

**July 15, 2010**

**Review of ADEC's Interim Antidegradation Implementation Methods:  
Support Document**

This document explains in detail the basis for EPA's finding that ADEC's antidegradation implementation methods are consistent with EPA's antidegradation regulation at 40 CFR 131.12. These methods were sent by ADEC to EPA by electronic mail on July 14, 2010, with a stated effective date of July 14, 2010.

► **General Applicability – Types of Activities Covered**

Consistent with 40 CFR 131.12. Under EPA's antidegradation regulation, antidegradation implementation methods are applicable to activities requiring state or federal permits consistent with EPA's position in the Water Quality Standards Advance Notice of Proposed Rulemaking (ANPRM) (63 FR 36780 (July 7, 1998)). See "When the policy applies" on page 2: "When a permit application [interpreted by EPA to mean an application for a state permit], or an application for state certification of a federal permit under Section 401 of the Clean Water Act, is received, staff should evaluate it to see if issuing the requested permit or certification would allow activities that would degrade the quality of the water body."

► **Applicability/"Triggers" for the various levels of Antidegradation Protection**

- Existing Use Protection ("Tier 1")

Consistent with 40 CFR 131.12(a)(1). Alaska's Tier 1 methods apply to all discharges, not just new or increased discharges that would lower water quality. See page 6 of Alaska's methods. This is consistent with 40 CFR 131.12(a)(1) and EPA's interpretation of its antidegradation regulation in its July 7, 1998 ANPRM (63 Federal Register 36781) ("Antidegradation policies are generally implemented for tier 1 by a review procedure that evaluates any discharge to determine whether it would impair an existing use."). "Discharge" as used here is not limited to the discharge of pollutants as in the NPDES context, but rather has the broad meaning consistent with the applicability of section 401 of the CWA.

- High Quality Water Protection ("Tier 2")

Consistent with 40 CFR 131.12(a)(2). The implementation methods overall are applicable to new or increased discharges that could lower water quality, and hence Tier 2 would be triggered in such cases. See "When the policy applies," pp. 2 & 3. Applying or "triggering" Tier 2 review requirements only where there is a new or increased discharge that could lower water quality is consistent with 40 CFR 131.12(a)(2) because the substantive Tier 2 "review" requirements of 40 CFR 131.12(a)(2) (e.g., "necessary to accommodate important economic or social development", etc.) only apply if the State is allowing lower water quality. Further, pursuant to ADEC's methods, Tier 2 is to be applied on a "parameter by parameter" basis, which EPA explained in its July 7, 1998

ANPRM (63 Federal Register 36782-83) is an acceptable approach to identifying high quality or Tier 2 waters. See “How to decide what tier applies,” pages 4 & 5.

- Outstanding National Resource Water Protection (“Tier 3”)

Consistent with 40 CFR 131.12(a)(3) in that ONRW or Tier 3 protection is applicable where a water is so designated. See pages 2-3, 5, and 9-10.

► Existing Use Protection (“Tier 1”)

- Processes for determining what is an existing use and what water quality is necessary to protect the existing uses.

Consistent with 40 CFR 131.12(a)(1). ADEC’s implementation methods (see “How to do a Tier 1 analysis” on pages 5-6) recognize that it may be necessary to request information from the applicant or State, local or federal agencies concerning existing uses for a particular waterbody. The methods also recognize that protecting existing uses may require water quality other than that provided by a water’s applicable water quality criteria (“Often protecting existing uses will amount to specifying effluent limits in a permit or certification that are based on the corresponding water quality criteria for those uses or other information that relates to how good water quality must be to protect the specific ‘existing’ use.”). ADEC’s methods state that draft and final permit fact sheet or certification shall document the existing uses and the water quality necessary to protect them. As mentioned above, ADEC’s methods also state that Tier 1 applies regardless of whether the proposed discharge would allow lower water quality, meaning that application of Tier 1 is not limited, as Tiers 2 and 3 are, to situations where the discharge could lower water quality, which is consistent with EPA’s interpretation of its antidegradation regulation (see EPA’s July 7, 1998 ANPRM (63 Federal Register 36781).

► High Quality Water Protection (“Tier 2”)

- Process for determining where “the quality of the waters exceed levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water”.

Consistent with 40 CFR 131.12(a)(2). ADEC’s implementation methods refer to potential sources of water quality data, and default to an assumption of high quality water /Tier 2 protection absent sufficient data. This is done on a “parameter by parameter” basis, which, as mentioned above, is one of the approaches EPA has recommended as far as identifying high quality or Tier 2 waters. See “How to decide what tier applies,” page 4. See also EPA’s July 7, 1998 ANPRM (63 Federal Register 36782-83). EPA notes that ADEC’s methods do not deny high quality water protection for a water body solely based on impairment for one or a small number of parameters, or based on impairment of one use.

- Process to determine if a proposed activity would accommodate important economic or social development in the area in which the effected waters are located.

Consistent with 40 CFR 131.12(a)(2). See “How to do a ‘tier 2’ analysis,” finding (A), pages 6-7. EPA has described in its July 7, 1998 ANPRM (63 Federal Register 36784) and EPA’s 1994 Water Quality Standards Handbook, section 4.5 (<http://www.epa.gov/waterscience/standards/handbook/chapter04.html>) its expectations for states regarding this part of its Tier 2 regulation, and ADEC’s finding A is consistent with EPA’s expectations in that it specifies appropriate elements to consider regarding economic or social development, such as jobs, risk reduction, and public health.

- Process to identify if it is necessary to lower water quality to realize the economic or social development associated with the proposed activity (i.e., alternatives analysis to determine if there a least degrading feasible alternative that can be implemented to avoid or reduce the degree of degradation).

Consistent with 40 CFR 131.12(a)(2). This part of the federal regulation at 40 CFR 131.12(a)(2), which is reflected in ADEC’s antidegradation policy and at finding A of its implementation methods, presents two key questions 1) will the activity that would lower water quality provide important economic or social development? and 2) is it necessary to lower water quality to realize such development?

The first question is addressed in the implementation methods at finding A, and is deemed consistent with 40 CFR 131.12(a)(2) for the reasons explained above. Addressing the second question involves an analysis of feasible alternatives to determine if the important economic or social development associated with the project could be realized without degradation, or with a reduced degree of degradation. See EPA’s July 7, 1998 ANPRM (63 Federal Register 36784). ADEC has chosen to address the second question, with its associated analysis of alternatives, at finding D (“The most effective and reasonable methods of pollution prevention control and treatment will be applied to all wastes and other substances to be discharged”). See “How to do a ‘tier 2’ analysis,” finding (D) on pages 7 & 8 of the methods. This section refers to the level of pollution prevention, control and treatment that ADEC should require before allowing degradation of water quality, and, specifically, the option of requiring treatability studies to evaluate the effectiveness and cost of various candidate technologies that could be used to treat a discharge. Because ADEC has included a method that directs the State to evaluate alternatives to the proposed discharge, and choose the least degrading reasonable alternative, this method is consistent with EPA’s Tier 2 regulation (40 CFR 131.12(a)(2)) and the Agency’s interpretation of such regulation in its ANPRM.

- Process and timing for public participation and intergovernmental coordination.

Consistent with 40 CFR 131.12. Draft antidegradation analyses and findings are to be included with the public notice of the associated draft permit or water quality

certification. See “Public notice and comment,” page 10. This is consistent with EPA’s Tier 2 regulation (40 CFR 131.12(a)(2)) and EPA’s WQS Handbook (section 4.8.2) (<http://www.epa.gov/waterscience/standards/handbook/chapter04.html>) because it provides for an opportunity for the public and any other governmental entities to comment on ADEC’s draft antidegradation analysis and finding at an appropriate stage in the decision-making process (i.e., while changes can still be made).

- Process for ensuring that the highest statutory and regulatory requirements for point sources are achieved and cost-effective and reasonable BMPs are achieved.

Consistent with 40 CFR 131.12. ADEC’s implementation methods (see Tier 2, finding (E) on pages 8-9 and “How the policy works” on pages 3-4) implement this requirement and direct that it shall be fulfilled during any Tier 2 review conducted by the State. As EPA wrote in its July 7, 1998 ANPRM (63 Federal Register 36784-85), a state is required to implement the nonpoint source prong of this provision **only if** the state regulates nonpoint sources. Alaska has chosen in its antidegradation policy (18 AAC 70.015(a)(2)(E)(ii)) to regulate nonpoint sources, at least in the context of its antidegradation policy, and thus must ensure that any and all such nonpoint sources on the water body are implementing all cost-effective and reasonable best management practices before any point source lowering of water quality is allowed. (See EPA’s July 7, 1998 ANPRM (63 Federal Register 36785)). ADEC’s methods are consistent with this requirement and EPA’s interpretation as stated in its ANPRM.

- Recognition that in allowing any lowering of water quality under Tier 2, existing uses must be protected and designated uses and their associated criteria must be met.

Consistent with 40 CFR 131.12(a)(2). See findings (B) and (C) at “How to do a ‘tier 2’ analysis,” page 7. Because each of these findings refers back to ADEC’s method regarding Tier 1 analysis, these provisions are consistent with EPA’s antidegradation regulation for the same reasons that ADEC’s Tier 1 method is consistent with EPA’s regulation.

► Outstanding National Resource Water Protection (“Tier 3”)

- Process and timing for identifying a waterbody as an ONRW, including process for public participation.

Consistent with 40 CFR 131.12(a)(3). ADEC’s implementation methods provide that in addition to considering a water for possible Tier 3 designation as part of a permit action, waters could be designated as Tier 3 through nominations made during the water quality standards triennial review process, or by advocating for a bill before the state legislature. See “How to decide what tier applies,” page 5.

The process for considering Tier 3 designation of a waterbody in conjunction with the permit process is described in some detail at “How to do a ‘tier 3’ analysis,” pages 9-10, and includes (1) identifying early in the project design or permit application

process when a waterbody at issue is in a national or state park or wildlife refuge or is a water with exceptional recreational or ecological significance; (2) coordination with other state and federal resource agencies; and (3) a process for public participation (“a minimum 30-day public comment period which may occur independently or in conjunction with the public notice for a draft permit”).

The overall process described by ADEC in its methods is consistent with 40 CFR 131.12(a)(3) because it provides for three options which when considered together are reasonable avenues by which a member of the public may petition to have an eligible water designated as a Tier 3 water body. This is also consistent with EPA’s statements regarding Tier 3 protection in EPA’s July 7, 1998 ANPRM (63 Federal Register 36785-87) and EPA’s WQS Handbook, section 4.7 (<http://www.epa.gov/waterscience/standards/handbook/chapter04.html>).

- Factors the state will use to make ONRW classification decisions.

Consistent with 40 CFR 131.12(a)(3). ADEC’s implementation methods provide that to qualify as Tier 3, a water must be in a national or state park or wildlife refuge, or a water with exceptional recreational or ecological significance. The methods also imply that the effects on future use of a nominated waterbody and nearby land use will be considered. See “How to decide what tier applies,” page 5. This is consistent with EPA’s Tier 3 regulation as interpreted in EPA’s July 7, 1998 ANPRM (63 Federal Register 36785-87) and EPA’s WQS Handbook, section 4.7 (<http://www.epa.gov/waterscience/standards/handbook/chapter04.html>).

- Description of the prohibitions or limitations on new or increased discharges that will ensure Tier 3 protection, i.e., conditions that will ensure that water quality is maintained and protected in ONRWs.

Consistent with 40 CFR 131.12. ADEC’s methods specify that the permitting approaches for Tier 3 waters include zero discharge (denial), short-term/temporary changes, and effluent limits that do not allow any lowering from natural conditions existing water quality. See “How to do a ‘tier 3’ analysis,” pages 9-10. These approaches ensure that Tier 3 water quality is maintained and protected and are consistent with EPA’s interpretation of its Tier 3 regulation, as expressed in EPA’s July 7, 1998 ANPRM (63 Federal Register 36785-87) and EPA’s WQS Handbook, section 4.7 (<http://www.epa.gov/waterscience/standards/handbook/chapter04.html>).

► Addresses how antidegradation analysis is done for general permits.

Consistent with 40 CFR 131.12. ADEC’s implementation methods provide that general permits shall undergo an antidegradation analysis either at the time the permitting authority develops and issues the general permit or upon review of an applicant’s request to be covered by a general permit, depending on the circumstances. See “General permits,” pages 10-11.