STATE OF ALASKA
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
FINAL CERTIFICATE OF REASONABLE ASSURANCE

A Certificate of Reasonable Assurance, as required by Section 401 of the Clean Water Act, has been requested by the Environmental Protection Agency (EPA) for the marine water discharge of primary treated domestic wastewater from the Municipality of Skagway Borough (Skagway) Wastewater Treatment Plant (WWTP).

The activity is located at 59.448523° north latitude, 135.326580° west longitude, near Skagway, Alaska with discharges to Taiya Inlet.

Water Quality Certification is required for the activity because the activity will be authorized by an EPA permit identified as National Pollutant Discharge Elimination Permit No. AK0020010 and because a discharge will result from the activity.

Public notice of the application for this certification was made in accordance with 18 Alaska Administrative Code (AAC) 15.180. Public notice of the Skagway's Antidegradation Form 2G, included as an attachment to this certification, was made in accordance with 18 AAC 70.016. In accordance with 18 AAC 70.016, *Antidegradation implementation methods for discharges authorized under the federal Clean Water Act,* the Alaska Department of Environmental Conservation (DEC or Department) reviewed Skagway's Antidegradation Form 2G and determined that the information provided by Skagway complies with the requirements of 18 AAC 70.016.

DEC has completed its review of EPA's Draft National Pollutant Discharge Elimination Permit (NPDES) No. AK0020010 and associated documents and by means of this Final Certificate of Reasonable Assurance conditionally certifies that there is reasonable assurance that the activity and the resulting proposed modified discharge from the Skagway WWTP is compliant with the requirements of Section 401 of the Clean Water Act, 40 Code of Federal Regulations (CFR) 125.61, Alaska Statutes Title 46, and Alaska Water Quality Standards 18 AAC 70 provided that the modified discharge adheres to the stipulations provided below in this certification. Furthermore, as per 40 CFR 125.64(b), the Department has determined that the modified discharge will not result in an additional treatment pollution control or other requirement on any other point or nonpoint sources as Taiya Inlet is not included on DEC's 2022 Integrated Water Quality Monitoring and Assessment Report as an impaired waterbody nor is the subject portion of Taiya Inlet subject to a proposed or approved Total Maximum Daily Load.

The Final Certification of Reasonable Assurance is contingent on the inclusion of the following stipulations in NPDES Permit No. AK0020010:

1. In accordance with 18 AAC 70.240, DEC authorizes mixing zones in Taiya Inlet for copper, dissolved oxygen, temperature, total residual chlorine, enterococcus bacteria, fecal coliform bacteria, and whole effluent toxicity contained in the discharge from the Skagway WWTP. The mixing zones are defined as follows:

   The chronic mixing zone has a dilution of 32:1 and is defined as a rectangular area with a length of 6.8 meters and width of 7.5 meters centered over the diffuser with the length oriented perpendicular to the diffuser.

   The acute mixing zone has a dilution of 19:1 and is defined as a rectangular area with a length of 4.9 meters and width of 6.5 meters centered over the diffuser with the length oriented perpendicular to the diffuser.

Rationale: In accordance with State Regulations 18 AAC 70.240, the department has authority to designate mixing zones in permits or certifications. The designated mixing zones will ensure that the most stringent water quality criteria for copper (acute 5.8 micrograms per liter (µg/L), chronic 3.7 µg/L total recoverable), dissolved oxygen (6.0 milligrams per liter (mg/L) daily minimum (surface for a depth of 1 meter, no less than 4 mg/L at any depth below the surface), 17 mg/L daily maximum), temperature (15° Celsius), total residual chlorine (acute 13 µg/L, chronic 7.5 µg/L), and whole effluent toxicity (1.0 chronic toxic units) are met at all points outside of the mixing zone.

2. In order for the Skagway WWTP to achieve compliance with the fecal coliform and enterococcus bacteria final effluent limits, DEC requires the establishment of a Compliance Schedule in the permit. Final effluent limits must be met as soon as possible, but no later than 5 years after the effective date of the permit. Interim requirements that will lead to compliance with the final effluent limits with dates for their achievement must be established in the permit. The following interim requirements shall be included in the Compliance Schedule:

   By one year after the effective date of the permit, the permittee shall develop a facility plan that evaluates alternatives to meet the final fecal coliform and enterococcus bacteria effluent limits and select their preferred alternative.

   By two years after the effective date of the permit, the permittee must complete the design of the preferred alternative and request approval to construct from DEC's Engineering Support and Plan Review (ESPR).

   By three years after the effective date of the permit, the permittee must secure funding and select a contractor to construct upgrades.

   By four years after the effective date of the permit, the permittee must commence construction.

   By five years after the effective date of the permit, the permittee must complete construction, complete optimization of facility upgrade operations, and achieve compliance with the final fecal coliform and enterococcus effluent limits. Final approval to operate must be requested from ESPR.

   The permittee must submit progress or compliance reports on interim and final requirements no later than 14 days following the scheduled date of each requirement.

   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.

   According to 18 AAC 83.560, the Department has authority to specify a schedule of compliance leading to compliance with 33 U.S.C. 1251-1387 (Clean Water Act). Any schedule of compliance must require compliance as soon as possible, but no later than the applicable statutory deadline under 33 U.S.C. 1251-1387 (Clean Water Act). 18 AAC 83.560(b) requires interim requirements and dates for their achievement if the schedule of compliance exceeds one year from the date of permit issuance. Time between interim requirements must not exceed one year. Progress reports must be submitted no later than 14 days following each interim date and the final date of compliance.

   According to 18 AAC 72.200, Application for department approval, (a) Except as otherwise provided in 18 AAC 72.035(d) and 18 AAC 72.200(b), a person must submit a plan to the department and obtain approval

of that plan before constructing, installing, or modifying any part of a domestic wastewater collection, treatment, storage, or disposal system. To obtain approval, a person shall provide to the department the information required by 18 AAC 72.205. 18 AAC 72.240, states that the department will issue final approval to operate if the information required by 18 AAC 72.235 confirms that (A) the system was constructed as originally approved or (B) the system, or a designated phase of that system, otherwise meets the requirements of AS 46.03 and 18 AAC 72. DEC plan approval requirements will ensure that the most stringent water quality criteria for fecal coliform and enterococcus bacteria are met at all points outside the mixing zone.

3. DEC requires that the permit contain the following final fecal coliform effluent limits:

Monthly Average 200 fecal coliform per 100 mL (FC/100 mL)
Weekly Average 400 FC/100 mL
Daily Maximum 800 FC/100 mL.

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 72.050(a)(3), Minimum treatment, states that the Department may authorize a person to discharge domestic wastewater into or onto water or land if the discharge to surface water has received secondary treatment and has been disinfected. 18 AAC 72.050(c) states that the Department may allow or require treatment different from the minimum set out in this section as necessary to protect public health, public and private water systems, or the environment. In deciding to evaluate alternative minimum treatment requirements, the Department will consider other permit or plan approval requirements, and the receiving environment.

Under Section 301(h) of the Clean Water Act, EPA determined that the Skagway WWTP qualifies for a continuation of their waiver from secondary treatment standards for 5-day biochemical oxygen demand (BOD_5) and total suspended solid (TSS). To qualify, Skagway must meet specific criteria including a requirement to achieve primary treatment. Therefore, DEC has determined that the Skagway WWTP may treat to less than the minimum secondary treatment requirement at 18 AAC 72.050(a)(3); however, less than secondary treatment only applies to BOD_5 and TSS and does not include disinfection. Therefore, the discharge of domestic wastewater to surface water must be disinfected.

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.

4. DEC requires that the permit contain the following final enterococcus bacteria limits:

   30-day Geometric Mean 1,120 colony forming unit (CFU)/100 mL
   Daily Maximum 4,160 CFU/100 mL).

   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.

   Enterococcus bacteria has reasonable potential to exceed water quality criteria. Effluent limits based on the reasonable potential for enterococcus bacteria to exceed water quality criteria and the dilution required for the effluent to meet enterococcus water quality criteria water quality criteria were therefore developed using the chronic dilution of the driver of the mixing zone (total residual chlorine, 32:1). The final enterococcus bacteria limits will ensure that the most stringent water quality criteria for enterococcus bacteria are met at all points outside the mixing zone. DEC expects that after the implementation of disinfection, the Skagway WWTF 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.

5. DEC requires the following copper effluent limits:

   Average Monthly 37 µg/L (total recoverable)
   Daily Maximum 79 µg/L (total recoverable)

   Rationale:
   18 AAC 70.240(b)(2) requires the Department to consider the characteristics of the effluent after treatment of the wastewater. Additionally, 18 AAC 83.435(d) specifies that when the Department determines, using the procedures in 18 AAC 83.435(c), that a discharge causes, has the reasonable potential to cause, or contributes to an in-stream excursion above the allowable ambient concentration of a state numeric criteria within a state water quality standard for and individual permit, the permit must contain effluent limits for that pollutant.

   DEC used the process described in the Technical Support Document (TSD) for Water Quality-Based Toxics Control (Environmental Protection Agency, 1991) and DEC's guidance, Alaska Pollutant Discharge Elimination System Permits Reasonable Potential Analysis and Effluent Limits Development Guide (June 30, 2014) to determine the reasonable potential for copper to exceed water quality criteria. The results of the reasonable potential analysis indicated that copper with a maximum expected concentration of 78 µg/L total recoverable, has reasonable potential to exceed Alaska copper marine water quality criteria (chronic 3.7 µg/L total recoverable, acute 5.8 µg/L total recoverable). Effluent limits based on the reasonable potential for copper to exceed water quality criteria and the dilution (acute 15:1, chronic 24:1) required for the effluent to meet copper water quality criteria were therefore developed (average monthly 37 µg/L total recoverable, daily maximum 79 µg/L total recoverable). These effluent limits will ensure that the most stringent copper water quality criteria are met at all points outside the mixing zone sized for total residual chlorine.

6. DEC requires the following total residual chlorine effluent limits:

Average Monthly 79 µg/L
Daily Maximum 247 µg/L

Rationale:
18 AAC 70.240(b)(2) requires the Department to consider the characteristics of the effluent after treatment of the wastewater. Additionally, 18 AAC 83.435(d) specifies that when the Department determines, using the procedures in 18 AAC 83.435(c), that a discharge causes, has the reasonable potential to cause, or contributes to an in-stream excursion above the allowable ambient concentration of a state numeric criteria within a state water quality standard for and individual permit, the permit must contain effluent limits for that pollutant.

DEC used the process described in the Technical Support Document (TSD) for Water Quality-Based Toxics Control (Environmental Protection Agency, 1991) and DEC's guidance, Alaska Pollutant Discharge Elimination System Permits Reasonable Potential Analysis and Effluent Limits Development Guide (June 30, 2014) to determine the reasonable potential for total residual chlorine to exceed water quality criteria. The results of the reasonable potential analysis indicated that total residual chlorine with a maximum expected concentration of 242 µg/L, has reasonable potential to exceed Alaska total residual chlorine marine water quality criteria (acute 13 µg/L, chronic 7.5 µg/L). Effluent limits based on the reasonable potential for total residual chlorine to exceed water quality criteria and the dilution required for the effluent to meet total residual chlorine water quality criteria (acute 19:1, chronic 32:1) were therefore developed (average monthly 79 µg/L, daily maximum 247µg/L). These effluent limits will ensure that the most stringent total residual chlorine water quality criteria are met at all points outside the mixing zone sized for total residual chlorine.

Signature	March 14, 2024 Date
James Rypkema Printed Name	Acting Program Manager Title