U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA) – REGION 10

Support Document

The EPA's Action on Alaska's New and Revised Water Quality Standards at 18 AAC 70.015, 18 AAC 70.016, and 18 AAC 70.990 Addressing Antidegradation Policy and Implementation Methods, Submitted March 9, 2018

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I. Background

A. Background on the Federal Antidegradation Policy

The federal water quality standards regulation at 40 CFR 131.12 requires that states and authorized tribes have an antidegradation policy and methods for its implementation. Antidegradation policies must be adopted in a binding form (e.g., in regulation or statute) and implementation methods may be either adopted as binding or presented in guidance. In accordance with 40 CFR 131.12(b), the development and any subsequent revision of antidegradation implementation methods, whether binding or in guidance, must include an opportunity for public involvement, and the completed methods must be made available to the public. Antidegradation policies and implementation methods must be consistent with the federal antidegradation policy.

The federal antidegradation policy at 40 CFR 131.12 provides for the following three levels of protection that are commonly referred to as Tiers 1 through 3:

- maintenance and protection of existing uses and the level of water quality necessary for their protection (40 CFR 131.12(a)(1)/Tier 1)

- maintenance and protection of water quality that exceeds levels necessary to support the protection and propagation of fish, shellfish and wildlife (interpreted to broadly include aquatic life), and recreation in and on the water, unless the state or tribe finds after an analysis of alternatives that allowing a lowering of water quality is necessary to accommodate important economic or social development in the area where the waters are located (40 CFR 131.12(a)(2)/Tier 2), and

- maintenance and protection of water quality in Outstanding National Resource Waters (ONRWs) identified by the state or tribe (40 CFR 131.12(a)(3)/Tier 3)

Antidegradation policies are to be implemented in addition to water quality criteria and designated uses, and antidegradation implementation methods provide a framework for states and tribes to determine whether, and to what extent, water quality may be lowered while still ensuring that water quality criteria are met and designated uses and existing uses are protected. Like other water quality standards, antidegradation provisions adopted on or after May 30, 2000, require the U.S. Environmental Protection Agency's (EPA) approval before they become applicable water quality standards for purposes of implementing the Clean Water Act (CWA) (40 CFR 131.21(c)).

Additional information about the federal antidegradation policy and antidegradation implementation methods can be found in the following documents:

- EPA's Water Quality Standards Handbook (https://www.epa.gov/sites/production/files/2014-10/documents/handbook-chapter4.pdf)

- EPA's July 7, 1998, Advance Notice of Proposed Rulemaking (ANPRM), 63 FR 36742 (https://www.gpo.gov/fdsys/pkg/FR-1998-07-07/pdf/98-17513.pdf), and

- Preamble to the EPA's August 21, 2015, revisions to its water quality standards regulation, 80 FR 51020 (https://www.gpo.gov/fdsys/pkg/FR-2015-08-21/pdf/2015-19821.pdf).

B. Background on Alaska's Submittal

By letter dated March 9, 2018, the Alaska Department of Environmental Conservation (ADEC) submitted new and revised water quality standards at 18 AAC 70.015, 18 AAC 70.016, and 18 AAC 70.990 of Alaska's water quality regulations. These new and revised water quality standards were adopted by ADEC on February 28, 2018; were certified by the Alaska Attorney General on March 7, 2018, as being duly adopted pursuant to state law; and became effective under Alaska state law on April 6, 2018. Prior to adoption, ADEC provided an opportunity for public comment, including a public hearing, as described in ADEC's public notice and ADEC's response to public comment ("Antidegradation Implementation Methods: Notice of Proposed Changes to the Water Quality Standards Regulations of the Department of Environmental Conservation," ADEC, May 31, 2017; and "Antidegradation Implementation Methods Regulations Responsiveness Summary," ADEC, November 2017; respectively).

The water quality standards changes submitted to the EPA for review and action are identified in an enclosure to ADEC's March 9, 2018 submittal letter, and include limited clarifying revisions to Alaska's antidegradation policy at 18 AAC 70.015, antidegradation implementation methods in rule at 18 AAC 70.016, and associated new definitions at 18 AAC 70.990 (Attachment to Memorandum, Scott Meriwether, Office of Lieutenant Governor, to Gary Mendivil, Department of Environmental Conservation, RE: Filed Permanent Regulations, March 9, 2018).

The implementation methods section at 18 AAC 70.016 is new, represents the majority of ADEC's submittal, and generally replaces Alaska's 2010 interim antidegradation implementation guidance. In its response to comments ADEC did, however, refer to its interim antidegradation implementation guidance when addressing a concern that Alaska's rule making did not include a process for nominating and designating waters for ONRW protection ("*…Tier 3 designation methods are still present and available. As stated in the Interim Antidegradation Implementation Methods (July 2010) …*"). ADEC further stated that it will "*continue to work with all stakeholders on a final nomination and designation process, including the final designating authority….*" (see "Antidegradation Implementation Methods Regulations Responsiveness Summary," ADEC, November 2017, Comment Summary 51).

18 AAC 70.016 addresses the applicability of Alaska's new antidegradation implementation methods regarding the waters and discharges that are covered, when a particular tier of protection is applicable (i.e., existing use, high quality water, and ONRW protection, which Alaska refers to as Tiers 1, 2, and 3, respectively), exceptions when ADEC will not make an antidegradation analysis and findings, and methods for implementing each of Alaska's three tiers of protection. In addition, 18 AAC 70.016 addresses specific requirements regarding general permits, CWA section 404 permits, "temporary and limited degradation," and information necessary to complete an antidegradation analysis.

II. Today's Action

A. The EPA's Approval

Pursuant to section 303(c)(3) of the CWA and 40 CFR Part 131, the EPA approves the submitted changes at 18 AAC 70.015, 18 AAC 70.016, and 18 AAC 70.990, except as identified below and in the appropriate sections of this support document that explain the EPA's rationale for today's action. The EPA is only acting on the new or revised water quality standards adopted into regulation by ADEC and identified in ADEC's March 9, 2018 submittal. The EPA is not acting on unrevised language or previously existing provisions of the water quality standards applicable in Alaska; the EPA makes note of such language and provisions where appropriate throughout this support document. The EPA is not acting on the previously existing sections of Alaska Administrative Code which were not part of ADEC's March 9, 2018 submittal, but are referenced in the revisions to 18 AAC 70.015 and in the new 18 AAC 70.016. In such cases, the EPA's action does not extend to the content of the referenced Alaska Administrative Code sections.

The EPA's action applies only to water bodies in the State of Alaska, and does not apply to waters that are within Indian Country, as defined in 18 U.S.C. § 1151. In addition, nothing in this action shall constitute an approval or disapproval of a water quality standard that applies to waters within Indian Country. The EPA, or authorized Indian Tribes, as appropriate, will retain responsibilities for water quality standards for waters within Indian Country.

B. Changes to 18 AAC 70 that the EPA is Not Acting On

The EPA is not acting on the following portion of the newly promulgated 18 AAC 70.016(a)(2)(B):

> *…the responsible party whose actions or lack of action necessitated an emergency response action shall address any lowering of water quality that is not temporary and limited; existing law may be used to address restoration, rehabilitation, replacement, or acquisition of the equivalent for the affected natural resources, including long-term water quality impacts;*

Rather than stating a desired water quality condition for waters, the provision addresses inconsistency with a desired condition. Such provisions are of an enforcement nature and therefore are not water quality standards subject to EPA action in accordance with CWA section 303(c) (see "What is a New or Revised Water Quality Standard under 303(c)(3), Frequently Asked Questions," October 2012, EPA Publication No. 820F12017, and the EPA's full discussion of 18 AAC 70.016(a)(2)(B) at section IV.C.2 of this support document).

C. Introduction to the EPA's Support Document for Today's Action

The subsequent sections of this support document contain the EPA's review of Alaska's submitted water quality standards revisions for consistency with the CWA and the federal antidegradation policy at 40 CFR 131.12. Section III addresses the revisions to Alaska's antidegradation policy at 18 AAC 70.015. Section IV addresses Alaska's new antidegradation implementation methods at 18 AAC 70.016 (sections IV. A, B, and C address the applicability of Alaska's implementation methods regarding the waters and discharges that are covered, when each tier of protection is applicable, and exceptions when

ADEC will not make an antidegradation analysis and findings; sections IV. D, E, F, and G address general information requirements and Alaska's methods for implementing the three antidegradation tiers; and sections IV. H, I, and J address Alaska's approach to general permits, "temporary and limited degradation," and CWA section 404 permits). Section V addresses Alaska's accompanying new definitions at 18 AAC 70.990. Rather than strictly addressing Alaska's implementation methods in the order presented at 18 AAC 70.016, the EPA's review often groups provisions from various sections of Alaska's rule that address common topics. This approach is to ensure clarity regarding how Alaska's implementation methods as a whole address the components of 40 CFR 131.12.

III. Alaska's Antidegradation Policy (18 AAC 70.015) - Rationale for Today's Action

Section III presents the EPA's review of the revisions to 18 AAC 70.015 (Alaska's antidegradation policy), which were related to the high quality water/Tier 2 provisions at 18 AAC 70.015(a)(2). The provision formerly at 18 AAC 70.015(a)(2)(D) was repealed and replaced by a similar provision at 18 AAC 70.016(c)(7)(D)(ii) of Alaska's new implementation methods rule. In addition, 18 AAC 70.015(d) was added.

A. Repeal of 18 AAC 70.015(a)(2)(D)

Like the former 18 AAC 70.015(a)(2)(D), the new 18 AAC 70.016(c)(7)(D)(ii) addresses "pollution prevention, control, and treatment" and sets forth a similar finding that ADEC must make before it authorizes a discharge that would lower water quality in a Tier 2 water. Because the new provision replaces the former 18 AAC 70.015(a)(2)(D), the EPA approves the repeal of the former 18 AAC 70.015(a)(2)(D) as being a non-substantive revision.

The new 18 AAC 70.016(c)(7)(D)(ii) differs from the former 18 AAC 70.015(a)(2)(D) in that "reasonable" was replaced with practicable, i.e., "*…most effective and practicable*." "Practicable" is an existing previously defined term in Alaska's water quality standards regulation and is a term used in the Tier 2 requirements of the federal antidegradation policy at 40 CFR 131.12(a)(2)(ii). The EPA's approval of the new 18 AAC 70.016(c)(7)(D)(ii) as being consistent with 40 CFR 131.12 is discussed at section IV.F.1 of the EPA's support document.

B. Definition of "highest statutory and regulatory requirements" (18 AAC 70.015(d))

The new 18 AAC 70.015(d) defines "highest statutory and regulatory requirements," as the phrase is used in Alaska's Tier 2 requirements at 18 AAC 70.015(a)(2)(D)(i):

> *(d) For purposes of (a) of this section, the highest statutory and regulatory requirements are*
>
> *(1) any federal technology-based effluent limitation identified in 40 C.F.R. 122.29 and 125.3, revised as of July 1, 2017 and adopted by reference;*
>
> *(2) any minimum treatment standards identified in 18 AAC 72.050;*

(3) any treatment requirement imposed under another state law that is more stringent than a requirement of this chapter; and

(4) any water quality-based effluent limitations established in accordance with 33 U.S.C. 1311(b)(l)(C) (Clean Water Act, sec. 301(b)(l)(C)).

18 AAC 70.015(a)(2)(D)(i) is where Alaska's antidegradation policy addresses the point source portion of the following requirement at 40 CFR 131.12(a)(2):

Further, the State shall assure that there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources and cost-effective and reasonable best management practices for nonpoint source control. (emphasis added)

For the reasons discussed below, the EPA approves 18 AAC 70.015(d) as being consistent with 40 CFR 131.12(a)(2).

In its National Pollutant Discharge Elimination System (NPDES) permit writers' manual (EPA-833-K-10-001, September 2010, Chapters 5 and 6) the EPA explains the technology and water quality-based effluent limitation requirements of the CWA ("*Title 40 of the Code of Federal Regulations (CFR) 125.3(a) require…technology-based treatment requirements, consistent with CWA section 301(b), that represent the minimum level of control that must be imposed in a permit*" and "*CWA section 301(b)(1)(C) requires…any effluent limitations necessary to meet water quality standards.*"). In citing 40 CFR 125.3 and CWA section 301(b)(1)(C), Alaska's definition of "highest statutory and regulatory requirements" is consistent with the meaning of the phrase as used at 40 CFR 131.12(a)(2) because both technology and water quality-based requirements of the CWA are addressed.

In addition to the federal technology and water quality-based regulatory requirements, 18 AAC 70.015(d) includes reference to state treatment requirements ("*(d)(2) any minimum treatment standards identified in 18 AAC 72.050,* and *(d)(3) any treatment requirement imposed under another state law that is more stringent than a requirement of this chapter;*"). These references to state treatment requirements are consistent with section 510 of the CWA which provides states with the authority to "*adopt or enforce…any standard or limitation respecting discharges of pollutants, or…any requirement respecting control or abatement of pollution*" that is more stringent than the CWA requirements. The federal water quality standards regulation at 40 CFR 131.4(a) specifically addresses such state authority ("*As recognized by section 510 of the Clean Water Act, States may develop water quality standards more stringent than required by this regulation.*"). The EPA's approval is limited to Alaska's reference to state treatment requirements, which are in addition to the federal requirements under the CWA. The EPA is not reviewing or approving the referenced state treatment requirements themselves.

IV. Alaska's Implementation Methods (18 AAC 70.016) - Rationale for Today's Action

Section IV presents the EPA's review of 18 AAC 70.016 which is new and contains Alaska's methods for implementing its antidegradation policy at 18 AAC 70.015. Sections IV. A, B, and C address the applicability of Alaska's implementation methods regarding the waters and discharges that are covered, when each tier of protection is applicable, and exceptions when ADEC will not make an antidegradation

analysis and findings. Sections IV. D, E, F, and G address general information requirements and Alaska's methods for implementing the three antidegradation tiers. Sections IV. H, I, and J address Alaska's approach to general permits, "temporary and limited degradation," and CWA section 404 permits.

A. General Applicability – Waters and Discharges Covered

This section presents the EPA's basis for approving Alaska's antidegradation implementation methods as having a general scope of applicability, regarding the waters and discharges that are covered, that is consistent with the CWA and 40 CFR 131.12.

In accordance with 18 AAC 70.016(a), Alaska's antidegradation implementation methods are applicable to all waters of the United States within Alaska, and to discharges subject to authorization under the Alaska Pollutant Discharge Elimination System (APDES) and section 401 of the CWA:

> *(a) General requirements for antidegradation analyses…The provisions of 18 AAC 70.015(a)(l) - (3) identify three tiers of water quality and water quality protection, Tiers 1, 2, and 3 respectively. In implementing the antidegradation policy for a water of the United States within this state, the following provisions apply:*
>
> *(1) the department will make an antidegradation analysis and findings for discharges subject to authorization by the department under*
>
> *(A) 18 AAC 83 (Alaska Pollutant Discharge Elimination System (APDES) Program); and*
>
> *(B) 33 U.S.C. 1341 (Clean Water Act, sec. 401) water quality certifications; …*
>
> (Note: A portion of 18 AAC 70.016(a)(B) not replicated above speaks to antidegradation implementation in the certification of CWA section 404 permits and is addressed at section IV.J of the EPA's support document.)

Discharges subject to certification under section 401 of the CWA include CWA section 402 permits issued by the EPA, CWA section 404 permits, Federal Energy and Regulatory Commission (FERC) licenses, and Rivers and Harbors Act section 9 and section 10 permits. APDES permits are authorized in accordance with CWA section 402. Thus, the scope of applicability regarding both the waters and discharges that are subject to Alaska's antidegradation implementation methods is consistent with the regulatory scope of the CWA, i.e., discharges regulated under the CWA into waters of the United States. For these reasons, the EPA approves the portions of 18 AAC 70.016(a) cited above because they establish general applicability of Alaska's antidegradation implementation methods that is consistent with the CWA and 40 CFR 131.12.

B. Applicability of Each Level of Antidegradation Protection

This section presents the EPA's basis for approving the applicability of each tier of Alaska's antidegradation implementation methods, i.e. existing use protection (Tier 1), high quality water

protection (Tier 2), and Outstanding National Resource Water protection (Tier 3), as being consistent with the CWA and 40 CFR 131.12.

1. Existing Use Protection ("Tier 1") Applicability

Alaska's Tier 1 methods apply to all waters subject to the jurisdiction of the CWA and to discharges subject to the jurisdiction of the CWA, not just new or increased discharges that would lower water quality. See 18 AAC 70.016(b) ("*Tier 1 applies to all water of the United States within this state…*") and 18 AAC 70.016(b)(1) ("*the department will conduct a Tier 1 antidegradation analysis for all discharges specified in (a)(l) of this section*"). 18 AAC 70.016(a)(1) in the preceding quote specifies discharges subject to APDES permits and discharges subject to CWA section 401certification, i.e., discharges regulated under the CWA. Thus, application of Tier 1 is not limited to situations where a discharge could lower water quality. This is consistent with the EPA's interpretation of 40 CFR 131.12(a)(1), as found in the July 7, 1998 Advance Notice of Proposed Rulemaking (ANPRM), 63 FR 36742, 36781 ("*All waters of the U.S. are subject to Tier 1 protection*" and "*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.*"). In a September 5, 2008 letter explaining its existing use provision, the EPA also stated: "…*EPA's antidegradation provisions require any CWA authorization of a discharge or activity that may result in a discharge to protect the existing use*." ("Denise Keehner, Director EPA's Standards and Health Protection Division to Derek Smithee, Oklahoma Water Resources Board," September 5, 2008).

Therefore, the EPA approves 18 AAC 70.016(b) and (b)(1) of Alaska's antidegradation implementation methods because they establish an applicability of existing use protection that is consistent with 40 CFR 131.12(a)(1), i.e., discharges subject to the jurisdiction of the CWA will receive Tier 1 review. Alaska's antidegradation implementation methods are written in terms of addressing the water quality impacts of "parameters," as defined at 18 AAC 70.990(76), and address discharges beyond the discharge of pollutants, consistent with the broader CWA meaning of discharge and the broad applicability of CWA section 401 (see the EPA's approval of 18 AAC 70.990(76) at section V.C of the EPA's support document).

In addition, 18 AAC 70.016(b)(4) explains that Tier 1 is the only level of antidegradation protection where a water is listed as impaired for a parameter in accordance with CWA section 303(d), or is otherwise determined as not being high quality for a parameter, and the water is not an ONRW/Tier 3 water (in establishing the applicability of Tier 1 and Tier 2, Alaska's use of "exceed"/"exceeded" in conjunction with water quality criteria is in the negative, e.g., "…*applicable water quality criteria are exceeded…"* is understood to mean that criteria are not met; see "Antidegradation Implementation Methods Regulation Responsiveness Summary," ADEC, November 2017, Comment Summary 30):

> *(b)(4) Tier 1 is the only antidegradation protection level for a parameter if the receiving water is not also designated a Tier 3 water and if the applicable water quality criteria are exceeded for that parameter as demonstrated by one or more of the following:*
>
> *(A) the receiving water is listed under 33 U.S.C. 1313(d) (Clean Water Act, sec. 303(d)) for that parameter;*

(B) the department determines a Tier 1 protection level for that parameter based on information in the most recent state report issued under 33 U.S.C. 1315(b) (Clean Water Act, sec. 305(b));

(C) the department has previously issued a Tier 1 finding for that parameter in the water and is re-evaluating that finding; the water remains Tier 1 for the applicable parameter unless sufficient and credible information is provided for the department to review and determine that the protection level for the parameter should be revised;

The EPA approves 18 AAC 70.016(b)(4) as being consistent with 40 CFR 131.12 because Tier 2 methods for determining if a lowering of water is "necessary" are not applicable where a water is not high quality for a parameter. As explained in the EPA's July 7, 1998 ANPRM (63 FR 36742, 36781), "*In general, waters that are subject to only tier 1 antidegradation policies are those water bodies that do not exceed the CWA Section 101(a)(2) goals, or do not have assimilative capacity to receive additional quantities of a pollutant(s) without jeopardizing the existing use.*" Further lowering of water quality is not to be authorized if a water is not high quality (i.e., where assimilative capacity is not available) for the parameter in question. Alaska recognizes this at 18 AAC 70.016(b)(5)(C) of its Tier 1 implementation methods ("*the department will not authorize a discharge to a Tier 1 water unless the department finds that…the discharge will not cause water quality to be lowered further where… the parameter already exceeds applicable criteria…*;" see the EPA's approval of 18 AAC 70.016(b)(5)(C) at section IV.E of the EPA's support document).

2. High Quality Water Protection ("Tier 2") Applicability

This section presents discussion of Alaska's "parameter-by-parameter" approach to applying Tier 2 review, various discharge permitting scenarios that do and do not trigger a Tier 2 review, Alaska's general presumption of Tier 2, and the EPA's bases for approving those provisions as being consistent with the CWA and 40 CFR 131.12.

For the reasons discussed below, the EPA approves AAC 70.016(a)(3), 18 AAC 70.016(c), 18 AAC 70.016(c)(2), 18 AAC 70.016(c)(3), and 18 AAC 70.016(c)(1)(A) through (D), to the extent that they address Tier 2 applicability, as being consistent with 40 CFR 131.12(a)(2). As noted in the EPA's discussion of Alaska's Tier 1 applicability, Alaska's use of "exceed"/ "exceeded" in conjunction with water quality criteria is in the negative, e.g., "*…does not exceed the applicable criteria…"* is understood to mean that criteria are met (see "Antidegradation Implementation Methods Regulation Responsiveness Summary," ADEC, November 2017, Comment Summary 30). This results in Alaska implementing its Tier 2 provisions when water quality is better than necessary to meet applicable water quality criteria (and a lowering of that water quality would be authorized), which is consistent with the EPA's usage of "exceeds" in the positive at 40 CFR 131.12(a)(2).

Alaska's Tier 2 methods apply on a parameter-by-parameter basis when a discharge subject to the jurisdiction of the CWA would lower high quality water for a parameter. See 18 AAC 70.016(a)(3) ("*…antidegradation analyses and department findings for Tier 1 and Tier 2 protection levels are on a parameter-by-parameter basis…*"); 18 AAC 70.016(c) ("*Tier 2 applies when the water quality for a parameter in a water of the United States within this state does not exceed the applicable criteria under 18 AAC 70.020(b), 18 AAC 70.030, or 18 AAC 70.236(b)…*"); and 18 AAC 70.016(c)(2) ("*…if that*

discharge will lower or have the potential to lower water quality of Tier 2 water, the department will conduct a Tier 2 antidegradation analysis…").

The "applicable criteria" under 18 AAC 70.020(b), 18 AAC 70.030, and 18 AAC 70.236(b) are collectively the previously existing water quality criteria currently found in Alaska's water quality standards to protect Alaska's designated uses, and discharges specified in 18 AAC 70.016(a)(l) are discharges subject to APDES permits and discharges subject to CWA section 401certification (i.e., discharges regulated under the CWA). The EPA is not acting on the previously existing water quality criteria at 18 AAC 70.020(b), 18 AAC 70.030, and 18 AAC 70.236(b).

In addition to the water quality criteria at 18 AAC 70.020(b), 18 AAC 70.030, and 18 AAC 70.236(b), referenced in Alaska's implementation methods at 18 AAC 70.016(c) and in other parts of 18 AAC 70.016, there are currently applicable water quality criteria that the EPA has promulgated for Alaska in accordance with CWA section 303(c)(4)(B) and certain water quality criteria that remain applicable for CWA purposes in accordance with 40 CFR 131.21(c) because the EPA has not approved Alaska's adopted replacement. For example, certain federally promulgated human health water quality criteria for carcinogens are currently applicable in Alaska (40 CFR 131.36). ADEC explicitly recognizes this on its water quality standard's web page in a document titled "Comparison of State and Federally Approved Water Quality Standards." In that document ADEC explains that there can be differences between the "state approved standards" and the federally approved standards for CWA purposes, and lists (under "Federally Approved State Criteria") both federally promulgated criteria for Alaska and state adopted criteria that remain applicable because the EPA has not approved ADEC's adopted replacement. Additionally, the APDES implementing regulations at 18 AAC 83.435(a)(1) provide that APDES permits "*must include conditions…if necessary to achieve water quality standards established under 33 U.S.C 1313…*" Such water quality standards include those applicable in accordance with CWA section 303(c)(4)(B) or 40 CFR 131.21(c). For these reasons, the EPA believes that ADEC will also recognize any applicable water quality criteria in accordance with CWA section 303(c)(4)(B) and 40 CFR 131.21(c) when implementing its antidegradation policy.

Applying Tier 2 review requirements only where a discharge could lower water quality (cause degradation) 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., a finding that degradation is necessary to accommodate important economic or social development) only apply if a state is "*allowing lower water quality*." Application of Tier 2 on a "parameter-by-parameter" basis is also consistent with 40 CFR 131.12(a)(2) which explicitly provides that states may identify high quality waters using that approach (40 CFR 131.12(a)(2)(i), "*The State may identify waters for the protections described in paragraph (a)(2) of this section on a parameter-by-parameter basis…*").

In addition, 18 AAC 70.016(c)(2) and (3) of Alaska's implementation methods specify various discharge permitting scenarios that do and do not trigger a Tier 2 review:

> *(c)(2) when evaluating development of a license or general or individual permit for a discharge specified in (a)(l) of this section, and if that discharge will lower or have the potential to lower water quality of Tier 2 water, the department will conduct a Tier 2 antidegradation analysis and make findings for*

(A) a proposed new or expanded discharge; for a proposed expanded discharge under a reissued license or general or individual permit, a Tier 2 antidegradation analysis will only be conducted for the portion of the discharge that represents an increase from the existing, authorized discharge;

(B) an existing discharge that did not previously require authorization, if the applicant is proposing an expanded discharge;

(C) an existing discharge where a license or permit was previously required but had not been issued;

(D) a previously expired license or permit that had not been administratively extended; or

(E) a previously terminated discharge, if the applicant is seeking reauthorization;

(c)(3) the department will not conduct a Tier 2 antidegradation analysis for

(A) reissuance of a license or general or individual permit for a discharge that the applicant is not proposing to expand;

(B) issuance of a license or general or individual permit for an existing discharge that did not previously require authorization and that the applicant is not proposing to expand; or

(C) reissuance of an administratively extended license or permit, if the applicant is not proposing an expanded discharge;

18 AAC 70.016(c)(2)(A) provides that proposed new or expanded discharges are subject to a Tier 2 review and further provides that for proposed expanded discharges, only the portion of the discharge that would represent an increase from the existing authorized discharge is subject to a Tier 2 review. Section 18 AAC 70.016(c)(3)(A) conversely specifies that reissuance of a license or permit for a discharge that is not proposing to expand is not subject to a Tier 2 review.

In a July 7, 2011 memorandum addressing Tier 2 review in the context of NPDES permit reissuance where no new or increased discharge is authorized, the EPA clarified that a Tier 2 review is not required in cases where there is no new or increased discharge from previously authorized levels (see "Antidegradation Requirements for High Quality Waters and Reissuance of NPDES Permits that Do Not Authorize New or Increased Discharges," Ellen Gilinsky, Senior Policy Advisor in the EPA's Office of Water, to the EPA Region 10 Office of Water and Watersheds, July 7, 2011):

…it is reasonable for states to require Tier 2 antidegradation review only when an NPDES permitting authority reissues a permit that authorizes new or increased discharges relative to those authorized by the prior permit. The reissuance of a permit without increasing the permitted discharge limit should not be considered to automatically result in a lowering of water quality, even where actual discharges are below permitted limits, and where a formal Tier 2 antidegradation review has never occurred. ... Therefore a Tier 2 antidegradation review would

not be required when a permitting authority reissues a permit that does not authorize new or increased discharges because the permit reissuance would not authorize a lower water quality.

Thus, 18 AAC 70.016(c)(2)(A) and 18 AAC 70.016(c)(3)(A) are consistent with 40 CFR 131.12(a)(2) because it is appropriate for a state to conduct a Tier 2 review when a lowering of water quality would be authorized, and conclude that reissuance of a permit or license when there is no change in the authorized discharge does not authorize a lowering of water quality that requires a Tier 2 review.

Alaska's implementation methods also address existing dischargers that did not previously require authorization, that are proposing to expand and that are not proposing to expand, at 18 AAC 70.016(c)(2)(B) and 18 AAC 70.016(c)(3)(B), respectively. Existing dischargers that did *not* previously require authorization, but are applying for a license or permit for the first time because regulations or a court decision require that their discharges be authorized, do not generally need to undergo a Tier 2 review, as long as the discharger is not proposing to lower water quality beyond the quality that currently exists in the receiving water. In such cases, not requiring a Tier 2 antidegradation analysis is consistent with 40 CFR 131.12(a)(2) because the permitting authority is not authorizing "lower water quality," given that the discharge has been ongoing without the need for authorization – either by statute, regulation, or court decision. Consistent with the EPA's position here, 18 AAC 70.016(c)(3)(B) of Alaska's implementation methods specifies that a Tier 2 review is not required when a discharger coming under regulation for the first time is not proposing to expand. Also consistent with the EPA's position, Alaska's implementation methods at 18 AAC 70.016(c)(2)(B) appropriately require Tier 2 review for existing dischargers coming under regulation for the first time that are proposing to expand and lower water quality beyond that which currently exists in the receiving water (i.e., "…*the department will conduct a Tier 2 antidegradation analysis and make findings for… an existing discharge that did not previously require authorization, if the applicant is proposing an expanded discharge"*).

Alaska's approach to the additional discharge permitting scenarios listed at 18 AAC 70.016(c)(2) and (3) is also consistent with 40 CFR 131.12(a)(2). The EPA agrees that it would not be appropriate to allow dischargers that previously required authorization to discharge but were discharging without such license to be granted a permit or license for the first time without a Tier 2 antidegradation review, if they have been discharging to high quality waters. Nor would it be appropriate to reissue a permit for discharges to high quality waters without a Tier 2 antidegradation review where a permit had expired and not been administratively extended. Furthermore, it would be inappropriate to exclude from Tier 2 review any discharger that had terminated its discharge at some previous time and was now seeking reauthorization, since at the time of the new permit issuance its loading would not have been accounted for. Alaska's implementation methods appropriately require a Tier 2 review in each of these scenarios, at 18 AAC 70.016(c)(2)(C), (D), and (E), respectively. Where a permit has been administratively continued, the EPA believes it would not need to undergo Tier 2 review as long as no new or increased discharge is proposed. Consistent with the EPA's position, 18 AAC 70.016(c)(3)(C) of Alaska's implementation methods specifies that a Tier 2 review is not required in this scenario.

18 AAC 70.016(c)(1)(A) - (C) of Alaska's implementation methods provide that a water is presumed to be Tier 2 unless the water is listed in accordance with CWA section 303(d) as impaired for the parameter in question, or other information indicates impairment or an absence of available assimilative capacity for the parameter. Section 18 AAC 70.016(c)(1)(D) appropriately recognizes that the Tier 2

methods for determining if a lowering of water quality may be authorized are not applicable to Tier 3 waters. Below is the full text of 18 AAC 70.016(c)(1)(A) through (D):

> *(c)(1) Tier 2 is presumed for all water as the default protection level for all parameters unless*
>
> *(A) the water is listed under 33 U.S.C. 1313(d) (Clean Water Act, sec. 303(d)) for the applicable parameter;*
>
> *(B) the department determines a Tier 1 protection level for the applicable parameter based on information in the most recent state report issued under 33 U.S.C. 1315(b) (Clean Water Act, sec. 305(b));*
>
> *(C) available evidence is provided for department review to determine if a parameter is only subject to Tier 1 analysis and the department finds that*
>
> *(i) the applicable parameter level persistently exceeds water quality criteria in 18 AAC 70.020(b), 18 AAC 70.030, or 18 AAC 70.236(b); and*
>
> *(ii) the failure to have water quality that does not exceed applicable criteria is not the result of a permit violation for discharge to the receiving water, unlawful discharge from a nonpoint source, or a spill; or*
>
> *(D) the water is designated Tier 3;*

While a state may begin with a presumption of Tier 2, particularly when it has an abundance of high quality waters, authorization of new loadings and a lowering of water quality should not occur without knowledge of whether there is sufficient assimilative capacity to allocate for the parameter(s) in question. The requirements to meet water quality criteria applicable to Alaska's waters and to provide water quality necessary to protect existing uses imply a need to understand whether there is remaining assimilative capacity to allocate to proposed new or increased discharges. Alaska's Tier 2 review methods provide that ADEC will not authorize a lowering of water quality unless applicable water quality criteria will be met (see discussion of 18 AAC 70.016(c)(7)(A) at section IV.F.6 of the EPA's support document).

Ensuring that waters will not be "over allocated" if additional pollutant loadings are authorized may require modeling to characterize water quality effects that cannot be measured in the receiving water, such as the effects of authorized loadings that are not occurring and effects from proposed new loadings. 18 AAC 70.016(a)(5) and (6) of Alaska's implementation methods address Alaska's authority to obtain such information. For example, 18 AAC 70.016(a)(6) provides that were necessary "*the applicant shall submit…baseline water quality information for the receiving water in order for the department to determine the applicable tier protection level and the assimilative capacity of the receiving water…*" Alaska's Tier 2 methods at 18 AAC 70.016(c)(4)(A) and (B) reference the 18 AAC 70.016(a)(5) and (6) information requirements. 18 AAC 70.016(a)(5) and (6), and 18 AAC 70.016(c)(4)(A) and (B), are addressed at section IV.D of the EPA's support document.

3. Outstanding National Resource Water ("Tier 3") Applicability

For the reasons discussed below, the EPA approves the portion of 18 AAC 70.016(a)(3) addressing Tier 3 applicability and the provisions of 18 AAC 70.016(d) and (d)(1) as being consistent with 40 CFR 131.12(a)(3).

18 AAC 70.016(d) provides that the applicability of ONRW/Tier 3 protection in Alaska requires that a water be designated as an ONRW ("*Tier 3 applies to a designated water, and upon designation receives the protection under 18 AAC 70.015(a)(3)…*;" 18 AAC 70.015(a)(3) is the previously existing ONRW provision of Alaska's antidegradation policy). Tier 3 applicability is also addressed at 70.016(a)(3) ("*analysis and department findings for Tier 3 water are on a basis of a designated water*"). The EPA approves the cited language at 18 AAC 70.016(a)(3) and 18 AAC 70.016(d) as being consistent with 40 CFR 131.12(a)(3) because the EPA's interpretation of the federal ONRW policy recognizes that ONRW protection requires explicit designation (see the EPA's July 7, 1998, ANPRM, 63 FR 36742, 36786, section III.D.5.a "Designating ONRWs").

In addition, 18 AAC 70.016(d)(1) of Alaska's implementation methods specifies various discharge permitting scenarios that are subject to a Tier 3 review:

> *(d)(1) for all discharges specified in (a)(l) of this section to a Tier 3 or tributary to a Tier 3 water that will degrade or have the potential to degrade the existing water quality of a Tier 3 water the department will conduct a Tier 3 antidegradation analysis and make findings when reviewing*
>
> *(A) a proposed new or expanded discharge;*
>
> *(B) an existing discharge that did not previously require authorization, if the applicant is proposing an expanded discharge;*
>
> *(C) an existing discharge where a license or permit was previously required but had not been issued;*
>
> *(D) a discharge with a previously expired license or permit that had not been administratively extended; or*
>
> *(E) a previously terminated discharge, if the applicant is seeking reauthorization;*

The EPA approves the provisions at 18 AAC 70.016(d)(1) as being consistent with 40 CFR 131.12(a)(3) because they provide that ADEC will conduct a Tier 3 antidegradation analysis for discharges regulated under the CWA that would add loadings to an ONRW that are not currently authorized, regardless of whether there is a discharge directly to an ONRW or a discharge to a tributary to an ONRW. Furthermore, 18 AAC 70.016(d)(4)(A) provides that upon conducting a Tier 3 analysis, ADEC will not authorize a discharge to a Tier 3 water or tributary to a Tier 3 water unless any lowering of water quality would be temporary and limited.

In its July 7, 1998 ANPRM (63 FR 36742, 36785-87), the EPA explained that it has interpreted the "*water shall be maintained and protected*" provision of 40 CFR 131.12(a)(3) as requiring "*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," with the only exception being for short-term and temporary lowering of water quality. The EPA has generally defined "temporary and short term" degradation in terms of "weeks and months, not years" (see 63 FR 36742, 36785-87 and the EPA's Water Quality Standards Handbook, EPA-823-B-12-002, 2012, section 4.7). The EPA's approval of 18 AAC 70.016(d)(4)(A) and other provisions of Alaska's Tier 3 review process are at section IV.G of the EPA's support document.

C. <u>Exceptions where ADEC will not make an antidegradation analysis and finding</u>

This section presents the EPA's basis for approving 18 AAC 70.016(a)(2)(A) through (D) of Alaska's implementation methods which provide four circumstances where ADEC will not make an antidegradation analysis and finding in accordance with its antidegradation policy at 18 AAC 70.015.

1. Restoration Projects

Alaska's implementation methods at 18 AAC 70.016(a)(2)(A) provide that ADEC will not make an antidegradation analysis and findings for "temporary and limited" lowering of water quality associated with activities proposed for the express purpose of watershed protection or restoration:

> *(a)(2) the department will not make an antidegradation analysis and findings for*
>
> *(A) activities proposed for the express purpose of watershed protection or restoration if the applicant supplies information and the department finds that the antidegradation analysis is not required because the lowering of water quality would be temporary and limited and is necessary to secure long-term water quality improvement, including projects for the protection or attainment of existing and designated uses in water where the department determines that those uses have been impaired or threatened due to the loss or diminishment of the water's natural characteristics; projects under this subparagraph shall implement all department-required practicable best management practices;*

For the reasons discussed below, the EPA approves 18 AAC 70.016(a)(2)(A) as being consistent with the objective of the CWA at section 101(a) and complementary to, and consistent with, the purpose of 40 CFR 131.12 (also see the EPA's discussion and approval of 18 AAC 70.016(f), "Temporary and limited degradation of water quality" at section IV.I of the EPA's support document).

The EPA recognizes the ability for states to allow "temporary and short-term" degradation in the course of ensuring that the water quality of ONRWs (i.e., Tier 3, the most stringent level of water quality protection in the federal antidegradation policy), is maintained and protected (see 63 FR 36742, 36785-87 and EPA's "Water Quality Standards Handbook," EPA-823-B-12-002, 2012, section 4.7). In the preamble to its November 8, 1983 water quality standards regulation (48 FR 51400, 51403), the EPA explained that 40 CFR 131.12(a)(3) was revised to provide a limited exception to the "absolute 'no degradation'" requirement, to allow some limited activities which result in temporary and short term changes in water quality, because the EPA was concerned that waters were not being designated as ONRWs due to the "flat no degradation" provision. As discussed in the EPA's WQS Handbook, section 4.7, ONRWs are intended to include the highest quality waters of the United States. Such waters often

have characteristics that are essentially representative of natural conditions. Section 18 AAC 70.016(a)(2)(A) is applicable to projects that are intended to restore a water's natural characteristics. For the above reasons, the EPA believes that 18 AAC 70.016(a)(2)(A) is consistent with ONRW protection at 40 CFR 131.12(a)(3).

The EPA believes that it is reasonable to apply a similar rationale to exempt from Tier 2 review temporary degradation associated with restoration projects, because Tier 2 is a less stringent level of water quality protection than Tier 3. Alaska's exemption applies for potential temporary degradation, which is interim to securing "*long term water quality improvement*" and is, therefore, consistent with both the federal antidegradation policy at 40 CFR 131.12(a)(2) and the CWA section 101(a) objective to "*…restore and maintain…the Nation's waters*." The substantive Tier 2 review requirements of 40 CFR 131.12(a)(2) apply if the State is allowing lower water quality. Here, the activity is intended to ultimately result in a net improvement to higher water quality (not lower water quality). Furthermore, 18 AAC 70.016(a)(2)(A) provides for implementation of best management practices (BMP) to reduce temporary lowering of water quality during restoration projects ("*projects under this subparagraph shall implement all department-required practicable best management practices.*"). Alaska's definition of the phrase "temporary and limited," which is used at 18 AAC 70.016(a)(2)(A), also provides for implementation of measures to minimize degradation ("*The department will allow the activity only after all practicable means are implemented to minimize the degradation*"). The EPA notes that where "*uses have been impaired or threatened due to the loss or diminishment of the water's natural characteristics*" it is possible that the water would not be high quality, and Tier 2 would not be applicable, anyway, for the parameter(s) in question.

The EPA believes that the intent of 18 AAC 70.016(a)(2)(A) to restore water quality "*for the protection or attainment of existing and designated uses*," where they "*have been impaired or threatened due to the loss or diminishment of the water's natural characteristics*," is consistent with the CWA 101(a) objective and is complementary to, and consistent with, the underlying intent of existing use protection at 40 CFR 131.12(a)(1).

"*Activities proposed for the express purpose of watershed protection or restoration*," to ultimately secure long-term water quality improvement where degradation has previously occurred, are distinguishable from traditionally regulated discharges that by their nature are intended to dispose of pollutants and would cause water quality degradation without any intent to improve water quality. The antidegradation provisions of 40 CFR 131.12 are intended to address the latter, that is to prevent or limit degradation of water quality from such traditionally regulated discharges, and are not intended to impede efforts to restore water quality and uses towards their natural characteristics. In a letter of September 5, 2008, explaining that 40 CFR 131.10(g) is not intended to apply to situations where removal of an existing use would facilitate attainment of a use closer to those supported by a water's natural or "minimally impacted conditions," EPA stated : "*The intent of the regulation is to further the objective of the CWA 'to restore and maintain the chemical, physical, and biological integrity' of the nation's waters (CWA section 101(a)), not to prevent actions that make the waterbody more like its minimally impacted condition.*" (see "Denise Keehner, Director EPA's Standards and Health Protection Division to Derek Smithee, Oklahoma Water Resources Board," September 5, 2008).

It is also important to recognize that 18 AAC 70.016(a)(2)(A) is specific to antidegradation and does not authorize exceedances of water quality criteria established to protect designated uses. Moreover, as

stated above, 18 AAC 70.016(a)(2)(A) provides for implementation of BMPs. The EPA believes it is reasonable to expect that implementation of BMPs would seek to minimize both the magnitude and the duration of temporary degradation. Finally, and most importantly, the ultimate intent of the project is that any degradation would be reversed and water quality would be improved to better than pre-project conditions.

2. Emergency Response Actions

Alaska's implementation methods at 18 AAC 70.016(a)(2)(B) provide that ADEC will not make an antidegradation analysis and findings for certain emergency response actions, provided that "*any lowering of water quality is temporary and limited and existing uses are maintained and protected*":

> *(a)(2) the department will not make an antidegradation analysis and findings for*
>
> *(B) emergency response actions under the direction of a federal or state on-scene coordinator, designated under 33 U.S.C. 1321, AS 46.04.020, or AS 46.09.020, if any lowering of water quality is temporary and limited and existing uses are maintained and protected;*

For the following reasons, the EPA approves the language cited above from 18 AAC 70.016(a)(2)(B) as being consistent with 40 CFR 131.12.

The applicability of 18 AAC 70.016(a)(2)(B) is limited in scope, as well as in time, in accordance with Alaska's definition of "temporary and limited" (see the EPA's discussion and approval of 18 AAC 70.016(f) at section IV.I of the EPA's support document). As discussed previously, the EPA recognizes the ability for states to allow "temporary and short-term" degradation in the course of ensuring that the water quality of ONRWs (i.e., Tier 3, the most stringent level of water quality protection in the federal antidegradation policy), is maintained and protected (see 63 FR 36742, 36785-87 and EPA's "Water Quality Standards Handbook," EPA-823-B-12-002, 2012, section 4.7). Thus, the EPA believes that it is reasonable to provide for a similar exception in Tier 2 waters because Tier 2 is a less stringent level of water quality protection than Tier 3. Furthermore, the applicability of 18 AAC 70.016(a)(2)(B) is dependent on existing uses being maintained and protected. The requirement that existing uses be maintained and protected is incorporated into to the language of 18 AAC 70.016(a)(2)(B).

The EPA is not acting on the following portion of 18 AAC 70.016(a)(2)(B), which follows the language cited and approved above:

> *…the responsible party whose actions or lack of action necessitated an emergency response action shall address any lowering of water quality that is not temporary and limited; existing law may be used to address restoration, rehabilitation, replacement, or acquisition of the equivalent for the affected natural resources, including long-term water quality impacts;*

The EPA reads these provisions to simply be a statement that the "responsible party" must address any degradation that is not temporary and limited, and a statement addressing how such degradation may be addressed in accordance with applicable law, rather than an authorization of degradation beyond Alaska's approved definition of temporary and limited or a waiver of the requirement to maintain and protect existing uses. Rather than stating a desired water quality condition for waters, the language

addresses inconsistency with a desired condition. Such provisions are of an enforcement nature and therefore are not water quality standards subject to EPA action in accordance with CWA section 303(c) (see "What is a New or Revised Water Quality Standard under 303(c)(3), Frequently Asked Questions," October 2012, EPA Publication No. 820F12017).

3. Waived CWA Section 401 Certification

Alaska's implementation methods at 18 AAC 70.016(a)(2)(C) provide that ADEC will not make an antidegradation analysis and findings in cases where the department has waived CWA section 401 certification:

> *(a)(2) the department will not make an antidegradation analysis and findings for*
>
> *(C) 33 U.S.C. 1341 (Clean Water Act, sec. 401) certifications where the department has waived certification under 33 U.S.C. 1341(a); this subparagraph does not alter federal agencies' existing obligations under 40 C.F.R. 230. l0(b)(l) to issue permits in compliance with state water quality standards, including antidegradation provisions; or*

The EPA approves 18 AAC 70.016(a)(2)(C) as being consistent with CWA section 401 as described by the following statements excerpted from the EPA's CWA Section 401 Handbook, 2010, and as discussed below:

> *Clean Water Act (CWA) §401 water quality certification provides states and authorized tribes with an effective tool to help protect water quality, by providing them an opportunity to address the aquatic resource impacts of federally issued permits and licenses.*
>
> *Under §401, a federal agency cannot issue a permit or license for an activity that may result in a discharge to waters of the U.S. until the state or tribe where the discharge would originate has granted or waived §401 certification.*
>
> *Waiver allows the permit or license to be issued without state or tribal comment.*
>
> *States and tribes are authorized to waive §401 certification, either explicitly, through notification to the applicant, or by the certification agency not taking action.*
>
> *Under the CWA, waiver does not indicate a state or tribe's substantive opinion regarding the water quality implications of a proposed activity or discharge. A state or tribe may waive certification for a variety of reasons, including a lack of resources to evaluate the application. Waiver merely means the federal permitting or licensing agency may continue with its own application evaluation process and issue the license or permit in the absence of an affirmative state or tribal certification.*

States have the authority to waive certification in accordance with CWA section 401 and "*waiver does not indicate a state or tribe's substantive opinion regarding the water quality implications of a proposed activity or discharge."* Thus, when 401 certification is waived, ADEC would not be expected to provide an antidegradation analysis and findings. Furthermore, such a waiver of 401 certification does not

change applicable laws and regulations, i.e., "*Waiver merely means the federal permitting or licensing agency may continue with its own application evaluation process and issue the license or permit in the absence of an affirmative state or tribal certification.*" Alaska's provision, "*this subparagraph does not alter federal agencies' existing obligations under 40 C.F.R. 230. l0(b)(l) to issue permits in compliance with state water quality standards, including antidegradation provisions*," is therefore also consistent with CWA section 401.

4. Revisions to 18 AAC 70

Alaska's implementation methods at 18 AAC 70.016(a)(2)(D) provide that ADEC will not make an antidegradation analysis and findings when amending 18 AAC 70, e.g., when adopting new or revised water quality standards:

> *(a)(2) the department will not make an antidegradation analysis and findings for*
>
> *(D) amendments to this chapter, including amendments to the water use classes and subclasses, amendments to water quality criteria, adoption of site-specific criteria, and the reclassification of waters;*

The EPA approves 18 AAC 70.016(a)(2)(D) as being consistent with 40 CFR 131.12 because the federal antidegradation policy is implemented at the time when a discharge or an activity that may result in a discharge is being evaluated for permit issuance or CWA section 401 certification. The EPA does not interpret 40 CFR 131.12 as applying to either a state's or tribe's review and adoption of water quality standards, or the EPA's review and CWA section 303(c)(3) action on a state's or tribe's new or revised water quality standards. This position is consistent with case law. In 2012, the Alaska District Court found that "…in light of the intent expressed by Congress as it is apparent in the full statutory scheme and legislative history, and alternatively, EPA's persuasive interpretation, the Court concludes that antidegradation review is required for revisions to effluent limitations based on water quality standards, and not for revisions to water quality standards, themselves". *Native Village of Point Hope v. EPA*, 2012 U.S. Dist. LEXIS 190848 at *33 (D. Alaska Sept. 14, 2012).

D. Information Required to Complete an Antidegradation Analysis

18 AAC 70.016(a)(5) and 18 AAC 70.016(a)(6) of Alaska's implementation methods address the collection of discharge and receiving water information necessary to complete an antidegradation analysis under 18 AAC 70.016(b), (c), and (d), i.e., Tiers 1, 2, and 3, respectively. 18 AAC 70.016(a)(5) specifies certain required information, with a focus on proposed discharges, and includes a requirement that the applicant provide "*any additional information as requested by the department.*" 18 AAC 70.016(a)(6) requires the applicant to provide information, if requested by ADEC, concerning baseline water quality of the receiving water "*in order for the department to determine the applicable tier protection level and the assimilative capacity of the receiving water*." Each tier of protection has a corresponding reference to these information requirements, at 18 AAC 70.016(b)(3), 18 AAC 70.016(c)(4)(A) and (B), and 18 AAC 70.016(d)(2)(A) and (B), for Tiers 1, 2, and 3, respectively. Tier 3 also has its own requirements for information regarding discharge quality and effects on Tier 3 waters, at 18 AAC 70.016(d)(2)(C) and (D).

The EPA approves the provisions of 18 AAC 70.016(a)(5), 18 AAC 70.016(a)(6), 18 AAC 70.016(b)(3), 18 AAC 70.016(c)(4)(A) and (B), and 18 AAC 70.016(d)(2)(A) – (D) as being consistent with 40 CFR 131.12 because they ensure that antidegradation decisions in Alaska can be based on appropriate discharge and receiving water information, including information on a water's assimilative capacity.

The full text of the provisions at 18 AAC 70.016(a)(5), 18 AAC 70.016(a)(6), and 18 AAC 70.016(d)(2) is presented below (18 AAC 70.016(b)(3) and 18 AAC 70.016(c)(4)(A) and (B) simply reference 18 AAC 70.016(a)(5) and (6) and are not replicated here):

> *(a)(5) the applicant shall submit sufficient information to complete an antidegradation analysis under (b), (c), and (d) of this section on department-approved forms; the department will review and determine whether the information is sufficient; information required for department review must include*
>
> *(A) identification of the receiving water, including the geographic extent potentially affected by the proposed discharge;*
>
> *(B) a description of the project purpose;*
>
> *(C) the type of facility, activity, and discharge;*
>
> *(D) the discharge rate;*
>
> *(E) parameters of concern in the discharge and the respective concentrations, persistence, and potential impacts to the receiving water;*
>
> *(F) data on parameters that may alter the effects of the discharge to the receiving water;*
>
> *(G) which tier should apply for each parameter of concern, if applicable; and*
>
> *(H) any additional information as requested by the department;*
>
> *(a)(6) if determined necessary by the department the following baseline water quality provisions apply:*
>
> *(A) the applicant shall submit sufficient and credible baseline water quality information for the receiving water in order for the department to determine the applicable tier protection level and the assimilative capacity of the receiving water, including the capacity to accommodate future development activities or multiple discharges;*
>
> *(B) the level of baseline water quality data necessary for department review must be relative to the size of the project, characteristics of the proposed discharge, and the characteristics of the receiving water including special management or habitat designations, as applicable; and*

(C) when evaluating whether the information submitted is sufficient and credible or whether additional information may be required, the department will consider all relevant factors, including

(i) the sensitivity of the receiving water to degradation of existing or designated uses;

(ii) the types of parameters of concern in the proposed discharge;

(iii) the available dilution or assimilative capacity of the receiving water for the proposed discharge, including the impacts of authorized discharges;

(iv) representativeness of any surrogate water information proposed for baseline water quality relative to the receiving water under review, including geographic, hydrologic, geologic, water use, and water quality characteristics;

(v) the validity of any baseline concentrations assumed to be below detection levels;

(vi) the quantity, date of analysis, analytical method, detection level, and spatial and temporal scope of any submitted data; and

(vii) whether the data considers applicable seasonal or natural variability.

(d)(2) the applicant shall submit sufficient and credible information in support of the application; information required for department review must include

(A) information required under (a)(5) of this section;

(B) applicable baseline water quality information requested under (a)(6) of this section for the Tier 3 water where the proposed discharge is to a Tier 3 water, and for the Tier 3 water and the receiving water where the proposed discharge is to a water tributary to the Tier 3 water and will degrade or potentially degrade the existing quality of a Tier 3 water;

(C) information on the quality of the existing or proposed expanded discharge to the Tier 3 water; and

(D) information on the effect of the proposed new or expanded discharge to the water quality of the Tier 3 water;

E. <u>Existing Use Protection (Tier 1) Review</u>

Alaska's implementation methods at 18 AAC 70.016(b)(5) provide the following regarding the method for identifying existing uses and the water quality necessary for their protection:

(b)(5) the department will not authorize a discharge to a Tier 1 water unless the department finds that

(A) existing uses and the water quality necessary for protection of existing uses have been identified based on available evidence, including water quality and use related data, information submitted by the applicant, and water quality and use related data and information received during public comment;

(B) existing uses will be maintained and protected; and

(C) the discharge will not cause water quality to be lowered further where the department finds that the parameter already exceeds applicable criteria in 18 AAC 70.020(b), 18 AAC 70.030, or 18 AAC 70.236(b).

For the reasons discussed below, the EPA approves the provisions at 18 AAC 70.016(b)(5) as being consistent with 40 CFR 131.12(a)(1).

18 AAC 70.016(b)(5)(A) of Alaska's implementation methods provides that existing uses and the water quality necessary for their protection are to be identified "*...based on available evidence, including water quality and use related data, information submitted by the applicant, and water quality and use related data and information received during public comment*." This is consistent with the EPA's position as stated in a letter of September 5, 2008, responding to questions concerning existing uses, i.e., "*…EPA interprets the definition of "existing use" to require consideration of the available data and information on both actual use and water quality*…" (See "Denise Keehner, Director EPA's Standards and Health Protection Division to Derek Smithee, Oklahoma Water Resources Board," September 5, 2008). The EPA approves 18 AAC 70.016(b)(5)(A) of Alaska's implementation methods as being consistent with 40 CFR 131.12(a)(1) because it provides that ADEC will utilize available information, consistent with the EPA's position stated above, including water quality and use related information submitted during the opportunity for public comment, to ensure that existing uses are identified and protected.

Consistent with 18 AAC 70.015(1) of Alaska's Antidegradation policy, 18 AAC 70.016(b)(5)(B) of Alaska's implementation methods provides that ADEC will not authorize a discharge to a Tier 1 water, which includes all waters of the U.S. within Alaska in accordance with 18 AAC 70.016(b), unless "*existing uses will be maintained and protected*." The EPA approves 18 AAC 70.016(b)(5)(B) because it is consistent with 40 CFR 131.12(a)(1) which requires protection of existing uses.

In addition to the requirement to protect existing uses, 18 AAC 70.016(b)(5)(C) of Alaska's implementation methods provides that ADEC will not authorize a discharge to a Tier 1 water unless "*…the discharge will not cause water quality to be lowered further where the department finds that the parameter already exceeds applicable criteria…*" Independent of the antidegradation requirements of 40 CFR 131.12, states are to adopt designated uses consistent with the uses specified at section 101(a)(2) of the CWA, where attainable, and adopt water quality criteria that protect those designated uses (see 40 CFR 131.10 and 131.11, respectively). Such water quality criteria are to be met regardless of whether the designated use is also an existing use. The EPA approves section 18 AAC 70.016(b)(5)(C) because its requirement that water quality is not to be lowered further where a parameter already exceeds applicable criteria (i.e. where water quality criteria are already not met) is consistent with 40 CFR 131.11 and 131.12.

Also, consistent with the requirement to maintain water quality that meets criteria, neither could a lowering of water quality be authorized that would cause criteria to be exceeded. Alaska's Tier 2 methods are applicable where water quality is better than necessary to meet criteria (i.e., where assimilative capacity is available) and are explicit that a lowering of water quality that would cause criteria to be exceeded may not be authorized (see the EPA's discussion of water quality criteria applicable to Alaska and the EPA's discussion and approval of 18 AAC 70.016(c)(7)(A), at sections IV.B.2 and IV.F.6 of the EPA's support document, respectively).

F. High Quality Water Protection (Tier 2) Review

This section presents the EPA's basis for approving each component of Alaska's Tier 2 review methods, i.e., analysis of alternatives to determine if a lowering of water quality is necessary; analysis to determine if a proposed activity would provide important economic or social development in the area in which the affected waters are located; method for public participation and intergovernmental coordination; method for ensuring that the highest statutory and regulatory requirements for point sources are achieved and cost-effective and reasonable BMPs are achieved for nonpoint sources; recognition that in allowing any lowering of water quality under Tier 2, existing uses must be protected; recognition that in allowing any lowering of water quality under Tier 2, water quality must be maintained at levels that meet water quality criteria; and consistency with 40 CFR 131.12(a)(4).

1. Analysis of alternatives to determine if a lowering of water quality is necessary

The federal antidegradation policy at 40 CFR 131.12(a)(2) specifies that a state may allow lower water quality only if it finds that the following two conditions are satisfied: 1) the activity that would lower water quality provides "important economic or social development" and 2) lower water quality is "necessary to accommodate" such development.

Satisfying the second condition involves an analysis of alternatives in accordance with 40 CFR 131.12(a)(2)(ii) as follows:

> (a)(2)*(ii) Before allowing any lowering of high water quality, pursuant to paragraph (a)(2) of this section, the State shall find, after an analysis of alternatives, that such a lowering is necessary to accommodate important economic or social development in the area in which the waters are located. The analysis of alternatives shall evaluate a range of practicable alternatives that would prevent or lessen the degradation associated with the proposed activity. When the analysis of alternatives identifies one or more practicable alternatives, the State shall only find that a lowering is necessary if one such alternative is selected for implementation.* (emphasis added)

The term "practicable" as used at 40 CFR 131.12(a)(2)(ii) is defined at 40 CFR 131.3(n):

> *(n) Practicable, in the context of § 131.12(a)(2)(ii), means technologically possible, able to be put into practice, and economically viable.*

Alaska's implementation methods address an analysis of alternatives to determine whether lowering water quality is "necessary" at 18 AAC 70.016(c)(4), 18 AAC 70.016(c)(6), and 18 AAC 70.016(c)(7)(D):

> *(c)(4) for a discharge specified in (a)(l) of this section, the applicant shall submit sufficient information in support of the application; the amount of information and level of detail necessary must be relative to the size of the project or facility, the characteristics of the proposed discharge, and the characteristics of and potential risk to the receiving water; information required for department review includes…*
>
> *(C) a description and analysis of a range of practicable alternatives that have the potential to prevent or lessen the degradation associated with the proposed discharge;*
>
> *(D) identification of receiving water quality and accompanying environmental impacts on the receiving water for each of the practicable alternatives in (C) of this paragraph;*
>
> *(E) evaluation of the cost for each of the practicable alternatives in (C) of this paragraph, relative to the degree of water quality degradation;*
>
> *(F) identification of a proposed practicable alternative that prevents or lessens water quality degradation while also considering accompanying cross-media environmental impacts; if the applicant has selected a non-degrading alternative, the social or economic importance analysis in (G) of this paragraph is not required;*
>
> *(c)(6) the department may require the analysis of specific alternatives or request additional information that the department determines necessary to assess the submitted alternatives analysis, …;*
>
> *(c)(7) if, after review of available evidence, the department finds that the proposed discharge will lower water quality in the receiving water, the department will not authorize a discharge unless the department finds that*
>
> *(D) the alternatives analysis provided under (4)(C) - (F) of this subsection demonstrates that*
>
> > *(i) a lowering of water quality under 18 AAC 70.015(a)(2)(A) is necessary; when one or more practicable alternatives that would prevent or lessen the degradation associated with the proposed discharge are identified, the department will select one of the alternatives for implementation; and*
> >
> > *(ii) the methods of pollution prevention, control, and treatment applied to all waste and other substances to be discharged are found by the department to be the most effective and practicable;*

Alaska has a previously existing, unrevised, definition of "practicable" at 18 AAC 70.990(48):

(48) "practicable" means available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes;

For the reasons discussed below, the EPA approves the provisions at 18 AAC 70.016(c)(4), 18 AAC 70.016(c)(6), and 18 AAC 70.016(c)(7)(D) because they require a determination that a lowering of water quality is necessary be based on an analysis of practicable alternatives, consistent with 40 CFR 131.12(a)(2).

The EPA is not reviewing and acting in accordance with CWA section 303(c) on Alaska's previously existing definition of practicable because it is not a new or revised water quality standard. The EPA does, nevertheless, believe that Alaska's definition of practicable at 18 AAC 70.990(48) can be read as being consistent with EPA's definition of practicable at 40 CFR 131.3(n).

Consistent with 40 CFR 131.12(a)(2)(ii), Alaska's implementation methods require an analysis of practicable alternatives and specify that, where identified, one such alternative that would prevent or lessen degradation must be selected for implemented. See 18 AAC 70.016(c)(4)(C) ("*information required for department review includes…a description and analysis of a range of practicable alternatives that have the potential to prevent or lessen the degradation associated with the proposed discharge*") and 18 AAC 70.016(c)(7)(D)(i) ("…*when one or more practicable alternatives that would prevent or lessen the degradation associated with the proposed discharge are identified, the department will select one of the alternatives for implementation*").

In addition, 18 AAC 70.016(c)(7)(D)(ii) provides direction regarding ADEC's selection of the alternative for implementation ("*the methods of pollution prevention, control, and treatment applied to all waste and other substances to be discharged are found by the department to be the most effective and practicable*"). Sections 18 AAC 70.016(c)(4)(D) and (E) address information useful in the evaluation and comparison of alternatives, i.e., the analysis must identify the receiving water impacts of each alternative and evaluate the cost of each alternative relative to the degree of water quality degradation.

18 AAC 70.016(c)(4)(F) further provides for the consideration of cross-media impacts when identifying a practicable alternative that prevents or lessens water quality degradation. In the preamble to the current federal antidegradation policy, the EPA explained that it chose not to require implementation of the least degrading practicable alternative to allow states and authorized tribes the flexibility to balance multiple considerations, such as negative environmental impacts on air and land. The EPA recommended that states and authorized tribes "*consider cross-media impacts and, where possible, seek alternatives that minimize degradation of water quality and also minimize other environmental impacts*" (80 FR 51020; 51032-33, August 21, 2015).

18 AAC 70.016(c)(4)(F) provides that a finding of important economic or social development is not necessary, if the analysis of alternatives results in the applicant choosing a non-degrading alternative ("*if the applicant has selected a non-degrading alternative, the social or economic importance analysis in (G) of this paragraph is not required;*"). This is consistent with 40 CFR 131.12(a)(2) because the requirement that a lowering of water quality be "necessary to accommodate important economic or social development" is not relevant if water quality will not be lowered. A "non-degrading alternative" would not be expected to lower water quality.

Finally, 18 AAC 70.016(c)(6) provides ADEC with the ability to ensure that appropriate alternatives are evaluated ("*the department may require the analysis of specific alternatives or request additional information that the department determines necessary to assess the submitted alternatives analysis…"*).

2. Analysis to determine if a proposed activity would provide important economic or social development in the area in which the affected waters are located

Alaska's implementation methods address the determination of whether a proposed activity, that would lower water quality, would provide important economic or social development, at 18 AAC 70.016(c)(4)(G), 18 AAC 70.016(c)(5)(A) and (B), 18 AAC 70.016(c)(6), and 18 AAC 70.016(c)(7)(E):

> *(c)(4) for a discharge specified in (a)(l) of this section, the applicant shall submit sufficient information in support of the application; …information required for department review includes…*
>
> *(G) an analysis that supports the accommodation of important social or economic development in the area where the receiving water is located, for the proposed discharge that will lower or has the potential to lower water quality;*
>
> *(c)(5) to demonstrate under (4)(G) of this subsection the accommodation of important social or economic development, the applicant shall complete either*
>
> *(A) a social importance analysis identifying each affected community in the area where the receiving water for the proposed discharge is located and demonstrating that a lowering of water quality accommodates important social development under 18 AAC 70.015(a)(2)(A), including in one or more of the following areas:*
>
> *(i) community services provided;*
> *(ii) public health or safety improvements;*
> *(iii) infrastructure improvements;*
> *(iv) education and training;*
> *(v) cultural amenities;*
> *(vi) recreational opportunities; or*
>
> *(B) an economic importance analysis identifying each affected community in the area where the receiving water for the proposed discharge is located and demonstrating that a lowering of water quality accommodates important economic development under 18 AAC 70.015(a)(2)(A), including in one or more of the following areas:*
>
> *(i) employment, job availability, and salary impacts;*
> *(ii) tax base impacts;*
> *(iii) expanded leases and royalties;*
> *(iv) commercial activities;*
> *(v) access to resources;*
> *(vi) access to a transportation network;*

(c)(6) the department may…request additional information that the department determines necessary to assess the submitted…social importance analysis, or economic importance analysis;

(c)(7) if, after review of available evidence, the department finds that the proposed discharge will lower water quality in the receiving water, the department will not authorize a discharge unless the department finds that

(E) except if not required under (4)(F) of this subsection, the social or economic importance analysis provided under (4)(G) and (5) of this subsection demonstrates that a lowering of water quality accommodates important social or economic development under 18 AAC 70.015(a)(2)(A);

For the reasons discussed below, the EPA approves the provisions at 18 AAC 70.016(c)(4)(G), 18 AAC 70.016(c)(5)(A) and (B), 18 AAC 70.016(c)(6), and 18 AAC 70.016(c)(7)(E) as being consistent with 40 CFR 131.12(a)(2).

In its July 7, 1998 ANPRM (63 FR 36742, 36784), the EPA explained that absent important social or economic benefit, degradation under 40 CFR 131.12(a)(2) must not be allowed and listed the following as examples of factors that may be assessed in determining if an activity would provide such a benefit: "*(a) employment (i.e., increasing, maintaining, or avoiding a reduction in employment), (b) increased production, (c) improved community tax base, (d) housing, and (e) correction of an environmental or public health problem.*"

Consistent with 40 CFR 131.12(a)(2), Alaska's implementation methods require a finding that a lowering of water quality would accommodate important economic or social development. See 18 AAC 70.016(c)(4)(G) ("*information required for department review includes… an analysis that supports the accommodation of important social or economic development in the area where the receiving water is located…*") and 18 AAC 70.016(c)(7)(E) ("…*the department will not authorize a discharge unless the department finds that…a lowering of water quality accommodates important social or economic development*"). 18 AAC 70.016(c)(5)(A) and (B) of Alaska's implementation methods require identification of the affected community and are consistent with EPA's expectations because they specify appropriate factors to consider regarding economic or social development associated with the proposed activity in that community, such as "*public health or safety improvements*," "*employment, job availability, and salary impacts*," and "*tax base impacts*." In addition, 18 AAC 70.016(c)(6) provides ADEC with the ability to ensure that appropriate information is evaluated ("*the department may…request additional information that the department determines necessary to assess the submitted…social importance analysis, or economic importance analysis"*).

The exception at 18 AAC 70.016(c)(4)(F) to the need for a finding of important economic or social development, when the analysis of alternatives results in the applicant choosing a non-degrading alternative, is cited at 18 AAC 70.016(c)(7)(E). As the EPA explained earlier, this exception is consistent with 40 CFR 131.12(a)(2) because the requirement that a lowering of water quality be "necessary to accommodate important economic or social development" is not relevant if water quality will not be lowered.

ADEC received public comments expressing concern that 18 AAC 70.016(c)(5)(A) and (B) of its implementation methods focus heavily on the economic benefits that a permitted activity may provide and that ADEC's analysis should ensure full consideration of both positive and negative effects of lowering water quality. In response, ADEC stated that "*The CWA is specific that the lowering of water quality supports important economic or social development, not that positive and negative impacts be evaluated*." ("Antidegradation Implementation Methods Regulation Responsiveness Summary," ADEC, November 2017, Comment Summary 47). To clarify, the EPA believes that states have the discretion when implementing 40 CFR 131.12(a)(2) to evaluate both positive and negative economic and social considerations that may be associated with a proposed lowering of high quality water, when determining if that lowering of water quality would accommodate <u>important</u> economic or social development in the area where the water is located. Additionally, the EPA does not read 18 AAC 70.016(c)(5)(A) and (B) as limiting ADEC's evaluation to the positive aspects of a proposal. For example, 18 AAC 70.016(c)(5)(B)(i) and (ii) refer to "*employment… <u>impacts</u>*" and "*tax base <u>impacts</u>*" (emphasis added). Impacts may be either positive or negative, and the EPA reads Alaska's rule as providing the authority to consider both.

Nevertheless, states have significant discretion in determining what is considered important economic or social development when implementing 40 CFR 131.12(a)(2). In its July 7, 1998 ANPRM (63 FR 36742, 36784), the EPA explained that "*approaches to evaluating social and economic importance vary widely*" and stated that "*determining the social and economic importance of a proposed activity is an important public question best addressed by State, Tribal or local interests, perhaps as part of the development of a basin plan*." In its Questions and Answers on Antidegradation, the EPA also stated that although it had issued suggestions on what might be considered in determining economic or social impacts, "*the Agency has no predetermined level of activity that is defined as 'important'*" ("Questions and Answers on: Antidegradation," EPA, August 1985, Question 19).

ADEC's response to the comments expressing concern with 18 AAC 70.016(c)(5)(A) and (B) further stated that "*…any impacts that are of concern, positive and negative, can be submitted during the required public notice period for the permit and will be addressed in the department's response to comments document*." ("Antidegradation Implementation Methods Regulation Responsiveness Summary," ADEC, November 2017, Comment Summary 47)**.** ADEC bears the responsibility of explaining to its public why the social or economic development associated with a proposed discharge is important, if a lowering of high quality water is being authorized. As discussed above, the EPA believes that ADEC's implementation methods concerning the determination of whether a proposed lowering of water quality would provide important economic or social development are consistent with the EPA's interpretation of 40 CFR 131.12(a)(2).

3. Method for intergovernmental coordination and public participation

ADEC addressed intergovernmental coordination and public participation in its antidegradation implementation methods, at 18 AAC 70.016(a)(4) under "General Requirements for Antidegradation Analysis," by referencing preexisting APDES regulatory procedures, at 18 AAC 83.120; and Alaska's antidegradation policy, at 18 AAC 70.015(c):

> *(a)(4) an antidegradation analysis for a discharge under 18 AAC 83 (Alaska Pollutant Discharge Elimination System (APDES) Program) specified in (l)(A) of this subsection is subject*

> *to the public participation and intergovernmental review procedures under 18 AAC 83.120; an antidegradation analysis for a 33 U.S.C. 1341 (Clean Water Act, sec. 401) certification of a discharge under (l)(B) of this subsection is subject to the public participation and intergovernmental review procedures under 18 AAC 70.015(c);*

Reference to 18 AAC 83.120, at 18 AAC 70.016(a)(4), provides specificity regarding the public participation and intergovernmental review procedures for APDES permits that is not in Alaska's antidegradation policy, as 18 AAC 70.015(c) simply refers to "*the procedures applicable to the permit… sought*."

For reference only, 18 AAC 70.015(c) of Alaska's antidegradation policy provides the following:

> *(c) An application received under (a) of this section is subject to the public participation and intergovernmental review procedures applicable to the permit, certification, or approval sought, including procedures for applications subject to 18 AAC 15. If the department certifies a federal permit, the public participation and intergovernmental review procedures followed by the federal agency issuing that permit will meet the requirements of this subsection.*

The EPA approves 18 AAC 70.016(a)(4) as providing a useful reference to where the public participation and intergovernmental review requirements associated with implementation of antidegradation in Alaska may be found. The EPA is not, however, reviewing and acting in accordance with CWA section 303(c) on 18 AAC 70.015(c) of Alaska's antidegradation policy or 18 AAC 83.120 of the APDES program because these previously existing regulatory provisions are not new or revised water quality standards (see "What is a New or Revised Water Quality Standard under 303(c)(3), Frequently Asked Questions," October 2012, EPA Publication No. 820F12017).

The EPA notes that ADEC received public comment which expressed concerns regarding public participation in 401 certifications of federal permits and suggested that ADEC clarify how it will ensure that its antidegradation review and tentative decisions will be made available to the public for comment before final decisions are made. ADEC provided the following response, in the context of CWA section 404 permits ("Antidegradation Implementation Methods Regulation Responsiveness Summary," ADEC, November 2017, Comment Summary 19):

> *The department publishes an intent to certify letter with the federal posting of Clean Water Act section 404 permit applications. The department's intent to certify letter shall include information on how the public may request the complete permit application, including the submitted antidegradation information proposed to meet regulatory criteria, for review and comment. The complete 404 permit application and all comments submitted during the federal public comment period are evaluated. After evaluation, the department issues its final state 401 certification, which will set out the antidegradation analysis and department findings. This procedure is compliant with all federal and state regulations. No additional changes were made to the regulations based on these comments.*

The EPA encourages ADEC to ensure that its tentative antidegradation review and decisions are available for public review and comment before final decisions are made, particularly when ADEC proposes that allowing lower water quality is "necessary" in accordance with its Tier 2 methods.

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

18 AAC 70.015(a)(2)(D) of Alaska's antidegradation policy reflects the following requirement in the federal antidegradation policy at 40 CFR 131.12(a)(2), which is applicable when a lowering of high quality water is to be allowed:

> *Further, the State shall assure that there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources and cost-effective and reasonable best management practices for nonpoint source control.*

To implement 18 AAC 70.015(a)(2)(D) of Alaska's antidegradation policy, 18 AAC 70.016(c)(7)(C) of Alaska's implementation methods provides:

> *(c)(7) if, after review of available evidence, the department finds that the proposed discharge will lower water quality in the receiving water, the department will not authorize a discharge unless the department finds that…*
>
> *(C) point source and state-regulated nonpoint source discharges to the receiving water will meet requirements under 18 AAC 70.015(a)(2)(D); to make this finding the department will*
>
> > *(i) identify point sources and state-regulated nonpoint sources that discharge to, or otherwise impact, the receiving water;*
> >
> > *(ii) consider whether there are outstanding noncompliance issues with point source permits or required state-regulated nonpoint source best management practices, consider whether receiving water quality has improved or degraded over time, and, if necessary and appropriate, take actions that will achieve the requirements of 18 AAC 70.015(a)(2)(D); and*
> >
> > *(iii) coordinate with other state or federal agencies as necessary to comply with (i) and (ii) of this subparagraph;*

For the reasons discussed below, the EPA approves the provisions of 18 AAC 70.016(c)(7)(C) as being consistent with 40 CFR 131.12(a)(2). The EPA is not reviewing or acting on the substantive language of 18 AAC 70.015(a)(2)(D), which was formerly 18 AAC 70.015(a)(2)(E), because it is preexisting and unrevised (see "What is a New or Revised Water Quality Standard under 303(c)(3), Frequently Asked Questions," October 2012, EPA Publication No. 820F12017).

As explained in the EPA's Water Quality Standards Handbook (EPA-823-B-12-002, 2012, Chapter 4), the rationale behind the federal antidegradation policy's requirement regarding achievement of statutory requirements for point sources and all cost effective and reasonable BMPs for nonpoint sources is to assure that proposed new or expanded point sources are not allowed to lower water quality in the absence of adequate assurance that any existing compliance problems will be resolved. Consistent with this, 18 AAC 70.016(c)(7)(C)(i) and (ii) require the identification and consideration of noncompliance

issues associated with point sources and "*state-regulated"* nonpoint sources that impact the receiving water, and 18 AAC 70.016(c)(7)(C)(iii) appropriately provides for ADEC to coordinate with other state or federal agencies as necessary to ultimately ensure compliance with 18 AAC 70.015(a)(2)(D) of Alaska's antidegradation policy. The EPA understands "*consider whether receiving water quality has improved or degraded over time, and, if necessary and appropriate, take actions that will achieve the requirements of 18 AAC 70.015(a)(2)(D),*" at 18 AAC 70.016(c)(7)(C)(ii), to mean: if identified noncompliance issues are of a nature that adversely affect water quality for a parameter for which ADEC intends to allow a new lowering of water quality, then ADEC will take action to ensure that the requirements of 18 AAC 70.015(a)(2)(D) are satisfied.

In addressing nonpoint sources, 18 AAC 70.016(c)(7)(C) is specific to those that are "*state-regulated*." This is consistent with the EPA's interpretation of this component of 40 CFR 131.12(a)(2) as explained in the EPA's July 7, 1998, ANPRM (63 FR 36742, 36784-85). In its ANPRM the EPA explained that this component of 40 CFR 131.12(a)(2) does not require a state to establish BMPs for nonpoint sources where such BMP requirements do not exist ("*State and Tribal antidegradation rules need only include provisions to assure achievement of BMPs that are required under State or Tribal nonpoint source control laws and regulations*."; see also "Memorandum from Tudor T. Davies, Director EPA Office of Science and Technology to EPA Water Management Division Directors, Regions I-X," Subject: Interpretation of Federal Antidegradation Regulatory Requirement, February 22, 1994).

5. Recognition that in allowing any lowering of water quality under Tier 2, existing uses must be protected

The EPA approves 18 AAC 70.016(c)(7)(B) of Alaska's Tier 2 methods as being consistent with the existing use component of 40 CFR 131.12(a)(2), for the reasons discussed below.

The federal antidegradation policy at 40 CFR 131.12(a)(2) requires that in allowing any lowering of water quality, the state must "*assure water quality adequate to protect existing uses fully.*" Alaska's Tier 2 methods ensure consistency with this requirement through implementation of 18 AAC 70.016(c)(7)(B), which specifies that Alaska's existing use protection/Tier 1 requirements must also be met:

> *(c)(7) if, after review of available evidence, the department finds that the proposed discharge will lower water quality in the receiving water, the department will not authorize a discharge unless the department finds that…*
>
> *(B) each requirement under (b)(5) of this section for a discharge to a Tier 1 water is met;*

The referenced 18 AAC 70.016(b)(5) in the language quoted above provides, in part, that existing uses will be maintained and protected. Alaska's Tier 1 methods apply to all waters subject to the jurisdiction of the CWA and to discharges subject to the jurisdiction of the CWA, which includes cases when Tier 2 is applicable (see the EPA's discussion and approval of Alaska's Tier 1 applicability at section IV.B.1 of the EPA's support document).

6. Recognition that in allowing any lowering of water quality under Tier 2, water quality must be maintained at levels that meet water quality criteria

The EPA approves 18 AAC 70.016(c)(7)(A) of Alaska's Tier 2 methods as being consistent with 40 CFR 131.12(a)(2) because 18 AAC 70.016(c)(7)(A) ensures that in allowing any lowering of water quality, water quality must be maintained at levels that meet water quality criteria.

Independent of the antidegradation requirements of 40 CFR 131.12, states are to adopt designated uses consistent with the uses specified at section 101(a)(2) of the CWA, where attainable, and adopt water quality criteria that protect those designated uses (see 40 CFR 131.10 and 131.11, respectively). 40 CFR 131.12(a)(2) only provides for lowering of water quality that exceeds levels necessary to support the protection and propagation of fish, shellfish, and wildlife and recreation in and on the water (i.e., the uses specified at section 101(a)(2) of the CWA), it does not provide authority to lower water quality below criteria established to protect such uses. As discussed in the EPA's Water Quality Standards Handbook (EPA-823-B-12-002, 2012, Chapter 4.5), in allowing any lowering of water quality in accordance with 40 CFR 131.12(a)(2), "…*water quality may not be lowered to less than the level necessary to fully protect the "fishable/swimmable" uses and other existing uses*" (the uses specified at section 101(a)(2) of the CWA are commonly referred to as "fishable/swimmable" uses).

Alaska's Tier 2 methods ensure consistency with this limitation on the extent to which water quality may be lowered in accordance with 40 CFR 131.12 through implementation of 18 AAC 70.016(c)(7)(A), which specifies that applicable criteria must be met ("…*the department will not authorize a discharge unless…the reduction of water quality meets the applicable criteria...*"):

> *(c)(7) if, after review of available evidence, the department finds that the proposed discharge will lower water quality in the receiving water, the department will not authorize a discharge unless the department finds that…*
>
> *(A) the reduction of water quality meets the applicable criteria of 18 AAC 70.020(b), 18 AAC 70.030, and 18 AAC 70.236(b), unless allowed under 18 AAC 70.200, 18 AAC 70.210, or 18 AAC 70.240;*

The "applicable criteria" of 18 AAC 70.020(b), 18 AAC 70.030, and 18 AAC 70.236(b) are collectively the previously existing water quality criteria currently found in Alaska's water quality standards to protect Alaska's s designated uses (see the EPA's discussion of water quality criteria applicable to Alaska at section IV.B.2 of the EPA's support document).

The EPA notes that 18 AAC 70.016(c)(7)(A) also includes "*unless allowed under 18 AAC 70.200, 18 AAC 70.210, or 18 AAC 70.240*." These three previously existing sections of Alaska's water quality standards rule address short-term variances, zones of deposit, and mixing zones, respectively. The EPA is not reviewing, evaluating, or otherwise addressing the provisions at 18 AAC 70.200, 18 AAC 70.210, and 18 AAC 70.240, other than recognizing that they are referenced at 18 AAC 70.016(c)(7)(A) of Alaska's antidegradation implementation methods for internal consistency with 18 AAC 70.015(a)(2) and Alaska's water quality standards rule as whole, and may allow circumstances where water quality does not meet certain applicable water quality criteria. The short-term variance (18 AAC 70.200) and zones of deposit (18 AAC 70.210) provisions are not subject to CWA section 303(c)(3) action because

they are not new or revised (see "What is a New or Revised Water Quality Standard under 303(c)(3), Frequently Asked Questions," October 2012, EPA Publication No. 820F12017). The EPA also notes that it has not yet acted on ADEC's 2006 revised mixing zone regulation at 18 AAC 70.240. Therefore, in accordance with 40 CFR 131.21(c), ADEC's revised mixing zone regulation at 18 AAC 70.240 is not applicable for CWA purposes because it has not been approved by the EPA. Furthermore, the EPA's discussion here does not constitute an approval of 18 AAC 70.240.

7. Consistency with 40 CFR 131.12(a)(4)

Alaska's Tier 2 methods include the following provision at 18 AAC 70.016(c)(7)(F), which addresses consistency with CWA section 316:

> *(c)(7) if, after review of available evidence, the department finds that the proposed discharge will lower water quality in the receiving water, the department will not authorize a discharge unless the department finds that…*
>
> *(F) 18 AAC 70.015 and this section have been applied consistent with 33 U.S.C. 1326 (Clean Water Act, sec. 316) with regard to potential thermal discharge impairments.*

The EPA approves 18 AAC 70.016(c)(7)(F) as being consistent with the federal antidegradation policy because 40 CFR 131.12(a)(4) requires that antidegradation policies and implementation methods be consistent with CWA section 316 "*In those cases where potential water quality impairment associated with a thermal discharge is involved…*"

G. Outstanding National Resource Water (ONRW) Protection (Tier 3) Review

For the reasons discussed below, the EPA approves the provisions at 18 AAC 70.016(d)(1), 18 AAC 70.016(d)(3), and 18 AAC 70.016(d)(4), which provide Alaska's method for ensuring the protection of water quality in ONRWs, as being consistent with 40 CFR 131.12(a)(3).

As discussed earlier under Tier 3 applicability (section IV.B.3 of the EPA's support document), 18 AAC 70.016(d)(1) of Alaska's implementation methods specifies various discharge permitting scenarios that are subject to a Tier 3 review:

> *(d)(1) for all discharges specified in (a)(l) of this section to a Tier 3 or tributary to a Tier 3 water that will degrade or have the potential to degrade the existing water quality of a Tier 3 water the department will conduct a Tier 3 antidegradation analysis and make findings when reviewing*
>
> *(A) a proposed new or expanded discharge;*
>
> *(B) an existing discharge that did not previously require authorization, if the applicant is proposing an expanded discharge;*
>
> *(C) an existing discharge where a license or permit was previously required but had not been issued;*

(D) a discharge with a previously expired license or permit that had not been administratively extended; or

(E) a previously terminated discharge, if the applicant is seeking reauthorization;

In summary, 18 AAC 70.016(d)(1) provides that ADEC will conduct a Tier 3 antidegradation analysis for discharges regulated under the CWA that would add loadings to an ONRW that are not currently authorized, be they discharges directly to an ONRW or discharges to a tributary to an ONRW.

Furthermore, 18 AAC 70.016(d)(4)(A) provides that ADEC will not authorize a discharge to either an ONRW, or a tributary to an ONRW, unless any lowering of water quality in the ONRW would be "temporary and limited:"

(d)(4) the department will not authorize a discharge to a Tier 3 water or tributary to a Tier 3 water unless the department finds that

(A) the lowering of water quality is temporary and limited, including any lowering of water quality due to dredging or fill placement authorized under a 33 U.S.C 1344 (Clean Water Act, sec. 404) permit;

In its July 7, 1998 ANPRM (63 FR 36742, 36785-87) the EPA explained that it has interpreted the "*water shall be maintained and protected*" provision of 40 CFR 131.12(a)(3) as requiring "*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*," with the only exception being for short-term and temporary lowering of water quality.

The EPA has generally defined "temporary and short term" degradation in terms of "*weeks and months, not years*" (see 63 FR 36742, 36785-87 and the "Water Quality Standards Handbook," EPA-823-B-12-002, 2012, Chapter 4.7). Alaska's definition of "temporary and limited" at 18 AAC 70.016(f) is consistent with this ("*A temporary and limited degradation of water quality is limited to the shortest possible time, generally weeks or months, and is limited in impact*."). See the EPA's full discussion of 18 AAC 70.016(f) at section IV.I of the EPA's support document.

Thus, the provisions at 18 AAC 70.016(d)(1) and 18 AAC 70.016(d)(4)(A) are consistent with the EPA's interpretation of 40 CFR 131.12(a)(3) because they provide that ADEC will review proposed new or increased discharges and ensure that any new authorizations will be limited to those that cause only short-term and temporary degradation of water quality in ONRWs ("temporary and limited" degradation in Alaska's terms).

18 AAC 70.016(d)(4)(B), (C), and (D) provide, in summary, that ADEC will not authorize a discharge to a Tier 3 water or a tributary to a Tier 3 water unless existing uses will be protected, discharges to a tributary to a Tier 3 water meet applicable Tier 2 requirements, and existing state-regulated nonpoint sources to the Tier 3 water are using all state-required practicable BMPs. These provisions are internally consistent with other sections of Alaska's implementation methods rule which are discussed and approved as being consistent with 40 CFR 131.12. For example, Alaska's methods for protecting existing uses at 18 AAC 70.016(b) apply to all waters subject to the jurisdiction of the CWA and to

discharges subject to the jurisdiction of the CWA, which includes cases where Tier 3 is applicable (see the EPA's discussion of Alaska's Tier 1 applicability at section IV.B.1 of the EPA's support document).

Additionally, 18 AAC 70.016(d)(3) and 18 AAC 70.016(d)(4)(E) are consistent with "maintaining and protecting" the water quality of ONRWs because they provide that ADEC will not authorize new zones of deposit or new mixing zones in ONRWs/Tier 3 waters (meaning that ADEC will not authorize new areas where water quality criteria may be exceeded within ONRWs).

The full text of 18 AAC 70.016(d)(3) and 18 AAC 70.016(d)(4) are presented below:

> *(d)(3) the department will not authorize a new zone of deposit under 18 AAC 70.210 or new mixing zone under 18 AAC 70.240 in a designated Tier 3 water;*
>
> *(d)(4) the department will not authorize a discharge to a Tier 3 water or tributary to a Tier 3 water unless the department finds that*
>
> *(A) the lowering of water quality is temporary and limited, including any lowering of water quality due to dredging or fill placement authorized under a 33 U.S.C 1344 (Clean Water Act, sec. 404) permit;*
>
> *(B) no lowering of the Tier 3 water quality will occur and existing uses and Tier 3 water quality will be maintained and protected;*
>
> *(C) a discharge to a tributary to a Tier 3 water meets all applicable requirements under (b) and (c) of this section;*
>
> *(D) existing state-regulated nonpoint sources to the Tier 3 water are using all state-required practicable best management practices; the department will consider available information that documents whether state-regulated nonpoint sources to the Tier 3 water are using best management practices to ensure that no lowering of water quality will occur and existing uses will be maintained and protected; and*
>
> *(E) there is no proposal for a new zone of deposit under 18 AAC 70.210 or new mixing zone under 18 AAC 70.240 in a Tier 3 water.*

H. Antidegradation Analysis for General Permits

As the EPA discussed earlier under "General Applicability" (section IV.A of the EPA's support document), 18 AAC 70.016(a) provides that Alaska's antidegradation implementation methods are applicable to all waters of the United States within Alaska, and to discharges subject to authorization under the APDES or section 401 of the CWA. This broad applicability includes discharges authorized in accordance with both individual and general permits.

Additional information specific to antidegradation analysis for general permits issued under the APDES is provided in Alaska's implementation methods at 18 AAC 70.016(e):

(e) ***General permit antidegradation analysis.*** *The department will apply the antidegradation policy under 18 AAC 70.015 and implementation methods set out in this section for each new or reissued general permit under 18 AAC 83 (Alaska Pollutant Discharge Elimination System (APDES) Program) at the time a general permit is issued. At the time a general permit is issued, the department*

(1) will obtain available evidence, as necessary, to support tier-specific requirements and findings under this section;

(2) will make findings on how the antidegradation policy under 18 AAC 70.015 and the antidegradation implementation requirements under this section are met; and

(3) may request information from potential applicants who may discharge under the general permit in order to conduct the antidegradation analysis.

For the reasons discussed below, the EPA approves the provisions at 18 AAC 70.016(e) as being consistent with 40 CFR 131.12.

The provisions at 18 AAC 70.016(e) specify that ADEC will apply its antidegradation requirements at the time when issuing APDES general permits, and provide assurance that ADEC has authority to obtain the information necessary to satisfy its antidegradation requirements, including proactively requesting information from potential applicants who may discharge under the general permit ((e)(1) and (3)). Together, 18 AAC 70.016(e)(1) and (3) provide ADEC with a means to address the site-specific nature of antidegradation implementation at the time of general permit issuance.

In its response to comments, ADEC discussed strategies to ensure that the issuance of general permits is consistent with Alaska's antidegradation policy and implementation methods. Such strategies implied the establishment of permit conditions which, if met, will ensure that water quality is not lowered, and tailoring the scope of a general permit to facilitate addressing antidegradation ("*…the department imposes permit conditions (e.g., effluent limits, best management practices, etc.) under the principle that the level of water quality (and the waterbody uses) for Tier 2 waterbodies will be maintained and protected when permit conditions are adhered too*," emphasis added; and "*potential impacts under an antidegradation analysis for a general permit are routinely addressed by the department when it determines the scope of the general permit itself*;" see "Antidegradation Implementation Methods Regulation Responsiveness Summary," ADEC, November 2017, Comment Summary 54).

ADEC also clarified in its response to comments that it has authority to conduct an individual antidegradation analysis for a discharger that seeks coverage under a general permit, as well as the authority to require a discharger that would otherwise be covered by a general permit to apply for an individual permit where further antidegradation analysis would be conducted ("Antidegradation Implementation Methods Regulation Responsiveness Summary," ADEC, November 2017, Comment Summary 54**)**:

"*…DEC does reserve the authority to conduct an individual antidegradation analysis for a discharge that seeks coverage under a general permit. In these cases, when DEC determines that an applicant seeking coverage under a general permit was not fully contemplated in the general*

permit's antidegradation analysis, then an additional analysis will be completed either as part of the general permit authorization or through the issuance of an individual permit. In the case of an additional antidegradation analysis being conducted as part of the general permit authorization process, the analysis specifying the area of coverage and the waterbody tier would be subject to a public notice and comment period. Thus, whether DEC completes an antidegradation analysis during general permit development or during subsequent general permit authorization, the requirement for public participation is satisfied."

18 AAC 70.016(e)(2) recognizes that ADEC must demonstrate how Alaska's antidegradation provisions are met for general permits. Furthermore, as discussed above, ADEC recognizes strategies to ensure that its antidegradation requirements are satisfied for general permits consistent with 40 CFR 131.12. For example, a permit that does not authorize a lowering of water quality would be consistent with 40 CFR 131.12(a)(2). Likewise, conducting an antidegradation analysis at the time when a discharger seeks authorization under a general permit, or requiring dischargers that would otherwise be covered by a general permit to apply for an individual permit and undergo an antidegradation analysis, would also be consistent with 40 CFR 131.12.

The EPA approves the provisions at 18 AAC 70.016(e) as being consistent with 40 CFR 131.12 because general permits issued in accordance with the APDES must satisfy Alaska's antidegradation provisions, regardless of when the antidegradation analysis is performed; and Alaska recognizes that if antidegradation is not adequately addressed at the time of permit issuance, further antidegradation review may be necessary and required either at the time an application is submitted for coverage under a general permit or through issuance of an individual permit.

I. Temporary and Limited Degradation of Water Quality

18 AAC 70.016(f) defines the phrase "temporary and limited" as it is used in Alaska's implementation methods and provides factors that ADEC will consider in determining if a proposed lowering of water quality would be temporary and limited:

*f) **Temporary and limited degradation of water quality.** A temporary and limited degradation of water quality is limited to the shortest possible time, generally weeks or months, and is limited in impact. An activity with a temporary and limited effect may not degrade water quality permanently. The department will allow the activity only after all practicable means are implemented to minimize the degradation. In determining if proposed degradation of water quality would be temporary and limited, the department will consider the following factors:*

(1) the length of time during which water quality will be lowered; activities under this paragraph may include temporary activities that require more than one construction season to complete;

(2) the percent change in ambient conditions;

(3) parameters and characteristics, including the potential for cumulative effects;

(4) the likelihood for long-term water quality benefits to the water body after the short-term degradation;

(5) the degree to which achieving the applicable water quality standards or criteria during the proposed activity will be at risk; and

(6) the potential for any residual long term effects on existing uses.

For the reasons stated below, the EPA approves the provisions at 18 AAC 70.016(f) as being consistent with 40 CFR 131.12.

Alaska's definition of "temporary and limited" is equivalent to the meaning of "temporary and short-term," as the EPA uses the phrase in the context of describing a limited allowance for degradation of water quality in ONRWs. In the context of implementing the federal ONRW provision, the EPA has generally defined "temporary and short-term" degradation in terms of "weeks and months, not years." The EPA has also stated that all practical means of minimizing the temporary degradation are to be implemented (see 63 FR 36742, 36785-87 and the "Water Quality Standards Handbook," EPA-823-B-12-002, 2012, Chapter 4.7).

Consistent with the EPA's explanation of temporary and short-term degradation, 18 AAC 70.016(f) specifies that temporary and limited degradation "*is limited to the shortest possible time, generally weeks or months*," specifies that such degradation "*may not degrade water quality permanently*," and provides that such degradation be "*limited in impact*" by requiring that "*all practicable means are implemented to minimize the degradation*." Alaska's provision at 18 AAC 70.016(f)(1), which recognizes "*activities that require more than one construction season to complete*," is also consistent with the EPA's explanation of temporary and short-term degradation. In its WQS Handbook the EPA stated, "*If a construction activity is involved…temporary is defined as the length of time necessary to construct the facility and make it operational*."

Additionally, 18 AAC 70.016(f)(1) – (6) provide factors that ADEC will consider in determining if proposed degradation of water quality would be temporary and limited. The EPA believes it is reasonable to expect that ADEC will interpret those factors consistent with its stated restrictions on temporary and limited degradation and consistent with the ultimate limitations on the extent to which water quality may be lowered in accordance with the federal antidegradation policy at 40 CFR 131.12, i.e., water quality criteria are to be met such that designated uses are protected, and existing uses are to be protected. As discussed in the EPA's Water Quality Standards Handbook (Chapter 4.7) in allowing temporary and short term lowering of water quality in accordance with 40 CFR 131.12(a)(3), "*Such activities must not permanently degrade water quality or result in water quality lower than necessary to protect existing uses in the ONRW.*" As is also discussed in the EPA's Water Quality Standards Handbook (Chapter 4.5), in allowing any lowering of water quality in accordance with 40 CFR 131.12(a)(2), "…*water quality may not be lowered to less than the level necessary to fully protect the "fishable/swimmable" uses and other existing uses.*" (EPA-823-B-12-002, 2012).

While the EPA's position discussed above regarding appropriate bounds on allowing temporary and limited/temporary and short-term degradation is generally in the context of ONRW protection, the EPA believes that such bounds are also appropriate for Alaska's other applications of temporary and limited (see the EPA's discussion approving 18 AAC 70.016(a)(2)(A) and (B) at sections IV.C.1 and 2 of the EPA's support document).

In response to comments expressing concern about the definition of "temporary and limited," ADEC stated, "*Since water quality criteria can be exceeded while still being protective of designated and existing uses (for example, mixing zone authorizations for a continuous discharge) it would be overly restrictive to adopt the suggested language that water quality shall not be exceeded during a temporary activity*" ("Antidegradation Implementation Methods Regulation Responsiveness Summary," ADEC, November 2017, Comment Summary 59). ADEC's response references "mixing zones authorizations," and it is accurate that regulatory mixing zones in accordance with 40 CFR Part 131 are areas where certain water quality criteria may be exceeded. To clarify, however, the federal antidegradation policy does not authorize lowering of water quality below applicable water quality criteria in waters beyond a mixing zone. Independent of the antidegradation requirements of 40 CFR 131.12, states are to adopt designated uses consistent with the uses specified at section 101(a)(2) of the CWA, where attainable, and adopt water quality criteria that protect those designated uses (see 40 CFR 131.10 and 131.11, respectively). The federal antidegradation policy at 40 CFR 131.12 does not provide an exception to meeting water quality criteria and protecting designated uses. For example, as presented above regarding limits on any lowering of water quality in accordance with 40 CFR 131.12(a)(2), "…*water quality may not be lowered to less than the level necessary to fully protect the "fishable/swimmable" uses and other existing uses.*" ("Water Quality Standards Handbook," EPA-823-B-12-002, 2012, Chapter 4.5).

The EPA does not read Alaska's rule language regarding temporary and limited degradation to suggest that such degradation may be of a magnitude that would exceed applicable water quality criteria (i.e., of a magnitude that would not meet water quality criteria) beyond an appropriately authorized regulatory mixing zone. To the contrary, one of the factors that ADEC will consider in determining if a proposed degradation of water quality would be temporary and limited is "*the degree to which achieving the applicable water quality standards or criteria during the proposed activity will be at risk*" (see 18 AAC 70.016(f)(5)). The EPA reads 18 AAC 70.016(f)(5) as being intended to ensure that any decision that a lowering of water quality would be temporary and limited considers the need to minimize or avoid a risk that water quality criteria will be exceeded.

J. Antidegradation Implementation and CWA Section 404 Permits

ADEC's implementation methods contains the following provisions addressing the application of antidegradation to CWA section 404 permits, at 18 AAC 70.016(a)(1)(B), 18 AAC 70.016(b)(2), and 18 AAC 70.016(d)(4)(A):

> ► *18 AAC 70.016(a)* ***General requirements for antidegradation analyses****…*
>
> *(1) the department will make an antidegradation analysis and findings for discharges subject to authorization by the department under…*
>
> *(B) 33 U.S.C. 1341 (Clean Water Act, sec. 401) water quality certifications; for 33 U.S.C. 1341 (Clean Water Act, sec. 401) water quality certifications of 33 U.S .C. 1344 (Clean Water Act, sec. 404) permits, the department may determine upon review whether an evaluation and findings of no significant degradation under 33 U.S.C. 1344 and under 40 C.F.R. Part 230, revised as of July 1, 2017 and adopted by reference, are sufficient to comply with state antidegradation requirements for Tiers 1 and 2 under this section with regard to water quality*

impacts to receiving water immediately surrounding the dredge or fill material; in the antidegradation findings the department will consider where the fill would be placed and impacts to the receiving water from the fill activity; only temporary and limited degradation may be authorized in Tier 3 water, in accordance with (d)(4)(A) of this section;

► *18 AAC 70.016(b)* ***Tier 1 analysis of existing use protection****…*

(2) for (a)(l)(B) of this section, the finding of no significant degradation under 33 U.S.C. 1344 (Clean Water Act, sec. 404) and under 40 C.F.R. Part 230, revised as of July 1, 2017 and adopted by reference, fulfills Tier 1 antidegradation finding requirements for dredge or fill material;

► *18 AAC 70.016(d)* ***Tier 3 analysis for the protection of water quality in outstanding national resource water****…*

(4) the department will not authorize a discharge to a Tier 3 water or tributary to a Tier 3 water unless the department finds that

(A) the lowering of water quality is temporary and limited, including any lowering of water quality due to dredging or fill placement authorized under a 33 U.S.C 1344 (Clean Water Act, sec. 404) permit;

The EPA approves 18 AAC 70.016(a)(1)(B), 18 AAC 70.016(b)(2), and 18 AAC 70.016(d)(4)(A), which address the application of antidegradation to CWA section 404 permits, because they are consistent with the EPA's interpretation the federal antidegradation policy in the CWA section 404 context, as discussed below.

When applying its antidegradation provisions to wetland fills, Alaska's implementation methods recognizes the use of "significant degradation" for Tier 1 and Tier 2 and maintain the requirement that any lowering of water quality in ONRWs/Tier 3 waters must be temporary and limited. The EPA's approval includes Alaska's adoption of 40 CFR Part 230 by reference because it is the EPA position that states may use the CWA section 404(b)(l) Guidelines at 40 CFR Part 230 as a method to determine "significant degradation" in the case of wetlands fills, when applying antidegradation consistent with Tiers 1 and 2 of the federal antidegradation policy.

In its Water Quality Standards Handbook, (EPA-823-B-12-002, 2012, Chapter 4.4.3), the EPA explains that "*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.*" Accordingly, the EPA states its interpretation that the existing use provision at section 131.12(a)(l) of the federal antidegradation policy is satisfied with regard to fills in wetlands if the discharge did not result in "significant degradation" to the aquatic ecosystem as defined at 40 CFR 230.10(c) of the CWA section 404(b)(l) Guidelines, and states that the 404(b)(l) Guidelines may be used by states to determine "significant degradation" for wetland fills. The EPA further explains in its Water Quality Standards Handbook that where wetlands are high quality water (Tier 2), water quality could be lowered to the no significant degradation level if the requirements of 40 CFR 131.12(a)(2) are satisfied. Additionally, the EPA explains that the ONRW/Tier 3 provision

of 40 CFR 131.12(a)(3) applies the same to wetlands as it does to other waterbodies. As previously discussed, the EPA interprets 40 CFR 131.12(a)(3) as only allowing for short-term and temporary degradation.

V. Definitions (18 AAC 70.990) - Rationale for Today's Action

Alaska revised 18 AAC 70.990 to include definitions for the following terms as they are used in the antidegradation implementation methods at 18 AAC 70.016. Definitions were adopted for "assimilative capacity," "new or expanded," "parameter," "receiving water," and "sufficient and credible," at 18 AAC 70.990(74), (75), (76), (77), and (78), respectively.

For the reasons discussed below, the EPA approves the new definitions at 18 AAC 70.990(74), (75), (76), (77), and (78) as being consistent with the CWA and 40 CFR 131.12.

A. Assimilative Capacity

> *(74) "assimilative capacity" means*
>
> > *(A) the increment of water quality that is better than the applicable criteria; or*
> >
> > *(B) the capacity of a specific water to accommodate the addition of a parameter without causing violations of applicable water quality criteria, impairing water quality, or negatively impacting uses;*

The EPA approves Alaska's definition of assimilative capacity at 18 AAC 70.990(74) because it is consistent with the EPA's use of the term in guidance for Tier 2 antidegradation reviews ("*The available assimilative capacity of a waterbody – the difference between the applicable water quality criterion for a pollutant parameter and the ambient water quality for that pollutant parameter where it is better than the criterion…*;" see "Tier 2 Antidegradation Reviews and Significance Thresholds," Memorandum from Ephraim S. King, Director, EPA, Office of Science and Technology, to Water Management Division Directors – Regions 1-10, EPA, August 10, 2005). Both Alaska and the EPA define the term as the difference or "increment" between the water quality and the applicable water quality criterion for a parameter, i.e., the amount of a parameter that a water can accept without exceeding criteria (part A of Alaska's definition). This, in turn, is the capacity of a specific water to accommodate the addition of a parameter without negatively impacting uses (part B of Alaska's definition).

Alaska's definition of assimilative capacity is also consistent with EPA's definition of "loading capacity" in its Water Quality Planning and Management regulation ("*The greatest amount of loading that a water can receive without violating water quality standards*;" see 40 CFR 130.2(f)). Additionally, Alaska's definition of assimilative capacity is consistent with one published by the Congressional Research Service ("*Assimilative capacity -The ability of a body of water to cleanse itself; its capacity to receive waste waters or toxic materials without deleterious effects and without damage to aquatic life or humans who consume the water*;" see "CRS Report for Congress, Agriculture: A Glossary of Terms, Programs, and Laws," 2005 Edition, Order Code 97-905).

B. <u>New or Expanded</u>

> *(75) "new or expanded," with respect to discharges, means discharges that are regulated for the first time or discharges that are expanded such that they could result in an increase in permitted parameter load or concentration or other changes in discharge characteristics that could lower water quality or have other adverse environmental impacts;*

The EPA approves Alaska's definition of *"new or expanded,"* at 18 AAC 70.990(75) because it is consistent with the EPA's guidance for when a Tier 2 review in accordance with 40 CFR 131.12(a)(2) is triggered, e.g. when new discharges subject to regulation under the CWA would lower water quality and are being permitted for the first time, and when existing discharges subject to regulation under the CWA are proposing to expand/increase such that water quality would be lowered (see "Water Quality Standards Handbook," EPA-823-B-12-002, 2012, Chapter 4.5 and "Antidegradation Requirements for High Quality Waters and Reissuance of NPDES Permits that Do Not Authorize New or Increased Discharges," Ellen Gilinsky, Senior Policy Advisor in the EPA's Office of Water, to the EPA Region 10 Office of Water and Watersheds, July 7, 2011).

C. <u>Parameter</u>

> *(76) "parameter" means any chemical, physical, or biological characteristic of water, including a pollutant as defined under 18 AAC 83.990;*

The EPA approves Alaska's definition of *"parameter*," at 18 AAC 70.990(76) because it is consistent with the CWA definition of "pollution" at section 502(19), which is inclusive of, but broader than, the definition of pollutant ("*The term "pollution" means the man-made or man-induced alteration of the chemical, physical, biological, and radiological integrity of water.*"). Alaska's antidegradation implementation methods are written in terms of addressing the water quality impacts of "parameters" and address discharges beyond the discharge of pollutants, consistent with the broader CWA meaning of discharge and the broad applicability of CWA section 401.

D. <u>Receiving water</u>

> *(77) "receiving water" means the water, or segment of the water, to which a discharge occurs or is proposed to occur;*

The EPA approves Alaska's definition of *"receiving water*" at 18 AAC 70.990(77) because it is consistent with the common usage of receiving water in CWA programs, such as "*Creeks, streams, rivers, lakes, estuaries…into which surface water, treated waste, or untreated waste are discharged*" (see "Vocabulary Catalog, Total Maximum Daily Loads (303d) Glossary," EPA Office of Water, January 6, 2010).

E. <u>Sufficient and Credible</u>

> *(78) "sufficient and credible" means scientifically valid chemical, physical, or biological data that*

(A) is of adequate quantity and quality; and

(B) is collected under a sampling and analysis plan, including quality assurance and quality control procedures, and addressing spatial and temporal coverage, as applicable.

The EPA approves Alaska's definition of *"sufficient and credible"* at 18 AAC 70.990(78) because it is consistent with the common meaning of "sufficient," i.e., "*enough to meet the needs of a situation or a proposed end*" (part A of Alaska's definition) and "credible," i.e., "*offering reasonable grounds for being believed*" (part B of Alaska's definition) as defined by the Merriam-Webster Online Dictionary. Alaska's definition appropriately addresses both spatial and temporal coverage in assuring adequate quantity and quality of chemical, physical, or biological data needed to implement Alaska's antidegradation policy. Alaska's definition of "sufficient and credible" is also consistent with the purpose of the EPA's data quality objectives guidance for determining the type, quantity, and quality of data needed to "*reach defensible decisions or make credible estimates*" ("Guidance on Systematic Planning Using the Data Quality Objectives Process (EPA QA/G-4)," EPA/240/B/001, February 2006).