



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 10  
1200 Sixth Avenue  
Seattle, WA 98101

Reply To  
Attn Of: OWW-131

OCT 24 2006

Ms. Lynn J. Tomich Kent  
Director, Division of Water  
Department of Environmental Conservation  
555 Cordova Street  
Anchorage, AK 99501-2617

Re: Approval of Revised Dissolved Gas Criterion for the Seafood Processing Use

Dear Ms. Kent:

The Department of Environmental Conservation (DEC) submitted revisions to the dissolved gas criteria and to analytical methods citations in its water quality standards (WQS). DEC proposed these revisions by public notice on June 1, 2005 ("Proposal to Adopt Regulation changes in Title 18 of the Alaska Administrative Code dealing with Dissolved Oxygen in Marine Waters for Seafood Processing Use"). The final regulation change was signed by the DEC Commissioner on May 3, 2006 and filed by the Lieutenant Governor on May 14, 2006. The requirements under the revised regulation became effective for State purposes on June 13, 2006. On August 18, 2006, the Environmental Protection Agency (EPA) received your letter dated August 14, 2006, submitting the revised regulation to EPA for review.

EPA has reviewed Alaska's revised dissolved gas criterion for the seafood processing use, pursuant to our authority under Section 303(c) of the Clean Water Act (CWA) and the implementing regulations at 40 CFR Part 131. With this revision, Alaska has repealed the dissolved gas criterion for the seafood processing use. Alaska has asserted that the criterion being repealed is not necessary to protect the use, and has no scientific basis.

In accordance with our authorities under the CWA, *EPA approves the revised dissolved gas criterion.* The technical basis for our determination is enclosed.

EPA will address the State's changes to analytical methods references and definitions under separate cover.

*Endangered Species Act and Essential Fish Habitat Consultation*

Section 7(a) of the Endangered Species Act (ESA; 16 U.S.C., Section 1536(a)) requires that Federal agencies, in consultation with the United States Fish and Wildlife Service and National Marine Fisheries Service ("Services"), ensure that their actions are not likely to jeopardize the continued existence of federally listed species or result in the adverse modification

of designated critical habitat of such species. The Magnuson-Stevens Fishery Conservation and Management Act (MSA), as amended by the Sustainable Fisheries Act of 1996 (Public Law 104-267), requires Federal agencies to consult with the National Marine Fisheries Services (NMFS) on activities that may adversely affect essential fish habitat (EFH).

Based on discussions with the Services and as further explained in the attached technical basis, EPA has determined that neither ESA nor EFH consultation is required on this action.

*Government-to-Government Consultation with Federally Recognized Alaska Tribes*

When EPA Region 10 is the ultimate decision-making authority, Federal and EPA Region 10 policies direct EPA Region 10 to consult with affected Federally-recognized tribes prior to decision-making. By letter dated August 17, 2005, the Director of the Office of Water and Watersheds for EPA Region 10 invited Federally-recognized Alaska tribes to initiate consultation with EPA regarding the Region's anticipated action on the dissolved gas and analytical methods revisions to Alaska's water quality standards revisions. No tribes notified EPA of a desire to initiate government-to-government consultation on these revisions.

I appreciate the early exchange that has occurred between DEC, EPA, and Services staff regarding this revised WQS. Please feel free to contact Lisa McGuire of my staff if you have any questions relating to this action ((206) 553-0226; [mcguire.lisa@epa.gov](mailto:mcguire.lisa@epa.gov)).

Sincerely,



Michael F. Gearheard, Director  
Office of Water and Watersheds

cc: Jim Powell, DEC

## Technical Justification

### Approval of Revisions to Dissolved Gas Criterion

#### A. Background

By letter dated August 14, 2006 from Lynn Kent, Alaska Department of Environmental Conservation (DEC), to Michael Gearheard, U.S. Environmental Protection Agency, Region 10, DEC submitted revisions to Alaska's water quality standards (WQS). Specifically, these revisions included (a) a repeal of the dissolved gas criterion for the seafood processing use, and (b) updates to analytical methods references and changes to several definitions. This memo addresses only (a), the repeal of the dissolved gas criterion. The revisions to the analytical methods references and definitions will be addressed in a separate memo.

DEC provided an opportunity for public notice and comment through a public notice published June 2, 2005. In DEC's August 14, 2006 letter submitting the revisions for EPA review and approval, DEC provided the following materials:

- a redline-strikeout copy of the revised WQS
- an adoption order signed by DEC Commissioner Fredriksson and Lieutenant Governor Leman
- a memo dated May 8, 2006 from the Alaska Department of Law certifying the regulation
- a "Frequently Asked Questions" document presenting DEC's technical justification for the changes

In addition, in response to EPA's request, DEC provided a copy of the summary of public comments received by the DEC on the public notice ("Responsiveness Summary" dated March 2, 2006). DEC also provided two comment letters received during the State's 2003 Triennial Review process pertaining to the dissolved gas criterion. These materials are in the public record for EPA's action.

#### B. Revised criterion

Table 1 shows the dissolved gas criteria for all marine water uses, as revised. The specific revisions before EPA for action are indicated by underlined text (indicating text that has been added) and bracketed and capitalized text (indicating text that has been removed). Table 1 shows that the dissolved gas for the seafood processing use has been revised with the elimination of the words "D.O. must be greater than or equal to 5 mg/L" and addition of the words "Not applicable."

**Table 1.** Changes to 18 AAC 70.020(b)(15).

Designated use	Dissolved gas criterion
(A) Water Supply (i) aquaculture	Surface dissolved oxygen (D.O.) concentration in coastal water may not be less than 6.0 mg/l for a depth of one meter except when natural conditions cause this value to be depressed. D.O. may not be reduced

	below 4 mg/l at any point beneath the surface. D.O. concentrations in estuaries and tidal tributaries may not be less than 5.0 mg/l except where natural conditions cause this value to be depressed. In no case may D.O. levels exceed 17 mg/l. The concentration of total dissolved gas may not exceed 110% of saturation at any point of sample collection.
(A) Water Supply (ii) seafood processing	<u>Not applicable.</u> [D.O. MUST BE GREATER THAN OR EQUAL TO 5 MG/L.]
(A) Water Supply (iii) industrial	Not applicable.
(B) Water Recreation (i) contact recreation	Same as (15)(A)(i).
(B) Water Recreation (ii) secondary recreation	Same as (15)(A)(i).
(C) Growth and Propagation of Fish, Shellfish, Other Aquatic Life, and Wildlife	Same as (15)(A)(i).
(D) Harvesting for Consumption of Raw Mollusks or Other Raw Aquatic Life	Same as (15)(A)(i).

### C. Basis for approving revised criterion

In reviewing criteria adopted by States, EPA evaluates whether the State's criteria are sufficient to protect the designated uses by ensuring that all numeric criteria are based on CWA Section 304(a) guidance, 304(a) guidance modified to reflect site-specific conditions, or other scientifically defensible methods. EPA's decision to accept criteria based on site-specific calculations or alternative scientific procedures is based on a determination of the validity and adequacy of the supporting scientific procedures and assumptions (Water Quality Standards Handbook, p. 6-8). Alaska has eliminated the dissolved gas criterion for the seafood processing designated use. In order to approve this change, EPA's administrative record must reflect that the absence of a criterion still results in protection of the designated use.

Information in EPA's record for this action reflects that a dissolved gas criterion is not necessary to ensure a level of water quality that will protect the seafood processing use. As explained in the FAQs document submitted by DEC in support of the submitted revision, the seafood processing use pertains to water drawn into seafood processing facilities and only used in the processing of seafood. According to the FAQs, DEC "determined that seafood processing use is not dependent upon any level of DO in the water" and that "upon review the seafood processing criteria did not seem appropriate to the designated use it is supposed to protect..." DEC further wrote, in its 2006 "Responsiveness Summary," that "[t]he seafood processing use protects water for processing and packaging fish and seafood for human consumption...[t]he water in seafood packaging does not need dissolved oxygen in order for the seafood

to be safe for consumption.” Finally, during the Triennial Review process, comments put forth by members of the seafood processing industry indicated that the existing criterion was not needed to protect the seafood processing use. In addition to other comments raised by members of the industry regarding the marine dissolved gas criteria, the only comment specific to the dissolved gas requirement for the seafood processing use indicated that the requirement was unnecessary for the use:

“...There is no rationale for having a separate dissolved oxygen criterion for the water used for seafood processing. This is water to be used in the seafood processing facility, and there is no reason to have any limit..” (e-mail from Greg Peters, Director of Environmental Compliance, Alyeska Seafoods, Inc., to Nancy Sonafrank, DEC, dated April 1, 2003).

EPA is not independently aware of technical or commercial literature describing any dissolved gas requirements for seafood processing facility intake/process water. DEC adopted the current dissolved gas criteria, shown in Table 1, before 1979. EPA is not independently aware of a technical basis for the current 5.0 mg/L criterion for this use, but DEC states in its FAQs that the current criterion “had no scientific basis.” No public comments as summarized in DEC’s “Responsiveness Summary” argued that the proposed change would result in water quality that did not protect the use.

**The record summarized above indicates (1) that the current criterion for dissolved gas in water used in seafood processing is not necessary to protect the use, (2) that there is no apparent technical basis for the current criterion for dissolved gas in water used in seafood processing, and (3) that removal of the criterion for the seafood processing use will not result in water quality that is not protective of this use. On this basis, EPA approves the revised criterion.**

#### **D. Protection of uses other than seafood processing**

In marine receiving waters, the dissolved gas criterion for the seafood processing use was the most stringent criterion for depths below 1 meter, and at the surface (i.e., for depths within 1 meter) if dissolved oxygen is naturally depressed below 5.0 mg/L. For estuarine and tidal tributaries, it was the most stringent criterion in waters where dissolved oxygen is naturally depressed below 5.0 mg/L. See Table 1. In Alaska, all waters are designated for all uses, unless uses have been specifically removed through a use designation change; there are no marine waters in Alaska from which uses have been removed. Therefore, elimination of the dissolved gas criterion for the seafood processing use removes what in some cases may be the most stringent marine water dissolved gas criterion. Furthermore, dissolved oxygen levels in Alaskan coastal waters may naturally often be higher than the remaining dissolved gas criteria<sup>1</sup>.

There are, however, mechanisms that will ensure that any other uses present will be protected with adequate dissolved gas requirements. Specifically, any other uses (e.g. aquatic life) should have use designations, and corresponding dissolved gas criteria, that will protect those uses. In addition, any

---

<sup>1</sup> For example, data collected to support a 1994 circulation study of Unalaska Bay (CH2M Hill, 1994) indicated that average background DO levels in the Unalaska Bay area were estimated to be about 11.7 mg/L for the surface layer and 10.5 mg/L for the bottom layer (p. 5-4, CH2M Hill, 1994).

permits that become less stringent as a result of the elimination of the seafood processing dissolved gas criterion would be subject to anti-backsliding requirements at 40 CFR 402(o). Finally, any new or reissued permits would be subject to the State's anti-degradation requirements at 18 AAC 70.015, which among other things require that where water quality is better than the minimum level necessary to protect important uses, that level of water quality must be maintained and protected unless an applicant submits evidence that certain specific conditions are met; and the application must undergo a public process.

### **E. Endangered Species Act and Magnuson-Stevens Act Consultation**

Section 7(a) of the Endangered Species Act (ESA; 16 U.S.C., Section 1536(a)) requires that Federal agencies, in consultation with the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS), ensure that their actions are not likely to jeopardize the continued existence of Federally listed species or result in the adverse modification of designated critical habitat of such species. The Magnuson-Stevens Fishery Conservation and Management Act (MSA), as amended by the Sustainable Fisheries Act of 1996 (Public Law 104-267), requires Federal agencies to consult with the National Marine Fisheries Services (NMFS) on activities that may adversely affect essential fish habitat (EFH).

The "seafood processing" designated use is a "human" use – that is, its purpose is not to protect water quality for aquatic life or wildlife, but rather to protect the quality of water used in seafood processing. Dissolved gas requirements for the protection of aquatic life and wildlife is specified separately in Alaska WQS, and that criterion is not affected by EPA's approval of the revision to the seafood processing gas criterion. EPA preliminarily determined that because the criterion in question was for the protection of the seafood processing use and that a separate criterion already existed for the protection of aquatic life and wildlife, consultation would not be required on this action. During early exchanges with USFWS and NMFS staff regarding the proposed revisions, the Services' staff indicated that this was an appropriate approach in this situation (see e-mail from Lawrence Peltz, NMFS, dated 6/8/05, to Lisa McGuire, EPA; and e-mail from Philip Johnson, USFWS, 6/27/05, to Lisa McGuire). Therefore, EPA concluded that consultation under the ESA and MSA was not necessary for EPA's approval action.

### **F. Tribal Consultation**

When EPA Region 10 is the ultimate decision-making authority, Federal and EPA Region 10 policies direct EPA Region 10 to consult with affected Federally-recognized tribal governments prior to decision-making. By letter dated August 17, 2005, the Director of the Office of Water and Watersheds for EPA Region 10 invited Federally-recognized Alaska tribes to initiate consultation with EPA regarding the Region's anticipated action on the dissolved gas and analytical methods revisions to Alaska's water quality standards revisions. No tribes notified EPA of a desire to initiate government-to-government consultation on these revisions.