

DECISION DOCUMENT
Alaska Department of Environmental Conservation
Division of Water
Wastewater Discharge Authorization Program
September 16, 2016

LTF General Permit
Rowan Bay LSA
Rowan Bay
U.S. Forest Service
Permit No. AKG700062

The U.S. Forest Service (USFS) submitted a Notification to be covered under the Alaska Pollutant Discharge Elimination System (APDES) Clean Water Act Section 402 Modifications of Section 404 Permits for Log Transfer Facilities in Alaska Which Received a Section 404 Permit Prior to October 22, 1985, AKG700000 (general permit). USFS proposes to recommence operations at a log storage area (LSA) in Rowan Bay that was issued a Section 404 permit prior to 1985. The location is Rowan Bay, Kuiu Island, adjacent to Chatham Strait, at latitude 56.67015° N and longitude 134.24494° W.

This Decision Document presents an assessment of regulatory issues with respect to the requested authorization.

Background

The Rowan Bay site was originally approved for construction in 1972. USFS received a Section 404 permit from the U.S. Army Corps of Engineers for the log transfer facility (LTF) and the LSA at Rowan Bay. In 1984, the Environmental Protection Agency (EPA) determined that the transfer of logs into marine waters created a point source discharge of bark and woody debris and would require a National Pollutant Discharge Elimination System (NPDES) permit under Section 402 of the Clean Water Act. The Rowan Bay LTF received permits under the NPDES Program and, subsequently, under the APDES Program, but the LSA permit was terminated. On June 9, 2016, USFS provided DEC with a notification to again cover the Rowan Bay LSA under the general permit.

The applicant proposes to use the existing, permitted Rowan Bay LTF site to place logs in the water using a low angle slide. After placement in the water, logs will be bundled in the raft make-up area adjacent to the low angle slide. From there, a boom boat will be used to push the log rafts to the LSA, the subject of this Decision Document. Rafts will be stored at the LSA until they can be transported to their final destination.

Rowan Bay was placed on the Section 303(d) list of impaired waters in 1996 for impairment caused by bark and woody debris. Rowan Bay was removed from the 303(d) list in 2002/2003 after dive surveys documented that continuous bark coverage had been reduced to less than 1.5 acres, the threshold for inclusion on the 303(d) list. A pre-discharge dive survey of the LSA, submitted by the applicant, documented no bark accumulation or critical habitat in the LSA site. The survey did, however, note the presence of “anoxic sediments” throughout the area of the LSA. The LSA is located at depths ranging from approximately 20-40 feet MLLW.

USFS seeks authorization for log storage as described in the notification. The proposed project area for log storage is 16.07 acres. Rowan Bay and associated, state owned, uplands are covered under the Alaska Department of Natural Resources’ (ADNR) *Central/Southern Southeast Area Plan* (2000). According to the Plan, state owned uplands “have been designated for multiple use, including potential timber harvest.” The management intent for Rowan Bay is to “protect fish and wildlife habitat and commercial/community harvest values,” and to “maintain public access for future settlement or timber harvest.”

Antidegradation Policy

The Antidegradation Policy of the Alaska Water Quality Standards (WQS) (18 AAC 70.015) states that existing water uses and the level of water quality necessary to protect existing uses must be maintained and protected. For Tier 2 water bodies, which the Alaska Department of Environmental Conservation (DEC or Department) has conservatively assumed the water body (i.e., Rowan Bay) to be, DEC may allow reduction of water quality only after finding that five specific criteria are met. These criteria and the Department's findings are set out below.

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.

The Department finds that localized lowering of water quality is necessary as other alternatives to support the activity were found to be infeasible. The topography of Rowan Bay provides protection from storm forces, which allows for the rafting of log bundles. The Rowan Bay LTF site is the only existing facility able to support the North Kuiu Timber Sale without the permitting and/or construction of a new LTF site. As provided by the applicant in the NOI, barge loading at the Rowan Bay LTF bulkhead is not possible without specialized lifting equipment. Additionally, the circular shape of the bulkhead makes it difficult to secure a barge to the bulkhead for loading. Due to the commodity value of timber in Alaska, transportation costs have to be kept competitive to compete with producers from around the world and to realize the social and economic benefits.

Timber sales create social and economic benefits to local communities and the State of Alaska. If implemented, the North Kuiu Timber Sale will provide direct and indirect economic benefits to the communities of southeast Alaska. Direct benefits include employment opportunities and wages paid by the operator. Indirect benefits include the flow of cash to support services, such as fuel, food, housing, transportation, and medicine. USFS estimates that, on an annualized basis, the North Kuiu Timber Sale will create between 87-126 jobs in logging and transportation services. Based on the appraisal of the North Kuiu Timber Sale, it is estimated that the sale of this timber will generate a return of \$247,000 to the State of Alaska for the sale of 23 million board feet (MMBF).

In addition to this project, a number of other timber harvest projects are planned for the region that would also benefit from the use of the facilities at Rowan Bay. The USFS is in the planning stages of another potential harvest project of 50-65 MMBF. In addition, Sealaska owns nearly 4,000 acres in the region that is expected to be harvested for the benefit of the native corporation's shareholders. Finally, the State of Alaska owns over 600 acres in the region that could be harvested in the future.

DEC finds that authorization to discharge at the Rowan Bay LSA accommodates important economic activity and 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 or 18 AAC 70.235 or the whole effluent toxicity limit in 18 AAC 70.030.

Except within the ZOD, violation of the water quality criteria in 18 AAC 70.020 is prohibited. Reduction of water quality in the ZOD is specifically authorized according to 18 AAC 70.210 and as allowed in 18 AAC 70.015(a)(2). Justification for DEC's decision to authorize a ZOD is provided at the end of this Decision Document. All applicable water quality criteria will be met outside the boundary of the ZOD.

The general permit requires the permittee to establish best management practices and pollution prevention plans to minimize the deposition of bark and woody debris within the ZOD. Annual dive

surveys are required to document conditions at the site. A remediation trigger of one acre of continuous bark coverage, 10 centimeters in thickness, is established in the general permit for the ZOD. If an annual dive survey demonstrates that this remediation trigger has been exceeded within the ZOD, the operator is required to submit a Remediation Plan to DEC within 120 days of discovery of such conditions. The Remediation Plan must identify a set of feasible, reasonable, and effective measures that the operator proposes to implement to reduce existing and future continuous coverage by bark and wood debris to less than the one acre remediation trigger.

Discharges authorized under the general permit will not violate applicable water quality criteria, as allowed under 18 AAC 70.235. Under this regulation, the Department may establish a site-specific water quality criteria that modifies a water quality criterion set for a waterbody. Since there are no site-specific criteria established for Rowan Bay, further evaluation is not required.

Discharges authorized under the general permit will not violate the whole effluent toxicity limit in 18 AAC 70.030. The general permit authorizes the discharge of bark and wood debris only within the ZOD. These residues are non-toxic, and the discharge of bark and wood debris from logs will not impart chronic toxicity to aquatic organisms.

The Department finds that the reduced water quality will not violate applicable water quality criteria and that the requirement is met.

3. 18 AAC 70.015 (a)(2)(C). The resulting water quality will be adequate to fully protect existing uses of the water.

DEC has concluded that ecologically significant effects from the discharge and accumulation of bark and wood debris at Rowan Bay will not occur outside the project-area ZOD given the permit requires compliance with WQS. As such, WQS, including existing uses, should be maintained and protected in Rowan Bay as a whole subject to compliance with permit terms. DEC concludes that water quality will be adequate to fully protect existing uses of the water. DEC finds this requirement is met.

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

The methods of prevention, control, and treatment DEC finds to be most effective are the practices and requirements set out in the general permit. As discussed in finding 18 AAC 70.015 (a)(2)(A) above as well as in the ZOD Section below, alternate methods of pollution prevention, control, and treatment (e.g., barging) were not found to be effective and reasonable. The general permit requires the operator to follow prescribed best management practices and to develop and implement a Pollution Prevention Plan to control waste discharge. The general permit also requires the operator to prepare a proposed Remediation Plan if continuous cover by bark and wood debris exceeds the permit mandated threshold.

DEC concludes that compliance with the general permit conditions will ensure that the most effective and reasonable methods of pollution prevention, control and treatment will be applied. DEC finds that this criterion 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 non-point sources, all cost-effective and reasonable best management practices.

The applicable “highest statutory and regulatory treatment requirements” are defined in 18 AAC 70.990(30) (as amended June 26, 2003) and in DEC’s *Policy and Procedure Guidance for Interim Antidegradation Implementation Methods*. Accordingly, there are three parts to the definition, which are:

- (A) any federal technology-based effluent limitation guidelines (ELG) identified in 40 CFR § 125.3 and 40 CFR § 122.29, as amended through August 15, 1997, adopted by reference at 18 AAC 83.010(c)(9);
- (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 all federal technology-based ELGs. No federal technology-based ELGs for this industrial sector have been promulgated.

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 the minimum treatment standards found at 18 AAC 72.050, which refers to domestic wastewater discharges only. No domestic wastewater discharges are authorized under the general permit, so this part of the definition is not applicable.

The third part includes any more stringent treatment required by state law, including 18 AAC 70 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.

After review of the applicable statutory and regulatory requirements, including 18 AAC 70, 18 AAC 72, and 18 AAC 83, the Department finds that the authorized discharge meets the highest applicable statutory and regulatory requirements and that this finding is met.

ZOD

Under the ZOD provision of the Alaska WQS (18 AAC 70.210), the Department may authorize deposit of substances on the bottom of marine waters within limits set by the Department. The water quality criteria may be exceeded in a ZOD but must be met at every point outside the authorized ZOD.

In the general permit, the Department allows authorizes a ZOD for the accumulation of bark and wood debris on the ocean bottom within the project area of an LTF or LSA. The ZOD may include "continuous coverage," "discontinuous coverage," and "trace coverage" by bark and wood debris. The area limit is the project area of the LTF or LSA.

However, the general permit requires that if a bark monitoring survey shows that continuous coverage by any existing bark and wood debris, whenever deposited, exceeds both 1.0 acre and a thickness of 10 centimeters at any point, the operator must submit a proposed Remediation Plan to the Department to reduce existing and future continuous coverage to less than both 1.0 acre and a thickness of 10 centimeters at any point. The plan is subject to Department approval, modification, or denial. In this manner, the Department establishes a 1.0 acre continuous bark "threshold", which, if exceeded, requires remedial action.

During the review of a NOI, the Department evaluates the proposed ZOD to determine if it complies with the terms of the permit. The basis for this determination is consideration of certain terms of the general permit and the six factors listed below.

ZOD Assessment

The Department reviewed the NOI, including the pre-discharge bark monitoring survey from 2016. The Department concludes that the authorized ZOD is acceptable at the location of the Rowan Bay LSA.

In authorizing a ZOD, the Department must consider: (1) alternatives that would eliminate or reduce adverse effects of the deposit; (2) potential direct and indirect impacts on human health; (3) potential impacts on aquatic life and other wildlife; (4) potential impacts on other uses of the water body; (5) expected duration of the deposit and any adverse effects; and (6) potential transport of pollutants by biological, physical, and chemical processes. The Department's six ZOD regulatory findings are provided below.

- 1) The ZOD provision requires the Department to consider alternatives that would eliminate or reduce adverse effects of the deposit. Further, the general permit requires the NOI to include an assessment of the feasibility of onshore log storage and barging. The following is the Department's assessment of alternative considerations:
 - a) Authorization of a ZOD for the Rowan Bay LSA is necessary to support log rafting. The existing, permitted LTF at Rowan Bay is needed to get timber from the North Kuiu Timber Sale to market. The design of this LTF is not conducive to loading barges. The circular, sheet pile bulkhead makes securing a barge difficult. In addition, barge loading would require the installation and use of a specialized crane or yarder to load logs onto barges. The existing, three rail, low angle slide is a much safer and more practical alternative to barge loading at this facility. The high cost of barging, which would likely require the reconstruction of the LTF and/or the installation of new loading equipment, would render this project economically infeasible or would significantly reduce the economic and social benefits.

2) Biological and human uses of the area are described above in the Antidegradation Analysis, 18 AAC 70.015 (a)(2)(C). The Department concludes based on case histories from similar sites that uses will be fully protected outside the ZOD and that impacts on human health are not at issue.

3) and 4) A pre-discharge dive survey performed by Haggitt Consulting on May 21, 2016 for the discharge of bark and woody debris failed to document critical habitat at the proposed LTF site. ADNR identifies the following management intent for Rowan Bay:

Protect fish and wildlife habitat and commercial/community harvest values. Maintain public access for future settlement or timber harvest.

Given that the authorized activity is consistent with WQS per the terms of the general permit and this authorization, DEC concludes that existing uses for the water should be fully protected.

5) DEC recognizes that most published scientific literature projects that the duration of a bark deposit may be several years in length. However, 2007 DEC-funded studies conducted at legacy Clean Water Act §303(d) LTF sites in Southeast Alaska (Hobart Bay, Twelvemile Arm, Schulze Cove, and Thorne Bay) found that the bark piles at these sites had either dispersed and were no longer visible or had been incorporated into native sediments. Further, this site is a legacy LSA with no documented critical habitat, so adverse effects are not expected.

6) Bark that does not accumulate within the project area will be transported elsewhere and dispersed by natural processes. No residual bark from historic logging operations was observed within the project area during the pre-discharge survey. This suggests that, over time, natural processes will attenuate any bark within or outside of the project area. Bark, given its innocuous nature, if transported from the project area, is not expected to impair existing uses within Rowan Bay.

Conclusion The Department concludes that in-water log storage, bark discharge, and bark accumulation at the proposed Rowan Bay LSA are consistent with the ZOD provision.