

# STATE OF ALASKA

**DEPARTMENT OF ENVIRONMENTAL CONSERVATION  
DIVISION OF WATER  
Wastewater Discharge Authorization Program**

**SEAN PARNELL, GOVERNOR**

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August 5, 2011

DEC File No. 150.45.111  
Certified Mail No.:  
Return Receipt Requested

Mr. Paul Anderson  
Denali National Park  
P.O. Box 9  
Denali National Park, AK 99755

Re: Draft Certificate of Reasonable Assurance for NPDES Permit No. AK0053775,  
Denali National Park Front Country Wastewater Treatment Facility

Dear Mr. Anderson:

In accordance with § 401 of the Clean Water Act, as well as Alaska Administrative Code (AAC) 18 AAC 15 (Administrative Procedures), 18 AAC 70 (Water Quality Standards), and 18 AAC 72 (Wastewater Discharges), the Alaska Department of Environmental Conservation (DEC or the Department) has made a tentative determination to certify that NPDES Permit AK0053775 for the Denali National Park Front Country Wastewater Treatment Facility will comply with the applicable provisions of §401 of the Clean Water Act. Prior to making a final determination, DEC will review any comments received during the public notice period of this tentative determination. A copy of the draft certificate of reasonable assurance is enclosed.

The Department has both an informal review process and a formal administrative appeal process for final permit decisions. An informal review request must be delivered within 15 days after receiving the Department's decision to the Director of Water at the following address:

Director of Water  
Alaska Department of Environmental Conservation  
555 Cordova Street  
Anchorage, AK 99501

Interested persons can review 18 AAC 15.185 for the procedures and substantive requirements regarding a request for an informal department review. See <http://www.dec.state.ak.us/commish/ReviewGuidance.htm> for information regarding appeals of Department decisions.

An adjudicatory hearing request must be delivered to the Commissioner of the Department within 30 days of the permit decision or a decision issued under the informal review process, whichever is later. An adjudicatory hearing will be conducted by an administrative law judge in the Office of Administrative Hearings within the Department of Administration. A written request for an adjudicatory hearing shall be delivered to the Commissioner at the following address:

Commissioner  
Alaska Department of Environmental Conservation  
410 Willoughby Avenue, Suite 303  
Juneau, AK 99811-1800

Interested persons can review 18 AAC 15.200 for the procedures and substantive requirements regarding a request for an adjudicatory hearing. See <http://www.dec.state.ak.us/commish/ReviewGuidance.htm> for information regarding appeals of Department decisions.

Be advised, pursuant to 18 AAC 15.120(c), the final certification of the NPDES permit constitutes the permit required under AS 46.03.100. Also, 18 AAC 15.120(c) states, “Any rights or privileges inuring to the benefit of EPA in the NPDES permit, including any right to enter, inspect, sample, and have access to records, also inure to the benefit of the Department. Any reports or other information filed with EPA in accordance with the NPDES permit must be contemporaneously filed with the Department.”

Please contact Marie Klingman by phone at (907) 451-2101 or via e-mail at [marie.klingman@alaska.gov](mailto:marie.klingman@alaska.gov) with any questions or comments concerning this draft certification.

Sincerely,

Sharon Morgan  
Program Manager

Enclosure: Draft Certificate of Reasonable Assurance

cc: Wade Strickland/DEC, Anchorage  
Marie Klingman/DEC, Fairbanks  
Lisa Olson/EPA, Seattle

**STATE OF ALASKA**  
**DEPARTMENT OF ENVIRONMENTAL CONSERVATION**  
**DRAFT CERTIFICATE OF REASONABLE ASSURANCE**

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A Certificate of Reasonable Assurance, as required by Section 401 of the Clean Water Act (CWA), has been requested by the United States Environmental Protection Agency (EPA) for the discharge of secondary treated domestic wastewater from the Denali National Park Front Country Wastewater Treatment Facility (WWTF).

The activity is located at Latitude 63.7295° North, Longitude 148.8748° West, with discharge to the Nenana River.

Public notice of the application for this certification was made in accordance with 18 AAC 15.140.

The Department reviewed the permit application and National Pollutant Discharge Elimination System (NPDES) permit AK0053775 and, in accordance with the DEC *Interim Antidegradation Implementation Methods* (July 2010) finds the reduction in water quality to be in compliance with the requirements of 18 AAC 70.015, provided that the terms and conditions of this certification are made part of the final NPDES Permit. See Appendix A for the antidegradation analysis of decisions contained in this certification.

The Department reviewed the permit and certifies that there is reasonable assurance that the proposed activity and any resulting discharge complies with the requirements of CWA Section 401 and 18 AAC 70 (Water Quality Standards). Through this certification, in accordance with 18 AAC 15.120, the NPDES Permit will constitute the permit required under Alaska Statutes (AS) 46.03.100 Waste Disposal Permit, provided that the terms and conditions of this certification are made part of the final NPDES Permit. The Department is specifying the following permit terms and conditions under authority of AS 46.03.110(d).

1. The Department authorizes the effluent limits and monitoring requirements for flow, carbonaceous biochemical oxygen demand, total suspended solids, and fecal coliform bacteria, pH, and total residual chlorine contained in the NPDES Permit Part I.B.1-Table 1.

*Rationale: In accordance with State Regulations, 18 AAC 15.090, the Department may attach terms and conditions to a permit variance, or approval, including operating, monitoring, inspection, sampling, access to records, reporting requirements, and the posting of a performance bond or other surety, that it considers necessary to ensure all applicable criteria will be met. The effluent limits included in the permit provide assurance that water quality standards (WQS) are being met.*

## RECOMMENDATION

In addition to the above stipulation, the Department is making the following recommendation:

1. Permit Part I.C. Table 2, Surface Water Monitoring: The requirement to measure the flow of the Nenana River, which is a fast moving glacial river, will place those collecting the data at undue risk. An accurate stream flow measurement requires multiple depth and velocity measurements recorded across the width of the river. The Department recommends that the established and closest known active gauge, the National Oceanic and Atmospheric Administration flow gauge HNRA2 located at Healy, be used for the required flow measurement to comply with this permit condition.

**APPENDIX A**  
**DRAFT**  
**ANTIDegradation ANALYSIS OF THE**  
**CERTIFICATE OF REASONABLE ASSURANCE**  
**FOR NPDES PERMIT AK0053775**

The Antidegradation Policy contained in Alaska WQS (18 AAC 70.015) states that the existing water uses and the level of water quality necessary to protect existing uses must be maintained and protected. This appendix analyzes and provides rationale for the Department's decisions in its § 401 Certification with respect to the antidegradation policy.

The Department's approach to implementing the antidegradation policy, found in 18 AAC 70.015, is based on the requirements in 18 AAC 70 and the Department's July 14, 2010 *Interim Antidegradation Implementation Methods*. Using these requirements and policies, the Department determines whether a waterbody or portion of a waterbody is classified as Tier 1, Tier 2, or Tier 3, where a larger number indicates a greater level of water quality protection.

To qualify as a Tier 3, or "outstanding national resource" water, one of two criteria must be met. The water must either be 1) in a national park or wildlife refuge or 2) a waterbody with exceptional recreational or ecological significance. Where there is insufficient information to make a determination about water quality, the Department presumes that the water is of high quality and subject to at least Tier 2 protection.

The Department determined that the affected waters are Tier 2 waters for the following reasons. First, while the Nenana River forms a portion of the eastern boundary of Denali National Park and Preserve (DNP), the entire river lies outside DNP. Second, the affected segment of the Nenana River is not considered an area of exceptional recreational or ecological significance. Finally, since July 14, 2010 when *Interim Antidegradation Implementation Methods* came into effect, the Department has yet to designate any Tier 3 waters. Therefore, based on the location of the river, discharge, and the lack of precedent setting circumstances, the Department determined that the affected segment of the Nenana River is a Tier 2 water.

In accordance with 18 AAC 70.015(a)(2), an antidegradation analysis was applied on a parameter-by-parameter basis to permit limits associated with reduction of water quality. The Antidegradation Policy of the Alaska WQS (18 AAC 70.015) states that the existing water uses and the level of water quality necessary to protect existing and designated uses must be maintained and protected. The Department may allow a reduction of water quality only after finding that five specific requirements of the antidegradation policy at 18 AAC 70.015(a)(2)(A)-(E) are met. The Department's findings follow.

1. *18 AAC 70.015(a)(2)(A). Allowing lower water quality is necessary to accommodate important economic or social development in the area where the water is located.*

DNP, originally established as Mount McKinley National Park in 1917 and later enlarged under the Alaska National Interest Lands Conservation Act (ANILCA) of 1980 and renamed DNP, was "set apart as a public park for the benefit and enjoyment of the people...for recreation purposes by the public and for the preservation of animals, birds, and fish and for the preservation of the natural curiosities and scenic beauties thereof..." (39 Statute 938). Furthermore, under ANILCA, national parks and preserves such as

DNP are preserved and managed for the benefit, use, education, and inspiration of present and future generations.

Approximately 303,000 people visited DNP in 2010 to participate in activities such as hiking, camping, rafting, kayaking, mountaineering, photography, and wildlife viewing (UAA 2011). Significant revenue is generated from visitor entrance fees, concession receipts for food, gifts, books, campground fees, and contract tour operations. Nearby communities that provide integral visitor support services, such as lodging, retail trade, restaurants, and amusements, also benefit economically and socially from park operations.

The Department finds that this requirement is met.

2. *18 AAC 70.015(a)(2)(B). Except as allowed under this subsection, reducing water quality will not violate the applicable criteria of 18 AAC 70.020, 18 AAC 70.235, or 18 AAC 70.030.*

The effluent limits for fecal coliform bacteria and pH are the water quality criteria at 18 AAC 70.020. The effluent limits for total residual chlorine are protective of the water quality criteria found in the *Alaska Water Quality Criteria Manual for Toxic and Other Deleterious Organic and Inorganic Substances* (2008). A mixing zone is not authorized for this discharge; therefore, water quality criteria will be met at the end of the treatment process prior to discharge to the Nenana River. Site-specific criteria under 18 AAC 70.235 have not been designated for this discharge, and because the discharge is primarily domestic wastewater and does not include contributions from industrial sources, reducing water quality is not expected to violate the whole effluent toxicity requirements under 18 AAC 70.030.

The Department finds that this requirement is met.

3. *18 AAC 70.15(a)(2)(C). The resulting water quality will be adequate to fully protect existing uses of the water.*

The WQS serve the specific purpose of protecting the existing and designated uses of the water. The effluent limits for fecal coliform bacteria and pH are the water quality criteria at 18 AAC 70.020. The effluent limits for total residual chlorine are the water quality criteria found in the *Alaska Water Quality Criteria Manual for Toxic and Other Deleterious Organic and Inorganic Substances* (2008). The effluent limits for carbonaceous biochemical oxygen demand and total suspended solids are secondary treatment effluent limits located at 40 CFR Part 102. Restricting the amount of flow to the design capacity of the facility will assure that the treatment capacity of the facility is not exceeded. A mixing zone is not authorized for this discharge; therefore, effluent limits are required to be met at the end of the treatment prior to discharge, and the resulting water quality will be adequate to fully protect existing uses of the Nenana River.

The Department finds that this requirement is met.

4. *18 AAC 70.015(a)(2)(D). The methods of pollution prevention, control, and treatment found by the Department to be most effective and reasonable will be applied to all wastes and other substances to be discharged.*

The wastewater treatment system consists of a department reviewed and approved 112,000 gallon per day dual power (both complete and partial mix) multi-cell aerated lagoon system. Biological conversion of the influent organic material to biomass and flocculation of the biomass occurs in the complete mix reactor basin, while sludge sedimentation, stabilization, and storage takes place in a series of partially mixed settling basins. The effluent is treated with chlorine to remove pathogens followed by dechlorination prior to discharge. Dry solids, that are expected to be removed every six years, shall be disposed of at an approved solid waste facility located outside of the park.

The permittee shall be required, as a condition of the permit, to develop and implement an Operation and Maintenance Plan, Quality Assurance Plan, and Emergency Response and Public Notification Plan. In addition, the permittee must control the introduction of undesirable pollutants and industrial users.

The Department finds that this requirement is met.

5. *18 AAC 70.015(a)(2)(E). All wastes and other substances discharged will be treated and controlled to achieve (i) for new and existing point sources, the highest statutory and regulatory requirements; and (ii) for nonpoint sources, all cost-effective and reasonable best management practices.*

The “highest statutory and regulatory requirements” are defined in 18 AAC 70.990(30) (as amended June 26, 2003) as:

- (A) any federal technology-based effluent limitation identified in 40 CFR §125.3 and 40 CFR §122.29, as amended through August 15, 1997, adopted by reference;
- (B) minimum treatment standards in 18 AAC 72.040; and
- (C) any treatment requirement imposed under another state law that is more stringent than a requirement of this chapter

The first part of the definition includes technology-based treatment requirements in permits. The DNP Front Country WWTF’s effluent limits are technology-based requirements found at 40 CFR §125.3 and includes technology-based effluent limits for carbonaceous biochemical oxygen demand and total suspended solids found at 40 CFR §133.102. 40 CFR §122.29 refers to industrial wastewater discharge and does not apply to DNP Front Country WWTF’s domestic wastewater discharge.

The second part of the definition, 18 AAC 70.990(B) (2003), appears to be in error, as 18 AAC 72.040 describes discharges to sewers and not minimum treatment. The correct reference appears to be 18 AAC 72.050, Minimum Treatment. The DNP Front Country WWTF treats to secondary treatment standards, which is consistent with the minimum treatment requirements at 18 AAC 72.050.

The third part of the definition refers to treatment requirements imposed under another state law that are more stringent than 18 AAC 70. Other regulations beyond 18 AAC 70 that apply to this permitting action include 18 AAC 15 and 18 AAC 72. Neither the regulations in 18 AAC 15 and 18 AAC 72 nor another state law that the Department is aware of impose more stringent requirements than those found in 18 AAC 70.

The Department finds that this requirement is met.

### **REFERENCES**

DEC (Alaska Department of Environmental Conservation). 2008. Alaska Water Quality Criteria Manual for Toxic and Other Deleterious Organic and Inorganic Substance. State of Alaska, Department of Environmental Conservation.

DEC, 2010. Interim Antidegradation Implementation Methods, Effective July 14, 2010. State of Alaska, Department of Environmental Conservation, Policy and Procedure Number 05.03.103.

UAA (University of Alaska Anchorage). 2011. Feasibility study for the proposed south Denali visitor center. Center for Economic Development, Anchorage.  
<http://www.southdenali.alaska.gov/includes/feasibilitystudyfinal429.pdf> . Accessed 7/2011.