



# Water Quality Standards

## Standard Analytical Methods Update

Alaska Department of Environmental Conservation  
Division of Water

February 25, 2015



# Division of Water

## Mission Statement:

*Improve and protect water quality*

## How?

- 💧 Establishes standards for water cleanliness
- 💧 Regulates discharges to waters and wetlands
- 💧 Provides financial assistance for water and wastewater facility construction and waterbody assessment and remediation
- 💧 Trains, certifies, and assists water and wastewater system operators
- 💧 Monitors and reports on water quality



# Standard Analytical Methods Update:

## Overview of presentation:

- 💧 Clean Water Act- **Regulatory Framework**
- 💧 Review of Proposed Regulation Changes- **What's New**
- 💧 Public Participation Process- **Staying Involved**

# Clean Water Act 101



- 💧 Passed by U.S. Congress in 1972 to address water pollution issues
- 💧 Provides EPA with the authority to regulate and delegate aspects of the Clean Water Act
- 💧 Requires clean water programs to use EPA-approved analytical methods
- 💧 EPA retains the authority to approve or deny regulations



# Policy & Implementation Methods

## Clean Water Act – Codified in 40 Code of Federal Register 136

- Guidelines Establishing Test Procedures for the Analysis of Pollutants- **section 304(h)**
- Only EPA-approved analytical methods can be used for CWA purposes
- New and revised methods issued in 2012

## ADEC-

- Proposes new regulatory language and updated citations in state regulation at 18 AAC 70 and 18 AAC 83
- Assures consistency with the CWA



# EPA 2012 Final Method Updates Rule

- This rule modifies the testing procedures approved for analysis under the Clean Water Act.
- Includes:
  - New and Revised Waster water Methods
  - Examples of Allowed Method Flexibility
  - New Quality Control Requirements
  - Clarifications and Corrections to Previously Approved Methods
  - Revision to Sample Collection, Preservation, and Holding Times



# Use of Sufficiently Sensitive Test Methods for Permit Applications and Reporting

- Water quality testing must use methods “sufficiently sensitive” enough to assess against water quality criteria
- The rule:
  - adds a new 40 CFR 122.21(e)(3),
  - revises 122.44(i)(1)(iv) to require NPDES applicants use sufficiently sensitive EPA-approved analytical methods,
  - provides a cross-reference to these changes in 40 CFR 136

# ADEC 18 AAC 70

## Proposed Regulation Changes

Legend  
**BOLD = NEW**  
 [Bracket]= Removed

18 AAC 70.020(b)(14)(D) is amended to read:

Water Quality Standards for Designated Uses	
Pollutant & Water Use	Criteria
(14) Fecal Coliform (FC), For Marine Uses, (see note 1)	
(D) Harvesting for Consumption of Raw Mollusks or Other Raw Aquatic Life	<b><u>In a 30 day period, the geometric mean</u></b> [BASED ON THE 5-TUBE DECIMAL DILUTION TEST, THE FECAL COLIFORM MEDIAN MPN] may not exceed 14 FC/100 ml, and not more than 10% of the samples may exceed [A FECAL COLIFORM MEDIAN MPN OF] 43FC/ 100 ml.

18 AAC 70.020(b) Water Quality Standards Table Note 1, is amended to read:

1. Wherever criteria for fecal coliform bacteria are provided in the section, fecal coliform bacteria numeration must be determined by the membrane filter technique or most probable number procedure according to any edition of *Standard Methods for Examination of Water and Wastewater*, adopted by reference in (c)(1) of this section, or in accordance with other standards approved by the department and the United States Environmental Protection Agency (EPA). **Fecal coliform reported as “too numerous to count” (TNTC) is considered an exceedance for comparison for water quality standards. Analysis and reporting of the method recommended dilution of the sample is required.**

Legend  
**BOLD = NEW**  
[Bracket]= Removed

18 AAC 70.020(b) Water Quality Standards Table Note 9 is amended to read:

9. Wherever cited in this chapter, 10 C.F.R. Part 20 means the Standards for Protection Against Radiation, **revised** as of January 24, 2013 [January 1, 1978], adopted by reference

18 AAC 70.020(b) Water Quality Standards Table Note 10 is amended to read:

10. Wherever cited in this chapter, National Bureau of Standards, Handbook 69 means Maximum Permissible Body Burdens and Maximum Permissible Concentrations of Radionuclides in Air and Water for Occupational Exposure, United States Department of Commerce, National Bureau of Standards Handbook 69, June 5, 1959, **with August 1963 Addendum**, adopted by reference.

Legend

**BOLD = NEW**

[Bracket]= Removed

18 AAC 70.020(c)(1) is amended to read:(1)Standard Methods for the Examination of Water and Wastewater, 18<sup>th</sup> edition, 1992, 19<sup>th</sup> edition, 1995, [OR]20<sup>th</sup> edition, 1998, or **21<sup>st</sup> edition, 2005**, published jointly by the American Public Health and American Water Works Associations, and the Water Environment Federation; the editions of Standard Methods for the Examination of Water and Wastewater listed in this paragraph are adopted by reference, **except for analytical methods where the most recently EPA approved version is required under (c)(3) of this section and later versions of those methods** [THAT ANALYTICAL METHODS THE FOLLOWING ANALYTICAL METHODS 3111B, 3111D, 3112B, 3113B, AND 3114B IN THE 20<sup>TH</sup> EDITION] are not adopted by reference and are not approve

Legend  
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18 AAC 70.020(c)(3) is amended to read:

(3) EPA's *Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act*; **Analysis and Sampling Procedures, 77 FED. REG. 29758 – 29846 (May 18, 2012)**[NATIONAL PRIMARY DRINKING WATER REGULATIONS; AND NATIONAL SECONDARY DRINKING WATER REGULATIONS; METHODS UPDATE, 67 Fed. Reg. 65220 – 65253 (OCTOBER 23, 2002)], adopted by reference;

(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 6/13/2006, Register 178; am 9/1/2006, Register 179; am 9/19/2009, Register 191; am 5/26/2011, Register 198; am \_\_/\_\_/\_\_\_\_, Register\_\_)

Authority: AS 46.03.020 AS 46.03.070 AS 46.03.080 AS 46.03.050

18 AAC 70.030(a) is amended to read:

(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, 4<sup>th</sup> edition(2002), Technical Report No. EPA-821-R-02-013, adopted by reference, and Short-Term Methods for Estimating the chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms,3<sup>rd</sup> [1<sup>ST</sup> ]edition(October 2002) [AUGUST 1995], Technical Report NO. **EPA/821/R-02/014** [EPA/600/R-95/136], adopted by reference or alternate methods and species approved by the department that provide equivalent estimates of chronic toxicity.

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Legend  
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# ADEC 18 AAC 83

## Proposed Regulation Changes

18 AAC 83.010(f) is amended to read:

(f) The provisions of 40 C.F.R. Part 136 (Guidelines Establishing Test Procedures for the Analysis of Pollutants), as revised as of **September 18, 2014** [July 1, 2006], are adopted by reference.

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(Eff. 7/29/2006, Register 179; am 11/10/2007, Register 184; am 10/23/2008, Register 188; am \_\_\_/\_\_\_/, Register\_\_\_)

Authority: AS 44.46.020 AS46.03.010 AS 46.03.020 AS46.03.050 AS46.03.100  
AS 46.03.110



# Public Involvement



- ✓ PUBLIC NOTICE-
  - 45-days notice period
  
- ✓ PUBLIC HEARING- **02/25/2015**
  - Oral or written comments may be submitted
  - Individuals may participate via teleconference
  
- ✓ PUBLIC COMMENTS-
  - Written Comments
  - Faxed Comments
  - Electronic Mailed Comments
  - Alaska Online Public Notice System
  - **March 10, 2015 by 5:00 p.m.**

# Summary

- \* Standard Analytical Methods ensure quality and repeatability among the different laboratories
- \* EPA periodically updates the analytical methods based on the best available science and technology
- \* DEC wants to ensure that scientifically proven methods are used when testing water and wastewater for compliance with WQS.
- \* The proposed regulations do not change the water quality criteria- but are intended to update methods cited in 18 AAC 70 and 18 AAC 83

**Comments Must Be Received  
No Later Than  
5:00p.m. On March 10, 2015**



## Mechanisms to Stay Involved:

- **Water Quality Standards Website:**

<http://dec.alaska.gov/water/wqsar/wqs/index>

- **Standard Analytical Methods Update:**

[http://dec.alaska.gov/water/wqsar/wqs/analytical\\_methods\\_updates.htm](http://dec.alaska.gov/water/wqsar/wqs/analytical_methods_updates.htm)

- **Water Quality Standards List Serve:**

[http://list.state.ak.us/soalists/DEC\\_WaterQualityStandard/jl.htm](http://list.state.ak.us/soalists/DEC_WaterQualityStandard/jl.htm)

- **Wastewater Discharge (APDES) List Serve:**

[http://dec.alaska.gov/water/npdes/npdes\\_email\\_list.htm](http://dec.alaska.gov/water/npdes/npdes_email_list.htm)



Thank you for your time!

Questions?

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Division of Water  
<http://dec.alaska.gov/water/index.htm>