

Colorado Antidegradation Review Process

Issue: Trigger for Antidegradation Review

WQCD Primer Question: What constitutes a “new or increased discharge” that would trigger an antidegradation review?

Concerns:

The current rule and guidance fail to express an unambiguous trigger. It is not clear what types of activities would require antidegradation review, or how any linkage is made between discharges and water quality impacts. Application of the antidegradation program to any situation that may impact water quality would make the program unworkable by requiring review even when a discharger is not proposing an activity that would result in a significant new or increased discharge. It also would unfairly penalize regulated discharges for circumstances beyond their control.

Use of the term “impacts” as opposed to “discharge” is confusing, and appears to allow antidegradation review to be triggered by changes to water quality that are not caused by a particular regulated discharger. For example, a water quality impact could be caused by nonpoint source storm water runoff, such as nutrient loadings from agricultural activities. Or a period of drought could increase the in-stream concentration of certain pollutants, even if this increase is not related to changes at the regulated facility. Neither of these impacts is the result of any activity by a regulated discharger, and thus should not trigger antidegradation review for a regulated discharger.

Although the guidance would seem to imply that the antidegradation process is only triggered when a discharger proposes to undertake an activity that would necessitate a new or increased permit limit, the guidance is not clear regarding permit renewals. Routine renewals in which a discharger is not changing its operations or activities should never be subject to antidegradation review. However, the guidance has been interpreted such that routine renewals may trigger antidegradation review due to changes in ambient water quality or revisions to water quality standards or monitoring procedures. Renewals where water quality standards relax merely because hardness has increased and effluent limits increase miniscule amounts are interpreted to trigger the beginning of the antidegradation review, which is avoided by the permittee accepting effluent limits to reflect current conditions for parameters where there were no previous limits because no reasonable potential to exceed water quality standards. These extremely low threshold limits are frequently accepted by the discharger rather than conducting the alternatives analysis review, due to costs, complexity, and uncertainty of such a review. This practice is not consistent with the statutory language of Clean Water Act Section 303(d)(4)(B).

Recommendations:

In the rule and/or guidance, it should be made clear that the antidegradation process is triggered only when a regulated discharger is proposing to undertake an activity that would result in a new

or increased discharge that would require a new or increased permit limit. As it concerns existing facilities, antidegradation review should not be triggered unless and until the discharger proposes to increase its design capacity.

There are three important steps in this trigger:

First, there must be a deliberate action on the part of the regulated discharger – a proposed activity by the discharger, such as increasing treatment capacity. Normal operational variability, including changes in pollutants in intake water, should not trigger antidegradation review. Furthermore, changes in water quality standards or monitoring procedures should not trigger antidegradation review. For example, if the state has adopted a new or revised water quality criterion, antidegradation review should not be triggered just because a new limit for that parameter now must be included in a renewal permit. Similarly, if a more sensitive analytical test method is approved, antidegradation review should not be triggered just because that parameter is detected for the first time in the discharge. In these situations, although a new permit limit may be necessary, there is no actual change in the discharge.

Second, the activity proposed by the discharger must result in a new or increased discharge. The appropriate scope of antidegradation for regulated facilities must focus on the discharge. Any water quality impacts that are not caused by the regulated discharger should not trigger antidegradation review for the discharger. Thus, if ambient water quality conditions (such as flow or hardness) have changed during a permit cycle, antidegradation review should not be triggered during a routine permit renewal because the discharger is not proposing to make any changes to its discharge.

Third, the activity proposed by the discharge must result in the need for a new or increased permit limit. In other words, if the activity can be undertaken within the current permit limits and conditions, it should not need to undergo antidegradation review because the permit already authorizes the discharge. For example, if a municipality increases its service area or the number of sewer taps, but can operate within the existing permitted plant capacity and permit limits, it should be able to do so without going through antidegradation review.

We also recommend that the rule and/or guidance contain a clear statement that new or increased discharges that are within the approved and permitted design capacity of the treatment facility are not subject to antidegradation review. For POTW, this would include increasing the sewered area or connection of new sewers and customers. Antidegradation review would only occur if the plant is requesting an increase in design capacity.

Our preference for implementing our recommendations would be to revise the rule to change the trigger from “new or increased water quality impacts” to “a new or expanded deliberate action causing a new or increased discharge that would require new or increased permit limits.” However, we believe our recommendations could also be implemented by making clarifications to the guidance.

Additional supporting documentation and analysis follow.

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Supporting Documentation and Analysis

Current Colorado Rule and Guidance:

Subsection 31.8(3)(a) establishes the applicability of the antidegradation review process, and states that the “procedures shall apply to the review of regulated activities with new or increased water quality impacts.”

The Procedural Guidance further describes this trigger as follows:

This includes new activities or facilities; expansion of existing activities or facilities resulting in an increased load over the current authorized load; or at the time of renewal, any increase in the authorized discharge levels (effluent limits) in a permit over the current authorized discharge levels.

Recommendation:

We recommend that the rule and/or guidance be clarified to make it clear that the antidegradation process is triggered only when a regulated discharger is proposing to undertake an activity that would result in a new or increased discharge that would require a new or increased permit limit. As it concerns existing facilities, antidegradation review should not be triggered unless and until the discharger proposes to increase its design capacity.

This approach can be supported as consistent with federal antidegradation requirements, and is used by many other states with antidegradation implementation procedures, as described below.

Clean Water Act Section 303(d)(4)(B):

In the Clean Water Act, antidegradation is addressed only as it concerns the revisions of effluent limitations:

STANDARD ATTAINED—For waters identified under paragraph (1)(A) where the quality of such waters equals or exceeds levels necessary to protect the designated use for such waters or otherwise required by applicable water quality standards, any effluent limitation based on a total maximum daily load or other waste load allocation established under this section, or any water quality standard established under this section, or any other permitting standard may be revised only if such revision is subject to and consistent with the antidegradation policy established under this section.

This reference is relevant to the antidegradation trigger because it clarifies that antidegradation review is meant to occur only in situations where a discharger is seeking a revised permit limit.

U.S. EPA Great Lakes Water Quality Guidance (40 CFR Part 132):

In 1995, U.S. EPA adopted regulations for waters in the Great Lakes system. Appendix E of the regulations specify antidegradation standards and implementation procedures. The final regulations only address bioaccumulative chemicals of concern (BCCs). There are several relevant provisions concerning the applicability of antidegradation review. First, the regulation clearly establishes an unambiguous trigger of a deliberate action on the part of the discharger:

Significant Lowering of Water Quality. A significant lowering of water quality occurs when there is a new or increased loading of any BCC from any regulated existing or new facility, either point source or nonpoint source for which there is a control document or reviewable action, as a result of any activity including, but not limited to:

- (1) Construction of a new regulated facility or modification of an existing regulated facility such that a new or modified control document is required;
- (2) Modification of an existing regulated facility operating under a current control document such that the production capacity of the facility is increased;
- (3) Addition of a new source of untreated or pretreated effluent containing or expected to contain any BCC to an existing wastewater treatment works, whether public or private;
- (4) A request for an increased limit in an applicable control document;
- (5) Other deliberate activities that, based on the information available, could be reasonably expected to result in an increased loading of any BCC to any waters of the Great Lakes System.

b. Notwithstanding the above, changes in loadings of any BCC within the existing capacity and processes, and that are covered by the existing applicable control document, are not subject to an antidegradation review. These changes include, but are not limited to:

- (1) Normal operational variability;
- (2) Changes in intake water pollutants;
- (3) Increasing the production hours of the facility, (e.g., adding a second shift); or
- (4) Increasing the rate of production.

C. Also, excluded from an antidegradation review are new effluent limits based on improved monitoring data or new water quality

criteria or values that are not a result of changes in pollutant loading.

Background on this provision can be found in U.S. EPA's Supplementary Information Document (SID) for the regulation (relevant portions attached). The SID includes a discussion of EPA's decision to change the proposed rule trigger for BCCs from "existing effluent quality" (EEQ) to an unambiguous trigger of a deliberate action (such as needing a new or increased permit limit).

[U]nlike EEQ, the mechanism contained in the final Guidance does not expose dischargers to enforcement actions solely as a result of unusual effluent variability. Also, by linking antidegradation to actions taken by a discharger, there is no danger of a discharger being forced to undergo spurious antidegradation reviews to justify apparent increases in loadings.

The SID also explains that the proposed rule addressed non-BCCs, and triggered antidegradation review based upon the need for a new or increased permit limit.

If a discharger was able to operate below permit limits such that an increased loading from the discharger would not exceed existing permit limits, no antidegradation review would be required. Similarly, if the proposed increase in permit limits was less than a de minimis level, no antidegradation review would be required.

Examples from Other States:

Indiana: Indiana's current rules specify antidegradation procedures for the Great Lakes system, consistent with the federal regulations. 327 IAC 5-2-11.3 (antidegradation implementation procedures for high quality waters, which are similar to Colorado's reviewable waters) contains the federal regulation's deliberate action language provided above for BCCs. For non-BCCs, the rule uses a trigger of the need for a new or increased permit limit, as follows:

There is a new or increased permit limit for a substance that is not a BCC, from any existing or new facility, either point source or nonpoint source for which there is a permit or reviewable action, as a result of any activity, and the new or increased permit limit will result in both of the following:

- (i) A calculated increase (calculated decrease for dissolved oxygen) in the ambient concentration of the substance outside of the designated mixing zone or volume, where applicable, in the receiving waterbody.
- (ii) A lowering of water quality that is greater than a de minimis lowering of water quality. [De minimis provisions follow]

This language is consistent with state statute IC 13-18-3-2(m), which provides:

The procedures provided by rule ... must include the following:

(1) A definition of significant lowering of water quality that includes a de minimis quantity of additional pollutant load:

(A) for which a new or increased permit limit is required; and

(B) below which antidegradation implementation procedures do not apply.

Indiana's rules also contain an express statement that the following actions by POTWs do not trigger antidegradation review: "New or increased discharges of a pollutant or pollutant parameter due to increasing the sewered area, connection of new sewers and customers, or acceptance of trucked-in wastes (such as septage and holding tank wastes) by a POTW, provided that the increase is within the design flow of the facility...." 327 IAC 5-2-11.3(b)(1)(C)(iii)(FF).

Washington: The antidegradation guidance provides a clear trigger for antidegradation review (Washington guidance attached). The trigger requires an action on the part of the discharger that causes a measurable lowering of water quality:

All three of the following conditions must be met before an activity would be required to go through a Tier II analysis:

1) it must be a new or expanded action,

2) it must be an action that is regulated by Ecology, and

3) the action must have the potential to cause measurable degradation to existing water quality at the edge of a chronic mixing zone.

Ohio: Ohio's regulations provide a clear exemption for new or increased discharges within the approved design capacity of the treatment plant:

The activities, permits, applications, certifications or other circumstances described in this paragraph are exempt from all provisions of this rule. Any existing source where the net increase is simply the result of allowing a previously authorized or documented production/treatment capacity to be achieved.

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