Memorandum

State of Oregon
Department of
Environmental
Quality

From: Jennifer Wigal, Water Quality Program Manager JW
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To: DEQ Water Quality Permit Writers and 401 Staff
Regarding: Procedures for existing use review during antidegradation analysis
Date: November 3, 2014

This memorandum is a narrow modification to DEQ's Internal Management Directive on Antidegradation Policy Implementation and is intended to address comments provided by EPA to DEQ on how DEQ implements Tier 1 antidegradation. While this memorandum focuses on issuing or renewing NPDES permits, the concepts and approach described are also applicable more broadly to other discharges that require a federal permit or licence and are subject to certification under section 401 of the federal Clean Water Act.

Background

On August 8, 2013, EPA sent DEQ a review of DEQ's Antidegradation Policy Implementation IMD. EPA found that DEQ's procedures for Tier 1 review were inconsistent with federal requirements and stated that: 1) the Tier 1 review must analyze protection of existing uses that are not designated beneficial uses; and 2) Tier 1 review, including the analysis of existing use protection, must be done for all new and existing discharges at the time of permit issuance or renewal, regardless of whether they result in a lowering of water quality.

To address these findings, permit writers should determine whether the discharge protects existing uses during development of any permit, even if the discharge pollutant loads are the same or less than during the previous permit cycle and DEQ has determined that there will be no lowering of water quality. DEQ cannot assume that the uses currently designated at the location of the discharge include all existing uses. Permit writers should consider available data including information submitted during the permitting process and determine whether such data indicate that existing uses will not be maintained under the specific circumstances presented by the permit. If existing uses are not maintained, additional controls may be required in order to maintain existing uses. The antidegradation implementation flow chart and review sheet have been modified accordingly. Specific procedures are outlined here.

Review of whether existing uses differ from designated beneficial uses

The Antidegradation Review Sheet has been modified to require permit writers to determine whether existing uses differ from designated uses in the area affected by the discharge (Question #13). If existing uses do differ, permit writers should identify whether existing uses are protected from impacts of the discharge.

Water quality standards are comprised of designated uses, the criteria (numeric or narrative) necessary to protect designated uses, plus antidegradation policies and implementation

procedures necessary to protect designated AND existing uses. Existing uses are defined in EPA's regulations as:

> *"those uses actually attained in the water body on or after November 28, 1975, whether or not they are included in water quality standards."*(40 CFR 131.3(e))

In general, designated uses in Oregon apply broadly throughout the state and include fish and aquatic life, fishing, wildlife, boating, hunting and wildlife, and water contact recreation. The EQC adopts numeric water quality criteria for parameters such as toxics, dissolved oxygen and bacteria that are necessary to protect designated beneficial uses, as well as narrative standards that broadly protect these uses. DEQ also has aquatic life use subcategories that have varied criteria for temperature and dissolved oxygen. These include:

- salmon and steelhead spawning
- core cold water habitat
- salmon and trout rearing and migration
- migration corridor
- Lahontan cutthroat trout or redband trout
- bull trout spawning and juvenile rearing
- cool water species
- Borax Lake Chub
- cold-water aquatic life
- cool-water aquatic life
- warm-water aquatic life

The bacteria standard also includes specific requirements for marine waters and estuarine shellfish growing waters that differ from freshwaters and non-shellfish growing estuarine waters.

In order to determine if there are existing uses that differ from the designated uses for the receiving water body, permit writers should refer to environmental mapping conducted according to the Mixing Zone IMD to identify which areas may be impacted by the discharge. Once those areas are identified, refer to DEQ's designated use tables and maps to determine what designated beneficial use or uses apply in the impacted area. Then examine the appropriate ODFW Fish Distribution Maps and all reasonably available relevant information, including information submitted during the comment period that is of sufficient quality, to determine what uses (e.g., salmon and steelhead spawning or salmon and trout migration or rearing, or other non-designated use) may be existing uses or may have been existing uses since November 28, 1975 in the area affected by the discharge[1]. In addition, staff should consult with ODFW staff or review other confirmatory information to verify that the non-designated uses has occurred since November 28, 1975, in the impacted area[2]. If the existing use differs from the designated use,

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[1] 40 CFR 131.3(e)

[2] It's possible that the maps indicate "potential" use, rather than an existing use. For example, barrier removal may have opened up a stretch of stream to salmonid passage, which may be indicated on the ODFW Fish Distribution Maps. However, after consultation with ODFW staff, permit writers may find out that salmonids have yet to use that stretch. Therefore, the use may not yet exist. In addition, in case there is a discrepancy between ODFW data nad other reasonably available data, DEQ will defer to ODFW due to their expertise on the distribution

refer to the water quality standards to determine if more stringent criteria are applicable to the existing uses than the designated use. If the criteria are more stringent, the permit writer must analyze whether the discharge will protect the existing use (i.e., meet the appropriate water quality standard(s) for the existing use).

For discharges to estuarine waters, staff should determine if a discharge that was previously classified as entering a non-shellfish growing water is now impacting a shellfish-growing water and determine if the discharge would meet appropriate bacteria criteria.

Example: A permittee discharges to the Crooked River near Prineville. DEQ's Deschutes Basin fish use maps (Figures 130a and 130b) show the Crooked as salmon rearing and migration, but not spawning. ODFW's map shows that the reach is spawning habitat for summer steelhead. The biologically-based numeric criterion for spawning habitat is 13.0°C (as a seven-day average maximum temperature), which is more stringent than the 18.0°C criterion that applies to rearing and migration. Thus, in order to determine if existing uses are protected, the permit writer should analyze discharge data to ensure that the more stringent criterion of 13.0°C will be met at the edge of the mixing zone during the spawning season for summer steelhead.

Documentation of existing use review
DEQ has revised the Permit Evaluation Report Template to ensure that existing use review is documented in the antidegradation review portion of the PER.

To the extent appropriate, in cases where the permit is renewed with the same or lower discharge loadings as the previous permit, the permit writer may use the following language:

If there is no information to determine that existing uses differ from designated uses:

> "DEQ has performed an antidegradation review for this discharge. Permit renewals with the same discharge loadings as the previous permit are not considered to lower water quality from the existing authorized condition. DEQ is not aware of any information indicating that existing limits are not protective of the designated beneficial uses as listed in *(modify as necessary)* Section 5.2. These uses are very broad and include *(revise the following list as necessary)* fish and aquatic life (including cold water species, salmonid migration, spawning and rearing), fishing, boating, and water contact recreation. Furthermore, DEQ is not aware of any existing uses present within the area impacted by the discharge other than those uses already designated and therefore protected by standards developed to protect designated beneficial uses. Therefore, DEQ has determined that existing uses will be protected and the proposed discharge complies with DEQ's antidegradation policy (see Antidegradation Review Worksheet in *(modify as necessary)* Appendix D).

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of aquatic species and habitat, and their process for regularly updating their data with quality, peer-reviewed information.

If existing uses differ from designated uses and require more stringent criteria for protection:

> DEQ performed an antidegradation review for this discharge. The proposed permit contains the same or reduced discharge loadings compared to the existing permit. Permit renewals with the same or reduced discharge loadings as the previous permit are not considered to lower water quality from the existing authorized condition. The designated beneficial uses for the receiving stream are listed in Section 5.1. These uses are very broad and include *(revise the following list as necessary)* fish and aquatic life (this includes salmonid migration), fishing, boating, and water contact recreation. Based on *(provide reference)*, existing uses of the stream also include *(modify as necessary)* salmon & steelhead spawning. The stream is not currently designated as *(modify as necessary)* salmon & steelhead spawning; however the permit limits have been developed to protect this existing use by meeting the more stringent salmon and steelhead spawning criteria for temperature and dissolved oxygen. The proposed effluent limits and terms and conditions have been developed to protect both existing and designated beneficial uses at the edge of the mixing zone, if one has been established, or at the outfall. Therefore, DEQ determined that existing uses will be protected and the proposed discharge complies with DEQ's antidegradation policy (see Antidegradation Review Worksheet in (*modify as necessary*) Appendix D).

If the permit is a new discharge or will result in a lowering of water quality, the same procedures for existing use review apply. To the extent appropriate for the specific permit, the permit writer may use the following permit language:

If the activity will result in a new discharge or a lowering of water quality and there is no information to determine that existing uses differ from designated uses:

> "DEQ has performed an existing use review for this discharge. DEQ is not aware of any information that limits are not protective of the designated beneficial uses as listed in *(modify as necessary)* Section 5.2. These uses are very broad and include *(revise the following list as necessary)* fish and aquatic life (including cold water species, salmon and trout rearing and migration), fishing, boating, and water contact recreation. Furthermore, DEQ is not aware of any existing uses present within the area impacted by the discharge other than those already designated and therefore protected by standards developed to protect designated beneficial uses. Therefore, DEQ has determined that the proposed discharge complies with the existing use protection requirements of DEQ's antidegradation policy with respect to Tier 1 existing use protection (see Antidegradation Review Worksheet in (*modify as necessary*) Appendix D).

If the activity will result in a new discharge or a lowering of water quality and existing uses differ from designated uses:

> DEQ performed an existing use review for this discharge. The designated beneficial uses for the receiving stream are listed in Section 5.1. These uses are very broad and include *(revise the following list as necessary)* fish and aquatic life

(this includes salmon and trout rearing and migration), fishing, boating, and water contact recreation. Based on *(provide reference)*, existing uses of the stream also include *(modify as necessary)* salmonid spawning. The stream is not currently designated as *(modify as necessary)* salmonid spawning; however permit limits have been developed to protect this more sensitive use. The proposed effluent limits and terms and conditions of the permit will protect both existing and designated beneficial uses at the edge of the mixing zone. Therefore, DEQ determined that the proposed discharge complies with the existing use protection requirements of DEQ's antidegradation policy with respect to Tier 1 existing use protection (see Antidegradation Review Worksheet in *(modify as necessary)* Appendix D).

In any situation where a permit writer determines that a use exists that is not a designated use, the permit writer should inform and confer with DEQ's standards program staff. The standards program will track these findings and determine whether designated uses should be updated through a rulemaking process.