

**DECISION DOCUMENT**  
**Alaska Department of Environmental Conservation**  
**Division of Water**  
**Wastewater Discharge Authorization Program**  
**May 12, 2016**

**LTF General Permit**  
**State of Alaska Edna Bay LTF**  
**Edna Bay**  
**Department of Natural Resources**  
**Authorization No. AKG701066**

The Alaska Department of Natural Resources (ADNR) submitted a Notice of Intent (NOI) requesting authorization to discharge bark and wood debris at the State of Alaska Edna Bay Log Transfer Facility (LTF) under the Alaska Pollutant Discharge Elimination System (APDES) General Permit for Log Transfer Facilities, AKG701000 (general permit). The location is Edna Bay, Kosciusko Island, adjacent to Davidson Inlet, at the latitude 55°56'12" N and longitude of 133°38'56" W.

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

**Background**

Timber harvesting on Kosciusko Island began in the early 1940s. Due to this early harvesting, Kosciusko Island has significant stands of mature and near mature timber currently available for harvest. In the past, operators in this region used LTFs at Cape Pole and the Edna Bay town site to bring timber to market. Neither of these historical LTF sites is suitable for current use. The Cape Pole site is in disrepair and does not meet Alaska Timber Task Force (ATTF) Guidelines. The historic LTF at the Edna Bay town site is located adjacent to the State of Alaska airplane float dock and is not conducive to heavy industrial activity.

ADNR seeks authorization for log rafting and storage as described in the January 12, 2016 NOI. For this LTF, ADNR has selected a site that is in compliance with the ATTF Guidelines. Barging was considered in the NOI but was ruled out due to a lack of barges on the west coast of Prince of Wales Island and the significantly higher costs associated with barging (three times as expensive as log rafting and towing).

The proposed project area for log rafting and storage is approximately 9.0 acres. Public comments collected by the US Army Corps of Engineers (USACE) and ADNR Division of Forestry during their respective public comment periods indicate that the anchorage of boats during adverse weather conditions is the highest use for the receiving waters in the vicinity of the proposed LTF. Stipulations in the USACE permit require shared use of the receiving waters in the vicinity of the proposed LTF.

**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 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. As provided by the applicant in the NOI, barging will triple the cost of transporting logs. Due to the commodity value of young growth 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 to the State.

The proposed LTF site was specifically chosen to satisfy ATTF Guidelines. Historical LTF sites at Cape Pole and the Edna Bay town site were considered but ultimately rejected. The Cape Pole site does not meet ATTF Guidelines and is in disrepair. The historic Edna Bay town site LTF is located adjacent to the State of Alaska floatplane dock and is not suitable for heavy industrial activity, as the operations of the LTF would constitute a safety hazard to users of the dock.

The State of Alaska has issued a Best Interest Finding for the Edna Bay Parley Timber Sale SSE 1342K that discusses the cost and benefits of the project. From page 13 of the Finding,

*Timber sales have traditionally created economic benefits to the communities of Southeast Alaska. The business communities will receive direct economic benefits by providing timber operators with support services such as fuel, food, housing, medical and miscellaneous supplies. The residents of the communities in Southeast Alaska will receive both direct and indirect benefits through employment opportunities and wages paid by the operator during the course of the timber harvest and milling operations.*

*The 2005 McDowell Group report, "Southeast Timber Harvest Employment Impact Analysis" concludes that logging, sawmilling, and stevedoring activities create between 4.3 and 4.5 jobs per million board feet (MMBF) harvested. "Southeast Alaska by the Numbers 2015" published by Southeast Conference in September 2015 reports that in 2014, 328 timber jobs in southeast Alaska produced earnings of \$17.2 million which equates to an annual salary of just under \$52,500. Based on these two reports, the volume scheduled for harvest under this final BIF could produce approximately 105 jobs and total earnings in the \$5.5 million dollar range.*

*Recent stumpage returns on State timber sales in Southeast have ranged from \$7.00 per MMBF to \$157.00 per MMBF. Based on current market conditions it is estimated that the volume scheduled for harvest under this BIF could generate approximately \$75.00 per MMBF. Based on the estimated total volume of 24.5 MMBF, the estimated rate per MMBF would generate a return to the State of approximately \$1.8 million dollars.*

Projected logging operations in Edna Bay include approximately 22 MMBF under contract with the University of Alaska. If harvested, this timber would provide a return of \$3.9 million dollars to the University.

The proposed LTF site at Edna Bay will be available to the US Forest Service and Sealaska to support future timber harvests in Edna Bay for many years into the future. Projected harvests could generate over \$100 million dollars in economic activity in Southeast Alaska over the course of the next rotation of timber on Kosciusko Island.

DEC concurs that operation of the State of Alaska Edna Bay LTF constitutes important economic development in the area. The residue criteria of the WQS prohibit any waste material in the water or on the bottom; however, DEC has determined that an allowable WQS variance in the form of a zone of deposit (ZOD) authorization will be granted, and the resulting lowering of water quality within the ZOD are necessary to accommodate operation of the LTF, but that the quality and the designated uses of the water body as a whole will be maintained and protected. DEC finds that this criterion 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 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 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 any receiving waters applicable to this permit, 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 believes that ecologically significant effects from the discharge and accumulation of bark and wood debris at Edna Bay are not likely to occur outside the project-area ZOD. With respect to the proposed discharges of bark and wood debris, DEC concludes that water quality will be adequate to fully protect existing uses of the water. DEC finds this criterion 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. The proposed LTF site was specifically located so as to ensure compliance with ATTF Guidelines. As discussed in finding 18 AAC 70.015 (a)(2)(A) above, alternate methods of pollution prevention, control, and treatment (e.g. barging, alternate LTF site locations) were not found to be the most effective and reasonable due to a variety of reasons including cost and safety. 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 a threshold of one acre.

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 LTFs have been promulgated. In the absence of effluent guidelines for a particular industry, technology-based limits may be established on a case-by-case basis using Best Professional Judgement (BPJ). DEC has adopted a 1.0 acre threshold for continuous bark and wood debris within the ZOD as a BPJ technology limit for implementing remediation planning.

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 allow 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 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 one acre continuous bark "threshold", which, if exceeded, requires remedial action.

During the review of a NOI, the Department may determine that a ZOD is not appropriate at the proposed location and is not authorized. In such a case, authorization under the general permit likely would be denied. The basis for this determination is consideration of certain terms of the general permit, the six factors listed below, and the antidegradation requirements.

### ZOD Assessment

The Department reviewed the NOI, including bark monitoring surveys from 2013. The Department concludes that the authorized ZOD is acceptable at the location of the State of Alaska Edna Bay LTF.

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.

- 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) The general permit requires implementation of best management practices "to minimize the discharge of bark and other pollutants from the LTF," and requires a Pollution Prevention Plan to "identify and employ all reasonable practices to avoid the discharge of bark, wood, debris, and other pollutants to waters of the United States, and to contain then discharge to the smallest area that is practicable and is consistent with the safe and orderly operation of the log transfer facility." In terms of operational practices, these requirements clearly are intended to "eliminate or reduce adverse effects of the deposit."
  - b) The State of Alaska Edna Bay LTF will utilize in-water storage of logs. The Department recognizes that direct barge transport would eliminate bark discharge and accumulation, and the need for a ZOD. The ADNDR submitted a NOI for log storage and transfer and that is the proposal

that DEC reviewed and evaluated. Note barging was determined to triple transportation costs, reducing social and economic benefits to the State.

- c) ADNR's application identified and evaluated two alternate locations for the LTF. DEC agreed with the declaration of the applicant or its representatives that the alternative sites were impractical and/or unsafe.
- 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 October 18, 2013 failed to document critical habitat at the proposed LTF site. Public comments collected during review periods for the USACE Permit and the Interagency Land Management Plan suggest that the primary use for the proposed LTF site is ship anchorage during severe weather conditions. Given that the authorized activity is consistent with WQS per the terms of the general permit and this authorization, DEC concludes that other 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 long term, even many decades. 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.
- 6) Bark that does not accumulate within the project area will be transported elsewhere and dispersed. The Department has no information on quantities of bark that are transported beyond the project area.

*Conclusion* The Department concludes that in-water storage, bark discharge, and bark accumulation are consistent with the ZOD provision.