

Tier I Antidegradation Policy: The Need for Implementation Methods

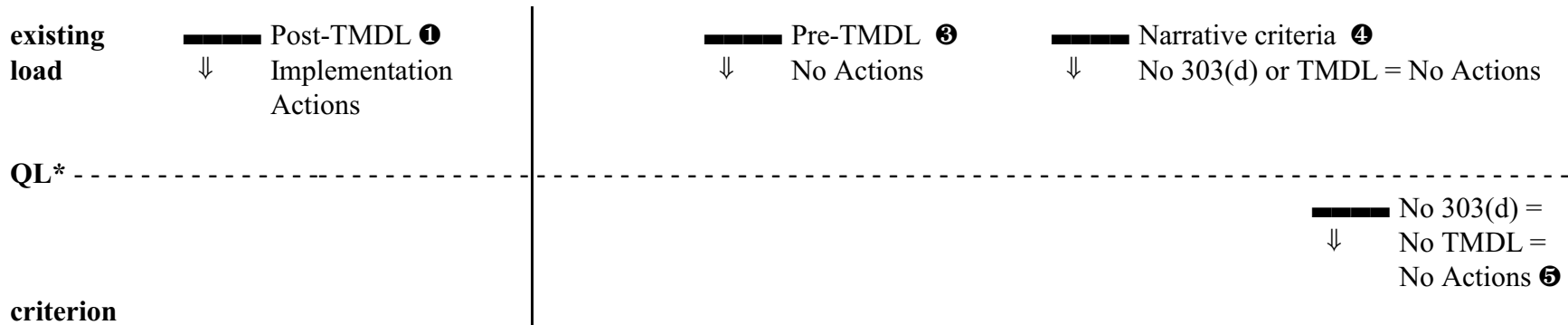
EPA: “[Tier I is] the absolute floor of water quality” providing “a minimum level of protection” to all waters.

Oregon: “The purpose of the Antidegradation Policy is . . . to protect, maintain, and enhance existing surface water quality to ensure the full protection of all existing beneficial uses.”

What Oregon Has

What Oregon Does Not Have

(LOWER QUALITY THAN CRITERIA) Tier I goal: to maintain or lower pollution levels



existing load

↑ Tier II review for ②
█ NPDES & §401 Cert.

↑ 35 years of
█ degradation

↑
█ 1975 ⑥

↑ Nonpoint Sources
█ No Tier II Review ⑦

(HIGHER QUALITY THAN CRITERIA) Tier I & II goals: to prevent or restrict pollution increases

* QL=quantitation limit. Similar to a detection limit, the QL is the level at which sampling technology can quantify toxics.

June 7, 2010

To: DEQ Staff
From: Nina Bell, Northwest Environmental Advocates
Re: **Using Tier I Antidegradation Policy Requirements to Address Gaps in Water Quality Protection for Oregon's Waters**

DEQ staff prepared a memorandum concerning "Authorities Related to Nonpoint (Non-NPDES) Source Pollution Prevention and Control," November 17, 2009, as part of the ongoing triennial review of Oregon's human health criteria for toxics. In that memo, DEQ concluded that: (1) DEQ has "extremely broad" authority to regulate all pollution sources; (2) "the EQC hasn't provided to DEQ the same tools for control of nonpoint sources of pollution as for point sources"; and (3) TMDLs are the "primary mechanism" for regulating nonpoint source pollution. Despite these findings, the staff has rejected nearly all proposals to use the antidegradation policy provisions of Oregon's water quality standards as a mechanism to effect nonpoint source controls outside the context of TMDLs. This memo describes the gaps in the policy and how rulemaking to address those gaps would provide the Commission with a path to achieving greater nonpoint source controls of toxics and other pollutants.

The federally-mandated antidegradation policy and implementation methods (together "antidegradation requirements") consist of three tiers of protection. The discussion below is limited to Tier I (protection of existing uses) and Tier II (protection of high quality water), and omits Tier III (protection of outstanding waters). Although some aspects of Tier II are discussed and addressed, the recommended approach is actually limited to Tier I. Federal rules require that states "identify the methods for implementing" the antidegradation policy. Addressing this requirement in the context of Tier I protections is the subject of this memo.

Tier I protection in federal rules requires that "[e]xisting instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected." EPA guidance notes Tier I protections constitute "the absolute floor of water quality" providing "a minimum level of protection to all waters." Oregon's Tier I protections are "to protect, maintain, and enhance existing surface water quality to ensure the full protection of all existing beneficial uses." Because Tier I applies to all waters, it can be used to protect higher quality waters as well as to improve lower quality waters.

The attached diagram demonstrates the benefits of adopting clear and specific antidegradation requirements for nonpoint sources as part of Oregon's Tier I policy. Currently, Oregon's water quality standards do not elaborate on how the agency should implement Tier I protections. Likewise, there is no DEQ guidance on implementing Tier I, although it could be said that some Tier I protections (to "enhance" water quality) are implemented through pollution reductions called for in Total Maximum Daily Loads (TMDL). TMDLs, however, do not apply to all waters, they take time to complete, and implementation of the TMDL Load Allocations assigned to nonpoint sources is largely nonexistent. In contrast, Tier I requirements apply to all waters, do not require the development of a TMDL, and are water quality standards that other agencies must meet. In short, Tier I requirements can and should be immediate goals and expectations for all activities that affect water quality, incorporated into Oregon's water quality standards.

The left side of the diagram demonstrates what Oregon has in place now. ❶ For waters where the existing pollution load is above an applicable criterion, and a TMDL has been completed, the TMDL is the triggering mechanism for any pollution reductions. ❷ For waters where the existing load is lower than the criterion and the water is of higher quality than the standard requires, DEQ has an Internal Management Directive (IMD) that guides an analysis of whether to allow any proposed increases in pollutant loads from NPDES sources or activities regulated under Section 401 certifications. There is, however, no Tier II consideration of whether lowered water quality should be allowed from any nonpoint sources that might increase pollutant loads.

The right side of the diagram demonstrates what Oregon does not have in place. ❸ For waters identified as having a pollution load that exceeds a criterion and that have been placed on the 303(d) list, prior to DEQ's developing a TMDL, DEQ has no mechanism for lowering pollutant loads nor any requirements to do so. There is, however, no reason to wait for a TMDL to be developed to implement basic pollution control practices, such as forested riparian buffers. While the TMDL may demonstrate that more actions beyond basic controls are necessary, there are certain controls that are certain to be needed. Waiting for a TMDL to be completed before taking those basic pollution control actions merely postpones attainment of Oregon's water quality standards. ❹ Waters that violate Oregon's narrative criteria are not likely to be listed on the 303(d) list and therefore will not be scheduled for a TMDL at all. In this case, while water quality is impaired, and standards are not met, no pollution reduction actions will be taken because no TMDL will be developed. ❺ Likewise, where water quality criteria are below levels at which toxic pollutants can be detected and quantified, there will be no 303(d) listing and no TMDL developed even if water quality is violating the criteria. This is particularly important in light of the fact that roughly half of Oregon's new human health criteria will be below the quantitation limit (QL). Waters may well violate these new criteria, but no pollution reduction actions will be taken. In all three instances on this diagram, nothing in Oregon's antidegradation policy triggers pollution controls for nonpoint sources affecting waters that have unsafe levels of pollution despite Oregon's stated policy to "protect, maintain, and enhance" Oregon's water quality. In fact, there is nothing that will prevent further degradation of these already over-polluted waters.

Likewise, there are no triggering mechanisms to protect, maintain, or enhance water quality that is higher than the criteria in the following two situations. ❻ First, where water quality has eroded over the 35 years since 1975 – the key date for preserving "existing uses" and the water quality necessary to protect them – there is nothing in place to ensure that Oregon protects those uses. Oregon has no mechanism to identify and assess existing uses or to provide for their protection. Instead, contrary to federal policy, Oregon has allowed uses to become locally extirpated, species to be forced to the edge of extinction, and water quality to become more degraded without taking any action. This degradation makes a mockery of the Commission's policy to "protect, maintain, and enhance" water quality. ❼ Second, where nonpoint sources will lower water quality that current meets water quality criteria, there are no Tier II mechanisms to prevent further pollution, DEQ has no internal guidance, and the agency may well lack regulatory authority to regulate a nonpoint source that is planning to lower water quality.

The solution to all five of the situations described above, where Oregon has established no triggering mechanism to protect, maintain, and enhance already over-polluted waters or waters

where standards are met is the same: explicit Tier I protections. As stated above, and inherent in Oregon's existing Tier I language, Tier I protections apply to all waters, regardless of their existing quality. Therefore, if the existing Commission policy of protecting, maintaining, and enhancing water quality were translated into baseline performance expectations for nonpoint sources, established as Tier I requirements, Oregon's water quality standards could begin to remedy Oregon's water quality problems. Because Tier I requirements are water quality standards, other agencies that establish management practices for nonpoint sources would be required to meet them in developing practices for activities under their jurisdiction.

For example, a Tier I requirement could be continuous forested riparian buffers of a required minimum width to prevent excess sedimentation and toxics (current and historic) associated with sediment, as well as to capture nutrient runoff. These buffers also provide shade to both maintain and enhance temperature, the state's most widespread pollution problem. Minimum buffer widths could also be established based on other considerations, such as: (1) application of phosphorus fertilizers which requires wider buffers to achieve pollutant removal; (2) the slope of the land which affects the efficacy of buffers in achieving sediment removal; and (3) soils, climate, and the erosive state of the land affected by human activities.

Likewise Tier I implementation methods could range from general narrative requirements and performance expectations to specific numeric provisions. They could include such baseline nonpoint source controls as:

- (1) zones in which no herbicides, pesticides, soil amendments, or fertilizers can be used because of their likely entry into waters of the state;
- (2) use of the same Oregon Department of Forestry practices currently required to prevent landslides onto houses and roads to protect streams and rivers from landslides;
- (3) a narrative prohibition on controllable erosion into waters of the State;
- (4) a requirement that stream banks be stable and preserved in or restored to a natural state;
- (5) calculated limits on controllable erosion established through modified Universal Soil Loss Equations, Tolerable Soil Loss, or other methods;
- (6) limits on rates of application of fertilizers and soil amendments containing toxics and nitrogen;
- (7) prohibitions on domestic animals, and their wastes, being in and near streams, with specific numeric restrictions (e.g., location of fencing, watering areas, and stream crossings); and
- (8) use of all known available and reasonable methods of control and treatment.

These are but a few of the approaches that could be taken to implement Tier I of Oregon's antidegradation policy. The general rationale for these approaches is set out in the October 21, 2009 memorandum from the Mixed Media Subcommittee regarding "Controlling Non-Point Source Runoff of Toxic Contaminants." All baseline controls for nonpoint sources would apply as Tier I protections unless a TMDL directed that more stringent controls were necessary to meet load allocations and water quality standards.