the minimum federal requirements. It is not clear how the provision would be implemented and given DEQ's understanding of the intent of the provisions, the department would not likely have the resources necessary to implement the provisions in the near term.

Policy objective

The policy objective stated in the mixed media memo is to make Oregon's antidegradation requirements:

- consistent with federal law,
- sufficient to extend the antidegradation policy to existing and new nonpoint sources, and
- meet the goals of the Commission, including attainment of Oregon's new toxics criteria.

Policy evaluation

While DEQ agrees with much of the policy objectives above, it does not reach the conclusion that the suggested language is necessary to meet the objectives. DEQ does not agree with the above stated objective to extend the antidegradation policy to existing sources. It is not the policy objective of DEQ to make the implementation of management practices to control erosion and runoff from nonpoint sources generally and broadly a regulatory requirement through the antidegradation policy. DEQ does not agree that this provision is required to make its antidegradation policy consistent with federal law.

Advantages and disadvantages

Contains a specific statement regarding the expectations for erosion-related impacts on water quality.

It is unclear whether DEQ's authorities and resources or ODA's authorities and resources would be responsible for implementation and oversight of requirements. DEQ would likely have limited authority.

Extending the applicability of the antidegradation policy to existing sources would create a significant added workload to DEQ. Additional guidance and revisions to the IMD would be necessary to describe how this policy would be implemented related to permit issuance and TMDL development.

Authority and precedence

DEQ has the authority to require some but not all nonpoint source activities or land managers to employ management practices for controlling sheet erosion and runoff prior to a TMDL. Please refer to the paper provided by DEQ on its authorities to address nonpoint sources (DEQ, December 2010).

DEQ is unaware of any precedence for the suggested language being used by any state.

2. Antidegradation policy alternative for impaired waters.

Description

This alternative would require DEQ to develop reasonable and cost effective BMPs intended to prevent new or increased loads as soon as a water body is identified as impaired and before the TMDL is developed. DEQ would work with state resource management agencies to develop minimum cost effective and reasonable BMPs that would be expected to prevent the addition of toxic pollutants to waters that are impaired for one or more toxic pollutants. These BMPs would be included in agricultural water quality management area plans and rules, forest practice rules and other nonpoint source plans developed by Designated Management Agencies for those activities known or likely to be sources of the impairing pollutant. Once developed, the TMDL will specify the sources of the toxic pollutants of concern and surrogate measures that will be used to reduce those sources and attain compliance with the water quality criteria. In order to fully implement the TMDL, additional BMPs could be required to reduce existing loads and meet the allocations specified in the TMDL. The “implementation ready TMDLs” approach is similar to the second step of this option as it also addresses how to reduce existing loads and implement BMPs to achieve TMDL targets and water quality standards.

Applicability/Scope

This policy would apply wherever a water body has been listed as impaired and specific nonpoint source activities are known to be likely sources of the impairment pollutant.

DEQ Recommendation

DEQ does not recommend this approach at this time. This approach overlaps with DEQ’s recommendations for antidegradation nonpoint source implementation (above) and for implementation-ready TMDLs.

Policy evaluation - Advantages and disadvantages:

- A cooperative interagency effort where DEQ contributes water quality and habitat expertise to resource management agencies that are developing best management practices is more likely to achieve the implementation of management practices by large numbers of private land owners than for DEQ to identify what is required unilaterally.
- DEQ has neither the resources nor the expertise to undertake this activity independently at this time.
- This is very close to the current framework for agriculture and forestry, though there is likely room for improvement for targeting toxic pollutants, BMP effectiveness monitoring and for DEQ involvement.
- There may be some nonpoint sources, such as urban runoff or road runoff, that could be improved and where DEQ could participate more fully.

Authority and precedence

Oregon statutes give ODA authority for regulating agriculture to meet water quality standards and ODF the authority for regulating non-federal forest management to meet water quality standards. DEQ has the authority to specify cost effective and reasonable BMPs that would reduce toxic pollutants and meet water quality standards for some types of nonpoint source activities, such as stormwater runoff. DEQ also has authority to require additional measures if they are deemed necessary to meet TMDL load allocations.

DEQ is unaware of any precedence for such language being used by any state.

3. Mixed media suggested revisions to the high quality waters policy.

Description of Tool/ Proposed rule language

The proposed rule revision appears to require the implementation of reasonable and cost effective BMPs across land uses statewide and that DEQ would develop the minimum required reasonable and cost effective BMPs.

340-041-0004(6) (Antidegradation) High Quality Waters Policy: Where the existing water quality meets or exceeds those levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, and other designated beneficial uses, that level of water quality must be maintained and protected. To meet this goal, all cost-effective and reasonable land management practices must be used on private, state, and federal lands to assure numeric and narrative criteria are attained and maintained. Cost-effective and reasonable land management practices include compliance with any minimum best management practices developed by the Department.

Applicability/Scope

This proposal would require that all “cost-effective and reasonable” land management practices be implemented on private, state and federal lands and implies that DEQ would develop minimum required best management practices.

DEQ Recommendation

DEQ does not recommend adopting the proposed language. DEQ finds that the scope of this policy change is large and a fundamental change for Oregon and the relationship between DEQ and ODA and ODF that was established by state legislation. Therefore, the department concludes that this is not an appropriate change to adopt in the scope of the timeframe of this rulemaking and would require more in depth review and consideration before pursuing.

Policy objective

Protect and maintain the quality of high quality waters by requiring land management practices on all lands.

Policy evaluation

The proposal indicates that an approach to “maintaining and protecting” beneficial uses can be achieved as it relates to nonpoint sources through the implementation of an established minimum set of BMPs developed by DEQ.

Advantages

- DEQ would establish clear minimum BMPs.

Disadvantages

- It is not clear who would be responsible for implementing and enforcing BMPs developed under this proposal.
- As drafted, the rule does not address how the provision would intersect the current rules at -0004 (6), which allow a lowering of water quality after certain findings are made. Arguably, nonpoint sources should also be allowed to lower water quality in certain circumstances similar to the existing rules for point sources.
- It is not practicable for DEQ to establish a program by which any time a nonpoint source wishes to have an exception from implementing the minimum required BMPs, the Department or Commission would have to review whether the social/economic benefit of the activity would outweigh the resulting lowering of water quality. The nature of nonpoint sources is that there are very many small sources across the landscape. Even understanding the water quality impacts of these activities on a case by case basis would be a large task.

Summary of RWG discussion and views

The Mixed Media subgroup of stakeholders, which includes members representing Northwest Environmental Advocates, the Oregon Association of Clean Water Agencies (ACWA) and the League of Oregon Cities (LOC), recommends that Oregon add a clear statement to the water quality standards rules about the relationship between the numeric toxics criteria and antidegradation requirements. The group stated that the rule language is needed to make Oregon’s antidegradation requirements consistent with federal law and to extend the antidegradation policy to nonpoint sources. They suggest this is required by federal law and to meet the goals of the Commission, including the attainment of Oregon’s new toxic criteria.

The mixed media subgroup provided the following rationale for its proposal (Mixed Media Subcommittee, October, 2009):

The consumption of high levels of fish by a variety of Oregonians is an existing use that requires protection. Waters that violate criteria constitute waters whose water quality fails to protect existing uses by definition and therefore violate the Tier I protections. As a result, non-NPDES sources (including, but not limited to erosion, air deposition sources, legacy sources) must be controlled to the degree necessary to protect those existing uses and their associated water quality. Where

waters are of high quality, meaning there is a presumption that existing uses are protected and criteria are not violated, the nonpoint source controls that are required are limited to those that are “cost-effective and reasonable” in order to protect those waters from deteriorating. In other words, the antidegradation policy applies to waters with unsafe levels of toxic contaminants, waters that are relatively clean, and waters where the detectable levels are above the applicable numeric criteria. In all cases the needed nonpoint source controls are essentially the same.

Authority and precedence

DEQ believes that the legislative intent under SB1125, SB 1010 and SB502 was that ODF and ODA have primary responsibility to regulate non-federal forest land management practices and agricultural activities to meet water quality standards rather than DEQ as a general matter.

4. Require BMPs before allowing a new or increased permitted discharge.

Description of Tool/ Proposed rule language

Adopt an amendment to the antidegradation policy stating that the Commission or the Department may not allow a lowering of water quality (a new or increased discharge) by a point source if that lowering of water quality could be partially or completely prevented through the implementation of existing State required BMPs. This would apply to high quality waters for the toxic pollutants that are contained in the new or increased discharge. In order for the Department to conclude that the lowering of water quality is “necessary to accommodate important economic and social development,” DEQ must find that all existing BMPs required by the state that would prevent or mitigate the lowering of water quality for the specific pollutant, are being fully implemented. Under this alternative DEQ would have to define what qualifies as existing state required BMPs.

This approach would be consistent with EPA guidance that states should assure that “all cost-effective and reasonable BMPs established under state authority (emphasis added)” are implemented for nonpoint sources before the state authorizes degradation of high quality waters by point sources. (See EPA 1994(a)).

Applicability/Scope

This approach would apply to any pollutant for which a new or increased discharge is being proposed by a point source and for which existing state required BMPs could reduce the current loading of that pollutant in the water body in order to prevent or reduce the lowering of water quality that would occur if the new or increased point source load is allowed.

A variation may be to revise Oregon’s antidegradation implementation plan such that, before a new or increased discharge by a point source is allowed, that source has explored all opportunities to offset or mitigate that load by reducing nonpoint source loading that

will affect the receiving water. For example, perhaps it is not feasible for the source to treat or prevent the pollutant in their discharge, but they could fund the implementation of required BMPs to ensure that they are implemented in a timely manner by landowners in the vicinity of the proposed discharge.

DEQ Recommendation

DEQ does not recommend this approach as drafted; it puts restrictions on point sources based on actions that are likely out of their control. If a lowering of water quality is otherwise deemed to be acceptable and appropriate to the EQC, it should not be prohibited because not all land owners in the watershed have applied “cost effective and reasonable” BMPs.

Policy objective

To prevent increased loading of toxic pollutants to Oregon waters and protect high quality waters.

Policy evaluation

Advantages

- DEQ has the current authority and administrative process in place.
- This would be consistent with other efforts to require point sources to offset or mitigate their toxic pollutant discharges where they cannot meet water quality standards. It would extend that idea to the protection of high quality waters.

Disadvantages

- This approach holds NPDES-permitted sources responsible for nonpoint source implementation of pollution control. Such point sources may not be the primary source of a pollutant; implementation of such an approach puts point sources “on the hook” for achieving pollutant loads for which they may not have a direct responsibility.
- DEQ would unlikely be able to reach a conclusion on its own regarding whether potential sources of nonpoint pollution were implementing all of the existing state required BMPs, and would likely need to rely on the Departments of Agriculture and/or Forestry to reach any conclusion.

Authority and precedence

DEQ has the authority to identify what requirements need to be met before allowing a permitted point source to lower water quality under an antidegradation review.

V. Summary of RWG discussion and views

The stakeholder workgroup discussed options for the antidegradation policy and its application to nonpoint sources at their meetings in April and May 2010. There is a range of views among the

stakeholders about the application of the antidegradation policy to nonpoint source activity and whether it could be an effective tool for reducing toxic pollutants from nonpoint sources. There is also a range of views about what DEQ's role in this process should be relative to other state resource management agencies.

Forest and agricultural land managers expressed concerns that the antidegradation policy is not a good fit for nonpoint source activity. They question why land managers would be asked to do more if the water quality where the nonpoint source activity occurs is sufficient and meeting water quality standards. They conclude that the policy is more fitting for a situation where a point source is seeking a new or increased load and the Department can evaluate the impact of that load prior to allowing it by issuing an NPDES permit.

The Northwest Environmental Advocates representative felt strongly that DEQ's recommendation is not adequate and that more could be done through the antidegradation policy to protect water quality and to be more preventative. This member also commented that DEQ's recommendations ignore federal Tier 1 antidegradation requirements. Similarly, the "mixed media subgroup," which included Northwest Environmental Advocates, ACWA and the League of Oregon Cities, proposed that the antidegradation policy rule be revised and commented that developing an implementation plan for the existing policy related to nonpoint sources does not go far enough. These interests believe a fundamental policy change is needed to effectively manage toxics statewide from all sources.

Additional workgroup member concerns included:

- Whether DEQ will have the resources and capability to implement the antidegradation policy for nonpoint sources.
- How existing versus new or increased loads be defined for nonpoint source activity.
- How DEQ will determine what qualify as reasonable and cost effective BMPs; DEQ has limited experience in this area.
- ORS 527.765(1) requires nonpoint forest operations to meet water quality standards only to the "maximum extent practicable."
- There should be public participation in the process to determine reasonable and cost effective BMPs, or to develop criteria for that evaluation.
- Whether DEQ will identify the cost of implementing additional BMPs and who will pay that cost.
- Whether the proposal would duplicate efforts of other agencies.

DEQ has worked to understand the issues, concerns and frustrations that have been expressed during the discussions and briefly summarized above.

DEQ concludes that the first step should be to explore the potential to make progress on reducing toxic pollutants from nonpoint sources under the existing antidegradation policy rule. DEQ also must recognize the intent of state law related to the management of nonpoint sources of pollution. DEQ, working with other agencies, will address the issues summarized in this issue

paper to the extent possible through the development of the nonpoint source chapter of the Antidegradation Implementation Internal Management Directive within the timeframe stated above. DEQ does not find that it is timely to recommend revisions to our antidegradation policy rules prior to fully exploring what can be accomplished under the existing policy.

Attachment A

OAR 340-041-0004**Antidegradation**

(1) Purpose. The purpose of the Antidegradation Policy is to guide decisions that affect water quality such that unnecessary further degradation from new or increased point and nonpoint sources of pollution is prevented, and to protect, maintain, and enhance existing surface water quality to ensure the full protection of all existing beneficial uses. The standards and policies set forth in OAR 340-041-0007 through 340-041-0350 are intended to supplement the Antidegradation Policy.

(2) Growth Policy. In order to maintain the quality of waters in the State of Oregon, it is the general policy of the Commission to require that growth and development be accommodated by increased efficiency and effectiveness of waste treatment and control such that measurable future discharged waste loads from existing sources do not exceed presently allowed discharged loads except as provided in section (3) through (9) of this rule.

(3) Nondegradation Discharges. The following new or increased discharges are subject to this Division. However, because they are not considered degradation of water quality, they are not required to undergo an antidegradation review under this rule:

(a) Discharges Into Existing Mixing Zones. Pollutants discharged into the portion of a water body that has been included in a previous mixing zone for a permitted source, including the zones of initial dilution, are not considered a reduction in water quality, so long as the mixing zone is established in accordance with OAR 340-041-0053, there are no other overlapping mixing zones from other point sources, and the discharger complies with all effluent limits set out in its NPDES permit.

(b) Water Conservation Activities. An increase in a pollutant concentration is not considered a reduction in water quality so long as the increase occurs as the result of a water conservation activity, the total mass load of the pollutant is not increased, and the concentration increase has no adverse effect on either beneficial uses or threatened or endangered species in the water body.

(c) Temperature. Insignificant temperature increases authorized under OAR 340-041-0028(11) and (12) are not considered a reduction in water quality.

(d) Dissolved Oxygen. Up to a 0.1 mg/l decrease in dissolved oxygen from the upstream end of a stream reach to the downstream end of the reach is not considered a reduction in water quality so long as it has no adverse effects on threatened and endangered species.

(4) Recurring Activities. Since the baseline for applying the antidegradation policy to an individual source is the water quality resulting from the source's currently authorized discharge, and since regularly-scheduled, recurring activities remain subject to water quality standards and the terms and conditions in any applicable federal and state permits, certifications and licenses, the following activities will not be considered new or increasing discharges and will therefore not trigger an antidegradation review under this rule so long as they do not increase in frequency, intensity, duration or geographical extent:

(a) Rotating grazing pastures,

(b) Agricultural crop rotations, and

(c) Maintenance dredging.

(5) Exemptions to the Antidegradation Requirement. Some activities may, on a short term basis, cause temporary water quality degradation. However, these same activities may also have substantial and desirable environmental benefits. The following activities and situations fall into this category. Such activities and situations remain subject to water quality standards, and must demonstrate that they have minimized adverse affects to threatened and endangered species in order to be exempt from the antidegradation review under this rule:

(a) Riparian Restoration Activities. Activities that are intended to restore the geomorphology or riparian vegetation of a water body, or control invasive species need not undergo an antidegradation review so long as the Department determines that there is a net ecological benefit to the restoration activity. Reasonable measures that are consistent with the restoration objectives for the water body must be used to minimize the degradation;

(b) Emergency Situations. The Director or a designee may, for a period of time no greater than 6 months, allow lower water quality without an antidegradation review under this rule in order to respond to public health and welfare emergencies (for example, a significant threat of loss of life, personal injury or severe property damage); and

(c) Exceptions. Exceptions authorized by the Commission or Department under (9) of this rule.

(6) High Quality Waters Policy: Where the existing water quality meets or exceeds those levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, and other designated beneficial uses, that level of water quality must be maintained and protected. However, the Environmental Quality Commission, after full satisfaction of the intergovernmental coordination and public participation provisions of the continuing planning process, and with full consideration of sections (2) and (9) of this rule, and 340-041-0007(4), may allow a lowering of water quality in these high quality waters if it finds:

(a) No other reasonable alternatives exist except to lower water quality; and

(b) The action is necessary and benefits of the lowered water quality outweigh the environmental costs of the reduced water quality. This evaluation will be conducted in accordance with DEQ's "Antidegradation Policy Implementation Internal Management Directive for NPDES Permits and section 401 water quality certifications," pages 27, and 33-39 (March 2001) incorporated herein by reference;

(c) All water quality standards will be met and beneficial uses protected; and

(d) Federal threatened and endangered aquatic species will not be adversely affected.

(7) Water Quality Limited Waters Policy: Water quality limited waters may not be further degraded except in accordance with section (9)(a)(B), (C) and (D) of this rule.

(8) Outstanding Resource Waters Policy. Where existing high quality waters constitute an outstanding State or national resource such as those waters designated as extraordinary resource waters, or as critical habitat areas, the existing water quality and water quality values must be maintained and protected, and classified as "Outstanding Resource Waters of Oregon."

(a) The Commission may specially designate high quality water bodies to be classified as Outstanding Resource Waters in order to protect the water quality parameters that affect ecological integrity of critical habitat or special water quality values that are vital to the unique character of those water bodies. The Department will develop a screening process and establish a list of nominated water bodies for Outstanding Resource Waters designation in the Biennial Water Quality Status Assessment Report (305(b) Report). The priority water bodies for nomination include:

(A) Those in State and National Parks;

(B) National Wild and Scenic Rivers;

(C) State Scenic Waterways;

(D) Those in State and National Wildlife Refuges; and

(E) Those in federally designated wilderness areas.

(b) The Department will bring to the Commission a list of water bodies that are proposed for designation as Outstanding Resource Waters at the time of each triennial Water Quality Standards Review; and

(c) When designating Outstanding Resource Waters, the Commission may establish the water quality values to be protected and provide a process for determining what activities are allowed that would not affect the outstanding resource values. After the designation, the Commission may not allow activities that may lower water quality below the level established except on a

short term basis to respond to public health and welfare emergencies, or to obtain long-term water quality improvements.

(9) Exceptions. The Commission or Department may grant exceptions to this rule so long as the following procedures are met:

(a) In allowing new or increased discharged loads, the Commission or Department must make the following findings:

(A) The new or increased discharged load will not cause water quality standards to be violated;

(B) The action is necessary and benefits of the lowered water quality outweigh the environmental costs of the reduced water quality. This evaluation will be conducted in accordance with DEQ's "Antidegradation Policy Implementation Internal Management Directive for NPDES Permits and section 401 water quality certifications," pages 27, and 33-39 (March 2001) incorporated herein by reference; and

(C) The new or increased discharged load will not unacceptably threaten or impair any recognized beneficial uses or adversely affect threatened or endangered species. In making this determination, the Commission or Department may rely upon the presumption that if the numeric criteria established to protect specific uses are met the beneficial uses they were designed to protect are protected. In making this determination the Commission or Department may also evaluate other State and federal agency data that would provide information on potential impacts to beneficial uses for which the numeric criteria have not been set;

(D) The new or increased discharged load may not be granted if the receiving stream is classified as being water quality limited under sub-section (a) of the definition of "Water Quality Limited" in OAR 340-041-0002, unless:

(i) The pollutant parameters associated with the proposed discharge are unrelated either directly or indirectly to the parameter(s) causing the receiving stream to violate water quality standards and being designated water quality limited; or

(ii) Total maximum daily loads (TMDLs), waste load allocations (WLAs) load allocations (LAs), and the reserve capacity have been established for the water quality limited receiving stream; and compliance plans under which enforcement action can be taken have been established; and there will be sufficient reserve capacity to assimilate the increased load under the established TMDL at the time of discharge; or

(iii) Effective July 1, 1996, in water bodies designated water-quality limited for dissolved oxygen, when establishing WLAs under a TMDL for water bodies meeting the conditions defined in this rule, the Department may at its discretion provide an allowance for WLAs calculated to result in no measurable reduction of dissolved oxygen (DO). For this purpose, "no

measurable reduction" is defined as no more than 0.10 mg/L for a single source and no more than 0.20 mg/L for all anthropogenic activities that influence the water quality limited segment. The allowance applies for surface water DO criteria and for Intergravel dissolved oxygen (IGDO) if a determination is made that the conditions are natural. The allowance for WLAs applies only to surface water 30-day and seven-day means; or

(iv) Under extraordinary circumstances to solve an existing, immediate and critical environmental problem, the Commission or Department may, after the completion of a TMDL but before the water body has achieved compliance with standards, consider a waste load increase for an existing source on a receiving stream designated water quality limited under sub-section (a) of the definition of "Water Quality Limited" in OAR 340-041-0002. This action must be based on the following conditions:

(I) That TMDLs, WLAs and LAs have been set; and

(II) That a compliance plan under which enforcement actions can be taken has been established and is being implemented on schedule; and

(III) That an evaluation of the requested increased load shows that this increment of load will not have an unacceptable temporary or permanent adverse effect on beneficial uses or adversely affect threatened or endangered species; and

(IV) That any waste load increase granted under subparagraph (iv) of this paragraph is temporary and does not extend beyond the TMDL compliance deadline established for the water body. If this action will result in a permanent load increase, the action has to comply with sub-paragraphs (i) or (ii) of this paragraph.

(b) The activity, expansion, or growth necessitating a new or increased discharge load is consistent with the acknowledged local land use plans as evidenced by a statement of land use compatibility from the appropriate local planning agency.

(c) Oregon's water quality management policies and programs recognize that Oregon's water bodies have a finite capacity to assimilate waste. Unused assimilative capacity is an exceedingly valuable resource that enhances in-stream values and environmental quality in general. Allocation of any unused assimilative capacity should be based on explicit criteria. In addition to the conditions in subsection (a) of this section, the Commission or Department may consider the following:

(A) Environmental Effects Criteria:

(i) Adverse Out-of-Stream Effects. There may be instances where the non-discharge or limited discharge alternatives may cause greater adverse environmental effects than the increased discharge alternative. An example may be the potential degradation of groundwater from land application of wastes;

(ii) Instream Effects. Total stream loading may be reduced through elimination or reduction of other source discharges or through a reduction in seasonal discharge. A source that replaces other sources, accepts additional waste from less efficient treatment units or systems, or reduces discharge loadings during periods of low stream flow may be permitted an increased discharge load year-round or during seasons of high flow, so long as the loading has no adverse affect on threatened and endangered species;

(iii) Beneficial Effects. Land application, upland wetlands application, or other non-discharge alternatives for appropriately treated wastewater may replenish groundwater levels and increase streamflow and assimilative capacity during otherwise low streamflow periods.

(B) Economic Effects Criteria. When assimilative capacity exists in a stream, and when it is judged that increased loadings will not have significantly greater adverse environmental effects than other alternatives to increased discharge, the economic effect of increased loading will be considered. Economic effects will be of two general types:

(i) Value of Assimilative Capacity. The assimilative capacity of Oregon's streams is finite, but the potential uses of this capacity are virtually unlimited. Thus it is important that priority be given to those beneficial uses that promise the greatest return (beneficial use) relative to the unused assimilative capacity that might be utilized. In-stream uses that will benefit from reserve assimilative capacity, as well as potential future beneficial use, will be weighed against the economic benefit associated with increased loading;

(ii) Cost of Treatment Technology. The cost of improved treatment technology, non-discharge and limited discharge alternatives may be evaluated.

Stat. Auth.: ORS 468.020, 468B.030, 468B.035 & 468B.048

Stats. Implemented: ORS 468B.030, 468B.035 & 468B.048

Hist.: DEQ 17-2003, f. & cert. ef. 12-9-03; DEQ 2-2007, f. & cert. ef. 3-15-07

Attachment B

Code of Federal Regulations (CFRs)**Chapter 40, § 131.12 Antidegradation policy.**

(a) The State shall develop and adopt a statewide antidegradation policy and identify the methods for implementing such policy pursuant to this subpart. The antidegradation policy and implementation methods shall, at a minimum, be consistent with the following:

(1) Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected.

(2) Where the quality of the waters exceed levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality shall be maintained and protected unless the State finds, after full satisfaction of the intergovernmental coordination and public participation provisions of the State's continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. In allowing such degradation or lower water quality, the State shall assure water quality adequate to protect existing uses fully. Further, the State shall assure that there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint source control.

(3) Where high quality waters constitute an outstanding National resource, such as waters of National and State parks and wildlife refuges and waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected.

(4) In those cases where potential water quality impairment associated with a thermal discharge is involved, the antidegradation policy and implementing method shall be consistent with section 316 of the Act.

Chapter 40, § 131.3 Definitions.

(a) *The Act* means the Clean Water Act (Pub. L. 92–500, as amended (33 U.S.C. 1251 *et seq.*)).

(b) *Criteria* are elements of State water quality standards, expressed as constituent concentrations, levels, or narrative statements, representing a quality of water that supports a particular use. When criteria are met, water quality will generally protect the designated use.

(c) *Section 304(a) criteria* are developed by EPA under authority of section 304(a) of the Act based on the latest scientific information on the relationship that the effect of a constituent concentration has on particular aquatic species and/or human health. This information is issued periodically to the States as guidance for use in developing criteria.

(d) *Toxic pollutants* are those pollutants listed by the Administrator under section 307(a) of the Act.

(e) *Existing uses* are those uses actually attained in the water body on or after November 28, 1975, whether or not they are included in the water quality standards.

(f) *Designated uses* are those uses specified in water quality standards for each water body or segment whether or not they are being attained.

(f) *Designated uses* are those uses specified in water quality standards for each water body or segment whether or not they are being attained.

(g) *Use attainability analysis* is a structured scientific assessment of the factors affecting the attainment of the use which may include physical, chemical, biological, and economic factors as described in §131.10(g).

(h) *Water quality limited segment* means any segment where it is known that water quality does not meet applicable water quality standards, and/or is not expected to meet applicable water quality standards, even after the application of the technology-bases effluent limitations required by sections 301(b) and 306 of the Act.

(i) *Water quality standards* are provisions of State or Federal law which consist of a designated use or uses for the waters of the United States and water quality criteria for such waters based upon such uses. Water quality standards are to protect the public health or welfare, enhance the quality of water and serve the purposes of the Act.

Attachment C

Excerpt of proposed revisions to the Antidegradation Policy and rationale from Mixed Media memo (October 21, 2009).

Rule language is required to make Oregon's antidegradation requirements consistent with federal law and sufficient to extend the antidegradation policy to existing and new nonpoint sources as required by federal law and to meet the goals of the Commission including attainment of Oregon's new toxic criteria.

The Mixed media subgroup of stakeholders, which includes Northwest Environmental Advocates, ACWA and LOC, recommends that Oregon add to the water quality standards rule a clear statement of the relationship between the numeric toxics criteria and the antidegradation requirements. Rule changes they suggested for consideration include:

340-041-0004(1) (Antidegradation) "Purpose. The purpose of the Antidegradation Policy is to guide decisions that affect water quality such that unnecessary further degradation from new or increased point and existing or new nonpoint sources of pollution is prevented, and to protect, maintain, and enhance existing surface water quality to ensure the full protection of all existing beneficial uses."

340-041-0004(7) (Antidegradation) "Water Quality Limited Waters Policy:
(a) Water quality limited waters may not be further degraded except in accordance with section (9)(a)(B), (C) and (D) of this rule.
(b) Management practices employed to control sheet erosion and surface runoff from nonpoint sources to water quality limited waters must be sufficient to assure protection of existing uses and the water quality necessary to support the existing uses."

340-041-0004(6) (Antidegradation) "High Quality Waters Policy: Where the existing water quality meets or exceeds those levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, and other designated beneficial uses, that level of water quality must be maintained and protected. To meet this goal, all cost-effective and reasonable land management practices must be used on private, state, and federal lands to assure numeric and narrative criteria are attained and maintained. Cost-effective and reasonable land management practices include compliance with any minimum best management practices developed by the Department."

Rationale: Water quality standards require both an antidegradation policy and antidegradation policy implementation methods, referred to collectively as "antidegradation requirements." Specifically, the federal antidegradation policy requires the following three relevant components:

Tier I Requirements: Protection and maintenance of “existing uses and the level of water quality necessary to protect the existing uses” is required.¹¹ Existing uses are defined as “those uses actually attained in the water body on or after November 28, 1975, whether or not they are included in the water quality standards.”¹² The requirement to protect existing uses applies to all waters regardless of their present quality.

Tier II Requirements. To implement Tier II protection of high quality waters, the State must achieve “all cost-effective and reasonable best management practices for nonpoint source control.”¹³

Implementation Methods: The State must “identify the methods for implementing” its antidegradation policy.¹⁴ These methods must include both Tier I protections for existing uses and the level of water quality necessary to protect and maintain those uses as well as Tier II protections for the protection and maintenance of the quality of high-quality waters.

The consumption of high levels of fish by a variety of Oregonians is an existing use that requires protection. Waters that violate criteria constitute waters whose water quality fails to protect existing uses by definition and therefore violate the Tier I protections. As a result, non-NPDES sources ((including, but not limited to erosion, air deposition sources, legacy sources) must be controlled to the degree necessary to protect those existing uses and their associated water quality. Where waters are of high quality, meaning there is a presumption that existing uses are protected and criteria are not violated, the nonpoint source controls that are required are limited to those that are “cost-effective and reasonable” in order to protect those waters from deteriorating. In other words, the antidegradation policy applies to waters with unsafe levels of toxic contaminants, waters that are relatively clean, and waters where the detectable levels are above the applicable numeric criteria. In all cases the needed nonpoint source controls are essentially the same.

¹³ 40 C.F.R. §131.12(a)(2).

¹⁴ 40 C.F.R. §131.12(a).

References

ODEQ, 2001. Antidegradation Policy Implementation Internal Management Directive for NPDES Permits and Section 401 Water Quality Certifications.

ODEQ, 2009. Paper on nonpoint source authorities.

USEPA, 1994a. Interpretation of Federal Antidegradation Regulatory Requirement. Memo from Tudor Davies, EPA, February 22, 1994.

WDOE, 2005. Supplementary Guidance, Implementing the Tier II Antidegradation Rules (WAC 173-201A-320). Washington Department of Ecology Water Quality Program, July 18, 2005.