

Applicability of Antidegradation Regulations

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APPLICABILITY OF ANTIDEGRADATION REGULATIONS

EPA has determined and courts have held that, at a minimum, any one or a combination of several activities can trigger an antidegradation review. Typically, antidegradation implementation methods adopted by states or supported by EPA require such reviews for “new or expanded” *regulated* discharges, e.g., those authorized by an NPDES permit under section 402 of the CWA, those related to the placement of dredged or fill materials into regulated waters under section 404 of the CWA, and those subject to other regulatory approvals—especially from state water resource agencies.

A confusing aspect of antidegradation is the applicability of antidegradation to nonpoint sources and other *unregulated* activities that have the potential to degrade water quality. EPA policy notes that water quality standards, including antidegradation, can be applied to *any* activity that might affect water quality (*Water Quality Standards Handbook* 1994; *Interpretation of Federal Antidegradation Regulatory Requirement*, memorandum from Tudor Davies, Director, Office of Science and Technology (OST), to Water Management Division Directors, dated February 22, 1994; *EPA Region 5 Guidance for Antidegradation Policy Implementation for High Quality Waters*, 1986; *EPA Region 4 Antidegradation Guidance Tier II Procedures*, undated). However, the Agency has clearly indicated that despite the broad applicability of water quality standards, mechanisms to implement water quality standards through various regulatory schemes might not exist in all circumstances. None of the antidegradation memoranda or guidance documents produced by EPA, nor existing regulations, require states to regulate nonpoint sources that are currently unregulated. However, where independent regulatory authority over nonpoint sources exists that requires compliance with water quality standards, compliance with the antidegradation provisions is expected.

Federal Actions are Subject to State Antidegradation Rules

In *Addressing Water Pollution from Livestock Grazing after ONDA v. Dombeck: Legal Strategies Under the Clean Water Act* (2000), Peter M. Lacy notes that the courts have consistently ruled that federal activities are also subject to state antidegradation rules. For example, in 1987 the 9th Circuit affirmed federal responsibilities under the CWA in a timber harvest and road construction case. In *Oregon Natural Resources Council v. U.S. Forest Service (ONRC v. USFS)*, the plaintiffs alleged that the USFS's activities associated with a timber sale on the Willamette National Forest in Oregon violated state water quality standards and, therefore, were in violation of section 313. Specifically, ONRC claimed that the defendants violated and planned to violate both Oregon's nondegradation standard that “existing high quality waters...shall be maintained and protected” and a rule that activities in the Willamette Basin must not cause a 10 percent or greater cumulative increase in natural stream turbidities. Citing *Northwest Indian Cemetery Protective Association*, the plaintiffs argued that the 9th Circuit had already “recognized the rights of citizens to enforce state water quality standards against the [USFS].” The court accepted this duty under section 313 without further discussion.

In another case arising out of a fire-recovery timber sale on the Klamath National Forest in California, an environmental organization alleged that the proposed agency action would violate a state water quality control plan adopted by California's Water Quality Control Board. While the state plan required that turbidity must not increase by more than 20 percent, the turbidity levels from the combined effects of the fire and the project would exceed that level. Citing *ONRC v. USFS*, the 9th Circuit reaffirmed in 1990 that the USFS must comply with all state water quality standards, a duty that included violations from nonpoint sources. Finally, in 1998 the 9th Circuit stated that the requirement that all federal agencies comply with state water quality standards includes a state's antidegradation policy.

Broadly speaking, antidegradation protection applies to all surface waters. The antidegradation review procedure is designed to ensure that planned, regulated activities that have the potential to impact water quality are assessed before approval to ensure that existing uses of the waterbody—and the quality of water necessary to protect existing uses—is maintained. Most states apply antidegradation provisions to surface waters only. However, some states (e.g., Missouri and West Virginia) consider groundwater among the many *waters of the state*, and have retained the ability to apply antidegradation protection to groundwater. No states are known to have implemented a specific procedure for protecting groundwater under the antidegradation program, but the capacity to do so certainly exists. Other groundwater protection programs, such as the wellhead and source water protection programs, are more commonly used to ensure nondegradation of groundwater resources.

In Region 5 states, the definition of new or expanded discharge may vary depending on whether it is to be discharged into the Great Lakes System. For example, in Wisconsin, new and expanded discharges are defined as follows:

New discharge: Any point source which has not received a WPDES permit from the department prior to March 1, 1989.

Increased discharge:

(a) *Increased discharge* means any change in concentration, level or loading of a substance which would exceed an effluent limitation specified in a current WPDES permit.

(b) Except as provided in par. (c), increased discharge does not include the initial imposition of effluent limitations for substances which were in a previous discharge but which had not been limited in a prior or the current permit unless the initial imposition of effluent limitations occurs due to a changed discharge location, other than a change in location necessary to accommodate a mixing zone as provided for in ch. NR 106.

(c) For discharges of bioaccumulative chemicals of concern (BCCs), defined in s. NR 105.03 (9), to the Great Lakes system, increased discharge means:

1. An increased discharge as defined in par. (a);
2. The initial imposition of an effluent limitation for a BCC that occurs due to an actual or expected increase in loading of the BCC; and
3. Any actual or expected increase in loading of a BCC which is caused by or will be caused by a facility expansion, a process modification, or the connection to an existing public or private wastewater treatment system of a substantial source of untreated or pretreated effluent containing BCCs, and which requires notification to the department pursuant to s. NR 205.07 (2) (a) or (3) (c) or (d). Under this subdivision, increased discharge does not include any increase in the loading of BCCs that is caused by normal operational variability, changes in intake pollutants or increasing the rate or hours of production within the existing production capacity. Normal operational variability includes, for POTWs, any additional wastewater volume within the existing capacity of the POTW from commercial, industrial or residential growth which do not normally contribute substantial quantities of BCCs to the POTW's wastewater flow.

Ohio goes further in defining a *net increase* for an existing source as:

(i) The amount by which the sum of the following exceeds zero:

(a) The increase in the mass discharge limit attributable to the activity subject to this rule; and

(b) All other contemporaneous increases or decreases attributable to other pollutant source(s) affecting the surface water segment(s) under consideration and which are stipulated as a condition of the applicant's permit and which shall occur during the term of the applicant's permit;

or

- (ii) For heat, bacteria and any other regulated pollutant which, though not measurable as a mass level is nonetheless susceptible to determinations of net increase, the amount by which the sum of the following exceeds zero:
 - (a) The increase in an authorized discharge level attributable to the activity subject to this rule; and
 - (b) All other contemporaneous increases or decreases attributable to other pollutant source(s) affecting the surface water segment(s) under consideration and which are stipulated as a condition of the applicant's permit and which shall occur during the term of the applicant's permit.

Stormwater Focus: New and Expanded Discharges

The majority of the Region 5 states surveyed, Illinois, Ohio, Wisconsin, and Indiana, expressly exempt current MS4 permit from antidegradation review because they do not consider them to be a new or expanded discharge. Michigan also in effect exempts existing stormwater discharges in that its rules contain several exemptions that permit stormwater dischargers to demonstrate that antidegradation review is not required. Other state programs surveyed do not have this interpretation of MS4 discharges. For most states, stormwater permits, including those for MS4s, construction activities, and industrial facilities, are considered to new or expanded permits for which antidegradation review is conducted during the general permit development process.

For stormwater regulated under *individual permits*, the State of Washington defines new or expanded discharge as changes in the amount of polluted stormwater runoff that would reach waters beyond the stormwater treatment network. A good surrogate measure of increased polluted runoff is the change in impervious surface area, or alternatively, a change in the use of existing impervious surface to activities known to contribute greater levels of pollutants in runoff. For industrial facilities applying for an individual stormwater permit, an expected increase in impervious surface (compared to the previous landscape) of more than 10% or a significant change in the use of existing impervious surfaces should generally be considered an indication that a new or expanded discharge will have or will occur. For municipal stormwater permits, it should be assumed, absent defensible information to the contrary, that there will be new or expanded discharges of stormwater which would cause a measurable lowering of water quality.

In Oregon and most other states, a new discharge involves submission of any new NPDES permit application or 401 water quality certification (or other regulated discharges such as 404 permits) and an expanded discharge is one that goes beyond that presently allowed in an existing permit or that will lower water quality from existing water quality.

Pennsylvania directly addressed the issue of grandfathered discharges as follows:

Discharges in existence prior to the high quality (HQ) [Tier II] or exceptional value (EV) [Tier III] designation are "grandfathered" and considered to be part of the existing quality of the waterbody. "Grandfathered" flows are not subject to "the non-discharge alternatives/use of best technologies analysis" or [social or economic justification] SEJ (for HQ waters) in acknowledgment of the resources invested by municipal officials in planning for community sewage needs and corporate officials in equivalent planning to tailor treatment facilities to the wastewater volume and characteristics created by production/manufacturing processes.

Other states have various definitions of *new and expanded* discharges; however, none surveyed apply a discharge volume threshold, as does Minnesota, to indicate an expansion significant enough to *trigger* nondegradation review.

States may elect to extend their antidegradation policies to other areas and activities, including the following:

- Activities affecting groundwater
- Animal feeding operations
- Onsite wastewater treatment systems
- Other unregulated nonpoint sources of pollution
- Channel and flow alterations

For example, the California Colorado River Basin Regional Water Quality Control Board has expanded the scope of antidegradation review to sedimentation and siltation from all sources:

A prohibition of sediment/silt discharge is hereby established for the Imperial Valley, including the Alamo River, New River, all Imperial Valley Drains, and their tributaries. Specifically, beginning three months after EPA approval, the direct or indirect discharge of sediment into the Imperial Valley is prohibited, unless:

1. The Discharger is:
 - a. In compliance with applicable Sedimentation/Siltation TMDL(s), including implementation provisions (e.g., Discharger is in good standing with the ICFB Watershed Program or has a Drain Water Quality Monitoring Plan (DWQMP) approved by the Executive Officer); or
 - b. Has a monitoring and surveillance program approved by the Executive Officer that demonstrates that discharges of sediment/silt into the aforementioned waters do not violate or contribute to a violation of the TMDL(s), *the anti-degradation policy (State Board Resolution No. 68-16)*, or water quality objectives; or
 - c. Is covered by Waste Discharge Requirements (WDRs) or a Waiver of WDRs that applies to the discharge.

The Oregon Department of Environmental Quality (Oregon DEQ) considers antidegradation to apply to nonpoint source pollution, and the state's antidegradation policy has expanded the review to cover several sources. The following policy is implemented through general project review:

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* (emphasis added):

- (a) Rotating grazing pastures,
- (b) Agricultural crop rotations, and
- (c) Maintenance dredging.

While Oregon DEQ does not have formal procedures at this time, it intends to develop procedures for applying antidegradation policy in a nonpoint source context for those discharges that do not meet the above waiver criteria.

The issues related to application of antidegradation requirements to channel and flow alterations are complex. Clearly, altering existing stream channels or altering existing flows can and often do impact water quality (i.e., result in degradation). A strong case can be made for including these activities among the regulated activities typically subject to antidegradation reviews. In the case of channel alterations, such a review is usually required if the activity is subject to a CWA section 404 permit or CWA section 401 water quality certification. Flow alterations subject to state permitting programs can also be

included among the activities requiring an antidegradation review. New Hampshire specifically includes flow alterations in its antidegradation regulation at Env-Ws 1708.02:

Antidegradation shall apply to... (an) increase in flow alteration over an existing alteration; and...all hydrologic modifications, such as dam construction and water withdrawals.

Pennsylvania also applies antidegradation requirements to activities that impact flow, such as those involving water withdrawal permits. In its 2003 *Water Quality Antidegradation Implementation Guidance*, the state's DEP notes:

For projects subject to a DEP permit or approval that may affect an (Exceptional Value) or (High Quality) surface water but do not involve a discharge, there is a somewhat different review process. This process evaluates the effect of the proposed activity on surface water and requires that the use of the surface water be maintained and protected. Addressing water quantity issues as part of DEP's permitting process is an evolving area. Activities involving surface and groundwater withdrawals which require a DEP permit under the Pennsylvania Safe Drinking Water Act (SDWA) are being addressed on a case-by-case basis and in accordance with DEP's guidance... The procedures were developed to identify those surface and groundwater withdrawals under the SDWA which may be considered to have significant impact on streams, springs, and wetlands and indicate when additional determinations relating to water quantity are important permit considerations. It provides a means for applicants and DEP to focus on situations where additional review or assessment is needed to evaluate the magnitude and likelihood of potential impacts of such water withdrawals on surface water uses. Another tool that is useful in assessing stream impacts from a proposed withdrawal on a stream which supports a cold water fishery is DEP's guidance on use of the Instream Flow Incremental Methodology (IFIM)... While these tools provide a framework for evaluation of water withdrawal projects, DEP and the applicant may also use other methods and resources to achieve the goal of protecting the uses of surface waters where projects impacting water quantity are proposed.

Some states use their definition of new or expanded discharges to expressly exempt MS4 stormwater discharges because of the fact that the municipality was in existence and discharging before their antidegradation policy effective date and before the date it was permitted as a *regulated* activity subject to antidegradation reviews. For other states, antidegradation review is applied to stormwater discharges either during general permit development or through the individual permit issuance process. For example, the State of Washington defines a new or expanded discharge as changes in the amount of polluted stormwater runoff that would reach waters beyond the stormwater treatment network.

The state inventory revealed few other states that are applying antidegradation policy to stormwater discharges, except to consider an array of BMPs believed to reduce impacts associated with expansions of the MS4 area. Some states exempt stormwater specifically or otherwise do not include them in the types of discharges subject to antidegradation reviews. A few states consider some types of stormwater discharges to be subject to antidegradation review (i.e., construction discharges); however, as noted, the review is conducted during general permit development and no quantitative analysis of site-specific discharges is conducted. Finally, several states (e.g., West Virginia) do cite specific circumstances under which an antidegradation review would be conducted on the proposed discharge from an individual construction project (i.e., size of the project).