



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION I

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BOSTON, MASSACHUSETTS 02109-3912

April 11, 2016

Paul Mercer, Commissioner  
Maine Department of Environmental Protection  
17 State House Station  
Augusta, ME 04333-0017

Re: Withdrawal of Disapprovals, and Issuance of Approvals, of Maine's Human Health Criteria for Multiple Pollutants

Dear Commissioner Mercer:

On February 2, 2015, EPA disapproved Maine's new or revised human health criteria (HHC), set forth in DEP Rule Chapter 584, as they relate to waters in Indian lands in Maine. The disapprovals were based on EPA's conclusion that the HHC do not protect the sustenance fishing use in those waters because Maine's 32.4 g/day fish consumption rate (FCR) is not representative of an unsuppressed sustenance fish consumption rate by the tribes, who are the target general population in waters in Indian lands.

In June 2015, EPA updated its Clean Water Act § 304(a) recommended criteria for human health for 94 pollutants (the 2015 criteria update).<sup>1</sup> For eighteen of those pollutants, calculating the HHC using the latest science reflected in the 2015 criteria update along with a FCR of 286 g/day, which EPA believes represents an unsuppressed sustenance fish consumption rate for the tribes in Maine, results in HHC that are the same or less stringent than Maine's corresponding HHC that EPA disapproved for the consumption of water plus organisms and/or for the consumption of organisms alone, as shown in Table 1. Consequently, EPA has now concluded (1) that Maine's HHC for the consumption of water plus organisms for 1,2-dichloropropane, 1,4-dichlorobenzene, dichlorobromomethane, chlorodibromomethane, chrysene, methylene chloride, nitrosopyrrolidine, chlorophenoxy herbicide (2, 4, 5-TP), and chlorophenoxy herbicide (2,4-D) are stringent enough to protect the sustenance fishing use; (2) that Maine's HHC for the consumption of organisms alone for acrolein and gamma-BHC (lindane) are stringent enough to protect the sustenance fishing use; and (3) that Maine's HHC for the consumption of water plus organisms as well as Maine's HHC for the consumption of organisms alone for 1,2-dichloroethane, acrylonitrile, benzidine, bis(chloromethyl) ether,

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<sup>1</sup> Final Updated Ambient Water Quality Criteria for the Protection of Human Health, (80 FR 36986, June 29, 2015). See also: USEPA. 2015. Final 2015 Updated National Recommended Human Health Criteria. U.S. Environmental Protection Agency, Office of Water, Washington, DC.  
<http://water.epa.gov/scitech/swguidance/standards/criteria/current/hhfinal.cfm>.

chloroform, methyl bromide, and tetrachloroethylene are stringent enough to protect the sustenance fishing use.

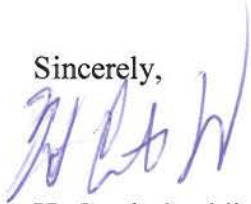
Accordingly, pursuant to Section 303(c)(3) of the CWA and 40 C.F.R. part 131, for waters in Indian lands, I hereby withdraw the disapprovals of, and approve, Maine's HHC as follows:

- 1) for the consumption of water plus organisms<sup>2</sup> for 1,2-dichloropropane, 1,4-dichlorobenzene, dichlorobromomethane, chlorodibromomethane, chrysene, methylene chloride, nitrosopyrrolidine, chlorophenoxy herbicide (2, 4, 5-TP), and chlorophenoxy herbicide (2,4-D);
- 2) for the consumption of organisms alone<sup>3</sup> for acrolein and gamma-BHC (lindane); and
- 3) for both the consumption of water plus organisms and the consumption of organisms alone for 1,2-dichloroethane, acrylonitrile, benzidine, bis(chloromethyl) ether, chloroform, methyl bromide, and tetrachloroethylene.

As explained above, EPA is taking these actions because the identified HHC are protective of the sustenance fishing use in the waters in Indian lands.

Please contact Jeanne Voorhees in the Office of Ecosystem Protection at 617-918-1686 if you have any questions.

Sincerely,



H. Curtis Spalding  
Regional Administrator

cc: Brian Kavanah, MEDEP  
Jennifer Brundage, EPA SHPD  
Christina Christensen, EPA SHPD  
Jeanne Voorhees, EPA Region 1  
Jennie Bridge, EPA Region 1

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<sup>2</sup> Note that for 1,2-dichloropropane, 1,4-dichlorobenzene, dichlorobromomethane, chlorodibromomethane, chrysene, methylene chloride, and nitrosopyrrolidine, EPA is not withdrawing its disapproval of the criteria to protect consumption of organisms only.

<sup>3</sup> Note that for these pollutants, EPA is not withdrawing its disapproval of the criteria to protect consumption of water and organisms.



**Table 1 - Summary of Approved Human Health Criteria**

Pollutant	CAS Number	Water + Organisms Criteria (µg/L)		Organisms Only Criteria (µg/L)	
		Approved Maine Criteria	EPA Calculated Criteria*	Approved Maine Criteria	EPA Calculated Criteria*
1,2-dichloropropane	78875	0.5	0.66		
1,4-dichlorobenzene	106467	50	60		
dichlorobromomethane	75274	0.53	0.66		
chlorodibromomethane	124481	0.40	0.54		
chrysene	218019	0.003	0.0098		
methylene chloride	75092	4.6	10		
nitrosopyrrolidine	930552	0.016	0.016		
chlorophenoxy herbicide (2, 4, 5-TP)	93721	10	30		
chlorophenoxy herbicide (2,4-D)	94757	100	550		
acrolein	107028			5.0	30
gamma-BHC (lindane)	58899			0.1	0.33
1,2-dichloroethane	107062	0.38	8.4	19.8	48
acrylonitrile	107131	0.04	0.055	0.13	0.52
benzidine	92875	0.00006	0.00012	0.0001	0.00078
bis(chloromethyl) ether	542881	0.000079	0.00014	0.00016	0.0013
chloroform	67663	5.4	50	94	200
methyl bromide	74839	46	100	800	900
tetrachloroethylene	127184	0.59	1.9	1.77	2.1

\*EPA Calculated Criteria were derived using EPA's *Methodology for Deriving Ambient Water Quality Criteria for the Protection of Human Health (2000)* (EPA-822-B-00-004) and EPA's 2015 Human Health Criteria recommended inputs for these pollutants (see EPA's *Fact Sheet (EPA 820-F-15-001)* and *June 2015 input summary table* at <http://www.epa.gov/sites/production/files/2015-10/documents/chemical-specific-inputs-for-the-2015-final-updated-human-health-ambient-water-quality-criteria-june-2015.pdf>), except for the fish consumption rate (FCR). The FCR used was 286 g/day, of which 36% was assumed to be consumed from trophic level 2, 40% from trophic level 3 and 24% from trophic level 4, consistent with the relative apportionment of fish consumed in EPA's 2015 recommendations.