

Water: Handbook

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- Water Home
- Drinking Water
- Education & Training
- Grants & Funding
- Laws & Regulations
- Our Waters
- Pollution Prevention & Control
- Resources & Performance
- Science & Technology
  - Analytical Methods & Laboratories
  - Applications & Databases
  - Climate Change
  - Contaminants of Emerging Concern
  - Drinking Water Monitoring & Assessment
  - Research & Risk Assessment
  - Surface Water Standards & Guidance
  - Wastewater Technology
- Water Infrastructure
- What You Can Do

You are here: [Water](#) » [Science & Technology](#) » [Surface Water Standards & Guidance](#) » [Water Quality Standards](#) » [Handbook](#) » [Water Quality Handbook – Chapter 4: Antidegradation \(40 CFR 131.12\)](#)

# Water Quality Standards Handbook – Chapter 4: Antidegradation (40 CFR 131.12)

## Table of Contents

1. [Introduction](#)
2. [4.1 History of Antidegradation](#)
3. [4.2 Summary of the Antidegradation Policy](#) | [Updated Information](#)
4. [4.3 State Antidegradation Requirements](#) | [Updated Information](#)
5. [4.4 Protection of Existing Uses – 40 CFR 131.12\(a\)\(1\)](#) | [Updated Information](#)
  1. [4.4.1 Recreational Uses](#)
  2. [4.4.2 Aquatic Life/Wildlife Uses](#)
  3. [4.4.3 Existing Uses and Physical Modifications](#)
  4. [4.4.4 Existing Uses and Mixing Zones](#)
6. [4.5 Protection of Water Quality in High-Quality Waters – 30 CFR 131.12\(a\)\(2\)](#) | [Updated Information](#)
7. [4.6 Applicability of Water Quality Standards to Nonpoint Sources Versus Enforceability of Controls](#)
8. [4.7 Outstanding National Resource Waters \(ONRW\) – 40 CFR 131.12\(a\)\(3\)](#)
9. [4.8 Antidegradation Application and Implementation](#)
  1. [4.8.1 Antidegradation, Load Allocation, Waste Load Allocation, Total Maximum Daily Load, and Permits](#)
  2. [4.8.2 Antidegradation and the Public Participation Process](#)

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This chapter provides guidance on the antidegradation component of water quality standards, its application in conjunction with the other parts of the water quality standards regulation, and its implementation by the States. Antidegradation implementation by the States is based on a set of procedures to be followed when evaluating activities that may impact the quality of the waters of the United States. Antidegradation implementation is an integral component of a comprehensive approach to protecting and enhancing water quality.

## 4.1 History of Antidegradation

The first antidegradation policy statement was released on February 8, 1968, by the Secretary of the U.S. Department of the Interior. It was included in EPA's first Water Quality Standards Regulation (40 CFR 130.17, 40 F.R. 55340-41, November 28, 1975), and was slightly refined and re-promulgated as part of the current program regulation published on November 8, 1983 (48 F.R. 51400, 40 CFR 131.12). Antidegradation requirements and methods for implementing those requirements are minimum conditions to be included in a State's water quality standards. Antidegradation was originally based on the spirit, intent, and goals of the Act, especially the clause "... restore and maintain the chemical, physical and biological integrity of the Nation's waters" (101(a)) and the provision of 303(a) that made water quality standards under prior law the "starting point" for CWA water quality requirements. Antidegradation was explicitly incorporated in the CWA through:

- a 1987 amendment codified in section 303(d)(4)(B) requiring satisfaction of antidegradation requirements before making certain changes in NPDES permits; and
- the 1990 Great Lakes Critical Programs Act codified in CWA section 118(c)(2) requiring EPA to publish Great Lakes water quality guidance including antidegradation policies and implementation procedures.

[↑ Top of page](#)

## 4.2 Summary of the Antidegradation Policy

Section 131.13(a)(1), or "Tier 1," protecting "existing uses," provides the absolute floor of water quality in all waters of the United States. This paragraph applies a minimum level of protection to all waters.

Section 131.12(a)(2), or "Tier 2," applies to waters whose quality exceeds that

**Updated Information**

- [Interim Economic guidance \(1995\)](#) - This document provides guidance for use by

necessary to protect the section 101(a)(2) goals of the Act. In this case, water quality may not be lowered to less than the level necessary to fully protect the "fishable/swimmable" uses and other existing uses and may be lowered even to those levels only after following all the provisions described in section 131.12(a)(2).

Section 131.12(a)(3), or "Tier 3," applies to Outstanding National Resource Waters (ONRW) where the ordinary use classifications and supporting criteria may not be sufficient or appropriate. As described in the preamble to the Water Quality Standards Regulation, "States may allow some limited activities which result in temporary and short-term changes in water quality," but such changes in water quality should not impact existing uses or alter the essential character or special use that makes the water an ONRW.

The requirement for potential water quality impairment associated with thermal discharges contained in section 131.12(a)(4) of the regulation is intended to coordinate the requirements and procedures of the antidegradation policy with those established in the Act for setting thermal discharge limitations. Regulations implementing section 316 may be found at 40 CFR 124.66. The statutory scheme and legislative history indicate that limitations developed under section 316 take precedence over other requirements of the Act.

As the States began to focus more attention on implementing their antidegradation policies, an additional concept was developed by the States, which EPA has accepted even though not directly mentioned in previous EPA guidance or in the regulation. This concept, commonly known as "Tier 2½," is an application of the antidegradation policy that has implementation requirements that are more stringent than for "Tier 2" (high-quality waters), but somewhat less stringent than the prohibition against any lowering of water quality in "Tier 3" (ONRWs). EPA accepts this additional tier in State antidegradation policies because it is clearly a more stringent application of the Tier 2 provisions of the antidegradation policy and, therefore, permissible under section 510 of the CWA.

The supporting rationale that led to the development of the Tier 2½ concept was a concern by the States that the Tier 3 ONRW provision was so stringent that its application would likely prevent States from taking actions in the future that were consistent with important social and economic development on, or upstream of, ONRWs. This concern is a major reason that relatively few water bodies are designated as ONRWs. The Tier 2½ approach allows States to provide a very high level of water quality protection without precluding unforeseen future economic and social development considerations.

[↑ Top of page](#)

### 4.3 State Antidegradation Requirements

Each State must develop, adopt, and retain a statewide antidegradation policy regarding water quality standards and establish procedures for its implementation through the water quality management process. The State antidegradation policy and implementation procedures must be consistent with the components detailed in 40 CFR 131.12. If not included in the standards regulation of a State, the policy must be specifically referenced in the water quality standards so that the functional relationship between the policy and the standards is clear. Regardless of the location of the policy, it must meet all applicable requirements. States may adopt antidegradation statements more protective than the Federal requirement. 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.

State antidegradation policies and implementation procedures are subject to review by the Regional Administrator. EPA has clear authority to review and approve or disapprove and promulgate an antidegradation policy for a State. EPA's review of the implementation procedures is limited to ensuring that procedures are included that describe how the State will implement the required elements of the antidegradation review. EPA may disapprove and federally promulgate all or part of an implementation process for antidegradation if, in the judgment of the

states and tribes in understanding the economic factors that may be considered, and the types of tests that can be used to determine if a designated use cannot be attained, if a variance can be granted, or if degradation of high-quality water is warranted.

- [Antidegradation Clearinghouse: State, Tribal & Territorial Antidegradation Policies](#) – The clickable map on this website provides access to state and territorial antidegradation policies that have been approved by EPA for Clean Water Act purposes.

#### Updated Information

- [Antidegradation Clearinghouse: Implementation Procedures](#) – This website links to examples of State antidegradation implementation procedures.

#### Federal Rules Involving Antidegradation

- [Water Quality Standards for Puerto Rico: Final Rule \(2007\)](#) – This federal register notice promulgated methods to implement Puerto Rico's existing antidegradation policy.
- [Advanced Notice of Proposed Rulemaking for Water Quality Standards \(1998\) | Print Version \(PDF\)](#) (66 pp, 474K) –

Administrator, the State's process (or certain provisions thereof) can be implemented in such a way as to circumvent the intent and purpose of the antidegradation policy. EPA encourages submittal of any amendments to the statement and implementing procedures to the Regional Administrator for pre-adoption review so that the State may take EPA comments into account prior to final action.

If a State's antidegradation policy does not meet the Federal regulatory requirements, either through State action to revise its policy or through revised Federal requirements, the State would be given the opportunity to make its policy consistent with the regulation. If this is not done, EPA has the authority to promulgate the policy for the State pursuant to section 303(c)(4) of the Clean Water Act (see section 6.3, this Handbook).

[↑ Top of page](#)

#### 4.4 Protection of Existing Uses – 40 CFR 131.12(a)(I)

This section requires the protection of existing uses and the level of water quality to protect those uses. An "existing use" can be established by demonstrating that:

- fishing, swimming, or other uses have actually occurred since November 28, 1975; *or*
- that the water quality is suitable to allow the use to be attained—unless there are physical problems, such as substrate or flow, that prevent the use from being attained.

An example of the latter is an area where shellfish are propagating and surviving in a biologically suitable habitat and are available and suitable for harvesting although, to date, no one has attempted to harvest them. Such facts clearly establish that shellfish harvesting is an "existing" use, not one dependent on improvements in water quality. To argue otherwise would be to say that the only time an aquatic protection use "exists" is if someone succeeds in catching fish.

Full protection of the existing use requires protection of the entire water body with a few limited exceptions such as certain physical modifications that may so alter a water body that species composition cannot be maintained (see section 4.4.3, this Handbook), and mixing zones (see section 4.4.4, this Handbook). For example, an activity that lowers water quality such that a buffer zone must be established within a previous shellfish harvesting area is inconsistent with the antidegradation policy.

Section 131.12(a)(I) provides the absolute floor of water quality in all waters of the United States. This paragraph applies a minimum level of protection to all waters. However, it is most pertinent to waters having beneficial uses that are less than the section 101(a)(2) goals of the Act. If it can be proven, in that situation, that water quality exceeds that necessary to fully protect the existing use(s) and exceeds water quality standards but is not of sufficient quality to cause a better use to be achieved, then that water quality may be lowered to the level required to fully protect the existing use as long as existing water quality standards and downstream water quality standards are not affected. If this does not involve a change in standards, no public hearing would be required under section 303(c). However, public participation would still be provided in connection with the issuance of a NPDES permit or amendment of a section 208 plan or section 319 program. If, however, analysis indicates that the higher water quality does result in a better use, even if not up to the section 101(a)(2) goals, then the water quality standards must be upgraded to reflect the uses presently being attained (131.10(i)).

If a planned activity will foreseeably lower water quality to the extent that it no longer is sufficient to protect and maintain the existing uses in that water body, such an activity is inconsistent with EPA's antidegradation policy, which requires that existing uses are to be maintained. In such a circumstance, the planned activity must be avoided or adequate mitigation or preventive measures must be taken to ensure that the existing uses and the water quality to protect them will be maintained.

Section 4.4.1, this Handbook, discusses the determination and protection of recreational "existing" uses, and section 4.4.2, this Handbook, discusses aquatic life protection "existing" uses (of course, many other types of existing uses may occur in a water body).

##### —4.4.1 Recreational Uses

See pages 36779 to 36787 for and overview of antidegradation policy and EPA's thinking on program development in 1998.

- [Final Water Quality Guidance for the Great Lakes System: Final Rule \(1995\)](#) See Appendix E for Antidegradation Provisions.

#### Updated Information

- [Letter: Mr. Derek Smithee, State of Oklahoma Water Resources Board. Questions and Answers on EPA's Existing Use Policy \(2008\) \(PDF\)](#) (12 pp, 3.8MB) – This letter answers Oklahoma's questions on several issues related to existing uses.

Recreational uses traditionally are divided into primary contact and secondary contact recreation (e.g., swimming vs. boating; that is, recreation "in" or "on" the water.) However, these two broad uses can logically be subdivided into a variety of subcategories (e.g., wading, sailing, power boating, rafting). The water quality standards regulation does not establish a level of specificity that each State must apply in determining what recreational "uses" exist. However, the following principles apply.

- The State selects the level of specificity it desires for identifying recreational existing uses (that is, whether to treat secondary contact recreation as a single use or to define subcategories of secondary recreation). The State has two limitations:
  - the State must be at least as specific as the uses listed in sections 101(a) and 303(c) of the Clean Water Act; and
  - the State must be at least as specific as the written description of the designated use classifications adopted by the State.
- If the State designated use classification system is very specific in describing subcategories of a use, then such specifically defined uses, if they exist, must be protected fully under antidegradation. A State with a broadly written use classification system may, as a matter of policy, interpret its classifications more specifically for determining existing uses—as long as it is done consistently. A State may also redefine its use classification system, subject to the constraints in 40 CFR 131.10, to more adequately reflect existing uses.
- If the use classification system in a State is defined in broad terms such as primary contact recreation, secondary contact recreation, or boating, then it is a State determination whether to allow changes in the type of primary or secondary contact recreation or boating activity that would occur on a specific water body as long as the basic use classification is met. For example, if a State defines a use simply as "boating," it is the State's decision whether to allow something to occur that would change the type of boating from canoeing to power boating as long as the resulting water quality allows the "boating," use to be met. (The public record used originally to establish the use may provide a clearer indication of the use intended to be attained and protected by the State.)

The rationale is that the required water quality will allow a boating use to continue and that use meets the goal of the Act. Water quality is the key. This interpretation may allow a State to change activities within a specific use category but it does not create a mechanism to remove use classifications; this latter action is governed solely by the provisions of the standards regulation (CWA section 131.10(g)).

One situation where EPA might conceivably be called upon to decide what constitutes an existing use is where EPA is writing an NPDES permit. EPA has the responsibility under CWA section 301(b)(1)(C) to determine what is needed to protect existing uses under the State's antidegradation requirement, and accordingly may define "existing uses or interpret the State's definition to write that permit if the State has not done so. Of course, EPA's determination would be subject to State section 401 certification in such a case.

#### —4.4.2 Aquatic Life/Wildlife Uses

No activity is allowable under the antidegradation policy which would partially or completely eliminate any existing use whether or not that use is designated in a State's water quality standards. The aquatic protection use is a broad category requiring further explanation. Non-aberrational resident species must be protected, even if not prevalent in number or importance. Water quality should be such that it results in no mortality and no significant growth or reproductive impairment of resident species. Any lowering of water quality below this full level of protection is not allowed.

A State may develop subcategories of aquatic protection uses but cannot choose different levels of protection for like uses. The fact that sport or commercial fish are not present does not mean that the water may not be supporting an aquatic life protection function. An existing aquatic community composed entirely of invertebrates and plants, such as may be found in a pristine alpine tributary stream, should still be protected whether or not such a stream supports a fishery.

Even though the shorthand expression "fishable/swimmable" is often used, the actual objective of the Act is to "restore and maintain the chemical, physical, and biological integrity of our Nation's waters" (section 101(a)). The term "aquatic life" would more accurately reflect the protection of the aquatic community that was intended in section 101(a)(2) of the Act.

Section 131.12(a)(1) states, "Existing instream water uses and level of water quality necessary to protect the existing uses shall be maintained and protected." For example, while sustaining a small coldwater fish population, a stream does not support an existing use of a "coldwater fishery." The existing stream temperatures are unsuitable for a thriving coldwater fishery. The small marginal population is an artifact and should not be employed to mandate a more

stringent use (true coldwater fishery) where natural conditions are not suitable for that use.

A use attainability analysis or other scientific assessment should be used to determine whether the aquatic life population is in fact an artifact or is a stable population requiring water quality protection. Where species appear in areas not normally expected, some adaptation may have occurred and site-specific criteria may be appropriately developed. Should the coldwater fish population consist of a threatened or endangered species, it may require protection under the Endangered Species Act. Otherwise, the stream need only be protected as a warmwater fishery.

#### —4.4.3 Existing Uses and Physical Modifications

A literal interpretation of 40 CFR 131.12(a)(1) could prevent certain physical modifications to a water body that are clearly allowed by the Clean Water Act, such as wetland fill operations permitted under section 404 of the Clean Water Act. EPA interprets section 131.12(a)(l) of the antidegradation policy to be satisfied with regard to fills in wetlands if the discharge did not result in "significant degradation" to the aquatic ecosystem as defined under section 230.10(c) of the section 404(b)(l) Guidelines.

The section 404(b)(l) Guidelines state that the following effects contribute to significant degradation, either individually or collectively:

... significant adverse effects on (1) human health or welfare, including effects on municipal water supplies, plankton, fish, shellfish, wildlife, and special aquatic sites (e.g., wetlands); (2) on the life stages of aquatic life and other wildlife dependent on aquatic ecosystems, including the transfer, concentration, or spread of pollutants or their byproducts beyond the site through biological, physical, or chemical process; (3) on ecosystem diversity, productivity, and stability, including loss of fish and wildlife habitat or loss of the capacity of a wetland to assimilate nutrients, purify water, or reduce wave energy; or (4) on recreational, aesthetic, and economic values.

These Guidelines may be used by States to determine "significant degradation" for wetland fills. Of course, the States are free to adopt stricter requirements for wetland fills in their own antidegradation policies, just as they may adopt any other requirement more stringent than Federal law requires. For additional information on the linkage between water quality standards and the section 404 program, see [Appendix D](#).

If any wetlands were found to have better water quality than "fishable/swimmable," the State would be allowed to lower water quality to the no significant degradation level as long as the requirements of section 131.12(a)(2) were followed. As for the ONRW provision of antidegradation (131.12(a)(3)), there is no difference in the way it applies to wetlands and other water bodies.

#### —4.4.4 Existing Uses and Mixing Zones

Mixing zones are another instance when the entire extent of the water body is not required to be given full existing use protection. The area within a properly designated mixing zone (see section 5.1) may have altered benthic habitat and a subsequent alteration of the portions of the aquatic community. Any effect on the existing use must be limited to the area of the regulatory mixing zone.

[↑Top of page](#)

### 4.5 Protection of Water Quality in High-Quality Waters – 40 CFR 131.12(a)(2)

This section provides general program guidance in the development of procedures for the maintenance and protection of water quality where the quality of the water exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water. Water quality in "high-quality waters" must be maintained and protected as prescribed in section 131.12(a)(2) of the WQS regulation.

High quality waters are those whose quality exceeds that necessary to protect the section 101(a)(2) goals of the Act, regardless of use designation. All parameters do a need to be better quality than the State's ambient criteria for the water to be deemed a "high-quality water." EPA believes that it is best to apply antidegradation on a parameter-by-parameter basis. Otherwise, there is potential for a large number of waters not to receive antidegradation protection, which is important to attaining the goals of the Clean Water Act to restore and maintain the integrity of the Nation's waters. However, if a State has an official interpretation that differs from this interpretation, EPA will evaluate the State

#### Updated Information

- [Memo: Tier 2 Antidegradation Reviews and Significance Thresholds \(2005\) \(PDF\)](#) (4 pp, 168K) – Recommendation regarding significance thresholds and lowering of water quality in high quality waters in the context of tier 2 antidegradation reviews.

interpretation for conformance with the statutory and regulatory intent of the antidegradation policy. EPA has accepted approaches that do not use a strict pollutant-by-pollutant basis (see [Application of Antidegradation Policy to the Niagara River, USEPA, 1989c](#)) (PDF) (2 pp, 145K).

In "high-quality waters," under 131.12(a)(2), before any lowering of water quality occurs, there must be an antidegradation review consisting of:

- a finding that it is necessary to accommodate important economical or social development in the area in which the waters are located (this phrase is intended to convey a general concept regarding what level of social and economic development could be used to justify a change in high-quality waters);
- full satisfaction of all intergovernmental coordination and public participation provisions (the intent here is to ensure that no activity that will cause water quality to decline in existing high-quality waters is undertaken without adequate public review and intergovernmental coordination); and
- assurance that the highest statutory and regulatory requirements for point sources, including new source performance standards, and best management practices for nonpoint source pollutant controls are achieved (this requirement ensures that the limited provision for lowering water quality of high-quality waters down to "fishable/swimmable" levels will not be used to undercut the Clean Water Act requirements for point source and Nonpoint source pollution control; furthermore, by ensuring compliance with such statutory and regulatory controls, there is less chance that a lowering of water quality will be sought to accommodate new economic and social development).

In addition, water quality may not be lowered to less than the level necessary to fully protect the "fishable/swimmable" uses and other existing uses. This provision is intended to provide relief only in a few extraordinary circumstances where the economic and social need for the activity clearly outweighs the benefit of maintaining water quality above that required for "fishable/swimmable" water, and both cannot be achieved. The burden of demonstration on the individual proposing such activity will be very high. In any case, moreover, the existing use must be maintained and the activity shall not preclude the maintenance of a "fishable/swimmable" level of water quality protection.

The antidegradation review requirements of this provision of the antidegradation policy are triggered by any action that would result in the lowering of water quality in a high-quality water. Such activities as new discharges or expansion of existing facilities would presumably lower water quality and would not be permissible unless the State conducts a review consistent with the previous paragraph. In addition, no permit may be issued, without an antidegradation review, to a discharger to high-quality waters with effluent limits greater than actual current loadings if such loadings will cause a lowering of water quality (see [Application of Antidegradation Policy to the Niagara River, USEPA, 1989c](#)) (PDF) (2 pp, 145K).

Antidegradation is not a "no growth" rule and was never designed or intended to be such. It is a policy that allows public decisions to be made on important environmental actions. Where the State intends to provide for development, it may decide under this section, after satisfying the requirements for intergovernmental coordination and public participation, that some lowering of water quality in "high-quality waters" is necessary to accommodate important economic or social development. Any such lower water quality must protect existing uses fully, and the State must assure that the highest statutory and regulatory requirement for all new and existing point sources and all cost-effective and reasonable BMPs for nonpoint source control are being achieved on the water body.

Section 131.12(a)(2) does not *REQUIRE* a State to establish BMPs for nonpoint sources where such BMP requirements do not exist. We interpret Section 131.12(a)(2) as *REQUIRING* States to adopt an antidegradation policy that includes a provision that will assure that all cost-effective and reasonable BMPs established under State authority are implemented for nonpoint sources before the State authorizes degradation of high quality waters by point sources (see [Interpretation of Federal Antidegradation Requirement, USEPA, 1994a](#)) (PDF) (6 pp, 446K).

Section 131.12(a)(2) does not mandate that States establish controls on nonpoint sources. The Act leaves it to the States to determine what, if any, controls on nonpoint sources are needed to provide for attainment of State water quality standards (See CWA Section 319.) States may adopt enforceable requirements, or voluntary programs to address nonpoint source pollution. Section 40 CFR 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.

The rationale behind the antidegradation regulatory statement regarding achievement of statutory requirements for point sources and all cost effective and reasonable BMPs for nonpoint sources is to assure that, in high quality waters, where there are existing point or nonpoint source control compliance problems, proposed new or expanded point sources are not allowed to contribute additional pollutants that could result in degradation. Where such compliance

problems exist, it would be inconsistent with the philosophy of the antidegradation policy to authorize the discharge of additional pollutants in the absence of adequate assurance that any existing compliance problems will be resolved.

EPA's regulation also requires maintenance of high quality waters except where the State finds that degradation is "*necessary* to accommodate important economic and social development in the area in which the waters are located." (40 CFR Part 131.12(a) (Emphasis added)). We believe this phrase should be interpreted to prohibit point source degradation as *unnecessary* to accommodate important economic and social development if it could be partially or completely prevented through implementation of existing State-required BMPs.

EPA believes that its antidegradation policy should be interpreted on a pollutant-by-pollutant and water-body-by-waterbody basis. For example, degradation of a high quality waterbody by a proposed new BOD source prior to implementation of required BMPs on the same waterbody that are related to BOD loading should not be allowed. However, degradation by the new point source of BOD should not be barred solely on the basis that BMPs unrelated to BOD loadings, or which relate to other waterbodies, have not been implemented.

We recommend that States explain in their antidegradation policies or procedures how, and to what extent, the State will require implementation of otherwise non-enforceable (voluntary) BMPs before allowing point source degradation of high quality waters. EPA understands this recommendation exceeds the Federal requirements discussed in this guidance. For example, nonpoint source management plans being developed under section 319 of the Clean Water Act are likely to identify potential problems and certain voluntary means to correct those problems. The State should consider how these provisions will be implemented in conjunction with the water quality standards program.

[↑ Top of page](#)

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## 4.6 Applicability of Water Quality Standards to Nonpoint Sources Versus Enforceability of Controls

The requirement in Section 131.21(a)(2) to implement existing nonpoint source controls before allowing degradation of a high quality water, is a subset of the broader issue of the applicability of water quality standards versus the enforceability of controls designed to implement standards. A discussion of the broader issue is included here with the intent of further clarifying the nonpoint source antidegradation question. In the following discussion, the central message is that water quality standards apply broadly and it is inappropriate to exempt whole classes of activities from standards and thereby invalidate that broader, intended purpose of adopted State water quality standards.

Water quality standards serve the dual function of establishing water quality goals for a specific waterbody and providing the basis for regulatory controls. Water quality standards apply to both point and nonpoint sources. There is a direct Federal implementation mechanism to regulate point sources of pollution but no parallel Federal regulatory process for nonpoint sources. Under State law, however, States can and do adopt mandatory nonpoint source controls.

State water quality standards play the central role in a State's water quality management program, which identifies the overall mechanism States use to integrate the various Clean Water Act water quality control elements into a coherent management framework. This includes, for example: (1) setting and revising water quality standards for all surface waterbodies, (2) monitoring water quality to provide information upon which water quality-based decisions will be made, progress evaluated, and success measured, (3) preparing a water quality inventory report under section 305(b) which documents the status of the States's water quality, (4) developing a water quality management plan which lists the standards, and prescribes the regulatory and construction activities necessary to meet the standards, (5) calculating total maximum daily loads and wasteload allocations for point sources of pollution and load allocations for nonpoint sources of pollution in the implementation of standards. (6) implementing the section 319 management plan which outlines the State's control strategy for nonpoint sources of pollution, and (7) developing permits under Section 402.

Water quality standards describe the desired condition of the aquatic environment, and, as such, reflect any activity that affects water quality. Water quality standards have broad application and use in evaluating potential impacts of water quality from a broad range of causes and sources and are not limited to evaluation of effects caused by the discharge of pollutants from point sources. In this regard, States should have in place methods by which the State can determine whether or not their standards have been achieved (including uses, criteria, and implementation of an antidegradation policy). Evaluating attainment of standards is basic to successful application of a State's water quality standards program. In the broad application of standards, these evaluations are not limited to those activities which are directly controlled through a mandatory process. Rather, these evaluations are an important component of a State's water quality management program regardless of whether or not an enforcement procedure is in place for the activity under review.

Water quality standards are implemented through State or EPA-issued water quality-based permits and through State

nonpoint source control programs. Water quality standards are implemented through enforceable NPDES permits for point sources and through the installation and maintenance of BMPs for nonpoint sources. Water quality standards usually are not considered self-enforcing except where they are established as enforceable under State law. Application of water quality standards in the overall context of a water quality management program, however, is not limited to activities for which there are enforceable implementation mechanisms.

In simple terms, applicability and enforceability are two distinctly separate functions in the water quality standards program. Water quality standards are applicable to all waters and in all situations, regardless of activity or source of degradation. Implementation of those standards may not be possible in all circumstances; in such cases, the use attainability analysis may be employed. In describing the desired condition of the environment, standards establish a benchmark against which all activities which might affect that desired condition are, at a minimum, *evaluated*. Standards serve as the basis for water quality monitoring and there is value in identifying the source and cause of a exceedance even if, at present, those sources of impact are not regulated otherwise controlled.

It is acceptable for a State to specify particular classes of activities for which no control requirements have been established in State law. It is not acceptable, however, to specify that standards do not apply to particular classes of activities (e.g. for purposes of monitoring and assessment). To do so would abrogate one of the primary functions of water quality standards.

[↑ Top of page](#)

#### 4.7 Outstanding National Resource Waters (ONRW) – 40 CFR 131.12(a)(3)

Outstanding National Resource Waters (ONRWs) are provided the highest level of protection under the antidegradation policy. The policy provides for protection of water quality in high-quality waters that constitute an ONRW by prohibiting the lowering of water quality. ONRWs are often regarded as highest quality waters of the United States: That is clearly the thrust of 131.12(a)(3). However, ONRW designation also offers special protection for waters of "exceptional ecological significance." These are water bodies that are important, unique, or sensitive ecologically, but whose water quality, as measured by the traditional parameters such as dissolved oxygen or pH, may not be particularly high or whose characteristics cannot be adequately described by these parameters (such as wetlands).

The regulation requires water quality to be maintained and protected in ONRWs. EPA interprets this provision to mean no new or increased discharges to ONRWs and no new or increased discharge to tributaries to ONRWs that would result in lower water quality in the ONRWs. The only exception to this prohibition, as discussed in the preamble to the Water Quality Standards Regulation (48 F.R. 51402), permits States to allow some limited activities that result in temporary and short-term changes in the water quality of ONRW. Such activities must not permanently degrade water quality or result in water quality lower than that necessary to protect the existing uses in the ONRW. It is difficult to give an exact definition of "temporary" and "short-term" because of the variety of activities that might be considered. However, in rather broad terms, EPA's view of temporary is weeks and months, not years. The intent of EPA's provision clearly is to limit water quality degradation to the shortest possible time. If a construction activity is involved, for example, temporary is defined as the length of time necessary to construct the facility and make it operational. During any period of time when, after opportunity for public participation in the decision, the State allows temporary degradation, all practical means of minimizing such degradation shall be implemented. Examples of situations in which flexibility is appropriate are listed in [Exhibit 4-1](#).

##### Exhibit 4-1. Examples of Allowable Temporary Lowering of Water Quality in Outstanding National Resource Waters

1. Example:
  - o A national park wishes to replace a defective septic tank-drainfield system in a campground. The campground is located immediately adjacent to a small stream with the ONRW use designation.
  - o Under the regulation, the construction could occur if best management practices were scrupulously followed to minimize any disturbance of water quality or aquatic habitat.
2. Example:
  - o Same situation except the campground is served by a small sewage treatment plant already discharging to the ONRW. It is desired to enlarge the treatment system and provide higher levels of treatment.
  - o Under the regulation, this water-quality-enhancing action would be permitted if there was only



temporary increase in sediment and, perhaps, in organic loading, which would occur during the actual construction phase.

3. Example:

- o A National forest with a mature, second growth of trees which are suitable for harvesting, with associated road repair and re-stabilization. Streams in the area are designated as ONRW and support trout fishing.
- o The regulation intends that best management practices for timber harvesting be followed and might include preventive measures more stringent than for similar logging in less environmentally sensitive areas. Of course, if the lands were being considered for designation as wilderness areas or other similar designations, EPA's regulation should not be construed as encouraging or condoning timbering operations. The regulation allows only temporary and short-term water quality degradation while maintaining existing uses or new uses consistent with the purpose of the management of the ONRW area.

Other examples of these types of activities include maintenance and/or repair of existing boat ramps or boat docks, restoration of existing sea walls, repair of existing stormwater pipes, and replacement or repair of existing bridges.

[↑ Top of page](#)

## 4.8 Antidegradation Application and Implementation

Any one or a combination of several activities may trigger the antidegradation policy analysis. Such activities include a scheduled water quality standards review, the establishment of new or revised load allocations, waste load allocations, total maximum daily loads, issuance of NPDES permits, and the demonstration of need for advanced treatment or request by private or public agencies or individuals for a special study of the water body.

Nonpoint source activities are not exempt from the provisions of the antidegradation policy. The language of section 131.12(a)(2) of the regulation: "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..." reflects statutory provisions of the Clean Water Act. While it is true that the Act does not establish a federally enforceable program for nonpoint sources, it clearly intends that the BMPs developed and approved under sections 205(j), 208, 303(e), and 319 be aggressively implemented by the States.

### —4.8.1 Antidegradation, Load Allocation, Waste Load Allocation, Total Maximum Daily Load, and Permits

In developing or revising a load allocation (LA), waste load allocation (WLA), or total maximum daily load (TMDL) to reflect new information or to provide for seasonal variation, the antidegradation policy, as an integral part of the State water quality standards, must be applied as discussed in this section.

The TMDL/WLA/LA process distributes the allowable pollutant loadings to a water body. Such allocations also consider the contribution to pollutant loadings from nonpoint sources. This process must reflect applicable State water quality standards including the antidegradation policy. No waste load allocation can be developed or NPDES permit issued that would result in standards being violated. With respect to antidegradation, that means existing uses must be protected, water quality may not be lowered in ONRWs, and in the case of waters whose quality exceeds that necessary for the section 101(a)(2) goals of the Act, an activity cannot result in a lowering of water quality unless the applicable public participation, intergovernmental review, and baseline control requirements of the antidegradation policy have been met. Once the LA, WLA, or TMDL revision is completed, the resulting permits must incorporate discharge limitations based on this revision.

When a pollutant discharge ceases for any reason, the waste load allocations for the other dischargers in the area may be adjusted to reflect the additional loading available consistent with the antidegradation policy under two circumstances:

- In "high-quality waters" where after the full satisfaction of all public participation and intergovernmental review requirements, such adjustments are considered necessary to accommodate important economic or social development, and the "threshold" level requirements (required point and nonpoint source controls) are met.
- In less than "high-quality waters," when the expected improvement in water quality (from the ceased discharge) would not cause a better use to be achieved.

The adjusted loads still must meet water quality standards, and the new waste load allocations must be at least as stringent as technology-based limitations. Of course, all applicable requirements of the section 402 NPDES permit regulations would have to be satisfied before a permittee could increase its discharge.

If a permit is being renewed, reissued or modified to include less stringent limitations based on the revised LA/WLA/TMDL, the same antidegradation analysis applied during the LA/WLA/TMDL stage would apply during the permitting stage. It would be reasonable to allow the showing made during the LA/WLA/TMDL stage to satisfy the antidegradation showing at the permit stage. Any restrictions to less stringent limits based on antibacksliding would also apply.

If a State issues an NPDES permit that violates the required antidegradation policy, it would be subject to a discretionary EPA veto under section 402(d) or to a citizen challenge. In addition to actions on permits, any waste load allocations and total maximum daily loads violating the antidegradation policy are subject to EPA disapproval and EPA promulgation of a new waste load allocation/total maximum daily load under section 303(d) of the Act. If a significant pattern of violation was evident, EPA could constrain the award of grants or possibly revoke any Federal permitting capability that had been delegated to the State. Where EPA issues an NPDES permit, consistent with its NPDES regulations, add any additional or more stringent effluent limitations required to ensure compliance with the State antidegradation policy incorporated into the State water quality standards. If a State fails to require compliance with its antidegradation policy through section 401 certification related to permits issued by other Federal agencies (e.g., a Corps of Engineers section 404 permit), EPA could comment unfavorably upon permit issuance. The public, of course, could bring pressure upon the permit issuing agency.

For example applications of antidegradation in the WLA and permitting process, see [Exhibit 4-2](#).

#### Exhibit 4-2. Examples of the Application of Antidegradation in the Waste Load/Load Allocation and NPDES Permitting Process

1. Example:
  - Several Facilities on a stream segment discharge phosphorus-containing wastes. Ambient phosphorus concentrations meet the designated class B (non-fishable/swimmable) standards, but barely. Three dischargers achieve elimination by developing land treatment systems. As a result, actual water quality improves (i.e., phosphorus levels decline) but not quite to the level needed to meet class A (fishable/swimmable) standards. Can the remaining dischargers now be allowed to increase their phosphorous discharge without an antidegradation analysis with the result that water quality declines (phosphorus levels increase) to previous levels?
  - Nothing in the water quality standards regulation explicitly prohibits this. Of course, changes in their NPDES permit limits may be subject to non-water quality constraints, such as BPT, BAT, or the NPDES antibacksliding provisions, which may restrict the increased loads.
2. Example:
  - Suppose, in the above situation, water quality improves to the point that actual water quality now meets class A requirements. Is the answer different?
  - Yes. The standards must be upgraded (see [section 2.8](#)).
3. Example:
  - As an alternate case, suppose phosphorus loadings go down and water quality improves because of a

change in farming practices (e.g., initiation of a successful nonpoint source program.) Are the above answers the same?

- o Yes. Whether the improvement results from a change in point or nonpoint source activity is immaterial to how any aspect of the standards regulation operates. Section 131.10(d) clearly indicates that uses are deemed attainable if they can be achieved by "... cost-effective and reasonable best management practices for nonpoint source control." Section 131.12(a)(2) of the antidegradation policy contains essentially the same wording.

#### —4.8.2 Antidegradation and the Public Participation Process

Antidegradation, as with other water quality standards activities, requires public participation and intergovernmental coordination to be an effective tool in the water quality management process. 40 CFR 131.12(a)(2) contains explicit requirements for public participation and intergovernmental coordination when determining whether to allow lower water quality in high-quality waters. Nothing in either the water quality standards or the waste load allocation regulations requires the same degree of public participation or intergovernmental coordination for such non-high-quality waters as is required for high-quality waters. However public participation would still be provided in connection with the issuance of a NPDES permit or amendment of a 208 plan. Also, if the action that causes reconsideration of the existing waste loads (such as dischargers withdrawing from the area) will result in an improvement in water quality that makes a better use attainable, even if not up to the "fishable/swimmable" goal, then the water quality standards must be upgraded and full public review, is required for any action affecting changes in standards. Although not specifically required by the standards regulation between the triennial reviews, we recommend that the State conduct a use attainability analysis to determine if water quality improvement will result in attaining higher uses than currently designated in situations where significant changes in waste loads are expected.

The antidegradation public participation requirement may be satisfied in several ways. The State may hold a public hearing or hearings. The State may also satisfy the requirement by providing public notice and the opportunity for the public to request a hearing. Activities that may affect several water bodies in a river basin or sub-basin may be considered in a single hearing. To ease the resource burden on both the State and public, standards issues may be combined with hearings on environmental impact statements, water management plans, or permits. However, if this is done, the public must be clearly informed that possible changes in water quality standards are being considered along with other activities. It is inconsistent with the water quality standards regulation to "back-door" changes in standards through actions on US's, waste load allocations, plans, or permits.

(8/15/94)

Pages: 4-1-4-15

[↑Top of page](#)

