

**DEPARTMENT OF  
ENVIRONMENTAL CONSERVATION**



**18 AAC 70**

**Water Quality Standards**

**Public Comment Draft**

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Frank Murkowski  
Governor

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Commissioner



18 AAC 70.020(b)(15) is amended to read:

**18 AAC 70.020. Protected water use classes and subclasses; water quality criteria; water quality standards table.**

(b) Except as modified by or under 18 AAC 70.220 or 18 AAC 70.235, the water quality criteria set out in the following table, and in the *Alaska Water Quality Criteria Manual for Toxic and Other Deleterious Organic and Inorganic Substances*, dated May 15, 2003 and adopted by reference, in combination with the classes and subclasses of water use set out in the (a) of this section, constitute the water quality standards for a particular waterbody; the water quality standards regulate human activities that result in alterations to waters within the state's jurisdiction:

<b>Water Quality Standards for Marine Water Uses</b>	
<b>POLLUTANT &amp; WATER USE</b>	<b>CRITERIA</b>
<b>(15) DISSOLVED GAS, FOR MARINE WATER USES</b>	
(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	<b>Not applicable.</b> [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).

Notes 1., 7., and 8. in 18 AAC 70.020(b) are amended to read:

**Notes:**

1. Wherever criteria for fecal coliform bacteria are provided in this section, fecal coliform bacteria **enumeration** must be determined by the membrane filter technique or most probable number procedure according to **any edition of *Standard Methods for the Examination of Water and Wastewater*, adopted by reference** [18<sup>TH</sup> EDITION, 1992, AS DESCRIBED] in (c)(1) of this section[, AND ADOPTED BY REFERENCE], or in accordance with other standards approved by the department and the United States Environmental Protection Agency (EPA).

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7. Samples to determine concentrations of total aromatic hydrocarbons (TAH) and total aqueous hydrocarbons (TAqH) must be collected in marine and fresh waters below the surface and away from any observable sheen; concentrations of TAqH must be determined and summed using a combination of: (A) EPA Method 602 (plus xylenes) or EPA Method 624 to quantify monoaromatic hydrocarbons and to measure TAH; and (B) EPA Method 610 or EPA Method 625 to quantify polynuclear aromatic hydrocarbons listed in EPA Method 610; use of an alternative method requires department approval; the EPA methods referred to in this note may be found in 40 C.F.R. 136, Appendix A, as revised as of **October 23, 2003** [JULY 1, 2002] and adopted by reference.

8. Color is as measured in color units on the platinum-cobalt scale according to **any edition of *Standard Methods for the Examination of Water and Wastewater*, adopted by reference** [18<sup>TH</sup> EDITION, 1992 AS DESCRIBED] in (c)(1) of this section [AND ADOPTED BY REFERENCE].

18 AAC 70.020(c) is amended to read:

(c) Water quality **must** [WILL] be analyzed according to

(1) **methods in any of the following documents:**

**(A) *Standard Methods for the Examination of Water and Wastewater*, 18th edition, 1992, published jointly by the American Public Health and American Water Works Associations, and the Water Environment Federation (publication office: American Public Health Association, 1015 15th Street NW, Washington, D.C. 20005), adopted by reference;**

**(B) *Standard Methods for the Examination of Water and Wastewater*, 19<sup>th</sup> edition, 1995, published jointly by the American Public Health and American Water Works Associations, and the Water Environment Federation (publication office: American Public Health Association, 1015 15th Street NW, Washington, D.C. 20005), adopted by reference;**

**(C) *Standard Methods for the Examination of Water and Wastewater*, 20<sup>th</sup> edition, 1998, published jointly by the American Public Health and American**

**Water Works Associations, and the Water Environment Federation (publication office: American Public Health Association, 1015 15th Street NW, Washington, D.C. 20005), adopted by reference; the following analytical methods listed in the 20<sup>th</sup> edition of the *Standard Methods for the Examination of Water and Wastewater*, are not approved: 3111B, 3111D, 3112B, 3113B, and 3114B;**

(2) *Methods for Chemical Analysis of Water and Wastes*, **March 1983** [MARCH 1979], Technical Report No. EPA 600-4-79-020, Environmental Monitoring and Support Laboratory, Office of Research and Development, United States Environmental Protection Agency, Cincinnati, Ohio 45268 (available from the National Technical Information Service, United States Department of Commerce, Springfield, Virginia 22161, Order No. PB 297686), **adopted by reference;**

(3) Guidelines Establishing Test Procedures for the Analysis of Pollutants; **Under the Clean Water Act: National Primary Drinking Water Regulations: and National Secondary Drinking Water Regulations; Methods Update: Final Rule [AND INTERIM FINAL RULE AND PROPOSED RULE], Federal Register Part VIII, EPA, **Wednesday, October 23, 2002, 40 C.F.R. Part 136, Vol. 67, No. 205; EPA 815Z02005, adopted by reference;**** [FRIDAY, OCTOBER 26, 1984, 40 C.F.R. PART 136, VOL. 49, NO. 209];

(4) [GUIDELINES ESTABLISHING TEST PROCEDURES FOR THE ANALYSIS OF POLLUTANTS; FINAL RULE AND INTERIM FINAL RULE AND PROPOSED RULE; CORRECTIONS, FEDERAL REGISTER PART VI, EPA, FRIDAY, JANUARY 4, 1985, 40 C.F.R. PART 136, PAGES 690 THROUGH 697;

(5) *Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater*, July 1982 Technical Report No. EPA 600 14-82-057, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio 45268, **adopted by reference;**

**(5)** [(6)] methods cited in (b) of this section; or

**(6)** [(7)] other methods of analysis approved by the department and EPA.

(Eff. 11/1/97, Register 143; am 4/29/99, Register 150; am 5/27/99, Register 150; am 6/22/2003, Register 166; am \_\_/\_\_/\_\_, Register \_\_)

Authority: AS 46.03.020 AS 46.03.050 AS 46.03.070  
AS 46.03.080

The lead-in to 18 AAC 70.030(a) is amended to read:

**18 AAC 70.030. Whole effluent toxicity limit.** (a) An effluent discharged to a water may not impart chronic toxicity to aquatic organisms, expressed as 1.0 chronic toxic unit, at the point of discharge, or if the department authorizes a mixing zone in a permit, approval, or certification, at or beyond the mixing zone boundary, based on the minimum effluent dilution achieved in the mixing zone. If the department determines that an effluent has reasonable

potential to cause or contribute to exceedance of the whole effluent toxicity limit, the department will require whole effluent toxicity testing as a condition of a permit, approval, or certification. The permittee shall use methods and species approved by the United States Environmental Protection Agency in *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (3d ed. 1994) (Environmental Monitoring Systems Laboratory, U.S. Environmental Protection Agency USEPA [(2D ED. 1989) (OFFICE OF RESEARCH AND DEVELOPMENT, CINCINNATI, OH, EPA-600/4-89/001)], *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms* (1<sup>st</sup> e. 1995) (National Exposure Research Laboratory, Cincinnati, OH, EPA-600-R-95/136) [SHORT-TERM METHODS FOR ESTIMATING THE CHRONIC TOXICITY OF EFFLUENTS AND RECEIVING WATERS TO MARINE AND ESTUARINE ORGANISMS (1988) (OFFICE OF RESEARCH AND DEVELOPMENT, CINCINNATI, OH, EPA-600/4-87/028)], and *Supplement to "Short-term Methods for Estimating the Chronic Toxicity of Effluents and Surface Waters to Freshwater Organisms"* (September 1989) (Office of Research and Development, Cincinnati, OH, EPA-600/4-89/001a, Revision 1), or alternate methods and species approved by the department that provide equivalent estimates of chronic toxicity. The department will require that the testing use sensitive and biologically important life stages of indigenous species, as the department considers necessary and feasible to protect aquatic life fully. The department will reduce the frequency of, or eliminate, whole effluent toxicity testing if

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(Eff. 11/1/97, Register 143; am 4/29/99, Register 150; am \_\_\_/\_\_\_/\_\_\_, Register \_\_\_)

Authority: AS 46.03.020 AS 46.03.070 AS 46.03.080  
AS 46.03.050

18 AAC 70.990(34), (52), and (70) are amended to read:

**18 AAC 70.990. Definitions.** Unless the context indicates otherwise, in this chapter

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(34) "mean" means the average of values obtained over a specified time period and, for fecal coliform analysis, is computed as a **geometric mean** [LOGARITHM];

....

(52) "settleable solids" means solid material of organic or mineral origin that is transported by and deposited from water, as measured by the volumetric Imhoff cone method and at the method detection limits specified in method 2540(F), **in any edition of Standard Methods for the Examination of Water and Wastewater, adopted by reference in 18 AAC 70.020(c)(1)** [18TH EDITION (1992)];

....

(70) “milliequivalents per liter” or “meq/l” mean milligrams per liter divided by **the product of** the molecular weight of the chemical compound **and the electrical charge or valence of that compound;**

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(Eff. 11/1/97, Register 143; am 4/29/99, Register 150; am 6/22/2003, Register 166; am \_\_\_/\_\_\_/\_\_\_\_, Register \_\_\_)

Authority:	AS 46.03.010	AS 46.03.080	AS 46.03.110
	AS 46.03.020	AS 46.03.090	AS 46.03.710
	AS 46.03.050	AS 46.03.100	AS 46.03.720
	AS 46.03.070		