

# **Alaska Department of Environmental Conservation (DEC) Response to Comments for the Draft Certificate of Reasonable Assurance for the Haines Borough Wastewater Treatment Plant (WWTP) National Pollutant Discharge Elimination System (NPDES) Permit No. AK0021385**

## **Summary**

The Haines Borough (Haines) Draft NPDES Permit, AK0021385 was public noticed by the Environmental Protection Agency on May 4, 2023 for 45 days. DEC's Draft Certificate of Reasonable Assurance of Reasonable Assurance was public noticed on September 27, 2023 for 30 days. This document summarizes the comments and the justification for any action taken or not taken by DEC in response to the comments related to the Draft Certificate of Reasonable Assurance.

## **1. Disinfection/Dechlorination**

### **Comment Summary**

Haines requests an explanation for why acceptable fecal coliform bacteria levels proposed for effluent were reduced nearly 5,000-fold and why disinfection is required. They compare fecal coliform bacteria's 5,000-fold decrease to enterococcus bacteria that has a proposed effluent level that is 19 times higher than the enterococcus bacteria water quality criterion of 35 colony forming units per 100 mL (CFU/100 mL). Haines states that fecal coliform bacteria monitoring results from previous mixing zone monitoring does not indicate a public health concern in Portage Cove. Portage Cove has significant tidal influence and limited recreational activity due to cold water temperatures and boating traffic. In order to achieve compliance with the final bacteria effluent limits, engineering services will be required to develop a design for a disinfection process, equipment will need to be procured, and construction and/or remodeling will be necessary to accommodate the new treatment system. In order to address fisheries concerns, a dechlorination system will also be needed. The Haines Borough estimates that the WWTP expansion will run over 4 million dollars. Furthermore, that the change will place considerable cost upon their community, will cause a financial hardship, and that the proposal is unacceptable without grants.

### **DEC Response**

DEC provided the regulatory basis for the final fecal coliform effluent limits in DEC's Draft Certificate of Reasonable Assurance, the text, of which is copied below. The 2001 NPDES permit did not contain enterococcus bacteria limits nor was it monitored as a condition in the permit. However, because fecal coliform bacteria has reasonable potential to exceed water quality criteria, it is reasonable to expect enterococcus bacteria to exceed water quality criteria as well. Therefore, DEC authorized enterococcus bacteria in the mixing zone sized for copper and used copper's chronic dilution (19:1) to establish final enterococcus bacteria effluent limits. However, as stated in DEC's Draft Certificate of Reasonable Assurance, DEC expects that after the implementation of disinfection, the Haines WWTP may achieve compliance with enterococcus water quality criteria (30-day geometric mean 35 CFU/100 mL with not more than 10% of the samples exceeding a statistical threshold value of 130 CFU/100 mL), therefore these final enterococcus bacteria limits may be revised in the next permit reissuance.

#### *Rationale:*

*In accordance with State Regulations 18 AAC 15.090, the Department may attach terms and reporting requirements, and the posting of a performance bond or other surety, that it considers necessary to ensure that conditions to a permit, variance, or approval, including*

*operating, monitoring, inspection, sampling, access to records and all applicable criteria will be met.*

*18 AAC 72.990(21) defines disinfect to treat by means of a chemical, physical, or other process such as chlorination, ozonation, application of ultraviolet light, or sterilization, designed to eliminate pathogenic organisms, and producing an effluent with a 30-day 200 FC/100 mL monthly average and a seven-day 400 FC/100 mL average. These limits are required as final fecal coliform limits. A daily maximum final effluent limit of 800 FC/100 mL limit is also required. Establishment of a daily maximum limit will help ensure compliance with water quality criteria. Since these limits are dependent on the use of specific technological processes, DEC applies these final fecal coliform bacteria effluent limits as technology-based limits. These final fecal coliform bacteria effluent limits will ensure that the most stringent water quality criteria for fecal coliform bacteria are met at all points outside the mixing zone.*