



Brock Tabor
Alaska Department of Environmental Conservation
Division of Water – Water Quality Program
PO Box 111800
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Juneau, Alaska 99811

March 31, 2023

Dear Mr. Tabor:

NANA Regional Corporation appreciates the opportunity to comment in response to DEC’s Public Notice, “Alaska DEC Online Public Notice for Scoping: Development of Criteria for the Protection of Human Health in State Water Quality Standards,” published on February 9, 2023. NANA is owned by more than 15,000 Iñupiaq shareholders who live or have roots in northwest Alaska. We rely on the 38,000 square miles of lands that make up the NANA region for foods that sustain us nutritionally and spiritually. NANA is committed to protecting its lands to preserve subsistence and the Iñupiaq way of life, which requires safe water for its people and fish. NANA is also committed to ensuring that DEC develop water quality standards to protect regulated waters that are based on defensible science.

Our responses to DEC’s request for comments are presented below.

1. What methodology should DEC use to revise HHC in State Water Quality Standards?

NANA response: NANA expects DEC to develop methodology that ensure water quality criteria protect our shareholders from exposure to pollutants in regulated waters. Subsistence use is NANA’s highest use of its land and associated waters. The Clean Water Act is intended to address and reduce pollution and human health risk from pollutants in regulated waters. However, it is not intended to address, and cannot reduce, pollution and human health risk from pollutants in non-regulated and international waters. Health exposure from pollutants in non-regulated and international waters can only be addressed by source control. DEC methodology must ensure protection from the risk of exposure to pollutants in jurisdictional, regulated waters.

2. Should, and if so, how should DEC use the EPA Methodology for Deriving Ambient Water Quality Criteria for the Protection of Human Health (2000)?

NANA response:

The EPA methodology could serve as a basis for DEC’s methodology but must ensure that Alaska-specific issues are addressed, such as the potential to double-count salmonids and to impose criteria in jurisdictional waters that do not protect against human exposure to pollutants from species that are most exposed to pollutants in non-jurisdictional waters.

3. Comments related to HHC Formula Input: Bioaccumulation/Bioconcentration values?

NANA response:

Bioaccumulation factors for pollutants must have sufficient defensible data for Alaska species in Alaska waters. If no data exist, NANA recommends DEC 1) apply bioconcentration factors with sufficient

defensible data for Alaska species in Alaska waters, and 2) develop a plan to establish data to develop bioaccumulation factors for pollutants. Regardless, both bioaccumulation and bioconcentration factors need to be scientifically defensible.

4. Comments related to HHC Formula Input: Body Weight

NANA response: No comments

5. Comments related to HHC Formula Input: Cancer Risk Level

NANA response: No comments

6. Comments related to HHC Formula Input: Cancer Slope Factor

NANA response: No comments

7. Comments related to HHC Formula Input: Drinking Water Intake

NANA response: No comments

8. Comments related to HHC Formula Input: Fish Consumption Rate

NANA response:

- a. Inclusion of salmon in the FCR: Salmon constitutes a large portion of our shareholders' diet, and all our communities practice subsistence harvesting of salmon. However, the relationship between local water quality and exposure of potential contaminants to the salmon, and therefore the risk of exposure to our shareholders, is obscure. Juvenile salmon and smolt will be exposed to fresh waters under the jurisdiction of the Clean Water Act for only a small portion of their lives. The ratio of salmon mass derived from feeding in jurisdictional waters to total body mass upon return is in the range from 1:20 to as little as 1:400. Even if salmon retained contaminants accumulated from exposure in freshwater early on, after a life at sea that contamination would be overwhelmed by exposure to marine waters and consumption of prey in the marine environment. The link between contaminants found in freshwater salmon habitats and risk of exposure of subsistence salmon users to those contaminants through the pathway of salmon consumption is tenuous, at best. The inability to effectively associate water quality in juvenile salmon habitat with exposure to humans through consumption of adult salmon suggests that the rate of consumption of salmon cannot be meaningful in determining human health risk.

The inclusion of salmon, including species that may spend a significant portion of the life cycle in non-regulated and international waters, in the FCR would not provide additional human health protection, yet would result in significantly lower HHC. However, the lower HHC would not reduce our shareholders' or other Alaskan's exposure to pollutants from consuming fish that spend a significant portion of the life cycle, and therefore take up pollutants, in non-regulated waters. Nor would stricter HHC address the documented risk from the importation of pollutants from non-regulated and international waters, via fish, into jurisdictional waters. Infrastructure and development projects might not be able to meet the HHC, or the costs to do so might be prohibitive, yet our shareholders would remain at risk from pollutants taken up by fish from non-regulated and international waters. The inclusion of salmon in the FCR may present to the public the appearance of reduced risk from pollutants but is unlikely to actually reduce that risk.

NANA does not support the inclusion of salmon in the FCR (as opposed to the RSC) because it is:

- i. inconsistent with EPA's past recommendations and current approach to deriving national HHC;
 - ii. could result in significantly lower HHC and significantly higher compliance costs without a measurable reduction in risk from pollutants; and
 - iii. could result in "double-counting," since the RSC already accounts for marine fish species yet salmon would be captured by the FCR as well.
- b. Inclusion of marine mammals in the FCR: Subsistence use of bearded seal, beluga, and bowhead whales is a critical part of NANA's culture. However, HHC are developed to regulate the discharge of pollutants into jurisdictional waters. The data on marine mammal life cycle and pollutant uptake in jurisdictional waters are currently inconclusive or unavailable. Including marine mammals in the FCR without sufficient data to support their inclusion may not reduce the risk of human exposure to pollutants in marine mammal tissue and may ignore the importance of source control outside regulated waters. The potential for human exposure to pollutants in marine mammals is an important issue for NANA that DEC should address with a systematic approach to identify marine mammal pollutant uptake exposure and control the pollutants at the source. The relative source contribution can address the risk for those pollutants known to accumulate in marine mammals (e.g., PCBs).

NANA does not support the inclusion of marine mammals in the FCR unless and until sufficient life cycle and pollutant data are developed to demonstrate the risks within jurisdictional waters.

9. Comments related to HHC Formula Input: Reference Dose

NANA response: No comments

10. Comments related to HHC Formula Input: Relative Source Contribution

NANA response:

Please see comments in Question 8, "Fish Consumption Rate."

11. Other comments that may be related to how DEC revises HHC.

NANA response:

1. Implementation:

We observed that some methods proposed to derive the FCR may result in very low HHC without demonstrating additional protection for human health. This could significantly increase the number of water bodies listed as "impaired," even if the waters pose no actual human health risk and may limit NANA's use of our lands.

There are significant challenges and costs to permitting discharges to impaired waters such that projects that require discharges to "impaired" waters could be delayed or prohibited. Without an analysis of which waterbodies would likely become impaired for specific HHC and the associated State and discharger costs required to develop and implement total maximum daily loads, the State cannot reasonably make informed decisions regarding the proposed methods to derive the HHC.

For other (“non-impaired”) waters, the revised HHC will likely pose hurdles to permitting discharges for rural community infrastructure and industry if the criteria cannot be met. DEC suggested dischargers could use existing implementation tools, such as mixing zones and compliance schedules, to permit discharges. Compliance schedules provide a limited extension to adopt technology to meet the HHC, which can temporarily defer some of the costs to comply but is unlikely to reduce the overall cost. All mixing zones are prohibited in anadromous fish spawning waters, so they provide no benefits in much of Alaska. The revised HHC may make some projects uneconomical, especially for rural communities, and could limit and industrial development. As stated above, it is not clear that the additional treatment and associated cost to meet these more stringent HHC derived would provide a reduction in human health risk from consumption of fish caught in fresh water. The state has an obligation to establish HHC based on reasonable assumptions to address human health risk. However, the state has wide discretion in determining how to establish and implement HHC that are protective of human health while at the same time not imposing extremely burdensome and unnecessary costs on rural communities and industry. Given the real potential that the methods being considered by the state to derive HHC could lead to prohibitive costs without tangible reductions in risk, the state should conduct a thorough and transparent cost-benefit analysis prior to promulgating draft HHC. Each element/assumption in deriving the criteria should be considered in terms of how it actually minimizes risk. The cost-benefit analysis should determine the likely costs of HHC implementation to rural communities, industrial dischargers, and other affected parties.

2. Regulations:

NANA appreciates that DEC included us in the HHC Technical Working Group process and recommends that DEC include the public in the regulatory development process prior to releasing draft regulations. NANA recognizes that the Technical Working Group process is complete, and that DEC has committed to a timeline with EPA. However, NANA believes that a “strawman” approach to developing the regulations would show transparency in the process and be more likely to result in regulations that achieve the protective goals and intent of the Clean Water Act, result in HHC that protect people from the risk of pollutants in regulated waters, and allow for equitable and cost-effective implementation.

Respectfully submitted by,

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