



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 10

1200 Sixth Avenue, Suite 155  
Seattle, WA 98101-3123

WATER  
DIVISION

JUL 02 2019

Deane Osterman, Executive Director  
Kalispel Natural Resources Department  
Kalispel Tribe of Indians  
P.O. Box 39  
Usk, Washington 99180

Re: The EPA's Action on Revised Dioxin and Thallium Human Health Criteria of the  
Kalispel Tribe of Indians 2017 Surface Water Quality Standards

Dear Mr. Osterman:

The U.S. Environmental Protection Agency has completed its Clean Water Act review of the revised human health criteria for 2,3,7,8-TCDD (dioxin) and thallium that the Kalispel Tribe submitted to the EPA on October 27, 2017. Under CWA § 303, 33 U.S.C. § 1313, tribes that are authorized for treatment in a manner similar to a state for the purpose of administering a water quality standards program must submit new and revised WQS to the EPA for review and action. In accordance with its CWA authority, 33 U.S.C. § 1313(c)(3) and 40 CFR 131, the EPA approves the human health criteria for 2,3,7,8-TCDD (dioxin) and thallium in Section 10: Toxic Substances pertaining to human health criteria.

Under § 303(c) of the CWA and federal implementing regulations at 40 CFR 131.4, states and authorized tribes have the primary responsibility for reviewing, establishing, and revising WQS, which consist of the designated uses of a waterbody or waterbody segment, the water quality criteria necessary to protect those designated uses, and an antidegradation policy. This statutory framework allows states and authorized tribes to work with local communities to adopt appropriate designated uses (as required in 40 CFR 131.10(a)) and to adopt criteria to protect those designated uses (as required in 40 CFR 131.11(a)).

On March 18, 2003, the Tribe adopted new WQS, which the EPA approved on June 24, 2004. On October 27, 2017, the Tribe submitted revised WQS that incorporated, among other things, the Tribal Council's approved fish consumption rate of 389 grams/day and revised human health criteria that incorporated this fish consumption rate and other updated factors.<sup>1</sup> Prior to adopting the revised WQS, the Tribe provided the opportunity for public comment starting on January 25, 2016, and held a public hearing on March 14, 2016. The invitation for comment and

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<sup>1</sup> The Tribe resubmitted WQS in 2017 after revising significant figures and rounding in several human health criteria values from a previous September 22, 2016 submittal. The Tribe considered these non-substantive corrections, and the EPA is acting on the 2017 version of the Tribe's WQS. The Tribe's Council approved the 2017 version and a Tribal Attorney's Certification was included, dated October 25, 2017.

announcement of the public hearing was also sent to the EPA Region 10 and the Washington State Department of Ecology. No public comments were received other than those provided by the EPA.

#### Human Health Criteria Derivation

The input parameters that the Tribe used to derive the human health criteria for dioxin and thallium are generally consistent with the EPA's 2000 Human Health Methodology<sup>2</sup> and the EPA's 2015 CWA § 304(a) human health criteria recommendations.<sup>3</sup> The Tribe used the following input parameters to derive the dioxin and thallium human health criteria in the 2017 WQS:

- A **fish consumption rate** of 389 grams per day. This value is based on the 99<sup>th</sup> percentile of surveyed adults from *A Fish Consumption Survey of the Umatilla, Nez Perce, Yakama, and Warm Springs Tribes of the Columbia River Basin* (Columbia River Inter-Tribal Fish Commission, 1994), which provides relevant local and regional fish consumption data consistent with the EPA's 2000 Human Health Methodology.
- **Toxicity factors** (reference dose for thallium and cancer slope factor for dioxin) consistent with the EPA's current recommendations.
- **Bioconcentration factors** consistent with the EPA's current recommendations; bioconcentration factors were used in the absence of available bioaccumulation factors.
- A **cancer risk level** of  $10^{-6}$  for dioxin, consistent with the EPA's 2000 Human Health Methodology.
- A **relative source contribution** of 0.2 for thallium, consistent with the EPA's 2015 recommendations for non-carcinogens.
- A **drinking water intake rate** of 2.4 liters per day consistent with the EPA's 2015 recommendations.
- A **body weight** input of 70 kg based on the NHANES III database (1988-1994). The Tribe indicated that it does not have information to show that the EPA's 2015 increased body weight assumption of 80 kg applies to tribal members. Therefore, the Tribe has chosen to retain use of the previous body weight assumption until regional-specific information is available.

The EPA's national recommended 304(a) human health criteria for thallium (published in 2003) are based on an IRIS reference dose from 1990. The EPA's national recommended human health criteria for dioxin (published in 2002) are based on a cancer slope factor from 1988. The existing national recommended 304(a) human health criteria for both thallium and dioxin are derived using a fish consumption rate of 17.5 g/day. The EPA did not update the 304(a) national recommended criteria for these two pollutants in 2015 because further analysis was necessary to develop scientifically sound recommendations.<sup>4</sup> For thallium and dioxin, the Tribe used the

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<sup>2</sup> USEPA. October 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, available at <https://nepis.epa.gov/Exe/ZyPDF.cgi/20003D2R.PDF?Dockey=20003D2R.PDF>.

<sup>3</sup> <https://www.epa.gov/sites/production/files/2015-10/documents/human-health-2015-update-factsheet.pdf>.

<sup>4</sup> USEPA. 2015. EPA Response to Scientific Views from the Public on Draft Updated National Recommended Water Quality Criteria for the Protection of Human Health. U.S. Environmental Protection Agency, Office of Water, Washington, D.C. <https://www.epa.gov/sites/production/files/2015-10/documents/epa-response-to-publiccomments-to-human-health-final-criteria.pdf>.

EPA's existing 304(a) recommendations along with the Tribe's selected fish consumption rate of 389 g/day and the EPA-recommended drinking water intake rate of 1.4 L/day, and adopted the criteria provided in Table 2 of the 2017 WQS submittal.

Under the CWA, the EPA has an obligation to act on the Tribe's human health criteria for thallium and dioxin. Because the Tribe used existing EPA data on the toxicity of thallium and dioxin and relied on the derivation methodology from EPA guidance and 304(a) recommendations, the EPA approves these human health criteria. As new information becomes available from IRIS, the EPA encourages the Tribe to consider revisions, if necessary, to incorporate the latest science for dioxin and thallium.

The EPA appreciates our work together and we remain committed to providing ongoing assistance to the Tribe. If you have any questions concerning this letter, please contact me at (206) 553-1855 or Hanh Shaw, Standards and Assessment Section Manager, at (206) 553-0171.

Sincerely,

A handwritten signature in blue ink, appearing to read "Daniel D. Opalski".

Daniel D. Opalski  
Director

cc: Mr. Ken Merrill, Water Resources Program, Kalispel Tribe