



## Maine Department of Environmental Protection 2021 Triennial Review of Water Quality Standards

### Environmental Protection Agency 2015 Decision Letters

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**Decision Letter 2/2/2015**



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION I  
5 POST OFFICE SQUARE SUITE 100  
BOSTON, MASSACHUSETTS 02109-3912

February 2, 2015

Patricia W. Aho, Commissioner  
Maine Department of Environmental Protection  
17 State House Station  
Augusta, ME 04333-0017

Re: Review and Decision on Water Quality Standards Revisions

Dear Commissioner Aho:

By letter of January 14, 2013, the Maine Department of Environmental Protection ("DEP") submitted revisions of the State's surface water quality standards ("WQS") to Region 1 of the United States Environmental Protection Agency ("EPA" or "Region") for review and approval or disapproval. The revisions were adopted by the DEP on July 13, 2012. By letter to EPA dated January 9, 2013, Maine's Assistant Attorney General in the Natural Resources Division certified the revisions as having been duly adopted pursuant to state law. By letter of May 16, 2013, EPA approved the revision to the arsenic criteria to protect human health in state waters outside of Indian territories and lands, but did not act on the arsenic criteria for waters in Indian territories and lands. In the approval letter EPA also indicated that the additional revisions submitted by DEP were still under review.

I commend DEP for the 2012 adoption of revisions to its water quality standards that strengthen the ability to protect Maine's waters including the adoption of new aquatic life criteria for acrolein, diazinon, and nonylphenol.

DEP submitted additional revisions of the State's surface water quality standards to the Region for review and approval or disapproval by letter of February 27, 2014. The revisions were certified on February 26, 2014, by Maine's Assistant Attorney General in the Natural Resources Division as having been duly adopted pursuant to state law. Before now, EPA had not acted on any of these revisions for any waters in Maine.

In both of the above-referenced submission letters, DEP requested that EPA approve Maine's WQS in Indian territories and lands ("Indian lands"). As discussed in the attached Decision Support Document (Attachment A), EPA has concluded that the State of Maine has the authority to adopt WQS that are applicable to waters in Indian lands. Accordingly, EPA is herein responding to the remaining unapproved elements of the 2013 and 2014 WQS revisions for waters throughout the State, including in Indian lands.

In addition to the 2013 and 2014 submissions, DEP submitted numerous WQS revisions to EPA from August 26, 2003, through July 8, 2011, for review and approval or disapproval.<sup>1</sup> In EPA's letters approving WQS revisions contained in those submissions, EPA noted that it was not taking action on the WQS with respect to any waters in Indian lands. In light of EPA's determination that the State of Maine has the authority to adopt WQS for waters in Indian lands, EPA is herein responding to those WQS revisions for those waters.<sup>2</sup>

Many of the WQS revisions under review for approval or disapproval for waters in Indian lands are water quality criteria, and the Clean Water Act ("CWA") requires that criteria be protective of designated uses. As discussed in the Decision Support Document, EPA has not yet approved any WQS, including designated uses, for waters in Indian lands.

Therefore, in order to evaluate whether the submitted criteria are protective of designated uses, EPA must first approve designated uses for these waters. Accordingly, EPA is herein approving Maine's surface water classifications and corresponding designated uses for waters in Indian lands.<sup>3</sup> Because EPA has not previously approved these WQS for waters in Indian lands, EPA considers them to be "new" WQS as applied to such waters. EPA is also approving 38 M.R.S. § 6207(4) and (9) (a provision of the Maine Implementing Act, or MIA, which settled the Maine Indian land claims as a matter of Maine law), as an explicit designated use for certain waters in Indian lands.

The following paragraphs state EPA's decisions on Maine's new and revised WQS described above. The decisions include approvals and disapprovals, and the detailed explanations for the decisions are provided in Attachment A. EPA has also identified several provisions that EPA is not taking action on, primarily because DEP is planning to update them soon, and some provisions that EPA is not taking action on because we have concluded that they are not WQS requiring EPA review and approval; these are also explained in Attachment A. EPA is not responding to new or revised Maine WQS other than those explicitly identified in this letter.

## **Approvals**

Pursuant to Section 303(c)(3) of the Clean Water Act and 40 C.F.R. part 131, I hereby approve the following new or revised WQS:

### Classifications and Designated Uses

For all waters in Indian lands:

- Maine's standards for classification and corresponding designated uses in 38 M.R.S. § 465(1.A), (2.A), (3.A) and (4.A)(for fresh waters); § 465-A(1.A) (for great ponds and natural lakes and ponds less than 10 acres in size, and impoundments of rivers that are

<sup>1</sup> A list of these submissions is provided in Section 4.10 of Attachment A.

<sup>2</sup> Maine's July 8, 2011 submission was for EPA's review of a reclassification of the Kennebec River. Although EPA's July 20, 2011 letter approving the reclassification included the caveat about not acting with respect to waters in Indian lands, the Kennebec River is nowhere near Indian lands. Therefore, EPA is taking no further action today with respect to that submission.

<sup>3</sup> EPA intends to review and approve or disapprove all remaining Maine WQS that could apply to waters in Indian lands, such as dissolved oxygen criteria, definitions, antidegradation provisions, etc., as soon as possible.

defined as great ponds pursuant to 38 M.R.S. § 480-B), including the definition of “great ponds” in 38 M.R.S. § 480-B(5); and § 465-B(1.A), (2.A) and (3.A) (for estuarine and marine waters);

- The classification of specific waters in 38 M.R.S. § 467 (Classification of major river basins) and § 468 (Classification of minor drainages); and § 469 (Classification of estuarine and marine waters);
- The addition of agriculture as a designated use to freshwaters (Classes AA, A, B, C, and GPA), submitted to EPA on August 26, 2003; and
- The reclassifications, submitted to EPA on December 7, 2009, of Otter Creek, a tributary of Seboeis Stream, Alder Stream, and South Branch Stream, a tributary to the Mattamiscontis Stream, from Class B to Class A; and of Grand Falls Flowage between Route 1(Princeton and Indian Township) and Black Cat Island from Class B to Class GPA.

### Criteria

For waters throughout the State of Maine, including in Indian lands, the following water quality criteria provisions contained in DEP Rule Chapter 584, Surface Water Quality Criteria for Toxic Pollutants, Appendix A, submitted to EPA on January 14, 2013:

- Freshwater and marine aquatic life criteria for diazinon and nonylphenol;
- Freshwater aquatic life criteria for acrolein;
- Corrections of Federal Register Cites/Sources in Tables I and II of Appendix A; clarifications in footnote II in Table I, and footnotes A and C and Additional Note 4 in Table II; and
- Footnote aME in Table I of Appendix A *except* for the first sentence related to arsenic, which EPA is taking no action on.

For all waters in Maine *except* for waters in Indian lands, the following water quality criteria contained in DEP Rule Chapter 584, Surface Water Quality Criteria for Toxic Pollutants, Appendix A, submitted to EPA on January 14, 2013:

- Human health criteria for the consumption of water plus organisms for acrolein; and
- Human health criteria for the consumption of organisms only for acrolein and phenol.

For all waters in Indian lands, the following water quality criteria provisions:

- The provision regarding dissolved oxygen measurement requirements in riverine impoundments contained in 38 M.R.S. § 464(13), submitted to EPA on August 26, 2003;
- Aquatic life criteria provisions in 38 M.R.S. § 420(1-B.A.(1)),(1-B.C),(1-B.D), and (1-B.E), submitted to EPA on May 14, 2004, *except for* revisions made at in 38 M.R.S. § 420(1-B.C.(1)) and (1-B.C.(2)) that describe the state regulatory procedures for establishing site-specific bioaccumulation factors and which are not WQS (see below);
- The Classification Attainment Evaluation Using Biological Criteria for Rivers and Streams, contained in DEP Rule Chapter 579, submitted to EPA on May 14, 2004;
- All provisions of DEP Rule Chapter 584, Surface Water Quality Criteria for Toxic Pollutants, including Appendix A, submitted to EPA on January 11, 2006, *except for*:
  - All human health criteria in Appendix A, which EPA is disapproving ( see below);

- the ammonia aquatic life criteria in Appendix A and 7.C, on which EPA is taking no action at this time (see below); and
- provisions which are not WQS (see below);
- The 30-day average dissolved oxygen criterion of 6.5 ppm for certain Class C waters, contained in 38 M.R.S. § 465(4.B), submitted to EPA on January 11, 2006;
- The instream design flows for the application of water quality criteria for aquatic life and human health protection, which are consistent with EPA's current guidance (IQ10 low flow for acute aquatic life criteria, 7Q10 low flow for chronic aquatic life criteria, and harmonic mean flow for human health criteria), contained in DEP Rule Chapter 530, § 4.B, submitted to EPA on January 11, 2006; and
- Revisions at 38 M.R.S. § 465(3.C.(2)) and § 465-B(2.C) enacted in Chapter 291, L.D. 1274, "An Act to Allow the Discharge of Aquatic Pesticides Approved by the Department of Environmental Protection for the Control of Mosquito-borne Diseases in the Interest of Public Health and Safety,"), submitted to EPA on April 8, 2008.

### General

For all waters in Indian lands:

- The provisions in 38 M.R.S. § 464(3.B) that ensure that a hearing will be held at least once every three years for the purpose of reviewing Maine's water quality standards, and revising them as appropriate, consistent with 40 C.F.R. § 131.20, submitted to EPA for review on May 14, 2004.

### **Disapprovals**

Pursuant to Section 303(c)(3) of the CWA and 40 C.F.R. part 131, I hereby disapprove the following new and revised water quality standards:

For all waters in Indian lands:

- The mercury human health criteria revision at 38 M.R.S. § 420(1-B.A.(2)), submitted to EPA May 14, 2004;
- All human health criteria in DEP Rule Chapter 584, Surface Water Quality Criteria for Toxic Pollutants, Appendix A, submitted to EPA on January 11, 2006; and
- Human health criteria revisions related to arsenic, acrolein, and phenol in DEP Rule Chapter 584, Surface Water Quality Criteria for Toxic Pollutants, Appendix A, and the last sentence in Ch. 584, § 5.C related to the fish consumption rate, submitted to EPA on January 14, 2013.

### **Revisions for Which EPA is Not Making a Decision at This Time**

EPA is not deciding to approve or disapprove the following new or revised WQS at this time:

For all waters in Indian lands:

- The ammonia criteria for protection of aquatic life in DEP Rule Chapter 584, Appendix A, submitted to EPA on January 11, 2006;

- The recreational (bacteria) numeric criteria for the protection of primary contact recreation for Class B and C waters in 38 M.R.S. § 465(3.B) and (4.B), submitted to EPA on January 11, 2006;
- The revisions made in L.D. 1450 at 38 M.R.S. § 465-B(2.B) and (3.B), which extended the applicability of the bacteria criteria for Class SB and Class SC waters to include bacteria of domestic animal origin, submitted to EPA on January 11, 2006; and
- The first sentence of Footnote aME in Table I of Appendix A and the last sentence in Ch. 584, § 4 (the cancer risk level to be used to calculate human health criteria for inorganic arsenic).

For all waters throughout Maine, including in Indian lands:

- The revision made in L.D. 1304 at 38 M.R.S. § 464(4.A(3)(a)), and § 465((3.C.(1)) and (4.C), related to certain pesticide discharges, submitted to EPA on January 11, 2006;
- The revisions made in L.D. 1304 at 38 M.R.S. § 465(3.B) and (4.B), which extended the applicability of the bacteria criteria for Class B and Class C waters to include bacteria of domestic animal origin, submitted to EPA on January 11, 2006;
- The revision made in L.D. 1778 at 38 M.R.S. § 465-A(1.B), which extended the applicability of the bacteria criteria for Class GPA waters to include bacteria of domestic animal origin, submitted to EPA on April 8, 2008;
- The phenol criteria for the protection of human health consumption of water plus organisms, in DEP Rule Chapter 584, Appendix A, submitted to EPA on January 14, 2013; and
- The revision made in L.D. 1430 at 38 M.R.S. § 464(4.A(3)(b)), related to certain pesticide discharges to tributaries of GPA waters, submitted to EPA on February 27, 2014.

For waters outside of waters in Indian lands:

- The reclassification of a 0.3 mile segment of Long Creek that flows through Westbrook from Class B to Class C, submitted to EPA on December 7, 2009.

### **Revisions That are not WQS and do Not Require an EPA Decision**

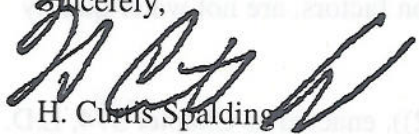
I have concluded that the following revisions, which relate to exemptions from discharge prohibitions, testing and licensing provisions related to discharges, updates of federal statutory and regulatory references, and procedural provisions that establish processes for adopting alternative criteria and establishing site-specific bioaccumulation factors, are not water quality standards requiring EPA review and approval or disapproval:

- Revisions made at 38 M.R.S. § 465(1.C.(2)) and (2.C.(2)), enacted as Chapter 574, L.D. 1833 “An Act to Amend Water Quality Laws to Aid in Wild Atlantic Salmon Restoration,” submitted to EPA on May 14, 2004;
- Revisions made at 38 M.R.S. § 420(1-B.B) related to discharger compliance, submitted to EPA on May 14, 2004;
- Revisions made at in 38 M.R.S. § 420(1-B.C.(1)) and (1-B.C.(2)) that describe the state regulatory procedures for establishing site-specific bioaccumulation factors, submitted to EPA on May 14, 2004;

- Revisions made at 38 M.R.S. § 361-A(1-J) and (1-K), enacted as Chapter 330, L.D. 1588, Sections 7 and 8, which updated the definitions of "Code Of Federal Regulations" and "Federal Water Pollution Control Act" to include their amendments through January 1, 2005, submitted to EPA on January 11, 2006;
- Revisions made at 38 M.R.S. § 464(4.A.(1)(c) and (d)); § 465(1.C.(3)) and (2.C.(3)); and § 465-A(1.C), enacted as Chapter 182, L.D. 1304 "An Act Concerning Invasive Species and Water Quality Standards," submitted to EPA on January 11, 2006;
- Revisions made at DEP Rule Chapter 584 § 3, submitted to EPA on January 11, 2006, regarding adoption procedures for alternative statewide and site specific criteria. This includes: the requirement in Chapter 584 § 3(A.(2)) that "statewide criteria must be initiated in accordance with the petition for rulemaking provisions of the State Administrative Procedures Act, 5 M.R.S.A., Section 8055"; the provision in the first paragraph of Chapter 584 § 3(B) that site specific criteria "must only be adopted by the Board as part of a waste discharge license proceeding pursuant to 38 MRSA Sections 413, 414 and 414-A"; and the first two sentences of the second paragraph of Chapter 584 § 3(B);
- Revisions made at 38 M.R.S. § 464(4.A.(1)(e)); § 465(1.C.(4)) and (2.C.(4)); § 465-A(1.C.(4)); and § 465-B(1.C.(2)), enacted as Chapter 291, L.D. 1274, "An Act to Allow the Discharge of Aquatic Pesticides Approved by the Department of Environmental Protection for the Control of Mosquito-borne Diseases in the Interest of Public Health and Safety," submitted to EPA on April 8, 2008;
- Revisions made at 38 M.R.S. § 420(1-B)(F) and § 464(4)(J) and (K), related to testing and licensing requirements for waste discharges that were included in LD 515, submitted to EPA on January 14, 2013; and
- Revisions made at 38 M.R.S. § 464(4.A.(1)(f)); § 465(1.C.(5)) and (2.C.(5)); § 465-A(1.C.(5)); and § 465-B(1.C.(4)), enacted as Chapter 193, L.D. 1430, "An Act to Clarify the Permitted Use of Aquatic Pesticides," submitted to EPA on February 27, 2014.

EPA looks forward to continued cooperation with Maine in the development, review and approval of water quality standards pursuant to our responsibilities under the Clean Water Act. EPA would like to begin discussions with DEP as soon as possible about the criteria that EPA is disapproving and those about which EPA is making no decision. EPA will contact you next week to schedule such discussions. In the meantime, please contact Ellen Weitzler (at [weitzler.ellen@epa.gov](mailto:weitzler.ellen@epa.gov) or 617-918-1582) if you have any questions.

Sincerely,



H. Curtis Spalding  
Regional Administrator



**Decision Letter 2/2/2015 - Attachment A**

**Analysis Supporting EPA's February 2, 2015 Decision  
to Approve, Disapprove, and Make No Decision on, Various Maine  
Water Quality Standards, Including Those Applied to  
Waters of Indian Lands in Maine**

**EXECUTIVE SUMMARY**

Maine's Department of Environmental Protection (DEP) submitted numerous new or revised water quality standards (WQS) to EPA for review and approval under the Clean Water Act (CWA) between 2003 and 2014. In its decisions from 2004-2013 following review of such WQS, EPA limited its approvals of the new or revised WQS to state waters outside of Indian territories and lands in Maine ("Indian lands"), and explicitly refrained from taking any action on the WQS for waters in Indian lands. In its decision today, EPA is responding to the outstanding new and revised WQS from 2003-2014 as they relate to waters in Indian lands, and, in the case of some of the WQS, also as they relate to state waters outside of Indian lands.

As summarized below and explained in more detail in the body of this decision support document, Maine has the authority to establish WQS for waters in Indian lands, subject to EPA's authority under the CWA to review and approve or disapprove such standards. After evaluating the various new and revised WQS contained in DEP's submissions from 2003-2014, EPA is today approving all of the aquatic life criteria for toxic pollutants for waters in Indian lands except for ammonia, and all but one of the new aquatic life criteria submitted in 2013 for all waters, including in Indian lands.<sup>1</sup> EPA is also approving a number of other WQS provisions for waters in Indian lands, as well as Maine's classifications and designated uses for those waters. EPA is disapproving Maine's human health criteria as they apply to waters in Indian lands. Finally, EPA has identified a number of provisions on which it is taking no action because they are not WQS and therefore are not subject to EPA review.

The bases for two aspects of EPA's decision today are summarized below because of their complexity -- EPA's conclusion that Maine has the authority to establish WQS in waters in Indian lands, and EPA's conclusion that Maine's human health criteria do not protect the designated uses and therefore must be disapproved.

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<sup>1</sup> EPA is taking no action on the ammonia criteria and certain provisions related to bacteria and pesticides, based on our understanding from discussions with DEP staff that DEP will be revising these criteria and provisions in light of recent EPA criteria recommendations and to ensure the protection of designated uses, nor is EPA taking action on the reclassification of a non-tribal water (Long Creek), pending further discussion with DEP. See section 4.8 below. EPA is also taking no action on one of the new phenol criteria for all waters pending DEP's correction of a mathematical error, which DEP has agreed to correct. See section 4.3 below. Finally, EPA is taking no action on the cancer risk level for arsenic in light of EPA's disapproval of the arsenic criteria for waters in Indian lands. See section 4.2.4 below.

**The Issue:** The State of Maine submitted numerous new and revised water quality standards (WQS) for EPA to approve under the Clean Water Act in the territories and lands of the federally recognized Indian Tribes in Maine – the Penobscot Nation, Passamaquoddy Tribes, Houlton Band of Maliseet Indians, and Aroostook Band of Micmacs. Under well-established principles of federal Indian law, states generally do not have authority to regulate the environment in Indian country. Maine asserts that in the Maine Indian Claims Settlement Act (MICSA) Congress granted the State jurisdiction to regulate the environment in the Tribes’ lands, including the authority to set WQS. The Tribes contest that assertion, noting especially that state WQS have the potential to determine how much fish they may safely eat in waters where the Tribes fish for their sustenance. The Tribes assert the State has not adequately accounted for their sustenance fishing practices in setting the WQS submitted to EPA.

**Jurisdiction to set WQS:** EPA analyzed the jurisdictional provisions of MICSA extensively, including a careful review of comments from the Tribes and Maine on the jurisdictional provisions of the statute. EPA concludes that under the unique jurisdictional formula Congress established in Maine, the State has jurisdiction to set WQS in the waters on the Tribes’ lands. See *Maine v. Johnson*, 498 F.3d 37 (1<sup>st</sup> Cir. 2007). But the Agency also finds that this authority is not unconstrained. EPA is required under the Clean Water Act to review state WQS, and will approve them when they comply with the Act. In these circumstances, where Maine is authorized to set WQS in tribal waters, EPA is informed by the operation of the Indian settlement acts in Maine and will require that WQS in tribal waters protect the Tribes’ sustenance fishing use of those waters.

**Sustenance Fishing Use in Tribal Waters:** The first step in establishing and reviewing WQS is to determine the uses of the waters. In tribal waters, EPA must harmonize the CWA requirement that WQS must protect uses with the fundamental purpose for which land was set aside for the Tribes under the Indian settlement acts in Maine. Those settlement acts, which include MICSA and other state and federal statutes that resolved Indian land claims in the State, provide for land to be set aside as a permanent land base for the Indian Tribes in Maine. One clear purpose of that set aside is to provide a land base on which these Tribes could continue their unique cultures. A critical element of tribal cultural survival is the ability to exercise sustenance living practices, including sustenance fishing. There are multiple provisions in the Indian settlement acts that specifically codify the Tribes’ sustenance practices. Maine general law regulating fish take accommodates sustenance fishing, and in several regards also specifically codifies the Tribes’ ability to sustenance fish. The legislative record supporting the Indian settlement acts in Maine makes it clear that the statutes intend to create a land base on which the Tribes in Maine may fish for their sustenance. Therefore, EPA interprets the State’s “fishing” designated use, as applied in tribal waters, to mean “sustenance” fishing; and EPA is approving a specific sustenance fishing right reserved in one of the settlement acts as a designated use for certain tribal reservation waters.

**Protecting the Sustenance Fishing Use:** To adequately protect that sustenance fishing use, the State must revisit two aspects of its analysis supporting the human health criteria that determine how clean the waters must be to allow the Tribes to safely consume fish for their sustenance. First, the analysis must treat the tribal population exercising the sustenance fishing use as the target general population, not as a high-consuming subpopulation of the State. EPA guidance

calls for WQS that provide a high level of protection for the general population, while recognizing that small subpopulations may face greater levels of risk. However, the Tribes are not a subpopulation using the waters on their own lands; they are the population for which that land base was established and set aside. Second, the data used to determine the fish consumption rate for tribal sustenance consumers must reasonably represent tribal consumers taking fish from tribal waters and fishing practices unsuppressed by concerns about the safety of the fish available to them to consume. The data on which the State relied to develop fish consumption rates for these WQS did not include information about the sustenance practices of tribal members fishing in their own waters, nor did they represent consumption levels that were unsuppressed by concerns about pollution. EPA concludes that the best available data that represent the unsuppressed sustenance fishing practices of tribal members fishing in tribal waters are contained in the Wabanaki Lifeways study, which looked at the historic sustenance practices of the Tribes in Maine.

EPA has received a written legal opinion dated January 30, 2015 from the Solicitor of the Department of the Interior (DOI) addressing several of the issues involved in EPA's decision. EPA sought DOI's advice because the Department is the federal government's expert agency on matters of Indian law and is charged with administering the settlement acts in Maine. *Passamaquoddy Tribe v. State of Maine*, 75 F.3d 784, 794 (1<sup>st</sup> Cir. 1996) (DOI is the department that administers MICSA). DOI has provided EPA important insight into how the Indian settlement acts in Maine address the Tribes' right to fish and the critical relationship between those rights and water quality. In making our decision on Maine's WQS, EPA has carefully considered and relied upon the DOI Solicitor's analysis, which is reflected in DOI's written opinion and is included in the administrative record for this decision.

**The Remedy:** EPA is disapproving Maine's human health criteria because they are not protective of human health for the target population. They are based on a fish consumption rate of 32.4 grams per day, with the exception of arsenic which is based on 138 grams per day. However, the Wabanaki study indicates that consumption values between 286 and 514 grams per day represent the sustenance fishing use in tribal waters. EPA is approving Maine's regulation requiring that human health criteria, except for arsenic, be based on a cancer risk level of no more than one in a million ( $10^{-6}$ ) as applied to the Tribe's waters, because that is a reasonable level of risk for a general target population. EPA is approving nearly all the State's aquatic life criteria, because they are consistent with the Clean Water Act and unlike the human health criteria, they do not implicate the safety of fish for human consumption. The Clean Water Act gives the State 90 days to address the bases for EPA's disapproval of the human health criteria, after which time, if the State does not do so, EPA will propose and promulgate appropriate human health criteria for waters in Indian lands in Maine.

# 1 Background

## 1.1 Overview

On January 14, 2013, the Maine Department of Environmental Protection (DEP) submitted a request to EPA to approve five new or revised water quality criteria (WQC) and specifically asked EPA to approve them in all waters located in the State of Maine, including waters in the territories and lands of the federally recognized Indian Tribes in Maine.

EPA's review of the State's submission determined that when the State provided public notice on its proposed WQS revisions, it was not clear on the record that the State had solicited comment on the question of the State's authority to set WQS in waters in the Tribes' territories and lands (as explained further below, hereinafter EPA will use the term Indian or tribal "lands" to refer to the entire tribal land base in Maine). Although EPA does not customarily provide public notice for state WQS submissions, the Agency exercised its discretion in the unique circumstances of this submittal to invite public comment on the issue of applying state WQS in waters in Indian lands in Maine. EPA identified two general areas for comment. First, has the State demonstrated adequate authority to set WQS in waters in Indian lands? Second, if so, are the WQC that the State submitted based on sound scientific rationale and adequate under the Clean Water Act (CWA) to protect uses in those waters?

This document contains the detailed explanation to accompany EPA's decision letter acting on the State's request that EPA approve these WQS for waters in Indian lands. In addition, from 2004 through 2010, in response to Maine's 2003 to 2009 submittals of new or revised WQS, EPA approved WQS for waters outside of Indian lands, but specifically stated that EPA was taking no action to approve or disapprove WQS within Indian lands. Today's decision addresses all of Maine's WQS submissions from 2003 through 2014 as they relate to waters in Indian lands, as well as certain submissions on which EPA has not yet acted for any waters in Maine.<sup>2</sup>

In summary, EPA finds that Maine has jurisdiction to set WQS for waters in Indian lands. Because EPA has not yet approved any of Maine's WQS for waters in Indian lands, EPA is first approving the State's classifications and associated designated uses for these waters. All of the relevant classifications include a designated use of "fishing," which the Agency interprets to include sustenance fishing consistent with these Tribes' sustenance practices in waters on their lands. EPA is also approving a specific sustenance fishing use for the inland waters of the reservations of the Penobscot Nation and Passamaquoddy Tribe. EPA is approving all but one of the State's aquatic life criteria. EPA has determined that Maine's human health criteria, however, do not adequately protect the designated use of sustenance fishing in the waters in tribal lands and, therefore, do not comply with the CWA's requirement that criteria protect the

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<sup>2</sup> EPA is also approving today certain pre-2004 WQS for waters in Indian lands to the extent necessary to act on the submissions from 2003 through 2014. EPA intends to act on other pre-2004 WQS applicable to those waters as soon as possible. Before 2004, EPA's approvals or disapprovals of new or revised WQS in Maine did not address waters in Indian lands, or expressly consider the State's jurisdiction to establish WQS for such waters or the sufficiency of the State's WQS for such waters under the CWA. EPA thus takes the position that it has not previously approved any of the State's pre-2004 WQS for waters in Indian lands in Maine.

uses of the waters to which they apply. In a separate document EPA will respond to specific comments that interested parties submitted.

## 1.2 Indian Tribes in Maine

There are four federally recognized Indian Tribes in Maine represented by five governing bodies. The Penobscot Nation and the Passamaquoddy Tribe have reservations and trust land holdings in central and coastal Maine. The Passamaquoddy Tribe has two governing bodies, one on the Pleasant Point Reservation and another on the Indian Township Reservation. The Houlton Band of Maliseet Indians and the Aroostook Band of Micmacs have trust lands further north in the State. To simplify the discussion of the legal framework that applies to each Tribe's territory, EPA will refer to the Penobscot Nation and the Passamaquoddy Tribe together as the "Southern Tribes" and the Houlton Band of Maliseet Indians and Aroostook Band of Micmacs as the "Northern Tribes." EPA acknowledges that these are collective appellations the Tribes themselves have not adopted, and the Agency uses them solely to simplify drafting this decision.

## 1.3 Settlement Acts in Maine

### 1.3.1 MIA and MICSA

In 1980, Congress passed the Maine Indian Claims Settlement Act (MICSA), which resolved litigation in which the Southern Tribes asserted land claims to a large portion of the State of Maine. 25 U.S.C. §§ 1721, *et seq.* MICSA ratified a state statute passed in 1979, the Maine Implementing Act (MIA), which was designed to embody the agreement reached between the State and the Southern Tribes. 30 M.R.S. §§ 6201, *et seq.* In 1981, MIA was amended to include provisions for land to be taken into trust for the Houlton Band of Maliseet Indians, as provided for in MICSA. 30 M.R.S. § 6205-A, 25 U.S.C. § 1724(d)(1). Since it is Congress that has plenary authority as to federally recognized Indian Tribes, MIA's provisions concerning jurisdiction and the status of the Tribes are effective as a result of, and consistent with, the Congressional ratification in MICSA.

### 1.3.2 MSA and ABMSA

In 1989, the Maine legislature passed the Micmac Settlement Act (MSA) to embody an agreement as to the status of the Aroostook Band of Micmacs. 30 M.R.S. §§ 7201, *et seq.* In 1991, Congress passed the Aroostook Band of Micmacs Settlement Act (ABMSA), which ratified the MSA. 25 U.S.C. § 1721, Act Nov. 26, 1991, P.L. 102-171, 105 Stat. 1143. One principal purpose of both statutes was to give the Micmacs the same settlement that had been provided to the Maliseets in MICSA. See ABMSA § 2(a)(4) and (5). In 2007, the Federal Court of Appeals for the First Circuit confirmed that the Micmacs and Maliseets are subject to the same jurisdictional provisions in MICSA. *Aroostook Band of Micmacs v. Ryan*, 484 F.3d 41 (1<sup>st</sup> Cir. 2007).

Where appropriate, this document will refer to the combination of MICSA, MIA, ABMSA, and MSA as the "settlement acts."

## 1.4 Indian Territories and Lands in Maine

MICSA, MIA, MSA and ABMSA establish a unique framework for confirming and enhancing the Tribes' land base in Maine. For the Southern Tribes, MIA uses the term "Indian territory" to describe the combination of the Southern Tribes' reservations, as described in treaties with the States of Maine and Massachusetts, plus 150,000 acres of land for each Tribe to be held in trust for the Tribes by the United States. 30 M.R.S. § 6205(1) and (2). As such, the Southern Tribes' land base is made up of both the reservations continuously occupied by the Tribes, and subsequently acquired trust lands.

The land base for the Northern Tribes is made up entirely of trust lands. MIA provides for the Houlton Band of Maliseet Indians to acquire trust land, and Congress provided \$900,000 in MICSA to fund that acquisition. 30 M.R.S. § 6205-A, 25 U.S.C. § 1724(d)(1). Similarly, the MSA provides for the Aroostook Band of Micmacs to acquire trust land, and Congress again provided \$900,000 in ABMSA to fund that acquisition. 30 M.R.S. § 7204, ABMSA §§ 4(a) and 5(a).

In this document, where appropriate depending on the context, EPA will refer to the tribal land base relevant to this decision as follows: "territories" for the Southern Tribes' land base, which as described above includes both reservations and trust lands; "trust lands" for the Northern Tribes' land base; and "Indian" or "tribal" lands for the entirety of all the Tribes' land base in Maine.<sup>3</sup>

### 1.4.1 Identification of waters covered by this decision

The Penobscot Indian Nation and Passamaquoddy Tribe have reservation lands as defined in MIA. 30 M.R.S. § 6203(5) (defining Passamaquoddy Indian Reservation); § 6203(8) (defining Penobscot Indian Reservation). The trust lands acquired for the Maine tribes are the product of modern conveyances. Generally, based on the default Maine property rule under which owners of riparian land also own out to the thread, or middle, of most streams, *Wilson & Son v. Harrisburg*, 107 Me. 207, 212-213 (1910), Indian waters include waters adjacent to land held in trust by the Secretary of the Interior and lands in the Tribes' reservations as defined in the Settlement Acts.<sup>4</sup> In addition, Maine common law provides that owners of shore land above the mean high water mark presumptively hold title in fee to intertidal land. *Bell v. Town of Wells*, 557 A.2d 168 (Supreme Judicial Court of Maine, 1989). In *Bell* (often referred to as the "Moody Beach case"), the court explained that such title is subject only to the public's right to fish, fowl, and navigate, and that the rule of law governing titles to intertidal land has its origin in the

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<sup>3</sup> In addition to their reservations and trust lands, the Tribes also hold certain lands in fee, which are not at issue in this matter. Any action EPA has taken to approve Maine WQS for waters outside Indian lands would apply to waters in these fee lands.

<sup>4</sup> See Report of the Joint Select Committee on Indian Land Claims, Maine Legislature (1980), par. 14. ("The boundaries of the Reservations are limited to those areas described in the bill, but include any riparian or littoral rights expressly reserved by the original treaties with Massachusetts or by operation of State law. Any lands acquired by purchase or trade may include riparian or littoral rights to the extent they are conveyed by the selling party or included by general principles of law. However, the Common Law of the State, including the Colonial Ordinances, shall apply to this ownership. The jurisdictional rights granted by this bill are coextensive and coterminous with land ownership.")

Colonial Ordinance of 1641-47 of the Massachusetts Bay Colony. As stated in an article written by the Marine Law Institute, University of Maine School of Law, “[t]he Moody Beach Case affirms that in Maine owners of beachfront property or property adjoining tidelands (also called littoral or riparian owners) have property rights to the low water mark or low tide area subject only to a public easement for fishing, fowling, and navigation.” See Citizens’ Guide to Ocean and Coastal Law, Public Shoreline Access and the Moody Beach Case, August, 1990. Therefore, the Passamaquoddy Tribe’s reservation at Pleasant Point would include at least the waters present in the intertidal zone.

EPA acknowledges that there are remaining uncertainties over what waters are associated with Indian lands in Maine in a few locations. For instance, the boundaries of the Penobscot Nation’s reservation are currently the subject of litigation in the United States District Court for the District of Maine. *Penobscot Nation v. Mills*, Case No. 1:12-cv-254-GZS. The United States has intervened in that case, and it is the Government’s position that the reservation includes Penobscot River waters, while the State of Maine alleges it does not. Pending resolution of this dispute, EPA’s decision to approve or disapprove Maine’s WQS for Indian waters includes at least some portion of the Penobscot River in the main stem from Indian Island north surrounding the islands in the Nation’s reservation.

In addition, this decision treats the Passamaquoddy Tribe’s reservation as including the “15 islands in the St. Croix River in existence on September 19, 1794 and located between the head of the tide of that river and the falls below the forks of that river . . .” as specifically enumerated in MIA’s definition of the reservation. 30 M.R.S. 6203(5).

It is not necessary or reasonable for EPA to suspend its decision on the State’s WQS submissions to await an authoritative resolution of disputes over the boundaries of Indian waters. If any disputes over reservation boundaries result in an authoritative adjudication inconsistent with the assumptions made in this decision, EPA will revisit or clarify the scope of the Agency’s determinations in this decision.

## **2 EPA’s Determination that Maine has Authority to Set WQS in Indian Territories**

EPA concludes that MICSA provides the State with jurisdiction to set WQS in the Northern Tribes’ trust lands and that the federal statute ratifies provisions of MIA that provide the State with such authority in the Southern Tribes’ territories. Although in both cases the settlement acts provide the State jurisdiction to establish WQS, EPA notes that MICSA provides a different jurisdictional framework for the Northern Tribes than that which applies to the Southern Tribes.

### **2.1 Northern Tribes**

MICSA provides that the Northern Tribes are subject to state law:

Except as provided in section 1727(e) and section 1724(d)(4) of this title, all Indians, Indian nations, or Tribes or bands of Indians in the State of Maine, other than the Passamaquoddy Tribe, the Penobscot Nation, and their members, and any lands or natural resources owned by any such Indian, Indian nation, Tribe or band of Indians and any



lands or natural resources held in trust by the United States, or by any other person or entity, for any such Indian, Indian nation, Tribe, or band of Indians shall be subject to the civil and criminal jurisdiction of the State, the laws of the State, and the civil and criminal jurisdiction of the courts of the State, to the same extent as any other person or land therein.

25 U.S.C. 1725(a). In addition, MICSA ratified MIA, which also provides that all tribes in Maine, including the Northern Tribes are subject to state law:

Except as otherwise provided in this Act, all Indians, Indian nations, and Tribes and bands of Indians in the State and any lands or other natural resources owned by them, held in trust for them by the United States or by any other person or entity shall be subject to the laws of the State and to the civil and criminal jurisdiction of the courts of the State to the same extent as any other person or lands or other natural resources therein.

30 M.R.S. § 6204. Both statutes make it clear that laws of the State include regulation and that lands and natural resources include water and water rights. 25 U.S.C. §§ 1722(b) and (d); 30 M.R.S. § 6203(3) and (4). The only exceptions to state jurisdiction provided in MIA apply to the Southern Tribes. There are no such exceptions for the Northern Tribes. Notably, the U.S. Court of Appeals for the First Circuit has expressly found that the State's jurisdictional reach in the Northern Tribes' lands is greater than in the Southern Tribes' territories. *Houlton Band of Maliseet Indians v. Ryan*, 484 F.3d 73, 74-75 (1st Cir. 2007). That same year the First Circuit ruled that, even as to the Southern Tribes, MICSA and MIA grant the State jurisdiction to regulate surface water discharge permitting. *Maine v. Johnson*, 498 F.3d 37 (1st Cir. 2007). As discussed below, EPA has concluded that the court's analysis controls our decision as to the State's authority to set WQS in the Southern Tribes' territories. Given that MICSA gives the State a broader scope of jurisdiction over the Northern Tribes than over the Southern Tribes, which are nevertheless subject to the State's authority to set WQS, it is clear that state law applies to the Northern Tribes, and the State has authority to set WQS for waters in these Tribes' trust lands.

The Aroostook Band of Micmacs has argued that the passage of ABMSA impliedly repealed the application of MICSA to the Tribe, and, therefore, that the Micmacs were not subject to the same jurisdictional framework as the Houlton Band of Maliseet Indians. The First Circuit, however, rejected that argument. *Aroostook Band of Micmacs v. Ryan*, 484 F.3d 41, 60-62 (1st Cir. 2007).

## 2.2 Southern Tribes

MICSA addresses the jurisdictional relationship between the Southern Tribes and the State by reference to MIA, which MICSA ratifies:

The Passamaquoddy Tribe, the Penobscot Nation, and their members, and the land and natural resources owned by, or held in trust for the benefit of the Tribe, nation, or their members, shall be subject to the jurisdiction of the State of Maine to the extent and in the

manner provided in the Maine Implementing Act and that Act is hereby approved, ratified, and confirmed.

25 U.S.C. § 1725(b)(1). As discussed above, MIA in turn provides generally that all Indian Tribes in the State are subject to state law:

Except as otherwise provided in this Act, all Indians, Indian nations, and Tribes and bands of Indians in the State and any lands or other natural resources owned by them, held in trust for them by the United States or by any other person or entity shall be subject to the laws of the State and to the civil and criminal jurisdiction of the courts of the State to the same extent as any other person or lands or other natural resources therein.

30 M.R.S. § 6204. Importantly, MIA section 6204 refers to exceptions to the grant of state jurisdiction found elsewhere in the statute, and those exceptions are all applicable to the Southern Tribes. *See, e.g.*, §§ 6206 (internal tribal matters); 6207 (hunting and fishing in Indian territories); 6209-A & B (minor crimes, small claims, child custody, and domestic relations). EPA has carefully considered whether any of the exceptions provided in MIA operate to block the grant of jurisdiction to the State in the area of setting WQS in the Southern Tribes' waters. EPA concludes that they do not impede the State's jurisdiction to establish WQS under the CWA for the Southern Tribes' waters.

### 2.2.1 Maine v. Johnson Decision

The U.S. Court of Appeals for the First Circuit previously adjudicated the issue of Maine's authority to regulate water quality protection in the Southern Tribes' territories. In 2003, EPA approved the State to issue national pollutant discharge elimination system (NPDES) permits under the CWA generally in the Southern Tribes' territories, except for those dischargers where EPA concluded that permitting would qualify as an internal tribal matter. MIA section 6206 exempts the Southern Tribes' internal tribal matters from state regulation. EPA determined that two tribally owned and operated public treatment works, which served only tribal members on the Tribes' reservations and had minimal water quality impacts at the point of discharge, qualified as internal tribal matters, and thus excluded those two facilities from the State's approved permitting program. In *Maine v. Johnson*, 498 F.3d 37 (1<sup>st</sup> Cir. 2007), the First Circuit upheld EPA's approval of the State's program in the Southern Tribes' territories, but reversed EPA's decision to withhold approval of the State to issue the permits for the two tribal treatment works.

In ordinary statutory construction, the [internal tribal matters] proviso thus reserves to the tribe matters pertaining to tribal membership and governance structure, expenditure of fund income and *other matters of the same kind* . . .; but it does not displace general Maine law on most substantive subjects, including environmental regulation. . . . [W]e readily uphold the position of the EPA and Maine that the nineteen non-Indian discharge sources draining into tribal waters can be regulated by the state. The only real question is the EPA's carve-out of the two source points that are on tribal lands and are owned by Tribe entities. . . .

In our view, the Settlement Acts make ordinary Maine law apply, even if only tribal members and tribal lands are affected in the particular case, *unless* the internal affairs exemption applies; and the scope of that exemption is determined by the character of the subject matter. Discharging pollutants into navigable waters is not of the same character as tribal elections, tribal membership or other exemplars that relate to the structure of Indian government or the distribution of tribal property.

*Id.* at 44-46 (emphasis in original; citations omitted). EPA has concluded that the *Maine v. Johnson* decision makes it clear that the grant of jurisdiction to the State includes the area of environmental regulation, certainly as it applies to surface water discharge permitting. The Agency also finds no basis to distinguish the analysis in that case as applied to the State's authority to set WQS for surface waters in the Southern Tribes' territories.

### 2.2.2 Arguments Maine Tribes have Advanced for Exceptions to State Jurisdiction for Southern Tribes

EPA considered whether, given the jurisdictional provisions of the applicable statutes and the precedent set in *Maine v. Johnson*, there is any basis for concluding that the State's authority to administer the NPDES permitting program would not apply equally to the State's WQS program. EPA concludes there is no such basis.

#### 2.2.2.1 Internal Tribal Matters

As a threshold matter, the court in *Maine v. Johnson* concluded that environmental regulation was part of the jurisdictional grant to the State in Indian lands:

[T]he [internal tribal matters] proviso thus reserves to the tribe matters pertaining to tribal membership and governance structure, expenditure of fund income and *other matters of the same kind* . . .; but it does not displace general Maine law on most substantive subjects, including environmental regulation.

*Id.* at 45 (emphasis in original; underscore added). The WQS program is clearly a form of environmental regulation that would be covered by this characterization of the State's authority. Strictly speaking, the facts on which the court's holding rests only presented the question of the State's authority to issue waste water discharge permits. Nevertheless, the court's reasoning in that case makes it clear that this exception to State jurisdiction would not block the State from setting WQS.

When the Agency withheld approval from Maine to permit the two tribal treatment works, EPA conducted an analysis of the factors the First Circuit articulated in two prior cases examining whether a particular subject matter qualifies as an internal tribal matter not subject to state regulation. *Akins v. Penobscot Nation*, 130 F.3d 482, 486-490 (1<sup>st</sup> Cir. 1997); *Penobscot Nation v. Fellecker*, 164 F.3d 706, 710-713 (1<sup>st</sup> Cir. 1999). In its review of EPA's decision, the *Johnson* court found it unnecessary to apply the factors developed in the *Akins* and *Fellecker* cases; rather it concluded that this multi-factor assessment is relevant only when an area of regulation is

“arguably close to the (perhaps blurred) statutory borderline” of what might qualify as an internal tribal matter. 498 F.3d at 46. The court concluded that “discharging pollutants into navigable waters is not a borderline case in which balancing . . . or ambiguity canons . . . alter the result.” *Id.* (citations omitted).

EPA evaluated whether the authority to set WQS is any closer to the statutory borderline the First Circuit has outlined and, therefore, might properly be analyzed using the *Akins/Fellencer* factors rather than the more categorical analysis in the *Johnson* decision. The Penobscot Nation commented to EPA that setting WQS directly affects the quality of fish the Tribe is able to consume for its sustenance, an area of concern at the core of the Nation’s existence. The Penobscot Nation’s view is that this effect on the Tribe’s ability to safely consume fish makes setting WQS an internal tribal matter. EPA does not agree. Indeed, the Agency concludes that setting WQS is an exercise of jurisdiction even further from the “borderline” between state jurisdiction and internal tribal matters that the *Johnson* court posited.

The decision EPA is making is approval of WQS that are an integral part of a larger legal framework provided for in the CWA. Within that framework, the CWA and EPA’s regulations provide that NPDES permits for upstream dischargers must include limits that assure compliance with downstream WQS. 40 C.F.R. § 122.44(d)(4) and CWA § 401(a)(2). In reviewing Maine’s NPDES program, EPA found that permitting the two tribal treatment works involved only tribal members and would have minimal effect on water quality outside the Tribes’ territories. See 498 F.3d at 45 n. 8. EPA cannot make a corresponding finding here that setting a WQS would not have the potential for an effect on non-members or on water quality outside the Tribes’ territories. When it established the multi-factor internal tribal matters analysis, the *Akins* court noted that “*First, and foremost*, the [stumpage policy at issue] purports to regulate only members of the Tribe . . .” 130 F.3d at 486 (emphasis added). On this “foremost” factor, EPA concludes that the WQS program can have regulatory effects beyond the Tribe. Generally, downstream WQS determine what limits upstream dischargers must meet to assure protection of those WQS, which is a legal effect that could reach beyond the membership of the Tribes and the boundaries of their territories. These effects put the setting of WQS even further from the “(perhaps blurred) statutory borderline” of what qualifies as an internal tribal matter under the MIA and MICSA.

In *Maine v. Johnson* the court was prepared to accept EPA’s finding that permitting the two tribal treatment works would not have a substantial effect outside the Tribes’ territories, and it still refused to treat the category of waste water discharge permitting as an internal tribal matter. Here, EPA cannot find that setting WQS will have no potential for a substantial effect outside the Tribes’ territories. Therefore, under the principles announced in *Maine v. Johnson*, EPA concludes that setting WQS does not qualify as an internal tribal matter.

#### 2.2.2.2 The Southern Tribes’ Sustenance Fishing Right

EPA has also considered whether the reservation in MIA of the Southern Tribes’ right to take fish for their individual sustenance within their reservations provides an exception to the State’s jurisdiction. That right is reserved to the Southern Tribes “[n]otwithstanding . . . any other law of the State.” 30 M.R.S. § 6207(4). Arguably, if a state law interfered with the Southern Tribes’ right to take fish for their individual sustenance, this provision would block that law’s

application in the Southern Tribes' reservations. However, EPA concludes that the State's administration of WQS, subject to CWA requirements and EPA's oversight, does not have the potential to interfere with the Southern Tribes' sustenance fishing right.

MIA is clear that the basic grant of jurisdiction to the State includes the authority to apply laws of the State, which include regulations, to the Tribes' natural resources, which include "water and water rights and hunting and fishing rights." 30 M.R.S. §§ 6204, 6203(3) and (4). To conclude that the reserved fishing right precludes the operation of all state laws affecting environmental regulation that might indirectly affect the fishing right, one would have to conclude that the State's regulation of water quality is inherently and necessarily inimical to the Tribes' ability to take fish for their individual sustenance. EPA cannot reach that conclusion.

First, there are many state WQS that are reasonably adequate to support a fishery that could provide for an individual tribal member's sustenance. Indeed, as discussed below, EPA is approving many state WQS provisions that EPA has determined are sufficient to protect aquatic life. In *Maine v. Johnson* the court made it clear that decisions about the scope of the State's jurisdiction in the Southern Tribes' territories should be made on the basis of the category of the subject matter at issue – the court specifically rejected EPA's attempt to find or reject state jurisdiction based on the facts of any particular application of state jurisdiction within a subject matter category. "So we accept the EPA's factual premise as to the [limited] impact of the discharges but not the EPA's legal characterization. . . . [T]he scope of [the internal tribal matters] exemption is determined by the character of the subject matter." 498 F.3d at 45-46. The subject category at issue in *Maine v. Johnson* was environmental regulation of pollutants in surface waters, the same category at issue here. The impact of a specific state WQS regulation on the Tribes' sustenance fishing rights might provide the basis for a challenge to that specific regulation, but the bare potential for such a specific challenge at some point provides no basis for precluding all state regulation of that subject area. It is possible for the State to exercise jurisdiction to set WQS without necessarily or inevitably interfering with the Tribes' fishing rights.

Second, if the State does submit a new or revised WQS that would interfere with the Tribes' reserved fishing right, EPA has authority under the CWA to ensure that the Tribes' fishing right is protected. As described further below, EPA is approving the reserved sustenance fishing right as a designated use for the tribal waters to which the right applies. Where the State adopts a new or revised WQS, EPA has the authority and the obligation under the CWA to review and determine whether such new or revised WQS is consistent with the CWA. If EPA disapproves, the CWA directs EPA to propose and promulgate a new or revised WQS unless the State adopts an adequate revision to protect the use. The CWA thus provides the mechanism to protect the sustenance fishing use and prevent interference with the Southern Tribes' reserved fishing right. EPA's oversight of Maine's WQS is adequate to protect the Tribes' right while maintaining the basic statutory grant of jurisdiction to Maine, including the authority to set WQS, as provided under MISA in the first instance.

### 2.3 The Relationship Among MISA, Jurisdiction, and the Trust Responsibility

Several Tribes in Maine commented that it would be inconsistent with the federal government's trust relationship with the Tribes for EPA to approve the State to set WQS for waters in the Tribes' lands. On the other hand, the State argues that the trust relationship does not apply in the State because of MICSA.

EPA has consistently maintained that there is a trust relationship between the federal government and the Tribes in Maine in the general sense that the Tribes are federally recognized, they have sovereign governments that EPA interacts with on a government-to-government basis, and EPA has a responsibility to consult with the Tribes to understand and consider their interests when EPA is making a decision that affects the Tribes. This general trust relationship, however, does not alter the jurisdictional framework Congress ratified in MICSA. MICSA impacts the jurisdictional relationship among the Tribes and the State, within which EPA works to address the Tribes' interests as appropriate. It is consistent with the trust relationship for EPA to approve the State's authority to set WQS for waters in the Tribes' lands, because MICSA has dramatically revised the jurisdictional framework within which the trust operates in Maine as compared to the customary jurisdictional framework that applies in Indian country outside Maine. EPA intends to continue to act consistently with the trust relationship, to consult with the Tribes, and to consider their interests as we oversee the State's WQS under the CWA.

#### 2.4 The Penobscot Nation's Application for Treatment in the Same Manner as a State

On October 8, 2014, the Penobscot Nation submitted to EPA an application "to administer water quality standards program and for federal approval of the standards" covering the Main Stem of the Penobscot River from Indian Island north to the confluence of the east and west branches of the river. EPA is not acting today on the Nation's application. EPA is only deciding today that the State of Maine has authority to set WQS for waters in Indian lands, and then acting on the State's WQS as applied to those waters. The Nation's application raises complicated issues that EPA will address in a separate decision.

### **3 EPA's Determination to Approve Classifications and Designated Uses for Waters in Indian Lands**

In Section 2, above, EPA focused on the settlement acts and judicial interpretation of those statutes to analyze Maine's assertion of jurisdiction to set WQS in the waters in Indian lands. Having concluded that the State has jurisdiction to set those standards, EPA must now analyze whether the State's WQS as applied to waters in Indian lands are approvable under the CWA. So the balance of this document will focus primarily on the requirements of the CWA, as applied to the unique circumstances EPA must address here where a state is setting WQS for waters in lands that Congress has set aside for federally recognized Indian tribes.

The first step in developing and reviewing WQS under the CWA is to determine the uses of the waters to which the WQS apply. Here the State is not writing on a blank slate in the selection of uses for tribal waters. As described in detail in this section 3, EPA has concluded that the settlement acts operate to require Maine and the Agency to focus on the sustenance fishing use that federal and state law provide for the Tribes in Maine in waters in Indian lands. In light of

the sustenance fishing use, the CWA requires the State's water quality criteria to protect that use as explained in section 4, below.

### 3.1 Status of Previous State WQS as Applied to Waters in Indian Lands

#### 3.1.1 EPA's Prior Decisions on Maine WQS

Maine has periodically submitted new or revised WQS to EPA for review and approval or disapproval. Before 2004, EPA acted on those WQS without expressly considering or approving the State's jurisdiction to establish WQS for waters in Indian lands or the sufficiency of the State's WQS for such waters under the CWA. Since 2004, EPA has expressly stated, in all decisions that it made to approve or disapprove new or revised WQS, that its decisions applied only to Maine waters outside of Indian lands.

#### 3.1.2 EPA's Approach to State Programs in Indian Country

The State has commented to EPA that, prior to 2004, EPA approved state WQS submissions without reference to or exclusion of waters in tribal lands. From this the State infers that EPA approved the State's WQS for waters in tribal lands prior to 2004. EPA disagrees with this inference.

First, Maine did not obtain authority to regulate in tribal lands until Congress passed MICSA in 1980. While the State asserted the authority to govern the Tribes prior to MICSA, the First Circuit's decision in *Joint Tribal Council of the Passamaquoddy Tribe v. Morton*, 528 F.2d 370 (1<sup>st</sup> Cir. 1975), cast considerable doubt on that proposition, and the decision in *Bottomly v. Passamaquoddy Tribe*, 599 F.2d 1061 (1<sup>st</sup> Cir. 1979), effectively foreclosed this argument. So any WQS that Maine submitted prior to MICSA's passage could have no legal effect in tribal lands. At that point the State had no clear authority to set WQS in those waters.

But even as to WQS that Maine submitted following the passage of MICSA in 1980, EPA's position is that none of the State's WQS, whether submitted prior to or following enactment of MICSA, were approved under the CWA for waters in Indian lands. Prior to the Agency's decision today, EPA has never made a formal determination on the record expressly addressing either the State's jurisdictional authority or the sufficiency under the CWA of the State's WQS as applied to waters in Indian lands.

Today's decision demonstrates that in acting on new or revised state WQS for waters in Indian lands, EPA must consider the adequacy of such WQS to protect the uses in those specific waters. Where, as here, waters in Indian lands have a different designated use (*i.e.*, sustenance fishing) than waters outside of Indian lands, the analysis of the adequacy of criteria will necessarily be different. It would be arbitrary for EPA to assume, without analysis, that if criteria are protective for waters outside of Indian lands, they are also protective for waters in Indian lands.

In addition, under basic principles of federal Indian law, states generally lack civil regulatory jurisdiction within Indian country as defined in 18 U.S.C. § 1151. *Alaska v. Native Vill. Of Venetie Tribal Gov't*, 522 U.S. 520, 527 n.1. (1998) (“[g]enerally speaking, primary jurisdiction

over land that is Indian country rests with the Federal Government and the Indian Tribe inhabiting it, and not with the States.”). See also *Okla. Tax Comm’n v. Sac and Fox Nation*, 508 U.S. 114, 128 (1993) (“[a]bsent explicit congressional direction to the contrary, we presume against a State’s having the jurisdiction to tax within Indian Country . . .”). Thus, EPA cannot presume a state has authority to establish WQS or otherwise regulate in Indian country. Instead, a state must demonstrate its jurisdiction, and EPA must determine that the state has made the requisite demonstration and expressly determine that the state has authority, before a state can implement a program in Indian country.<sup>5</sup> Such a demonstration and approval of Maine’s authority to administer WQS in waters of Indian lands has not occurred prior to the decision EPA is making today.<sup>6</sup>

Maine cites to several actions by EPA employees that, in the State’s view, indicate EPA’s recognition that state WQS approved before 2004 apply in at least some tribal waters. EPA notes that some of those actions applied to stretches of rivers that either included both tribal and state waters or that were then and continue to be the subject of disputes over whether they included both tribal and state waters. As a result, those actions were inherently ambiguous as to their relevance to the tribal portions of the waters. But the Agency concedes that in some instances the Agency appeared to assume, without any express consideration or decision regarding the jurisdictional or CWA issues, that state WQS applied in certain tribal waters. For example, there are instances when the Region asked Maine DEP to certify under section 401 of the CWA that NPDES permits for tribal facilities discharging into tribal waters complied with state WQS. Simply put, those prior actions were mistakes that do not affect this decision. At the time, EPA had made no finding that Maine had jurisdiction to adopt WQS for tribal waters and had not approved the State’s WQS for such waters. EPA notes that unexplained mistakes by mid-level Agency officials cannot unilaterally revise a considered Agency-wide policy. *Puerto Rican Cement Co. v. EPA*, 889 F.2d 292, 299 (1<sup>st</sup> Cir. 1989).

### 3.2 EPA Approval of Water Classifications and Associated Designated Uses

Many of the WQS revisions under review for approval or disapproval for waters in Indian lands are water quality criteria, and the CWA requires that criteria be protective of designated uses. In order to evaluate whether the submitted criteria are protective of designated uses, EPA must first approve designated uses for these waters. Accordingly, EPA also reviewed and is approving

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<sup>5</sup> Consistent with EPA’s responsibility to consult with Indian tribes about decisions affecting their interests, as embodied in the Agency’s 1984 Indian Policy and EPA’s more recent Tribal Consultation Policy, EPA would offer to consult with any Indian tribe in the context of an Agency determination that a state has authority to set standards in that tribe’s territory. Notably, no such consultations occurred in the context of EPA’s prior decisions on the State’s WQS submissions, further evidencing that the Agency’s prior approvals were not intended to extend to waters in Indian lands.

<sup>6</sup> Indeed, as described above in the Agency’s analysis of the State’s jurisdictional authority to set WQS in Indian waters, EPA’s review and assessment of how Maine’s WQS affect tribal uses in Indian waters is an essential step in the argument that it is possible to reconcile the State setting WQS in Indian waters with the fishing rights that MICSA reserves to Tribes in Maine. Ignoring or side-stepping EPA’s role in overseeing Maine’s WQS submissions as they apply to Indian waters risks creating an irreconcilable conflict between the jurisdictional grant to the State in MICSA and the provision for Tribes in Maine to sustain themselves on the land base that the Maine settlement acts established for the Tribes. Respecting EPA’s oversight role effectively harmonizes those elements of the settlement acts in Maine.



Maine's surface water classifications and corresponding designated uses, adopted and submitted to EPA for review to date<sup>7</sup>, for waters in Indian lands.<sup>8</sup>

The general classifications and their corresponding uses consist of the following:

- 38 M.R.S. § 465(1.A) Class AA freshwater uses: drinking water after disinfection, fishing, agriculture, recreation in and on the water, navigation, and as habitat for fish and other aquatic life. The habitat must be characterized as free-flowing and natural.
- 38 M.R.S. § 465(2.A) Class A freshwater uses: drinking water after disinfection; fishing; agriculture; recreation in and on the water; industrial process and cooling water supply; hydroelectric power generation, except as prohibited under Title 12, section 403; navigation; and as habitat for fish and other aquatic life. The habitat must be characterized as natural.
- 38 M.R.S. § 465(3.A) Class B freshwater uses: drinking water supply after treatment; fishing; agriculture; recreation in and on the water; industrial process and cooling water supply; hydroelectric power generation, except as prohibited under Title 12, section 403; navigation; and as habitat for fish and other aquatic life. The habitat must be characterized as unimpaired.
- 38 M.R.S. § 465(4.A) Class C freshwater uses: drinking water supply after treatment; fishing; agriculture; recreation in and on the water; industrial process and cooling water supply; hydroelectric power generation, except as prohibited under Title 12, section 403; navigation; and as a habitat for fish and other aquatic life.
- 38 M.R.S. § 465-A(1.A) Class GPA lake and pond uses: drinking water after disinfection, recreation in and on the water, fishing, agriculture, industrial process and cooling water supply, hydroelectric power generation, navigation, and as habitat for fish and other aquatic life. The habitat must be characterized as natural. This section applies to great ponds (as defined in 38 M.R.S. § 480-B (5)), natural lakes and ponds less than 10 acres in size, and impoundments of rivers that are defined as great ponds pursuant to 38 M.R.S. § 480-B (5).
- 38 M.R.S. § 465-B (1.A) Class SA estuarine and marine water uses: recreation in and on the water, fishing, aquaculture, propagation and harvesting of shellfish, navigation, and as habitat for fish and other estuarine and marine life. The habitat must be characterized as free-flowing and natural.
- 38 M.R.S. § 465-B (2.A) Class SB estuarine and marine water uses: recreation in and on the water, fishing, aquaculture, propagation and harvesting of shellfish, industrial process and cooling water supply, hydroelectric power generation, navigation, and as habitat for fish and other estuarine and marine life. The habitat must be characterized as unimpaired.
- 38 M.R.S. § 465-B (3.A) Class SC estuarine and marine water uses: recreation in and on the water, fishing, aquaculture, propagation and restricted harvesting of shellfish,

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<sup>7</sup> This includes the addition of "agriculture" as a designated use for freshwaters, submitted to EPA on August 26, 2003.

<sup>8</sup> There are other provisions of Maine's WQS that EPA is not approving or disapproving at this time because they are not directly related to the scope of this decision, which is responding to new and revised WQS submitted to EPA from 2003 to 2014. These remaining provisions include, for example, definitions, antidegradation policies, and WQS implementation policies in regulation and statute. EPA will review those elements in the coming months and make decisions accordingly.

industrial process and cooling water supply, hydroelectric power generation, navigation and as a habitat for fish and other estuarine and marine life.

Waters throughout Maine are identified by classification in 38 M.R.S. § 467 (classifications of major river basins), § 468 (classifications of minor drainages), and § 469 (classifications of estuarine and marine waters), which results in the assignment of designated uses for each waterbody.

Each of the classification categories identified above contains designated uses that are consistent with the requirements of Section 303(c)(2)(A) of the Clean Water Act and 40 C.F.R. § 131.6(a). In addition, EPA has concluded that the classifications as applied to specific waters in Indian lands are reasonable. Therefore, EPA is approving the general classifications and associated designated uses in 38 M.R.S. § 465(1.A), (2.A), (3.A), and (4.A); § 465-A(1.A) (and the definition of “great ponds” in 38 M.R.S. § 480-B (5)); and § 465-B(1.A), (2.A), and (3.A); as well as the classification of specific waters in 38 M.R.S. § 467, § 468, and § 468, as applied to waters in Indian lands, because they are consistent with Sections 101(a)(2) and 303(c)(2)(A) of the Clean Water Act and 40 C.F.R. §131.10(a). EPA is including in its approval of specific waterbody classifications the reclassifications, submitted to EPA on December 7, 2009, of Otter Creek, a tributary of Seboeis Stream, and Alder Stream from Class B to Class A; and of Grand Falls Flowage between Route 1(Princeton and Indian Township) and Black Cat Island from Class B to Class GPA.

### 3.3 EPA’s Identification of the “Fishing” Designated Use as “Sustenance Fishing” in Waters in Indian Lands in Maine

#### 3.3.1 The Purpose of the Tribal Land Base and Tribal Sustenance Fishing in Maine

The settlement acts in Maine include extensive provisions to confirm and expand the Tribes’ land base, and the legislative record makes it clear that a key purpose behind that land base is to preserve the Tribes’ culture and support their sustenance practices. MICSA section 1724 establishes a trust fund to allow the Southern Tribes and the Maliseets to acquire land to be put into trust. In addition, the Southern Tribes’ reservations are confirmed as part of their land base. 30 M.R.S. § 6205(1)(A) and (2)(A). MICSA combines with MIA sections 6205 and 6205-A to establish a framework for taking land into trust for those three Tribes, and laying out clear ground rules governing any future alienation of that land and the Southern Tribes’ reservations. Sections 4(a) and 5 of the ABMSA and 7204 of the state MSA accomplish essentially the same result for the Micmacs, consistent with the purpose of those statutes to put that Tribe in the same position as the Maliseets.

EPA has concluded that one of the over-arching purposes of the establishment of this land base for the Maine Tribes was to ensure their continued opportunity to engage in their unique cultural practices to maintain their existence as a traditional culture. An important part of the Maine Tribes’ traditional culture is their sustenance life ways. The legislative history for MICSA makes it clear that one critical purpose for assembling the land base for the Tribes in Maine was to preserve their culture. The Historical Background in the Senate Report for MICSA opens with the observation that “All three Tribes [Penobscot, Passamaquoddy and Maliseet] are riverine in

their land-ownership orientation.” Sen. Rep. No. 96-957, at 11. The Report’s “Special Issues” section specifically refutes the concern that:

*The Settlement will lead to acculturation of the Maine Indians.* – Nothing in the settlement provides for acculturation, nor is it the intent of Congress to disturb the cultural integrity of the Indian people of Maine. To the contrary, the Settlement offers protections against this result being imposed by outside entities by providing for tribal governments which are separate and apart from the towns and cities of the State of Maine and which control all such internal matters. The Settlement also clearly establishes that the Tribes in Maine will continue to be eligible for all federal Indian cultural programs.

*Id.* at 17. As the Tribes have extensively documented in their comments, their culture relies heavily on sustenance practices, including sustenance fishing. So if a purpose of MICSA is to avoid acculturation and protect the Tribes’ continued political and cultural existence on their land base, then a key purpose of that land base is to support those sustenance practices.

As explained in more detail below, MICSA, MIA, ABMSA, and MSA include very different provisions governing sustenance practices, including fishing, depending on the type of Indian lands involved. But each set of provisions in its own way is designed to make a homeland for these Tribes where they may safely practice their sustenance life ways.

### 3.3.1.1 Southern Tribes’ Sustenance Fishing Right Reserved in Their Reservations in MIA/MICSA

If there were any doubt that sustenance practices are central to tribal culture, MICSA ratifies the MIA’s reservation of the Southern Tribes’ right to take fish for their individual sustenance:

**SUSTENANCE FISHING WITHIN THE INDIAN RESERVATIONS.** Notwithstanding any rule or regulation promulgated by the commission or any other law of the State, the members of the Passamaquoddy Tribe and the Penobscot Nation may take fish, within the boundaries of their respective Indian reservations, for their individual sustenance subject to the limitations of subsection 6.

30 M.R.S. § 6207(4). Under this section, “fish” is defined as “a cold blooded completely aquatic vertebrate animal having permanent fins, gills and an elongated streamlined body usually covered with scales and includes inland fish and anadromous and catadromous fish when in inland water.” 30 M.R.S. § 6207(9).

The only limitation on the Southern Tribes’ right to take fish for their individual sustenance on their reservations is the State’s ability to limit the take based on a finding that the Tribes’ fishing practices are threatening stocks outside the Tribes’ reservations in a process in which the State carries the burden of proof. 30 M.R.S. § 6207(6). To date the State has made no such determination. So a plain language reading of this provision entitles the Southern Tribes to take as much fish as they deem necessary to sustain individual members.

The legislative history for MIA makes it clear that the Maine legislature intended to continue and ratify the State's practice of not regulating the Southern Tribes' sustenance fishing practices. See transcript of the public hearing held on March 28, 1980 by the Maine Legislature's Joint Select Committee on the Maine Indian Claims Settlement at 55-56. The special issues section of the Senate Report on MICSA confirms that the intent of this provision is to shield the Southern Tribes' right to take fish from the prospect that the State might someday interfere with it. By responding to a rhetorical assertion (in italics below), the report confirms that the Southern Tribes have a right to take fish that is subject to state regulation only under very limited circumstances:

*Subsistence hunting and fishing rights will be lost since they will be controlled by the State of Maine under the Settlement.* – Prior to the settlement, Maine law recognized the Passamaquoddy Tribe's and Penobscot Nation's right to control Indian subsistence hunting and fishing within their reservations, but the State of Maine claimed the right to alter or terminate these rights at any time. Under Title 30, Sec. 6207 as established by the Maine Implementing Act, the Passamaquoddy Tribe and the Penobscot Nation have the permanent right to control hunting and fishing not only within their reservations, but insofar as hunting and fishing in certain ponds is concerned, in the newly-acquired Indian territory as well. The power of the State of Maine to alter such rights without the consent of the affected tribe or nation is ended by Sec. 6(e)(1) of S. 2829. The State has only a residual right to prevent the two tribes from exercising their hunting and fishing rights in a manner which has a substantially adverse effect on stocks in or on adjacent lands or waters. This residual power is not unlike that which other states have been found to have in connection with federal Indian treaty hunting and fishing rights. The Committee notes that because of the burden of proof and evidence requirements in Title 30, Sec. 6207(6) as established by the Maine Implementing Act, the State will only be able to make use of this residual power where it can be demonstrated by substantial [evidence] that the tribal hunting and fishing practices will or are likely to adversely affect wildlife stock outside tribal lands.

Sen. Rep. No. 96-957, pp. 16-17. Importantly, MIA section 6207 did not create a fishing right for the Southern Tribes. Rather it confirmed an aboriginal right the Tribes have continuously exercised, and shielded that right from state regulation absent a finding of depletion. DOI's legal opinion confirms that this statutorily reserved fishing right is rooted in treaty guarantees that were upheld through the settlement acts.

The Senate Committee's discussion of the similarity between MIA section 6207 and the structure of more traditional Indian treaty hunting and fishing rights is instructive. Essentially, the State of Maine has adopted into state law and Congress has ratified a reserved fishing right like the rights reserved to other Indian tribes by treaties, executive orders, or other statutes. It is axiomatic that the settlement acts in Maine significantly revised the customary formulae of federal Indian law that apply outside the State. *Akins*, 130 F.3d at 484. But it is equally important to recognize those elements of the settlement acts where both the state and federal governments made careful provision for tribal rights that mirror those more commonly seen elsewhere in Indian country. See *Washington v. Washington State Commercial Passenger Fishing Vessel Association*, 443 U.S. 658, 674 (1979) (Stevens Treaties explicitly reserved to the Pacific Northwest tribes "[t]he

right of taking fish, at all usual and accustomed grounds and stations . . . in common with all citizens of the Territory”). The Southern Tribes’ reserved aboriginal right to take fish for their individual sustenance within their reservations is such a right.

### 3.3.1.2 Federal Law Framework for Sustenance Fishing in Trust Lands

Similarly, to understand how the Maine Tribes’ sustenance fishing practices are provided for in their newly acquired trust lands, it is helpful to review the federal law background against which Congress and the State of Maine were legislating when they provided for land to be taken into trust for the benefit of the Maine Tribes. Courts have found that when Congress sets aside land for a fishing tribe, it implicitly grants to the tribe the right to carry out its traditional fishing practices on that land. See *Menominee v. U.S.*, 391 U.S. 404, 405-406 (1968) (holding that lands acquired for the Menominee Tribe included the implicit right to hunt and fish on those lands); *Parravano v. Babbitt*, 70 F.3d 539, 544 (9th Cir. 1995) (recognizing the doctrine “that the grant of hunting and fishing rights is implicit in the setting aside of a reservation ‘for Indian purposes.’”); see also *Katie John v. U.S.*, 720 F.3d 1214, 1230 (9th Cir. 2013) (Reserved water rights “are created when the United States reserves land from the public domain for a particular purpose, and they exist to the extent that the waters are necessary to fulfill the primary purposes of the reservation.”).

Courts have found an implicit fishing right based on legislative history indicating that, in setting aside land for a tribe, Congress intended to preserve a tribe’s fishing culture/practices. See *Menominee*, 391 U.S. at 405 (“The essence of the Treaty of Wolf River was that the Indians were authorized to maintain on the new lands ceded to them as a reservation their way of life which included hunting and fishing.”); *Parravano*, 70 F.3d at 542 (In enacting the Hoopa-Yurok Settlement Act, “[o]ne of the concerns of Congress at the time” was “to protect the Tribes’ fisheries.”); see also *id.* at 546 (“Although the 1988 Hoopa-Yurok Settlement Act did not explicitly set aside fishing rights, it did make clear that partitioning would not dispossess the Tribes of their assets. The legislative history of the 1988 Act indicates that Congress was aware that each Tribes’ interests in their salmon fisheries was one of its principal assets.”). As explained in greater detail below, there is such legislative history here.

There is an important distinction between the Southern Tribes’ aboriginal fishing right, which Congress explicitly reserved on those Tribes’ reservations, and tribal sustenance fishing on the trust lands, which Congress provided for based on its demonstrated intent to preserve the Tribes’ riverine culture. EPA is not determining that the Tribes in Maine have an aboriginal fishing right in their trust lands. The Agency acknowledges there is dispute over the scope of the Tribes’ aboriginal resource rights following enactment of MICSA. See 25 U.S.C. §§ 1722(b) and 1723(b) and Assessment of the Intergovernmental Saltwater Fisheries Conflict between Passamaquoddy and the State of Maine, Maine Indian Tribal-State Commission: Special Report 2014/1 (June 17, 2014) at 7.

But regardless of the status of aboriginal fishing rights outside the Southern Tribes’ reservations, it is possible for Congress to make provision for tribal sustenance fishing on trust lands, not based on the reservation of aboriginal rights, but based on Congressional intent to establish a land base for a tribe in order to sustain its unique culture. As described in detail below, EPA has

determined that Congress did just that in the Maine settlement acts, and when Congress did so, it acted against the backdrop of the principles outlined in the cases above. The legislative record regarding the trust land provisions in MIA, MICSA, MSA and ABMSA demonstrate Congress's intent to provide the Tribes with the opportunity to exercise their traditional sustenance lifeways, including traditional sustenance fishing in waters of tribal trust lands.

### 3.3.1.2.1 Sustenance Fishing in the Trust Lands of the Southern Tribes

Both MICSA and MIA make it clear that the land acquisition fund for the benefit of the Passamaquoddy and Penobscot Tribes was established to ensure these Tribes not only had a land base to occupy, but also access to natural resources to sustain their continued existence as a unique culture, including their ability to exercise their fishing rights. "The Secretary is authorized and directed to expend . . . the land acquisition fund for the purpose of acquiring land or natural resources for the Passamaquoddy Tribe, [and] the Penobscot Nation . . . and for no other purpose." 25 U.S.C. § 1724(b) (emphasis added). "Land or natural resources" are defined to include "water and water rights, and hunting and fishing rights." 25 U.S.C. § 1722(b).<sup>9</sup>

As excerpted more fully above, MICSA's legislative history also makes it clear that the Southern Tribes would be engaged in sustenance fishing in the newly-acquired trust lands:

Under Title 30, Sec. 6207 as established by the Maine Implementing Act, the Passamaquoddy Tribe and the Penobscot Nation have the permanent right to control hunting and fishing not only within their reservations, but insofar as hunting and fishing in certain ponds is concerned, in the newly-acquired Indian territory as well.

Sen. Rep. No. 96-957, pp. 16-17 (emphasis added). The legislative history of MIA also makes it clear that the Maine Legislature understood that MIA was designed to accommodate sustenance fishing practices in the Southern Tribes' trust lands. See transcript of the public hearing held on March 28, 1980 by the Maine Legislature's Joint Select Committee on the Maine Indian Claims Settlement at 151-152.<sup>10</sup> So it is clear that in creating the authority to take land into trust for the Southern Tribes, Congress understood that MIA made provision for the Tribes to engage in sustenance fishing in those trust lands and intended the trust lands to provide a base for the Tribes to engage in sustenance practices.

As recognized by Congress in MICSA's legislative history, the Southern Tribes' control of fishing in certain trust waters was specifically codified in MIA. Section 6207(1) provides that

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<sup>9</sup> Unlike MICSA, when MIA refers to Penobscot and Passamaquoddy trust lands, it uses the term "land acquired by the secretary [of Interior] for the benefit" of each tribe, without reference to natural resources. Compare 25 U.S.C. § 1724(d) with 30 M.R.S. § 6205(1)(B) and (2)(B). As explained in the section above, other provisions of MIA make it clear that the statute anticipated that those lands would include the attendant natural resources acquired with the land, especially fishing rights. Moreover, to the extent that this differing terminology suggests a conflict between MICSA and MIA in defining the scope of the tribes' interest in their trust lands and natural resources, the provisions of MICSA would control. 25 U.S.C. § 1735(a).

<sup>10</sup> "[The Tribes can adopt ordinances with respect to . . . fishing but only on ponds of less than ten acres in size. Those ordinances have to be equally applicable to Indians and non-Indians except that the Indians can make special provisions for sustenance hunting . . ." and fishing per MIA § 6207(1). *Id.* at 151.

the Southern Tribes have exclusive authority to enact ordinances regulating the taking of fish on ponds of less than ten acres in their trust lands. As with the Southern Tribes' fishing right in their reservations, this authority is subject only to the State's authority to limit the take after carrying the burden of proof that the Tribes are depleting fish stocks. MIA specifically anticipates that any tribal ordinances regulating fishing in these waters "may include special provisions for the sustenance of the individual members of the Passamaquoddy Tribe or the Penobscot Nation." *Id.*

As to greater ponds and rivers and streams in or along the Southern Tribes' trust lands, MIA also codifies the understanding that the Tribes would be engaged in sustenance fishing in those waters. MIA creates the Maine Indian Tribal-State Commission (defined as the "commission" 30 M.R.S. § 6203(1)), made up of representatives appointed by the State and the Southern Tribes. 30 M.R.S. § 6212. MIA provides that commission the exclusive authority to promulgate fishing rules in these waters. When it does so "the commission shall consider and balance" several factors, including "the needs or desires of the Tribes to establish fishery practices for the sustenance of the tribes or to contribute to the economic independence of the tribes, [and] the traditional fishing techniques employed by and ceremonial practices of Indians in Maine." 30 M.R.S. § 6207(3). Importantly, as analyzed in the record supporting this decision, none of the fishing regulations adopted by the commission would impinge on the ability of the Tribes to sustain themselves on fish taken from these waters.<sup>11</sup>

MICSA and MIA combine to authorize the establishment of trust lands for the Southern Tribes to provide a land base in which the Tribes can exercise their sustenance fishing practices. As compared with the sustenance fishing right reserved to the Southern Tribes within their reservations, MICSA and MIA allow for a greater, although still sharply limited, role for the State, through the commission, to participate in the development of fishing regulations on certain of the waters in the trust lands. But in exercising even that authority, the commission is charged with considering the Tribes' sustenance fishing practices. Therefore, it is clear that a critical purpose behind establishing the Southern Tribes' trust lands is to give the Tribes an opportunity to engage in sustenance fishing.

### 3.3.1.2.2 Sustenance Fishing in the Trust Lands of the Northern Tribes

Compared with the Southern Tribes' territories, the arrangement for the Northern Tribes' trust lands provides for more direct state regulation of fishing practices. Nevertheless, it appears Congress intended these trust lands to preserve the Northern Tribes' unique cultures as well. So the Northern Tribes' trust lands provide a land base in which the Tribes are able to exercise sustenance fishing practices to the extent consistent with the legal limits on their fishing. Again, similar to the situation for the Southern Tribes' trust lands, EPA is not concluding that there is an aboriginal fishing right reserved to the Northern Tribes on their trust lands. But the Agency does conclude that there is sufficient evidence in the legislative record to indicate that Congress intended the Northern Tribes to engage in sustenance practices on their trust lands to the extent they could.

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<sup>11</sup> See memorandum from Ralph Abele to the file for this decision, regarding Effects of Maine Fishing Regulations on Sustenance Fishing by Maine Tribes, dated January 30, 2015.

Authority to establish the Northern Tribes' trust lands came in several rounds of legislation. The first involved the Maliseets, who came to the negotiations around MIA and MICSA late in the legislative process. In 1980, MICSA provided that "[t]he Secretary is authorized and directed to expend . . . the land acquisition fund for the purpose of acquiring land or natural resources for the . . . the Houlton Band of Maliseet Indians and for no other purpose." 25 U.S.C. § 1724(b) (emphasis added). "Land or natural resources" is defined to include "water and water rights, and hunting and fishing rights." 25 U.S.C. § 1722(b) (emphasis added).

At the time Congress authorized land to be taken into trust for the Maliseets, it specifically acknowledged that "[a]ll three tribes [Penobscot, Passamaquoddy and Maliseet] are riverine in their land-ownership orientation." Sen. Rep. No. 96-957, at 11. Congress also specifically noted that one purpose of MICSA was to avoid acculturation of the Maine Tribes:

*The Settlement will lead to acculturation of the Maine Indians.* – Nothing in the settlement provides for acculturation, nor is it the intent of Congress to disturb the cultural integrity of the Indian people of Maine. To the contrary, the Settlement offers protections against this result being imposed by outside entities by providing for tribal governments which are separate and apart from the towns and cities of the State of Maine and which control all such internal matters. The Settlement also clearly establishes that the Tribes in Maine will continue to be eligible for all federal Indian cultural programs.

*Id.* at 17. Congress's purpose in providing for the establishment of the Maliseet trust lands was to provide a land base on which the Tribe could maintain its "cultural integrity." The Maliseets have submitted extensive comments documenting the sustenance fishing practices central to the Tribe's culture.

In 1981, the Maine Legislature added provisions to MIA to correspond to the action Congress took in MICSA to recognize the Maliseets and authorize trust lands to provide a resource base for the Tribe. In contrast to MIA's language describing the Southern Tribes' trust lands, the statute explicitly defines the Maliseet trust lands to include natural resources. 30 M.R.S.A §§ 6203(2-A) ("Houlton Band Trust Land' means land or natural resources acquired by the secretary in trust for the Houlton Band of Maliseet Indians . . ."); see also § 6205-A ("Land or natural resources" may be taken into trust for the Maliseets). As in MICSA, MIA makes it clear that natural resources acquired for the Maliseets may include fishing rights. *Id.* at § 6203(3) ("Land or other natural resources' means any real property or other natural resources . . . including, but without limitation, . . . water and water rights and hunting and fishing rights.")

It was not until 1989 that the Micmacs negotiated a settlement with Maine as codified in the MSA. Similar to the settlement with the Maliseets, MSA provides that the Micmacs' trust lands include natural resources. 30 M.R.S. § 7202(2) ("Aroostook Band Trust Land' means land or natural resources acquired by the secretary in trust for the Aroostook Band of Micmacs . . ."). MSA further defines natural resources to include fishing rights. *Id.* at § 7202(3) ("Land or other natural resources' means any real property or other natural resources . . . including, but without limitation . . . water and water rights and hunting and fishing rights.")



In 1991, Congress passed ABMSA, one key purpose of which was to ratify the MSA. ABMSA § 1(b)(4). Congress specifically found and declared that:

It is now fair and just to afford the Aroostook Band of Micmacs the same settlement provided to the Houlton Band of Maliseet Indians for the settlement of that Band's claims, to the extent they would have benefited from inclusion in the Maine Indian Claims Settlement Act of 1980.

*Id.* at § 1(a)(5). To that end, Congress established the Aroostook Band of Micmacs Land Acquisition Fund, *id.* at § 4(a), and provided that:

the Secretary is authorized and directed to expend, at the request of the Band, the principal of, and income accruing on, the Land Acquisition Fund for the purposes of acquiring land or natural resources for the Band and for no other purposes. Land or natural resources acquired within the State of Maine with funds expended under the authority of this subsection shall be held in trust by the United States for the benefit of the Band.

*Id.* at § 5(a). ABMSA defines "Band Trust Land" to mean "land or natural resources acquired by the Secretary of the Interior and held in trust by the United States for the benefit of the Band" and defines "land or natural resources" to mean "any real property or natural resources, or any interest in or right involving any real property or natural resources, including (but not limited to) . . . water and water rights, and hunting and fishing rights." *Id.* at § 3(3) and (4). As with the Maliseets, Congress clearly intended that the Micmacs' trust lands could encompass fishing rights.

The Senate conference report from the Select Committee on Indian Affairs on ABMSA indicates that Congress intended to remedy the plight of the Micmacs, who had been deprived of a land base on which to secure the Tribe's continuation as a unique culture. "As Maine's only Native American community without a tribal land base, the Aroostook Band of Micmacs faces major challenges in its quest for cultural survival." 102 S. Rpt 136 (1991). The report describes the cultural practices of the band, including its historic homeland range along the west bank of the St. John River. "The ancestors of the Aroostook Micmac made a living as migratory hunters, trappers, fishers and gatherers until the 19<sup>th</sup> century." It goes on to note that "[t]oday, without a tribal subsistence base of their own, most Micmacs in Northern Maine occupy a niche at the lowest level of the social order." The discussion of the Band's history ends by observing:

It is remarkable that the Aroostook Band of Micmac Indians, as a long disenfranchised and landless native group, has not withered away over the centuries. To the contrary, this community in Northern Maine has demonstrated an undaunted collective will toward cultural survival.

As with the Maliseets, it is clear Congress intended to establish a land base for the Micmacs that would enable the Tribe to secure its "cultural survival" and avoid acculturation. Congress intended for the Northern Tribes' trust lands to provide a "subsistence base" on which the Tribes

could assure their continued existence as a unique culture. And Congress was aware that part of that subsistence base for the Northern Tribes was their sustenance fishing practices.

While Congress intended that the Indian lands in Maine provide a land base to support all the Tribes' sustenance practices, it ratified dramatically different regulatory frameworks within which the Southern and Northern Tribes could operate in exercising those practices. In their reservations and lesser ponds in their trust lands, the Southern Tribes are substantially free from state fishing regulations, and elsewhere in their trust lands any regulation of the Southern Tribes' fishing must consider their sustenance practices. As explained in the discussion of the State's jurisdictional authority above, the Northern Tribes and their trust lands are subject to the laws of the State, including the regulation of natural resources, which includes fishing rights. So unlike the Southern Tribes, the ability of the Northern Tribes to exercise their sustenance fishing practices is potentially subject to regulation directly under state law. As DOI's legal opinion explains, the Northern Tribes' trust lands include fishing rights appurtenant to those land acquisitions, which are subject to state regulation.

But this jurisdictional arrangement does not alter the fact that Congress established the Northern Tribes' trust lands for the purpose of providing these Tribes a land base on which to exercise their sustenance practices to the extent possible. Finding that state law applies to the Northern Tribes' fishing rights does not answer the question how those Tribes intend to use the waters on their trust lands consistent with the purpose of setting aside their land base. And the state law applicable to the Northern Tribes' fish take makes it clear that there are generous take limits that allow a catch sufficient to support sustenance fishing. As analyzed in the review of state fishing regulations supporting this decision, it appears state fishing regulations applicable to the Northern Tribes' trust lands do not impose limits that would prevent individual members of the Northern Tribes from taking fish sufficient to support a sustenance diet.<sup>12</sup> Further, under state law, the Department of Inland Fisheries and Wildlife has authority to set take limits on fisheries for the purposes of their preservation, protection, enhancement and use as well as the propagation of fish for the effective management of inland fisheries resources in public waters of the State. 12 M.R.S. § 10053.<sup>13</sup> While this regulatory process does not include the same kind of procedural and burden of proof protections MIA provides for the Southern Tribes' fishing rights, it still requires the State to have a legitimate, non-arbitrary reason for limiting the take in the Northern Tribes trust lands based on the need to preserve and protect state fisheries. So as provided under state law, there appears to be ample ability for the Northern Tribes to fish for their sustenance in tribal waters associated with their trust lands.

### 3.3.1.3 Passamaquoddy Marine Sustenance Fishing

The Passamaquoddy Tribe's Pleasant Point reservation is located on marine, not inland, waters. There is a dispute among the Tribe, the State, and the commission about whether the Tribe's aboriginal right to take fish in marine waters survived the passage of MICA. See 25 U.S.C. §§ 1722(b) and 1723(b) and Assessment of the Intergovernmental Saltwater Fisheries Conflict between Passamaquoddy and the State of Maine, Maine Indian Tribal-State Commission: Special

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<sup>12</sup> See memorandum from Ralph Abele to the file for this decision, regarding Effects of Maine Fishing Regulations on Sustenance Fishing by Maine Tribes, dated January 30, 2015.

<sup>13</sup> See memorandum from Greg Dain, re: Maine Fishing Regulation, December 23, 2014.

Report 2014/1 (June 17, 2014) at 7. EPA is taking no position at this time as to the Tribes' aboriginal rights to take fish in marine waters or the scope of the sustenance fishing right codified in MIA section 6207 in marine waters. Nonetheless, the marine waters that are part of the Pleasant Point reservation serve a function in supporting the sustenance of the Tribe identical to the inland waters in the Tribe's reservation and trust lands.

First, Congress understood that the Passamaquoddy Tribe exercised subsistence practices on its reservations, including the Pleasant Point Reservation. The Senate Report's discussion of Special Issues noted that "[p]rior to the settlement, Maine law recognized the Passamaquoddy Tribe's and Penobscot Nation's right to control Indian subsistence hunting and fishing within their reservations, but the State of Maine claimed the right to alter or terminate these rights at any time." As quoted more extensively above, the Senate Report then goes on to describe in detail MIA's provisions for the reserved sustenance fishing right of the Southern Tribes. Sen. Rep. No. 96-957 at 16-17. While some dispute whether the Southern Tribes' sustenance fishing extends into marine waters, at a minimum Congress understood that the Passamaquoddy Tribe fished for its sustenance on its reservation and that the State had accommodated that practice under state law.

Notably, Maine has continued its practice of recognizing and providing for the Passamaquoddy Tribe's sustenance marine fishing practices under state law. In 2013, the State codified a "tribal exemption" from otherwise applicable state fishing regulation of marine species for all four Indian Tribes in Maine to exercise a "sustenance use if the tribal member holds a valid sustenance fishing license issued by the tribe, nation or band . . ." That same subsection goes on to define "sustenance use" as:

. . . all noncommercial consumption or noncommercial use by any person within Passamaquoddy Indian territory, as defined in Title 30, section 6205, subsection 1, Penobscot Indian territory, as defined in Title 30, section 6205, subsection 2, or Aroostook Band Trust Land, as defined in Title 30, section 7202, subsection 2, or Houlton Band Trust Land, as defined in Title 30, section 6203, subsection 2-A, or at any location within the State by a tribal member, by a tribal member's immediate family or within a tribal member's household.

12 M.S.A. § 6302-A(2)(emphasis added). This section imposes seasonal limits on the taking of sea urchins and limits on the number of lobster traps used to harvest lobsters for sustenance use. But it is a clear acknowledgement of and provision for the Passamaquoddy Tribe to take marine species for their sustenance "within Passamaquoddy Indian territory" as defined in MIA, which includes the Tribe's reservations.

Again, EPA acknowledges that there is a current dispute about the extent of the State's authority to regulate the Tribes' marine fishing practices. In citing section 6302-A, EPA does not take a position on the merits of that dispute. EPA is concluding, however, that even if EPA accepts the State's position on its ability to regulate the Passamaquoddy Tribe's marine fishing practices, state law makes ample provision for sustenance fishing on the Tribe's reservation. Therefore, as with the Northern Tribes' trust lands, even if the State has authority to regulate the Tribe's take of marine species, EPA concludes that one important purpose of the Tribe's reservation is to

serve as a land base for the Tribe's exercise of sustenance practices at least to the extent consistent with Maine law regulating the taking of fish. And consistent with that Maine law, the Tribe can consume sufficient marine species to sustain themselves under section 6302-A.

### 3.3.2 Purpose of MIA, MICSA, MSA, ABMSA and Water Quality

As explained above, all four settlement acts in Maine provide for the Tribes to exercise sustenance fishing practices on waters in Indian lands in Maine. The statutory mechanism supporting this conclusion is quite different depending on which element of Indian lands is involved. But the fundamental conclusion that Congress understood and intended that the Tribes be able to sustain their unique cultures and sustain themselves on Indian lands in Maine is clear.

EPA concludes that the purpose to which Congress dedicated these Indian lands has important implications for water quality regulation under the CWA. Some in Maine have argued that the fishing right reserved to the Southern Tribes in their reservations is simply an exception from otherwise applicable state creel limits, but has no bearing on whether the water supporting that fishing right must be clean enough to ensure that the fish that tribal members are consuming is safe to eat. EPA does not agree with this narrow approach to the relationship between the provisions for tribal sustenance practices on the one hand and water quality on the other. Fundamentally, the Tribes' ability to take fish for their sustenance under the Maine settlement acts would be rendered meaningless if it were not supported by water quality sufficient to ensure that tribal members can safely eat the fish for their own sustenance.

There are several examples of the courts finding that fishing rights for tribes encompass subsidiary rights that are not explicitly included in treaty or statutory language, but are nonetheless necessary to render those rights meaningful. One line of cases focuses on the tribes' ability to access fish. *See, e.g., United States v. Winans*, 198 U.S. 371, 384 (1905) (tribe must be allowed to cross private property to access traditional fishing ground); *Kittitas Reclamation District v. Sunnyside Valley Irrigation District*, 763 F.2d 1032, 1033-34 (9th Cir. 1985) (tribe's fishing right protected by enjoining water withdrawals that would destroy salmon eggs before they could hatch); *Grand Traverse Band of Ottawa and Chippewa Indians v. Director, Mich. Dept of Nat. Resources*, 141 F.3d 635 (6th Cir. 1999) (treaty right to fish commercially in the Great Lakes found to include a right to temporary mooring of treaty fishing vessels at municipal marinas because without such mooring the Indians could not fish commercially).

Another line of cases focuses on water quantity sufficient to support fish habitat. In *United States v. Adair*, the Ninth Circuit held that the tribe's fishing right implicitly reserved sufficient waters to "secure to the Tribe a continuation of its traditional . . . fishing lifestyle." 723 F.2d 1394, 1409-10 (9th Cir. 1983). *See also Colville Confederated Tribes v. Walton*, 647 F.2d 42, 47-48 (9th Cir. 1981) (implying reservation of water to preserve tribe's replacement fishing grounds); *Winters v. United States*, 207 U.S. 564, 576 (1908) (express reservation of land for reservation impliedly reserved sufficient water from the river to fulfill the purposes of the reservation); *Arizona v. California*, 373 U.S. 546, 598-601 (1963) (creation of reservation implied intent to reserve sufficient water to satisfy present and future needs).

The preceding cases focus on fishing rights, and the attendant or implicit requirement that those fishing rights not be denied through collateral action impairing that right. Analogously, when diminished water quality has hindered tribal uses of water outside the fishing context, courts have held in favor of tribes and found that a right to put water to use for a particular purpose must include a subsidiary right to water quality sufficient to permit the protected water use to continue. This occurred in an Arizona case, *United States v. Gila Valley Irrigation District*, in which farmers whose properties were located upstream from an Indian reservation were required to take steps to decrease the salinity of the river reaching the tribe's reservation so that "the Tribe receives water sufficient for cultivating moderately salt-sensitive crops." 920 F. Supp. 1444, 1454-56 (D. Ariz. 1996), *aff'd*, 117 F. 3d 425 (9th Cir. 1997).

So there is precedent for the proposition that, when Congress identifies and provides for a particular purpose or use of specific Indian lands, an Agency should consider whether its actions have an impact on a tribe's exercise of that purpose or use and, to the extent possible, ensure that its actions protect that purpose or use. If a tribe could not survive on its land base without water, or water clean enough to farm, for example, courts have recognized that the purpose of that reservation or trust land would be entirely defeated. So too here, it would defeat the purpose of MIA, MICSA, MSA and ABMSA if the Maine Tribes cannot safely sustain themselves from the fish they can catch from their waters. DOI's legal opinion concludes that "fundamental, long-standing tenets of federal Indian law support the interpretation of tribal fishing rights to include the right to sufficient water quality to effectuate the fishing right." If EPA were to ignore the impact that water quality, and specifically water quality standards, could have on the Tribes' ability to safely engage in their sustenance fishing practices on their lands, the Agency would be contradicting the clear purpose for which Congress ratified the settlements in Maine and provided for the establishment of Indian lands in the State. Therefore, it is incumbent upon EPA when applying the requirements of the CWA to harmonize those requirements with this Congressional purpose.

### 3.3.3 Tribal Fishing Rights, the CWA, and the MICSA Savings Clauses

Accordingly, as explained in more detail below, EPA is identifying "sustenance fishing" to be a designated use in tribal waters, and is disapproving Maine's human health criteria because they are not stringent enough to protect the sustenance fishing use. EPA considered whether taking this action is prohibited by the so-called "savings clauses" in MICSA that are designed to block application of federal law in the State if it would both accord or relate to a special status or right for Indian tribes and affect or preempt the jurisdiction of the State. 25 U.S.C. §§ 1725(h) and 1735(b). EPA concludes that the savings clauses do not preclude EPA's actions under the CWA.

EPA is addressing the provisions of MICSA, which specifically provides for a land base for the Maine Tribes that is set aside for the purpose of preserving the Tribes' culture and sustenance practices, in the Agency's implementation of the CWA, which requires that water quality criteria protect designated uses and be based on sound scientific rationale. Unless EPA acts to ensure that the Tribes are able to safely exercise their sustenance practices, a key purpose behind the provisions in MICSA, MIA, ABMSA and MSA to assemble and preserve the Maine Tribes' land base and cultures would be largely defeated. When EPA identifies Maine's designated use of "fishing" to mean "sustenance fishing" in tribal waters, it is giving effect to MICSA within the

framework of Agency oversight of WQS provided for in the CWA. It certainly cannot be the case that the savings clauses in MICSA somehow operate to prevent the government from addressing MICSA itself.

In addition, the savings clauses cannot block operation of the CWA oversight authority EPA is exercising in this case. EPA's authority to review and approve or disapprove new or revised state WQS rests on the requirements of CWA section 303(c)(3), which provides general authority and a non-discretionary duty to review and approve or disapprove all new or revised WQS from states. Because this authority under the CWA neither "accords or relates to a special status or right of or to any Indian . . . tribe," nor "affects or preempts the . . . regulatory jurisdiction of the State of Maine. . .," it is not blocked by the operation of the applicable MICSA savings clause. See 25 U.S.C. § 1725(h) (note that section 1735(b) would not apply to CWA section 303, because section 303 was enacted in 1972, and section 1735(b) applies only to laws enacted in and after 1980.). Nothing about EPA's oversight of Maine's WQS limits the State's jurisdiction to set WQS for waters in Indian lands. As to the adequacy of the WQS, no state has authority under the CWA to set standards that are "not consistent with the applicable requirements of this chapter [of the CWA]." 33 U.S.C. § 303(c)(3). In determining whether Maine's new or revised criteria are protective of the sustenance fishing designated use in Indian waters, EPA is simply exercising the same oversight authority it would exercise inside or outside Indian country anywhere in the nation. So this action does not accord the Indian Tribes in Maine a "special status or right."

EPA also considered whether, in looking to the federal common law of reserved tribal fishing rights when interpreting MICSA and implementing the CWA, EPA has somehow applied federal law to affect the application of state law. As a threshold matter, the MICSA savings clauses appear to be drafted entirely with Congressional statutory enactments in mind, and do not appear to address federal common law. For example, MICSA section 1725(h) provides that "no law or regulation of the United States" in existence at the time MICSA passed will apply in Maine if the conditions of that section are met. The formulation of "law or regulation" suggests Congress had in mind statutes that are routinely implemented by regulation. And the example provided in the Senate Committee Report of the operation of that section is a description of how section 164 of the Clean Air Act, a statutory law, would not apply in Maine. Sen. Rep. No. 96-957, p. 31.<sup>14</sup>

Finally, the operation and effect of these savings clauses is irrelevant to the use that EPA is making of federal common law in this case. The savings clauses are designed to prevent the federal government from unintentionally re-writing the jurisdictional deal embodied in MICSA. Only Congress has the authority to do that. In referencing certain principles of federal common

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<sup>14</sup> Section 1735(b) is the companion "savings" provision to section 1725(h), and it blocks the application of federal law enacted after 1980 if that law would benefit the Tribes and affect or preempt the application of state law. That section refers to "enacted Federal law" and includes the idea that a federal law may apply in Maine if it is made specifically applicable in Maine. This provision also appears aimed at statutes that Congress enacts where Congress has the opportunity to decide whether to call out Maine in particular. The Senate Report on MICSA confirms this reading: "*Subsection 16(b)* [codified as section 1735(b)] provides a rule of construction to govern interpretation of Federal *statutes* enacted after the date of enactment of this Act." Sen. Rep. No. 96-957, p. 35 (underscore added). Thus it appears that both of these savings provisions were designed to operate in combination to address congressional enactments and resulting regulations that might apply in Maine, not common law.

law noted above, EPA is merely acknowledging useful precedent that can inform how to interpret the purpose to which Congress dedicated the Tribes' lands under MICSA and the other settlement acts. Doing so does not revise MICSA or change its jurisdictional formula; rather EPA is ensuring that the tribal territories can continue to serve the purpose for which they were created under MICSA. This is precisely consistent with First Circuit precedent in which the court has looked to federal principles of Indian law to help interpret the meaning of MICSA. *Akins*, 130 F.3d at 489-490 and *Fellencer*, 164 F.3d at 711-712.

### 3.3.4 Designated Use of Sustenance Fishing

In section 3.2 above, EPA describes its approval of the designated uses contained in the various classifications of waters in Indian lands. Each classification includes the designated use of "fishing." As explained below, EPA is interpreting the designated fishing use for all waters in Indian lands to mean "sustenance fishing"; and for certain waters in the Southern Tribes reservations, EPA is also approving a sustenance fishing designated use specified in MIA.

#### 3.3.4.1 EPA's Decision to Approve a Sustenance Fishing Use in the Southern Tribes' Inland Reservation Waters

As discussed above, MIA provides that: "Notwithstanding any rule or regulation promulgated by the commission or any other law of the State, the members of the Passamaquoddy Tribe and the Penobscot Nation may take fish, within the boundaries of their respective Indian reservations, for their individual sustenance subject to the limitations of subsection 6." 30 M.R.S. § 6207, sub-§ 4. "Fish" is defined to mean "a cold blooded completely aquatic vertebrate animal having permanent fins, gills and an elongated streamlined body usually covered with scales and includes inland fish and anadromous and catadromous fish when in inland water." 30 M.R.S. § 6207, sub-§ 9.

These provisions clearly codify a tribal right of sustenance fishing for inland, anadromous, and catadromous fish in the inland waters of the Penobscot Nation's and Passamaquoddy's reservations.<sup>15</sup> This right is subject only to 30 M.R.S. § 6207, sub-§ 6, which authorizes Maine's Commissioner of Inland Fisheries and Wildlife to, among other things, adopt remedial measures, including the rescission of any tribal ordinance or regulation by the Maine Indian Tribal-State Commission, to prevent substantial diminution of fish stocks in waters outside of the boundaries of lands or waters subject to regulation by the Passamaquoddy Tribe, the Penobscot Nation or the Commission.

EPA has evaluated whether 30 M.R.S. § 6207, sub-§§ 4 and 9, constitutes a new or revised water quality standard, in light of the Agency's recent guidance regarding how it determines what is or is not a new or revised WQS, summarized in EPA's 2012 Frequently Asked Questions (FAQ) publication on the subject.<sup>16</sup> As explained in the FAQ, EPA considers four questions in making this determination, and in this case, all four questions are answered in the affirmative. First,

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<sup>15</sup> EPA is taking no position here on whether this codified right includes or excludes fish in marine waters. See section 3.3.1.3, above. EPA is approving these provisions for inland waters where there is no ambiguity.

<sup>16</sup> EPA, [What is a New or Revised Water Quality Standard Under CWA 303\(c\)\(3\)? Frequently Asked Questions](#), October 2012.

these provisions are legally binding and were established as a matter of state law. Second, they include and address one of the three core components of a water quality standard (i.e., a designated use), since they articulate a specific fishing use for the specified waters. Third, they express or establish the desired condition of the waters, or level of protection afforded the waters, by specifically providing for *sustenance* fishing. (As discussed above, to protect sustenance fishing, the water quality must be both adequate to support healthy fish populations at levels that provide a sufficient quantity of fish to be taken for sustenance purposes, and adequate to ensure that such fish may be safely consumed at sustenance rates by tribal members.<sup>17</sup>) Lastly, these provisions establish a new water quality standard since they have not previously been approved by EPA.

Based on this evaluation, EPA has determined that 30 M.R.S. § 6207, sub-§§ 4 and 9, constitutes a new or revised water quality standard, specifically a designated use, subject to EPA review and approval or disapproval under section 303(c) of the CWA.<sup>18</sup> EPA further finds that the sustenance fishing designated use established by 30 M.R.S. § 6207, sub-§§ 4 and 9, is consistent with the provisions of sections 101(a) and 303(c)(2) of the CWA, as well as EPA's implementing regulations. Accordingly, EPA is today approving the designated use of sustenance fishing for inland, anadromous, and catadromous fish, applicable to all inland waters of the Southern Tribes' reservations in which populations of fish are or may be found.<sup>19</sup>

#### 3.3.4.2 EPA's Decision to Interpret the State's Designated Use of "Fishing" to Mean Sustenance Fishing for Waters in the Northern and Southern Tribes' Trust Lands

As explained above, EPA is approving the State's designated use of "fishing" as it applies to waters in Indian lands. In inland waters of the Southern Tribes' reservations EPA is also approving a specific additional designated use of sustenance fishing, as explained immediately above. In the trust lands for all the Tribes in Maine and the marine waters of the Passamaquoddy Tribe's reservation, EPA must determine how to interpret the fishing use that EPA is approving for those waters. EPA concludes that to protect the function of these waters to preserve the Tribes' unique culture and to provide for the safe exercise of their sustenance practices, EPA must interpret the fishing use to include sustenance fishing.<sup>20</sup>

In reviewing Maine's WQS as they apply to waters in Indian lands, EPA must reconcile two statutory frameworks. On the one hand, the CWA generally assigns to a state the responsibility of determining the designated uses in its waters (subject to certain restrictions at 40 C.F.R. § 131.10). 33 U.S.C. §§ 1251(a)(2), 1313(c)(2)(A). On the other hand, as explained above, the

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<sup>17</sup> As noted above, the sustenance fishing use is subject to the limitations of 30 M.R.S. § 6207, sub-§ 6, which authorizes Maine's Commissioner of Inland Fisheries and Wildlife to take steps to prevent substantial diminution of fish stocks. EPA considers this to be a fisheries management provision, and not a restriction on the *quality* of water needed to protect the sustenance fishing use.

<sup>18</sup> EPA's authority and duty to review and approve or disapprove new or revised WQS does not depend on whether such WQS have been submitted by the State to EPA for review, or on where in state law they are codified. *FAQ* at 2.

<sup>19</sup> EPA interprets this designated use of sustenance fishing as not applying to inland waters that are inherently incapable of sustaining fish populations, such as most ephemeral streams and vernal pools.

<sup>20</sup> EPA interprets the designated "fishing" use for the inland waters of the Southern Tribes' reservations in the same manner. However, because EPA is also approving a specific sustenance fishing use contained in 30 M.R.S. § 6207, sub-§§ 4 and 9 for those waters, the discussion in this section is focused on the waters in the Trust lands.



settlement acts in Maine recognize and create specific areas in the State to provide for the Tribes to use their waters in a way that is distinct from waters outside Indian lands. EPA is bound to attend to and comply with both statutory frameworks to the extent EPA is able to reconcile how they apply to the Agency's review of Maine's WQS in Indian waters.

It is possible to harmonize these two statutory frameworks by recognizing that the State's designated fishing use under the CWA must include the concept of sustenance fishing as provided for in the settlement acts. To do otherwise would run the risk that state WQS could be based on assumptions about fish consumption rates that could lead to criteria that fail to protect the Tribes' ability to safely consume fish for their sustenance. The settlement acts, adopted between 1980 and 1991, are designed to establish a land base on which the Tribes can sustain themselves as unique cultures going forward. Therefore, the Agency will interpret the designated fishing use to include the ability of tribal members to safely take fish for their individual sustenance.

The extent to which existing state law either codifies or at least accommodates tribal sustenance fishing supports this approach to harmonizing the settlement acts with the structure of the WQS program under the CWA. As described above, MIA codifies an express provision for sustenance fishing in the Southern Tribes' trust lands. The state fishing code as it applies to waters in the Northern Tribes' trust lands imposes take limits that appear to be consistent with those Tribes' ability to fish for their sustenance. And finally, in 2013, Maine explicitly provided for all the Tribes in Maine to take marine species for their sustenance. The role of tribal sustenance fishing is woven into the fabric of Maine law, so requiring that use to be protected in the State's WQS program as applied to tribal waters will not conflict with state law governing how the Tribes may use these waters.

As described above, EPA acknowledges that the Tribes' sustenance fishing practices are not free from state regulation. The State has varying degrees of authority to regulate the quantity of fish that can be taken depending on the type of Indian land involved. In the Southern Tribes' reservations, the State has very narrow authority to set limits in the reservations to prevent depletion of fish stock in waters outside the Southern Tribes' reservation waters. The commission can regulate fish take on certain waters on the Southern Tribes' trust lands based on factors enumerated in MIA. On the Northern Tribes' trust lands the State regulates take consistent with state law.<sup>21</sup> However, the State's authority to limit the taking of fish to manage fisheries for their protection and preservation is not inconsistent with the settlements acts' provision of sustenance fishing in tribal waters and EPA's identification of "sustenance fishing" as the designated use for these waters. Neither does the State's authority to limit take mean that state water quality criteria need not protect sustenance fishing in those waters. Water quality criteria must be sufficient to protect the designated uses, whether or not the uses are currently being achieved. CWA 303(c)(2)(A) and 40 C.F.R §§131.3(f) and 131.11.

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<sup>21</sup> As noted earlier, EPA is not taking a position one way or the other on whether the State may regulate Passamaquoddy marine sustenance fishing where such fishing occurs within their reservation.

## 4 EPA's Decisions on Maine's New or Revised Water Quality Standards Submissions From 2003 through 2014

### 4.1 General Background

Section 303 of the CWA requires each state to adopt water quality standards to protect public health and welfare, enhance the quality of water, and otherwise serve the purposes of the CWA.<sup>22</sup> Any new or revised standard adopted by a state under section 303(c) must be submitted to EPA for review, to determine whether it meets the CWA's requirements, and approval or disapproval. 33 U.S.C. § 1313(c)(1) and (3); 40 C.F.R. §§ 131.5, 131.6 and 131.20.

WQS describe the desired condition of a waterbody and consist of three principle elements: (1) the "designated uses" of the state's waters, such as public water supply, recreation, propagation of fish, or navigation; (2) "criteria" specifying the amounts of various pollutants, in either numeric or narrative form, that may be present in those waters without impairing the designated uses; and (3) antidegradation requirements, providing for protection of existing water uses and limitations on degradation of high quality waters. EPA's regulations at 40 C.F.R. part 131 describe the minimum requirements for each of these three elements of WQS.

In accordance with CWA § 303(c) and 40 C.F.R. §§ 131.5 and 131.11, EPA must ensure that new or revised criteria are based on sound scientific rationale and contain sufficient parameters or constituents to protect designated uses.

### 4.2 EPA's Decision to Disapprove Maine's Human Health Criteria for Waters in Indian Lands because They Do Not Protect the Designated Use of Sustenance Fishing in Waters in Indian Lands in Maine, and to Approve Maine's Cancer Risk Level of 10<sup>-6</sup>

#### 4.2.1 Maine's Human Health Criteria Submitted to EPA on May 14, 2004, January 11, 2006 and January 14, 2013

On May 14, 2004, DEP submitted revisions to the human health criteria for mercury at 38 M.R.S. § 420(1-B.A.(2)) to EPA for review and approval or disapproval. On January 11, 2006, Maine DEP submitted numeric Human Health Criteria ("HHC") for toxic pollutants, among other revisions, to EPA for review and approval or disapproval (the "2006 HHC").<sup>23</sup> These criteria replaced Maine's previous regulation that incorporated EPA's CWA § 304(a) recommended criteria by reference. The revisions reflected DEP's use of a statewide fish consumption rate ("FCR") of 32.4 g/day (an increase from the 6.5 g/day FCR on which EPA's

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<sup>22</sup> Section 303's requirements also apply to tribes that are authorized to implement a WQS program. Since EPA's decision today relates to a state's WQS program, the discussion of general statutory and regulatory requirements and guidance are framed in terms of state actions only.

<sup>23</sup> HHC are established to protect human health from exposure to pollutants that occur through the ingestion of water and/or contaminated fish and shellfish. Any human health criterion for a toxicant is based on at least three interrelated considerations: cancer potency or systemic toxicity, exposure (e.g., fish consumption rate), and risk characterization. <http://water.epa.gov/scitech/swguidance/standards/handbook/chapter03.cfm#section13>

then CWA § 304(a) recommended criteria were based).<sup>24</sup> The HHC revisions included a requirement that HHC for carcinogens be based on a cancer risk level (CRL) of  $1 \times 10^{-6}$ . DEP Rule Chapter 584 § 4. Accordingly, all of the HHC for carcinogens submitted to EPA in 2006 were calculated using a  $10^{-6}$  CRL. EPA approved the mercury criteria for waters outside of Indian lands on January 25, 2005, and approved the other criteria for waters outside of Indian lands on July 7, 2006 and September 18, 2006. EPA is today addressing these criteria for waters in Indian lands.

On January 13, 2014, DEP submitted new HHC for acrolein and phenol, and revised criteria for arsenic (discussed separately below), to EPA for review and approval. Similar to the 2006 HHC, the new HHC for acrolein and phenol were based on the statewide fish consumption rate of 32.4 g/day and a CRL of  $10^{-6}$ . EPA is addressing these criteria in its decision today for all waters in the State, including in Indian lands.

In 2011, Maine's legislature enacted LD 515, which required DEP to revise Maine's HHC for arsenic by basing it on a CRL of 1 in 10,000 ( $1 \times 10^{-4}$ ) rather than the previous CRL of 1 in 1,000,000 ( $1 \times 10^{-6}$ ). DEP adopted the new criteria based on the  $10^{-4}$  CRL and a revised FCR of 138 g/day, in order to protect highly exposed state subpopulations, and on January 14, 2013, submitted them to EPA for review and approval. EPA approved the revised arsenic criteria only for waters outside of Indian lands on May 16, 2013. EPA is addressing these criteria in its decision today for waters in Indian lands.

#### 4.2.2 EPA's Analysis of the Adequacy of Maine's HHC for Waters in Indian Lands

##### 4.2.2.1 EPA Guidance

As explained in EPA's *Methodology for Deriving Ambient Water Quality Criteria for the Protection of Human Health* (the "2000 Human Health Methodology" or "2000 Guidance"), EPA recommends that states provide adequate protection from adverse health effects to the general population, as well as to highly exposed populations, such as recreational and subsistence fishers, two distinct groups whose fish consumption rates may be greater than the general population.<sup>25</sup> EPA provides national default fish consumption rates ("FCR") of 17.5 grams per day ("g/day") for the general population and recreational anglers, and of 142.4 g/day for subsistence fishers.<sup>26</sup> However, because the level of fish consumption in highly exposed populations varies by geographic location, EPA strongly recommends that states use local or regional data over the default values. EPA has also recently explained that in order to provide for safe fish consumption, it is important that HHC avoid any suppression effects that may occur

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<sup>24</sup> Although not explicitly stated in DEP Regulation Chapter 584, the mercury criteria in 38 M.R.S. § 420(1-B.A.(2)) were based on the Maine Bureau of Health Fish Tissue Action Level of 0.2 mg/Kg, which was derived using a fish consumption rate of 32.4 g/day. See *Development of Ambient Water Quality Criteria for Mercury, A Report to the Joint Standing Committee on Natural Resources*, by DEP, dated January 15, 2001.

<sup>25</sup> EPA. 2000. *Methodology for Deriving Ambient Water Quality Criteria for the Protection of Human Health*. U.S. Environmental Protection Agency, Office of Water, Washington, D.C. EPA-822-B-00-004, p. 2-2. Available at: <http://www.epa.gov/waterscience/criteria/humanhealth/method/complete.pdf>

<sup>26</sup> Id., pp. 1-12 and 1-13.

when a group's consumption rate is artificially diminished due to perceptions of pollutant contamination of the fish.<sup>27</sup>

#### 4.2.2.2 Tribal Sustenance Fishers to be Protected as the Target Population in Tribal Waters

EPA concludes that when analyzing how the WQS program applies to the sustenance fishing use in the waters of Indian lands in Maine, the tribal population must be considered to be the "target population" for the purpose of determining whether the State's human health criteria are adequate to protect the tribes' health, including determining the appropriate fish consumption rate applicable in those waters and weighing the risk level to which tribal members should be exposed. Congress set aside Indian lands to provide a place for the Tribes to reside and to exercise their sustenance practices. Therefore, that tribal population and its sustenance fishing use must be the focus of the risk assessment supporting water quality criteria to adequately protect that use. To do otherwise risks undermining the purpose for which Congress established and confirmed the Tribes' land base.

EPA's 2000 Human Health Methodology provides that when developing in-stream water quality criteria to protect human health, states have some flexibility in determining which populations the state's criteria are designed to protect. Generally the guidance recommends that states consider how to protect both susceptible and highly exposed populations when setting criteria.

When choosing exposure factor values [including fish consumption rates] to include in the derivation of a criterion for a given pollutant, EPA recommends considering values that are relevant to population(s) that is (are) most susceptible to that pollutant. In addition, highly exposed populations should be considered when setting criteria.<sup>28</sup>

EPA's approach in this guidance is to recommend protection of the general population based on fish consumption rates designed to represent "the general population of fish consumers," and then to recommend that states assess whether there might be more highly exposed subpopulations or "population groups" that require the use of a higher fish consumption rate to protect them as the "target population group(s)." *Id.* at 4-24 – 25. The guidance leaves states considerable discretion in determining which populations to target for protection using either statewide criteria or more geographically focused site-specific criteria.

The 2000 Guidance does not directly speak to the unique situation EPA confronts in this action, where 1) a state has authority to set human health criteria for waters in Indian lands, and 2) those lands have been set aside by Congress for, among other reasons, the preservation of tribal cultural practices, including sustenance fishing. Nevertheless, it is possible to apply the principles outlined in the 2000 Guidance to this situation, informed by the settlement acts. As discussed below, the settlement acts lead EPA to consider the Tribes to be the general target population in their waters, and the Guidance's recommendations on exposure and cancer risk for the general target population can be applied accordingly.

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<sup>27</sup> EPA 2013, Human Health Ambient Water Quality Criteria and Fish Consumption Rates: Frequently Asked Questions, page 2. Available at:

<http://water.epa.gov/scitech/swguidance/standards/criteria/health/methodology/upload/hhfaqs.pdf>

<sup>28</sup> EPA 2000 Human Health Methodology at 4-17.

In Maine, the State has authority to set WQS for the waters in tribal lands where tribal members are the exclusive or predominant population. See 30 M.R.S. § 6206(1) (Penobscot Nation and Passamaquoddy Tribe control “the right to reside within the respective Indian territories” as an internal tribal matter.) Some of those lands and the waters in them are subject to a statutorily reserved tribal fishing right; some are set aside for the purpose of giving the resident tribe a land base on which to exercise traditional sustenance practices. What all the waters in these Indian lands have in common is, as explained above, that the fishing activity on them will involve tribal members, and may be predominated by tribal members, who have the right to, and desire to, fish for their sustenance. Also as explained above, consistent with the purpose of the settlement acts to preserve the Tribes’ culture, these tribal members intend to fish for their sustenance. They are not a highly exposed or high-consuming subpopulation in their own lands; they are the general population for which the federal set-aside of these lands and their waters was designed.<sup>29</sup>

Therefore, as described above, EPA has identified and approved a designated sustenance fishing use applicable to waters in these Indian lands. That designated use requires the Agency to focus its analysis on sustenance fishers as the target general population. In effect, the settlement acts have determined how EPA and Maine must analyze the use of these waters and the population to be targeted for protection, because those acts established Indian lands in Maine for the clearly identifiable purpose of allowing the Tribes to sustain themselves on their own lands and waters.

A similar analysis applies to another critical factor in deriving human health criteria, the cancer risk level. For carcinogenic pollutants, EPA’s 2000 Guidance recommends that states protect the general population to a level of risk no greater than one in one hundred thousand to one in one million ( $1 \times 10^{-5}$  to  $10^{-6}$ ) of an additional cancer occurring in that population. Maine DEP has selected  $10^{-6}$  as the level of risk that must be used to establish human health criteria for carcinogenic pollutants, with the exception of arsenic. Maine Rule Chapter 584 § 4. EPA’s 2000 Guidance indicates that if there are highly exposed groups or subpopulations within that target general population, such as subsistence consumers, water quality standards should protect those consumers to a level of risk no greater than one in ten thousand ( $1 \times 10^{-4}$ ).<sup>30</sup> EPA and Maine relied on this aspect of the guidance in approving Maine’s recently submitted revision to its human health criterion for arsenic as it applies to waters outside Indian lands. The Agency analyzed whether the State’s revised arsenic criterion adequately protected subsistence consumers *outside* tribal waters as a *subpopulation* to a risk level of  $10^{-4}$ .

Again, EPA concludes that it would be inconsistent with the intent of the settlement acts to treat the Tribes as a subpopulation of the State when developing HHC for waters in their own lands, and to expose them to levels of risk above what would be reasonable for the general population of the State. Therefore, the CWA requires that when establishing WQS for these waters, the tribal members must be considered to be the target general population for the purposes of setting

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<sup>29</sup> EPA recognizes that tribal members will not be the only population fishing from some of these waters. On major rivers such as the Penobscot River, for example, the general population has the right to pass through the waters in Indian lands. The presence of some nonmembers fishing on these waters, however, does not change the fact that the resident population in the Indian lands is made up of tribal members who expect to fish for their sustenance in the waters in Indian lands pursuant to the settlement acts.

<sup>30</sup> EPA 2000 Human Health Methodology at 2-6.

risk levels to protect the sustenance fishing use. In Maine, the State has codified a risk level of  $10^{-6}$  for all but one carcinogen, and EPA is today approving that provision in Chapter 584 to apply to waters in Indian lands, as discussed further below.

#### 4.2.2.3 Fish Consumption Rate

In evaluating the adequacy of Maine's HHC to protect the sustenance fishing designated use for waters in Indian lands, EPA reviewed the basis for the FCR used by Maine, and also considered whether other localized information exists that would be relevant and appropriate to consider in determining an adequate sustenance fishing consumption rate that is not artificially suppressed by pollution concerns.

##### 4.2.2.3.1 ChemRisk Study

DEP derived the 32.4 g/day FCR, used for all of its HHC except arsenic, in part<sup>31</sup> from the results of a 1990 study conducted by McLaren/Hart – ChemRisk, of Portland, Maine (the “ChemRisk Study”<sup>32</sup>). While DEP considered several sources of information about fish consumption rates to develop the 2006 HHC, the ChemRisk Study contains the only localized data that DEP used. EPA reviewed the ChemRisk Study as well as additional information about the Study contained in comments from a primary author of the Study and responses to comments from DEP, contained in DEP's May 25, 2012 Response to Comments document submitted to EPA on January 14, 2013, to determine the Study's relevance to the target tribal populations' sustenance fish consumption rates in waters in Indian lands.

In 1990, to characterize the rates of freshwater fish consumption by Maine's resident anglers, ChemRisk conducted a statewide mail survey of Maine residents holding a valid Maine fishing license in 1989. The survey asked respondents to report the number of freshwater fish caught in Maine, their species, and the average length of each fish that was eventually consumed by them, including fish caught by other members of the respondent's household and by individuals outside the household. Along with other demographic information, respondents were asked to self-identify their ethnic background (white/non-Hispanic, Hispanic, Native American, Asian/Pacific Islander, Black, or other). Of the 2,500 surveys mailed, 1,612 were completed and returned. Of these, 1,053 anglers reported having consumed freshwater and anadromous fish obtained from Maine inland waters during the 1989-1990 ice fishing season or 1990 open water fishing season. The 95<sup>th</sup> percentile FCR (as calculated by rank without any assumption of statistical distribution) for the fish consuming anglers was 26 g/day.

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<sup>31</sup> Maine Bureau of Health, *Fish Tissue Action Levels*, February 20, 2001, published at <https://www1.maine.gov/dhhs/mecdc/environmental-health/eohp/fish/documents/action-levels-writeup.pdf>

<sup>32</sup> ChemRisk, A Division of McLaren Hart, and HBRS, Inc., *Consumption of Freshwater Fish by Maine Anglers*, as revised, July 24, 1992. See also Ebert, E.S., N.W. Harrington, K.J. Boyle, J.W. Knight, R.E. Keenan, *Estimating Consumption of Freshwater Fish among Maine Anglers*, North American Journal of Fisheries Management, 13:4, 737-745 (1993); [http://dx.doi.org/10.1577/1548-8675\(1993\)013<0737:ECOFFA>2.3.CO;2](http://dx.doi.org/10.1577/1548-8675(1993)013<0737:ECOFFA>2.3.CO;2)

According to the Study, 148 Native Americans participated in the survey (11% of total participants), and 96 of those reported consuming freshwater fish that had been sport-caught.<sup>33</sup> The consumption rate for the Native American participants equaled or exceeded the rate of all other population groups at the 66<sup>th</sup>, 75<sup>th</sup>, and 90<sup>th</sup> percentiles<sup>34</sup>, and the 95<sup>th</sup> percentile for Native Americans was nearly double the 95<sup>th</sup> percentile for the next highest population group.<sup>35</sup> However, the maximum rate reported by the Native Americans respondents (162 g/day) was lower than the maximum rate reported by the entire surveyed population (182 g/day).<sup>36</sup>

Ultimately, DEP used a statewide fish consumption rate of 32.4 g/day to establish its HHC, which is the equivalent of one 8-oz. fish meal per week, and, according to DEP, represents the 97<sup>th</sup> percentile FCR for Maine recreational anglers for all waters, and the 94<sup>th</sup> percentile for Native American anglers in Maine.<sup>37</sup> It was “designed to protect the subpopulation of recreational anglers that frequently consume sport-caught fish....”<sup>38</sup>

As explained above, in evaluating whether the sustenance fishing designated use for waters in Indian lands is protected by Maine’s HHC, EPA considers the tribal sustenance fishers to be the “target” general population for such waters. This means that the FCR for the applicable HHC must reflect, as accurately as possible, the Tribes’ sustenance level FCR, and the CRL must be protective of the sustenance fishers as a general population rather than as a highly exposed subpopulation.

Maine’s FCR is based primarily on statewide data, which EPA’s 2000 HH Methodology generally prefers over the use of national data. However, it is not based on localized data for the specific waters in Indian lands or the target tribal populations. The ChemRisk Study was not intended to be, nor was it, a survey of tribal sustenance fishers in tribal waters. The survey was sent to state-licensed recreational anglers, but tribal sustenance fishers are not required to have state licenses to fish in waters in Indian lands.<sup>39</sup> Therefore, EPA is unable to conclude that the Study results are representative of a fish consumption rate for tribal sustenance fishers in tribal waters.

In addition, the Study does not reflect unsuppressed fish consumption levels. At the time the ChemRisk survey was conducted, Maine had issued fish consumption advisories for the main stem of the Penobscot River, where the Penobscot Nation reservation is located, the Androscoggin River (1985), and the Kennebec River, (1987), and it issued advisories for the Presumpscot River and West Branch of the Sebasticook River in 1990.<sup>40</sup> DEP has acknowledged that “public awareness of historical pollution in industrialized rivers can be expected to have suppressed fish consumption on a local basis,” and that the ChemRisk

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<sup>33</sup> ChemRisk Study, Tables 5 and 6a..

<sup>34</sup> Id., Table 6a.

<sup>35</sup> Id., as revised (see comment by Ellen Ebert in DEP’s Response to Comments, May 25, 2012, page 16).

<sup>36</sup> Written comments from Ellen Ebert, primary author of the Chemrisk Study, to Maine DEP, as reported in DEP Response to Comments dated May 25, 2012 and submitted to EPA January 14, 2013. DEP, page 16.

<sup>37</sup> Maine RTC, May 25, 2012, page 20.

<sup>38</sup> Maine DEP testimony to the Maine Legislature, April 25, 2011, p. 3.

<sup>39</sup> Id., p. 19.

<sup>40</sup> Id., p. 20.

“estimates of fish consumption for rivers and streams as well as the inclusive ‘all waters’ category are likely to have been affected to some degree.”<sup>41</sup>

Although the responses were not tallied and not analyzed in ChemRisk’s report, the ChemRisk survey did include questions regarding the impact of fish consumption advisories. EPA analysis of the survey response data<sup>42</sup> indicates that 35% of respondents (556 individuals) were aware of the advisories during the time of the survey. Of the 160 respondents who reported that they ate fish from locations covered by fish consumption advisories, 82% (135) reported that the advisories affected whether they kept the fish caught at those locations.<sup>43</sup> It is not clear (because the question was not asked) whether anglers avoided certain waters in the 1989/1990 fishing season because of the fish advisories and whether that avoidance affected their total fish consumption. Nonetheless, it is clear that the existence of the advisories did result in some anglers reducing their take from those rivers.

EPA also reviewed the results of the Penobscot Nation’s draft 1991 Penobscot River Users Survey.<sup>44</sup> While the survey was small (210 respondents) and the response rate was only 25%, and it was limited to Penobscot Nation members and their use of the Penobscot River, it does contain information that reinforces EPA’s conclusion that the ChemRisk Study does not reflect unsuppressed sustenance fish consumption in tribal waters. For example, 72.9 % of the respondents stated they did not eat fish from the Penobscot River, and a majority (66.7%) stated that they had concerns about eating fish from the river.<sup>45</sup> The vast majority of those concerns were related to pollution.<sup>46</sup> In addition, of the 37.1% who reported not using the river at all, 16.3% identified the reason as concerns about pollution.<sup>47</sup>

#### 4.2.2.3.2 Wabanaki Traditional Cultural Lifeways Exposure Scenario

In considering whether there are other sources of local data to inform EPA’s determination of what FCR is representative of sustenance fishing in the waters in Indian lands, EPA reviewed the Wabanaki Cultural Lifeways Exposure Scenario (“Wabanaki Study”), which was completed in 2009. This peer reviewed Study was produced under a Direct Implementation Tribal Cooperative Agreement (DITCA) awarded by EPA to the Aroostook Band of Micmac Indians on behalf of all of the Maine Tribes. The purpose of the Study was to use available anthropological and ecological data to develop a description of Maine Tribes’ traditional cultural uses of natural resources, and to present the information in a format that could be used by EPA to evaluate whether or not tribal uses are protected when EPA reviews or develops water quality standards in Indian lands in Maine.<sup>48</sup> It is relevant to contemporary water quality because another purpose of

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<sup>41</sup> Id., pp. 20-21.

<sup>42</sup> Provided by the study author, Ellen Ebert, to EPA via email October 3, 2013.

<sup>43</sup> EPA, *Analysis of Suppression Questions from Chemrisk Study*, Memo to File, January 30, 2015.

<sup>44</sup> 1991 Penobscot River Users Survey conducted by the Penobscot Nation’s Department of Natural Resources (draft).

<sup>45</sup> Id., Appendix A, §§ A.5 and A.6

<sup>46</sup> Id., Appendix A, § A.6

<sup>47</sup> Id., Appendix A, §A.1.a

<sup>48</sup> Harper, Barbara and Darren Ranco, *Wabanaki Traditional Cultural Lifeways Exposure Scenario*, prepared for EPA in collaboration with the Maine Tribes, p.7, July 9, 2009.



the Study “is to describe the lifestyle that was universal when resources were in better condition and that some tribal members practice today (and many more that are waiting to resume once restoration goals and protective standards are in place).”<sup>49</sup> It provides a numerical representation of the environmental contact, diet, and exposure pathways of the traditional tribal lifestyle, including the use of water resources for food, medicine, cultural and traditional practices, and recreation. The Study acknowledges that “the Wabanaki homelands extended further west and south into areas with different plants and climate and where farming was possible,” but notes that “the scenario itself covers only areas most heavily used by Tribal members at present, and where farming is marginal due to climate.”<sup>50</sup>

The report used anthropological and ecological data to identify major activities that contribute to environmental exposure and then to develop exposure factors related to traditional diet, drinking water, soil and sediment ingestion, inhalation rate and dermal exposure. Credible ethno historical, ecological, nutritional, archaeological, and biomedical literature was reviewed through the lens of natural resource use and activities necessary to survive in the Maine environment and support tribal traditions. Along with single, best-professional judgment estimates for direct exposures (inhalation, soil ingestion, water ingestion) as a reasonable representation (central tendency) of the traditional cultural lifeways, the Wabanaki Study provides an estimated range of diets that reflect three major habitat types.<sup>51</sup>

In developing the dietary component of the exposure scenario, the Wabanaki Study authors assembled information about general foraging, seasonal patterns, dietary breadth, abundance, and food storage. From these they evaluated the relative proportion of major food groups, including fish, as well as nutritional information, total calories and quantities of foods. This resulted in an estimate of a nutritionally complete diet for the area east of the Kennebec River, which is the area most heavily used by tribal members today and where farming is marginal due to climate.<sup>52</sup>

With regard to the consumption of fish, the Wabanaki Study identifies three traditional lifestyle models, each with its own diet:

1. Permanent inland residence on a river with anadromous fish runs (“inland anadromous”),
2. Permanent inland residence with resident fish only (“inland non-anadromous”), and
3. Permanent coastal residence (“coastal”).

The study provides estimates of average consumption of aquatic resources, game, fowl, and plant based foods for each lifestyle model. Aquatic resources were divided into two categories: “resident fish and other resources” and “anadromous and marine fish and shellfish.” Table 1 summarizes the consumption of aquatic resources for each lifestyle model.

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<sup>49</sup> Id., p. 9

<sup>50</sup> Id.

<sup>51</sup> Id., p. 16.

<sup>52</sup> Id., pages 8-9.

**Table 1 – Consumption of Aquatic Resources by Lifestyle Model<sup>53</sup>**

Lifestyle Model	Resident Fish & Other Aquatic Resources(g/day)	Anadromous & Marine Fish, Shellfish (g/day) <sup>54</sup>
Inland Anadromous	114	400
Inland Non-anadromous	286	0
Coastal	57	457

The Wabanaki Study provides a range of fish consumption rates specifically for Maine Indians using natural resources for subsistence living and reduces the uncertainties associated with a lack of knowledge about tribal exposure in Maine Indian waters. On their own, these fish consumption rates could form the basis for criteria protective of sustenance fishing. Alternatively, they could be the starting point that could be modified, based on additional information, to take into account present day circumstances related to the species composition of available fish. For example, in developing its 2014 tribal water quality criteria, the Penobscot Nation used a FCR of 286 g/day. The Nation explained that it chose the inland non-anadromous total FCR of 286 g/day because, although the Penobscot lands are in areas that would have historically supported an inland anadromous diet (with total FCR of 514 g/day), the contemporary populations of anadromous species in Penobscot waters are currently too low to be harvested in significant quantities.<sup>55</sup>

#### 4.2.3 Disapproval of Maine’s HHC Because They Are Based on FCRs that Fail to Protect Sustenance Fishing

EPA is today disapproving, for waters in Indian lands, the mercury human health criteria in 38 M.R.S. § 420(1-B.A.(2)) submitted to EPA on May 14, 2004; the fish consumption rate of 32.4 g/day specified in DEP Rule Chapter 584 § 5.C and all human health criteria in DEP Rule Chapter 584, Surface Water Quality Criteria for Toxic Pollutants, Appendix A, submitted to EPA on January 11, 2006; and the human health criteria revisions related to arsenic, acrolein, and phenol in DEP Rule Chapter 584, Surface Water Quality Criteria for Toxic Pollutants, Appendix A, as well as the last sentence in Ch. 584, § 5.C related to the fish consumption rate, submitted to EPA on January 14, 2013. The basis for the disapproval is that the HHC do not protect the sustenance fishing use in those waters. For the reasons discussed above, Maine’s 32.4 g/day FCR is not representative of an unsuppressed sustenance fish consumption rate by tribal members in waters in Indian lands.

In the absence of a local survey of current fish consumption, adjusted to account for suppression, that documents fish consumption rates for sustenance fishing in the tribal waters, EPA finds that the Wabanaki Study contains the best currently available information for the purpose of deriving an FCR for HHC adequate to protect sustenance fishing for such waters. It is local, focused on the areas most heavily used by tribal members today. It identifies historic FCRs based on

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<sup>53</sup> Id., pp. 61-66.

<sup>54</sup> Includes marine mammals for coastal lifestyle model only.

<sup>55</sup> Penobscot Nation, Department of Natural Resources, *Response to Comments on Draft Water Quality Standards*, September 23, 2014, p. 9.

reasonable estimates for total calories and protein intake per day. Heritage rates provide reliable evidence of what unsuppressed rates would be for tribal populations.<sup>56</sup> The Study uses a sound methodology (peer reviewed, written by a range of experts in risk assessment and anthropology). It presents a range of FCRs from 286 g/day (freshwater fish only) to 514 g/day (combinations of freshwater, anadromous, and marine species), which can provide the basis for choosing an FCR that reflects traditional cultural practices in light of present day circumstances related to, for example, the species composition of available fish (as the Penobscot Nation recently did in adopting an FCR of 286 g/day).

Because the Wabanaki Study documents a substantially higher tribal sustenance fish consumption rate than the FCR on which Maine's HHC are based, EPA cannot conclude that the HHC are based on a sound scientific rationale consistent with 40 C.F.R. § 131.11(a) and protect the sustenance fishing use for the waters in Indian lands. EPA is therefore disapproving the HHC.

#### 4.2.3.1 Remedy to Address EPA's Disapproval

Under CWA § 303(c)(3) and EPA's implementing regulations at 40 C.F.R. §§ 131.21 and 131.22, when the EPA disapproves a state's new or revised water quality standard, it must "specify the changes" necessary to meet the applicable requirements of the Act and EPA's regulations. The CWA requires that this disapproval of Maine's human health criteria for waters in Indian lands be addressed in a timely manner. In the first instance, the CWA and EPA's regulations provide the State up to 90 days to revise its WQS, and EPA prefers that Maine address this disapproval under its regulatory development process. However, if the State does not adopt necessary changes, EPA will propose and promulgate appropriate human health criteria for waters in Indian lands in Maine.

To address this disapproval action, Maine must develop new human health criteria for waters in Indian lands that protect tribal sustenance fishers as the target general population and are based on a fish consumption rate that represents unsuppressed sustenance fishing by tribal members.

Among the available existing information on fish consumption, the Wabanaki Study is most relevant for Maine to consider in revising human health criteria in Indian lands. As discussed in section 4.2.2.3, the Wabanaki study is directly applicable to the Maine Tribes fishing in waters on Indian lands. The fish consumption rates developed in the Wabanaki study are estimates of unsuppressed tribal fish consumption that could be used in the derivation of criteria protective of contemporary tribal sustenance fishing. In addressing the disapproval, Maine should use the fish consumption rates developed in the Wabanaki study either on their own or modified, based, for instance, on information that may be provided by the Maine Tribes, to take into account changes in species composition in tribal fisheries and contemporary tribal sustenance fishing goals.

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<sup>56</sup> National Environmental Justice Advisory Council, *Fish Consumption and Environmental Justice*, November 2002 (revised), page 49.

#### 4.2.4 Approval of Maine's Cancer Risk Level of $10^{-6}$ and No Action on Maine's Arsenic CRL of $10^{-4}$

Maine's water quality regulations specify that water quality criteria for carcinogens be based on a CRL of  $10^{-6}$  for all pollutants except arsenic. DEP Rule Chapter 584 § 4. This CRL is consistent with the range of CRLs that EPA considers to be appropriate for the general population and is the risk level that EPA uses when publishing its CWA § 304(a) recommended criteria.<sup>57</sup> As explained above, EPA has determined that the Tribes are the target general population for waters in Indian lands. EPA is therefore today approving Maine's requirement to use  $10^{-6}$  CRL for all carcinogens except arsenic (discussed further below) for the waters in Indian lands. Criteria based on this low level of cancer risk, along with other appropriate factors (including an appropriate FCR), will protect the sustenance fishing use for waters in Indian lands.

EPA recognizes that the Maine Legislature enacted a law that requires DEP to use a CRL of  $10^{-4}$  when establishing arsenic criteria,<sup>58</sup> and that DEP Rule Chapter 584 was revised in 2012 to reflect this requirement. Since EPA is disapproving Maine's arsenic criteria along with all of the other HHC for waters in Indian lands due to an inadequate FCR, EPA is not acting on Maine's CRL for arsenic (i.e., the last sentence in Ch. 584, § 4, related to the cancer risk level to be used to calculate human health criteria for inorganic arsenic, and the first sentence of Footnote aME in Table I of Appendix A of Chapter 584). However, we note that when Maine revises its arsenic criteria, it must ensure that the criteria protect the Tribes as the general target population in these waters, not as a subpopulation. Based on the analysis above, the use of a sustenance level FCR developed for all of the HHC, in combination with a CRL of  $10^{-4}$  for arsenic, would not protect the designated use of sustenance fishing.

#### 4.3 EPA's Decision to Approve Maine's Human Health Criteria for Acrolein for the Consumption of Organisms Only and for the Consumption of Water and Organisms, and Phenol for the Consumption of Organisms Only, and to Take No Action on Phenol for the Consumption of Water and Organisms, in Waters Outside Waters in Indian Lands

For all waters in Maine *except* for waters in Indian lands, EPA approves the following water quality criteria contained in DEP Rule Chapter 584, Surface Water Quality Criteria for Toxic Pollutants, Appendix A, submitted to EPA on January 14, 2013:

- Human health criteria for the consumption of water plus organisms for acrolein; and
- Human health criteria for the consumption of organisms only for acrolein and phenol.

Maine's revised human health criteria for acrolein and phenol were derived using the same methodology and equations used to calculate EPA's current 304(a) recommended criteria for non-carcinogens. EPA updated recommended human health criteria for acrolein and phenol in 2009 based on new Integrated Risk Information System Reference Doses (RfDs) for the pollutants<sup>59</sup>. Consistent with EPA's criteria derivation, Maine has made no changes to the

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<sup>57</sup> 2000 *Human Health Methodology*, p. 1-8.

<sup>58</sup> 38 M.R.S. § 420(1-B.J).

<sup>59</sup> Federal Register: June 10, 2009 (Volume 74, Number 110)

parameters incorporated into these criteria or to the equations used other than the new RfDs. The criteria calculations are summarized in attached Tables 1 and 2 below.

**Table 1 – Calculation of Approved Acrolein Human Health Criteria**

Parameter	2012 criteria
Reference Dose (RfD)	0.0005 mg/(kg-d)
Body Weight (BW)	70 kg
Water Consumption (DW)	2 L/day
Bioconcentration Factor (BCF)	215 L/kg
Fish Consumption Rate (FCR)	0.0324 kg/day
Criteria to protect human health for consuming fish and drinking water (water + organism) = $\frac{1,000 \mu\text{g}/\text{mg} \times \text{RfD} \times \text{BW}}{\text{DW} + (\text{BCF} \times \text{FCR})}$	3.9 $\mu\text{g}/\text{L}$
Criteria to protect human health for consuming fish only (organism only) = $\frac{1,000 \mu\text{g}/\text{mg} \times \text{RfD} \times \text{BW}}{\text{BCF} \times \text{FCR}}$	5.0 $\mu\text{g}/\text{L}$

**Table 2 – Calculation of Approved Phenol Human Health Criteria**

Parameter	2012 criteria
RfD for Phenol	0.30 mg/(kg-d)
Body Weight (BW)	70 kg
Water Consumption (DW)	2 L/day
Bioconcentration Factor (BCF)	1.4 L/kg
Fish Consumption Rate (FCR)	0.0324 kg/day
Criteria to protect human health for consuming fish only (organism only) = $\frac{1,000 \mu\text{g}/\text{mg} \times \text{RF} \times \text{BW}}{\text{BCF} \times \text{FCR}}$	462,963 $\mu\text{g}/\text{L}$

EPA’s approval of Maine’s revisions to its human health criteria for acrolein and to the human health criteria for phenol for the consumptions of organisms only is based on a review of whether the criteria protect the applicable designated uses, including consideration of EPA’s National Recommended Water Quality Criteria published pursuant to Section 304(a) of the CWA. EPA finds that the revised criteria are scientifically defensible and are protective of designated uses for waters outside of Indian lands, for the reasons explained in the EPA criteria documents for each chemical constituent.

EPA understands that DEP will be revising the phenol criteria for the consumption of water and organisms to address a mathematical error made in the criteria derivation. Therefore, at this time EPA is not taking action on the human health criteria for phenol for the consumption of water and organisms, for waters outside of Indian lands, with the anticipation that the revised phenol criteria will be adopted and submitted to EPA for review and action within the coming months.

#### 4.4 EPA’s Decision to Approve Maine’s Aquatic Life Criteria for Acrolein, Diazanone and Nonylphenol for waters throughout the State of Maine, including in Indian Lands

EPA's review of Maine's new aquatic life criteria for acrolein, diazanon and nonylphenol, submitted to EPA on January 14, 2013, is based on whether the criteria protect aquatic life uses, including consideration of EPA's National Recommended Water Quality Criteria published pursuant to Section 304(a) of the CWA. EPA finds that the revised criteria are scientifically defensible and are protective of designated uses for the reasons explained in the EPA criteria documents<sup>60</sup> for acrolein, diazanon and nonylphenol.

4.5 EPA's Decision to Approve Maine's Aquatic Life Criteria Tables I and II in DEP Rule Chapter 584, except for Ammonia, Approve Aquatic Life Criteria in 38 M.R.S. § 420(1-B.A.(1)), (1-B.C), (1-B.D), and (1-B.E), and Approve Biological Criteria in DEP Rule Chapter 579 for Waters in Indian lands

EPA's review of the aquatic life criteria, other than ammonia, in DEP Regulation Chapter 584 Tables I and II, submitted to EPA on January 11, 2006, and in 38 M.R.S. § 420(1-B.A.(1)), (1-B.C)<sup>61</sup>, (1-B.D), and (1-B.E), submitted to EPA on May 14, 2004 (related to mercury and referenced in Table I of Chapter 584), for waters in Indian lands, is based on whether the criteria protect aquatic life uses, including consideration of EPA's National Recommended Water Quality Criteria published pursuant to Section 304(a) of the CWA. EPA finds that the revised criteria are scientifically defensible and are protective of designated uses for the reasons explained in the EPA criteria documents<sup>62</sup> for those pollutants. EPA approved these criteria for waters outside Indian lands on January 25, 2005 and July 7, 2006, and is now approving them for waters in Indian lands.

DEP Rule Chapter 579 provides numeric biological criteria that quantify aquatic life standards for Class AA, A, B and C waters. The rules use the benthic macroinvertebrate community as a surrogate to determine conformance with statutory aquatic life standards. EPA approves of these criteria because they are based on sound scientific rationale and are protective of designated aquatic life uses, as required by Section 303(c)(2)(B) of the CWA and 40 C.F.R. § 131.11. EPA approved this rule for waters outside Indian lands on January 25, 2005, and is now approving it for waters in Indian lands.

4.6 EPA's Decision to Approve Maine's Narrative Criteria for Toxic Pollutants and Implementation Policies Regarding the Development of Statewide Criteria and Site-Specific Criteria, except for Specified Fish Consumption Rates, in DEP Rule Chapter 584, for Waters in Indian Lands

EPA's review of Maine's narrative water quality criteria, as expressed in Chapter 584, §§ 1, 2, and 3.A(1), and submitted to EPA on January 11, 2006, is based on whether those provisions are protective of designated uses, as required in 40 C.F.R. § 131.11. Since the narrative criteria specifically call for waters to be free of pollutants in concentrations that cause waters to be

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<sup>60</sup> See <http://water.epa.gov/scitech/swguidance/standards/criteria/current/index.cfm#altable> for National Recommended Water Quality Criteria and access to criteria documents for each pollutant.

<sup>61</sup> Not including 38 M.R.S §420(1-B.C.(1)) and (1-B.C.(2)), which are not WQS requiring EPA review and approval – see section 4.9 below.

<sup>62</sup> See <http://water.epa.gov/scitech/swguidance/standards/criteria/current/index.cfm#altable> for National Recommended Water Quality Criteria and access to criteria documents for each pollutant.

unsuitable for the designated uses of the water body, EPA finds that they are consistent with the requirements. EPA approved these provisions for waters outside Indian lands on July 7, 2006, and is now approving them for waters in Indian lands.

EPA's review of Maine's implementation policies regarding the development of statewide criteria and site specific criteria in Chapter 584 §§ 3 and 5 (other than the fish consumption rates of 32.4 g/day and 138 g/day, which EPA is disapproving as discussed above) is based on whether the criteria developed from those policies would protect the applicable designated uses including a consideration of EPA's ambient water quality criteria guidance, published pursuant to Section 304(a) of the CWA. The implementation policies include requirements for developing scientific bases for new or revised criteria as well as assumptions regarding ambient waters characteristics (such as pH, temperature, and salinity), and human health (such as water consumption rate and average body weight). EPA approved these policies for waters outside Indian lands on July 7, 2006 and now approves the implementation policies in Chapter 584 §§ 3 and 5 (other than the fish consumption rates) for waters in Indian lands because they require criteria to protect designated uses, and since the procedures and numeric assumptions are consistent with currently published EPA guidance.

EPA is not taking action on the procedures described in Chapter 584 § 3 which describe how alternative statewide and site-specific criteria are to be initiated, reviewed and adopted under state law.<sup>63</sup> Such procedures are not WQS requiring review and approval by EPA. Any new or revised criteria developed under the procedures for statewide, alternative statewide, or site-specific criteria must be submitted to EPA for review and approved by EPA pursuant Section 303(c)(3) of the Clean Water Act and 40 C.F.R. part 131 in order to be effective for Clean Water Act purposes.

#### 4.7 EPA's Decision to Approve Maine's Dissolved Oxygen (DO) Criteria for Class C waters, Requirements for Compliance with DO criteria in Riverine Impoundments, Requirements for Instream Design Flows, the Requirement to Hold a WQS Review Hearing Every Three Years and Provisions that Allow for Pesticide Discharges into Class B and SB Waters for Mosquito Control, for Waters in Indian Lands

EPA's review of the revision to the DO criteria for Class C waters in 38 M.R.S. §465(4.B), submitted to EPA on January 11, 2006, is based on whether the criteria protect aquatic life uses, particularly cold waters species. For the reasons provided in our July 7, 2006 approval of these criteria for waters that are not in Indian lands, EPA finds that the criteria are protective of aquatic life uses and approves them in Indian lands as well.

EPA's review of the revision to DO measurement requirements for riverine impoundments in 38 M.R.S. §464(13), submitted to EPA on August 26, 2003, is based on whether the criteria protect existing and designated uses for waters in Indian lands. As explained in our February 9, 2004

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<sup>63</sup> Specifically, these provisions are: the requirement in Chapter 584 § 3(A.(2)) that "statewide criteria must be initiated in accordance with the petition for rulemaking provisions of the State Administrative Procedures Act, 5 M.R.S.A., Section 8055"; the provision in the first paragraph of Chapter 584 § 3(B) that site specific criteria "must only be adopted by the Board as part of a waste discharge license proceeding pursuant to 38 M.R.S.A. Sections 413, 414 and 414-A"; and the first two sentences of the second paragraph of Chapter 584 § 3(B).

approval of this revision for waters that are not in Indian lands, EPA finds that the narrative standard that accompanies the measurement requirements (“dissolved oxygen concentration in existing riverine impoundments must be sufficient to support existing and designated uses of these waters”) ensures that, notwithstanding the measurement restrictions in this provision, the revision is consistent with the requirements of the Clean Water Act.

EPA’s review of the revisions to DEP Rule Chapter 530 § 4(B), which contains instream design flows for the application of water quality criteria for aquatic life and human health, submitted to EPA on January 11, 2006, is based on whether the provision protect existing and designated uses for waters in Indian lands. The instream design flows (1Q10 low flow for acute aquatic life criteria, 7Q10 for chronic aquatic life criteria, and harmonic mean flow for human health criteria), are consistent with guidance intended to ensure protection of uses provided in Section 5.2 of [EPA’ Water Quality Standards Handbook](#)<sup>64</sup>. EPA approved this provision for waters outside Indian lands on April 17, 2006, and is now approving it for waters in Indian lands.

EPA’s review of the revision to provisions in 38 M.R.S. § 464(3.B), that ensure that a hearing will be held at least every three years for the purpose of reviewing Maine’s WQS, and revising them, as appropriate, submitted to EPA on May 14, 2004, is based on whether the provision is consistent with federal WQS review requirements. This revision reversed a previous change to 38 M.R.S. § 464(3.B)<sup>65</sup> that specified hearings only every four years. Since CWA § 303(c)(1) and 40 C.F.R. § 131.20 require states to hold public hearings every three years, the revision is consistent with federal WQS requirements. EPA approved this provision for waters outside Indian lands on January 25, 2005, and is now approving it for waters in Indian lands.

Revisions submitted on April 8, 2008 included the addition of 38 M.R.S. § 465(3.C.(2)) and § 465-B(2.C) which allow the discharge to Class B and SB waters of aquatic pesticides approved by DEP for control of mosquito-borne diseases. EPA’s review is based on whether the provision will protect existing and designated uses for waters in Indian lands and is consistent with the requirements of the Clean Water Act. Given the requirements that the methods and materials used be protective of non-target species, EPA anticipates that no degradation of water quality would occur due to the discharge of aquatic pesticides authorized under these revisions. EPA approved these provisions for waters outside Indian lands on August 19, 2009 and is now approving it for waters in Indian lands.

#### 4.8 EPA’s Decision to Take No Action on Maine’s Ammonia and Recreational Bacteria Criteria for Waters in Indian lands; on the Reclassification of Long Creek; and on Certain Bacteria and Pesticide Provisions for Waters throughout Maine, Including Waters in Indian Lands

EPA understands that Maine will be conducting a comprehensive triennial review in the coming months and will be reviewing the ammonia criteria for protection of aquatic life and the bacteria

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<sup>64</sup> EPA-820-B-14-004, September 2014, provided on line at <http://water.epa.gov/scitech/swguidance/standards/handbook/chapter05.cfm#section52>.

<sup>65</sup> EPA did not act on the previous revision (calling for hearings every 4 years) which DEP submitted to EPA on August 26, 2003, since DEP agreed at that time to propose changing the requirement back to hearings every 3 years.



criteria for the protection of primary contact recreation, in light of EPA's recommendations<sup>66</sup> for these widespread pollutants, issued in 2013 and 2012, respectively. EPA expects that DEP will be revising these criteria for all waters in Maine, including waters in Indian lands, so that they are based on sound science and protective of the designated uses. For this reason, for waters in Indian lands, we are not taking action at this time on Maine's ammonia criteria for the protection of aquatic life in DEP regulation Chapter 584, Appendix A, and the numeric bacteria criteria for the protection of primary contact recreation for Class B and C waters in 38 M.R.S. §465(3.B) and (4.B), and the extension of the applicability of bacteria criteria for Class SB and SC waters to include bacteria of domestic animal origin in 38 M.R.S. § 465-B(2.B) and (3.B). For the same reason, we are not taking action for waters throughout the State, including waters in Indian lands, on the revisions to 38 M.R.S. §465(3.B) and (4.B) and 38 M.R.S. § 465-A(1.B), which extended the applicability of the bacteria criteria for Class B, C, and GPA waters to include bacteria of domestic animal origin. EPA would be happy to provide assistance to DEP as it develops the new criteria.

In addition, EPA is not taking action on the reclassification of a section of Long Creek (which is a water outside of Indian lands) from Class B to Class C. This downgrade in classification was adopted to achieve consistency in the Creek where the upstream and downstream reaches were already Class C waters. EPA agrees with DEP that it is unusual for a downstream section of a flowing water to be at a higher classification than the upstream section. However, EPA would like to discuss this reclassification further with DEP in the coming months to explore whether there are other means to remedy the inconsistency, such as reclassifying the upstream section to Class B if the restoration of Long Creek and Class B uses there are attainable.

EPA also reviewed the provisions related to certain pesticide discharges submitted to EPA in 2006, 2008 and 2014 and finds that many of these are not water quality criteria requiring review and approval by EPA (as discussed in the section that follows) and two are WQS that we have approved herein (as discussed in the preceding section). However, EPA finds that some of these revisions are WQS which EPA has not yet acted on for waters anywhere in Maine. The revisions related to pesticides that are WQS that we are continuing to take no action on are:

- The revisions made in L.D. 1304 at 38 M.R.S. § 464(4.A.(3)(a)), and § 465((3.C.(1)) and (4.C), related to certain pesticide discharges, submitted to EPA on January 11, 2006;
- The revision made in L.D. 1430 at 38 M.R.S. § 464(4.A.(3)(b)), related to certain pesticide discharges to tributaries of GPA waters, submitted to EPA on February 27, 2014.

The revisions made at 38 M.R.S. § 464(4.A.(3)(a) and (b)), would allow, in GPA waters and tributaries to GPA waters, the impairment of characteristics and designated uses and increase in trophic state due to discharges of aquatic pesticides or chemical discharges for the purpose of restoring biological communities affected by an invasive species or that are the unintended or incidental result of the spraying of pesticides. The revision made at 38 M.R.S. § 465((3.C.(1)) would allow, in Class B waters, impairment of the resident indigenous biological community due to discharges of aquatic pesticides or chemical discharges for the purpose of restoring biological

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<sup>66</sup> See December 2, 2013 letter from EPA Region 1 Office of Ecosystem Protection Director, Ken Moraff to DEP Bureau of Land and Water Quality Director, Michael Kuhns.

communities affected by an invasive species. Similarly, the revision made at 38 M.R.S. § 465(4.C) would allow impairment of the function and structure of the indigenous biological community due to discharges of aquatic pesticides for the purpose of restoring biological communities affected by and invasive species. EPA understands from recent discussion with DEP, that Maine will be revising these provisions during the upcoming months to ensure that they are protective of designated uses. For this reason EPA is not taking action on these revisions at this time.

#### 4.9 EPA's Determination That Various Provisions Submitted to EPA from 2004 through 2014 Are Not Water Quality Standards and Therefore EPA is Taking No Action on These Provisions

EPA has reviewed the following provisions and determined that they are not water quality standards and therefore EPA is taking no action on these provisions:

- Revisions made at 38 M.R.S. § 465(1.C.(2)) and (2.C.(2)), enacted as Chapter 574, L.D. 1833 "An Act to Amend Water Quality Laws to Aid in Wild Atlantic Salmon Restoration," submitted to EPA on May 14, 2004;
- Revisions made at 38 M.R.S. § 420(1-B.B) related to discharger compliance, submitted to EPA on May 14, 2004;
- Revisions made at in 38 M.R.S. § 420(1-B.C.(1)) and (1-B.C.(2)) that describe the state regulatory procedures for establishing site-specific bioaccumulation factors, submitted to EPA on May 14, 2004;
- Procedures in DEP Rule Chapter 584 that describe how alternative statewide and site-specific criteria are to be initiated, reviewed and adopted under state law, submitted to EPA on January 11, 2006;<sup>67</sup>
- Revisions made at 38 M.R.S. § 361-A(1-J) and (1-K), enacted as Chapter 330, L.D. 1588, Sections 7 and 8, which updated the definitions of "Code Of Federal Regulations" and "Federal Water Pollution Control Act" to include their amendments through January 1, 2005, submitted to EPA on January 11, 2006;
- Revisions made at 38 M.R.S. § 464(4.A.(1)(c) and (d)); § 465(1.C.(3)) and (2.C.(3)); and § 465-A(1.C), enacted as Chapter 182, L.D. 1304 "An Act Concerning Invasive Species and Water Quality Standards," submitted to EPA on January 11, 2006;
- Revisions made at 38 M.R.S. § 464(4.A.(1)(e)); § 465(1.C.(4)) and (2.C.(4)); § 465-A(1.C.(4)); and § 465-B(1.C.(2)), enacted as Chapter 291, L.D. 1274, "An Act to Allow the Discharge of Aquatic Pesticides Approved by the Department of Environmental Protection for the Control of Mosquito-borne Diseases in the Interest of Public Health and Safety," submitted to EPA on April 8, 2008;
- Revisions made at 38 M.R.S. § 420(1-B.F) and § 464(4.J) and (4.K), related to testing and licensing requirements for waste discharges that were included in LD 515, submitted to EPA on January 14, 2013; and

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<sup>67</sup> Specifically, these provisions are: the requirement in Chapter 584 § 3(A.(2)) that "statewide criteria must be initiated in accordance with the petition for rulemaking provisions of the State Administrative Procedures Act, 5 M.R.S.A., Section 8055"; the provision in the first paragraph of Chapter 584 § 3(B) that site specific criteria "must only be adopted by the Board as part of a waste discharge license proceeding pursuant to 38 M.R.S.A. Sections 413, 414 and 414-A"; and the first two sentences of the second paragraph of Chapter 584 § 3(B).

- Revisions made at 38 M.R.S. § 464(4.A.(1)(f)); § 465(1.C.(5)) and (2.C.(5)); § 465-A (1.C.(5)); and § 465-B(1.C.(4)), enacted as Chapter 193, L.D. 1430, “An Act to Clarify the Permitted Use of Aquatic Pesticides,” submitted to EPA on February 27, 2014.

Since many state and tribal laws that establish WQS include related provisions that are not themselves WQS, as defined by the Clean Water Act and EPA’s regulations, EPA routinely reviews state submissions and identifies revisions that, while an important element of state law, are not WQS requiring EPA review and approval or disapproval pursuant to Section 303(c)(2) of the Clean Water Act and 40 C.F.R. part 131. EPA has in the past considered certain discharge prohibition exceptions, discharge licensing requirements, and alternative criteria adoption procedures in Maine to be WQS revisions and acted on them accordingly.<sup>68</sup> However, since the Region last considered such a revision in Maine, EPA has clarified how it determines what is or is not a new or revised WQS, as summarized in EPA’s 2012 Frequently Asked Questions (FAQ) publication on the subject.<sup>69</sup> After careful review of Maine’s submissions in light of this clarification, EPA finds that the provisions listed above are not WQS requiring EPA review and approval or disapproval.

As noted in the FAQ, one salient feature of a water quality standard is that it includes or addresses one of the three core components of WQS: designated uses, water quality criteria (narrative or numeric) to protect designated uses, and/or antidegradation requirements for waters of the United States. The provisions listed above, in contrast, do not establish, alter, or in any other way include or address designated uses, criteria or antidegradation requirements. Rather, most of the provisions allow the DEP to issue discharge licenses for certain previously prohibited discharges to occur in certain waters, and address compliance and testing requirements for certain discharges. In all cases, such discharges would still need to satisfy all applicable water quality standards. Therefore, the provisions are more accurately characterized as permit implementation provisions rather than water quality standards. The remaining provisions are purely procedural in nature, updating federal statutory and regulatory references, and establishing processes for adopting alternative criteria and establishing bioaccumulation factors, but they do not themselves alter uses, criteria, or antidegradation requirements, or mandate how they must be expressed or established in the future.

EPA has previously written approval letters for some of the above-listed provisions as applied in state waters, assuming that they were WQS (such as the discharge prohibition exceptions), or without calling out embedded non-WQS language in a longer narrative (such as the state adoption procedures in DEP rule Chapter 584). However, under CWA §303(c), EPA only has authority to approve or disapprove new or revised state WQS. Therefore, EPA’s prior “approval” letters related to these provisions have no legal effect. EPA is hereby clarifying that

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<sup>68</sup> The latest example of EPA action on discharge prohibition exemptions in Maine as WQS was EPA’s August 19, 2008 approval of discharge prohibition exemptions related to the discharge of aquatic pesticides for the control of mosquito-borne diseases in the interest of public health and safety using methods and materials that provide for the protection of non-target species.

<sup>69</sup> EPA, [What is a New or Revised Water Quality Standard Under CWA 303\(c\)\(3\)? Frequently Asked Questions](#), October 2012.

in spite of letters that might indicate otherwise, the Agency has not taken action pursuant to CWA §303(c) on any of these provisions.

With respect to the new provisions enacted in L.D. 1304, submitted to EPA on January 11, 2006, and L.D. 1430, submitted to EPA on February 27, 2014 (both listed above), it is important to note that federal antidegradation regulations and Maine's WQS require that water quality in Outstanding National Resource Waters (ONRWs) be "maintained and protected" (*See* 40 C.F.R. § 131.12(a)(3) and Title 38 M.R.S. § 464(4)(F)(2)). EPA has interpreted that language to mean that states may only allow "some limited activity which may result in temporary and short-term changes in water quality" (*See* 48 FR 51402, November 8, 1983 preamble to changes in 40 C.F.R. part 131). The new provisions enacted in L.D. 1430 do not alter antidegradation requirements. Therefore, in any review of a request to apply pesticides to Class AA or other ONRWs, DEP must ensure that such application will result in no more than temporary and short term changes in water quality, as well as comply with all other CWA applicable WQS requirements.

#### 4.10 List of Submissions from 2003 through 2014

DEP submissions from 2003-2014 to which EPA is responding in today's decision are:

- August 26, 2003 submission which included enacted legislative chapters from the 2002-2003 legislative session;
- May 14, 2004 submission which included statutory amendments and rulemakings from 2000 to 2004 that had not been previously submitted to EPA ;
- January 11, 2006 submission which included statutory amendments and rulemakings from 2004 and 2005;
- April 8, 2008 submission which included statutory amendments from the 2007 legislative session;
- December 7, 2009 submission which included statutory amendments from the 2009 legislative session;
- May 16, 2013 submission which included statutory amendments from the 2011-2012 legislative session and 2012 rulemaking; and
- February 27, 2014 submission which included statutory amendments from the 2013 legislative session.

**Decision Letter 3/16/2015**



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION I  
5 POST OFFICE SQUARE SUITE 100  
BOSTON, MASSACHUSETTS 02109-3912

March 16, 2015

Patricia W. Aho, Commissioner  
Maine Department of Environmental Protection  
17 State House Station  
Augusta, ME 04333-0017

Re: Review and Decision on Water Quality Standards Revisions

Dear Commissioner Aho:

On February 2, 2015, EPA issued its decision approving or disapproving many of Maine's new and revised water quality standards ("WQS") as they relate to waters in Indian lands in Maine (and, for some WQS, as they relate to all waters in the State). In that decision, EPA also identified several provisions that EPA did not take action on, primarily because the Department of Environmental Protection ("DEP") was planning to update them soon to ensure their consistency with federal Clean Water Act ("CWA") requirements. However, in response to Maine's subsequent request that EPA nevertheless act on those provisions, EPA is hereby issuing its decision as to those provisions.<sup>1</sup>

### Approvals

Pursuant to Section 303(c)(3) of the CWA and 40 C.F.R. part 131, I hereby approve the following new and revised water quality standards:

For estuarine and marine waters in Indian lands:

- The ammonia criteria for protection of aquatic life in saltwater in DEP Rule Chapter 584, Appendix A, submitted to EPA on January 11, 2006.

For all waters outside of waters in Indian lands:

- The revisions made in L.D. 1304 at 38 M.R.S. § 465(3.B) and (4.B), which extended the applicability of the bacteria criteria for Class B and Class C waters to include bacteria of domestic animal origin, submitted to EPA on January 11, 2006; and
- The revision made in L.D. 1778 at 38 M.R.S. § 465-A(1.B), which extended the applicability of the bacteria criteria for Class GPA waters to include bacteria of domestic animal origin, submitted to EPA on April 8, 2008.

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<sup>1</sup> For the sake of completeness, EPA is also making its decision with respect to the pre-2004 recreation (bacteria) criteria for Class B, GPA, SB, and SC waters in Indian lands, as explained further below.

## Disapprovals

Pursuant to Section 303(c)(3) of the CWA and 40 C.F.R. part 131, I hereby disapprove the following new and revised water quality standards:

For all waters in Indian lands:

- The numeric bacteria criteria for the protection of primary contact recreation in Class B, C, GPA, SB and SC waters in 38 M.R.S. §§ 465(3.B) and (4.B), 465-A(1.B), and 465-B(2.B) and (3.B), submitted to EPA in 1985;
- The revisions to the numeric bacteria criteria for the protection of primary contact recreation for Class B and C waters in 38 M.R.S. § 465(3.B) and (4.B), submitted to EPA on January 11, 2006;
- The revisions made in L.D. 1450 at 38 M.R.S. §§ 465(3.B) and (4.B), and 465-B(2.B) and (3.B), which extended the applicability of the bacteria criteria for the protection of primary contact recreation in Class, B, C, SB and SC waters to include bacteria of domestic animal origin, submitted to EPA on January 11, 2006;
- The revision made in L.D. 1778 at 38 M.R.S. § 465-A(1.B) which extended the applicability of the bacteria criteria for the protection of primary contact recreation in Class GPA waters to include bacteria of domestic animal origin, submitted to EPA on April 8, 2008;
- For fresh waters in Indian lands, the ammonia criteria for protection of aquatic life in fresh water in DEP Rule Chapter 584, Appendix A, submitted to EPA on January 11, 2006; and
- The water quality standards revisions submitted to EPA on January 14, 2013, related to the  $10^{-4}$  cancer risk level to be used to calculate human health criteria for inorganic arsenic, at 38 M.R.S. §420(2.J), as set forth in P.L. 2011, Ch. 194 (L.D. 515) "An Act To Review State Water Quality Standards"; the last sentence in Maine Rule Chapter 584, § 4; and first sentence of Footnote aME in Table I of Appendix A of Ch. 584.

For all waters throughout Maine, including in Indian lands:

- The revisions made in L.D. 1304 at 38 M.R.S. § 464(4.A(3)(a)), and § 465((3.C.(1)) and (4.C), related to certain pesticide discharges, submitted to EPA on January 11, 2006;
- The phenol criteria for the protection of human health consumption of water plus organisms, in DEP Rule Chapter 584, Appendix A, submitted to EPA on January 14, 2013; and
- The revision made in L.D. 1430 at 38 M.R.S. § 464(4.A(3)(b)), related to certain pesticide discharges to tributaries of GPA waters, submitted to EPA on February 27, 2014.

For waters outside of waters in Indian lands:

- The reclassification of a 0.3 mile segment of Long Creek that flows through Westbrook from Class B to Class C, submitted to EPA on December 7, 2009.

Under CWA § 303(c)(3) and EPA's implementing regulations at 40 C.F.R. §§ 131.21 and 131.22, when EPA disapproves a state's new or revised water quality standard, it must "specify

the changes" necessary to meet the applicable requirements of the Act and EPA's regulations. The CWA requires that these disapprovals be addressed in a timely manner. In the first instance, the CWA and EPA's regulations provide the State up to 90 days to revise its WQS, and EPA prefers that Maine address these disapprovals under its regulatory development process. However, if the State does not adopt necessary changes, EPA will propose and promulgate appropriate water quality standards for waters in Maine.

The following paragraphs describe the rationale for the approval and disapproval decisions listed above as well as recommended remedies for each disapproval.

## **Supporting Discussion of Approvals**

### **For all waters in Indian lands:**

#### Ammonia Criteria for Saltwater

EPA's decision on the saltwater ammonia aquatic life criteria in Chapter 584, Appendix A, Table II, submitted to EPA on January 11, 2006, for estuarine and marine waters in Indian lands is based on whether the criteria protect aquatic life uses, including consideration of EPA's National Recommended Water Quality Criteria published pursuant to Section 304(a) of the CWA. EPA finds that Maine's ammonia criteria for the protection of aquatic life in saltwater are scientifically defensible and are protective of designated uses for the reasons explained in EPA's criteria document for ammonia in saltwater.<sup>2</sup> EPA approved these criteria for estuarine and marine waters outside Indian lands on July 7, 2006, and is now approving them for estuarine and marine waters in Indian lands.

### **For all waters outside of waters in Indian lands:**

#### Bacteria Criteria for the Protection of Primary Contact Recreation (Recreational Criteria)

EPA is approving the revisions for Class B, C, and GPA waters outside of waters in Indian lands that extended the applicability of the recreational criteria to include bacteria of domestic animal origin, as these revisions incorporate additional protection for the primary contact recreation designated use and are an improvement over the previous criteria. However, as EPA has explained to DEP in the past, the criteria's failure to include bacteria from all fecal sources, including wild animal sources, continues to be a concern. Human pathogens are present in both domestic and wildlife animal fecal sources, and there is, therefore, a potential risk from recreational exposure in animal-impacted waters (2012 Recreational Water Quality Criteria (RWQC), see section 3.5.1-2). EPA strongly recommends that in developing any revised recreational criteria, DEP ensure that they be written to apply to all bacteria sources, or develop site-specific alternative criteria that are scientifically defensible and protective of the primary contact recreation use (see Chapter 6 of the 2012 RWQC document for a discussion about using quantitative microbial risk assessment or other methods for developing alternative site-specific criteria).

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<sup>2</sup> EPA, *Ambient Water Quality Criteria for Ammonia (Saltwater)-1989*, EPA 440/5-88-004, April 1989.



In addition, as explained in our December 2, 2013 letter<sup>3</sup> to DEP, EPA strongly recommends that DEP revise all of Maine's recreational criteria to be consistent with EPA's 2012 recommendations, including the addition of frequency and duration components of the criteria (discussed in more detail below). Also as discussed further below, EPA recommends that Maine apply the criteria to a longer time period than May 15<sup>th</sup> to September 30<sup>th</sup>. We understand that DEP is already working on this effort, as indicated in the schedule that Maine's Healthy Beaches Program submitted to EPA on February 17, 2015, and that DEP expects to be requesting informal EPA review of new proposed recreational criteria later this year.

## **Supporting Discussion of Disapprovals**

### **For all waters in Indian lands:**

#### Ammonia Criteria for Fresh Waters

EPA's disapproval of the ammonia aquatic life criteria in Chapter 584, Appendix A, for fresh waters in Indian lands is based on a review of whether the criteria protect the applicable designated uses and are based on sound scientific rationale. EPA revised its CWA Section 304(a) recommended ammonia criteria for fresh waters in August 2013 and incorporated the latest science for fresh water mussels and snails, which are sensitive to ammonia toxicity and not included in EPA's 1999 ammonia criteria recommendations. Maine's criteria are not protective of the designated use because they are not protective of fresh water mussels and snails. In the absence of supporting scientific information to justify a finding that Maine's current ammonia criteria adequately protect the aquatic life designated use, EPA must disapprove the criteria. To assure compliance with the CWA, Maine must adopt ammonia criteria that protect the designated use, or provide sufficient justification based on sound science that the current ammonia criteria are adequately protective of the use. On December 2, 2013, EPA recommended that DEP update its ammonia criteria for waters outside of Indian lands, in light of EPA's 2013 revised criteria recommendations. We recommend that DEP adopt revised ammonia criteria for all fresh waters, both outside and inside Indian lands, in a single action.

#### Recreational Criteria

As explained in EPA's February 2, 2015 decision, EPA had not approved any of Maine's water quality standards for waters in Indian lands in Maine prior to that date. Consequently, in reviewing the adequacy of Maine's recreational criteria for those waters now, it is necessary to review those aspects of the criteria that Maine adopted and submitted before 2003 that are still in effect, as well as any revisions submitted since 2003. The geometric means included in Maine's recreational criteria adopted in 1985 for Class B, and the geometric means and instantaneous levels adopted in 1985 for Class GPA, SB, and SC waters, have not been revised. Other aspects of the criteria, for Class B, SB, and SC waters, as well as the numeric and other aspects of the Class C criteria, were revised in 2005, and submitted to EPA in 2006. Revisions to the non-numeric criteria aspects of Class GPA waters were made and submitted to EPA in

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<sup>3</sup> See December 2, 2013, letter from EPA Region 1 Office of Ecosystem Protection Director, Ken Moraff to DEP Bureau of Land and Water Quality Director, Michael Kuhns.

2008. EPA has reviewed the 1985 criteria and the 2005 and 2008 revisions in making its decision today.

EPA’s disapproval of the 1985 recreational criteria, as revised in 2005 and 2008, in 38 M.R.S. §§ 465(3.B) and (4.B), 465-A(1.B), and 465-B(2.B) and (3.B) for Class, B, C, GPA, SB and SC waters in Indian lands, is based on a review of whether the criteria, as a whole, protect the applicable designated use of primary contact recreation. Until recently, Maine’s recreational criteria for Class B, C, GPA, SB and SC waters were, with the exception of the exclusion for bacteria from natural sources, consistent with, or more protective than, EPA’s 1986 recreational criteria recommendations. However, EPA published new recreational criteria recommendations in 2012. The new recommendations are comprised of two numeric thresholds (geometric mean and statistical threshold value, or STV), an averaging duration for the geometric mean, and maximum frequency of exceedance for the STV. Table 1 summarizes Maine’s recreational criteria and EPA’s current recreational criteria recommendations for fresh and salt waters.

**Table 1- Maine adopted and EPA Recommended Recreational Criteria**

<b>Recreational Criteria Element</b>	<b>Maine Recreational Criteria</b>	<b>2012 EPA Recreational Criteria Recommendations</b>
Sources	Only applies to bacteria of human and domestic animal origin	Applies to all sources
Geometric Mean	64 <i>e.coli</i> /100 ml for Class B 126 <i>e.coli</i> /100 ml for Class C 29 <i>e.coli</i> /100 ml for Class GPA 8 enterococci/100 ml for Class SB 14 enterococci/100 ml for Class SC	100-126 <i>e.coli</i> /100 ml for fresh waters <u>or</u> 30-35 enterococci/100 ml for fresh or marine waters
Averaging Period	None in rule (Maine’s assessment guidance <sup>4</sup> specifies 1 year)	30 days
STV	None	320-410 <i>e.coli</i> /100 ml for fresh waters <u>or</u> 110-130 enterococci/100 ml for fresh or marine waters
STV exceedance frequency	None	Not more than 10 % of samples in 30 days
Instantaneous maximum	236 <i>e.coli</i> /100 ml for Class B and C 194 <i>e.coli</i> /100 ml for Class GPA 54 enterococci/100 ml for Class SB 94 enterococci/100 ml for Class SC (only used for beach notifications and not for assessing impairment)	None. (EPA recommends use of a separate Beach Action Value, or BAV, for beach notifications)

While Maine’s geometric means for all classes of waters are at least as stringent as EPA’s currently recommended geometric mean magnitude, Maine’s recreational criteria in their entirety are not fully protective unless they include an explicit duration and frequency of exceedance. EPA is disapproving Maine’s recreational criteria in waters in Indian lands

<sup>4</sup> DEP, 2012 *Integrated Water Quality Monitoring and Assessment Report*, February 21, 2014, page 67.

because of the lack of an exceedance frequency and undefined averaging period in Maine's current criteria. The duration and frequency of EPA's 2012 recommended criteria are protective, and EPA encourages Maine to adopt the 30-day duration and 10% exceedance frequency when revising the criteria for the protection of primary contact uses.

In addition, as discussed above, Maine's recreation criteria fail to include bacteria from all fecal sources, including wild animals. In developing revised recreational criteria, DEP must either include all bacteria sources, or develop site-specific alternative criteria that are scientifically defensible and protective of the primary contact recreation use.

Finally, EPA recommends that Maine extend the season within which the criteria apply to reflect a longer time period than May 15<sup>th</sup> to September 30<sup>th</sup>. Primary recreation includes any activity that people conduct in or on the water. This includes activities such as swimming, windsurfing, waterskiing and diving. EPA is aware that many such activities occur in New England waters in the springtime before May 15<sup>th</sup> and in the fall after September 30<sup>th</sup>. EPA recommends that Maine consider extending the season within which the criteria apply to ensure that recreational uses are protected whenever they occur. This could be accompanied by a provision that allows DEP to reduce the seasonal applicability on a site-specific basis if it is demonstrated that such activities do not occur during such longer season.

To assure compliance with the CWA, Maine must either adopt recreational bacteria criteria that are consistent with EPA's recommended criteria, or provide sufficient justification based on sound science that alternate bacteria criteria are adequately protective of the use. On December 2, 2013, EPA recommended that DEP update its recreational criteria for waters outside of Indian lands.<sup>5</sup> We recommend that DEP adopt revised recreational criteria for all waters, both outside and inside Indian lands, in a single action.

### Cancer Risk Level for Arsenic

In its February 2, 2015 decision, EPA disapproved all of Maine's human health criteria ("HHC"), including inorganic arsenic, as applied to waters in Indian lands because they were based on an inadequate fish consumption rate.<sup>6</sup> Today EPA is disapproving, as applied to those same waters, the water quality standards revisions related to the 10<sup>-4</sup> cancer risk level to be used to calculate human health criteria for inorganic arsenic at 38 M.R.S. § 420(2.J), as set forth in P.L. 2011, Ch. 194 (LD 515) "An Act To Review State Water Quality Standards"; the last sentence in Maine Rule Chapter 584, § 4; and the first sentence of Footnote aME in Table I of Appendix A of Ch. 584.

This disapproval is based on a review of whether the cancer risk level ("CRL") of 10<sup>-4</sup> results in criteria that adequately protect the applicable designated use. As EPA explained in detail in its February 2, 2015 decision, EPA has identified and approved a designated use of sustenance fishing applicable to the waters in Indian lands in Maine. EPA further explained that tribal

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<sup>5</sup> See December 2, 2013 letter from EPA Region 1 Office of Ecosystem Protection Director, Ken Moraff to DEP Bureau of Land and Water Quality Director, Michael Kuhns

<sup>6</sup> All of Maine's HHC except arsenic are based on a fish consumption rate ("FCR") of 32.4 g/day, and the arsenic criteria are based on a 138 g/day FCR. Both of these rates are well below the FCRs identified in the Wabanaki Cultural Lifeways Exposure Scenario, which EPA concluded contains the best currently available information for the purpose of deriving an FCR for HHC adequate to protect sustenance fishing for tribal waters.

sustenance fishers are to be considered the target *general* population for the purpose of determining whether human health criteria for tribal waters are adequately protective.

For carcinogenic pollutants, EPA's *Methodology for Deriving Ambient Water Quality Criteria for the Protection of Human Health* (the "2000 Guidance") recommends that states protect the target general population to a level of risk no greater than one in one hundred thousand to one in one million ( $1 \times 10^{-5}$  to  $10^{-6}$ ) of an additional cancer occurring in that population.<sup>7</sup> The 2000 Guidance also provides that if there are highly exposed groups or subpopulations within that target general population, criteria should protect those consumers to a level of risk no greater than one in ten thousand ( $1 \times 10^{-4}$ ).<sup>8</sup>

DEP has stated, in its responses to comments on the proposed arsenic criteria, that the final criteria – based on an FCR of 138 g/day and a CRL of  $10^{-4}$  – are adequate to protect sensitive *subpopulations* in Maine. As noted above, EPA previously disapproved the human health criteria, including the arsenic criteria, because the criteria were based on an FCR that is not representative of an unsuppressed sustenance fish consumption rate by tribal members – the target *general* population – in waters in Indian lands. EPA is now also disapproving the requirements to base the arsenic criteria on a  $10^{-4}$  CRL in the context of the criteria already submitted, as applied to waters in Indian lands. The existing record does not support a finding that the use of the  $10^{-4}$  CRL results in human health criteria that adequately protect sustenance fishers in tribal waters as the target general population.

To remedy today's disapproval and EPA's February 2, 2015 disapproval, EPA recommends that Maine revise 38 M.R.S. §420(2.J), the last sentence in Maine Rule Chapter 584, § 4, and first sentence of Footnote aME in Table I of Appendix A of Ch. 584, and adopt arsenic criteria protective of the tribes' sustenance fishing use in waters in Indian lands.

**For all waters throughout Maine, including in Indian lands:**

Pesticide provisions

EPA's disapproval of the revisions at 38 M.R.S. § 464(4.A(3)(a) and (b)) and § 465((3.C.(1)) and (4.C), related to certain pesticide discharges, is based on a review of whether the revisions protect applicable designated uses.

Section 464(4.A(3)) prohibits discharges to tributaries of GPA waters that would cause water quality degradation that would impair the characteristics and designated uses of downstream GPA waters or cause an increase in the trophic state of those GPA waters, but provides exceptions from the prohibition against impairment in subsections (a) and (b) for discharges of aquatic pesticides and chemicals to control invasive species, and of other pesticides if unintended and incidental to aerial spraying.

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<sup>7</sup> EPA. 2000. *Methodology for Deriving Ambient Water Quality Criteria for the Protection of Human Health*. U.S. Environmental Protection Agency, Office of Water, Washington, D.C. EPA-822-B-00-004, p. 2-6. Available at: <http://www.epa.gov/waterscience/criteria/humanhealth/method/complete.pdf>

<sup>8</sup> Id.

Similarly, § 465((3.C) provides that discharges to Class B waters may not cause adverse impact to aquatic life in that the receiving waters must be of sufficient quality to support all aquatic species indigenous to the receiving water without detrimental changes in the resident biological community, but provides an exception from this level of protection in subsection (1) for certain aquatic pesticides and chemical discharges.

EPA interprets both of these statutory revisions to be authorizations of use impairments when certain types of discharges occur. This is tantamount to a removal of the designated uses without justification by a use attainability analysis, and therefore is inconsistent with 40 C.F.R. 131.10(g). In addition, because they establish circumstances where existing uses do not need to be protected, these revisions are, in effect, an alteration of the State's antidegradation requirements, which require the protection of existing uses consistent with 40 C.F.R. § 131.12(a)(1). This is inconsistent with the federal antidegradation regulation at 40 C.F.R. § 131.12. For these reasons, EPA is disapproving the revisions.

DEP staff has indicated a willingness to work with Maine's legislature to revise the provisions related to pesticide discharges to be consistent with other pesticide provisions that EPA determined in its February 2, 2015 decision are not water quality standards, and to delete any statutory authorization of use impairment. Such changes would sufficiently remedy EPA's disapproval.

### Phenol

EPA's disapproval of Maine's phenol criteria for the protection of human health consumption of water plus organisms, for waters throughout Maine, is based on a review of whether the criteria protect the applicable designated uses, including a consideration of EPA's ambient water quality criteria guidance published pursuant to Section 304(a) of the CWA. While DEP based the criteria on EPA's current guidance, DEP made an inadvertent mathematical error that resulted in less stringent criteria than the guidance recommends. Specifically, although DEP used the correct derivation formulation, a computational error resulted in Maine adopting a criterion of 10,514 µg/L rather than the correctly computed result of 10,267 µg/L. EPA alerted DEP to the discrepancy via email on July 22, 2013 and subsequently reviewed DEP's calculations to ensure that all the factors that were used in DEP's calculation were correct and that the error was mathematical, which EPA confirmed to DEP via email on July 23, 2013.<sup>9</sup> In the absence of supporting scientific information to justify a finding that the less stringent criteria adequately protect the designated use, EPA must disapprove the criteria for all waters in Maine.<sup>10</sup> DEP staff acknowledged this error<sup>11</sup> and stated DEP's intention to revise the criteria to correct the error, which would remedy the disapproval.

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<sup>9</sup> Email correspondence between Ellen Weitzler, EPA, and Brian Kavanah, DEP, July 22 and July 23, 2013.

<sup>10</sup> In its February 2, 2015 decision, EPA also disapproved these criteria for waters in Indian lands due to the use of an inadequate fish consumption rate.

<sup>11</sup> Email from Brian Kavanah, DEP to Ellen Weitzler, EPA, September 16, 2013.

## **For waters outside of waters in Indian lands:**

### Long Creek Reclassification

Maine revised the classification for a 0.3 mile segment of Long Creek in Westbrook, Maine from Class B to Class C in 2009. The effect of the reclassification, if approved, is that the Class B designated use for aquatic life would be supplanted by the less protective aquatic life use assigned to Class C waters, and certain associated criteria would become less stringent.

EPA has carefully reviewed the information provided by DEP in support of the reclassification, as well as public comments submitted by Conservation Law Foundation in opposition to the reclassification. As discussed further below, EPA has concluded that federal regulations at 40 C.F.R. § 131.10(g), which govern the removal of a designated use, apply in this case. Because DEP has not provided a use attainability analysis to demonstrate, based on one or more factors in 40 C.F.R. 131.10(g), that Class B aquatic life uses cannot be met, EPA must disapprove the reclassification.

The drainage area for the 0.3 mile reach of Long Creek in Westbrook includes the upper reaches of Long Creek in South Portland as well as the Blanchard Brook drainage area, wholly located in Westbrook. Prior to 1990, all waters in Cumberland County, including Long Creek and Blanchard Brook, were classified, by default, as Class C. In 1990, there was a statewide overhaul of Maine's classifications to reflect legislated changes to Maine's water quality standards in 1986. The changes were so wide reaching that six public hearings were held across the state. Among other reclassifications, Maine changed the default classification for minor drainages in Cumberland County from Class C to Class B. Exceptions to the Class B default classifications were specifically identified, and Long Creek's upper and lower reaches in South Portland, along with all other minor drainages in South Portland, were classified as Class C. No exceptions were made for the Westbrook section of Long Creek and Blanchard Brook, so those waters were classified as Class B.

The 2009 reclassification was prompted by a proposal by the City of Westbrook. In support of the proposal before the Board of Environmental Protection, DEP staff stated the view that the classification was inadvertently changed due to a "Legislative bill drafting error."<sup>12</sup> In response to comments by CLF, DEP similarly stated that the classification of the segment from Class C to Class B in 1990 was a "mis-labeling" mistake, and that it is reasonable to "assume" that the intent was to maintain all of Long Creek as Class C, since it would not make sense to have multiple classes apply to different segments of the same stream.<sup>13</sup> In its "Supplemental Basis" document, DEP stated that an upgrade of this segment would have been "nonsensical" since management actions could not result in that segment attaining Class B where adjacent segments remained at Class C.<sup>14</sup> DEP additionally noted that since the water body was listed in 1990 on Maine's § 303(d) list of impaired waters for failing to meet Class C standards, and that the

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<sup>12</sup> Letter from Maine's Board of Environmental Protection to the Maine Legislature's Joint Standing Committee on Natural Resources, February 17, 2009.

<sup>13</sup> DEP, *Reclassification Proposal and Response to Comments*, December 18, 2008 (as amended January 9, 2009).

<sup>14</sup> DEP, *Supplemental Basis: Long Creek Reclassification Proposal*, submitted to EPA via email, February 2, 2010.

Westbrook segment was not meeting Class B biocriteria or Class C dissolved oxygen criteria, it could not have been intended for an upgrade to Class B.<sup>15</sup>

EPA is concerned about basing a reclassification approval decision on speculations about the intentions behind a classification action that occurred nearly 20 years previously. One could equally speculate, as CLF did, that perhaps there was a deliberate decision to assign higher classification goals to waters or segment of waters in towns or areas that were not as heavily developed.<sup>16</sup> Further, Long Creek's impairment status, and the Westbrook segment's nonattainment of Class B biocriteria or Class C dissolved oxygen criteria, are not necessarily indicative of what the Westbrook segment's use goals were intended to be. Meeting the water quality criteria for higher standards is not a prerequisite for a classification upgrade. As noted in materials provided at the July 11, 1989 public hearing in Portland, "The important feature of the classification system is that it does not necessarily describe the present state of the water, but rather that it establishes the goal toward which future management is directed."<sup>17</sup> Finally, this situation is unlike other examples of clear factual mistakes offered by DEP, such as where the same water body was assigned two classifications on the very same segment, or a saltwater was mischaracterized as a fresh water, or where the mistake could be corrected without causing a removal of a use or the application of less stringent criteria. Therefore, we see no basis to conclude that the use attainability requirements of 40 C.F.R. § 131.10(g) do not apply.

As noted above, because Maine did not provide a use attainability analysis consistent with 40 C.F.R. § 131.10(g) and demonstrate that Class B designated uses, particularly aquatic life uses, are unattainable, EPA must disapprove the reclassification. To remedy this disapproval, EPA recommends that DEP either revise the classification of Long Creek in Westbrook back to Class B or provide EPA with a use attainability analysis, based on at least one of the factors listed in 40 C.F.R. 131.10(g), to justify the downgrade.

EPA looks forward to continued cooperation with Maine in the development, review, and approval of water quality standards pursuant to our responsibilities under the Clean Water Act. As stated in the February 2, 2015 letter, EPA would like to begin discussions with DEP as soon as possible about the criteria that EPA has disapproved. EPA will again attempt to work with DEP to schedule such discussions. In the meantime, please contact me (at [spalding.curt@epa.gov](mailto:spalding.curt@epa.gov) or 617-918-1012) or Ken Moraff (at [moraff.ken@epa.gov](mailto:moraff.ken@epa.gov) or 617-918-1502), or have your staff contact Ellen Weitzler (at [weitzler.ellen@epa.gov](mailto:weitzler.ellen@epa.gov) or 617-918-1582), if you have any questions.

Sincerely,

  
H. Curtis Spalding  
Regional Administrator

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<sup>15</sup> Id.

<sup>16</sup> February 12, 2010 letter from Conservation Law Foundation to EPA regarding the proposed Long Creek reclassification.

<sup>17</sup> DEP, *Reclassification of Maine's Surface Waters A Guide for the Public Hearings (Southern Coastal Basin)*, July 1, 1989.

**Decision Letter 6/5/2015**





UNITED STATES ENVIRONMENTAL PROTECTION  
AGENCY  
REGION I  
5 POST OFFICE SQUARE SUITE 100  
BOSTON, MASSACHUSETTS 02109-3912

June 5, 2015

Patricia W. Aho, Commissioner  
Maine Department of Environmental Protection  
17 State House Station  
Augusta, ME 04333-0017

Re: Review of and Decisions on Maine Water Quality Standards

Dear Commissioner Aho:

On February 2 and March 16, 2015, EPA issued decisions approving or disapproving Maine's new and revised water quality standards ("WQS") adopted between 2003 and 2014 (as well as certain WQS that were adopted prior to 2003) as they relate to waters in Indian lands in Maine. In the February 2 decision, EPA explained that EPA had never approved (or disapproved) any WQS for waters in Indian lands in Maine until that date, and stated its intent to review and approve or disapprove all remaining Maine WQS that could apply to waters in Indian lands as soon as possible. This letter contains EPA's decisions on those remaining WQS that EPA has not yet acted on as applied to waters in Indian lands.<sup>1</sup> In addition, as explained below, this letter includes some decisions regarding new or revised WQS provisions that EPA had never before approved or disapproved for any waters in Maine, and these decisions apply to all waters of the State.

In order to determine what WQS still needed to be reviewed and approved or disapproved for waters in Indian lands, EPA reviewed the statutes and rules submitted by Maine Department of Environmental Protection ("DEP") on May 23, 2000 (which updated Maine's initial submittal of June 21, 1999) to EPA's water quality standards repository for Maine,<sup>2</sup> and also searched its files for any WQS submitted between May, 2000 and December, 2003. EPA reviewed all of the provisions in those statutes and rules and identified those WQS that EPA had not yet approved or disapproved in the decisions referenced above.<sup>3</sup> EPA's decisions on these remaining WQS are set forth below and discussed in the paragraphs that follow.

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<sup>1</sup> Because EPA has never acted on pre-2003 WQS for waters in Indian lands, they remain "new or revised" WQS as to those waters and thus subject to EPA review and approval or disapproval pursuant to CWA § 303(c).

<sup>2</sup> [http://water.epa.gov/scitech/swguidance/standards/wqslibrary/me\\_index.cfm](http://water.epa.gov/scitech/swguidance/standards/wqslibrary/me_index.cfm).

<sup>3</sup> Of those submissions, the only new or revised WQS that EPA did not review is DEP Rule Chapter 530.5, which was repealed in 2005.

EPA learned during review of its historic files that the Agency had never formally approved or disapproved some of the State's new or revised WQS for any waters in Maine (or could find no record of ever having done so), most of which Maine submitted before May 30, 2000,<sup>4</sup> but one of which Maine submitted in 2001. For those WQS, EPA's decisions today apply to waters both inside and outside Indian lands, and we have identified such WQS decisions below.<sup>5, 6</sup> EPA today is disapproving on a statewide basis several new or revised WQS that were adopted and submitted before May 30, 2000. Pursuant to 40 C.F.R. § 131.21(c), those WQS took immediate effect in waters outside Indian lands for Clean Water Act purposes upon submission to EPA, and following EPA's disapproval they will remain in effect in waters outside Indian lands until the State promulgates (and EPA approves), or EPA promulgates, replacement WQS.

Lastly, EPA identified a number of provisions that EPA is not taking action on because we have concluded that they are not WQS requiring EPA review and approval; these are identified at the end of this letter.

EPA has attempted to be as thorough as possible, but if we inadvertently overlooked a WQS that would apply to waters in Indian lands, we would appreciate DEP's bringing that to our attention as soon as possible so that we can take action on any such WQS.

### **Approvals**

Pursuant to Section 303(c)(3) of the CWA and 40 C.F.R. part 131, I hereby approve the following new and revised water quality standards for all waters throughout Maine, including in Indian lands:

- 38 M.R.S. § 361-A – Definitions: Discharge, Agricultural activities, Commissioner, Board, Department, Pollutant, and Waters of the state;
- 38 M.R.S. § 413(11.D) – Antidegradation provision for mercury discharges;
- 38 M.R.S. § 414-A(1.A, 1.B, and 1.C) – Tier 1 and 2 antidegradation provisions; and § 414-A(2) – language that authorizes the use of compliance schedules in discharge licenses to meet final effluent limitations based on a water quality standard adopted after July 1, 1977;
- 38 M.R.S. § 464(2-A) – Requirements and limitations for the removal of designated uses and creation of subcategories of uses;

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<sup>4</sup> For some new or revised WQS in Maine, it is not clear from EPA's records whether the State submitted them to EPA for review at the time of enactment. However, EPA considers any WQS included as part of Maine's May 23, 2000 submission to the WQS repository to have been submitted to EPA before May 30, 2000 for the purposes of 40 C.F.R. § 131.21(c).

<sup>5</sup> In the event it comes to light that EPA did previously approve any such standards in state waters, then the date of that earlier action would be the operative approval date.

<sup>6</sup> EPA is not specifically identifying ministerial or nonsubstantive revisions (e.g., changing "department" from "commissioner," or changing "is" from "shall be") to previously approved WQS but is hereby approving them as applicable to all waters.

- 38 M.R.S. § 464(2-B) – Temporary removal of uses, use attainability analysis, and creation of subcategories of uses for combined sewer overflows;
- 38 M.R.S. § 464(4.D) – Policy for determining the assimilative capacity of a river or stream (second and third sentences);
- 38 M.R.S. § 464(4.H) – Habitat and aquatic life criteria for new (post-1992) hydropower projects;
- 38 M.R.S. § 464(9-A.D and 9-A.E) – Habitat and aquatic life criteria for existing hydropower impoundments managed as great ponds;
- 38 M.R.S. § 464(10) – Habitat and aquatic life criteria for existing hydropower impoundments managed under riverine classifications;
- 38 M.R.S. § 465(1.C.(3) and (5)) – Certain exceptions to prohibition on discharges to Class AA waters;
- 38 M.R.S. § 465(4.B., the last two sentences) – Direction to adopt rules for identification of fish spawning areas; and
- 38 M.R.S. § 465-B(1.C.(3) and (4)) – Certain exceptions to prohibition on discharges to Class SA waters.

Pursuant to Section 303(c)(3) of the CWA and 40 C.F.R. part 131, I hereby approve the following new and revised water quality standards for specific waters outside of waters in Indian lands:

- 38 M.R.S. § 464(9-A.A) – Habitat and aquatic life criteria for existing hydropower impoundment above the Ripogenus dam; and
- 38 M.R.S. § 464(11) – Habitat and aquatic life criteria for four river segments downstream of existing hydropower impoundments.

Pursuant to Section 303(c)(3) of the CWA and 40 C.F.R. part 131, I hereby approve the following new and revised water quality standards for all waters in Indian lands:

- 38 M.R.S. § 361-A – Definitions: Fresh surface waters and Estuarine and marine waters;
- 38 M.R.S. § 414-C(3) – Instream color pollution standard;

- 38 M.R.S. § 420(2) and (2.A-G)<sup>7</sup> – Introductory paragraph of section 2, which addresses the definition of “toxic substance” and how toxic substances are to be addressed in WQS; the requirement in 2.A to regulate toxic substances at the levels recommended by EPA, pursuant to CWA Chapter 304(a), and the exception to that requirement for naturally occurring toxic substances but only as it pertains to aquatic life criteria<sup>8</sup>; and the provisions in 2.B through 2.G, related to responsibility and authority for the adoption of statewide and site specific criteria for toxic substances in regulation;
- 38 M.R.S. § 464(1) – Language that identifies the findings, objectives and purpose of Maine’s WQS;
- 38 M.R.S. § 464(2) – Procedures for reclassification;
- 38 M.R.S. § 464(4.A(3)) – Language providing Tier 1 protection, but not including the exceptions at 4.A(3)(a) and (b), which EPA disapproved in its February 2, 2015 decision; § 464(4.A(4)) – narrative criteria related to color, taste, and other properties; and § 464(4.A(5)) – pH criterion for estuarine and marine waters<sup>9</sup>;
- 38 M.R.S. § 464(4.B) – Narrative criteria for settled and floating substances;
- 38 M.R.S. § 464(4.C)) – Natural conditions clause as it applies to aquatic life criteria<sup>10</sup>;
- 38 M.R.S. § 464(4.D) – Policy for determining the assimilative capacity of a river or stream (first sentence);
- 38 M.R.S. § 464(4.E) – Waters in excavations for wastewater treatment purposes;
- 38 M.R.S. § 464(4.F.(1) – (5)) – Antidegradation policy;
- 38 M.R.S. § 465(1.B) – Narrative criteria for aquatic life and dissolved oxygen in Class AA waters;
- 38 M.R.S. § 465(1.C.(2) and (4)) – Prohibition, and certain exceptions to prohibition on discharges to Class AA waters;
- 38 M.R.S. § 465(2.B) – Narrative criteria for aquatic life in Class A waters;
- 38 M.R.S. § 465(2.C, first paragraph) – General requirements on discharges to Class A waters;

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<sup>7</sup> We note that 38 M.R.S. § 420(2.H) is obsolete and therefore not before EPA for action.

<sup>8</sup> EPA is disapproving the exception in 38 MRS §420(2.A) for naturally occurring toxic substances as it applies to human health criteria. See below.

<sup>9</sup> EPA is disapproving the pH criterion for freshwaters in 38 M.R.S. § 464(4.A(5)). See below.

<sup>10</sup> EPA is disapproving the natural conditions clause in 38 M.R.S. § 464(4.C)) as it applies to human health criteria. See below.

- 38 M.R.S. § 465(3.B) – Numeric criteria for dissolved oxygen in Class B waters;
- 38 M.R.S. § 465(3.C) – Narrative criteria for aquatic life in Class B waters;
- 38 M.R.S. § 465(4.C) – Narrative criteria for aquatic life in Class C waters;
- 38 M.R.S. § 465-A(1.B) – Narrative eutrophication criteria in Class GPA waters;
- 38 M.R.S. § 465-B(1.B) – Narrative criteria for estuarine and marine life and dissolved oxygen in Class SA waters;
- 38 M.R.S. § 465-B(1.C.(2)) – Prohibition, and certain exception to prohibition on discharges to Class SA waters;
- 38 M.R.S. § 465-B(2.B) – Numeric dissolved oxygen criteria and bacteria criteria for the protection of shellfishing in Class SB waters;
- 38 M.R.S. § 465-B(2.C, first sentence) – Narrative criteria for estuarine and marine life in Class SB waters;
- 38 M.R.S. § 465-B(3.B) – Numeric dissolved oxygen criteria and bacteria criteria for the protection of shellfishing in Class SC waters;
- 38 M.R.S. § 465-B(3.C) – Narrative criteria for estuarine and marine life in Class SC waters;
- 38 M.R.S. § 466 – Definitions: Aquatic life, As naturally occurs, Color pollution unit, Combined sewer overflow, Community function, Community structure, Direct discharge, Estuarine and marine life, Indigenous, Invasive species, Natural, Resident biological community, Unimpaired, Use attainability analysis, and Without detrimental changes in the resident biological community;
- 38 M.R.S. § 636(8) – Certification and reclassification provisions related to proposed hydropower impoundments;
- DEP Rule Chapter 581 – Regulations relating to water quality evaluations including: hydrologic conditions for computing assimilative capacity in rivers and streams and in great ponds; minimum flows on regulated streams; zone of passage; and great ponds trophic state;
- DEP Rule Chapter 582(1) – Freshwater temperature criteria<sup>11</sup>; and
- DEP Rule Chapter 585– Identification of fish spawning areas and designation of salmonid spawning areas.

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<sup>11</sup> EPA is disapproving the tidal temperature criteria in DEP Rule Chapter 582(2). See below.

## **Disapprovals**

Pursuant to Section 303(c)(3) of the CWA and 40 C.F.R. part 131, I hereby disapprove the following new and revised water quality standards for all waters throughout Maine, including in Indian lands:

- 38 M.R.S. § 363-D – Waiver or modification of protection and improvement laws;
- 38 M.R.S. § 465(2.B) – Numeric criteria for dissolved oxygen in Class A waters; and
- 38 M.R.S. § 465(1.C.(1)) and § 465-B(1.C.(1)) – Exceptions to prohibitions on discharges to Class AA waters and Class SA waters, respectively.

Pursuant to Section 303(c)(3) of the CWA and 40 C.F.R. part 131, I hereby disapprove the following new and revised water quality standards for all waters in Indian lands:

- 38 M.R.S. § 420(2.A) – Exception for naturally occurring toxic substances from the requirement to regulate toxic substances at the levels recommended by EPA, as it applies to human health criteria;
- 38 M.R.S. § 451 – Mixing zone policy;
- 38 M.R.S. § 464(4.A.(5)) – pH criterion for freshwaters;
- 38 M.R.S. § 464(4.C)) – Natural conditions clause, as it applies to human health criteria;
- 38 M.R.S. § 465(1.B), § 465(2.B) and § 465-B(1.B) – Narrative criteria for bacteria in Class AA, A, and SA waters, respectively; and
- DEP Rule Chapter 582(5) – Tidal temperature criteria.

## **Supporting Discussion of Approvals**

### **Findings, Objectives and Purpose [38 M.R.S. § 464(1)]**

EPA is approving the findings, objectives and purpose expressed in 38 M.R.S. § 464(1) because they are consistent with the goals expressed in Section 101(a) of the CWA.

### **Definitions [38 M.R.S. § 361-A and 38 M.R.S. § 466]**

EPA is approving the definitions in 38 M.R.S. §§ 361-A and 466 specified above because they are integral to the WQS program and, in the case of definitions of terms that are also contained in the CWA and the federal WQS, they are generally as broad and protective as the federal

terms.<sup>12</sup> We note that § 361-A refers to the Code of Federal Regulations and the Federal Water Pollution Control Act, both as amended through July 1, 2009. We encourage Maine to update these references when it makes other revisions to its WQS.

**Procedures for Reclassifications, Removals of Designated Uses, and Creation of Subcategories of Uses [38 M.R.S. § 464(2), (2-A), and (2-B)]**

EPA approves the provisions of 38 M.R.S. § 464(2), (2-A), and (2-B) because they are consistent with the requirements of section 303 of the CWA and with provisions regarding designated uses, removals of uses and creations of subcategories of uses in 40 C.F.R. §131.10.

**Natural Conditions Clauses as They Apply to Aquatic Life Criteria [38 M.R.S § 464(4.C) and 38 M.R.S § 420(2.A)]**

EPA's review of Maine's natural conditions clauses at 38 M.R.S § 464(4.C) and § 420(2.A) as they apply to aquatic life criteria is based on whether the clauses protect designated aquatic life uses. The clause in 38 M.R.S § 464(4.C) says that, "Where natural conditions, including but not limited to, marshes bogs and abnormal concentrations of wildlife cause the dissolved oxygen criteria or other water quality criteria to fall below the minimum standards...those waters shall not be considered to be failing to attain their classification because of those natural conditions." The clause in 38 M.R.S. § 420(2.A) says, "Except as naturally occurs or as provided in paragraphs B and C, the board shall regulate toxic substances in the surface waters of the State at the levels set forth in federal water quality criteria as established by the United States Environmental Protection Agency pursuant to the Federal Water Pollution Control Act...."

These provisions are consistent with EPA's interpretation of the relationship between natural conditions and the protection of designated aquatic uses, which is articulated in EPA's November 1997 guidance entitled *Establishing Site Specific Aquatic Life Criteria Equal to Natural Background*.<sup>13</sup> EPA recognizes that there may be naturally occurring concentrations of pollutants which exceed the national criteria published under section 304(a) of the CWA. The policy states that "For aquatic life uses, where the natural background concentration for a specific parameter is documented, by definition that concentration is sufficient to support the level of aquatic life expected to occur naturally at the site absent any interference by humans."

EPA approves the natural conditions clauses at 38 M.R.S §464(4.C) and § 420(2.A) as they apply to criteria that protect aquatic life because the application of this provision protects designated aquatic life uses as required by the CWA and federal water quality standards regulations at 40 C.F.R. § 131.11(a).

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<sup>12</sup> In any case, for Clean Water Act purposes, federal definitions would apply in the event they are broader than state definitions.

<sup>13</sup> Davies, Tudor, EPA. [\*Establishing Site Specific Aquatic Life Criteria Equal to Natural Background\*](#), November 5, 1997.

**Hydrologic Conditions for Computing Assimilative Capacity [38 M.R.S. § 464(4.D) and DEP Rule Chapter 581(1) - (3)]**

Title 38 M.R.S. § 464(4.D) requires that the minimum 7-day low flow which can be expected to occur with a frequency of one in ten years (7Q10 low flow) be used for the purpose of computing whether a discharge will violate the classification of any river or stream, unless otherwise provided for toxic substances and consistent with the risk being addressed. This provision is supplemented by DEP Rule Chapter 530(4.B), which provides greater specificity for flows to be used with acute aquatic life criteria (1/4 of 1Q10) and with human health criteria (harmonic mean flow). EPA approved DEP Rule Chapter 530(4.B) for waters in Indian lands in our February 2, 2015 decision.

Sections 1, 2, and 3 of DEP Rule Chapter 581 also address the hydrologic assumptions to be used when calculating whether a discharge will violate the classification of rivers, streams and great ponds. Section 1 repeats the requirements in at 38 M.R.S. § 464(4.D) by requiring that the 7Q10 low flow be used for the purpose of computing assimilative capacity in rivers and streams. Section 2 authorizes DEP to establish minimum flow requirements in regulated rivers and streams where necessary to maintain WQS. Finally, section 3 requires that hydraulic residence time be used in great ponds for the purpose of computing assimilative capacity and provides a formula for calculating the hydraulic residence time.

As explained in Section 5.2 of EPA's Water Quality Standards Handbook, critical low flow values are important for criteria implementation, to help ensure that criteria are protective of uses.<sup>14</sup> In the *Technical Support Document for Water Quality-based Toxics Control*,<sup>15</sup> EPA also explained that critical flows are necessary to provide a dimension of frequency and duration of pollutant exposure for the evaluation of "reasonable potential"<sup>16</sup> and the derivation of permit effluent limits. EPA approves the provisions related to hydrologic assumptions for critical flow, maintenance of critical flow, and hydraulic residence time in 38 M.R.S. § 464(4.D) and DEP Rule Chapter 581(1), (2), and (3) because they are consistent with EPA's recommendation that states provide critical low flow values in their WQS, and the values themselves are protective of designated uses.

**Antidegradation Policy and Related Provisions [38 M.R.S. § 464(4.F.(1)-(5)); 38 M.R.S. § 414-A(1.A, 1.B, and 1.C); 38 M.R.S § 413(11.D); and 38 M.R.S. § 465(2.C, first paragraph)]**

1. 38 M.R.S. § 464(4.F.(1)-(5)) – Maine's antidegradation policy is set forth in 38 M.R.S. § 464(4.F.(1)-(5)). As described below, EPA approves 38 M.R.S. § 464(4.F.(1)-(5)) because it is consistent with the federal antidegradation policy at 40 C.F.R. § 131.12.

Subsection 1 requires existing instream water uses and the water quality necessary to protect the existing uses to be maintained and protected, and it identifies various factors DEP must

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<sup>14</sup> EPA, [Water Quality Standards Handbook - Chapter 5: General Policies](#), Section 5.2, 2015 online version.

<sup>15</sup> EPA, [Technical Support Document for Water Quality-based Toxics Control](#), EPA/505/2-90-001, March 1991, Appendix D, page D-6.

<sup>16</sup> "Reasonable potential" refers to the requirement in 40 C.F.R. § 122.44(d) that limitations control all pollutants that that may be discharged at a level which will have the reasonable potential to cause an excursion above any state water quality standard.



consider in determining the existing uses of a water body. Often referred to as “Tier 1” protection, this provision is consistent with 40 C.F.R. § 131.12(a)(1). Subsection 1-A further provides that any proposed activity will not have a significant impact on or cause significant degradation of existing uses.

Subsection 2 provides that where high quality waters constitute an outstanding national resource, that water quality must be protected and maintained. It also identifies the waters that are considered to be outstanding national resource waters (“ONRWs”), including all Class AA and SA waters, and waters in national and state parks, wildlife refuges, and public reserved lands. Often referred to as “Tier 3” protection, the ONRW provision affords the highest level of protection for waters, and it is consistent with 40 C.F.R. § 131.12(a)(3).

Subsection 3 provides protection for both existing and designated uses by allowing discharge licenses to be issued only if the receiving waterbody is meeting applicable WQS and antidegradation requirements; or, where the water body is not meeting applicable WQS, only if the discharge will not cause or contribute to the failure to meet WQS.

Subsection 4 adds further protection of uses by requiring that if the quality of water in a waterbody exceeds the minimum standards of the next highest classification, the Board of Environmental Protection must recommend to the Legislature that the waterbody be reclassified to that next highest classification.

Subsection 5 protects against the lowering of existing water quality in any water body unless DEP finds, after an opportunity for public participation, that the action is necessary to achieve important economic or social benefits to the State and that the action is in compliance with subsection 3 (described above). The protection of high quality waters in subsection 5, often referred to as “Tier 2” protection, ensures that water quality that is better than the minimum needed to attain WQS will be maintained unless the lowering of water quality satisfies specific requirements. EPA interprets the finding required in subsection 5, that “the action [i.e., the lowering of water quality] is necessary to achieve important economic or social benefits to the State,” to include a required finding that such lowering is necessary to achieve such benefits “in the areas in which the waters are located,” as required in 40 C.F.R. § 131.12(a)(2), and therefore concludes that it is consistent with the federal regulation.

In addition to the statutory Tier 2 provisions, EPA considered DEP’s waste discharge license guidance and regulations to determine how Maine interprets those provisions when implementing Tier 2 of its antidegradation policy. DEP’s waste discharge program guidance for implementing antidegradation (2001) provides that, in allowing the lowering of water quality, “there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint sources,” as required by 40 C.F.R. § 131.12(a)(2). Further, although 38 M.R.S. § 366, which DEP previously relied on to satisfy the intergovernmental coordination requirement of § 131.12(a)(2), has been repealed, DEP Rule Chapter 522, which governs waste discharge license issuance procedures, provides for intergovernmental coordination in § 8.c, by requiring notice of permit applications and public hearings to be provided to multiple state agencies, ensuring that such agencies would have the opportunity to comment on any wastewater discharge project that proposes a lowering of water quality. Therefore, EPA has determined that 38 M.R.S. § 464(4.F(5)) meets the requirements of EPA’s regulations at 131.12(a)(2).

EPA approved some sections of 38 M.R.S. § 464(4.F) in 1986 and did not act on others; disapproved a section in 1987; and then approved the remainder of § 464(4.F), including revisions that satisfactorily addressed the disapproval, in 1990. EPA is today approving 38 M.R.S. § 464(4.F(1)-(5)) in its entirety for tribal waters because it is consistent with 40 C.F.R. § 131.12. At the same time, EPA recommends that Maine clarify and strengthen certain aspects of its Tier 2 protection for all waters. The upcoming triennial review would be a good opportunity for Maine to revise § 464(4.F(5)) to explicitly provide for intergovernmental coordination, and to require the assurance related to point and nonpoint sources quoted above. Such revisions would clarify and ensure that these requirements will apply to projects that are the subject of CWA section 401 certifications from Maine, as well as to waste discharge licensees.

2. 38 M.R.S. § 414-A(1.A, 1.B, and 1.C) – EPA approves the antidegradation provisions in 38 M.R.S. § 414-A(1.A, 1.B, and 1.C). Section 414-A(1.A and 1.B) provide Tier 1 antidegradation protection by ensuring that discharges, either alone or in combination with others, will not lower the water quality of a water body below its classification (subsection 1.A) or below the classification which the board expects to adopt for such water body (subsection 1.B). Section 414-A(1.C) provides Tier 2 antidegradation protection by prohibiting discharges from lowering existing water quality unless 38 M.R.S. § 464(4.F), and certain specified elements of Tier 2 of the antidegradation policy, are satisfied. All of these provisions supplement and are consistent with 38 M.R.S. § 464(4.F), and they are consistent with 40 C.F.R. § 131.12(a)(1) and (2).

3. 38 M.R.S. § 413(11.D) – EPA approves the antidegradation provision in 38 M.R.S. § 413(11.D) related to mercury discharges. The end of the first paragraph in 38 M.R.S. § 413(11) requires facilities that discharge mercury to meet interim limits established under paragraph 11, “notwithstanding” 38 M.R.S. § 464(4.F)) (Maine’s antidegradation policy). Among such interim limits are those that may be established under § 413(11.D) for a new or expanded discharge of mercury provided that specified requirements, which are essentially a restatement of Tier 2 antidegradation provisions, are satisfied. EPA’s approval of § 413(11.D) is based on the understanding that it is merely a confirmation that a new or expanded discharge of mercury must satisfy Tier 2 antidegradation requirements, and that the introductory “notwithstanding” language does not mean that the full scope of the antidegradation policy at § 464(4.F), including Tier 1 and Tier 3 protection, is inapplicable to such discharges. Because of the ambiguity created by the introductory “notwithstanding” clause, however, EPA requests confirmation from Maine’s Attorney General that EPA’s interpretation upon which it bases this approval is correct.

4. 38 M.R.S. § 465(2.C) – The first paragraph of 38 M.R.S. § 465(2.C) requires discharges to Class A waters licensed after January 1, 1986 to meet an effluent quality equal to or better than the receiving water, and to demonstrate that the discharge is necessary and there are no reasonable alternatives available; and it allows discharges licensed before that date to continue only until practical alternatives exist. EPA approves these provisions because they supplement the antidegradation provisions of § 464(4.F) and strengthen the protection of the designated uses of Class A waters.

### **Class GPA Trophic State Criteria [38 M.R.S § 465-A(1.B) and DEP Rule Chapter 581(6)]**

EPA's review of the narrative criteria, in 38 M.R.S § 465-A(1.B), for the trophic state of Class GPA waters and the numeric criteria for the trophic state of great ponds and lakes, in DEP Rule Chapter 581(6), is based on whether the criteria support designated uses for those waters.

The narrative criteria in 38 M.R.S § 465-A(1.B) state that Class GPA waters must have a stable or decreasing trophic state (as measured by chlorophyll "a" content, Secchi disk transparency, total phosphorus content and other appropriate criteria), subject only to natural fluctuations, and must be free of culturally induced algal blooms that impair their use and enjoyment. The narrative criteria are explicitly protective of uses and are based, at least in part, on a causal measure (phosphorus) and response indicators (chlorophyll "a" and Secchi disk transparency) that EPA agrees are good indicators of eutrophication.<sup>17</sup>

DEP Rule Chapter 581(6) is entitled "Great Ponds Trophic State," but includes references to "all lakes" and GPA waters. Therefore, EPA understands that DEP Rule Chapter 581(6) applies to all Class GPA waters as defined in 38 M.R.S § 465-A(1) to be "great ponds and natural ponds and lakes less than 10 acres in size" and that it is intended to provide a numeric interpretation of the "stable or decreasing trophic state" part of the narrative criteria in 38 M.R.S § 465-A(1.B). Chapter 581(6) provides that a GPA water cannot be considered to have a stable or declining trophic state if values of the Maine Trophic State Index (TSI) are increasing or there is an onset of algal blooms. The TSI is calculated using chlorophyll "a" unless the lake is colored (less than 30 standard platinum units), in which case the basis for the calculation is total phosphorus concentration or mean Secchi disk transparency. Algal blooms are defined as planktonic growth of algae which causes Secchi disk transparency to be less than 2.0 meters. EPA finds that these are reasonable measures for identifying whether the trophic state of a lake is increasing, which can be an early warning sign that cultural eutrophication is occurring.

EPA approves both the narrative criteria in 38 M.R.S. § 465-A(1.B), because they explicitly protect designated uses, and the provisions of DEP Rule Chapter 581(6), because they provide a scientifically sound numeric interpretation of a part of the narrative criteria, which enhances the protection of uses.

### **Zone of Passage [DEP Rule Chapter 581(5)]**

EPA's review of the provision in DEP Rule Chapter 581(5) is based on whether the provision is protective of designated uses. The provision requires that all discharges shall provide for a zone of passage for free-swimming and drifting organisms that is at least three quarters of the cross-sectional area at any point in the receiving water. The zone of passage can be smaller if the discharger can demonstrate that because of physical phenomena in the receiving water body, such a minimum zone cannot be maintained and the minimum zone is not necessary to protect organisms in the receiving water from substantial adverse effect.

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<sup>17</sup> EPA, [\*Nutrient Criteria, Technical Guidance Manual, Lakes and Reservoirs, First Edition\*](#), EPA-822-B00-001, April 2000, pages 1-12 to 1-13.

EPA guidance provided in the *Water Quality Standards Handbook*<sup>18</sup> recommends that where there is incomplete mixing in a receiving water, pollutant loading be limited so that mixing zones are small enough to allow a zone of passage for free swimming and drifting organisms without significant adverse effects on their populations, including migration for anadromous and catadromous species. EPA approves Maine’s provision because it ensures that there will be ample passage for free-swimming and drifting organisms outside the mixing zone, and where the zone of passage needs to be smaller, the provision guards against substantial adverse effects to such organisms. Therefore the provision is consistent with EPA’s guidance and protective of the aquatic life designated use.

**Waters Contained in Excavations Approved for Wastewater Treatment Purposes [38 M.R.S. § 464(4.E)]**

The provision in 38 M.R.S. § 464(4.E) identifies as unclassified (and thus without designated uses) those waters contained in excavations approved for wastewater treatment purposes. EPA approves this provision with the understanding that it is limited to waters that are “waste treatment systems” that do not fall within Clean Water Act jurisdiction as “waters of the United States,” as provided at 40 C.F.R. § 122.2.

**WQS Related to Hydropower Projects [38 M.R.S. § 464(4.H), (9-A.A), (9-A.D), (9-A.E), (10), and (11); and 38 M.R.S. § 636(8)]**

1. 38 M.R.S. § 464(4.H), (9-A.D), (9-A.E), (10), and (11) – EPA has reviewed the revised WQS related to hydropower projects in 38 M.R.S. § 464(4.H), (9-A.D), (9-A.E), (10), and (11), all of which were initially enacted in essentially the same form in 1992 (P.L. 1992, c. 813), and which clarify water quality classifications and criteria applicable to hydropower impoundments and water segments immediately downstream of hydropower dams. EPA approves all of these revisions for the reasons discussed below.

The revisions at 38 M.R.S. § 464(9-A.D) and (9-A.E) (originally enacted as the last two paragraphs of § 464(9)), apply to existing hydropower impoundments classified as Great Ponds under 38 M.R.S. § 465-A. They reflect the legislature’s purpose of clarifying that the Class GPA criterion that “habitat must be characterized as natural” was not intended to apply to existing human-constructed great pond impoundments. Accordingly, § 464(9-A.D) requires such waters to, at a minimum, meet Class C habitat and aquatic life criteria, and § 464(9-A.E) requires that where the actual water quality in such impoundments attain any more stringent criteria required by the GPA classification, such water quality must be protected and maintained.

The revisions at 38 M.R.S. § 464(10) apply to existing hydropower impoundments managed under riverine classifications under 38 M.R.S. § 465. These reflect the legislature’s purpose of clarifying that Class A and B habitat and aquatic life uses and criteria defined as “natural” and “unimpaired” were intended to apply to free-flowing streams, and not to existing hydropower impoundments. Accordingly, § 464(10) provides that the Class A and B habitat characteristics

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<sup>18</sup> EPA, [Water Quality Standards Handbook - Chapter 5: General Policies](#), Section 5.1.1, subsection on mixing zone size, 2015 online version.

and aquatic life criteria are deemed to be met in existing hydropower impoundments as long as Class C aquatic life criteria are met. It further provides, however, that if reasonable changes can be made that would result in the improvement of habitat and aquatic life, such changes must be implemented and the resulting improved water quality must be achieved and maintained. In addition, where the actual water quality in such impoundments attain any more stringent criteria required by the applicable Class A or Class B criteria, that water quality must be protected and maintained.

The revisions at 38 M.R.S. § 464(11) apply to downstream stretches below two existing hydropower projects on the Kennebec River and two existing hydropower projects on the Saco River.<sup>19</sup> These revisions also reflect the legislature's purpose of clarifying that Class A habitat and aquatic life uses and criteria defined as "natural" were intended to apply to unaffected, free-flowing streams. Accordingly, § 464(11) provides that the Class A habitat characteristics and aquatic life criteria applicable to these segments are deemed to be met as long as Class C aquatic life criteria are met.

The revisions at 38 M.R.S. § 464(4.H) allow hydropower projects constructed after 1991 to cause some change to the habitat and aquatic life of the project's impoundment and the waters immediately downstream of and measurably affected by the project, so long as the habitat and aquatic life criteria of the applicable waters' classifications under § 465 (standards for classifications of freshwaters), § 465-A (standards of classification for lakes and ponds), § 467 (classifications of major river basins), and § 468 (standards of classification for minor drainages) are met. It specifically provides that it does not alter the habitat and aquatic life criteria under §§ 465 and 465-A.

It is not clear that EPA ever approved 38 M.R.S. § 464(4.H), (9-A.D), (9-A.E), (10), and (11).<sup>20</sup> Therefore, EPA is today approving these provisions as applied to all waters in Maine. As EPA acknowledged in several letters to Maine in 1992 and 1993,<sup>21</sup> the requirements to meet "natural" or "unimpaired" habitat and aquatic life characteristics are not necessarily appropriate for existing hydropower impoundments since they are, by their very nature, artificial. In its review of proposed legislation in 1992, EPA informed DEP that it was willing to accept, as satisfying federal UAA requirements, a single legislative finding that the "natural" and "unimpaired" criteria were not intended for existing impoundments to justify a change in the habitat and aquatic life criteria applicable to such impoundments, as long as Class C criteria at 38 M.R.S. § 465(4.C) are required to be met. The Class C criteria allow some changes to aquatic life as long as the waters are of sufficient quality to support all species of indigenous

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<sup>19</sup> These segments are not waters in Indian lands.

<sup>20</sup> EPA disapproved § 464(9), contained in "Part A" of P.L. 1992 c. 813, on January 14, 1993. Section 464(9) included the original versions of current subsections (9-A.D) and (9-A.E)), but EPA's disapproval did not relate to those provisions. EPA did not act at that time, or apparently at any later time, on other portions of the statute (including § 464(4.H) and (10)). On March 25, 1993, EPA approved a UAA that Maine prepared to address the January 14, 1993 disapproval and to support a subsequent amendment of § 464(9). It is not apparent that Maine ever submitted revised § 464(9) at any time before its May 2000 submission of all of its WQS to EPA's repository. In 2005, § 464(9) was repealed and its provisions were relocated to new § 464(9-A), and entirely new provisions were also added to section 9-A. Maine submitted the new provisions to EPA by letter dated January 11, 2006, and EPA approved them by letter dated April 17, 2006, but not the relocated provisions from § 464(9).

<sup>21</sup> Letters dated January 28, 1992, from Tonia Bandrowicz, EPA to Stephen Groves, DEP; February 4, 1992, from Tonia Bandrowicz, EPA to Stephen Groves, DEP; November 25, 1992, from Ronald Manfredonia, EPA to Stephen Groves, DEP; and March 25, 1993, from Paul Keough, EPA to Dean Marriott, DEP.

fish and maintain the structure and function of the resident biological community. EPA concludes that the revisions at 38 M.R.S. § 464(9-A.D), (9-A.E), and (10) are consistent with EPA’s advice to DEP in 1992 and 1993; are reasonable in light of the legislature’s statement of original intent to apply “natural” and “unimpaired” to free-flowing waters and not artificially impounded waters; and by requiring attainment of at least Class C criteria (or better), are protective of existing and designated aquatic life uses. EPA concludes that the same reasoning applies to 38 M.R.S. § 464(11), for which the legislature provided a similar statement of original intent to apply the “natural” habitat and aquatic life criteria only to unaffected and free-flowing waters, and that by requiring attainment of at least Class C criteria, § 464(11) is protective of existing and designated aquatic life uses.

EPA concludes that 38 M.R.S. § 464(4.H) is protective of existing and designated uses because it specifies that any new (post-1992) hydropower project must meet the habitat and aquatic life criteria applicable to the water body’s classification. While this section allows some change to habitat and aquatic life, EPA interprets this change to be allowed only if consistent with the antidegradation policy in 38 M.R.S. § 464(4.F), since nothing in § 464(4.H) precludes the applicability of § 464(4.F). EPA’s approval is based on this interpretation.

2. 38 M.R.S. § 464(9-A.A) – EPA has reviewed 38 M.R.S. § 464(9-A.A), which establishes habitat and aquatic life criteria for the impounded segment of the West Branch of the Penobscot River above the Ripogenus dam.<sup>22</sup> In 1993, EPA disapproved the original version of this section (enacted in 1992 as § 464(9)), and Maine subsequently prepared a Use Attainability Analysis (“UAA”) to support the establishment of less stringent habitat and aquatic life criteria than would otherwise apply. EPA approved the Ripogenus UUA on March 25, 1993, consistent with 40 C.F.R. § 131.10(g)(4), based on the determination that the existence and operation of the dam precludes the attainment of Class C aquatic life and habitat criteria. EPA further found that it would not be possible to operate the dam in a manner that could attain the use, in part because the aquatic community that had evolved in the impoundment and downstream was an important fishery that would be placed at risk if dam operations were significantly changed. Maine subsequently revised § 464(9) consistent with the UAA, and then relocated it to new § 464(9-A.A) in 2005 (see footnote 19 for additional information). EPA has no record of having previously approved revised § 464(9). EPA approves the provision today in its current form of § 464(9-A.A), consistent with EPA’s approval of the UAA.

3. 38 M.R.S. § 636(8) – EPA has reviewed the revised WQS in 38 M.R.S. § 636(8), which requires that there be reasonable assurance that a proposed hydropower project will not violate applicable WQS, including antidegradation requirements, both in the impounded area and in waters downstream of the impoundment. It further directs DEP to reclassify impounded waters from a proposed project as GPA if certain showings are made, including that the project would comply with antidegradation requirements.

Maine enacted this provision in response to EPA’s May 25, 1987 disapproval of prior legislation that automatically deemed such proposed impoundments to be GPA. EPA approved 38 M.R.S. § 636(8) on December 20, 1990. EPA today approves this provision for waters in Indian lands, because it ensures that WQS, including antidegradation requirements, will be met both upstream and downstream of the proposed project, and it provides for reclassification to

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<sup>22</sup> This segment is not a water in Indian lands.

GPA only if the DEP makes specific findings, including that antidegradation requirements will not be violated. EPA approves this provision with the understanding that the procedures for reclassification in 38 M.R.S. § 464(2), particularly regarding public participation, still apply to any reclassification pursuant to this section. This provision is protective of both designated and existing uses and consistent with the requirements of section 303 of the CWA and 40 C.F.R. part 131.

#### **Downstream Protection for Class GPA Waters [38 M.R.S § 464(4.A(3))]**

EPA's review of the downstream protection provision in 38 M.R.S § 464(4.A(3)) is based on whether the provision is protective of designated uses. The provision prohibits discharges to tributaries of Class GPA waters that would impair the characteristics and designated uses of downstream GPA waters or cause an increase in the trophic state of those GPA waters. EPA approves this narrative protection of downstream waters because it is protective of designated uses in Class GPA waters and is consistent with the requirement in 40 C.F.R. § 131.10(b) that States take into consideration the water quality standards of downstream waters and ensure that its water quality standards provide for the attainment and maintenance of the water quality standards of downstream waters.

#### **Criteria for Color, Taste, Turbidity, Toxicity, Radioactivity and Other Properties [38 M.R.S § 464(4.A(4))]**

EPA is approving the narrative criteria in 38 M.R.S § 464(4.A(4)) because the provision protects designated uses by prohibiting levels of these substances that would cause the waters to be unsuitable for the designated uses.

#### **Criterion for pH in Estuarine and Marine Waters<sup>23</sup> [38 M.R.S § 464(4.A(5))]**

EPA's review of the pH criterion for estuarine and marine waters in 38 M.R.S § 464(4.A(5)) is based on whether the criterion protects aquatic life uses in those waters. The criterion prohibits discharges that cause pH in estuarine and marine waters to fall outside of the 7.0 to 8.5 range. EPA's current pH recommendation is included in the 1986 Gold Book, which recommends pH in the range of 6.5 to 8.5 to protect marine aquatic life<sup>24</sup>. Since Maine's pH range for estuarine and marine waters is within that range, EPA finds that the pH criterion for estuarine and marine waters in 38 M.R.S § 464(4.A(5)) is protective of designates uses and approves it accordingly.

#### **Criteria for Settled and Floating Substances [38 M.R.S. § 464(4.B)]**

EPA's review of Maine's narrative criteria for settled and floating substances in 38 M.R.S. § 464(4.B) is based on whether the criteria are protective of designated uses. The provision states that "surface waters shall be free of settled substances which alter the physical or chemical nature of bottom material and of floating substances, except as naturally occur, which impair the characteristics and designated uses ascribed to their class." EPA approves of the narrative criteria because they are explicitly protective of designated uses.

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<sup>23</sup> As discussed below, EPA is disapproving the pH criterion for freshwaters.

<sup>24</sup> EPA, [Quality Criteria for Water 1986](#), EPA 440/5-86-001, pH, May 1, 1986.

### **Instream Color Pollution Standard [38 M.R.S § 414-C(3)]**

EPA approves the instream color pollution standard in 38 M.R.S § 414-C(3). This provision is protective of applicable designated uses because it defines a maximum total impact from discharges and thus provides an numeric threshold for waters to meet the narrative color criteria in 38 M.R.S. § 464(4.A.(4)) and is at least as protective as the EPA-recommended narrative criterion, which says that “waters shall be virtually free from substances producing objectionable color for aesthetic purposes.”<sup>25</sup>

### **Dissolved Oxygen (“DO”) for Class AA and SA Waters, and Aquatic Life Criteria for Class A, AA, and SA Waters [38 M.R.S. § 465(1.B and 2.B) and 38 M.R.S. § 465-B(1.B)]**

EPA's review of the narrative criteria for aquatic life for Class AA, A and SA waters (in 38 M.R.S. § 465(1.B and 2.B) and § 465-B(1.B), respectively) and the narrative criteria for dissolved oxygen in Class AA and SA waters (in 38 M.R.S. § 465(1.B) and § 465-B(1.B), respectively) is based on whether the narrative criteria are protective of the designated uses of habitat for fish and other aquatic life. The criteria require that aquatic life for Class AA, A and SA waters and DO for Class AA and SA waters be as naturally occurs. Since the term “as naturally occurs” is defined in 38 M.R.S. § 466(2) to mean “conditions with essentially the same physical, chemical and biological characteristics as found in situations with similar habitats free of measurable effects of human activity,” EPA finds that these narrative criteria are protective of the aquatic life designated uses. Therefore EPA approves these criteria.

### **Narrative Aquatic Life Criteria for Class B, C, SB and SC Waters [38 M.R.S. § 465(3.C); 38 M.R.S. § 465(4.C); 38 M.R.S. § 465-B(2.C); and 38 M.R.S. § 465-B(3.C)]**

EPA’s review of the narrative criteria for aquatic life in Class B, C, SB and SC waters expressed in the first sentences of 38 M.R.S. § 465(3.C); 38 M.R.S. § 465(4.C); 38 M.R.S. § 465-B(2.C); and 38 M.R.S. § 465-B(3.C), respectively, is based on whether the narrative criteria for aquatic life, expressed as a minimum condition remaining following the impact of discharges, support the designated uses for these water classifications.

The designated uses for Class B and SB waters are similar: “habitat for fish and other aquatic life” and “habitat must be characterized as unimpaired” for Class B waters (at 38 M.R.S. § 465(3.A)); and “habitat for fish and other estuarine and marine life” and “habitat characterized as unimpaired” for Class SB waters (at 38 M.R.S. § 465-B(2.A)). The narrative criteria to support these uses require that the waters be of sufficient quality to support all aquatic, estuarine, and marine species (as appropriate) indigenous to those waters without detrimental changes in the resident biological community. Maine defines “unimpaired” as “without diminished capacity to support aquatic life” at 38 M.R.S. § 466(11); “residential biological community” as “aquatic life expected to exist in a habitat which is free from the influence of the discharge of any pollutant” at 38 M.R.S. § 466(10); “indigenous” as “supported in a reach of water or known to have been supported according to historical records compiled by State and Federal agencies or published scientific literature” at 38 M.R.S. § 466(8); and “without detrimental changes to the resident biological community” as “no significant loss of species or

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<sup>25</sup> EPA, [Quality Criteria for Water 1986](#), EPA 440/5-86-001, Color, May 1, 1986.



excessive dominance by any species or group of species attributable to human activity” at 38 M.R.S. § 466(12). Based on these definitions, EPA finds that the narrative criteria for Class B and SB waters in the first sentences of 38 M.R.S. § 465(3.C) and 38 M.R.S. § 465-B(2.C), respectively, do support the designated uses, including the designated use of unimpaired habitat, and EPA therefore approves these criteria.

The designated uses for Class C and SC waters are also similar: “habitat for fish and other aquatic life” at 38 M.R.S. §465(4.A) and “habitat for fish and other estuarine and marine life” at 38 M.R.S. § 465-B(3.A). The narrative criteria to support these uses require that “discharges to Class C waters may cause some changes to aquatic life, except that the receiving waters must be of sufficient quality to support all species of fish indigenous to the receiving waters and maintain the structure and function of the resident biological community.” Similarly, “discharges to Class SC waters may cause some changes to estuarine and marine life provided that the receiving waters are of sufficient quality to support all species of fish indigenous to the receiving waters and maintain the structure and function of the resident biological community.” Maine defines “community function” as “mechanisms of uptake, storage, and transfer of life-sustaining materials available to a biological community which determines the efficiency of use and the amount of export of the materials from the community” at 38 M.R.S. § 466(3), and “community structure” as the organization of a biological community based on numbers of individuals within different taxonomic groups and the proportion each taxonomic group represents of the total community” at 38 M.R.S. § 466(4). Based on these definitions, combined with the pertinent definitions in the previous paragraphs, EPA finds that the narrative criteria for Class C and SC waters in the first sentences of 38 M.R.S. § 465(4.C) and 38 M.R.S. § 465-B(3.C), respectively, do support the designated uses, and EPA therefore approves these criteria.

### **Freshwater Temperature Criteria [DEP Rule Chapter 582(1)]**

EPA’s review of Maine’s freshwater temperature criteria in DEP Rule Chapter 582(1) is based on whether the criteria protect designated aquatic life uses, including all life stages of indigenous and endangered species. The criteria include several components, all expressed as measured at a point outside a mixing zone established by the Board of Environmental Protection. The maximum allowable temperature increase (“delta T”) due to any discharge is 3° F in the epilimnion of any lake or pond and 5° F in all other freshwaters. The ambient temperature due to discharges may not exceed 85° F, nor may it exceed EPA’s “national ambient water quality criteria established to protect all species of fish that are indigenous to the receiving waters.” Site specific criteria that are protective of indigenous species may also be developed. In addition, when ambient temperatures of the receiving water naturally exceed the maximum temperature criteria provided in Chapter 582(1), then the delta T is limited to 0.5° F.

EPA is approving the freshwater temperature criteria with the understanding that EPA’s recommended criteria will generally be the applicable criteria, because, with few exceptions, the maximum allowable temperature of 85° F is not protective of aquatic life uses, especially for many fish species that are indigenous to Maine waters. For example, the maximum allowable temperature of 85° F (29.4° C) is above temperatures which cause lethality in all life

stages of endangered Atlantic salmon (including adult migration and smolt emigration).<sup>26</sup> Brook trout exhibit a similar temperature tolerance range, where temperatures above 24° C (75° F) result in little to no growth.<sup>27</sup> EPA also finds that the delta T of 5° F may not adequately protect aquatic life in some waters, because, depending on the starting temperature, a 5° F temperature rise could result in temperatures that do not support various life stages of indigenous fish. For example, National Marine Fisheries Service, in providing input to EPA regarding the appropriateness of Maine's freshwater temperature criteria related to the endangered Atlantic salmon, said the following about the delta T of 5° F:

We are particularly concerned that the five degree (Fahrenheit) limit...could increase the temperature of nearly every salmon river in the State of Maine above the survival thresholds for the freshwater life stages of Atlantic salmon.... Warming of rivers and streams during the spring and summer could increase temperatures outside of the optimal window for feeding and possibly outside the window for survival of fry and parr. Spring and summer warming may also inhibit adult migration or result in direct or indirect mortality. Warming of river temperatures in the spring would narrow the window of time that would allow successful passage of salmon smolts (the life stage where salmon are transitioning from freshwater to saltwater) that can only occur between 5 and 10° C. Any warming of river temperatures in the winter would have the effect of advancing development of eggs and alevins. If this occurs too quickly, they may use up available energy stores in the egg before food in the river is available. This too could have the effect of narrowing the window of a key development phase. Given the precarious state of salmon in the GOM DPS [Gulf of Maine Distinct Population Segment], anthropogenic changes in water temperatures that alter temperatures in a way that could interfere with Atlantic salmon migratory behaviors or embryonic and juvenile development may pose a significant risk to the species.<sup>28</sup>

Therefore, EPA expects that the requirement in Maine's freshwater temperature criteria that ensures that ambient temperatures do not exceed EPA's national ambient water quality criteria recommendations for all species of indigenous fish will typically supersede the default maximum 85° F temperature limit and 5° F delta T. EPA's recommended temperature criteria provide a methodology for deriving temperature criteria on a site specific basis, depending on the species present or expected to be present and the pertinent life stages. EPA recommends, as described in the Gold Book,<sup>29</sup> that temperature criteria for any time of the year consist of two upper limiting temperatures for a specific location based on the important sensitive species and life stages found there during that time of year. One limit is a maximum temperature for short exposures that is time dependent and based on the results of experimental data for the sensitive species. The second value is a weekly average temperature which would vary seasonally and also be based on temperature sensitivity of the species present. Four species dependent options for deriving the weekly average temperature thresholds are provided in the Gold Book.

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<sup>26</sup> May 13, 2015 Letter from John K. Bullard, National Marine Fisheries Service, to Ralph Abele, EPA.

<sup>27</sup> Picard C, Bozek M and Walter Momot, [\*Effectiveness of Using Summer Thermal Indices to Classify and Protect Brook Trout Streams in Northern Ontario\*](#), North American Journal of Fisheries Management 23:206–215, 2003

<sup>28</sup> May 13, 2015 Letter from John K. Bullard, National Marine Fisheries Service, to Ralph Abele, EPA, page 5.

<sup>29</sup> EPA, [\*Quality Criteria for Water 1986\*](#), EPA 440/5-86-001, Temperature, May 1, 1986.

EPA approves DEP Rule Chapter 582(1) because it requires that temperatures in the receiving waters not exceed EPA recommended criteria for indigenous species, which include temperature sensitive species such as brook trout and the endangered Atlantic salmon. EPA's recommended criteria are based on sound science and provide a methodology for deriving ambient temperatures that are protective of such species. By incorporating EPA's recommended criteria, Maine's criteria are protective of aquatic life uses.

EPA approves the criteria as applicable to freshwaters, whether or not there is a mixing zone. If the Board does establish a mixing zone, then compliance for dischargers is to be measured at the edge of the mixing zone. As a result of EPA's disapproval today of Maine's mixing zone policy, discussed below, EPA expects that Maine will revise its policy and ensure that subsequently established mixing zones, including for temperature, will be protective of all uses, including aquatic life uses for indigenous species such as the endangered Atlantic salmon.

**DO Criteria for Class B, SB and SC Waters [38 M.R.S. § 465(3.B); 38 M.R.S. § 465-B(2.B); and 38 M.R.S. § 465-B(3.B)]**

EPA's review of Maine's DO criteria for aquatic life for Class B fresh waters in 38 M.R.S. § 465(3.B), is based on whether the criteria protect aquatic life uses, including consideration of EPA's National Recommended Water Quality Criteria published pursuant to Section 304(a) of the CWA. The criteria require that DO content be at least 7 mg/l or 75% of saturation, whichever is higher, from May 15<sup>th</sup> to September 30<sup>th</sup>. From October 1<sup>st</sup> to May 14<sup>th</sup>, in order to ensure spawning and egg incubation of indigenous fish species, the 7-day mean DO content must be at least 9.5 mg/l and the 1-day minimum DO content must be at least 8 mg/l in identified fish spawning areas. The spawning and egg incubation criteria are consistent with EPA's *Quality Criteria for Water 1986* ("Gold Book")<sup>30</sup> recommendations for protection of early life stages of coldwater species. The minimum DO criterion of 7 mg/l year-round for non-spawning areas and during the summer months for spawning areas, is at least as protective as EPA's recommendations for other life stages of coldwater species and all life stages of warmwater species (3 to 6.5 mg/l). EPA approves the DO criteria for Class B waters because they are based on sound science and protective of designated uses for the reasons provided in EPA's Gold Book.

EPA's review of the DO aquatic life criteria in 38 M.R.S. § 465-B(2.B) (for Class SB estuarine and marine waters, DO at least 85% saturation); and § 465-B(3.B) (for Class SC waters, DO at least 70 % saturation) is similarly based on whether the criteria protect aquatic life uses, including consideration of EPA's National Recommended Water Quality Criteria published pursuant to Section 304(a) of the CWA and DO criteria for Canadian marine waters.

EPA's current recommendations for saltwater DO criteria<sup>31</sup> of 4.8 mg/l for chronic exposure and 2.3 mg/l for acute exposure were developed to protect aquatic life in east coast Atlantic and estuarine waters in the Virginia Province (ranging from Cape Cod, Massachusetts to Cape Hatteras, North Carolina). These values are not directly comparable to Maine's criteria, which are expressed as percent saturation rather than as a DO concentration. However, it is possible

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<sup>30</sup> EPA, *Quality Criteria for Water 1986*, EPA 440/5-86-001, Dissolved Oxygen, May 1, 1986.

<sup>31</sup> EPA, *Ambient Aquatic Life Water Quality Criteria for Dissolved Oxygen (Saltwater): Cape Cod to Cape Hatteras*, EPA-822-R-00-012, November 2000.

to compare EPA's DO recommendations for the Virginia Province to Maine criteria for coastal waters by accounting for the differences in ambient temperatures. During the critical summer period (May 15<sup>th</sup> through September 30<sup>th</sup>), ambient monthly average coastal temperatures range up to 52° F (11° C) at the National Oceanic and Atmospheric Administration's ("NOAA") ambient water temperature monitoring location near Eastport, Maine. Using the 52° F ambient temperature and a DO-to-percent-saturation conversion table,<sup>32</sup> EPA's recommended minimum values for the Virginia Province translate to 32% saturation for chronic exposure and 21% saturation for acute exposure, both well below Maine's criteria of 70% and 85% saturation.

In evaluating Maine's criteria, EPA also reviewed the Canadian Water Quality Guidelines for the Protection of Aquatic Life for marine dissolved oxygen.<sup>33</sup> Canadian guidelines recommend a minimum concentration of DO in marine and estuarine waters of 8.0 mg/l, or at 11° C, 73% DO saturation<sup>34</sup>, within the range of Maine's criteria of 85% and 70% saturation for Class SB and SC waters respectively.

EPA approves Maine's DO criteria for SB and SC waters because they are protective of aquatic life uses in estuarine and marine waters.

#### **Identification of Spawning Areas and Applicable DO Criteria [DEP Rule Chapter 585 and the last two sentences of 38 M.R.S. § 465(4.B)]**

EPA's review of DEP Rule Chapter 585, which specifies how fish spawning areas in Class B waters and salmonid spawning areas in Class C waters are to be identified and the applicable DO criteria for such areas, is based on whether the requirements are supportive of aquatic life uses in Class B and C waters.

DO criteria set forth in 38 M.R.S. § 465(3.B) and (4.B) for Class B and C waters, respectively, include special numeric DO criteria for October 1 - May 14 in all spawning areas in Class B waters and narrative DO criteria in salmonid spawning areas in Class C waters, and § 465(4.B) further directs the Board to adopt rules for designation of spawning areas. The identification of spawning areas in these waters is critical to the protection of the use. In accordance with Chapter 585, prior to licensing or relicensing any wastewater discharge that may affect DO, DEP is required to request that the Maine Department of Inland Fisheries and Wildlife (DFW) identify existing or potential fish spawning areas. As the state agency with responsibility for managing fisheries, DFW has the resources and expertise, such as fisheries biologists, habitat inventories, and river reports, to make such identifications.

In addition, Chapter 585(1) includes the DO requirements that are specified in § 465(3.B) for spawning areas in Class B waters; and Chapter 585(3) specifies that in designated spawning areas in Class C waters, DO criteria shall not fall below the EPA recommended criteria for spawning for the period October 1- May 14. If levels of DO fall below EPA's recommended criteria, then corrective action is required or a UAA must be conducted,

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<sup>32</sup> <http://www.usawaterquality.org/volunteer/pdf/Special/DOConvTbl.pdf>

<sup>33</sup> Canadian Council of Ministers of the Environment, Canadian Water Quality Guidelines for the Protection of Aquatic Life, Dissolved Oxygen (Marine), Excerpt from Publication No. 1299; ISBN 1-896997-34-11999.

<sup>34</sup> Conversion to % saturation using conversion table at <http://www.usawaterquality.org/volunteer/pdf/Special/DOConvTbl.pdf>

EPA approves the last two sentences of 38 M.R.S. § 465(4.B) related to the adoption of rules governing designation of spawning areas, and all of Rule Chapter 585. EPA approves the requirements for spawning area identification in Chapter 585 because this coordination is necessary to ensure that DO criteria are implemented in a manner that protects aquatic species with reproductive cycles that are sensitive to low DO levels. EPA approves the DO criteria for Class B spawning areas for the reasons discussed above related to 38 M.R.S. § 465(3.B), and approves the DO criteria for Class C spawning areas because they require DO to be at least as high as EPA's recommended criteria, which are based on sound science and are protective of the designated use.

### **Shellfishing Bacteria Criteria for Class SB and SC Waters [38 M.R.S. § 465-B(2.B and 3.B)]**

EPA's review of Maine's bacteria criteria for the protection of shellfishing uses in Class SB and SC waters (in 38 M.R.S. § 465-B(2.B and 3.B), respectively) is based on whether the criteria are protective of the "propagation and harvesting of shellfish" use in Class SB waters and the "propagation and restricted harvesting of shellfish" use in Class SC waters.

The shellfishing criteria for Class SB and SC waters are identical: "The numbers of total coliform bacteria or other specified indicator organisms in samples representative of the waters in shellfish harvesting areas may not exceed the criteria recommended under the National Shellfish Sanitation Program [("NSSP")], United States Food and Drug Administration." Since this reference to the NSSP recommendations was enacted in 1986,<sup>35</sup> the NSSP recommendations in effect in 1986 are the applicable criteria for Class SA and SB waters. NSSP's bacteria recommendations for unrestricted (as for Class SB waters) and restricted (as for Class SC waters) harvesting of shellfish have not changed since 1986.<sup>36</sup> EPA's recommendation for shellfishing bacteria criteria, provided in the 1986 Gold Book,<sup>37</sup> are the same as the NSSP criteria for unrestricted harvesting of shellfish. EPA does not have a bacteria criteria recommendation for restricted harvesting of shellfish.

EPA approves the shellfishing bacteria criteria for Class SB and SC waters in 38 M.R.S. § 465-B(2.B and 3.B), because they reflect the current NSSP and EPA recommendations and are therefore protective of the designated uses. While we approve these provisions, we recommend that Maine adopt the NSSP numeric shellfishing bacteria criteria directly into WQS rather than by reference to undated recommendations. This would ensure that the requirements are clear on their face, and would avoid confusion if NSSP recommendations change in the future.

### **Compliance Schedule [38 M.R.S. § 414-A(2)]**

EPA approves 38 M.R.S. § 414-A(2), which authorizes the use of compliance schedules in discharge licenses to meet final effluent limitations based on a water quality standard adopted

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<sup>35</sup> "An Act to Amend the Classification System for Maine Waters and Change the Classification System of Certain Waters," Maine Public Laws, 112th Legislature, Chapter 698 (the "Reclassification Act").

<sup>36</sup> See National Shellfish Sanitation Program Manual of Operations Part I, Sanitation of Shellfish Growing Areas, revised 1986; and NSSP, Guide for the Control of Molluscan Shellfish, 2013 Revision.

<sup>37</sup> EPA [Quality Criteria for Water 1986](#), EPA 440/5-86-001, Bacteria, May 1, 1986

after July 1, 1977. The purpose of such a schedule is, where appropriate, to afford a permittee adequate time to comply with permit requirements that are based on new or revised water quality standards. EPA approves this provision because it is consistent with EPA's interpretation of the circumstances under which such compliance schedules may be provided consistent with the federal Clean Water Act.

**Toxic Substances [38 M.R.S. § 420(2) and (2.A) through (2.G)]**

EPA's review of the WQS provisions in 38 M.R.S. § 420(2) and (2.A) through (2.G), which provide direction to the Board of Environmental Protection ("Board") regarding the establishment of water quality criteria for toxic substances, is based on whether the resulting criteria would be protective of designated uses.

The introductory text in 38 M.R.S. § 420(2) generally identifies the scope of toxic substances to be regulated and defines the term "toxic substance." The provision requires that the Board take into consideration the toxicity, persistence and degradability of the substance as well as the sensitivity of organisms, including humans, potentially affected by the substance, either alone or in combination with substances already present. The definition of "toxic substance" is generally consistent with the CWA's definition of "toxic substances" in CWA § 502(13). EPA approves the introductory text in 38 M.R.S. § 420(2) because it is consistent with the requirements in 40 C.F.R. § 131.12(a)(2), which require states to adopt water quality criteria for toxic pollutants and to protect designated uses, and because the provisions explicitly require that sensitive organisms be protected.

The provisions in 38 M.R.S. § 420(2.A) through (2.G) instruct and authorize the Board of Environmental Protection to adopt statewide criteria for toxic substances that are consistent with EPA recommendations or to adopt site-specific criteria or alternative statewide criteria that are based on sound scientific rationale and protective of the most sensitive designated uses. EPA approves these provisions (except for the clause related to naturally occurring toxic substances in § 420(2.A), which EPA is separately partially approving and partially disapproving, as discussed on pages 7 and 27-28, respectively) because they are consistent with the requirements in 40 C.F.R. § 131.11 for state adoption of water quality criteria.

**Prohibitions and Exceptions to Prohibitions on Discharges to Class AA and Class SA Waters [38 M.R.S. § 465(1.C); 38 M.R.S. § 465(1.C.(2)); 38 M.R.S. § 465(1.C.(3)); 38 M.R.S. § 465(1.C.(4)); 38 M.R.S. § 465(1.C.(5)); 38 M.R.S. § 465-B(1.C.(2)); 38 M.R.S. § 465-B(1.C); 38 M.R.S. § 465-B(1.C.(3)); and 38 M.R.S. § 465-B(1.C.(4))]**

In EPA's February 2, 2015 decision letter related to Maine WQS revisions submitted to EPA between 2004 and 2014, EPA identified, among others, the following statutory revisions that EPA concluded were not WQS and therefore EPA did not act on them in that decision letter: 38 M.R.S. § 465(1.C.(2)); 38 M.R.S. § 465(1.C.(3)); 38 M.R.S. § 465(1.C.(4)); 38 M.R.S. § 465(1.C.(5)); 38 M.R.S. § 465-B(1.C.(2)); and 38 M.R.S. § 465-B(1.C.(4)). EPA now recognizes that this characterization was in error. All of these revisions allow exceptions from the general prohibitions on direct discharges to Class AA and SA waters in 38 M.R.S. § 465(1.C) and § 465-B(1.C), respectively. Class AA and SA waters are specifically identified as outstanding national resource waters ("ONRWs") in 38 MRS § 464(4.F.(2)) and are therefore afforded the highest (Tier 3) protection under federal and state antidegradation policies. The

exceptions to the prohibitions on discharges that would otherwise apply to these ONRWs are integrally related to the extent of Tier 3 antidegradation protection afforded to these waters. Consequently, EPA has concluded that they are WQS revisions. EPA today approves these provisions, along with the pre-2003 general prohibitions in 38 M.R.S. § 465(1.C) and § 465-B(1.C) and an additional revision at 38 M.R.S. § 465-B(1.C.(3)), having determined that they are consistent with the federal antidegradation requirement at 40 C.F.R. § 131.12(a)(3) for the reasons discussed below.<sup>38</sup> It is important to note that any discharges authorized under these provisions must also meet all other applicable water quality standards.

EPA's antidegradation policy requires the quality of ONRWs to be "maintained and protected." 40 C.F.R. § 131.12(a)(3). EPA interprets this requirement to mean that there shall be no new or increased discharges to ONRWs or their tributaries that would lower water quality, with some exception for limited activities that result in temporary and short-term changes in water quality (Water Quality Standards Handbook: Second Edition, EPA-823-B-94-005a, August 1994, at section 4.7).

EPA approves the general prohibitions on direct discharges to Class AA and SA waters in 38 M.R.S. § 465(1.C) and § 465-B(1.C), respectively, because they clearly afford protection of ONRWs consistent with the antidegradation policy.

EPA approves the revision at 38 M.R.S. § 465(1.C.(2)), which allows discharges approved by DEP to aid in wild Atlantic salmon restoration, for the same reasons stated in EPA's January 25, 2005 approval of the revisions for state waters outside Indian lands. Specifically, the discharge provision is not an authorization to lower water quality. Rather, the discharges must be for the express purpose of assisting in the restoration of endangered Atlantic salmon by restoring water quality that has been degraded by anthropogenic activity. This is consistent with 40 C.F.R. § 131.12(a)(3). Further, the intent to restore natural ambient water chemistry to aid in the restoration of endangered salmon is consistent with the overall objective of the CWA at 101(a).

EPA approves the revision at 38 M.R.S. § 465(1.C.(3)), which allows aquatic pesticide or chemical discharges approved by DEP for invasive species control. EPA finds that since such discharges are, by their nature, short-term and temporary, and are for the express purpose of restoring biological communities affected by invasive species, the provision will not result in a lowering of water quality of ONRWs and therefore is consistent with 40 C.F.R. § 131.12(a)(3).

EPA approves the revisions at 38 M.R.S. § 465(1.C.(4)) and 38 M.R.S. § 465-B(1.C.(2)), which allow licensed discharges of aquatic pesticides approved by DEP for the control of mosquito-borne diseases, for the same reasons stated in EPA's August 19, 2009 approval of the revisions for state waters outside Indian lands. EPA finds that since the discharges of aquatic pesticides for mosquito control are, by their nature, short-term and temporary, and will use methods and materials that are protective of non-target species, the provisions will not result in a lowering of water quality and are consistent with 40 C.F.R. § 131.12(a)(3).

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<sup>38</sup> EPA addresses two additional WQS revisions at 38 M.R.S. § 465(1.C.(1)) and 38 M.R.S. § 465-B(1.C.(1)), which allow stormwater discharges to Class AA and SA waters, respectively, in the disapproval section below.

EPA approves the revision at 38 M.R.S. § 465-B(1.C.(3)), which allows overboard discharges licensed prior to January 1, 1986. Because this provision relates to discharges that existed before 1986, it does not authorize new or increased discharges to Class SA waters and therefore will not result in a future lowering of water quality and is consistent with 40 C.F.R. § 131.12(a)(3).

EPA approves the revisions at 38 M.R.S. § 465(1.C.(5)) and 38 M.R.S. § 465-B(1.C.(4)), which allow the discharge of pesticides approved by DEP that are unintended and the incidental result of spraying of pesticides as long as they are applied consistent with federal labeling restrictions and in compliance with state pesticide rules and best management practices. Because such discharges would be short term and temporary, and in compliance with federal and state pesticide requirements, EPA concludes that these provisions will not result in a lowering of water quality and are thus consistent with 40 C.F.R. § 131.12(a)(3).

### **Supporting Discussion of Disapprovals**

#### **Waiver or Modification of Protection and Improvement Laws [38 M.R.S. § 363-D]**

Under 38 M.R.S. § 363-D, the DEP Commissioner or her designee may waive or modify any provision of Chapter 3 (Protection and Improvement of Waters), which includes water quality standards, to assist in any oil spill response activity conducted in accordance with the national or state contingency plans, or as otherwise directed by the federal on-scene coordinator or the Commissioner or her designee.

Waivers or modifications of WQS that would have the effect of removing a designated use or creating a subcategory of use, including waiving or modifying criteria necessary to support the use, may occur under the Clean Water Act but only in accordance with 40 C.F.R. § 131.10(g) (which, among other things, requires a use attainability analysis). Before taking such action, states must provide public notice and an opportunity for a public hearing, and revised WQS are subject to EPA review and approval. Because 38 M.R.S. § 363-D does not contain any of these requirements, it is not consistent with minimum federal requirements. Therefore EPA is disapproving 38 M.R.S. § 363-D as it relates to water quality standards.<sup>39</sup> EPA has no record of ever having previously acted to approve or disapprove this statute for any waters in Maine, so this disapproval applies to all waters in the State. Because 38 M.R.S. § 363-D was submitted to EPA before May 30, 2000, it will remain applicable for Clean Water Act purposes in state waters outside Indian lands until either EPA approves a revision promulgated by Maine or EPA promulgates a revision. See 40 C.F.R. § 131.21(c).

Maine may remedy this disapproval either by specifying in the statute that it does not apply to water quality standards, or by including requirements that must be satisfied before any waiver

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<sup>39</sup> EPA regulations, at 40 C.F.R. § 122.3(d), provide a limited exception from the need to get an NPDES permit and, indirectly, to comply with water quality standards, for “any discharge in compliance with the instructions of an On-Scene Coordinator pursuant to 40 CFR part 300 (The National Oil and Hazardous Substances Pollution Contingency Plan) or 33 CFR 153.10(e) (Pollution by Oil and Hazardous Substances).” Maine has a similar permitting exemption at 38 M.R.S. § 413(2-G.B). By contrast, 38 M.R.S. § 363-D does not limit the waiver to discharges conducted in compliance with the instructions of the federal On-Scene Coordinator, nor is it limited to discharges associated with removal efforts at the scene of the oil spill, which is the purpose of EPA’s regulation.



or modification of WQS takes effect under the statute, including public participation, use attainability analysis, and EPA review and approval.

### **Dissolved Oxygen (“DO”) Aquatic Life Criteria for Class A Fresh Waters [38 M.R.S. § 465(2.B)]**

EPA's review of the DO criterion for aquatic life in 38 M.R.S. § 465(2.B) for Class A fresh waters is based on whether the criterion is protective of aquatic life uses, including all life stages of indigenous species. The criterion requires a minimum of 7 mg/l DO year round. EPA's Gold Book recommends criteria for DO that are protective of coldwater and warmwater species at all life stages. These include freshwater DO criteria of at least 9.5 mg/l as a 7-day mean and at least 8 mg/l as a 1-day minimum to protect early life stages of coldwater species, including salmonids, and 3 to 6.5 mg/l for adult coldwater species and all life stages of warm water species. Maine's DO criterion for Class A freshwaters is protective of all life stages of warmwater species and adult coldwater species, but is not high enough to protect the early life stages of coldwater species.

In 1986, EPA declined to approve Maine's Class A criterion and requested that Maine adopt criteria for Class A waters that are protective of salmonid spawning, as had been done in Class B waters.<sup>40</sup> EPA reminded DEP of this request again in 1988.<sup>41</sup> So far, Maine has not remedied this deficiency in the DO criteria for Class A fresh waters.

Because the DO criterion for aquatic life in 38 M.R.S. § 465(2.B) does not protect early life stages of coldwater species and, therefore, the full aquatic life designated use, EPA is disapproving the criterion. This disapproval applies in all waters of Maine, including waters in Indian lands, because EPA never previously acted on the criterion for state waters. Because 38 M.R.S. § 465(2.B) was submitted to EPA before May 30, 2000, it will remain applicable for Clean Water Act purposes in state waters outside Indian lands until either EPA approves a revision promulgated by Maine or EPA promulgates a revision. See 40 C.F.R. § 131.21(c). Maine may remedy this disapproval by adopting DO criteria for Class A fresh waters that are protective of all life stages of indigenous aquatic life.

### **Mixing Zones [38 M.R.S. § 451]**

Maine's mixing zone policy, which is set forth in 38 M.R.S. § 451, allows the Commissioner to establish mixing zones that would allow the “reasonable” opportunity for dilution or mixture of pollutants before the receiving waters would be evaluated for WQS compliance.

States have the discretion to adopt mixing zone policies into their WQS, subject to EPA review and approval. 40 C.F.R. § 131.13. EPA's mixing zone guidance explains that a mixing zone is a limited area or volume of water where initial dilution of a discharge takes place, and where certain numeric criteria may be exceeded, so long as the designated uses of the waterbody as a whole are protected.<sup>42</sup> While mixing zones serve to dilute concentrations of pollutants in effluent discharges, they also allow increases in the mass loading of the pollutant to the

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<sup>40</sup> July 16, 1986, Letter from Michael R. Deland, EPA to Kenneth C. Young, DEP, page 3.

<sup>41</sup> November 3, 1988, Letter from David A. Fierra, EPA to Stephen W. Groves, DEP, page 4.

<sup>42</sup> EPA, [Water Quality Standards Handbook – Section 5: General Policies](#), Section 5.1, 2015 online version.

waterbody (more so than would occur if no mixing zone were allowed). Therefore, if not applied appropriately, a mixing zone could adversely affect mobile species passing through the mixing zone as well as less mobile species (e.g., benthic communities) in the immediate vicinity of the discharge. Because of these and other factors, mixing zones should be applied carefully so that they do not result in impairment of the designated use of the waterbody as a whole or impede progress toward the CWA goals of restoring and maintaining the physical, chemical, and biological integrity of the Nation's waters.<sup>43</sup>

EPA's guidance includes specific recommendations that a state's mixing zone policy should include to ensure the protection of uses. Among other things, mixing zone policies should ensure that mixing zones do not impair the designated uses of the water body as a whole; that pollutant concentrations in the mixing zone are not lethal to organisms passing through and do not cause significant human health risks; and that mixing zones do not endanger critical areas such as breeding or spawning grounds, drinking water intakes and sources, shellfish beds, or endangered or threatened species habitat.<sup>44,45</sup> Maine's mixing zone law does not contain any of these or other scientifically sound safeguards to ensure the protection of designated uses. The only specific statutory limitation on mixing zones in Maine's mixing zone policy is that they be "reasonable."

In 1985, EPA requested DEP to develop a mixing zone policy consistent with EPA's guidance.<sup>46</sup> DEP's response did not include agreement to develop a written policy or rule, saying instead that "Decisions regarding mixing zones considers [*sic*] the factors in E.P.A.'s 'Water Quality Standards Handbook,' Chapter 2."<sup>47</sup> On October 29, 1998, DEP acknowledged that EPA had, several years previously, asked Maine to develop a mixing zone rule.<sup>48</sup> To EPA's knowledge, no rule was ever promulgated or submitted to EPA.<sup>49</sup>

EPA is disapproving 38 M.R.S. § 451 for waters in Indian lands because it does not ensure that mixing zones will protect designated uses. Maine may remedy this disapproval by revising the statute or promulgating a regulation which contains explicit conditions on the scope and extent of mixing zones adequate to protect designated uses. EPA recommends that any revision extend to all waters in Maine, not just waters in Indian lands.

### **pH Criterion for Fresh Waters [38 M.R.S. § 464(4.A(5))]**

EPA's review of Maine's pH criterion in 38 M.R.S. § 464(4.A(5)) for fresh waters is based on whether the criterion is protective of aquatic life uses. The criterion prohibits discharges from

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<sup>43</sup> Id.

<sup>44</sup> Id., Section 5.1.1

<sup>45</sup> EPA, [Technical Support Document For Water Quality-based Toxics Control](#), EPA/505/2-90-001, March 1991, pages 70-71.

<sup>46</sup> Letters dated February 20, 1985 from Michael Deland, EPA to Henry Warren, Maine DEP; and March 7, 1985 from David Fierra, EPA to Stephen Groves, DEP.

<sup>47</sup> April 1, 1985, Letter from Stephen W. Groves, DEP to Michael R. Deland, EPA, Attachment page 2.

<sup>48</sup> October 29, 1998, Email from Barry Mower, DEP to William Beckwith, EPA

<sup>49</sup> EPA is today approving for tribal waters the zone of passage provision in DEP Rule Chapter 581(5). While related to the establishment of a mixing zone, it does not itself constitute a mixing zone policy or provide the necessary protection of designated uses.

causing pH to fall outside of the 6.0 to 8.5 range. EPA's recommended criterion for pH in fresh waters, which has been unchanged since 1976, specifies that pH be in the range from 6.5 to 9.0 to protect freshwater aquatic life.<sup>50, 51</sup>

In September of 1976, EPA recommended that Maine adopt pH criteria consistent with EPA's 1976 *Water Quality Criteria*.<sup>52</sup> At the time, Maine's freshwater pH criterion, which had been part of Maine's WQS since at least 1972, was already 6.0 to 8.5 for fresh waters.<sup>53</sup> States may adopt, and EPA may approve, statewide or site specific criteria that are less stringent than EPA's recommendations if there is a scientific basis that shows that a less stringent criteria is protective of designated the designated uses. However, EPA is not aware of correspondence or other documentation in our records indicating that such a scientific basis has ever been provided to justify Maine's pH criterion for fresh waters.

EPA disapproves Maine's pH criteria in 38 M.R.S. § 464(4.A(5)) for fresh waters in Indian lands because the low end of the pH range (6.0) is below EPA's recommended criterion of 6.5 for the low end of the pH range, and it is not protective of aquatic life uses. Maine may remedy this disapproval by adopting criteria that are consistent with EPA's recommendations or by demonstrating, based on sound scientific rationale, why pH in the range of 6.0 to 6.5 is protective of freshwater aquatic life uses. EPA recommends that any revision extend to all waters in Maine, not just waters in Indian lands.

#### **Natural Conditions Clauses as They Apply to Human Health Criteria [38 M.R.S § 464(4.C) and 38 M.R.S. § 420(2.A)]**

EPA's review of Maine's natural conditions clauses at 38 M.R.S § 464(4.C) and § 420(2.A) as they apply to human health criteria is based on whether the clauses protect designated human uses. The clause in 38 M.R.S § 464(4.C) says that, "Where natural conditions, including but not limited to, marshes bogs and abnormal concentrations of wildlife cause the dissolved oxygen criteria or other water quality criteria to fall below the minimum standards...those waters shall not be considered to be failing to attain their classification because of those natural conditions." The clause in 38 M.R.S. § 420(2.A) says, "Except as naturally occurs or as provided in paragraphs B and C, the board shall regulate toxic substances in the surface waters of the State at the levels set forth in federal water quality criteria as established by the United States Environmental Protection Agency pursuant to the Federal Water Pollution Control Act...."

These provisions are not consistent with EPA's interpretation of the relationship between natural conditions and the protection of designated human health uses, which is articulated in EPA's November 1997 guidance entitled *Establishing Site Specific Aquatic Life Criteria Equal to Natural Background*.<sup>54</sup> As discussed above in EPA's approval of these natural conditions clauses as they relate to aquatic life, EPA recognizes that there may be naturally occurring concentrations of pollutants which exceed the national criteria published under section 304(a)

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<sup>50</sup> EPA, *Quality Criteria for Water*, July 1976, page 178.

<sup>51</sup> EPA, *Quality Criteria for Water 1986*, EPA 440/5-86-001, pH, May 1, 1986.

<sup>52</sup> September 23, 1976, Letter from Kenneth L. Johnson, EPA, to William R. Adams, Jr., DEP

<sup>53</sup> EPA and DEP, *Water Quality Standards Summary*, 1972, pages I-4 to I-5.

<sup>54</sup> Davies, Tudor, EPA. *Establishing Site Specific Aquatic Life Criteria Equal to Natural Background*, November 5, 1997.

of the CWA that are still protective of aquatic life. However, in contrast with aquatic life uses, a natural level of a naturally occurring pollutant does not necessarily protect designated human uses. Naturally occurring levels of a pollutant are assumed to protect aquatic life species that have naturally developed in the affected waters. However, human health does not adapt to higher ambient pollutant levels, even if they are naturally caused. Consequently, the same assumptions of protectiveness cannot be made with regard to designated uses that affect human health (e.g., people eating fish or shellfish from Maine waters, and recreating in Maine waters). For this reason, EPA's 1997 guidance also states that where the natural background concentration exceeds the state-adopted human health criterion, at a minimum, states should re-evaluate the human health use designation.<sup>55</sup>

Therefore, EPA disapproves the natural conditions clauses at 38 M.R.S §464(4.C) and § 420(2.A) for waters in Indian lands as they apply to criteria that protect human health because the application of these provisions fails to protect designated human health uses as required by the CWA and federal water quality standards regulations at 40 C.F.R. § 131.11(a). Maine may remedy this disapproval by clarifying in statute, or, if appropriate, in a rule, that these provisions do not apply to human health criteria. EPA recommends that any revisions extend to all waters in Maine, not just waters in Indian lands. If there are naturally occurring pollutants which exceed Maine's criteria to protect human health, Maine may revise its WQS on a site-specific basis to remove or modify a use, in accordance with the procedures of 40 C.F.R. § 131.10(g) and 38 M.R.S. § 464(2-A).

EPA is aware of the error made in our approvals of similar provisions in DEP Rule Chapter 584(2) and (3), which allow for naturally occurring pollutants which impart toxicity. These provisions were approved by EPA in state waters in 2007<sup>56</sup> and in waters in Indian lands in 2015.<sup>57</sup> We recommend that at the same time that Maine revises the natural conditions clauses in 38 M.R.S §464(4.C) and § 420(2.A) to pertain only to aquatic life uses, Maine also remedy the corresponding clauses currently in DEP Rule Chapter 584 for toxic substances.

**Narrative Bacteria Criteria for Class AA, A, and SA Waters [38 M.R.S. § 465 (1.B and 2.B) and 38 M.R.S. § 465-B(1.B)]**

EPA's review of Maine's narrative bacteria criteria for Class AA, A, and SA waters in 38 M.R.S. § 465(1.B and 2.B) and 38 M.R.S. § 465-B(1.B) is based on whether the criteria are protective of recreational uses and, in SA waters, also shellfishing uses. The criteria specify that bacteria content of these waters shall be "as naturally occurs."

EPA recognizes that the intent of these criteria, similar to DO and aquatic life criteria for these waters, is to reflect conditions unaffected by human activity. However, in the case of bacteria, human pathogens can result from naturally occurring sources such as wild animals. Therefore there is potential human health risk from recreational and shellfishing exposure to bacteria in naturally occurring, wild animal-impacted waters (2012 Recreational Water Quality Criteria, see section 3.5.1-2). This concern underlies EPA's disapproval on March 16, 2015 of Maine's recreational bacteria criteria as applied to waters in Indian lands, because the criteria did not

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<sup>55</sup> Id, page 3.

<sup>56</sup> July 7, 2007, Letter from Linda M. Murphy, EPA to David P. Littell, DEP, page 1.

<sup>57</sup> February 2, 2015, Letter from H. Curtis Spalding, EPA to Patricia W. Aho, DEP, page 3.

address bacteria from wild animal sources. Similarly, EPA disapproves the narrative criteria, “as naturally occurs” for bacteria in Class AA, A and SA waters in Indian lands, because they do not adequately protect recreation in and on the waters in Class AA, A, and SA waters, and propagation and harvesting of shellfish in Class SA waters.

To address this disapproval, EPA recommends that Maine adopt bacteria criteria for Class A, AA and SA waters in Indian lands to support recreational and shellfishing uses, including EPA’s 2012 recommendations for recreational criteria<sup>58</sup> and EPA’s 1986 Gold Book recommendations for shellfishing<sup>59</sup> or the NSSP’s most recent recommendations for shellfish harvesting without depuration.<sup>60</sup> EPA also recommends that any revision extend to all waters in Maine, not just waters in Indian lands.

**Exceptions to Prohibitions on Discharges to Class AA and Class SA Waters [38 M.R.S. § 465(1.C.(1)) and 38 M.R.S. § 465-B(1.C.(1))]**

EPA’s review of 38 M.R.S. § 465(1.C.(1)) and 38 M.R.S. § 465-B(1.C.(1)), which allow an exception from the general prohibitions on direct discharges to Class AA and SA waters, respectively, for stormwater discharges that comply with state and local requirements, is based on whether they are consistent with the federal antidegradation requirement at 40 C.F.R. § 131.12(a)(3).

Class AA and SA waters are specifically identified as outstanding national resource waters (“ONRWs”) in 38 MRS § 464(4.F.(2)) and are therefore afforded the highest (Tier 3) protection under the antidegradation policy. The quality of such waters must be “maintained and protected,” which EPA interprets to mean no new or increased discharges to ONRWs or their tributaries that would lower water quality, with some exception for limited activities that result in temporary and short-term changes in water quality (Water Quality Standards Handbook: Second Edition, EPA-823-B-94-005a, August 1994). Stormwater discharges may be short-term, but they are not temporary in most cases, and we have not found provisions in other state laws that would ensure that any such stormwater discharges are controlled or treated such that the Class AA and SA water quality will be maintained and protected. Therefore, these provisions are not consistent with Tier 3 antidegradation requirements.

EPA is disapproving 38 M.R.S. § 465(1.C.(1)) and § 465-B(1.C.(1)) as they apply to all Class AA and SA waters in Maine, because EPA never acted on these provisions for any waters previously. These provisions were submitted to EPA before May 30, 2000 and therefore will remain in effect in state waters outside Indian lands until either EPA approves a revision promulgated by Maine or EPA promulgates a revision. See 40 C.F.R. § 131.21(c). Maine may remedy the disapprovals by removing or narrowing these exceptions to the prohibitions on direct discharges to ONRWs.

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<sup>58</sup> EPA, [Recreational Water Quality Criteria](#), Office of Water 820-F-12-058, 2012.

<sup>59</sup> EPA, [Quality Criteria for Water 1986](#), EPA 440/5-86-001, Dissolved Oxygen, May 1, 1986.

<sup>60</sup> NSSP, [Guide for the Control of Molluscan Shellfish 2013 Revision](#), 2013.

## **Tidal<sup>61</sup> Waters Temperature Criteria [DEP Rule Chapter 582(5)]**

EPA's review of the temperature criteria for tidal waters in DEP Rule Chapter 582(5), is based on whether the criteria protect estuarine and marine life uses for waters in Indian lands. Chapter 582(5) provides limits on the allowable rise in ambient temperature from individual discharges and provides a maximum allowable temperature from cumulative discharges. The allowable rise from individual dischargers is 4° F from September 2<sup>nd</sup> to May 30<sup>th</sup> and 1.5° F from June 1<sup>st</sup> to September 1<sup>st</sup>, as measured outside of any mixing zone. The maximum temperature allowed is 85° F, also as measured outside of any mixing zone.

EPA approved the temperature criteria for tidal waters in state waters in 1973<sup>62</sup>, which were based, in part, on the U.S. Department of Interior's ("DOI") 1968 "Green Book" recommendations for temperature differentials in marine waters.<sup>63</sup> DOI's 1968 recommendations were replaced in 1976 by EPA's "Red Book" recommendations<sup>64</sup> and again, most recently, in 1986 by EPA's Gold Book recommendations. While DEP updated its freshwater temperature criteria in 1989 and, among other things, added reference to EPA's recommended criteria to protect indigenous species, DEP has not updated its tidal temperature criteria since 1973. They make no reference to EPA's recommended criteria or to the development of equally protective site specific criteria.

The Gold Book recommendations include 1) a maximum acceptable increase in the weekly average temperature resulting from artificial sources of 1° C (1.8° F) during all seasons of the year, providing the summer maxima are not exceeded; 2) daily temperature cycles characteristic of the water body segment should not be altered in either amplitude or frequency; and 3) summer thermal maxima, which define the upper thermal limits for the communities of the discharge area, should be established on a site-specific basis. Baseline thermal conditions should be measured at a site where there is no unnatural thermal addition from any source, which is in reasonable proximity to the thermal discharge (within 5 miles) and which has a similar hydrography to that of the receiving waters at the discharge.<sup>65</sup>

The Gold Book also explains the importance of maintaining ambient water temperatures close to the baseline:

...life associated with the aquatic environment in any location has its species composition and activity regulated by water temperature. Since essentially all of these organisms are so-called "cold blooded" or poikilotherms, the temperature of the water regulates their metabolism and ability to survive and reproduce effectively.<sup>66</sup>

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<sup>61</sup> Although no definition of "tidal waters" is currently included in Maine's WQS, EPA assumes that the term "tidal waters" means "estuarine and marine waters," as defined in 38 M.R.S. § 361-A(5), since that definition was previously used to define "tidal waters." See L.D.1503, "An Act to Amend the Classification System for Maine Waters and Change the Classifications of Certain Waters," 112<sup>th</sup> Maine legislature, 1986.

<sup>62</sup> December 17, 1973, letter from John A.S. McGlennon, EPA to Kenneth M. Curtis, Governor of Maine.

<sup>63</sup> U.S. Department of the Interior, *Report of the Committee on Water Quality Criteria* ("Green Book"), April 1, 1968, page 69.

<sup>64</sup> EPA, *Quality Criteria for Water* ("Red Book"), July 1976, page 218.

<sup>65</sup> EPA, [Quality Criteria for Water 1986](#), EPA 440/5-86-001, May 1, 1986, pages 2-3 of Temperature section.

<sup>66</sup> EPA, [Quality Criteria for Water 1986](#), EPA 440/5-86-001, Temperature, May 1, 1986.

Maine's provision that allows a 4° F monthly average temperature rise above maximum ambient temperatures is inconsistent with EPA's recommendation.

Based on NOAA data, the average temperatures in Maine coastal waters in the vicinity of Eastport, which is the closest monitoring location to the Passamaquoddy Reservation at Pleasant Point, range from 37° F in February to 52° F in September.<sup>67</sup>

Maine's designated uses and narrative criteria for estuarine and marine waters in 38 M.R.S. § 465-B require, for SA waters, that habitat be "natural," and that estuarine and marine life be as naturally occurs; for SB waters, that habitat be characterized as unimpaired, and that the water quality be of sufficient quality to support all indigenous species without detrimental changes to the biological community; and for SC waters, that the water quality be of sufficient quality to support all indigenous species of fish and maintain the structure and function of the resident biological community. Maine's maximum temperature criterion of 85° F in estuarine and marine waters could not, by any measure, be considered protective of species which have been associated with waters in the 37° F to 52° F range, including indigenous species such as the anadromous Atlantic salmon, blueback herring, alewife, and American shad present in the vicinity of the St. Croix River. Ambient summertime water temperatures of 85° F are more typical of Atlantic coastal waters of the southern United States.<sup>68</sup>

EPA is disapproving the tidal water temperature criteria for waters in Indian lands because they do not protect the designated uses as required by the CWA and by 40 C.F.R. § 131.11(a). Maine may remedy EPA's disapproval by adopting temperature criteria that are consistent with EPA's current recommendations or by providing alternative site specific criteria that are based on sound scientific rationale and are sufficient to protect the designated uses. Although the disapproval does not apply to tidal waters temperature criteria for Maine waters outside waters in Indian lands, EPA recommends that Maine adopt new tidal waters temperature criteria statewide, in accordance with the requirements of 40 C.F.R. § 131.6(c) and 40 C.F.R § 131.20(a).

### **New or Revised Provisions That are Not WQS and do Not Require an EPA Decision**

As noted above, EPA reviewed Maine's statutes and rules in the State's docket and EPA's repository and identified provisions that, while important elements of state law, are not WQS requiring EPA review and approval or disapproval pursuant to Section 303(c)(2) of the Clean Water Act and 40 C.F.R. part 131. As discussed in more detail in EPA's February 2, 2015 decision, EPA recently clarified how it determines what is or is not a new or revised WQS, as summarized in EPA's 2012 Frequently Asked Questions ("FAQ") publication on the subject. After careful review of Maine's statutes and rules in light of this clarification, EPA finds that the provisions listed below are not WQS requiring EPA review and approval or disapproval, because they do not establish, alter, or in any other way include or address designated uses, criteria, or antidegradation requirements.

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<sup>67</sup>NOAA, Water Temperature Table of All Coastal Regions, [https://www.nodc.noaa.gov/dsdt/cwtg/all\\_meanT.html](https://www.nodc.noaa.gov/dsdt/cwtg/all_meanT.html)

<sup>68</sup> Id.

- 38 M.R.S. §§ 361-A and 466 – Definitions contained in these sections that are not specifically listed and approved above;
- 38 M.R.S. § 410-H – Nonpoint Source Pollution Program Definitions;
- 38 M.R.S. § 410-I – Nonpoint Source Pollution Program Implementation;
- 38 M.R.S. § 413(1)-(10) and (11.A, 11.B, 11.C, 11.F, and 11.G) – Waste discharge licenses;
- 38 M.R.S. § 414-A(1.D), (1.E), (1-A), (1-B), (1-C), and (3)-(6) – Conditions of licenses;
- 38 M.R.S. § 414-B – Publically Owned Treatment Works;
- 38 M.R.S. § 414-C(1), (2), and (4)-(6) – Color Pollution Control;
- 38 M.R.S. § 417 – Certain Deposits and Discharges Prohibited;
- 38 M.R.S. § 418 -- Log Driving Storage;
- 38 M.R.S. § 418-A -- Protection of Lower Penobscot River;
- 38 M.R.S. § 419-A – Prohibition on the Use of Tributyltin as an Anti-fouling Agent;
- 38 M.R.S. § 420(1), (1-A), (2.I), and (3) – Certain Deposits and Discharges Prohibited;
- 38 M.R.S. § 423 – Discharge of Waste from Watercraft;
- 38 M.R.S. § 423-A – Discharge of Waste from Motor Vehicles;
- 38 M.R.S. § 451-A – Time Schedule Variances;
- 38 M.R.S. § 464(3.A), (3.C), and (3.D) (reports to the Legislature); (4.A.(1), (1.(a), 1.(b),<sup>69</sup> (2), and (6) – (11)) (general discharge provisions); (4.J) (use of assimilative capacity); (4.K) (effluent limits for metals); (5) (rulemaking); (6) (implementation of biological water quality criteria); (7) (interdepartmental coordination); (8) (development of group systems); and (12) (discharges from fish hatcheries);
- 38 M.R.S. § 465(2.C.(1) – (5))(exceptions to general requirements on discharges to Class A waters); (2.D) (stormwater discharges to Class A waters ); (2.E) (deposit of material on banks of Class A waters); (3.C.(2)) (discharges of pesticides for mosquito borne diseases to Class B waters); and in (4.B.(2)), the second to last paragraph (regarding agreements with licensees and water quality certificate holders.)

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<sup>69</sup> EPA previously concluded in its February 2, 2015 decision that § 464(4)(A.(1)(c)-(f)) are not WQS.



- 38 M.R.S. § 465-A(1.C) -- Exceptions to prohibitions on discharges to Class GPA waters);
- 38 M.R.S. § 465-B(2.C, second sentence) – Prohibition on certain new discharges to Class SB waters;
- DEP Rule Chapter 450/Chapter 11 -- Administrative Regulations for Hydropower Projects;
- DEP Rule Chapter 514 -- Regulations Concerning the Use of Aquatic Pesticides;
- DEP Rule Chapter 519 -- Interim Effluent Limitations and Controls for the Discharge of Mercury;
- DEP Rule Chapter 530 – Surface Waters Toxics Control Program, except section 4.B (stream design flows), which EPA approved for tribal waters on February 2, 2015;
- DEP Rule Chapter 550 -- Discontinuance of Wastewater Treatment Lagoons;
- DEP Rule Chapter 570 -- Stormwater and Combined Sewer Overflows; and
- DEP Rule Chapter 586 – Rules Pertaining to Discharges to Class A Waters.

EPA has previously approved some of the above-listed provisions for state waters, assuming that they were WQS, or without calling out embedded non-WQS language in a longer narrative. However, under CWA §303(c), EPA only has the authority and duty to approve or disapprove new or revised state WQS. Therefore, EPA’s prior “approvals” related to these provisions have no legal effect. EPA is hereby clarifying that in spite of letters that might indicate otherwise, the Agency has not taken action pursuant to CWA §303(c) on any of these provisions because it had no authority to do so.<sup>70</sup>

EPA looks forward to continued cooperation with Maine in the development, review, and approval of water quality standards pursuant to our responsibilities under the Clean Water Act. As stated in the February 2, 2015 letter, EPA would like to begin discussions with DEP as soon

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<sup>70</sup> There are several statutes and regulations listed in EPA’s repository that Maine DEP did not include with its formal submission to EPA in 2000 of all of its WQS. On the repository, they are accompanied by an asterisk (\*) indicating that they are not part of the official Maine CWA-WQS docket and not subject to review under the Clean Water Act. They include 38 M.R.S. § 419-B (Goals for dates of removal of transformers containing polychlorinated biphenyls); 38 M.R.S. § 465-C (Standards of Classification of Groundwater); 38 M.R.S. § 470 (Classification of Groundwater); 38 M.R.S. § 470-H (In-stream Flow and Water Level Requirements); and DEP Rule Chapter 587 (In-stream Flow and Water Level Requirements). EPA agrees that 38 M.R.S. §§ 419-B, 465-C, 470, and 470-H are not WQS subject to CWA review. EPA would like to better understand Maine’s rationale for asserting that Rule Chapter 587 does not contain WQS before concluding that no part of the Rule is subject to CWA review.

as possible about the criteria that EPA has disapproved. EPA will again attempt to work with DEP to schedule such discussions. In the meantime, please contact Ellen Weitzler (at [weitzler.ellen@epa.gov](mailto:weitzler.ellen@epa.gov) or 617-918-1582) if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "H. Curtis Spalding". The signature is written in a cursive style with a large initial "H" and "C".

H. Curtis Spalding  
Regional Administrator