ALASKA POLLUTANT DISCHARGE ELIMINATION SYSTEM

PERMIT FACT SHEET – PROPOSED FINAL

Permit Number: AKG70000 and AKG701000

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)

AND

Log Transfer Facilities in Alaska (AKG701000)

DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Wastewater Discharge Authorization Program

555 Cordova Street

Anchorage, AK 99501

Public Comment Period Start Date: December 7, 2014
Public Comment Period Expiration Date: January 12, 2015

Alaska Online Public Notice System

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Proposed reissuance of Alaska Pollutant Discharge Elimination System (APDES) General permits for

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)

AND

LOG TRANSFER FACILITIES IN ALASKA (AKG701000)

The Alaska Department of Environmental Conservation (the Department or DEC) proposes to reissue two APDES general permits (permits) to log transfer facilities (LTFs) in Alaska. The general permits

authorize and set conditions on the discharge of pollutants from log transfer facilities to waters of the United States in the State of Alaska. In order to ensure protection of water quality and human health, the permits places limits on the types and amounts of pollutants that can be discharged from the facility and outlines best management practices to which the facility must adhere.

This fact sheet explains the nature of potential discharges from log transfer facilities operating in state waters and the development of the permit including:

- information on public comment, public hearing, and appeal procedures
- a listing of proposed effluent limitations, proposed monitoring requirements and other conditions in the permit
- technical material supporting the conditions in the permit

Appeal Process

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

Director, Division 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/InformalReviews.htm for information regarding informal reviews 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. 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 at
410 Willoughby Street, 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.

Documents are Available

The permit, fact sheet, and related documents can be obtained by visiting or contacting DEC between 8:00 a.m. and 4:30 p.m. Monday through Friday at the addresses below. The permit, fact sheet, and other information are located on the Department's Wastewater Discharge Authorization Program website: http://www.dec.state.ak.us/water/wwdp/index.htm or at the following DEC office locations.

Alaska Department of Environmental Conservation Division of Water Wastewater Discharge Authorization Program 555 Cordova Street Anchorage, AK 99501 (907) 269-6285	Alaska Department of Environmental Conservation Division of Water Wastewater Discharge Authorization Program 410 Willoughby Avenue, Suite 310 Juneau, AK 99801 (907) 465-5180

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1.0 INTRODUCTION

1.1 Basis for Issuance of a General Permit

Section 301(a) of the Clean Water Act (CWA) and 18 Alaska Administrative Code (AAC) 83.015 provide that the discharge of pollutants is unlawful except in accordance with an APDES permit. Although such permits are usually issued to individual dischargers, Department of Environmental Conservation (DEC) regulations at 18 AAC 83.205 authorize Departmental issuance of general permits to categories or subcategories of discharges within existing geographic or political boundaries when:

- A number of point sources involve the same or substantially similar types of operations;
- Facilities discharge the same types of wastes;
- Facilities require the same effluent limits or operating conditions;
- Facilities require the same or similar monitoring requirements; and
- In the opinion of the Department, are more appropriately controlled under a general permit than under individual permits.

A violation of a condition contained in a general permit constitutes a violation of the CWA and subjects the owner or operator of the permitted discharge to the penalties specified in Alaska Statute (AS) 46.03.760.

1.2 Permit Issuance History

In 1984, the U.S. Environmental Protection Agency (EPA) determined that log transfer into marine waters created a point source discharge of bark and woody debris, and would require a National Pollutant Discharge Elimination System (NPDES) permit. Up until this time, log transfer facilities (LTFs) were constructed and operated under the authority of a US Army Corps of Engineers (USACE) Section 404 permit, which at the time, had no expiration date. EPA determined that USACE Section 404 permits issued prior to October 22, 1985 failed to satisfy the requirements of Sections 301, 302, 306, 307, and 403 of the CWA. Specifically, the Section 404 permits failed to:

- Include a zone of deposit (ZOD) for underwater accumulation of bark and woody debris at LTFs;
- Include uniform monitoring and reporting requirements; and
- Provide uniform application of Best Management Practices (BMPs) and specific effluent limitations.

On October 22, 1985, EPA and the USACE signed a Memorandum of Agreement (MOA) regarding coordination of permitting for LTFs. Section IV of the MOA outlined procedures for existing LTFs, which had previously received a permit under Section 404 of the CWA or Section 10 of the Rivers and Harbors Act (RHA) of 1899.

In 1987, Congress passed a stand-alone provision to the CWA, Section 407 of Public Law 100-4, which reiterated the procedures outlined in the MOA for LTFs authorized under Section 404 prior to October 22, 1985. Under the provisions of Section 407, those permittees “shall not be required to submit a new application for a permit under section 402.” However, “in any case where the Administrator demonstrates, after an opportunity for a hearing, that the terms of a permit ….. do not satisfy the applicable requirements of sections 301, 302, 306, and 403 of such Act,” EPA had the authority to modify the existing Section 404 permits “to incorporate such applicable requirements.”

Therefore, in accordance with the provisions of Section 407 of Public Law 100-4 and the MOA regarding coordination of permitting LTFs, EPA modified all USACE Section 404 permits issued to LTF owners prior to October 22, 1985, to incorporate the requirements of Sections 301, 302, 306, 307, and 403 of the CWA. These actions resulted in what has become known as the Pre-85 LTF general permit (AKG700000).

In 1985 representatives from various State of Alaska resource agencies, the timber industry, and federal agencies involved in LTF permitting developed the Log Transfer Facility Siting, Construction, Operation and Monitoring / Reporting Guidelines (Alaska Timber Task Force Guidelines (ATTF Guidelines, Appendix B)). The Guidelines establish siting, construction and operational practices, and identified the physical features, practices, and measures considered needed to safely and efficiently transport logs from new LTFs. Many of the ATTF Guidelines are the basis of some of the requirements in what has become known as the Post-85 LTF general permit (AKG701000).

The ATTF Guidelines identified an interim threshold for bark and wood debris accumulation of 1.0 acre of 100% coverage greater than 10 cm at any point on the sea floor (both intertidal & subtidal). The 1.0 acre, 10 cm threshold became the 1.0 acre Zone of Deposit (ZOD) contained in individual NPDES permits issued to LTFs prior to the adoption of the 2000 LTF general permits as well as individual NPDES or general NPDES permits issued to Alaska seafood processors. The ATTF Guidelines address cleanup in Section C6 of Appendix B, Bark Accumulation. This section states that where bark and wood waste "accumulation exceeds the threshold level, cleanup (if any) will occur at the discretion of the permitting agency(ies)." DEC adopted the term "remediation planning" in lieu of "cleanup" in the 2000 and subsequent LTF general permits to reflect that options other than removal may be appropriate to manage bark accumulations that exceed the threshold level.

Following establishment of the ATTF Guidelines and the authority to coordinate permitting activities between EPA and USACE, EPA Region 10 adopted two NPDES general permits for LTFs in March 2000. Since the Pre-85 facilities were in existence at the time that NPDES permitting began, the siting guidelines were not retroactively applied to those facilities.

Permit No. AKG700000, the Pre-85 LTF general permit added terms to the Section 404 dredge and fill permits to control the discharge of bark and wood debris to satisfy the applicable requirements of the CWA. Permit No. AKG701000, the Post-85 NPDES general permit, became applicable to new LTFs discharging to marine waters of Alaska extending from the Alexander Archipelago west through central Gulf of Alaska and Prince William Sound to Kodiak Island (area of LTF general permit coverage), those with individual NPDES permits that had expired or had been administratively extended, those with individual NPDES permits that chose to seek coverage under the general permit, and to all offshore log storage facilities that wished to continue or resume operation.

The 2000 LTF general permits authorized the discharge of bark and wood debris, under specified terms, to both near shore and offshore marine waters in Alaska within the area of coverage. LTFs authorized by the 2000 LTF general permits were required to develop and implement Pollution Prevention Plans and to restrict their discharges to inside the perimeter of a project area ZOD. The permits also required annual underwater bark monitoring for facilities located in waters less than -60 feet Mean Lower Low Water (MLLW) that transferred more than 15 million board feet (mmbf) during the five-year period of the LTF general permits. If monitoring showed more than 1.0 acre of continuous coverage by bark and wood debris deeper than 10 cm (3.9 inches) at any point, the 2000

LTF general permits required that additional measures be taken to minimize further bark accumulation.

DEC certified the 2000 LTF general permits under Section 401 of the CWA on August 24, 1999. DEC's certification included a new ZOD provision allowing for a project area ZOD. Project area meant the entire marine operating area of an LTF, either shore-based or off-shore, including the following components: shore-based log transfer devices; shore-based log transfer, rafting, and storage areas; helicopter drop areas; vessel and barge loading and unloading areas; offshore log storage areas not adjacent to a shore-based LTF; bulkheads, ramps, floating walkways, docks, pilings, dolphins, anchors, buoys and other marine appurtenances; and the marine water and ocean bottom underlying and connecting these features.

The project area ZOD established a 1.0 acre remediation threshold (i.e., not a fixed limit) for continuous cover bark greater than 10 cm deep at any point. If the 1.0 acre threshold was exceeded, the state certification triggered requirements for remediation planning. The ZOD for the 2000 general permits allowed for the presence of discontinuous and trace cover bark without limits within the project area.

DEC's decision to allow this new ZOD provision was based on two primary considerations. The first was that the fixed 1.0 acre limit for continuous cover bark and wood waste failed to acknowledge that discontinuous (10% to 99% cover) and trace cover (<10% cover) bark and wood waste was likely to be found within the operational footprint of a facility. DEC recognized that trace and discontinuous bark was likely to be discharged within what became the project area as log bundles were transferred to water, moved to log raft building areas, and while at log raft storage. Bark found outside a fixed 1.0 acre ZOD would have been a violation of the Alaska Water Quality Standards (WQS) and potentially subject to enforcement. By adopting a project area ZOD, DEC allowed for the presence of discontinuous and trace cover bark through a variance to the WQS.

The second consideration was that NPDES permits usually establish limits on prospective discharges. In other words, limits typically apply only to discharges that occur after the permit is issued. In the case of the 2000 LTF general permits, DEC decided to regulate both historic and prospective bark accumulations.

1.2.1 Adjudication of DEC's August 24, 1999 Section 401 Certification

DEC's August 24, 1999 Section 401 certification of the 2000 NPDES LTF general permits was administratively challenged (under 18 AAC 15.195 and 18 AAC 15.200, request for an adjudicatory hearing) by the Natural Resource Defense Council (NRDC) on September 23, 1999. The primary NRDC issues were:

- Without a one acre limit on continuous cover bark the project area ZOD had no "limit" as DEC's ZOD regulations require;
- DEC did not adequately consider all the factors required by the WQS in allowing a project area ZOD;
- Alaska's antidegradation regulations require a site-specific determination that the ZOD will not impair existing uses, and that DEC cannot make that determination through a general permit;
- 18 AAC 70.900 prohibits the issuance of state general permits that "threaten" water quality, and that the project area ZOD would threaten water quality;

- Limiting bark accumulation monitoring to 60 feet is arbitrary, as continuous cover bark may extend beyond 60 feet into deeper but still productive habitats;
- The expansion of the ZOD from one acre to a LTF's project area fundamentally relaxes the regulatory requirements applicable to LTFs in Alaska; and
- The remediation plan process adopted by DEC would not protect water quality to the same extent as a 1.0 acre limit on continuous cover bark.

On May 2, 2002 the Hearing Officer in the adjudicatory proceedings issued his Final Decision. His legal conclusions were that:

1. "There is reasonable assurance that discharges authorized by DEC pursuant to the terms of the general permits, the certifications and review of NOI's (Notice of Intent) will comply with Alaska's water quality standards"; and
2. "There is reasonable assurance that the discharges authorized by DEC pursuant to the terms of the general permits, the certifications and review of NOI's will comply with Alaska's antidegradation policy."

The Hearing Officer upheld many of the provisions contained within the August 24, 1999 Section 401 certifications but did impose some additional requirements on DEC's certification of the 2000 LTF general permits and/or ZOD authorization process. DEC was required to:

1. Provide public notice for new, previously unpermitted LTFs to gather information on existing uses of the waterbody;
2. Provide public notice for LTFs reporting more than 1.0 acre of continuous cover bark;
3. Mail copies of the public notice to the environmental plaintiffs in the adjudication proceedings;
4. Conduct a site-specific ZOD authorization and develop a Decision Document that provides the basis for each ZOD authorization issued;
5. Conduct site specific reviews of NOIs; and
6. Provide parties to the adjudication appeal rights for new publically noticed individual authorizations.

1.2.1.1 2014 APDES LTF General Permits

The requirements listed in Section 1.2.1 above were imposed on the administrative procedures used to implement the requirements of the Section 401 certification of the 2000 LTF general permits. DEC proposes to consult with other state resource agencies as part of the NOI review process for new LTFs. However, DEC proposes to retain only requirements 1, 4 5, and 6 from this list during the ZOD authorization process for new facilities for the current general permits.

DEC elects to not incorporate parts 2 and 3 above. There is only one facility currently reporting more than one acre of continuous cover bark and information on this facility is included in this document which is being public noticed. Part 3 would impose a substantial administrative burden on the agency to contact all the parties, request if they still wish to receive information, and update both contact and mailing information.

The LTF general permits retain the Hearing Officers final decision prohibition against DEC issuing LTF general permit authorizations under state law to facilities located on waterbodies not meeting

Alaska WQS that are listed as “impaired” on DEC’s EPA approved CWA Section 303(d) list regardless of the source of the impairment.

1.2.2 2004 NPDES LTF General Permit Modifications

EPA’s 2000 LTF general permits were appealed to the United States Court of Appeals for the Ninth Circuit Court (9th Circuit Court). The 9th Circuit Court ruled on February 13, 2002 that EPA had not provided adequate notice in the Federal Register (FR) and Alaska newspapers of and an opportunity to comment on the project area ZOD provision in DEC’s final 401 certification of the LTF general permits. The public review drafts of the LTF general permits and DEC’s 401 certification retained the fixed 1.0 acre ZOD provision. DEC adopted the project area ZOD after the completion of the public review period, and the 9th Circuit Court found that the public had not been afforded an opportunity to comment on this change. The 9th Circuit Court remanded the LTF general permits to EPA to take further comment on this change. During the public comment period, EPA also proposed other modifications to certain permit conditions.

On October 22, 2002, EPA proposed modifications to, and requested additional public comments on, general NPDES permits AKG700000 and AKG701000 (67 FR 64885). The public comment period was twice extended (67 FR 68869 and 68 FR 2540), and closed on January 27, 2003. Notice for public comment was also published in the Anchorage Daily News, Ketchikan Daily News, The Seward Phoenix Log, The Valdez Vanguard, and The Cordova Times. Additionally, copies of the proposed modifications to the permits were sent to all known LTFs operating under a section 404 permit issued prior to October 22, 1985.

Public comment was solicited on five proposed modifications to the general permits related to: (1) The timing of final zone of deposit authorization by the State of Alaska; (2) exclusion of permit coverage in impaired waterbodies; (3) a limit on continuous bark or wood debris coverage of one acre and 10 centimeters at any point within a project area ZOD; (4) a lower threshold amount for continuous coverage to invoke amendments to a facility's Pollution Prevention Plan; and, (5) increasing the depth of bark surveys of continuous coverage on the ocean bottom to minus (-) 100 feet MLLW.

In response to numerous comments received from facility representatives, tribal representatives, concerned citizens, environmental groups, the U.S. Forest Service, U.S. Fish and Wildlife Service, the National Marine Fisheries Service, local municipalities, and the State of Alaska, EPA made two out of the five proposed modifications, numbers 1 and 5 above.

Modification one provided that DEC must issue a final decision document authorizing a project area ZOD to each LTF prior to EPA issuing a general permit discharge authorization. Modification five required that when conducting the bark monitoring surveys, if continuous coverage of bark and wood debris extended beyond minus 60 feet MLLW, the bark monitoring survey must continue until continuous coverage ends, or a depth of minus 100 MLLW feet is reached, whichever occurs first.

DEC originally certified on August 24, 1999 under section 401 of the CWA that the subject discharges under both of the original general permits complied with the Alaska State Water Quality Standards and sections 208(e), 301, 302, 303, 306 and 307 of the CWA. DEC determined that the general permit modifications were of a minor nature and that a new certification was not necessary.

Following the completion of the additional public review period, the LTF general permits were modified on April 27, 2004 to clarify procedures for authorization of project area ZODs consistent

with the Hearing Officers decision, as well as extending monitoring requirements for continuous cover bark deposits below -60 feet MLLW to -100 feet MLLW.

1.2.3 2008 LTF General Permit Re-Issuance

On July 31, 2007 EPA public noticed the availability of two general permits for LTFs, permit numbers AKG70000 and AKG701000. General permit AKG700000 (the ‘‘Pre-85’’ general permit) included section 402 modifications to section 404 permits issued to LTFs prior to October 22, 1985, in accordance with section 407 of the Water Quality Act of 1987 (Public Law 100–4). All other LTFs could apply to be authorized to discharge under AK G701000 if they met eligibility requirements. The public comment period ended on September 25, 2007.

The public review Post-85 general permit was a reissuance of a previously issued general permit that became effective on March 21, 2000, and was subsequently modified on April 27, 2004. The Post-85 general permit expired on March 21, 2005, and had been administratively extended. The public review Pre-85 general permit contained additional modifications to section 404 permits issued to LTFs prior to October 22, 1985. The modifications implemented by the Pre-85 general permit became effective as of April 27, 2004, and did not expire because the section 404 permits have no expiration date.

There were a number of proposed significant modifications to the public review general permits that were noticed. They included:

1. All shore-based LTFs must prepare and implement a Pollution Prevention Plan (PPP) before submitting a NOI or Notification for permit coverage.
2. EPA may issue new general permit discharge authorizations to LTFs located on residue impaired waters classified as Category 4b if a DEC approved remediation plan is in place. New LTFs located on impaired waters that are included in the CWA section 303(d) list (i.e., Category 5 waters) must apply for an individual NPDES permit.
3. Provided discretion for Pre-85 LTFs to operate in waters less than -40 feet MLLW. This change to Best Management Practices (BMPs) did not affect Post-85 LTFs.
4. The presence of continuous bark and/or wood debris within the project area ZOD in amounts equal or greater than 0.75 acres triggers implementation changes to BMPs and pollution prevention planning as a proactive approach towards preventing greater than 1.0 acres of continuous bark and wood debris from accumulating.
5. When submitting a NOI for coverage under the Post-85 general permit, or Notification for coverage under the Pre-85 general permit, operators must certify that BMPs will be implemented at the time when in-water log storage or transfer begins.
6. Required the use of a GPS receiver with Wide Area Augmentation System (WAAS) capabilities for locating the discharge point and permanent monitoring shore markers.
7. Requires that the PPP include a site map that shows the boundaries of the upland sort yard and the location of industrial activities that occur within the sort yard.
8. Changed the depth requirement for required dive monitoring surveys for LTFs transferring more than 15 million board feet over the life of the permit from -60 feet MLLW to -100 feet MLLW.

Proposed modification 1, 3, 5, and 8 were adopted without further modification in the final general permits. Proposed modification 2 and 4 were not adopted into the final general permits. Proposed modification 6 was adopted into the final general permits without reference to “Wide Area

Augmentation System (WAAS) capabilities" but with the requirement for a precision of at least three meters. The general permits have an effective date of December 1, 2008 and an expiration date of November 30, 2013.

DEC mailed all permittees a letter on May 8, 2013 remanding them of their obligation to submit a NOI or Notification at least 180 days in advance of permit expiration in order to maintain an administratively extended discharge authorization in the event that DEC did not re- issue the LTF general permits prior to the November 30, 2013 expiration date. DEC received applications from permittees for all LTFs that were authorized to discharge under the terms of the 2008 LTF general permits. DEC issued written administrative extension letters for all LTFs prior to the expiration date.

2.0 ALASKA POLLUTANT DISCHARGE ELIMINATION SYSTEM

DEC submitted a final NPDES program approval application to EPA on October 29, 2008. The application established a schedule for EPA to transfer permitting and compliance responsibility for the NPDES Program to DEC over a period of four years from the NPDES application approval date. On August 11, 2011 EPA approved DEC's request for a one-year extension of the transfer period, and the MOA between EPA and DEC was amended. On October 31, 2012, DEC assumed full authority to administer the wastewater discharge permitting and compliance program in Alaska. DEC's program is called the Alaska Pollutant Discharge Elimination System (APDES). LTFs were transferred to DEC on October 31, 2008. In addition, as of October 31, 2009, DEC became the storm water permitting authority.

2.1 Multi-Sector General Permit for Storm Water Discharges Associated With Industrial Activities (MSGP)

Permitted LTFs and any co-located industrial activities such as but not limited to saw mills are required to obtain coverage from DEC for industrial storm water discharges associated with industrial activities from timber products facilities as identified by the Standard Industrial Classification (SIC) Codes specified under Sector A in Table D-1 of Appendix D of the 2008 MSGP permit, or the most current version. Regulated facilities include general sawmills and planning mills (Sector A1, SIC code 2421) and log storage and handling facilities (Sector A3, SIC code 2411). See http://dec.alaska.gov/water/wnpspc/stormwater/MultiSector.htm

The 2008 MSGP expired at midnight on September 29, 2013. A new permit to replace it has not been issued. Permittees who obtained coverage under the 2008 MSGP prior to its expiration are automatically granted an administrative continuance of permit coverage. The administrative continuance will remain in effect until a new permit is issued. Permittees already covered under the 2008 MSGP are not required to submit a new Notice of Intent (NOI) for permit coverage until the MSGP is reissued. Permittees must continue to comply with all requirements in the 2008 permit, including requirements for monitoring and reporting.

New facilities seeking to discharge storm water associated with industrial activity are unable to apply for permit coverage until DEC reissues the MSGP to replace the administratively extended 2008 MSGP. DEC issued a "no action assurance" memorandum for newly-discharging facilities. The memo states that the Department will not pursue administrative or civil judicial enforcement actions for lack of permit coverage against a newly-discharging facility, provided that the operator

meets the requirements established in the memorandum **attached memo (PDF, 2 pp, 408K)**. **- NEW**.

Per the No Action Assurance Memo, new operators are to submit an NOI using the paper form. Additional MSGP forms are located at Storm Water Forms webpage http://dec.alaska.gov/water/wnpspc/stormwater/Forms.htm.

At this time DEC expects to reissue the MSGP in early 2015. At that time all operators desiring coverage under the MSGP, including those with administrative continuance under the 2008 MSGP, will need to submit NOIs for permit coverage.

This is not a new requirement as industrial storm water has been regulated since the promulgation of EPA's 1990 storm water regulations, which established NPDES permit requirements for "storm water discharges associated with industrial activity." EPA's first MSGP for storm water discharges associated with industrial activity was issued on September 29, 1995, and was reissued in 2000 and 2008.

3.0 INDUSTRY DESCRIPTION

The majority of the timber harvested within coastal Alaska originates from areas that lack road access to established domestic mills or final market destinations. For this reason most timber is transported via marine waters. A portion of the timber volume transported is placed directly onto a barge from a shore-based facility and the barge is towed to a domestic mill for unloading directly to the uplands for processing. LTF's that employee transfer methods such as direct transfer of log bundles to a barge or ship are not subject to APDES permitting requirements and need not seek coverage under either LTF general permit.

Timber that is not barged is transferred from shore-based LTFs to marine waters for transport to a domestic mill or loaded onto a log ship for transport. These shore-based LTFs, also known as log dumps or Marine Access Facilities (MAF), are subject to APDES permitting.

Once individual log bundles are transferred to marine waters, log bundles are consolidated into log rafts in the log raft makeup area. This area is typically located immediately adjacent to the actual shore-based LTF transfer device. Once a log raft has been assembled, they are either stored at the LTF, or towed and stored at the log storage area (LSA) associated with the LTF. The acreage of LSAs are included in the total acres in the project area ZOD associated with the shore-based LTF.

There are six permitted LSA (see table 1). Some LTF owners have permitted LSA in cases where it is not feasible to tow a large log raft storage from the shore-based facility due to currents. Other LSAs are used when it is necessary to break up a large raft so that small rafts can be towed through narrow waterbodies and re-assembled into the original configuration.

4.0 LTF GENERAL PERMIT COVERAGE

4.1 Area of Coverage

The 2008 Pre-85 general permit did not specify a geographic area since the intent of the 2000 Pre-85 general permit was to modify all existing 404 permits for LTFs issued prior to October 22, 1985, therefore, there can be no "new" facilities added to this coverage. All Pre-85 LTFs located within the

boundaries of the State of Alaska that meet the criteria established in 40 CFR§122.28(a) qualify for coverage under the general permit.

LTFs that received a Section 404 permit prior to October 22, 1985, and never applied for or received an individual NPDES permit and/or coverage under the 2000 or 2008 LTF general permit remain eligible for coverage under the Pre-85 general permit (Public Law 100-4). DEC considers these LTFs legacy facilities abandoned since they have not transferred any volume for approximately 30 years and re-construction costs are likely to be substantial.

If DEC receives a Notification for a legacy facility, DEC intends to take a hard look at the information contained in the Notification to ensure that issuing a project area ZOD is consistent with the ZOD and antidegradation regulations. Public Law 100-4 does not require DEC to issue project area ZODs to these facilities merely because the Section 404 permit had no expiration date.

The Post-85 general permit area of coverage includes marine waters of the U.S. within the State of Alaska extending west from the Alexander Archipelago through the central Gulf of Alaska and Prince William Sound to Kodiak Island. The LTF general permit coverage area does not include Cook Inlet, freshwater habitats (including streams, lakes, rivers, impoundments, and wetlands), or areas that are excluded from authorization. Cook Inlet is excluded due to its large tidal ranges, swift currents, and extensive low tide intertidal mud flats that make this area problematic for LTF siting per the LTF Siting Guidelines.

4.2 Facilities Authorized by the LTF General Permits

DEC records as of February 2014 identify eighty seven (87) LTFs authorized to discharge under the LTF general permits. Fifty three (53) LTFs are authorized under the Pre-85 general permit (59 percent) and the remaining thirty four (34) facilities are authorized under the Post-85 general permit. All authorized Pre-85 facilities are onshore LTFs. Of the 34 authorized Post-85 facilities, 28 are onshore facilities, and six (6) are offshore facilities. The United States Forest Service (USFS) is the permittee/authorized discharger for 83 percent of the Pre-85 LTFs. Sealaska Timber Corporation (STC) and the USFS are the permittee/authorized discharger for 44 and 29 percent of the Post-85 LTFs, respectively.

DEC has authorized specific project area ZODs for each facility based upon a Department of Natural Resources (DNR) or other land management authority's tidelands permit, lease or easement. DNR authorizes surface use of certain state-owned waters following a written final best interest finding (AS 38.05.035 (e)) subject to a public comment period. DEC is unaware if other land management authorities conduct a similar public process for their land use actions. Regardless, DEC authorizes seafloor deposits of bark and wood debris within an approved surface use footprint. DNR uses a number of lands action descriptions. ADL means Alaska Division of Lands. ATS means Alaska Tidelands Survey and LAS means Land Administration System.

The Ship Moorage Site for the East Port Frederick LTF (AKG700004) is permitted by the City of Hoonah since the submerged lands and tidelands below this site are owned by the City of Hoonah. The Ketchikan Gateway Borough owns the uplands and submerged lands at the Lewis Reef LTF (AKG701062). Table 1 shows the current project area ZOD for each currently permitted facility

DEC public noticed its intent to re-issue authorizations under the terms and conditions of the 2014 LTF general permits to all facilities listed in Table 1 with current administratively extended authorizations without additional agency review or public notice after the LTF general permits are issued and become effective.

Table 1. Currently Permitted LTFs

Map ID	Permit No.	Facility	Permittee	Project Area Zone of Deposit (acres)	DNR Authorization
1	AKG700001	Viking Lumber Mill	Viking Lumber Company (VLC)	5.97	ADL 105528
2	AKG700002	Grace Harbor LTF LSA	Sealaska Timber Corp. (STC)	16.01 10.71	ADL 103824
3	AKG700003	Klawock Island Dock LTF LSA	Klawock Heenya Corp. (KHC)	25.29 22.40	ADL 101015 ADL 106837
4	AKG700004	East Port Frederick LTF Ship Moorage Site	Huna Totem Corporation (HTC)	59.54 19.16	ADL 102830 City of Hoonah
5	AKG700005	Point Macartney LTF	STC	27.01	ADL 101709
6	AKG700006	Portage Bay LTF (not permitted by DNR) LSA	STC	44.90	ADL 106225 Tract BU for LSA only.
7	AKG700007	View Cove LTF LSA	STC	19.26 22.42	ADL 105981 ADL 101588,
8	AKG700008	West Port Frederick LTF LSA	STC	24.22 22.96	ATS 1167 Tract B & C
9	AKG700014	Anita Bay South LTF	US Forest Service (USFS)	11.19	ADL 105952
10	AKG700015	Blind Slough LTF	USFS	12.49	ADL 17648
11	AKG700016	Deep Bay LTF	USFS	11.01	ADL 106197
12	AKG700017	Deer Island West LTF	USFS	7.90	ADL 106353
13	AKG700018	Eight Fathom Bight LTF	USFS	10.79	ADL 106216
14	AKG700019	Hamilton Bay LTF	USFS	11.54	ATS 627
15	AKG700020	Hassler LTF	USFS	13.30	ADL 106125
16	AKG700021	Klu Bay LTF	USFS	13.47	ADL 106830
17	AKG700023	Marguerite Bay	USFS	10.23	ADL 107721
18	AKG700024	Pats Creek LTF	USFS	13.96	ADL 106352
19	AKG700025	Polk Inlet LTF	USFS	18.41	ADL 105438
20	AKG700026	Port Alice LTF	USFS	15.03	ADL 101550
21	AKG700027	Portage Bay LTF	USFS	14.16	ADL 104360
22	AKG700028	Rowan Bay LTF	USFS	14.08	ADL 106351
23	AKG700029	Salt Lake Bay LTF	USFS	13.65	ADL 104955
24	AKG700030	Shoal Cove LTF	USFS	14.01	ADL 106182

Map ID	Permit No.	Facility	Permittee	Project Area Zone of Deposit (acres)	DNR Authorization
25	AKG700031	Shrimp Bay LTF	USFS	11.46	ADL 106140
26	AKG700032	Thomas Bay LTF	USFS	14.34	ADL 104778
27	AKG700033	Tonka LTF	USFS	11.41	ADL 107229
28	AKG700034	Whale Pass LTF	USFS	10.76	ADL 105581
29	AKG700035	Winter Harbor LTF	USFS	6.76	ADL 103277
30	AKG700036	Woodpecker Cove LTF	USFS	10.55	ADL 106198
31	AKG700038	Calder LTF	USFS	11.36	ADL 102384
32	AKG700039	Coffman Cove LTF	USFS	23.86	ATS 625
33	AKG700040	Corner Bay LTF	USFS	15.55	ADL 100237
34	AKG700041	El Capitan LTF	USFS	16.48	ADL 101554
35	AKG700042	False Island LTF	USFS	11.14	ADL 104598
36	AKG700043	Fire Cove LTF	USFS	10.5	ADL 107720
37	AKG700044	Hanus Bay LTF	USFS	10.35	ATS 1632
38	AKG700045	Inbetween LTF	USFS	11.43	ADL 106728
39	AKG700046	Kennel Creek LTF	USFS	27.62	ATS 1088
40	AKG700047	Labouchere Bay LTF	USFS	10.64	ADL 101553
41	AKG700048	Marble Island East LTF	USFS	11.01	ADL 103912
42	AKG700049	Naukati LTF	USFS	8.77	ADL 101552
43	AKG700050	South West Neets Bay LTF	USFS	14.58	ADL 107719
44	AKG700051	Nichin Cove LTF	USFS	12.01	ADL 107606
45	AKG700052	Rynda LTF	USFS	13.79	ADL 106350
46	AKG700053	Saginaw Bay LTF	USFS	13.54	ADL 104371
47	AKG700054	Sawmill Cove LTF	USFS	9.88	ADL 102366
48	AKG700055	Sumez - Refugio LTF	USFS	8.98	ADL 107193
49	AKG700056	St Johns LTF	USFS	12.64	ADL 106199
50	AKG700057	Indian River LTF	USFS	11.36	ATS 1050
51	AKG700059	Todd LTF	USFS	12.75	ADL 103478
52	AKG700060	Venus Cove LTF	USFS	10.43	ADL 107718
53	AKG700061	Saltery Point LTF	Haida Corp.	13.21	ADL 105851, 103223

Map ID	Permit No.	Facility	Permittee	Project Area Zone of Deposit (acres)	DNR Authorization
54	AKG701001	Sandy Point LTF	STC	17.04	ADL 106090
55	AKG701002	Carroll LTF	USFS	13.19	LAS 20683
56	AKG701004	East Twelvemile LTF	USFS	13.98	ADL 105307
57	AKG701006	King George LTF	USFS	13.47	ADL 106273
58	AKG701007	Hoya LTF	USFS	10.86	ADL 106632
59	AKG701008	Lisa Creek LTF	USFS	6.20	ADL 107034
60	AKG701009	Shelter Cove LTF	USFS	11.05	ADL 105601
61	AKG701010	Saook Bay LTF	USFS	7.90	ADL 106871
62	AKG701013	St John Baptist LTF	USFS	5.33	ADL 106589
63	AKG701014	West Arm Cholmondeley LTF	USFS	12.68	ADL 106471
64	AKG701015	Kina Cove LTF LSA	STC	7.62 8.93	ADL 106502
65	AKG701016	Port Caldera LTF	STC	39.30	ADL 106095
66	AKG701027	Little Goose Bay LSA	STC	10.90	LAS 24232
67	AKG701028	Cleveland Peninsula LTF and LSA	STC	20.82	ADL 106089, 2013 NOI
68	AKG701029	Coco Harbor LTF LSA	STC	17.62 28.94	ADL 106224 Tract B ADL 106224 Tract A
69	AKG701030	Copper Mountain LTF LSA	STC	17.20 29.20	LAS 19495 Tract 2 LAS 19495 Tract 1
70	AKG701031	Hydaburg Ship Moorage Saltery Point (Trap Bay) LSA	STC	23.32 18.61	ADL 106228 ATS 1255 & 1172
71	AKG701032	Kake Ship Moorage Grave Island LSA	STC	18.35 12.0	ADL 106229 ADL 106226
72	AKG701033	Nutkwa Inlet North LTF LSA Area A LSA Area b	STC	13.9 5.70 10.0	ADL 106093
73	AKG701034	Nutkwa Inlet South LTF LSA	STC	14.46 11.93	ADL 106092
74	AKG701035	Rose Inlet LTF LSA	STC	15.25 6.44	ADL 106091
75	AKG701037	Soda Bay LTF LSA	STC	9.46 8.48	ADL 106414 Tract A ADL 106414 Tract B
76	AKG701038	Sulzer LTF	STC	22.40	ADL 106503
77	AKG701039	Tolstoi Bay STC LTF	STC	12.50	LAS 19496

Map ID	Permit No.	Facility	Permittee	Project Area Zone of Deposit (acres)	DNR Authorization
		LSA Tract 3 SM Tract 4 LSA Tract 5 LSA Tract 6 LSA Tract 7		14.70 14.70 4.80 9.20 1.80	LAS 28339 - pending LAS 28339 - pending LAS 28339 - pending LAS 28339 - pending LAS 28339 - pending
78	AKG701040	Wadleigh Island LSA	VLC	48.00	ATS 904 Tract A
79	AKG701044	Barefoot Beach LTF	Koncor Forest Products (KFP)	13.44	ADL 225156
80	AKG701049	Lookout Cove LTF LSA Ship Moorage Site	Afognak Native Corporation (ANC)	16.45 33.06 15.61	ADL 222924
81	AKG701053	Tolstoi Bay MHT LTF	Alaska Mental Health Trust Land Office (MHT)	11.06	ADL 107429
82	AKG701057	Sunny Point USFS LTF	USFS	12.77	ADL 107175
83	AKG701061	Leask Cove LTF Bull Island LSA Ship Moorage Site	MHT	4.60 5.20 4.75	LAS 25104
84	AKG701062	Lewis Reef LTF	Ketchikan Gateway Borough (KGB)	32.26	ATS 802
85	AKG701063	Pothole LSA	USFS	9.18	ADL 108084
86	AKG701064	Shakan Bay LSA	Boyer Towing (BT)	18.00	LAS 27163
87	AKG701065	East Dry Pass LSA	BT	18.00	LAS 27163
			Total Acres	**1,674.84**	

The 1,674.84 total acres is made of 1,148.90 acres of shore-based LTFs and log raft makeup areas, 430.05 acres of log storage areas, and 95.89 of authorized ship moorage sites.

DEC will use the Project Area Zone of Deposit acres listed in Table 1 above when issuing project area ZODs to permittees once the LTF general permit become effective. Permittees are encourage to review the information listed in Table 1 for their facilities to ensure that the information on acres and the DNR authorization number is correct.

The following map shows the permit coverage area for the Post-85 general permit and existing permitted LTFs. The maps as the same as those found in the Ocean Discharge Criteria Evaluation (ODCE).

Figure 1. Overview Map of Existing LTFs in Alaska

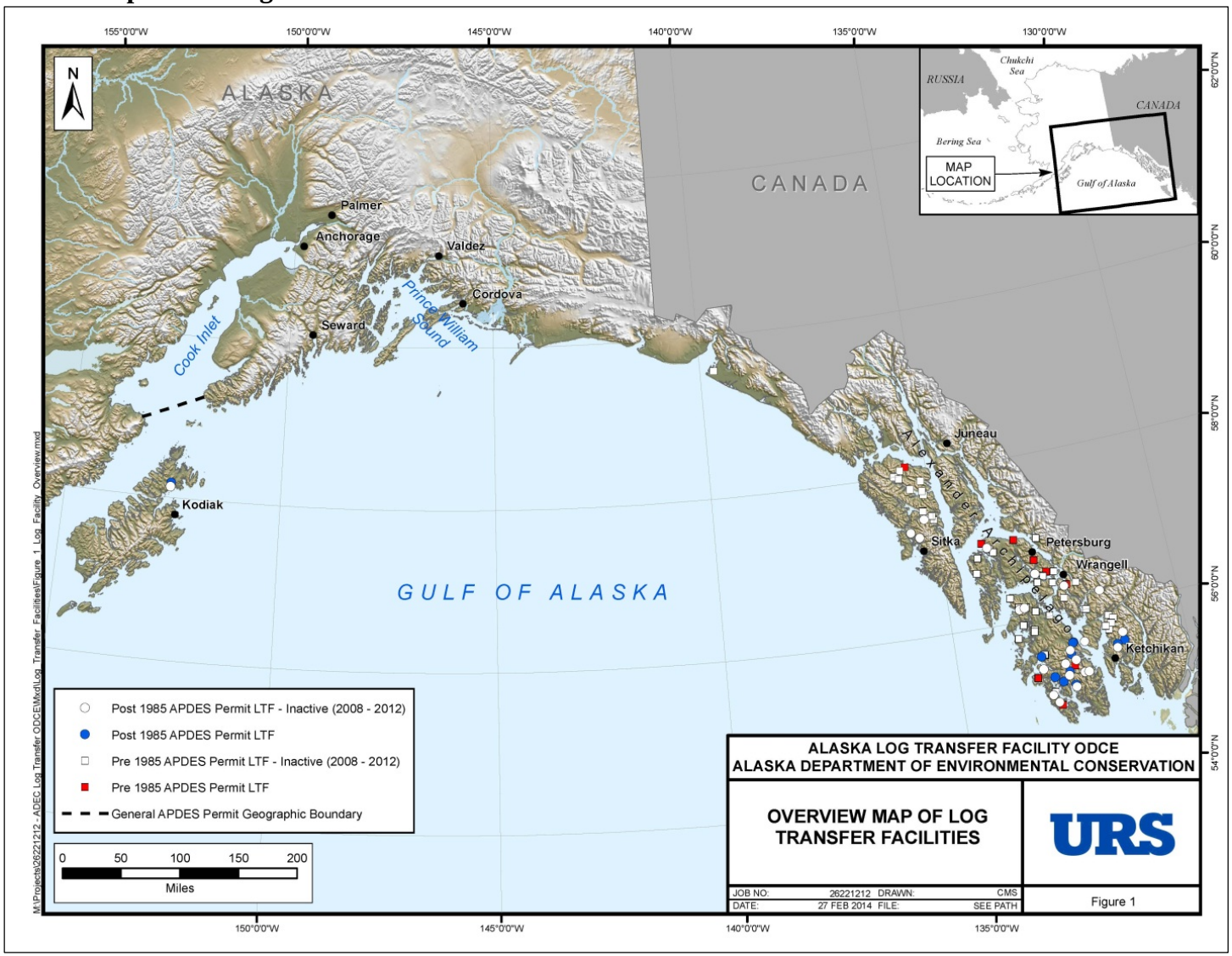

Figure 1 depicts the geographic area of coverage for the LTF general permits for qualifying LTFs discharging bark and woody debris into marine waters of the United States (U.S.) in the State of Alaska. It extends west from the Alexander Archipelago through the central Gulf of Alaska and Prince William Sound to Kodiak Island. The APDES general permit coverage area does not include Cook Inlet, freshwater habitats (including streams, lakes, rivers, impoundments, and wetlands), or areas that are excluded from authorization.

Figure 2. Southeast Alaska LTFs

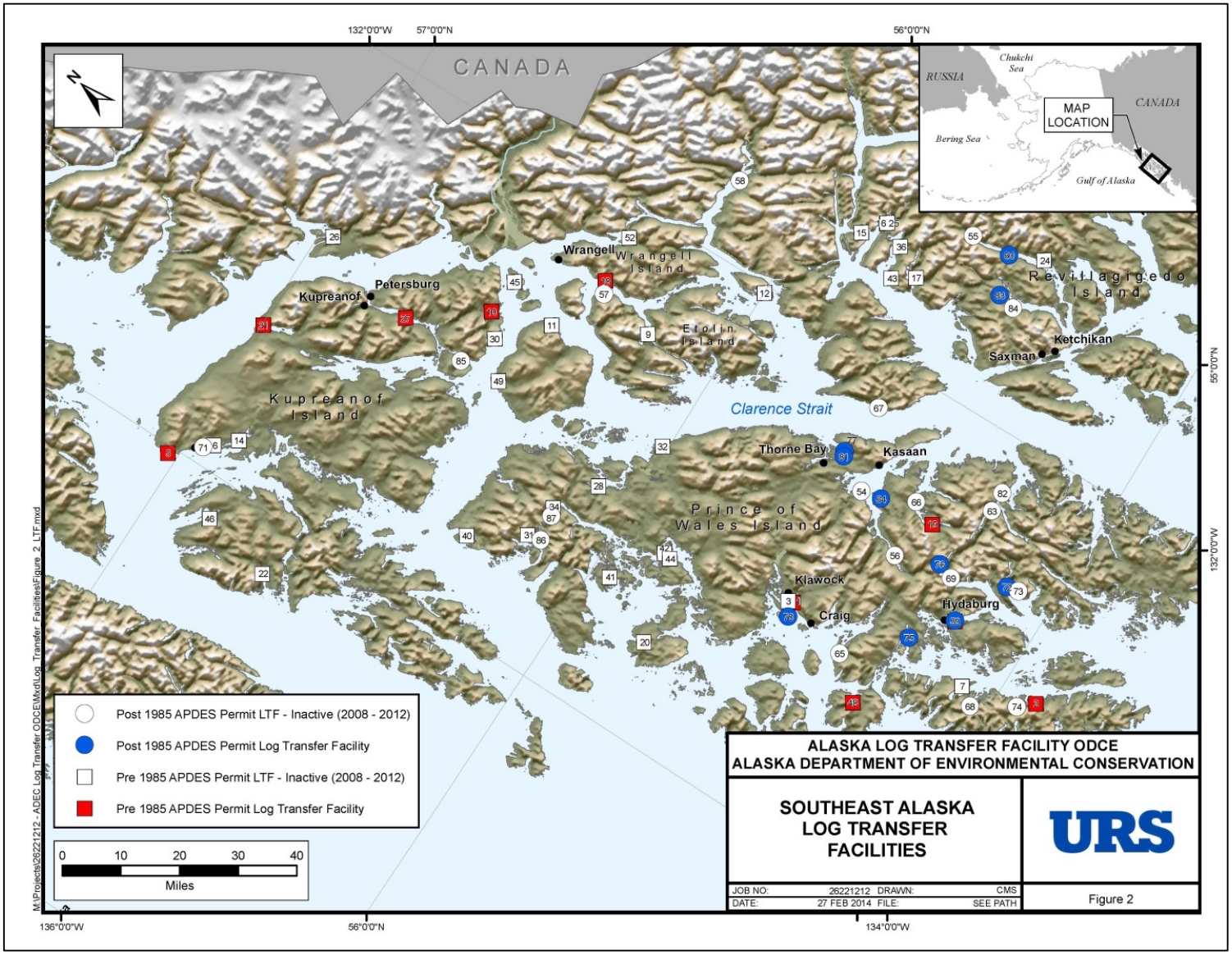

Figure 2 depicts LTFs with a discharge authorization for bark and woody debris into marine waters of the state of Alaska located on Prince of Wales Island and adjacent areas in Southeast Alaska.

Figure 3. LTFs in the Upper Panhandle, Yakutat Bay, and Afognak Island

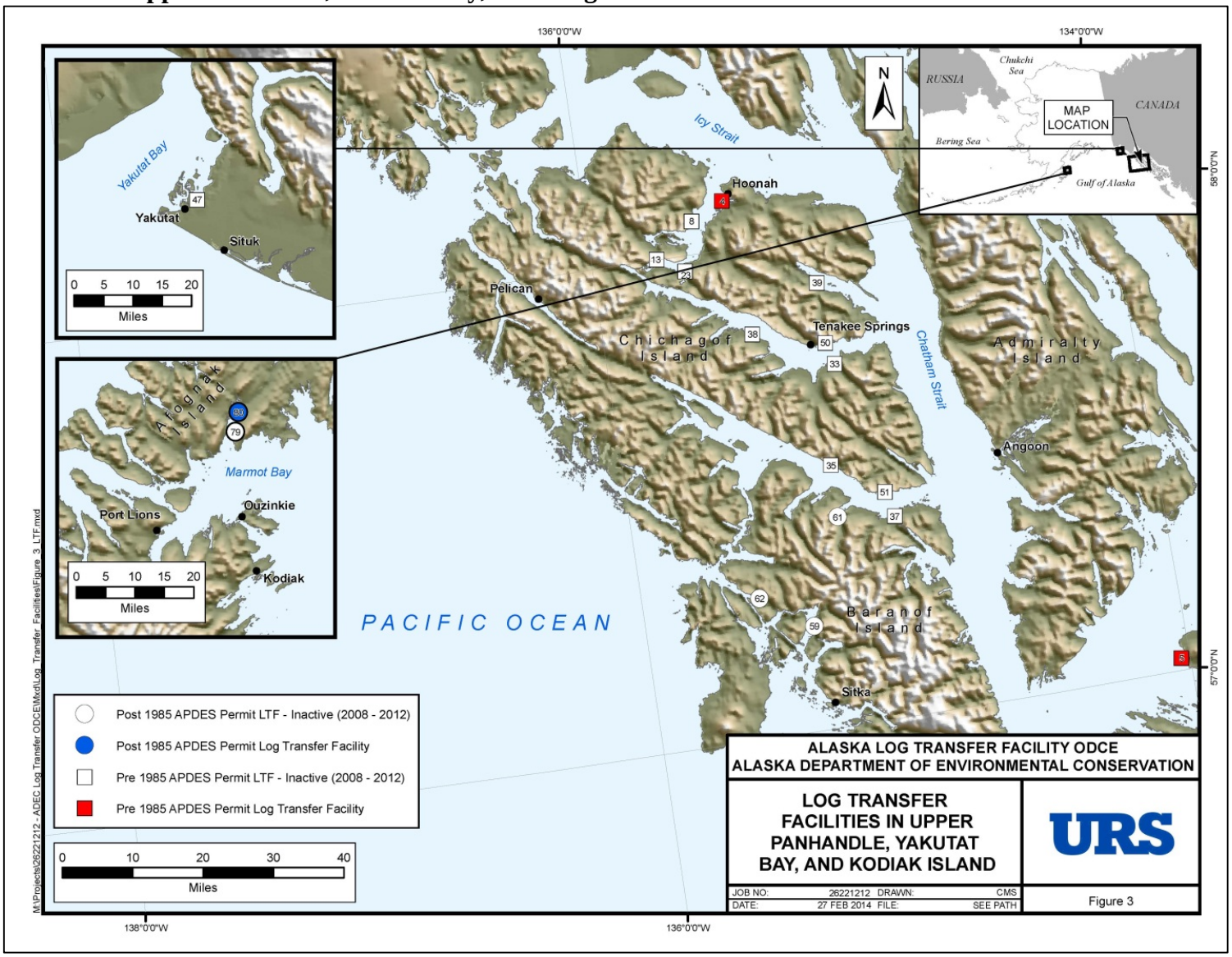

Figure 3 depicts LTFs discharge authorization for bark and woody debris into marine waters of the state of Alaska located on the upper Southeast Alaska panhandle, at Yakutat Bay, and Afognak Island, northeast of Kodiak Island.

4.3 Applying for Coverage

Facilities that transfer logs or bundles directly from land to barge (i.e., no in-water activity) need not apply for coverage under the LTF general permits since there is no discharge of bark or wood waste to waters of the U.S. in the State of Alaska. However, these facilities may be required to obtain a permit for storm water discharges and/or any other point source discharge (i.e., domestic waste) from the operation of the on-shore facility.

4.3.1 Pre-1985 General Permit Application Requirements

The Pre-85 LTF general permit will apply to all LTFs that received a USACE Section 404 permit prior to October 22, 1985. The Pre-85 general permit modifies all Section 404 permits for LTFs issued prior to October 22, 1985 where the LTF is being used for log transfer activities to incorporate the requirements and provisions contained in this permit. Because the original Section 404 permit contained no expiration date, authorization to discharge under the Pre-1985 general permit does not expire either. Nonetheless, DEC currently proposes to review and renew the Pre-1985 general permit every five years and, if necessary and appropriate, add new requirements to assure the discharges comply with the CWA.

The Pre-1985 LTF general permit requires owners or operators of an LTF to:

1. Review and update as necessary the PPP prior to discharging under the effective general permit if the facility is discharging bark and wood debris under the 2008 Pre-1985 general permit.
2. Receive an APDES permit number and a written project area ZOD authorization from DEC.

4.3.2 Pre-85 LTF Facilities that Never Received an Individual NPDES Permit or General Permit Authorization

The fact sheet for the 2008 LTF general permits (page 17) stated that "EPA and DEC want to establish a definitive list of Pre-85 LTFs. EPA and DEC believe that to effectively regulate LTF discharges, and efficiently administer the LTF general permits, determining the universe of older facilities which are eligible as Pre-85 LTFs is appropriate and necessary. To that end, EPA and DEC are requiring operators of any LTF that received a section 404 permit prior to October 22, 1985, and that never applied for or received an individual NPDES permit and/or coverage under the 2000 LTF general permit, to submit Notification within 90 days of the effective date of permit No. AKG700000 (see Section 4.5). If a Notification for coverage under the proposed Pre-85 LTF is not received within the 90 day deadline, it will be determined that the operator no longer exists and that the LTF is abandoned. Any future operation and discharge from the LTF will require authorization through the Post-85 LTF general permit."

DEC reviewed Public Law 100-4 during the development of this fact sheet and concluded that DEC lacks the authority to require these facilities to submit an application for a Section 402 permit. DEC would however, encourage owners of these facilities to re-evaluate the previous siting decision in light of the ATTF Guidelines when considering re-development costs for these legacy facilities. LTF owners of these legacy facilities are not prevented from submitting a NOI for coverage under the Post-85 facility if they elect to construct a new facility.

4.3.3 Post-85 General Permit General Permit Application Requirements

The Post-85 general permit applies to all other LTFs except those meeting an exclusion criteria described in Section 4.3.4 No.6 of this fact sheet. Authorization to discharge under the Post-1985 general permit will require owners or operators of an LTF to:

1. Submit a NOI for new facilities not authorized by the 2008 general permit, as described in Section 4.4 of this fact sheet to DEC.
2. For facilities currently covered under the administratively extended Post-85 general permit, review and update the PPP as necessary prior to discharging under the final general permit.
3. For new facilities, develop a PPP prior to submitting a NOI; and,
4. Receive an APDES permit number and written project area ZOD authorization from DEC.

4.3.3.1 Shore-Based LTF Classification

Both shore-based and off-shore LTFs may seek authorization to discharge under Permit No. AKG701000. All Pre-85 LTFs are shore-based operations. Shore-based LTFs include those facilities that move logs between land and water. Off-shore LTFs include vessels or helicopters moving logs into or out of off-shore marine waters and off-shore LSA not adjacent to a shore-based LTF.

DEC proposes to use the same classification system for shore-based LTFs from the 2008 LTF general permits. Shore-based LTFs are classified by use descriptions based on the volume of timber transferred during a typical rotation period of 80-100 years.

Type 1: Transfers over 30 million board feet per year (mmbf/year). 10 years or more of continuous operations.

Type II: Transfers up to 30 mmbf/year. Less than 10 years of continuous operation. May have intermittent activity at lower volumes.

Type III: Transfers up to15 mmbf/year. Up to 5 years of continuous operation. May have 1-3 similar periods of activity during rotation.

Type IV: Transfers less than 15 mmbf during the life of the permit. May have 1-2 similar periods of activity during rotation.

Other: Annual volume and duration/frequency of use to be defined in the Notification or NOI.

4.3.4 LTF Discharges and Receiving Waters Not Covered

The Post-85 general permit retains the discharge restrictions and prohibition contained in the 2008 Post-85 general permit. These include:

1. The 2008 LTF general permits only authorize discharges of bark or wood debris within an LTF project area ZOD.
2. General Permit No. AKG701000 does not apply to LTFs that received a CWA Section 404 dredge and fill permit before October 22, 1985 that have not been authorized to discharge under an individual NPDES permit. Discharges from these LTFs are subject to the requirements of the Pre-85 general permit (No. AKG700000) unless authorized by an individual NPDES permit. This prohibition is retained in the permit.
3. The LTF general permits do not authorize the discharge of domestic wastes to LTF project areas ZODs.
4. The LTF general permits do not apply to discharges from facilities where an individual NPDES permit has been terminated or denied.
5. The LTF general permits do not apply to discharges that will adversely affect a listed endangered or threatened species or its critical habitat.
6. <u>ATTF Siting Guidelines</u>

General permit AKG701000 retains the prohibition against authorizing discharges from LTF sites that do not meet the ATTF siting criteria listed in the permit. An applicant must apply for and obtain a waiver from DEC in order to discharge under the Post-1985 general permit from an LTF site which fails to meet any of the guidelines listed in this section. These guidelines and waiver requirements from the 2008 Post-1985 general permit have been retained in the permit, and are identified below.

a. **Proximity to Rearing and Spawning Areas**. Siting of log transfer and log storage facilities within 300 feet of the mouths of anadromous fish streams or in areas that are important for fish spawning or rearing is prohibited.

b. **Bark Dispersal**. LTFs should be sited along or adjacent to straits and channels or deep bays where currents are strong enough to disperse sunken or floating wood debris. The location of LTFs in embayments with sill or other natural restrictions to tidal exchange should be avoided.

c. **Site Productivity**. Sites for log transfer and log storage should be located in areas with the least ecologically productive intertidal and subtidal zones.

d. **Sensitive Habitats**. Log transfer and storage facilities should not be sited on or adjacent to (i.e., near enough to affect) extensive tide flats, salt marshes, kelp or eelgrass beds, seaweed harvest areas or shell fish concentrations areas.

e. **Storage and Rafting**. Log storage and rafting areas should be located in areas where logs and log rafts will not ground at low tide. Log rafting and storage areas shall be located in waters at least 40 feet deep measured at mean lower low water (MLLW).

DEC approved waiver requests for two Post-85 LTFs (the Pothole, AKG700163, and Port Caldera LTF, AKG701016) under the terms of the 2008 general permit. DEC public noticed its intent to re-authorize future discharges from these two facilities under the terms of the effective Post-85 including the previously granted waivers without additional public notice.

The ATTF LTF siting criteria have not been applied retroactively to facilities that received an USACE Section 404 permit prior to October 22, 1985 (i.e., the Pre-1985 general permit).

7. Waiver Request

An owner or operator of a proposed and otherwise qualified LTF not meeting one or more of the ATTF Guidelines may request a waiver to discharge under permit AKG701000 by submitting a timely and complete request that includes the following materials:

- A NOI to be authorized under the general permit in accordance with requirements of the permit and Section 4.4 of this fact sheet;
- Identification of the specific ATTF siting guideline (Section 4.3.4 No. 6 a-e above) from which the waiver is requested;
- A detailed description of the circumstances requiring discharges to the excluded area(s) and an evaluation of practicable alternatives to discharging within the excluded area(s) and demonstration that the proposed discharge is more protective of the environment than the alternatives evaluated.

- A description of how and why the discharges will not cause a violation of applicable state water quality standards in the receiving water or any other condition of general permit AKG701000.

8. General permit AKG701000 will not apply to discharges to the following protected water resources and special habitats. These protected water resources and special habitats are retained from the 2008 Post-1985 general permit. With the exception of 4.3.4 No. 8g and 8h, below, these exclusions do not apply to private in-holdings within state and federal land.

   The permit includes the definition of 'critical habitat' for Stellar sea lions so that applicants do not have to look up the regulations for the definition of this term. The following receiving waters are not eligible for permit coverage under the Post-85 general permit:

   a. Any State Game Sanctuary, Game Refuge, or Critical Habitat Area;

   a. Any State Park, without written authorization from the State Park Superintendent;

   b. Any unit of the National Park System or a National Historic or Natural Landmark without written authorization from the Park Superintendent (for National Parks) or Program Coordinator (for National Historic and Natural Landmarks);

   c. Any National Wildlife Refuge without written permission from the Regional Director of the U.S. Fish and Wildlife Service (USFWS) or a delegated representative;

   d. Any National Wilderness Area or National Monument;

   e. The Port Graham/English Bay Area which merits special attention;

   f. Within one nautical mile of any major Steller sea lion haulout or rookery site or within any Steller sea lion critical habitat area as defined at 58 Fed. Reg. 45269 (1993), without written permission from the Regional Director of the National Marine Fisheries Services. Critical habitat includes an aquatic zone that extends 3,000 feet (0.9 km) seaward in State and Federally managed waters from the baseline or basepoint of each major rookery and major haulout in Alaska that is east of Cape Suckling (144 degrees West longitude). Critical habitat includes an aquatic zone that extends 20 nm (37 km) seaward in State and Federally managed waters from the baseline or basepoint of each major rookery and major haulout in Alaska that is west of Cape Suckling.; and

   g. Within waters surrounding the Kodiak or Afognak Islands if, after coordination with the USFWS, it is determined that the discharge adversely affects either the Steller's eider or the southwest Alaska distinct population segment of the northern sea otter.

   h. In general, DEC has concluded that new LTFs located on residue impaired waterbodies included on the CWA section 303(d) list are more appropriately covered under an individual NPDES permit. These are Category 5 waters as identified in DEC's *Integrated Water Quality Monitoring and Assessment Report*, also referred to as the 305(b) report (DEC 2010), as requiring Total Maximum Daily Loads (TMDLs). With EPA approval, DEC may place Category 5, 303(d) listed waterways into Category 4b which are impaired waters with "other pollution control requirements" (i.e., Remediation Plans) in place to meet WQS. New LTFs seeking coverage in residue impaired waters may be eligible for coverage under the general permit if they are located in Category 4b waterways, and if there is a DEC-approved Remediation Plan in place. This means that new LTFs seeking Post-85 coverage in Category 4b waters must submit a Remediation

Plan along with their NOI, and receive approval of the plan from DEC prior to receiving authorization to discharge. However, for an LTF to continue to operate under a Remediation Plan in residue impaired waters, progress must be demonstrated towards reducing continuous bark and wood debris coverage on the sea floor to an area of less than 1.0 acres in the project area ZOD. General permit coverage is not available for new facilities seeking to operate a LTF in Category 5 waters. These facilities must apply for an individual NPDES permit, which will include any wasteload allocations identified in the TMDL.

4.3.5 Permit Expiration

The Post-85 general permit will expire five years after the permit's effective date. If the Post-85 general permit is not reissued before the expiration date, the conditions of the expired permits will continue in force until the effective date of a new or reissued permit (18 AAC 83.155). Only those facilities authorized to discharge under the expired permit, and who submit a NOI at least 180 days prior to expiration of the general permit, will remain authorized to discharge under the administratively extended Post-85 general permit.

Authorization to discharge under the Pre-85 general permit does not expire in accordance with Public Law 100-4; however, DEC reviews and, if necessary and appropriately amends the Pre-85 general permit every five years. Authorized Pre-85 LTFs are requested to submit an updated Notification to DEC at least 180 days prior to the expiration date of the Post-85 general permit so that DEC has updated facility information.

4.4 Application Requirements

In accordance with APDES regulations at 18 AAC 83.305, LTFs seeking coverage under the general permits must submit a written Notification (for the Pre-85 general permit) or a NOI (for the Post-85 general permit) to DEC to be eligible for coverage. Except as described in Section 4.8 below, a facility who fails to submit a Notification or NOI in accordance with applicable provisions of the LTF general permits will not be authorized to discharge under its terms. A qualified applicant will be authorized to discharge under permit AKG701000 upon assignment of an APDES permit number and a written authorization of a project area ZOD. No DEC written authorization is required for discharges who submitted timely Notifications to DEC to discharge under AKG700000. However, to discharge bark and wood debris under the Pre-85 general permit, applicants must receive an APDES permit number and written project area ZOD authorization.

A NOI form is contained in Appendix 1 of general permit AKG701000. The form is intended to require submittal of all information necessary for DEC to determine the appropriateness of coverage under the Post-85 general permit. A Notification form is contained in Appendix 1 of permit AKG700000. The form is intended to require submittal of all information necessary for DEC to determine the appropriateness of a written project area ZOD authorization under the Pre-85 general permit.

4.5 Submittal Dates

New facilities meeting the criteria for coverage under the Post-85 general permit must submit a NOI to be covered at least 90 days prior to the anticipated commencement of in-water log storage or transfer operations.

Facilities previously authorized under any of the previous general permits, but whose coverage was not administratively extended due to a failure to submit a timely NOI at least 180 days prior to the expiration date of the 2008 general permit, must also submit an NOI at least 90 days prior to the anticipated commencement of in-water log storage or transfer activities. For existing LTFs that are

operating under an administratively extended permit coverage pursuant to 18 AAC 83.155, NOIs were to be submitted 180 days prior to the expiration of the permit. If changes have occurred since that time that require a revised NOI to be submitted, such revised NOIs must be submitted no later than 60 days from the effective date of the final general permit. DEC may require additional information from applicants who submitted NOIs at least 180 days before the 2008 permit expired in order for the NOI to be deemed technically complete.

Pre-85 LTFs seeking coverage or continued coverage under AKG700000 must submit written Notification within 90 days of the effective date of the final Pre-85 general permit if they have not already done so. DEC may require additional information from applicants who submitted Notifications at least 180 days prior to the expiration of the 2008 permit in order for the Notification to be deemed technically complete.

4.6 NOI Contents for the Post-1985 General Permit

The following information requirements have been retained from the 2008 Post-85 general permit and must be included in a NOI. Modifications or new information requirements of the Post-1985 general permit are identified below. NOI materials should be submitted in both hard copy and electronic format (portable document file (pdf) preferred). The use of dot shading, hatching, or similar graphic symbols may be used to clarify the drawings.

1. Permit Information. The NOI must include any APDES number(s) currently or previously assigned to the LTF.
2. Owner Information. The NOI must include the name, complete address, telephone number, and fax number of the owner of the LTF and the name of his/her duly authorized representative. The Post-85 general permit requires that an email address of the owner be provided.
3. Fax number of the operator of the LTF and the name of his/her duly authorized representative. The Post-85 general permit requires that the operator provide an email address.
4. Facility Information. The NOI must include the following information about the LTF:
    a. Name, complete address, general telephone number, and fax number of the LTF (to the extent this information is available).
    b. For Post-85 LTFs, indicate if the discharge is new or existing. Indicate whether the LTF is operating under an administrative extension of the expired general permit.
    c. USACE CWA Section 404 and Section 10 permit name, number, and date of issuance, if applicable.
    d. The physical location, including the latitude and longitude of the proposed discharge point at the ramp or bulkhead with a precision of at least three meters on average by using a GPS receiver and the distance and direction to the nearest town/city.
    e. The DNR surface water use authorization number (i.e., ADL, LAS, ATS, or easement) and the acres authorized by DNR or other land management authority. ***This is a new requirement***.
    f. A nautical chart showing the location of the proposed discharge and any catalogued or known anadromous fish streams, estuaries, and mudflats within one-half mile as well as the location of the -40, -60, and -100 foot depth lines. This information will make it easier for DEC to evaluate the proposed discharge prior to DEC issuing a project area ZOD authorization. The chart must also clearly delineate the proposed project area ZOD boundary,

and include project area ZOD acreage. It must include the perimeter of the sort yard and the location of any areas of continuous bark coverage located in dive surveys;

g. A vicinity map showing the physical location of the proposed discharge and project area, the name of the waterbody receiving the proposed discharge, and the name of any larger, adjacent receiving waterbody. The Post-85 general permit require the vicinity map to be based upon an official map or chart with a scale of resolution between 1:15,840 and 1:63,360 and shall include a north arrow and scale. A map scale of 1:15,840 is a typical USGS quad map scale. The Post-85 general permit retains the requirement that if a new facility is proposed for waters surrounding Kodiak or Afognak Islands, a written concurrence of no effect or not likely to adversely affect endangered species with designated critical habitats is required from the USFWS.

h. A plan drawing showing the dimensions of the proposed LTF as viewed from above, including in-water log rafting, storage areas, and contiguous upland log storage areas. The drawing shall include the name of the waterbody, existing shorelines, mean higher high water (MHHW) and MLLW lines, average water depths around the proposed discharge point, north arrow, scale, and the acres of the marine portion of the project area ZOD.

i. An elevation and/or cross section view showing the dimensions of the proposed LTF as viewed from the side, front, or rear. Where the proposed LTF is a low-angle slide, these dimensions shall include the angle of the ramp. The drawing must include the name of the waterbody, existing shorelines, MHHW and MLLW lines, average water depths around the proposed discharge, north arrow, and scale.

j. The facility classification and a brief description of the log transfer operations. The description must include an assessment of the feasibility of onshore log storage and barging, as well as a description of the proposed storage, handling, sorting, bundling, transfer, and rafting of logs.

k. If applicable, copies of waivers and/or authorizations required by the Post-85 general permit for siting an LTF within or discharging to a protected water or special habitat or another area excluded from coverage under the Post-85 general permit.

l. A demonstration that operation of the LTF constitutes important social or economic development in the area, and that a ZOD is necessary to accommodate operation of the LTF (see 18 AAC 70.210 Zone of Deposit of Alaska's Water Quality Standards).

m. A description of known existing uses of the receiving water where the LTF is located, and a demonstration that those uses will be fully protected by the proposed operation of the LTF. *At the minimum, applicants should consult and cite the appropriate DNR area plan for known uses*; (***The text in italics is new)***

n. Any bark monitoring surveys not previously submitted to DEC.

o. Identify if the receiving waterbody is listed as impaired for residue according to the most recent EPA approved Integrated Water Quality Monitoring and Assessment Report (DEC 2012). If the waterbody is listed as impaired for residue under Category 4b, indicate if the facility is operating under a DEC approved Remediation Plan. New LTFs seeking permit coverage to operate in Category 4b waters must submit the Remediation Plan to DEC with the NOI, and obtain state approval of the plan prior to obtaining EPA written authorization to discharge.

5. <u>Facility Classification</u>. The NOI must classify the facility as follows.

a. Shore based or off shore,

b. Method of log transfer, and

c. Use description (Type I, II, III, or IV; see Section 4.3.3.1) or an alternative use description if neither Type I through Type IV applies.

6. Production Data. To the extent that information is available, the NOI must include the following production data.

   a. Expected facility life span;

   b. Maximum volume of timber expected to be transferred during the life of the permit in million board feet (mmbf);

   c. Average and maximum volume of timber (mmbf) expected to be transferred per year; and,

   d. Projected months of operation.

7. Pre-Discharge Bark Dive Survey. The Pre-85 and Post-85 general permit requires that a pre-discharge bark monitoring survey report for new facilities must be submitted with the Notification or NOI by applicants, with the exception of off-shore and Type IV shore-based LTFs. The survey will be used to document the biological resources that may be affected by the discharge and the presence of any existing bark and wood debris deposits.

   a. The pre-discharge survey must provide adequate site-specific information to determine whether discharges from the LTF are applicable for authorization under the Post-85 general permit, whether the site conforms to the 1985 ATTF siting guidelines, whether a waiver as described in Section 4.3.4.7 is necessary for authorization under the Post-85 general permit, and to document the area and depth of any existing bark and wood debris deposits.

      The pre-discharge survey shall include a representative description of the numbers and species of marine organisms and depths and substrate types where the organisms are found within a 300 ft radius of the center of the discharge site to a water depth of minus 60 feet MLLW.

   b. If bark is present, the pre-discharge survey shall also measure and report the aerial extent and thickness of bark deposits as described in the Bark Monitoring and Reporting Requirements of the Post-85 general permit. The survey data for biological resources shall be submitted in writing or in the form of a narrated underwater video. The narrated video submittal option has yet to be utilized by applicants.

   c. The report shall provide sampling data, a summary of the survey, and an evaluation as to whether the discharge site meets each of the requirements summarized in Section 4.3.4.8 of this fact sheet.

8. BMP Implementation Statement. The Post-85 general permit requires that facilities provide certification that the Best Management Practices identified in Section 10.2 of this fact sheet have been or will be implemented at any time when in-water log storage or transfer activities occur. This statement must be certified as per the signatory requirements below.

9. Signatory Requirements. The Post-85 general permit retains the same requirements as those in the 2008 Post-85 general permit. A NOI must be signed in accordance with APDES regulations found at 18 AAC 83.385:

   a. For a corporation: by a principal corporate officer;

   b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively;

   c. For a municipality, state, federal, or other public agency: by either a principle executive officer or ranking elected official.

10. Existing Dischargers. Facilities that submitted a NOI at least 180 days prior to the expiration of the 2008 Post-85 general permit may be required to supplement the NOI with additional information. DEC will review NOIs to see that all the elements of the final general permit have been received. DEC will inform facilities if additional information is required. ***This is a new requirement***.

4.7 Notification Contents for the Pre-1985 General Permit

The following information must be included in a written Notification to be covered under the Pre-85 general permit. Appendix 1 of the Pre-85 general permit provides a Notification form that may streamline the notification process. Notification materials must be submitted in both hard copy and electronic format (portable document file (pdf) preferred). The use of dot shading, hatching, or similar graphic symbols may be used to clarify the drawings.

1. Permit Information. The Notification must include the CWA Section 404 permit number and any APDES permit number(s) currently or previously assigned to the LTF.
2. Owner Information. The Notification must include the name, complete address, telephone number and FAX number of the owner of the LTF and the name of its duly authorized representative. The Pre-1985 general permit requires that an email address for the owner be provided.
3. Operator Information. The Notification must include the name, complete address, telephone number and FAX number of the operator of the LTF and the name of its duly authorized representative. The Pre-1985 general permit requires that an email address for the operator be provided.
4. Facility Information. The Notification must include the following information about the LTF:
    a. Name, address, and telephone number of the applicant; and the name, title, and telephone number of the operator for the facility.
    b. USACE CWA Section 404 and/or Section 10 permit name, number, and date of issuance.
    c. The physical location, including the latitude and longitude in either degrees, minutes, and seconds or decimal degrees of the discharge with a precision of at least of at least three meters on average by using a GPS receiver or other source, and the distance and direction to the nearest town/city.
    d. A nautical chart, showing the location of the discharge and any catalogued or known anadromous fish streams, estuaries, and mudflats within one-half mile. This information will make it easier for DEC to evaluate the proposed discharge prior to DEC issuing a project area ZOD authorization. The chart must also clearly delineate the proposed project area ZOD boundary, and include project area ZOD acreage. It must include the perimeter of the sort yard and the location of any areas of continuous bark coverage located in dive surveys.
    e. The DNR or other owner's surface water use authorization number (i.e., ADL, LAS, ATS, or easement) and the acres authorized by DNR or other land management authority. ***This is a new requirement***.
    f. A vicinity map, showing the physical location of the discharge point and project area ZOD, the name of the waterbody receiving the proposed discharge, and the name of any larger, adjacent receiving waterbody. The vicinity map shall be based upon an official map or chart with a scale of resolution between 1:15,840 and 1:63,360, and shall include a north arrow and scale.
    g. A plan drawing, showing the dimensions of the LTF as viewed from above, including in-water log rafting and storage areas, contiguous upland log storage and sorting areas. The drawing must include the name of the waterbody, existing shorelines, mean higher high water (MHHW) and

mean lower low water lines, average water depths around the discharge location north arrow, scale, and acres of the marine portion of the entire facility.

h. An elevation and/or cross section view, showing the dimensions of the LTF as viewed from the side, front, or rear. Where the LTF is a low-angle slide, these dimensions shall include the angle of the ramp. The drawing shall include the name of the waterbody, existing shorelines, mean higher high water and mean lower low water lines, average water depth around the discharge point, north arrow, and scale.

i. A brief description of log transfer operations at the facility. The operations description shall include an assessment of the feasibility of onshore log storage and barging, and a description of the proposed storage, handling, sorting, bundling, transfer and rafting of logs.

j. A demonstration that operation of the LTF constitutes important social or economic development in the area, and that a Zone of Deposit is necessary to accommodate operation of the LTF (18 AAC 70.210 Zone of Deposit of Alaska's WQS).

k. A description of known existing uses of the receiving water where the LTF is located, and a demonstration that those uses will be fully protected by the proposed operation of the LTF. *At a minimum, applicants should review and cite the appropriate DNR Land Use Plan for this information.* ***(The text in italics is new)***

l. Any bark monitoring surveys not previously submitted to DEC.

5. Facility Classification. The Notification must classify the facility as follows:

   a. Shore-based;

   b. Method of log transfer; and

   c. Use description (Type I-IV from Section 4.3.3.1). An alternative use description may be provided if Types I-IV do not apply.

6. Production Data. To the extent that the information is available, the Notification must include the following production data:

   a. Expected facility life span;

   b. Maximum volume of timber expected to be transferred during the next five years in million board feet (mmbf);

   c. Average and maximum volume (mmbf) of timber expected to be transferred per year;

   d. Projected months of operation; and

   e. Approximate volume of timber (mmbf) previously transferred over the facility, if known. Timber volumes shall be given in board feet, Scribner scale.

7. Pre-Discharge Survey

   a. Applicability. A pre-discharge underwater survey is required for all LTFs which received a permit under Section 404 of the CWA that did not receive NPDES or APDES coverage under the 2000 or 2008 issuance of the Pre-85 general permit.

   b. Purpose. The purpose of the pre-discharge underwater survey is to document the biological resources which may be affected by the discharge, and any existing bark and wood debris deposits.

c. Submittal. The results of the pre-discharge underwater survey must be submitted with the Notification.

d. Methods. The pre-discharge surveys must include a representative description of the numbers and species of marine organisms, and depths and substrate types where organisms are found within a 300 foot radius of the center of the discharge site to water depths of -60 feet MLLW.

   If bark is present, the pre-discharge survey must also measure and report the aerial extent and thickness of bark deposits as required in Part 5.3 of the final general permit. The survey data for biological resources must be submitted in writing, or in the form of a narrated underwater video.

e. Contents of Report. The report must provide sampling data, and a summary of the survey.

8. BMP Implementation Statement. The Pre-85 general permit requires that facilities provide certification that the Best Management Practices identified in Section 10.2 of this fact sheet have been or will be implemented at the time when in-water log storage or transfer activities begin. This statement must be certified as per the signatory requirements below.

9. Signatory Requirements. The Notification must be signed in accordance with APDES regulations at 18 AAC 83.385:

   a. For a corporation: by a principal corporate officer;

   b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively;

   c. For a municipality, state, federal, or other public agency: by either a principle executive officer or ranking elected official.

10. Existing Dischargers. Facilities that submitted a Notification at least 180 days prior to the expiration of the 2008 Pre-85 general permit may be required to supplement the Notification with additional information. DEC will review Notifications to see that all the elements of the effective general permit have been received. DEC will inform facilities if additional information is required. ***This is a new requirement***.

4.8 Notification of Coverage

Pursuant to APDES regulations at 18 AAC 83.210(h), the Department may notify a discharger that it is covered under either LTF general permit even if the discharger has not submitted a written NOI or Notification to be covered. In such cases, before discharging bark and wood debris, DEC must also issue a written project area ZOD to accompany permit authorization. A discharger so notified may request to be authorized by an individual permit.

4.9 Individual Permits

Owners or operators meeting the criteria for coverage under the LTF general permits may apply for an individual permit. This request must be made by submitting an APDES permit application and supporting documentation at least 60 days prior to the expiration of an individual APDES permit applicable to the discharge, or 60 days prior to the commencement of operation of a new source or new discharge, or 180 days prior to the expiration of coverage under the Post-1985 general permit. However, LTF operators are urged to seek coverage under the LTF general permits, if applicable. Furthermore, it is anticipated that permit requirements under an individual permit will be at least as stringent as those under the LTF general permits.

The Department may require any owner or operator authorized by the LTF general permits, or one seeking authorization under the LTF general permits, to apply for and obtain an individual permit.

Any interested person may petition the Director to require a discharger to seek coverage under an individual permit. The Department may require an individual permit:

1. When a single discharge or the cumulative effect of multiple discharges are a significant contributor of pollution in the receiving water;
2. Whenever the discharger is not in compliance with the conditions of the LTF general permits;
3. Whenever a change has occurred in the availability of demonstrated technology or practices for the control or abatement of pollutants applicable to the point source;
4. If effluent limitation guidelines are promulgated for point sources covered by the LTF general permits,
5. If a water quality management plan containing requirements applicable to such point sources is approved;
6. Circumstances have changed since the time of request to be covered so that the discharger is no longer appropriately controlled under the LTF general permits; either a temporary or permanent reduction or elimination of the authorized discharge is necessary; or, if the discharge is a significant contributor of pollutants, taking into account the location and size of the discharge and the quantity and nature of the pollutants.
7. If the facility is located on a waterbody that has been listed as “impaired” (Section 303(d) of the CWA).

4.10 Permit Violations

A violation of a condition contained in general permit No. AKG700000 or AKG701000 constitutes a violation of the CWA and subjects the owner and/or operator of the permitted facility to the penalties specified in AS 46.03.760.

5.0 BASIS FOR PERMIT EFFLUENT LIMITS

18 AAC 83.015 prohibits the discharge of pollutants to waters of the United States unless first obtaining a permit implemented by the APDES point source discharge program that meets the purposes of Alaska Statutes 46.03 and in accordance with CWA Section 402 and the requirements adopted by reference at 18 AAC 83.010. Per these statutory and regulatory provisions, the permit includes effluent limits that require the discharger to (1) meet standards reflecting levels of technological capability, (2) comply with WQS, (3) comply with other state requirements that may be more stringent, and (4) cause no unreasonable degradation to the territorial seas.

The CWA requires that the limits for a particular pollutant be the more stringent of either technology-based effluent limits or water quality-based effluent limits. Technology-based effluent limits are set according to the level of treatment that is achievable using available technology. A water quality-based effluent limit is designed to ensure that the WQS of a waterbody are met. Water quality-based effluent limits may be more stringent than technology-based effluent limits.

In establishing permit limits, DEC first determines which technology-based effluent limits from national Effluent Limitation Guidelines (ELG’s) apply to the discharges and must be incorporated into the permit. Where EPA has not yet developed effluent guidelines for a particular industry, technology-based effluent limits may be established on a case-by-case basis using Best Professional Judgment (BPJ) where BPJ meets the requirements of Best Conventional Technology and Best Available Technology Economically Achievable (BCT/BAT) [CWA Section 402(a)(1)]. The LTF general permits do not directly include technology-based effluent limitations (BPJ or otherwise)

since there is no minimum level of treatment for LTF discharges provided by currently available treatment technologies other than the application of Best Management Practices (BMPs). However, the 1.0 acre threshold for continuous bark and wood debris coverage within the project area ZOD is adopted as a BPJ technology limit for implementing remediation planning. DEC has developed permit conditions that are protective of water quality and existing or designated uses of the receiving water body.

5.1 Basis for Effluent and Receiving Water Monitoring

In accordance with AS 46.03.110(d), the Department may specify in a permit the terms and conditions under which waste material may be dispose. Monitoring in a permit is required to determine compliance with effluent limits. Monitoring may also be required to gather effluent and receiving water data to determine if additional effluent limits are required and/or to monitor effluent impact on the receiving water body quality.

5.2 Discharge Characterization

The LTF general permits authorize the discharge of bark and wood debris to marine waters of the U.S. within the project area ZOD. In addition to this material falling from floating logs to the sea floor, several other types of pollutants may potentially be discharged into the marine environment as a result of LTF operations, including:

- Petroleum products
- Leachates from sunken wood debris
- Sediment

While direct discharges of petroleum products are not allowed under the LTF general permits, incidental releases occasionally occur as a consequence of LTF related activities. Petroleum products may be conveyed into the marine environment via storm water runoff. The source of the petroleum products are leaks or accidental spills from heavy equipment used to unload log trucks and transport individual logs or bundles during the various processing steps that occur within the upland log yard. Typical petroleum products include gasoline, diesel fuel, hydraulic oil, motor oil, and grease. Additionally, releases of oil from leaking equipment and vessels can occur in the water.

During the 2009 – 2013 permit cycle, no LTFs reported visible oil sheens on the Annual Reports submitted for these facilities. During the 2000 – 2008 permit cycle, a total of seven (7) facilities reported a visible sheen on Annual Reports. Estimates of the size of the spills ranged from one cup to 425 gallons when a vessel sank. Based upon the frequency and magnitude of reported spills, it appears that relatively small and infrequent amounts of petroleum products may enter marine waters from storm water runoff or spills. The requirement to report sheens and implement corrective measures is continued in the LTF general permits.

Log sort yards in Alaska are not paved. Sort yard surfacing consists of shot rock spread in place. This material is obtained from local developed rock sources. The hardness of the rock determines how rapidly it breaks down. Regardless of how hard the rock is, weathering and heavy equipment travel will pulverize the surface over time and some of the rock will becoming fine textured. This material is easily transported in surface runoff resulting from rain or snow melt events. This is one of the sources of sediment that may be transported into marine or fresh waters. The other source is mud brought into the sort yard on log trucks. LTFs with storm water discharges are required to obtain coverage under the 2008 Multi-Sector General Permit for Storm Water Discharges Associated with Industrial Activity (MSGP) or the re-issued APDES MSGP, which may be available by the 2015 operating season.

Wood Waste

Operations of all in-water LTFs and LSAs result in some degree of bark loss and wood debris which can accumulate in benthic deposits. Wood waste, like any organic waste, creates a biological oxygen demand in sediments as it decomposes, and excessive amounts can reduce or eliminate available oxygen within the interstitial pore spaces of the wood waste deposit. A lack of oxygen (i.e., anaerobic conditions) in sediments limits the survival of benthic organisms. In addition, compounds such as sulfides, ammonia, and methane can build up in anaerobic sediments due to natural biological decomposition processes to levels that may be toxic to benthic organisms. Wood waste may also leach and/or degrade into some compounds such as phenols and methylated phenols, benzoic acid and benzyl alcohol, terpenes, and tropolones that can be toxic to aquatic life. Different types of wood and bark leach different chemicals and show varying degrees of toxicity in laboratory tests.

Large masses of wood waste may provide a difficult physical substrate for benthic colonization, spawning, and other habitat needs, and may smother aquatic plants and benthic organisms. This is not meant to infer that benthic life is absent at large masses of wood waste. There is a shift towards pollutant tolerant species and a reduction in diversity and density of other benthic organisms.

Large accumulations of bark and wood waste from log storage and pulp residue in mill effluent discharges have accumulated at Silver Bay (Sitka) and Ward Cove (Ketchikan) following years of pulp mill operations. These large deposits are slow to degrade and may persist in the aquatic environment for decades.

Currently there is only one permitted facility (Tolstoi Bay, AKG701039) reporting an exceedence of the 1.0 acre continuous cover threshold. DEC has agreed to wait until after the bark dive surveys for the 2014 operating season are submitted to DEC to determine if development of a Remediation Plan will be required since this is the first time the facility reported continuous cover bark in excess of 1.0 acre.

Every two years the Department of Environmental Conservation (DEC) is required to report on the condition of Alaska's waters in accordance with the CWA. The Integrated Report categorizes waterbodies in Alaska to meet the federal CWA reporting requirements for the Section 305(b) report and Section 303(d) list of impaired waters.

For the integrated reports for the period 1998 through 2008, portions of 16 different waterbodies were placed on the Section 303(d) list for not attaining water quality standards for residues by reporting more than one acre of continuous cover bark (13 LTFs and 3 LSAs). Of the 13 LTFs that contributed to exceedences of the residue standard, 11 of them would be classified as Pre-85 facilities. The 2010 Integrated Report lists just two waterbodies, Thorne Bay (currently not permitted) and East Port Frederick (AKG700004) as not attaining water quality standards for residues due to LTF activities as described in detail in the paragraphs below. This demonstrates that accumulations of bark and wood waste may persist for shorter periods of time at LTFs compared to pulp mills.

Thorne Bay should not be considered a typical LTF due to its total volume transferred. The original Thorne Bay LTF was located on the east side of the bay adjacent to the logging camp, which is now the location of the City of Thorne Bay. The original LTF was constructed and operated by the Ketchikan Pulp Company (KPC) beginning in 1961 and was used until 1980. That LTF was replaced by a new and expanded LTF at the head of the bay in 1980, which KPC operated until 1999. Gateway Forest Products continued operation of the LTF in 1999-2000. The LTF has been inactive since Gateway Forest Products ended its use, and the A-frame transfer device, rafting pens, log booms, and other facilities have been removed.

During KPC operations, the Throne Bay LTF was the largest log transfer and log storage facility in the world, handling a total of nearly 10 billion board feet of logs, composed of western hemlock, Sitka spruce, yellow cedar, and red cedar. The main purpose was to marshal logs for delivery to the KPC pulp mill in Ward Cove near Ketchikan, 47 miles to the southeast, which ceased operation in 1997. Log rafts from the Thorne Bay LTF were transported to the Ward Cove sawmill from 1989 to 2000, and the Annette Cedar Mill on Annette Island south of Ketchikan. The Thorne Bay LTF is not currently permitted.

Dive surveys over the years documented bark and wood debris on the ocean bottom at both the former log transfer area and the former log storage area. In 1988 and 1990, KPC conducted dive surveys to measure bark accumulation in the three main portions of the bay where logs were stored. The 1988 dive survey estimated approximately 55 acres of bark on the bottom, mostly varying from 6 to 24 inches in thickness, with some lesser and some greater thicknesses, and a maximum of 30 inches. The 1990 dive survey showed similar results, though the pattern of bark thickness varied somewhat from the 1988 dive survey, and the maximum thickness was 36 inches.

Detailed benthic studies at the log storage area were carried out by DEC in 2005 (2006 Germano report) and 2007 (2007 Germano report) to determine the extent of bark and wood debris on the bottom and the biological condition of bottom sediments. The studies determined that while there is significant wood residues content in bottom sediments at the log storage area, wood residues have mostly decomposed to small fragments and are mixed with bottom sediments. No logs are present on the bottom. Diverse, abundant, and healthy biological communities occur throughout the log storage area. As a result, the log storage area was removed from the Section 303(d) list in 2006. Thorne Bay remains Section 303(d) listed for 7.5 acres near the face of the 1980 LTF located at the head of the bay.

The bark pile at East Port Frederick (AKG700004) was successfully remediated to below the 1.0 care continuous cover threshold though natural attenuation. The 2010 dive survey (January 30, 31 and February 1, 2010) documented 0.92 acres of continuous bark cover. The most recent survey (April 7, 2013) documented 0.8 acres of continuous cover following the transfer of 8,309 thousand board feet (MBF) in 2012.

The history of the reduction in the number of Section 303(d) listed waterbodies with LTFs or LSAs suggests that bark and wood waste may not persist in marine waters as long as previously believed. The results of DEC funded LTF investigations documented that bark piles at typical LTFs are generally much smaller than those at historic pulp mills and bark at LTFs either degrades fairly rapidly or is dissipated away from the facilities through tidal or storm events following the end of facility use. Such dispersion is consistent with the goals of the ATTF Guidelines.

The severity of wood waste effects in sediments depends directly on its physical form, its degree of incorporation into sediments, the amount of wood waste present, the amount of flushing in the area, the habitat, and the type of wood from which the waste was derived. The adverse impacts of wood waste are, therefore, largely site-specific and may vary considerably even within a small area.

Overall, the quantities and composition of bark and wood debris that may potentially enter the marine environment as a result of LTF operations is dependent upon the following factors:

- Quantity of logs transferred
- Transfer method
- Species of logs transferred
- Operational practices

Log transfer methods include the use of cranes, A-frames, slides, chain conveyors, and direct dumping. The timber species also affects factors such as bark loss and the composition and

quantities of leachates released to receiving waters. The operating practices (e.g., length of time logs or log bundles are in the water before being moved by tug, and effectiveness of bark removal at the transfer point) used at an LTF also influence the quantity and composition of pollutants discharged. However, in order to reduce teredo (marine boring worm) damage to the logs, LTF operators generally try to minimize the length of time that log bundles are in the water.

5.3 Volumes Transferred

A total of 927,133 thousand board feet (MBF) or 927.1 million board feet (MMBF) was transferred to or from land or stored in water during the 2009 through 2013 operating seasons from 23 different facilities (see Table 2 below) based upon annual reports submitted to DEC. 2009 was the first year that annual reports were required by the 2008 LTF general permits.

Not all LTFs submitted Annual Reports on an annual basis as required in the LTF general permits. The lack of an Annual Report is indicated by “NAR”.

Table 2. Total Reported Volumes Transferred 2009 through 2013 (MBF)

Permit Number	Facility Name	Permittee	2009	2010	2011	2012	2013	2009 - 2013
AKG700001	Viking Lumber Mill	VLC	1,500	2,000	0	0	6,700	10,200
AKG700002	Grace Harbor LTF	STC	33,181	33,600	12,373	0	0	79,154
AKG700003	Klawock Island Dock LTF [1]	KHC	3,200	NAR	NAR	NAR	NAR	3,200
AKG700004	East Port Frederick LTF [2]	HTC	0	NAR	NAR	8,309	6,832	15,141
AKG700005	Point Macartney LTF	STC	0	0	0	0	0	0
AKG700006	Portage Bay LTF	STC	0	0	0	0	0	0
AKG700007	View Cove LTF	STC	0	0	0	0	0	0
AKG700008	West Port Frederick LTF	STC	0	0	0	0	0	0
AKG700014	Anita Bay South LTF	USFS	0	0	0	0	0	0
AKG700015	Blind Slough LTF	USFS	0	4,690	0	0	0	4,690
AKG700016	Deep Bay LTF	USFS	0	0	0	0	0	0
AKG700017	Deer Island West LTF	USFS	0	0	0	0	0	0
AKG700018	Eight Fathom Bight LTF	USFS	0	0	0	0	0	0
AKG700019	Hamilton Bay LTF	USFS	0	0	0	0	0	0
AKG700020	Hassler LTF	USFS	0	0	0	0	0	0
AKG700021	Klu Bay LTF	USFS	0	0	0	0	0	0
AKG700023	Marguerite Bay	USFS	0	0	0	0	0	0
AKG700024	Pats Creek LTF	USFS	0	0	840	1,000	1,600	3,440
AKG700025	Polk Inlet LTF	USFS	0	0	0	0	0	0
AKG700026	Port Alice LTF	USFS	0	0	0	0	0	0
AKG700027	Portage Bay LTF	USFS	0	0	0	0	0	0
AKG700028	Rowan Bay LTF	USFS	0	0	0	0	0	0
AKG700029	Salt Lake Bay LTF	USFS	0	0	0	0	0	0
AKG700030	Shoal Cove LTF	USFS	0	0	0	0	0	0
AKG700031	Shrimp Bay LTF	USFS	0	0	0	0	0	0

Permit Number	Facility Name	Permittee	2009	2010	2011	2012	2013	2009 - 2013
AKG700032	Thomas Bay LTF	USFS	0	0	0	0	0	0
AKG700033	Tonka LTF	USFS	0	0	0	0	15,100	15,100
AKG700034	Whale Pass LTF	USFS	0	0	0	0	0	0
AKG700035	Winter Harbor LTF	USFS	0	0	0	0	0	0
AKG700036	Woodpecker Cove LTF	USFS	0	0	0	0	0	0
AKG700038	Calder LTF	USFS	0	0	0	0	0	0
AKG700039	Coffman Cove LTF	USFS	0	0	0	0	0	0
AKG700040	Corner Bay LTF	USFS	0	0	0	0	0	0
AKG700041	El Capitan LTF	USFS	0	0	0	0	0	0
AKG700042	False Island LTF	USFS	0	0	0	0	0	0
AKG700043	Fire Cove LTF	USFS	0	0	0	0	0	0
AKG700044	Hanus Bay LTF	USFS	0	0	0	0	0	0
AKG700045	Inbetween LTF	USFS	0	0	0	0	0	0
AKG700046	Kennel Creek LTF	USFS	0	0	0	0	0	0
AKG700047	Labouchere Bay LTF	USFS	0	0	0	0	0	0
AKG700048	Marble Island East LTF	USFS	0	0	0	0	0	0
AKG700049	Naukati LTF	USFS	0	0	0	0	0	0
AKG700050	South West Neets Bay LTF	USFS	0	0	0	0	0	0
AKG700051	Nichin Cove LTF	USFS	0	0	0	0	0	0
AKG700052	Rynda LTF	USFS	0	0	0	0	0	0
AKG700053	Saginaw Bay LTF	USFS	0	0	0	0	0	0
AKG700054	Sawmill Cove LTF	USFS	0	0	0	0	0	0
AKG700055	Sumez - Refugio LTF	USFS	0	4,690	0	0	0	4,690
AKG700056	St Johns LTF	USFS	0	0	0	0	3,100	3,100
AKG700057	Indian River LTF	USFS	0	0	0	0	0	0
AKG700059	Todd LTF	USFS	0	0	0	0	0	0

Permit Number	Facility Name	Permittee	2009	2010	2011	2012	2013	2009 - 2013
AKG700060	Venus Cove LTF	USFS	0	0	0	0	0	0
AKG700061	Saltery Point LTF	STC	0	200	0	0	0	200
AKG700061	Saltery Point LSA	STC	38,126	14,500	24,495	14,497	0	91,618
AKG701001	Sandy Point LTF	STC	0	0	0	0	0	0
AKG701002	Carroll LTF	USFS	0	0	0	0	0	0
AKG701004	East Twelvemile LTF	USFS	0	0	0	0	0	0
AKG701006	King George LTF	USFS	0	0	0	0	0	0
AKG701007	Hoya LTF	USFS	0	0	0	0	0	0
AKG701008	Lisa Creek LTF	USFS	0	0	0	0	0	0
AKG701009	Shelter Cove LTF	USFS	0	0	0	0	0	0
AKG701010	Saook Bay LTF	USFS	0	0	0	0	0	0
AKG701013	St John Baptist LTF	USFS	0	0	0	0	0	0
AKG701014	West Arm Cholmondeley LTF	USFS	0	0	0	0	0	0
AKG701015	Kina Cove LTF	STC	0	0	0	827	15,891	16,718
AKG701016	Port Caldera LTF	STC	0	0	0	0	0	0
AKG701027	Little Goose Bay LSA	STC	0	0	0	0	0	0
AKG701008	Lisa Creek LTF	USFS	0	0	0	0	0	0
AKG701028	Cleveland Peninsula LTF	STC	0	0	0	0	0	0
AKG701029	Coco Harbor LTF	STC	0	0	0	0	0	0
AKG701030	Copper Mountain LTF	STC	0	0	0	0	0	0
AKG701031	Hydaburg Ship Moorage	STC	38,126	66,250	45,036	15,457	0	164,869
AKG701032	Kake Ship Moorage and LSA	STC	0	0	0	0	0	0
AKG701033	Nutkwa Inlet North LTF	STC	0	14,500	24,495	14,497	14,497	67,989
AKG701034	Nutkwa Inlet South LTF	STC	0	0	0	0	0	0
AKG701035	Rose Inlet LTF	STC	0	0	0	0	0	0
AKG701037	Soda Bay LTF	STC	15,325	0	0	0	0	15,325

Permit Number	Facility Name	Permittee	2009	2010	2011	2012	2013	2009 - 2013
AKG701038	Sulzer LTF	STC	12,975	18,150	8,167	960	0	40,252
AKG701039	Tolstoi Bay STC LTF	STC	0	0	10,987	27,122	47,005	85,114
AKG701040	Wadleigh Island LSA	VLC	4,000	6,000	0	0	6,700	10,000
AKG701044	Barefoot Beach LTF	KFP	0	0	0	0	NAR	0
AKG701049	Lookout Cove LTF	ANC	39,347	45,706	51,300	54,148	54,132	244,633
AKG701053	Tolstoi Bay MHT LTF	AMHT		0	0	2,500	0	2,500
AKG701057	Sunny Point LTF	USFS	0	0	0	0	0	0
AKG701061	Leask Cove LTF	AFP	5,368	9,936	4,340	7,756	0	27,400
AKG701062	Lewis Reef	KGB	NAR	NAR	NAR	NAR	NAR	0
AKG701063	Pothole LSA	USFS	NR	NR	0	0	15,100	15,100
AKG701063	Pothole LSA	BT	NAR	NAR				NAR
AKG701064	Shakan Bay LSA	BT	NAR	NAR	NAR	NAR	NAR	NAR
AKG701065	East Dry Pass LSA	BT	NAR	NAR	NAR	NAR	NAR	NAR
Totals			191,148	220,222	182,033	147,073	186,657	927,133

[1] Operated by STC in 2009 then STC ceased use of LTF

[2] Operated by STC in 2012 and 2013 only per annual reports

The total period volume of 927.1 million board feet (MMBF) is somewhat misleading in that a portion of the overall volume is counted twice. This means that a portion of the volume transferred from shore-based facilities to water by STC and the USFS is also reported as being transferred to log storage areas. Table 3 demonstrates how a portion of the STC volume was reported.

STC's annual report volumes from the Hydaburg Ship Moorage (HSM) LSA (AKG701031) for the period 2009 through 2013 totaled 164.869 MMBF. A careful review of the reported volumes from STC's shore based LTFs reveals that the HSM acted as a collection point for timber from various shore based LTFs and LSAs during this period. Similarly, the USFS annual reports for 2013 reported that the Tonka LTF (AKG700033) transferred 15.1 MMBF to water which was subsequently towed and temporarily stored at the Pothole LSA (AKG701063).

Table 3: Hydaburg Ship Moorage Volumes 2009 – 2013

Year	Hydaburg SM Volume Transferred	Contributing Shore-Based LTFs or LSAs	Volume Transferred
2009	38,126 MBF	Saltery Point LSA	38,126 MBF
2010	66,250 MBF	Saltery Point LSA	14,500 MBF (from Nutkwa North LTF)
		Sulzer LTF	18,150 MBF
		Grace Harbor LTF	33,600 MBF
2011	45,036 MBF	Saltery Point LSA	24,495 MBF (from Nutkwa North LTF)
		Grace Harbor LTF	12,373 MBF
		Sulzer LTF	8,167 MBF
2012	15,457 MBF	Nutkwa North LTF	14,497 MBF
		Sulzer LTF	960 MBF
2013	0 MBF		

5.4 Bark Monitoring Results

DEC has compiled information on continuous cover and discontinuous cover bark accumulation at all currently permitted facilities that submitted bark monitoring reports for the period 2000 to 2013 in Table 4 below. A significant number of facilities have been inactive (no log transfer activity) for this entire period. Bark monitoring reports for these long term inactive facilities were submitted with the Notice of Intent (Post-85 general permit) or Notification (Pre-85 general permit) when seeking permit coverage under the 2000 LTF general permits. DEC has yet to receive bark monitoring reports from all facilities that reported transfer activities for the 2013 operating season.

DEC elected to provide this information in an effort to provide as complete information as possible to reviewers of this document. DEC believes that the bark piles at these long term inactive facilities have likely naturally attenuated to a smaller pile, but absent recent survey results, the Department is reporting the original data.

The year of the bark dive survey shown in Table 4 is the year the bark dive survey was performed. NAR means No Annual Report was received by DEC. NBDR means No Bark Dive Report was submitted to DEC. NR means Not Required with the reason following, i.e., less than 15 MMBF over the life of the permit.

Aggregating the results of the most recent survey for each LTF that submitted a dive report results in an average of 0.19 acres of continuous cover and 0.55 cares of discontinuous cover. These values are very conservative figures given that many of the dive reports were submitted along with NOIs or

Notifications for coverage under the 2000 LTF general permits. DEC reminds reviewers that the project area ZOD has no limits on discontinuous cover nor is DEC proposing to establish a threshold level for discontinuous or trace cover bark in the general permits.

Table 4. Current Bark Deposit Information

Permit Number	Facility Name	Permittee	2000-2008 Volume	2009-2013 Volume (MBF)	2000-2013 Volume	Most Recent Bark Survey Dive Year	Acres Continuous Cover Bark	Acres Discontinuous Cover Bark
AKG700001	Viking Lumber Mill	VLC	6,000	10,200	16,200	NR < 15 MMBF	N/A	N/A
AKG700002	Grace Harbor LTF	STC	109,812	79,154	188,966	2012	0.31	0.12
AKG700003	Klawock Island Dock LTF	KHC - STC Operator	62,050	3,200	65,250	2010	0.00	3.95
AKG700004	East Port Frederick LTF	HTC - STC Operator	89,400	15,141	104,541	2013	0.80	0.34
AKG700005	Point Macartney LTF	STC	54,000	0	54,000	2003	0.52	1.17
AKG700006	Portage Bay LTF	STC	89,900	0	89,900	2004	0.06	0.06
AKG700007	View Cove LTF	STC	21,700	0	21,700	2004	0.19	0.50
AKG700008	West Port Frederick LTF	STC	9,100	0	9,100	2003	0.07	0.17
AKG700014	Anita Bay South LTF	USFS	0	0	0	2000	0.80	0.01
AKG700015	Blind Slough LTF	USFS	0	4,690	4,690	2000	0.00	0.00
AKG700016	Deep Bay LTF	USFS	0	0	0	2000	0.00	0.02
AKG700017	Deer Island West LTF	USFS	9,000	0	9,000	2000	0.00	0.00
AKG700018	Eight Fathom Bight LTF	USFS	0	0	0	2000	0.30	0.00
AKG700019	Hamilton Bay LTF	USFS	0	0	0	2002	0.62	0.55
AKG700020	Hassler LTF	USFS	7,200	0	7,200	2001	0.86	0.10
AKG700021	Klu Bay LTF	USFS	11,000	0	11,000	2000	0.20	0.50
AKG700023	Marguerite Bay	USFS	0	0	0	2000	0.10	0.70
AKG700024	Pats Creek LTF	USFS	100	3,440	3,540	2000	0.33	0.16
AKG700025	Polk Inlet LTF	USFS	0	0	0	2000	0.60	0.40
AKG700026	Port Alice LTF	USFS	1,100	0	1,100	2000	0.50	2.00
AKG700027	Portage Bay LTF	USFS	13,400	0	13,400	2001	0.10	0.40
AKG700028	Rowan Bay LTF	USFS	12,300	0	12,300	2002	0.81	0.64
AKG700029	Salt Lake Bay LTF	USFS	0	0	0	2001	0.05	0.25
AKG700030	Shoal Cove LTF	USFS	0	0	0	2000	0.60	0.40
AKG700031	Shrimp Bay LTF	USFS	2,000	0	2,000	2004	0.02	0.08

Permit Number	Facility Name	Permittee	2000-2008 Volume	2009-2013 Volume (MBF)	2000-2013 Volume	Most Recent Bark Survey Dive Year	Acres Continuous Cover Bark	Acres Discontinuous Cover Bark
AKG700032	Thomas Bay LTF	USFS	0	0	0	2000	0.00	0.00
AKG700033	Tonka LTF	USFS	20,900	15,100	36,000	2014	0.06	0.39
AKG700034	Whale Pass LTF	USFS	1,300	0	1,300	2000	0.30	1.30
AKG700035	Winter Harbor LTF	USFS	0	0	0	2000	0.20	1.70
AKG700036	Woodpecker Cove LTF	USFS	0	0	0	2000	0.00	0.00
AKG700038	Calder LTF	USFS	0	0	0	2001	0.00	0.21
AKG700039	Coffman Cove LTF	USFS	0	0	0	2000	0.18	0.30
AKG700040	Corner Bay LTF	USFS	0	0	0	2002	0.07	0.25
AKG700041	El Capitan LTF	USFS	0	0	0	2001	0.00	0.35
AKG700042	False Island LTF	USFS	0	0	0	2001	0.30	0.10
AKG700043	Fire Cove LTF	USFS	0	0	0	2001	0.24	0.43
AKG700044	Hanus Bay LTF	USFS	0	0	0	2001	0.20	2.60
AKG700045	Inbetween LTF	USFS	0	0	0	2001	0.00	0.20
AKG700046	Kennel Creek LTF	USFS	0	0	0	2001	0.10	0.10
AKG700047	Labouchere Bay LTF	USFS	0	0	0	2001	0.00	1.50
AKG700048	Marble Island East LTF	USFS	0	0	0	2001	0.00	0.04
AKG700049	Naukati LTF	USFS	0	0	0	2001	0.00	0.22
AKG700050	South West Neets Bay LTF	USFS	0	0	0	2001	0.00	0.33
AKG700051	Nichin Cove LTF	USFS	0	0	0	2001	0.00	0.08
AKG700052	Rynda LTF	USFS	0	0	0	2001	0.00	0.00
AKG700053	Saginaw Bay LTF	USFS	0	0	0	2002	0.74	0.10
AKG700054	Sawmill Cove LTF	USFS	15,600	0	15,600	2006	0.20	0.06
AKG700055	Sumez - Refugio LTF	USFS	0	4,690	4,690	2001	0.00	0.17
AKG700056	St Johns LTF	USFS	0	3,100	3,100	2001	0.40	1.30
AKG700057	Indian River LTF	USFS	0	0	0	2001	0.10	0.70
AKG700059	Todd LTF	USFS	0	0	0	2001	0.00	0.20

Permit Number	Facility Name	Permittee	2000-2008 Volume	2009-2013 Volume (MBF)	2000-2013 Volume	Most Recent Bark Survey Dive Year	Acres Continuous Cover Bark	Acres Discontinuous Cover Bark
AKG700060	Venus Cove LTF	USFS	0	0	0	2001	0.10	0.10
AKG700061	Saltery Point LTF	STC	4,000	200	4,200	2007	0.02	0.69
AKG700061	Saltery Point LSA	STC	35,561	91,618	127,179	2013	0.00	2.25
AKG701001	Sandy Point LTF	STC	4,000	0	4,000	2001	0.00	0.20
AKG701002	Carroll LTF	USFS	1,600	0	1,600	2001	0.05	0.14
AKG701004	East Twelvemile LTF	USFS	26,100	0	26,100	2001	0.05	0.20
AKG701006	King George LTF	USFS	5,400	0	5,400	2001	0.00	0.60
AKG701007	Hoya LTF	USFS	0	0	0	2000	0.00	0.00
AKG701008	Lisa Creek LTF	USFS	0	0	0	2000	0.13	0.20
AKG701009	Shelter Cove LTF	USFS	5,000	0	5,000	2000	0.23	0.08
AKG701010	Saook Bay LTF	USFS	0	0	0	2000	0.00	0.00
AKG701013	St John Baptist LTF	USFS	0	0	0	2002	0.22	0.45
AKG701014	West Arm Cholmondeley LTF	USFS	9,900	0	9,900	2004	0.01	0.06
AKG701015	Kina Cove LTF	STC	8,500	16,718	25,218	2001	0.37	0.36
AKG701016	Port Caldera LTF	STC	25,300	0	25,300	2001	0.30	1.10
AKG701027	Little Goose Bay LSA	STC	0	0	0	NBDR		
AKG701028	Cleveland Peninsula LTF	STC	0	0	0	2000	0.00	0.00
AKG701029	Coco Harbor LTF	STC	180,800	0	180,800	2004	0.25	0.38
AKG701030	Copper Mountain LTF	STC	16,000	0	16,000	2002	0.69	0.01
AKG701031	Hydaburg Ship Moorage	STC	456,061	164,869	620,930	2012	0.00	2.47
AKG701032	Kake Ship Moorage and LSA	STC	100,100	0	100,100	NR, > 60' MLLW		
AKG701033	Nutkwa Inlet North LTF	STC	11,500	67,989	79,489	2013	0.09	0.43
AKG701034	Nutkwa Inlet South LTF	STC	0	0	0	1997	0.03	0.51
AKG701035	Rose Inlet LTF	STC	0	0	0	1995	0.00	0.00
AKG701037	Soda Bay LTF	STC	121,300	15,325	136,625	2010	0.08	0.38
AKG701038	Sulzer LTF	STC	51,218	40,252	91,470	2013	0.35	0.15

Permit Number	Facility Name	Permittee	2000-2008 Volume	2009-2013 Volume (MBF)	2000-2013 Volume	Most Recent Bark Survey Dive Year	Acres Continuous Cover Bark	Acres Discontinuous Cover Bark
AKG701039	Tolstoi Bay STC LTF & LSA	STC	25,200	85,114	110,314	2012	**1.42**	9.20
AKG701040	Wadleigh Island LSA	VLC	6,000	16,700 [4]	22,700	NBDR		
AKG701044	Barefoot Beach LTF	KFP	71,200	0	71,200	2005	0.20	1.82
AKG701049	Lookout Cove LTF	ANC	94,070	244,633	338,703	2012	0.09	0.11
AKG701053	Tolstoi Bay MHT LTF	AMHT	54,500	2,500	57,000	2013	0.08	0.42
AKG701057	Sunny Point LTF	USFS	0	0	0	2005	0.00	0.00
AKG701061	Leask Cove LTF	AFP	33,187	27,400	60,587	2012	0.30	0.21
AKG701062	Lewis Reef [1]	KGB	3,993	NAR	3,993	NR, < 15 MMBF		
AKG701063	Pothole LSA	USFS [3]		15,100		2014	0.0	0.0
AKG701063	Pothole LSA	BT [2]	NAR	NAR	0	2007	0.00	0.00
AKG701064	Shakan Bay LSA	BT [2]	NAR	NAR		NBDR		
AKG701065	East Dry Pass LSA	BT [2]	NAR	NAR		NBDR		
		Totals	**1,886,352**	**927,133**	**2,813,485**		**15.97**	**47.59**
						Average per facility	**0.18**	**0.55**

[1] 2008 Annual Report Only by Pacific Log & Lumber

[2] State individual permit dated June 6, 2007 then permitted under 2008 Post-85 general permit

[3] 2008 Post-85 general permit issued May 23, 2012

[4] 2013 annual report not submitted until August 2014 and 2013 volume increased life of permit volume to greater than 15 MMBF so dive survey required

Total seafloor coverage (continuous plus discontinuous coverage bark) is 63.56 acres. This is 3.8% of the total authorized project area ZOD (1,674.84 acres, see Table 1) for all currently permitted LTFs. The average continuous bark pile is relatively small at 0.18 acres (86 feet by 86 feet). Only 13 facilities reported having continuous cover bark greater than or equal to 0.5 acres. See Table 5 below.

Table 5. Facilities with 0.5 acres or More of Continuous Cover Bark

Permit Number	Facility Name	Permittee	2000 - 2013 Volume (MBF)	Most Recent Bark Survey Dive Year	Acres Continuous Cover Bark	Acres Discontinuous Cover Bark
AKG700004	East Port Frederick LTF	Huna Totem Corp. - STC Operator	104,541	2013	0.80	0.34
AKG700005	Point Macartney LTF	STC	54,000	2003	0.52	1.17
AKG700014	Anita Bay South LTF	USFS	0	2000	0.80	0.01
AKG700019	Hamilton Bay LTF	USFS	0	2002	0.62	0.55
AKG700020	Hassler LTF	USFS	7,200	2001	0.86	0.10
AKG700025	Polk Inlet LTF	USFS	0	2000	0.60	0.40
AKG700026	Port Alice LTF	USFS	1,100	2000	0.50	2.00
AKG700028	Rowan Bay LTF	USFS	12,300	2002	0.81	0.64
AKG700030	Shoal Cove LTF	USFS	0	2000	0.60	0.40
AKG700053	Saginaw Bay LTF	USFS	0	2002	0.74	0.10
AKG701015	Kina Cove LTF	STC	25,218	2001	0.60	0.90
AKG701030	Copper Mountain LTF	STC	16,000	2002	0.69	0.01
AKG701039	Tolstoi Bay STC LTF & LSA	STC	110,314	2012	**1.42**	9.20

77% of the facilities in Table 5 are Pre-85 LTFs that were constructed prior to the use of ATTF Guidelines, which were developed with the goal of minimizing bark accumulation. With the exception of East Port Frederick and the Tolstoi Bay STC LTF & LSA, no volume has been transferred at any of these facilities since 2002 based on the year the last bark dive survey was conducted. As previously stated, natural attenuation has likely reduced the extent of both continuous and discontinuous coverage to less than that shown in Table 5, but without more recent information, DEC is unable to state with any certainty just how much, or how little, bark may remain on the seafloor.

East Port Frederick resumed operations in 2012 after instituting a DEC-approved remediation plan in 2005 based upon natural attenuation. DEC terminated the requirements of the Remediation Plan on December 13, 2010 after the continuous cover bark pile had reduced to 0.92 acres from the 2.1 acres reported at the end of the 2004 operating season. This deposit has continued to reduce and was reported at 0.8 acres after 8,309 MBF was transferred in 2012.

The increase in the continuous cover bark at Tolstoi Bay (AKG701039) is attributed to two factors. The first is that the size of the continuous cover pile at the LTF grew from 0.05 acres after the 2011

season to 0.45 acres after the 2012 season during which 27,122 MBF of timber was transferred. The second reason is that first time bark surveys for the LSA on the west side of Tolstoi Bay and the ship moorage site completed in 2013 documented an additional 0.97 acres of combined legacy continuous cover bark (previous AMHT and USFS use). DEC has agreed to defer the decision on requiring a remediation plan until after STC submits the bark dive surveys for the 2014 operating season given the dramatic increase in continuous cover bark at the LTF.

Combining the total reported continuous (15.97 acres) and discontinuous cover bark (47.59 ac) on the seafloor results in 63.56 acres of seafloor coverage. (DEC reminds reviewers that the project area ZOD has no limits on discontinuous cover.) While this may appear to be significant acreage, the State of Alaska owns and manages approximately 12 million acres of tidelands and submerged lands within the LTF general permits area of coverage, so only a very small fraction of seafloor is impacted by wood deposits. These totals includes submerged lands out to the three nautical mile line. Waters beyond this line are federally managed. See Table 5 for a breakdown of acreage by planning area.

Table 6. State-Owned Tidelands and Submerged Lands

Area Plan	Date	Acres of tidelands and submerged lands
Kodiak Area Plan	December 2004	3,372,239
Yakataga Area Plan	April 1995	932,840
Northern Southeast Area Pan	October 2002	3,442,464
Central/Southern Southeast Area Plan	November 2000	3,211,525
Prince of Wales Area Plan Amendment	May 2008	1,188,272
	Total	12,147,340

DNR has completed the Area Plans listed above. These plans contain land use designations that generally describe the general management intent for specific parcels, including marine units (tidelands and submerged lands). Only a portion of these areas are classified for General Use. This designation applies to both uplands and tidelands. When pertaining to tidelands, this designation applies to tidelands, shore lands and submerged lands not designated for specific, habitat, harvest, economic, or recreation functions. For example, the Prince of Wales Area Plan designates 731,102 acres of tidelands and submerged lands for general use. General use could potentially include LTF facilities.

5.5 Effluent Limits and Monitoring Requirements

The permit contains limits that are water quality-based. The following summarizes the proposed effluent limits. DEC proposes to retain the Limitations and Permit Requirements used in the two 2008 general permits. These limitations include:

1. **Volume of Timber**. The volume of timber transferred at a facility shall not exceed the maximum annual and total volumes of timber specified in the Notification or Notice of Intent.

   The Notification for Pre-85 LTFs and the NOI for Post-85 LTFs require that the applicant provide projections of the maximum annual volume to be transferred over the five year life of the permit as well as the total volume transferred over the five year life of the permit. The annual reporting requirement allows a LTF operator to increase the volume limit by notifying DEC that

a planned or actual increase in timber volume will occur from the figures provided in the NOI or Notification.

2. **Petroleum Hydrocarbons, Oil, and Grease**. There shall be no discharge of hydrocarbons or oil and grease that causes a film, sheen, or discoloration on the surface or floor of the water body or adjoining shorelines. The permits require daily monitoring of the surface of the receiving water when log transfer activities are occurring.
3. **Residues**. Except as authorized by a ZOD issued by DEC under 18 AAC 70.210, there shall be no discharge of bark or wood debris, slash, limbs, scum, floating solids, oily wastes, foam, or other residues which alone, or in combination with other substances: a) makes the water unfit or unsafe for use in aquaculture, water supply, recreation, growth and propagation of fish, shellfish, aquatic life and wildlife, or the harvesting and consumption of raw mollusks or other aquatic life; b) causes a film, sheen, or discoloration on the surface of the water or adjoining shorelines; c) causes leaching of toxic or deleterious substances; or, d) causes a sludge, solid, or emulsion to be deposited beneath or upon the surface of the water, within the water column, on the bottom, or upon adjoining shorelines.

   DEC may authorize a project area ZOD for each LTF upon receipt of the NOI or Notification from the owner/operator. The limits of the authorized project area ZOD will be defined in the authorization issued by DEC. The ZOD authorizes a deposit of substances on the sea floor within the area of the defined ZOD. All State of Alaska Water Quality Standards must be met at all points outside the authorized ZOD.
4. **State Water Quality Standards**. Discharges shall not cause violations of the Alaska Water Quality Standards (18 AAC Section 70).

5.6 Effluent Monitoring

In accordance with 18 AAC 83.455, the Department may specify in a permit the terms and conditions under which waste material may be disposed. Monitoring in permits is required to determine compliance with effluent limits. Monitoring may also be required to gather effluent and surface water data to determine if additional effluent limits are required and/or to monitor effluent impact on receiving waterbody quality. The permittees are responsible for conducting the monitoring and for reporting results in a monitoring report.

Alaska Statute 46.03.020(13), grants the Department authority to require an operator to undertake monitoring, sampling, and reporting activities described in Section 308 of the CWA. 18 AAC 83.455 and CWA Section 308 require monitoring in permits to determine compliance with effluent limits. Monitoring may also be required to gather effluent, surface water, and biological data to determine if additional effluent limitations are required in the future, and/or to monitor effluent impacts on the receiving water.

5.6.1 Monitoring Frequencies

Monitoring frequencies are based on the nature and effect of the pollutant, as well as a determination of the minimum sampling necessary to adequately monitor the facility's performance and compliance. Monitoring and reporting requirements from the 2008 general permits are retained in the 2014 permits proposed for reissuance, and include:

1. **Oil Sheen Monitoring and Reporting**. During periods of log transfer activity, receiving waters at the LTF must be visually monitored daily for the presence of an oil sheen. The presence (or absence) of any oil sheen must be recorded, with the date, name of observer, cause or source of oil sheen, and corrective measures taken. Monitoring results shall be reported to DEC and within 24 hours in accordance with permit requirements. Oil spills must also be reported to the U.S. Coast Guard National Response Center, and the SE Alaska Oil Spill Response Team, as specified in the general permits.

   Alaska state law requires all oil and hazardous substance releases to be reported to the Department of Environmental Conservation. DEC's Spill Prevention and Response website (http://dec.alaska.gov/spar/spillreport.htm) provides the following information on oil/ petroleum releases:

   TO WATER: Any release of oil to water must be reported as soon as the person has knowledge of the discharge.

   TO LAND: Any release of oil in excess of 55 gallons must be reported as soon as the person has knowledge of the discharge. Any release of oil in excess of 10 gallons but less than 55 gallons must be reported within 48 hours after the person has knowledge of the discharge. A person in charge of a facility or operation shall maintain, and provide to the Department on a monthly basis, a written record of any discharge of oil from 1 to 10 gallons.

   TO IMPERMEABLE SECONDARY CONTAINMENT AREAS: Any release of oil in excess of 55 gallons must be reported within 48 hours after the person has knowledge of the discharge.

   DEC contact phone and fax numbers are available on the webpage (http://dec.alaska.gov/spar/spillreport.htm).

2. **Bark Monitoring and Reporting**. The purpose of the bark monitoring program is to determine compliance with the Alaska Water Quality Standards for settleable residues in marine waters. In accordance with 18 AAC Part 70.210, DEC has authorized a ZOD for facilities authorized to discharge under this general permit, which includes the project area. The ZOD may include continuous coverage, discontinuous coverage, and trace coverage by bark and wood debris. At an LTF with an on-shore transfer device, to the extent practicable, the primary area of continuous coverage must be collocated with the primary area of continuous coverage existing prior to discharge under the general permit, unless a different area is authorized by DEC.

   DEC proposes to retain the requirement in the 2014 LTF general permits that requires annual bark monitoring for all facilities (LTFs and LSAs) located in water less than 100 feet at MLLW, which transfer a total of 15 million board feet (mmbf) or more during the five-year life of the general permits for any year that wood is transferred to or from water. Bark monitoring must determine depths, total areas, and the outer boundaries of continuous coverage by bark and wood debris depths to -100 feet MLLW. Bark monitoring must determine depths, total areas, and the outer boundaries of discontinuous coverage by bark and wood debris in water depths to -60 feet MLLW. Permittees classified as Type IV LTFs (<15 mmbf over the life of the permit) and inactive facilities are not required to conduct annual bark monitoring. The preferred time period for conducting annual bark monitoring surveys in a given year is March through May, or prior to operation.

   DEC is proposing one significant modification to the bark monitoring and reporting requirements in the LTF general permits. The proposed modification would require permittees to map and

report the total area of discontinuous coverage bark and wood debris by coverage class. The first coverage class includes discontinuous cover ranging from 99% to 50%. The second coverage class includes discontinuous cover ranging from 49% to 10% (trace).

This proposed modification is intended to gather additional information on discontinuous coverage distribution within project area ZODs. The selection of 50% is based on research results from two studies that have been published that examined the effects of wood waste discharges from pulp mills, not LTFs. DEC acknowledges that the findings from the two studies are not directly applicable to LTF discharges since the study's subject was wood, not bark. However, DEC finds the identified wood waste studies to provide the most meaningful corollary to bark deposition in the marine environment until such time monitoring data is collected and analyzed via permit mandated seafloor mapping, or new studies are completed or identified that provide useful information on the effects of bark deposition in the marine environment.

The 1984 Kathman study (Effects of Wood Waste on the Recruitment of Potential of Marine Benthic Communities, R.D. Kathman, S.F Cross, and M. Waldichuk, Department of Fisheries and Oceans Fisheries Research Branch, West Vancouver Laboratory, June 1984) found infauna colonization in artificial mixtures of wood waste (not bark) and sediments increased up to 60% for a 20% mixture and just slightly for a 50% mixture. This study concluded that "Species richness increased at 20% but showed a dramatic reduction at 100%. Diversity and evenness were highest at 20%, with slight decrease at 0% and 50%., and a large decrease at 100%. Dominance, the reciprocal of evenness, indicated that only a few species represented the majority of the individuals at the 100% treatment, but that there were no particular species dominant at the other three concentrations."

DEC also reviewed the study titled "Effects of Wood Waste for Ocean Disposal on the Recruitment of Marine Macrobenthic Communities" by E.R. McGreer, R.D. Munday, and M. Waldichuk (Department of Fisheries and Oceans, Fisheries Research Branch, August 1985). This study evaluated the effects of wood waste depth instead of percent volume. The study abstract concluded that "The effect of different thicknesses (1, 5, and 15 cm) of a fine wood waste material upon the recruitment of marine macrobenthic communities was experimentally assessed using in situ settlement trays. A clean marine sediment was used in the experiment as a reference substrate. Differences in species composition and abundance of macrobenthos settling to the reference and 1 cm wood waste substrate compared to the 5 and 15 cm wood substrate were found. Species richness showed a consistent decrease with increasing thickness of wood waste."

If this data gathering effort provides consistent results, DEC intends to evaluate potential modifications to current remediation planning requirements in future permits to include both continuous cover bark greater than 1.0 acres and deeper than 10 cm at any point and some portion of existing discontinuous cover. If by the expiration date of the permits, DEC concludes that it is not possible for permittees to consistently map discontinuous cover into the two proposed classes, this requirement may be deleted from future permits.

Results of a pre-discharge bark monitoring survey for new facilities must be submitted with the NOI to be covered by the Post-85 general permit. An annual bark monitoring survey may be required thereafter during years when the LTF is operating.

The method for conducting bark monitoring surveys is outlined in the LTF general permits; however, other methods are acceptable if they meet the purpose of the Bark Monitoring Program to determine compliance with applicable state WQS for residues. DEC is aware that other

technologies (i.e., remotely operated vehicles (ROV) and submersible cameras) are available that would allow permittees to monitor for the presence of continuous cover. Permittees may utilize these technologies with DEC approval if they so wish. However, these technologies currently do not have the ability to measure bark depth, a key element in the Remediation Planning requirements in the general permits. Permittees utilizing other technologies would likely have to employ a diver to satisfy the requirement of measuring the depth of bark deposits at each sample location.

Facilities required to conduct bark monitoring and reporting must also develop a Quality Assurance Plan (QAP) within six months of authorization to discharge. The purpose of the QAP is to ensure that adequate documentation is available to allow for reconstruction of dive surveys from field records, notes, dive plans and underwater photography. Bark monitoring surveys must be thoroughly documented and recorded, and submitted in report form to DEC within 60 days following receipt of the survey report by the operator.

3. Annual Report. ***DEC wishes to highlight that this requirement applies to all permitted LTFs even if there was no transfer activity during the calendar year (see Table 2)***. During the term of the LTF general permits, and by January 31 of each year, all permittees must prepare and submit to DEC an Annual Report of log transfer activities regardless if there was transfer discharges, periods of noncompliance, and facility changes. The Annual Report must include the following information:

   - APDES permit number; facility owner and operator; facility name, mailing and email addresses, telephone, and fax number;
   - A summary of periods of noncompliance with any of the requirements of the general permit, the reasons for such noncompliance, and the corrective steps taken;
   - Summary information from oil sheen monitoring observed during operating periods, including the date, name of observer, cause or source of oil sheen, and corrective measures taken;
   - A summary of log transfer activity during the previous year, including the volume of timber transferred (mmbf) and the method of log transfer; and,
   - A statement of changes in facility information from information provided in the NOI or Notification.

6.0 REMEDIATION PLANNING REQUIREMENTS

If bark monitoring surveys submitted by the operator, and other available evidence demonstrates 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 shall submit a proposed Remediation Plan to DEC within 120 days of discovery of such conditions, unless additional time is granted by DEC.

6.1 Remediation Plan Contents

A proposed Remediation Plan must:

1. Describe, to the extent that information is reasonably available, the historical log transfer processes, volumes, and responsible parties at the site, and their apparent relation to the existing deposition of bark and wood debris;
2. Describe the expected future log transfer processes and volumes at the site;
3. Evaluate environmental impacts caused by existing deposits of bark and wood debris, and environmental impacts of methods to reduce continuous coverage; and
4. Evaluate methods to reduce continuous coverage, including:
   i. Alternative methods of log transfer and transport;
   ii. Operational practices, including handling of logs out of water, handling of logs in water, movement of logs in water, and other operational elements;
   iii. Feasible methods and costs of removing bark and wood debris from the ocean bottom; and
   iv. Other methods.

A proposed Remediation Plan must identify, as a result of the evaluation, 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 both 1.0 acre and a thickness of 10 centimeters at any point. The proposed Remediation Plan must provide justification for the measures identified (iii).

6.2 Remediation Plans Proposing Bark Removal

If removal of bark and wood wastes is proposed, the Remediation Plan must specify the following:

1. The proposed areas, methods, and timing of removal;
2. The volume and nature of material to be removed;
3. The method of disposal of removed material, and management practices at the disposal site to assure meeting water quality standards and other applicable standards and to assure prevention of objectionable odors; and
4. The costs of removal by the proposed methods and alternatives considered.

6.3 Other Remediation Plan Requirements

A proposed Remediation Plan must include a performance schedule and performance measures for implementation of the plan. A proposed Remediation Plan may describe measures that will be implemented in phases, with continued bark monitoring surveys, and with future modification of the Remediation Plan based on progress in reducing continuous coverage.

6.4 DEC Review

Within 90 days of receipt of a proposed Remediation Plan, DEC will approve, approve with modification, or deny the proposed Remediation Plan. In acting on a Remediation Plan, DEC will consider the extent of the exceedence; environmental impacts of accumulated bark and wood debris; environmental impacts of methods to reduce continuous coverage; the feasibility, reasonableness, effectiveness, and cost of proposed and alternative measures; the timing of recovery under various alternatives; and other pertinent factors.

An approved Remediation Plan constitutes an enforceable condition of the APDES general permit.

7.0 RECEIVING WATER BODY

7.1 Ocean Discharge Criteria

Section 403(a) of the CWA, Ocean Discharge Criteria, prohibits the issuance of a permit under Section 402 of the CWA for a discharge into the territorial sea, the water of the contiguous zone, or the oceans except in compliance with Section 403. Permits for discharges seaward of the baseline of the territorial seas must comply with the requirements of Section 403, which include development of an Ocean Discharge Criteria Evaluation (ODCE).

An interactive map depicting Alaska's baseline plus additional boundary lines is available at http://www.charts.noaa.gov/OnLineViewer/AlaskaViewerTable.shtml.
The map is provided for information purposes only. The U.S. Baseline committee makes the official determinations on baseline.

A review of the baseline line maps reveals that, while a significant portion of the population of current LTFs are located landward of a NOAA baseline where no ODCE required, a portion of the population of current LTFs are located seaward of a baseline of the territorial sea; therefore, Section 403 of the CWA does apply to the LTF general permits, and an ODCE is required to be completed for this permit reissuance for those facilities located seaward of the baseline.

The Ocean Discharge Criteria (ODC) found in 40 CFR § 125, which is adopted by reference in 18 AAC 83.010(c), establishes guidelines for permitting discharges into the territorial seas, the contiguous zone, and the ocean. The ODC are intended to "prevent unreasonable degradation of the marine environment and to authorize imposition of effluent limitations, including a prohibition of discharge, if necessary, to ensure this goal" (See 49 Fed. Reg. 65942 (Oct. 3, 1980)).

Under the ODC, an APDES permit may be issued if the Department determines that a discharge will not cause unreasonable degradation to the marine environment. If insufficient information exists to make such a determination prior to permit issuance, DEC may only issue the permit if the discharge will not cause irreparable harm to the marine environment while additional monitoring is undertaken, and if there are no reasonable alternatives to on-site disposal. DEC conducted an evaluation using ODC established in accordance with CWA Section 403 and 40 CFR §125, as adopted by reference at 18 AAC 83.010(c). Based on the available information, DEC determines whether the discharge will cause unreasonable degradation of the marine environment. 40 CFR § 125.121, adopted by reference at 18 AAC 83.010(c)(8), states unreasonable degradation of the marine environment means:

- significant adverse changes in ecosystem diversity, productivity, and stability of the biological community within the area of discharge and surrounding biological communities;
- threat to human health through direct exposure to pollutants or through consumption of exposed aquatic organisms; or
- loss of aesthetic, recreational, scientific or economic values which is unreasonable in relation to the benefit derived from the discharge.

40 CFR § 125.122, provides 10 criteria to consider in the determination of whether there is unreasonable degradation or irreparable harm. The 10 ODC criteria include:

1. quantities, composition, and potential for persistence or bioaccumulation;
2. transport of the pollutants by biological, physical, or chemical processes;
3. composition and vulnerability of the biological communities exposed to the discharges including unique, threatened, or endangered species or those that are critical to the structure or function of the ecosystem;

4. importance of the receiving water area to surrounding biological community;
5. existence of special aquatic sites (including parks, refuges, etc.);
6. potential direct or indirect impacts to human health;
7. existing or potential recreational or commercial fisheries;
8. any applicable requirements of an approved Coastal Zone Management plan;
9. potential impacts on marine water quality; and
10. other factors relating to the effects of the discharge as may be appropriate.

After consideration of the 2014 ODCE and limits, prohibitions, and other permit requirements, DEC determined that discharges authorized by the permit and discharged in accordance with permit requirements will not cause unreasonable degradation to marine environment.

7.2 Water Quality Standards

Regulations in 18 AAC 70 require that the conditions in permits ensure compliance with WQS. The state's WQS are composed of use classifications, numeric and/or narrative water quality criteria, and an antidegradation policy. The use classification system designates the beneficial uses that each water body is expected to achieve. The numeric and/or narrative water quality criteria are the criteria deemed necessary by the state to support the beneficial use classification of each water body. The antidegradation policy ensures that the beneficial uses and existing water quality are maintained.

Waterbodies in Alaska are designated for all uses unless the water has been reclassified under 18 AAC 70.230 as listed under 18 AAC 70.230(e). Some water bodies in Alaska can also have site–specific water quality criterion per 18 AAC 70.235, such as those listed under 18 AAC 70.236(b).

None of the waterbodies with LTFs have been reclassified, nor have site-specific water quality criteria been established and therefore are designated for all uses. Use classes (2) (A, B, C, and D) are protected in accordance with 18 AAC 70.050. These use classes include (A) water supply (aquaculture, seafood processing, and industrial), (B) water recreation (contact and secondary), (C) growth and propagation of fish, shellfish, other aquatic life, and wildlife, and (D) harvesting for consumption of raw mollusks or other raw aquatic life.

7.3 Zone of Deposit

DEC has determined that discharges of bark and wood debris have the potential to cause or contribute to violations of state water quality criteria for residues. For marine waters of the State of Alaska, the most stringent residue criteria (May 27, 1999) is a narrative standard designed to be protective of the seafood processing designated use for water supply [18 AAC 70.020(b)(20)(A)(ii)]. This criteria reads as follows, residues:

> *May not, alone or in combination with other substances or wastes, make the water unfit or unsafe for the use; cause a film, sheen, or discoloration on the surface of the water or adjoining shorelines; cause leaching of toxic or deleterious substances; or cause a sludge, solid, or emulsion to be deposited beneath or upon the surface of the water, within the water column, on the bottom, or upon adjoining shorelines*.

DEC may issue a project area ZOD in order for in-water log storage or transfer to occur because there is a high likelihood that LTF operation will result in accumulation of debris that exceeds the residue standard despite the implementation of BMPs. As such, a ZOD represents an exception or variance to water quality standards which can only be authorized by the State. Alaska's ZOD provision (18 AAC 70.210(a)) states that:

The department will, in its discretion, issue or certify a permit that allows deposit of substances on the bottom of marine waters within limits set by the department.

The water quality criteria of 18 AAC 70.020(b) and the antidegradation requirement of 18 AAC 70.015 may be exceeded in a zone of deposit. However, the standards must be met at every point outside the zone of deposit. In no case may the water quality standards be violated in the water column outside the zone of deposit by any action, including leaching from, or suspension of, deposited materials. Limits of deposit will be defined in a short-term variance issued under 18 AAC 70.200 or a permit issued or certified under 18 AAC 15.

Specifics regarding the project area ZOD for individual new LTFs seeking coverage under either general permit (including size, location and dimensions), will be provided in DEC's written ZOD authorization. The decision whether to allow a ZOD requires DEC to consider: (1) alternatives that would reduce or eliminate any adverse effects of the deposit; (2) the potential direct and indirect impacts on human health; (3) the potential impacts on aquatic life and other wildlife, including the potential for bioaccumulation and persistence; (4) the potential impacts on other uses of the waterbody; (5) the expected duration of the deposit and any adverse effects; and, (6) the potential transport of pollutants by biological, physical, and chemical processes.

For LTFs with administrative permit extensions, DEC has previously completed the required ZOD criteria analysis for each separate LTF. DEC public noticed its intent to re-issue the general permit and ZOD authorizations to these existing facilities(see Table 1) as the six ZOD criteria for those previously authorized ZODs have already been evaluated.

The LTF general permits do not authorize the discharge of any pollutants except for residue (i.e., bark and wood debris). However, it is recognized that incidental or accidental spills or leaks of hydraulic or lubricating oils, or petroleum fuels can and do cause violations of Alaska's petroleum hydrocarbon criteria despite the fact that such discharges are not authorized by the general permits. For this reason, the general permits implement oil sheen monitoring and reporting requirements during periods of log transfer activity. Alaska's applicable narrative petroleum hydrocarbon criteria (18 AAC 70.020(b)(17)) for recreational and water supply uses reads as follows:

May not cause a film, sheen, or discoloration on the surface or floor of the water body or adjoining shorelines. Surface waters must be virtually free from floating oils.

Sediment is a main pollutant associated with timber harvest areas, logging roads, and sort yards. As noted in Section 5.3, discharges associated with upland portions of LTFs are not covered by the general permits, and operators must seek CWA authorization for these storm water discharges under the MSGP (Section 2.1).

7.4 Water Quality Status of Receiving Water

Any part of a water body for which the water quality does not or is not expected to meet applicable WQS is defined as a "water quality limited segment" and placed on the state's list of impaired waters. The following waterbodies are included on the Alaska's Final 2012 Integrated Water Quality Monitoring and Assessment Report, (December 23, 2013) for bark and wood debris. The following waterbodies are classified as Category 4a, meaning that they are impaired and a TMDL has been completed.

- 102 acres of Herring Cove of Silver Bay near Sitka, AK. for bark and woody debris from historical pulp mill operations;

- 6.5 acres of Silver Bay near Sitka, AK for pulp residues, logs, bark & woody debris, sediment toxicity due to wood decomposition by-products from historical pulp mill operations;
- 7.5 acres of Throne Bay on Prince of Wales Island for bark and woody debris from historical LTF operations; and
- 250 acres of Ward Cove near Ketchikan AK for pulp residues, logs, bark & woody debris, sediment toxicity due to wood decomposition by-products from historical pulp mill operations.

None of the above sites have had permitted log transfer activities since at least 2001.

7.5 Ocean Discharge Criteria Evaluation

The Ocean Discharge Criteria (ODC) found in 40 CFR § 125, which is adopted by reference in 18 AAC 83.010(c), establishes guidelines for permitting discharges into the territorial seas, the contiguous zone, and the ocean. The ODC are intended to "prevent unreasonable degradation of the marine environment and to authorize imposition of effluent limitations, including a prohibition of discharge, if necessary, to ensure this goal" (See 49 Fed. Reg. 65942 (Oct. 3, 1980)).

Under the ODC, an APDES permit may be issued if the Department determines that a discharge will not cause unreasonable degradation to the marine environment. If insufficient information exists to make such a determination prior to permit issuance, DEC may only issue the permit if the discharge will not cause irreparable harm to the marine environment while additional monitoring is undertaken, and if there are no reasonable alternatives to on-site disposal.

DEC conducted an evaluation using ODC established in accordance with CWA Section 403 and 40 CFR §125, as adopted by reference at 18 AAC 83.010(c). Based on the available information, DEC determines whether the discharge will cause unreasonable degradation of the marine environment. 40 CFR § 125.121, adopted by reference at 18 AAC 83.010(c)(8), states unreasonable degradation of the marine environment means:

- significant adverse changes in ecosystem diversity, productivity, and stability of the biological community within the area of discharge and surrounding biological communities;
- threat to human health through direct exposure to pollutants or through consumption of exposed aquatic organisms; or
- loss of aesthetic, recreational, scientific or economic values which is unreasonable in relation to the benefit derived from the discharge.

40 CFR § 125.122, provides 10 criteria to consider in the determination of whether there is unreasonable degradation or irreparable harm. The 10 ODC criteria include:

1. quantities, composition, and potential for persistence or bioaccumulation;

2. transport of the pollutants by biological, physical, or chemical processes;

3. composition and vulnerability of the biological communities exposed to the discharges including unique, threatened, or endangered species or those that are critical to the structure or function of the ecosystem;

4. importance of the receiving water area to surrounding biological community;

5. existence of special aquatic sites (including parks, refuges, etc.);

6. potential direct or indirect impacts to human health;

7. existing or potential recreational or commercial fisheries;

8. any applicable requirements of an approved Coastal Zone Management plan;

9. potential impacts on marine water quality; and

10. other factors relating to the effects of the discharge as may be appropriate.

After consideration of the 2014 ODCE and limits, prohibitions, and other permit requirements, DEC determined that discharges authorized by the permit and discharged in accordance with permit requirements will not cause unreasonable degradation to marine environment.

8.0 ANTIBACKSLIDING

18 AAC 83.480 requires that "effluent limitations, standards, or conditions must be at least as stringent as the final effluent limitations, standards, or conditions in the previous permit." The effluent limitations in this permit reissuance are consistent with 18 AAC 83.430. The permit effluent limitations, standards, and conditions are as stringent as in the previous permit.

Effluent limitations may be relaxed under two categories as allowed under 18 AAC 83.480 (CWA §402(o)) and CWA §303(d)(4). 18 AAC 83.480(b) allows relaxed limitations in renewed, reissued, or modified permits when there have been material and substantial alterations or additions to the permitted facility that justify the relaxation. CWA §303(d)(4)(A) states that, for water bodies where the water quality does not meet applicable water quality standards, effluent limitations may be revised under two conditions; the revised effluent limitation must ensure the attainment of the water quality standard (based on the water body's TMDL or the WLA) or the designated use which is not being attained is removed in accordance with the water quality standard regulations. CWA §303(d)(4)(B) states that, for water bodies where the water quality meets or exceeds the level necessary to support the water body's designated uses, water quality-based effluent limitations may be revised as long as the revision is consistent with the State's antidegradation policy. Even if the requirements of CWA §303(d)(4) or 18 AAC 83.480(b) are satisfied 18 AAC 83.480(c) prohibits relaxed limits that would result in violations of WQS or effluent limitation guidelines.

9.0 ANTIDEGRADATION

Section 303(d)(4) of the CWA states that, for water bodies where the water quality meets or exceeds the level necessary to support the water body's designated uses, water quality-based effluent limitations may be revised as long as the revision is consistent with the State's antidegradation policy.

The Department's approach to implementing the Antidegradation Policy, is based on the requirements in 18 AAC 70 and the Department's *Policy and Procedure Guidance for Interim Antidegradation Implementation Methods*, dated July 14, 2010. Using these procedures and policy, the Department determines whether a waterbody, or a portion of a waterbody, is classified Tier 1, Tier 2, or Tier 3, where a higher numbered tier indicates a greater level of water quality protection. At this time, no Tier 3 waters have been designated in Alaska.

For the purpose of this analysis, the Department classifies the impaired water bodies as Tier 1 for the parameters causing the impairment. Compliance with permit conditions will limit discharges to those water bodies listed as impaired. As a result, water quality in those water bodies is likely to improve subject to compliance with permit conditions. Accordingly, DEC finds that the existing uses in those water bodies designated as Tier 1 for the parameters they are impaired for will be maintained and protected. The remainder of this antidegradation analysis conservatively assumes that all other waters are Tier 2 waters, which provides for the next highest level of protection. The Tier 2 analysis for these waters follows.

The Antidegradation Policy of the 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. If the quality of water exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality must be maintained and protected unless the Department, after receiving from the applicant all information reasonably necessary to make a decision, allows the reduction of water quality for a zone of deposit under 18 AAC 70.210 (September 2009), a mixing zone under 18 AAC 70.240 (July 2003), or another purpose as authorized in a Department permit, certification, or other approval. The Department may authorize a reduction of water quality only after the applicant submits information in support of the application, and the Department must make five findings.

For LTFs with an administrative permit extension, DEC has previously completed the required antidegradation analysis for each separate LTF and public noticed its intent to re-issue authorizations under the final effective general permits without completing a new antidegradation finding. DEC will complete an antidegradation analysis and finding prior to issuing any discharge authorizations to new LTFs.

The five findings and the Department's determination for are as follows:

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.

   Operation of LTFs owned by Village Corporations or Regional Corporations are essential for operators to move timber to markets and realize the value of timber harvested from adjacent lands. Section 7(i) is a provision of the Alaska Native Claims Settlement Act, which states that each of the 12 Regional Corporations in Alaska must share 70 percent of their natural resources development income with the other Regional Corporations. Since inception, Sealaska has paid $306.4 million into the Section 7(i) pool, the most of any Regional Corporation (http://www.sealaska.com/page/shareholder_faq).

   By law, profits from Regional Corporation operations will be shared with regional and village corporations throughout Alaska. Timber operators will employ people, including Alaska Native Shareholders, who live and work in the area of coverage. The timber industry is an important component of regional and local economies, providing direct and indirect benefits to communities in the area of coverage.

   The Alaska Mental Health Trust (AMHT) was created by Congress in 1956, and was granted a land base of one million acres to provide a reliable source of funding for mental health services in Alaska. Harvest of timber is one way in which AMHT realizes revenue from the land base. These revenues are essential for AMHT to be able to provide mental health services. In addition, the timber harvest operation, which depends on the LTF, will provide direct economic benefit to

the logging contractor and its employees, and indirect benefits to supporting communities in the region.

LTFs owned by the US Forest Service are used to implement the direction in the Tongass Land and Resource Management Plan, to seek to meet market demand for timber as prescribed in the Tongass Timber Reform Act (1990), to contribute to providing a sustained volume of wood to meet local and national demand, and to provide local and regional employment opportunities. These LTFs are integral to the timber harvest activities conducted by the Forest Service. The timber industry is an important component of regional and local economies, providing direct and indirect benefits to communities in Southeast Alaska.

DEC finds that operation of LTFs constitutes important economic development in the area of coverage. 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 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. (Note: 18 AAC 70.210(a) indicate that the antidegradation requirements and water quality criteria of 18 AAC 70.015 may be exceeded in a ZOD.) 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.

Subject to the permits, DEC concludes that this criterion is required to be met outside the authorized ZOD. See above finding.

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 LTFs 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.

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 methods of prevention, control, and treatment DEC finds to be most effective are the practices and requirements set out in the General Permits. The General Permits requires the operator to follow prescribed BMPs, and to develop and implement a PPP to control waste discharge. The General Permits also requires the operator to prepare a proposed Remediation Plan if continuous cover by bark and wood debris exceeds a threshold of 1.0 acre, deeper than 10 cm at any point. LTF operators are also required to obtain coverage under the MSGP, the industrial storm water permit. DEC concludes 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 nonpoint 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 the July 14, 2010, DEC guidance titled 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;
(B) minimum treatment standards in 18 AAC 72.040; and
(C) any treatment requirements 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. Upon Department review, no federal technology-based ELGs directly apply to these types of discharges.

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.

The third part includes any more stringent treatment required by state law, including 18 AAC 70 and 18 AAC 72. 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 methods of treatment and control DEC finds to achieve the highest statutory and regulatory requirements are the practices and requirements set out in the permit; therefore, 18 AAC 70.015(a)(2)(E) is satisfied.

10.0 OTHER PERMIT CONDITIONS

10.1 Quality Assurance Project Plan

The permittee is required to develop procedures to ensure that the monitoring data submitted are accurate and to explain data anomalies if they occur. The permittee is required to update the Quality Assurance Project Plan (QAPP) within 120 days of the effective date of the final permit. Additionally, the permittee must submit a letter to the Department within 120 days of the effective date of the permit stating that the plan has been implemented within the required time frame. The QAPP shall consist of standard operating procedures the permittee must follow for collecting, handling, storing and shipping samples; laboratory analysis; and data reporting. The plan shall be retained on site and made available to the Department upon request.

10.2 Best Management Practices Plan

In accordance with AS 46.03.110 (d), the Department may specify in a permit the terms and conditions under which waste material may be disposed. This permit requires the permittee to implement a BMP Plan in order to prevent or minimize the potential for the release of pollutants to waters and lands of the State of Alaska through site runoff, spillage or leaks, or erosion. Pursuant to 18 AAC83.475, the LTF general permits includes provisions to ensure that discharges do not cause or contribute to an exceedance of water quality standards.

Best Management Practices (BMPs) are defined by NPDES regulations at 40 CFR §122.2 as schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce pollutants from entering waters of the United States. The general permits contains certain BMP conditions that must be included in the BMP plan. The BMPs described in this section are recommendations resulting from the 1985 ATTF Guidelines (Appendix B).

The permit requires the permittees to develop or update and implement a BMP plan within 180 days of the effective date of the final permit. The Plan must be kept on site and made available to the Department upon request.

The LTF general permits retain the following required BMPs from the 2008 LTF permit issuances for shore-based and off-shore LTFs.

1. Shore-Based and Off-Shore LTFs

The following BMP requirements apply to all LTFs authorized to discharge under the LTF general permits with the exception of Part 10.2.1.d below (40' depth minimum) for the Pre-85 general permit. This BMP comes from the ATTF Guidelines which were intended to be applied to future siting decisions for facilities applying for a NPDES permit. The Pre-85 facilities were sited prior to the adoption and use of the ATTF Guidelines, and it is inappropriate to require them to comply with this standard retroactively for the use of surface waters above the project area ZOD.

a. Log bundles must be placed into the receiving waters at a single discharge point specified in the NOI or Notification;

b. No in-water bundling of logs shall occur;

c. Log rafts, logs, and log bundles, which have been transferred to the receiving water, shall remain floating at all times and must not be allowed to rest on or touch the bottom;

d. Rafting and/or storage must be in water at least 40 feet deep at MLLW in an area with currents strong enough to disperse wood debris. This BMP reflects an ATTF Guideline, and is not being applied retroactively to Pre-85 facilities.

e. Logs, log bundles, and log rafts must be moved out of the log raft make-up and storage areas at the earliest possible time to minimize the retention time of logs in the water;

f. The log transfer device must be operated to eliminate or minimize the discharge of petroleum and lubricating products into receiving waters; and,

g. Solid waste must not be deposited in or adjacent to waters of the United States, including wetlands and marine tidelands. Solid waste includes cables, metal bands, used equipment, machinery, vehicle or boat parts, metal drums, appliances, trash, and other debris.

2. Shore Based LTFs

In addition to the requirements listed above, shore based LTFs authorized under the LTF general permits must implement the following BMPs. All of the Pre-85 LTFs are shore based facilities.

a. The speed of log bundles entering receiving waters must not exceed 3 feet per second;

b. No in-water sorting of logs shall occur;

c. All logs deposited on the tidelands during float-off log transfer operations must be removed on a daily basis;

d. Bark and wood debris that accumulate at the log transfer device and on adjacent tidelands must be removed daily, to the maximum extent achievable;

e. Bark and wood debris that accumulates in upland traffic flow areas must not be allowed to enter fresh waters, wetlands, marine waters, or tidelands. This debris must be removed and disposed of on a regular basis so that the debris and its leachate do not enter receiving waters.

3. Off Shore LTFs

In addition to the requirements listed in Part 10.2 of this fact sheet, the following requirements apply to all off shore LTFs authorized to discharge under general permit AKG701000.

a. The speed of logs or log bundles entering receiving waters shall not exceed 10 feet per second for self-dumping barges and must not exceed 3 feet per second for all other off-shore log transfer devices;

b. Log transfer must occur in waters at least minus 60 feet deep at MLLW, except that log transfer may occur in waters minus 40-60 feet deep at MLLW if the permittee demonstrates, and DEC agrees, that no practicable alternatives are available in deeper water;

c. No in-water disposal of limbs and other debris removed from logs shall occur; and,

d. All logs must be limbed, to the maximum extent practicable, prior to their discharge into the receiving waters.

10.3 Standard Conditions

Appendix A of the permit contains standard regulatory language that must be included in all APDES permits. These requirements are based on the regulations and cannot be challenged in the context of an individual APDES permit action. The standard regulatory language covers requirements such as monitoring, recording, reporting requirements, compliance responsibilities, and other general requirements.

11.0 OTHER LEGAL REQUIREMENTS

11.1 Endangered Species Act

The 2014 Ocean Discharge Criteria Evaluation prepared for the two general permits evaluated the potential impacts of LTF discharges throughout the permit area of coverage in Section 6 of the document. The document concluded that LTF discharges are unlikely to result in unreasonable degradation of the marine environment and that additional permit requirements are not needed to protect these species.

The Endangered Species Act (ESA) requires federal agencies to consult with the National Oceanic and Atmospheric Administration (NOAA) Marine Fisheries and the U.S. Fish and Wildlife Service (USFWS) if their actions could beneficially or adversely affect any threatened or endangered species. DEC is not required to formally consult but does contact the agencies.

On May 14, 2014, an email was sent to both the NOAA and USFWS notifying them that DEC was in the permit development process asking both agencies if proposed facility discharges would be to an area with listed threatened and/or endangered species (TESs), Essential Fish Habitat (EFH), or federally designated or proposed critical habitat. The USFWS responded via email on May 27, 2014

that DEC can generate a list of TES's
at http://www.fws.gov/alaska/fisheries/fieldoffice/anchorage/endangered/consultation.htm.

DEC used USFWS' **IPac – Information, Planning, and Conservation System** (http://ecos.fws.gov/ipac/wizard/chooseLocation!prepare.action to produce and exam maps of TSE's critical habitats in the general permit's area of coverage. Only LTFs located on Afognak Island discharge to designated critical habitats.

As of October, 2014 NOAA has not responded. Absent an agency response, DEC reviewed NOAA's on-line **Endangered and Threatened Marine Species under NMFS' Jurisdiction** (http://www.nmfs.noaa.gov/pr/species/esa/listed.htm) for information.

Afognak Island LTFs

Both NOAA and the USFWS list the southwest Distinct Population Segment (DPS) of the Northern Sea Otter (*Enhydra lutris kenyoni*) as Threatened. Critical habitat has been designated for this population by NOAA (October 8, 2009). Two existing LTFs located on Afognak Island within Kazakof Bay (AKG701044 and AKG701049) discharge into designated critical habitat for the Northern Sea Otter. On May 30, 2014 Chris Foley (DEC) talked with Ellen Lance (USFWS Endangered Species) about the two existing Afognak facilities. Ms. Lance said that because continued use of the two facilities will not lead to any changes from existing conditions and because the population is stable or increasing, no additional permit requirements were being recommend by the USFWS.

Both NOAA and the USFWS list the western DPS of the Stellar sea lion (*Eumetopias jubatus*) as Endangered. Critical habitat has been designated for this population (April 10, 1990). Two existing LTFs located on Afognak Island within Kazakof Bay (AKG701044 and AKG701049) discharge into designated critical habitat for this population. Both LTFs were in existence at the time that critical habitat was designated and both have operated during this period. Neither agency has previously condition use of these LTFs.

Both NOAA and the USFWS list the Steller's eider (*Polysticta stelleri*) as Threatened. This species is known or thought to occur throughout the Afognak Island area. There is no designated critical habitat in the vicinity of Afognak Island.

Entire General Permits Area of Coverage

Both NOAA and the USFWS list the Short-tail albatross (*Phoebastria albatrus*) as Endangered. Critical habitat has not been designated for this species. This species is known or thought to occur throughout the entire permit area of coverage. Conservation measures were not available online.

A number of endangered salmon species are found in Alaskan waters. These species spawn on the West Coast of the Lower 48 but may occur in Alaskan waters during the marine phases of their life cycles. These include:

- Upper Columbia River Spring Chinook
- Upper Columbia River Steelhead
- Snake River Fall Chinook
- Snake River Spring/Summer Chinook
- Lower Columbia River Chinook
- Upper Willamette River Chinook
- Snake River Basin Steelhead

- Lower Columbia River Steelhead
- Upper Willamette River Steelhead
- Puget Sound Chinook
- Snake River Sockeye
- Lower Columbia River Coho
- Columbia River Chum
- Hood Canal Summer Chum
- Middle Columbia River Steelhead
- Green Sturgeon (Southern DPS)

The following species are managed by NOAA and are listed as TSE and may be found throughout the entire general permit's area of coverage. GOA is the Gulf of Alaska. "E" means endangered. "T" means threatened.

Table 7: Other NOAA TES Species

Common Name	Scientific Name	Status	Occurrence	Range in AK.
Humpback whale	*Megaptera novaeangliae*	E	Regular	GOA, SE Alaska
Fin whale	*Balaenoptera physalus*	E	Regular	GOA, SE Alaska
Sperm whale	*Physeter macrocephalus*	E	Regular	GOA, SE Alaska
Leatherback sea turtle	*Dermochelys coriacea*	E	Rare	GOA
Blue whale	*Balaenoptera musculus*	E	Rare	GOA
North Pacific right whale *	*Eubalaena japonica*	E	Rare	GOA
Sei whale	*Balaenoptera borealis*	E	Rare	GOA
Gray whale	*Delphinapterus leucas*	E	Rare	GOA
Green sea turtle	*Chelonia mydas*	T	Rare	GOA
Loggerhead sea turtle	*Caretta caretta*	T	Rare	GOA
Olive Ridley sea turtle	*Lepidochelys olivacea*	T	Rare	GOA

* Has designated critical habitat

11.2 Essential Fish Habitat

Essential fish habitat (EFH) includes the waters and substrate (sediments, etc.) necessary for fish from commercially-fished species to spawn, breed, feed, or grow to maturity. The Magnuson-Stevens Fishery Conservation and Management Act (January 21, 1999) requires federal agencies to consult with NOAA when a proposed discharge has the potential to adversely affect (reduce quality and/or quantity of) EFH.

On May 14, 2014, an email was sent to NOAA notifying them that DEC was in the permit development process asking the agency if proposed facility discharges would be to an area with designated Essential Fish Habitat (EFH). As of October, 2014 NOAA has not responded. Absent an agency response, DEC examined NOAA's EFH Mapper, an on-line tool available to the public. (http://www.habitat.noaa.gov/protection/efh/efhmapper/index.html) This one-of-a-kind tool displays maps for **essential fish habitat** (EFH), **habitat areas of particular concern**, and **EFH areas protected from fishing**.

The following species have mapped EFH within or adjacent to the general permit's area of coverage:

- Weathervane Scallops (Kodiak area and Gulf of Alaska to Cross Sound)
- Alaska Plaice (Kodiak area)
- Atka Mackerel (Kodiak area and Gulf of Alaska to Dixon Entrance)

- Dover Sole (Kodiak area and Gulf of Alaska to Dixon Entrance)
- Dusky Rockfish (Kodiak area and Gulf of Alaska to Dixon Entrance)
- Greenland Turbot (scattered units around Kodiak)
- Northern Rockfish (generally in the Kodiak area)
- Pacific Cod (Kodiak area and Gulf of Alaska to Dixon Entrance)
- Rex Sole (Kodiak area and Gulf of Alaska to Dixon Entrance)
- Rock Sole (Kodiak area)
- Sablefish (Kodiak area and Gulf of Alaska to Dixon Entrance)
- Sculpin (mostly Kodiak area with scattered units to mid Dall Island)
- Shortraker and Rougheye Rockfish (Kodiak area and Gulf of Alaska to Dixon Entrance)
- Skate (Kodiak area and Gulf of Alaska to Dixon Entrance)
- Squid (Kodiak area and Gulf of Alaska with scattered units to Dixon Entrance)
- Thorny Rockfish (Kodiak area and Gulf of Alaska to Dixon Entrance)
- Walleye Pollock (Kodiak area and Gulf of Alaska with scattered units to Dixon Entrance)
- Yelloweye Rockfish (Kodiak area and Gulf of Alaska to Dixon Entrance), and
- Yellowfin Sole (Kodiak area)

APPENDIX A

Table Summarizing Permit Language Changes Reflected in the Draft General Permits

Section of Draft Pre-85 Permit	Change in Draft Pre-85 general permit	Section of Section Post-85 general permit	Changes in Draft Post-85 general permit	Rational for Change
1.0 PERMIT COVERAGE, 1.1 Coverage and Eligibility	Additional language clarifying that LTFs that had received a section 404 permit prior to October 22, 1985, and never applied for or received an individual NPDES permit and/or coverage under the 2000 or 2008 LTF general permit remain eligible for coverage under this general permit.			The 2008 fact sheet stated that these facilities would be required to apply for coverage under the Post-85 general permit (Section 402). Public Law 100-4 states these facilities never have to apply for Section 402 permit because the Section 404 discharge authorization never expires.
Section 1.2 Obtaining Authorization, Part 1.2.1		Section 1.2		The 2007 Section 401 Certification required DEC to provide a list of facilities that submitted a timely application at least 180 days prior to the expiration of the 2000 general permit to DNR & Department of Fish & Game (DFG). This was designed to provide DNR and DFG a 30 day review prior to DEC taking any action. DNR and could review the list and object to a particular re-authorization. This is noticing our intent to re-authorize without additional agency review since all of these facilities are in their second or third permit cycle.
Section 1.23 Exclusions	Added language excluding Section 303(d) waters authorization or waters with more than 1.0 acre of continuous cover bark greater than 10 cm in depth at any point from permit coverage.			Consistent with the Post-85 general permit and the Hearing Officer's 2002 Final Decision.

Section of Draft Pre-85 Permit	Change in Draft Pre-85 general permit	Section of Section Post-85 general permit	Changes in Draft Post-85 general permit	Rational for Change
Section 3.1 Limitations, No. 3	The language explicitly ties the boundaries of the project area ZOD to that of the boundaries of a DNR or other land management authority lease, easement, permit or other approval for surface use of the same waterbody.	Section 4.1 Limitations, No. 3	The language explicitly ties the boundaries of the project area ZOD to that of the boundaries of a DNR or other land management authority lease, easement, permit or other approval for surface use of the same waterbody.	Ensures that DEC authorizes the deposition of bark and wood debris on the seafloor within the same surface footprint as authorized by DNR or other land management agency.
4.2.2 Existing LTFs	Added language on Notification submission timelines for previously authorized LTFs without a currently administratively extended authorization to at least 90 days prior to commencement of transfer activities.	N/A		Changed the timeframe from 60 days to 90 days so DEC has adequate time for additional agency or public review.
	Added language on Notification submission timelines for qualified LTFs that had not been previously authorized under an individual NPDES permit or the 2000 or 2008 general permit to require a Notification at least 90 days prior to commencement of transfer activities	N/A		Longer review period for legacy sites that have never been issues project area ZOD

Section of Draft Pre-85 Permit	Change in Draft Pre-85 general permit	Section of Section Post-85 general permit	Changes in Draft Post-85 general permit	Rational for Change
		Section 5.2 Deadlines for Submitting Initial NOI	Added language that DEC will issue an authorization, or a denial, in writing within sixty days of its receipt of the NOI, and will provide that written decision to the LTF operator. Authorization or denial will be based on evaluation of the following conditions: a. Areas excluded from authorization under the General Permit; b. Depth waivers for discharges less than -60 feet Mean Lower Low Water (Part 4.2.3.b); c. Conformance with the NOI requirements of the General Permit (Part 5.0); d. Conformance with the Zone of Deposit section of the Water Quality Standards (18 AAC 70.210); e. Conformance with the Antidegradation Policy section of the Water Quality Standards (18 AAC 70.015); and f. Conformance with other applicable sections of the Water Quality Standards (18 AAC 70)	From 2007 Section 401 Certification

Section of Draft Pre-85 Permit	Change in Draft Pre-85 general permit	Section of Section Post-85 general permit	Changes in Draft Post-85 general permit	Rational for Change
	A new map attachment that shows the boundaries of a tidelands and submerged lands permit, lease, easement, or other approval issued for the LTF by DNR or other land management authority.	5.3 Contents of the NOI	A new map attachment that shows the boundaries of a tidelands and submerged lands permit, lease, easement, or other approval issued for the LTF by DNR or other land management authority.	The boundaries of any project area ZOD will be based on the authorized surface use for agency consistency.
4.3 Contents of Notification	Added a requirement for enhanced bark deposit maps by requiring permittees to map discontinuous cover classes (99% – 50% and 49% - 10%) as well as calculate acreage of both classes.	6.3 Bark Monitoring and Reporting	Added a requirement for enhanced bark deposit maps by requiring permittees to map discontinuous cover classes (99% – 50% and 49% - 10%) as well as calculate acreage of both classes to the extent practicable.	Information gathering requirement. May inform changes in remediation planning requirements in future permits.
5.3 Bark Monitoring and Reporting	Added discontinuous cover class reporting; added requirement to include digital photos, added electronic reporting requirement; added notification requirement if 1.0 acres continuous cover threshold exceeded; and added requirement to include a written statement outlining additional practices to minimize bark accumulation	6.3 Bark Monitoring and Reporting, No. 6 Contents of Report	Added discontinuous cover class reporting; added requirement to include digital photos, added electronic reporting requirement; added notification requirement if 1.0 acres continuous cover threshold exceeded; and added requirement to include a written statement outlining additional practices to minimize bark accumulation	From 2007 Section 401 Certification

Section of Draft Pre-85 Permit	Change in Draft Pre-85 general permit	Section of Section Post-85 general permit	Changes in Draft Post-85 general permit	Rational for Change
5.3 Bark Monitoring and Reporting , No. 6 Contents of Report	New section	7.0 Remediation Planning Requirements	New section	From 2007 Section 401 Certification
6.0 Remediation Planning Requirements	New section	7.0 Remediation Planning Requirements	New section	From 2007 Section 401 Certification
7.2.8 Pollution Prevention Plan Implementation	Changed review period to annual during years that transfer activities occur.	8.2.8 Pollution Prevention Plan Implementation	Changed review period to annual during years that transfer activities occur.	The term “periodically” is not enforceable. PPP is not intended to be a static document. This change give operators a chance to evaluate Plan effectiveness and make any necessary changes.

Appendix B

LOG TRANSFER FACILITY SITING, CONSTRUCTION, OPERATION, AND MONITORING / REPORTING GUIDELINES October 21, 1985

APRIL 2006

Note: The following text is the original language from the October 21, 1985 LOG TRANSFER FACILITY SITING, CONSTRUCTION, OPERATION, AND MONITORING / REPORTING GUIDELINES. It contains the original regulatory citations which may be outdated. The bibliography, Appendix 1, the list of Subcommittee members, and Appendix II have been omitted from this version.

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Introduction

Log transfer facilities (LTF's) undergo a complex and rigorous permitting process involving four state and four Federal resource management and regulatory agencies as well as comments from other interested parties. Through the permitting process, the regulatory agencies may approve or disapprove permits with stipulations which govern the construction and operation of LTF's.

In seeking clarification of permit stipulations expected to be included in LTF permits, the timber industry recommended -- through Governor Sheffield's Timber Task Force report (12/13/84) -- that: "
...the principal agency heads and industry representatives meet to agree upon a process which will result in a common set of log transfer facility guidelines..."

As a result of this request, a committee consisting of the principal agency and industry representatives met on April 15, 1985 to consider the Task Force recommendation. This committee created a Technical Subcommittee of industry, public, and resource agency personnel involved in permitting LTF's to develop LTF guidelines per the Timber Task Force recommendation that:
"...it would be beneficial for all parties involved in the permitting, construction, and operation of log transfer facilities to have a common set of criteria (guidelines) from which to work when designing facilities and reviewing permit applications for these facilities."

The LTF guidelines are in three sections:

- Siting
- Construction and Operation
- Monitoring and Reporting

The Use of Guidelines

The guidelines for planning and permitting of LTF's delineate the physical requirements necessary to construct a log transfer and associated facilities and--in context with requirements of applicable law and regulations--methods to avoid or control potential impacts from these facilities on water quality, aquatic, and other resources. The guidelines emphasize facility siting as the best means of limiting most environmental impacts from LTF's, log raft, storage areas, and adjoining collateral facilities. Additional means of limiting environmental impacts occur through application of construction and operating guidelines. Monitoring and reporting guidelines are necessary to determine if a facility is meeting the permit stipulations.

These guidelines can be used in the existing permitting process which emphasizes best professional judgment of the agencies in close cooperation with the applicants when selecting sites and imposing permit stipulations. The process is preferred because it accommodates site-specific conditions and enables all participants to collectively evaluate the practicable[1] alternatives and determine the best way to minimize impacts.

> [1]Practicable means available and capable of being done after taking into consideration costs, existing technology, and logistics in light of overall project purposes (40 CFR 230.3(g)).

The guidelines are comprehensive and may apply to any site being evaluated for LTF permits. Since each site is different, in unusual circumstances, there may be need to develop more specific stipulations or limitations during the permit review process for a specific site.

Periodic updating of the guidelines will be necessary since changes may occur in both the timber industry and new information may become available on the effects of log transfer facilities on water quality and biotic communities.

The guidelines apply to log transfer, log raft storage, and collateral facilities, such as log raft make-up areas, airplane and boat docks and contiguous upland log storage and sort yards immediately adjacent to the LTF.

The guidelines do not identify which permitting agency(ies) have regulatory and permitting jurisdiction for any guideline. The objective is to provide a comprehensive listing of guidelines applicable to LTF's through state and Federal resource management and regulatory programs.

The siting and construction and operation guidelines identify the physical features the timber industry needs to safely and efficiently transport logs, and minimum requirements that are needed to mitigate for changes in water quality and adverse impacts on aquatic biota. When evaluating proposals for these log transfer and associated facilities, all guidelines must be considered. The objective is to consider all guidelines and develop a "best mix" which allows the activities to proceed while meeting all applicable statutory and regulatory requirements.

Siting Guidelines

Proper siting of log transfer and log raft storage facilities is the single most important means of controlling adverse water quality and biotic impacts from the construction and operation of these facilities. The least biologically productive and sensitive area available which meets industry's physical and economic requirements is the preferred site. The need for regulatory agencies to impose additional permit stipulations above the minimum requirements to mitigate against environmental impacts is reduced to a level commensurate with the site-specific characteristics.

S1. Proximity to Rearing and Spawning Areas

Siting of log transfer and log raft storage facilities within 300 feet of the mouth of anadromous fish streams, or in areas known to be important for fish spawning or rearing is normally prohibited.

Discussion: This LTF siting guideline is derived from the Alaska Forest and Resources Practices Regulations (11 AAC 95.150 (c)). The estuarine areas adjacent to the mouths of anadromous fish streams serve as important feeding areas for salmon fry and smolts while they acclimate to saltwater. Elimination of impacts to these areas can force outmigrants into deeper waters where there is greater risk for predation. Placement of LTF's in known spawning areas results in loss of spawning habitat.

The outmigrant salmon fry are especially vulnerable and have particularly high value to the fishing industry. The concerns include the possibility of leachates entering fresh water or the possibility of sediments entering waters and affecting fish. Because of the high value of the fisheries resources, the Forest Practices Regulations of the state exclude LTF siting in these most valuable and highest risk locations.

S2. Protected Locations

Log transfer and log storage facilities should be sited in weather-protected waters with bottoms suitable for anchoring and with at least 20 acres for temporary log storage and log booming.

Discussion: Areas protected from adverse weather, tidal, and wave conditions are needed for the safety of the workers responsible for moving log bundles, building rafts, and similar water-oriented work activities. Log rafts and bag booms must be protected from adverse weather, tidal, and wave conditions that can damage the rafts and the bag booms. Protected conditions are needed for control of the log bundles being placed in the water and the requirement to retain them in the bag booms and rafts so as to avoid hazards to navigation.

At least 20 acres of available space is needed to place log bundles into the water, sort bundles into log booms, construct log rafts and hold log rafts until moved by tug to the next destination. Additional space is needed for docks and floats, and movement of boats, floatplanes and other transportation. Most of the space involved is used for the movement of vessels and log rafts.

Log bundle storage with maneuvering space for vessels and rafts requires 3.6 + or - acres per MMBF gross timber volume. Approximately 8 acres is required for storage of a typical tow of four log rafts. An additional 8 acres is needed for booming of bundles including maneuvering space.

Consolidation and concurrent use of log transfer and storage sites will increase the amount of space required. Each owner of logs will need separate log booms and storage areas to provide for log accountability. Where National Forest and privately-owned logs are stored or transferred from a consolidated site this separation is required by regulation.

While the guidelines suggest 20 acres for normal situations, it is possible to operate in less space under some situations. For small timber harvest operations, with timber volumes of less than one MMBF, the need for space will be reduced dramatically. There is, however, a practical minimum space needed for even the smaller operations. This minimum is approximately five acres.

S3. Upland Facility Requirements

Log transfer facilities generally should be sited in proximity to at least five acres of relatively flat uplands. There should also be a body of water sufficient to provide a minimum of a 60 lineal foot facility face.

Discussion: This guideline has two operative portions: 1) space needed for upland operations near the transfer point; and 2) the length of available space needed at the operating face.

Relatively flat land is required to avoid extensive excavation. The space needed for upland operations adjacent to the LTF is directly related to the type of facility (see Use Descriptions in the Glossary), volume of timber that may be handled annually, and the life of the operation. The amount of space needed may include truck unloading (0.9 acres), log scaling (1.5 acres), log storage (1.6 acres per MMBF), sorting (0.5-2.0 acres), and additional space for incidental related operations. Equipment yard and repair areas are commonly in this vicinity (1.5-2.5 acres). The five-acre minimum would service intermittent use and some occasional use sites, with up to 35 to 40 acres needed for continuous use sites.

Unobstructed width required for the transfer of logs to the water needs to be adequate for the products being moved. The constructed length of the working face can be as little as 40 feet, under special circumstances, but the operating clearance must exceed 60 feet to accommodate the longest log lengths. 110 feet available face is most desirable.

S4. Safe Access to a Facility from the Uplands

To provide safe access to the log transfer facility and adjoining log sort yard, the facility should be sited where access roads to the facility can maintain a grade of 10 percent or less and 4 percent for specialized equipment.

Discussion: Vehicle access must be provided to the point where log bundles are transferred either to the log sort yard facility or to the receiving waters. The operating layout must provide for operations within safe limits for the equipment, operators and other personnel in the area. The maximum safe grade for log stackers is 4 percent. The maximum safe grade can be increased to 6 percent with special modifications to the log stacker. Prudent consideration of safety suggests a desirable grade less than the maximum be used.

Road grades entering the unloading facility in excess of the 10 percent will not allow the truck driver to safely stop the vehicle in emergencies.

S5. Bark Dispersal

Log transfer facilities should be sited along or adjacent to straits and channels or deep bays where currents may be strong enough to disperse sunken or floating wood debris. Siting log transfer facilities in embayments with sills or other natural restrictions to tidal exchange should be avoided.

Discussion: The Environmental Protection Agency and the Alaska Department of Environmental Conservation consider bark to be a pollutant. Problems with bark occur when it accumulates. The accumulated bark both physically smothers organisms and may create anoxic conditions or toxic gases.

In bays that have sills or natural restrictions to tidal exchange, there is a concern that bark may accumulate due to inadequate current velocities. The concern is that sufficient bark accumulation and lack of water exchange in the layer below the sill will cause anoxic conditions.

While it is possible for sufficient bark to accumulate below sills to create anoxic conditions, this effect has not been documented at any existing log transfer site in Alaska.

S6. Site Productivity

Sites for in-water storage and/or transfer of logs should be located in areas having the least productive intertidal and subtidal zones.

Discussion: One of the siting methods used to limit the impacts that log transfer and log storage facilities may have on the environment has been to site the facilities in the least productive habitats. These habitats are often found along steep

shorelines, where there is little substrate for plant or animal growth. Bark, because of the steep topography, seldom accumulates in such areas. Areas with a minimum bottom substrate in the euphotic zone are to be preferred.

S7. Sensitive Habitats

Log transfer facilities and log raft storage areas should not be sited on or adjacent to extensive tideflats, salt marshes, kelp or eelgrass beds, seaweed harvest areas or shellfish concentration areas.

Discussion: Tideflats, salt marshes, and aquatic vegetation beds support numerous biological communities, i.e., nursery and rearing areas for commercial species of crab and fish. The areas are usually shallow and high producers of planktonic organisms which support the aquatic food chain.

Woody debris from log transfer and water storage can be carried by currents and deposited on these plant and animal communities. Debris may cover the area and physically smother plants and animals. There is a concern that debris accumulation may reduce dissolved oxygen concentration in the water below the minimum level required by fish and other aquatic life. Bark debris is expected to reduce dissolved oxygen concentration in the bark interstices. One study found that the dissolved oxygen, pH, oxidation reduction potential, and concentration of toxic products of decomposition in the water column at 30 centimeters (12 inches) above the bark were not significantly different than at the control sites. Reductions in dissolved oxygen below Water Quality Standards have not been documented.

S8. Safe Marine Access to Facilities

Log rafting and storage facilities should be safely accessible to tugboats with log rafts at most tides and on most winter days.

Discussion: Tugboats gather log rafts for transshipment to mills and other loading facilities. The lack of safe access to log rafting areas will result in the tug operator refusing to accept or deliver log rafts.

S9. Storage and Rafting

Logs, log bundles, or log rafts should be stored in areas where they will not ground at low tide. A minimum depth of 40 feet or deeper measured at Mean Lower Low Water (MLLW) for log raft storage is preferred.

Discussion: Grounding of logs or log rafts compacts the substrate and decreases biota living in and on the substrate. The siting and design of log transfer facilities should provide sufficient water depth to avoid grounding of log bundles at the transfer facility and at log raft make-up areas.

Log rafting in depths greater than 40 feet (MLLW) is preferred because rooted aquatic macrophytes and algaes generally begin to decrease in density in Southeast Alaska below this depth. Rafting 40+ feet MLLW or more will protect these organisms and habitat (less than 40 feet MLLW) from bark accumulation and shading by log rafts. Log raft storage may occur at depths less than 40 feet (MLLW) depending on biological productivity, sensitivity to shading and potential risk of bark accumulations.

The logging industry retains the need to maintain existing sites which allow log rafts to ground or be stored in areas with low salinity, typically at the head of the bay, and in water less than 40 feet deep. The purpose is to protect logs from shipworm infestation, which can occur immediately after the logs are placed in the water.

Shipworms are an endemic problem because they cause economic loss to timber values, both from the holes they produce in sawtimber, and from the calcium deposits they leave in logs used for pulp purposes. The industry has observed that reductions in shipworms occurs in waters with low salinities and when logs are allowed to ground in cold weather. For this reason, the industry continues to seek the opportunity to have sites where logs will be allowed to ground in order to reduce shipworm damage.

The objective of regulatory agencies is to discontinue the practice of allowing logs to ground or be stored in areas less than 40 feet deep when they are biologically productive or are sensitive habitats.

There is a need for additional research into shipworms and possible ways to reduce infestation in log rafts. Research needs identified by Sedal & Duvall, if accomplished, could reduce the conflicts.

S10. Bald Eagle Nest Trees

Site log transfer facilities to avoid bald eagle nests. No project construction or operation should be closer than 330 feet to any bald eagle nest tree unless permitted by U.S. Fish and Wildlife Service. (See the Eagle MOU for details.)

Discussion: The Bald Eagle Protection Act (16 U.S.C.) protects bald and golden eagles. To provide guidance for the management and protection of bald eagles on National Forest Lands in Alaska, a Memorandum of Understanding was signed by the U.S. Forest Service (Region 10) and the U.S. Fish and Wildlife Service (Region 7). The Memorandum of Understanding states that a management zone of 5 chains (330 feet) around each eagle nest tree will be established and that all land use activity within the zone will be excluded. The Memorandum of Understanding includes provisions for variances from the requirement.

Construction and Operation Guidelines

The following guidelines apply to the construction and operation of the log transfer facilities and collateral upland facilities such as sort yards and upland log storage areas. Construction and operation guidelines have not been developed for log raft storage facilities since the only practical means of regulating raft storage is through proper siting. The degree of application of these guidelines to individual LTF's is based on the siting of the facility.

C1. Log Transfer Facility Design

Log transfer facility design should be the least environmentally damaging, practicable alternative. Factors to be considered in selection of design alternatives include:
1) economic practicability;
2) facility requirements;
3) physical site constraints;
4) timber volumes to be transferred (site usage and duration);
5) total potential effects on biota and water quality, (including biological productivity and sensitivity; and
6) other potential uses of the site and facility.

Discussion: The preferred LTF design(s) should be those that represent the best practicable alternative and the least impact from placement of fill and associated impacts, such as bark accumulations. For example, emphasis on facility designs that minimize bark loss may result in a greater total coverage of the intertidal and subtidal areas by fill -- due to design requirements -- than would occur under another alternative which allows greater bark loss, but less fill.

C2. Fill Structures

Fill structures shall be designed and constructed to prevent erosion, pollution, and structural displacement.

Discussion: The intent is to avoid introducing fine sediments and organic matter into the water. The guideline requires design and construction practices that minimize fine sediment plumes and prevent change in the substrate's composition near the structure as a result of lost fill material.

This guideline is performance-based, by allowing the use of a range of materials within fills provided proper design, construction, and containment procedures are followed. The use of woody debris in fill structures is acceptable with containment.

It is assumed in the guideline that timbers and logs used in construction are not classified as fine organic matter.

C3. Timing of Inwater Construction

In-water construction, blasting, and/or filling associated with LTF sites should be timed to limit adverse impacts to marine and estuarine fishery resources and avoid conflicts with other user groups.

Discussion: Juvenile salmonids use shallow, near shore areas for feeding during the first few weeks after they leave freshwater. Construction activities during this outmigration period may cause direct mortality from blasting if the over pressure in the marine waters exceeds 2 psi. Increased water column turbidity related to construction or filling may decrease availability of prey organisms and cause physiological damage to fry during this critical period. Spawning herring are also susceptible to turbidity and effects of blasting.

Generally the period from mid-March to mid-June is the period when in-water turbidity and over pressure restrictions will be needed in order to protect juvenile salmon and spawning herring. The actual times will vary depending on site and the presence or absence of juvenile salmon or spawning herring.

Timing restrictions to avoid conflicts with existing user groups vary and would be evaluated on a site-by-site basis. Facility siting to avoid juvenile salmon nursery areas, herring spawning areas and areas utilized by other user groups will reduce the need for timing restrictions.

C4. Bark Accumulation Management

The siting, design, and operation of the LTF and contiguous collateral upland facilities shall utilize the best practicable procedures and methodologies to control intertidal and submarine accumulations of bark.

Discussion: Intertidal and submarine accumulations of bark impact infauna and epifauna primarily through smothering, but also through alteration of natural habitat and water quality. The extent of the impact is limited to the actual area of complete bark coverage. Through proper implementation of best practicable procedures and methodologies, such as siting, design selection, operation, and solid waste management, the level and impact of intertidal and submarine accumulations can be minimized. Selection of best practicable procedures and methodologies to limit intertidal and tidal bark accumulations for a specific site should be used.

C5. Solid Waste Management

Solid wastes, including wood and other solid waste generated from the LTF, contiguous and other collateral facilities shall be routinely removed from the log transfer facilities and adjacent facilities and disposed of at an approved upland solid waste disposal site.

Discussion: Disposal of solid wastes, cable, machine parts, and equipment, as well as wastes from logs in the sort yard, truck unloading and log transfer operations should occur in accordance with (18 AAC 60) which requires that solid wastes be properly disposed of at an approved disposal site. In order to prevent accidental introduction of materials into receiving waters, bull rails, or similar constraints to retain bark and wood waste on the upland improvements adjacent to the LTF, should be utilized. Bark and other solid waste should be periodically removed from uplands and intertidal areas around the log transfer system, depending on the site conditions.

C6. Bark Accumulation

The regulatory agency(ies) will impose an interim intertidal and submarine threshold bark accumulation level. When accumulations exceed the threshold level, cleanup -- if any -- will occur at the discretion of the permitting agency(ies). The interim threshold bark accumulation level is described as 100 percent coverage exceeding both one acre in size and a thickness greater than 10 cm (3.9 inches) at any point.

Discussion: This guideline is necessary because intertidal and submarine accumulations of bark impact infauna and epifauna primarily through smothering but also through alteration of natural habitat and water quality. The problem with bark occurs when it accumulates. Through siting, transfer system selection, and solid waste management, the amount of bark lost and accumulating in intertidal and submarine areas is prevented to significantly diminished. Bark accumulation is still expected to occur in some areas promoting the need for this guideline. This is an interim guideline developed by the Log Transfer Facility Guideline Committee. The committee developed this procedural guideline in order to be responsive to ongoing research, and at the same time raise site-specific problems to the respective decision-makers for appropriate action.

An interim guideline for threshold bark accumulation levels and cleanup when exceeding those levels is being used due to a lack of information. Technical data is needed to evaluate technical feasibility of various options for managing accumulations, such as removal or other control procedures. Water quality and biological information is needed to evaluate effects on water quality and biota from removal and disposal of bark accumulations and effects of other corrective options that may be used to manage bark accumulations.

The USDA Forest Service and the U.S. Fish and Wildlife Service have entered into a cooperative agreement to assess the practicability of bark removal. This study is planned for 1986 to evaluate bark removal at one site and the level of

recolonization that will occur after removal. DEC is scheduled to conclude studies that will provide information on factors that will result in bark accumulation occurring.

Completion of these scheduled plus design of additional studies to answer questions for threshold accumulation levels and bark removal will provide information to develop final guidelines for these issues

The interim guidelines will remain in effect pending completion of these studies. Final completion of the recolonization studies will not occur until FY 89-90. These will, however, be interim reports for these studies dealing with cost effectiveness of suction dredging removal techniques, release of toxics into the water during bark removal and preliminary recolonization of evaluations. These interim reports will provide sufficient information to develop a final guideline by the fall of 1987.

C7. Bundle Speed

The speed of the log bundles entering receiving waters should be the slowest practicable speed available. Decisions on the allowable transfer system that can be used will occur on a site-specific basis during the permitting process.

Discussion: This guideline is necessary because the amount of bark lost during transfer of log bundles into receiving waters is directly correlated with the speed of log bundles entering receiving waters. These conclusions have been confirmed by an in-progress USFWS study. The loss of bark into receiving and submarine areas can adversely effect aquatic biota through smothering and alteration of habitat.

The release of bark into receiving waters initiates a regulatory response that bark is a pollutant when discharged into receiving waters. To the extent practicable, its discharge should be eliminated.

This guideline was developed by the Log Transfer Facility Guidelines Committee. The Committee concluded that rather than pursue a uniform speed requirement for all LTF's, the guideline should emphasize the need to meet the slowest speed achievable after taking into consideration costs, existing technology, and logistics, in light of the overall project purposes (see the definition of practicable).

There is insufficient information to agree upon a guideline which defines a practicable speed for various types and sizes of transfer operations. However, based on current information about existing transfer technology, a 3 foot per entry velocity is an achievable entry speed and will serve as a reference point for discussion. Practicable speed requirements for various types of log transfer operations will be better quantified when the U.S. Fish and Wildlife Service completes its study evaluating the source and amount of bark lost from different log transfer systems operating in early fall 1985. Additionally, further evaluation of the range of velocities achievable by various transfer systems are scheduled for the 1986-1986 season.

These studies would provide better information to evaluate log transfer alternatives. The reports should address the technical and economic feasibility of meeting various speed limits for different use categories (i.e., continuous, intermittent, occasional, and incidental use sites) and analysis of the cumulative effects of construction and operation of different mechanical transfer systems on the environment. These studies to delineate practicable velocities for various categories of log transfer facilities should be completed by Fall 1987.

C8. Surface Drainage Management

The design, construction and operation of LTF's, contiguous sort yards and/or log storage yards shall utilize practicable procedures for control of surface water runoff from facilities.

Discussion: The surface water runoff from LTF's and adjacent contiguous sorting/storage areas has been observed to carry sediments, woody debris, and hydrocarbons. These pollutants can directly enter receiving waters. Surface runoff control can be accomplished with a variety of techniques. These include such practices as keeping overland flow from entering the LTF or adjacent facilities, collecting runoff from the facility in settling basins, or retaining vegetative buffer strips. The design, construction, and operation of LTF's, in conjunction with adjacent and contiguous sorting storage areas, will utilize practicable procedures for meeting Water Quality Standards for the State of Alaska and the Clean Water Act.

The Alaska Department of Environmental Conservation may require information on sort and/or storage yards contiguous to the LTF that is not routinely provided on permit applications in order to assist permittees in managing surface runoff so as to comply with Water Quality Standards.

C9. Control of Hydrocarbons

The log transfer system and adjacent sort yard handling equipment shall be operated and maintained to minimize petroleum and lubricating products from entering waters.

Discussion: The operation of certain log transfer systems and equipment used in any adjoining log unloading facility or log and sort yard storage facility, are a potential source of hydrocarbons and hydraulic fluids which can spill on the upland facilities and enter receiving waters. This equipment should be maintained and facilities managed to ensure lubricants and hydraulic fluids do not enter receiving waters. Continuous-chain log transfer systems require periodic lubrication and result in unavoidable introduction of hydrocarbons into receiving waters. Lubrication of these systems should use manufacturer's specified lubricants and lubrication should not exceed manufacturer's specifications.

C10. Onshore Log Storage

Where feasible, preference must be given to onshore storage and barging of logs.

Discussion: 11 AAC 95.150 of the Alaska State Forest Resources and Practices Regulations specifies preference to onshore storage and barging of logs where feasible.

C11. Facility Maintenance and Reclamation

The permittee shall maintain the structure or work authorized in good condition and in reasonable accordance with the approved plans and drawings. If and when the permittee desires to abandon the authorized activity herein, unless such abandonment is part of the transfer procedure by which the permittee is transferring its interests to a third party, the permittee must restore the area to a satisfactory condition.

Discussion: The authorizations from the Corps of Engineers under Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act include the general conditions (h) requirements to maintain authorized work and (g) upon abandonment restoration of the area to a satisfactory condition. This guideline repeats those general conditions.

Monitoring and Reporting Guidelines

LTF's are monitored to assure permit compliance. Monitoring results are used to assess activities associated with the construction, operation, and maintenance of the facilities, and to ensure that corrective action occurs, if appropriate. The level and type of monitoring are dependent on the type of facility.

M1. Monitoring by Permittee

Monitoring for bark accumulations, oil sheen, and surface runoff associated with the construction, operation, and maintenance of facilities, and to ensure that corrective action occurs, if appropriate. The level and type of monitoring is dependent on the type of facility (see use definitions in the Glossary).

Discussion: The regulatory agencies when issuing permits can include conditions to a permit which require monitoring by the permittee. The agencies can assume some or all monitoring responsibilities.

M2. Monitoring Requirements

Monitoring should be undertaken at all continuous and intermittent use LTF sites, and at those occasional and incidental use LTF's at which total volume of logs transferred is similar to that of intermittent use sites. The level of monitoring and parameters to be monitored should be determined on a site-specific basis. Monitoring at occasional and incidental use facilities may be required on a site-specific basis. The need for monitoring of occasional or incidental use sites will be limited. Permittees will be required to submit a monitoring program to the permitting agencies prior to operation of a new continuous or intermittent use LTF. Agency approval of monitoring plans is required. Requirements for monitoring should be responsive to data obtained during prior monitoring activities.

Discussion: Monitoring is required to determine the occurrence and the extent of possible environmental impacts. The nature of monitoring activities shall be site-specific and determined by such factors as volume, site characteristics, life of project, and type of operation, since these factors may determine the extent of environmental impacts. Depending upon monitoring results, permitting agencies have sufficient flexibility to modify monitoring requirements for any LTF at any time during its operation, or after the first three years of operation of a continuous LTF. For example, monitoring requirements for a continuous LTF could be dropped if monitoring data indicates that significant deposits of bark debris are not accumulating. Permitting agencies approval is needed to determine if a monitoring plan will satisfy permit conditions.

M3. Annual Monitoring for Bark Accumulation

At continuous and intermittent use LTF's, monitoring of bark debris accumulation should occur prior to the operating season as a minimum requirement. Monitoring at intermittent LTF's would occur only during periods when the LTF is active.

Discussion: In order to determine if the bark accumulation conditions and stipulations of the permit are being met, it is necessary to measure bark and debris accumulations.

M4. Elements of Bark Accumulation Monitoring Program:

Elements that should be included in a monitoring program for continuous and intermittent use LTF's, are site-specific and may include, but not be limited to:
a. permanent transects
b. measurement of areal extent, thickness and percent coverage of bark debris,
c. measurements required by M4, a and b are from MHW (Mean High Water) to depths of 60 feet MLLW (Mean Lower Low Water).

Discussion: In order to determine changes in site characteristics over time, installation of permanent transects is required. Thickness, area, and extent of bark coverage affects benthos. Sixty feet below MLLW was selected because it is a depth at which repeated dives can safely be conducted.

Permanent transects are necessary to enable collection of repetitive data. If little or no change is observed, the permit holder may be relieved of the requirement for collecting information along the transect. The requirement for dive transects, the number of transects, and the method of establishing permanence of the transects will be related to the period of usage, the amount of use intended, the resource values involved, and the expectations of effects as a result of the siting process.

M5. Monitoring for Oil Sheen

Waters in the vicinity of an LTF shall be monitored during operations for the presence of a visible sheen and recorded when observed.

Discussion: The monitoring is necessary to determine if an LTF is being operated to comply with water quality standards for petroleum hydrocarbons, oils, and grease. Authority for this guideline is provided by State Water Quality Standards (18 AAC 70), Oil Pollution Regulations (18 AAC 75), and Federal Regulations (40 CFR 110).

M6. Monitoring Upland Discharges

On a case-by-case basis, discharges of rainfall from log sorting and storage yard, and discharges from any settling pond used to treat water, may require monitoring to ensure compliance with State Water Quality Standards and the Clean Water Act.

Discussion: This monitoring is necessary to determine if measures or structures designed to concentrate and treat runoff are operating effectively.

M7. Reporting Guidelines

Routine annual reports include the following descriptive information: a. Location of the LTF (404/402 permits require latitude and longitude). Forest Service traditionally uses legal descriptions.
b. Description of the LTF, including transfer devices and sorting and storage areas.
c. Permit holder and/or operator of LTF.
d. Starting and ending dates of operating season (from first to last bundle), and number of operating days per season.
e. Gross volume in board feet (Scribner Scale) or number of bundles transferred during the operating season.
f. Monitoring data as described in Monitoring Guidelines.

Glossary

Biological productivity: Highly diverse biological communities with many individuals.

Clean fill is defined as inorganic material, sized as sand and larger, free of organics. Current practice is to allow 0 to 15 percent material finer than sand and no organic materials in reinforced earth structures used for log transfer. Field observations indicate that the percentage of material is finer than sand from rock pits used for fill is considerably lower than the maximum percentage of fine material.

Log raft make-up area: A facility constructed in waters of the United States near or adjacent to log transfer facilities. The log raft make-up area is utilized for constructing log rafts which on completion are moved to either a log storage area or loaded on to a vessel.

Log raft storage area: A facility constructed in the waters of the United States utilized for the purpose of temporary or long-term storage of commercially harvested logs awaiting transfer to a vessel, manufacturing facility, or storage at the manufacturing facility.

Log transfer facility: A facility constructed, in whole or part, in waters of the United States which is utilized for the purpose of transferring commercially harvested logs to or from a vessel or log raft.

Practicable: Means available and capable of being done after taking into consideration costs, existing technology, and logistics in light of overall project purposes (40 CFR 230.3(q)).

Use Descriptions: There are four classifications to describe the range of use for log transfer operations. The intensity and duration of site use will vary over time and the descriptions for each use provide a benchmark description to relate to operating levels and characteristics. There is a trend away from long-term continuous sites with increased incidence of intermittent and occasional use sites.

Continuous use sites: Sites where use is expected to be continuous on a regular basis for 20 years or longer. These sites were described and analyzed by Sedlak (3-16) in his analysis of alternative log transportation systems. Volume of expected timber is approximately 20 to 50 MMBF per year. Industry practice is to try to operate at a minimum of 35 MMBF activity level if a year-round camp is to be maintained. Log sorting and scaling commonly occurs at these sites. Export shipping is expected for privately owned timber. This operation is described as having "two sides" (two full yarding and support systems) with year-round land-based camp operations normal. Sites originally developed and operated as continuous use will frequently change to intermittent use or occasional use sites subsequent to the initial harvest activities.

Incidental use sites: Sites where use for log transfer is expected to occur only once or twice over a 70-100 year period. Typically the focus is on salvage of logs as the result of blowdown, disease, or harvest of isolated stands of timber. The lands involved are generally not accessible by alternative means. Timber volumes at a site will normally not exceed 5-10 MMBF. Log sorting areas are normally not constructed and native log structures are expected. Floating camp operations are expected.

Intermittent use sites: Sites where use is expected to vary from zero to approximately 11-17 MMBF per year. This operation can be described as having a "single side" (one full yarding operation and supporting system). These sites were described and analyzed by Sedlak (3-17) in his analysis of alternative log transportation systems. Typically these sites will vary in use in a pattern of 4 MMBF for the first year, 11-17 MMBF for three years, 4 MMBF for one year, and 6-15 years with no log transfer (3-17). Timber volumes from intermittent use would be at the average annual rate of 3-5 MMBF per year over 20-50 years. Timber salvage operations may occur in the periods between major operations. Sort yards are not normally constructed if water storage sites are available.

Year-round camp operation is generally not expected. Land-based camps have been common in the past, but increased use of floating camps has been observed at these sites.

Occasional use sites: Sites where intensive log transfer is expected to occur for only 4-6 years out of a 20-30 year period. These sites have not been analyzed in the literature. The use pattern is expected to be cyclical through the life of the site. Timber volumes from major timber activities would be at the average annual rate of about 1/2 MMBF/year over 20-50 years.

Small timber operations will occur during the periods when major sale activities do not occur. Sorting yards are constructed only if no other options are available. Direct shipping of export logs is not expected. Floating camp operations are the expected normal situation unless commuting of workers from an established camp is feasible.

Appendix C

Definitions

The following are common definitions of terms associated with APDES permits. Not all the terms listed may appear in a permit. Consult the footnote references for a complete list of terms and definitions.

Administrator[a]	Means the Administrator of the EPA or an authorized representative
Alaska Pollutant Discharge Elimination System (APDES)[a]	Means the state's program, approved by EPA under 33 U.S.C. 1342(b), for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits and imposing and enforcing pretreatment requirements under 33 U.S.C. 1317, 1328, 1342, and 1345
Alaska Timber Task Force Guidelines	Means the guidelines developed for log transfer siting, construction, operation and monitoring/reporting dated October 21, 1985.
Annual	Means once per calendar year
At any point	Means at any single point within the area of continuous coverage. It does not mean at all points and does not mean a single piece of bark or wood protruding from the surface of bark and wood debris.
Bark and wood debris	Means pieces of bark, wood, and minute amounts of organic material (soil, lichen or moss) dislodged from logs during processing. Bark and wood debris may also include whole logs which lost their commercial value during processing (e.g., lost, damaged, or sunken logs).
Best Management Practices (BMPs)[a]	Means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage areas.
Board foot	A measure of wood volume. One board foot equals a piece of lumber one inch thick, 12 inches wide and one foot long.
Boundary[b]	Means line or landmark that serves to clarify, outline, or mark a limit, border, or interface.
Bypass[a]	Means the intentional diversion of waste streams from any portion of a treatment facility.
Clean Water Act (CWA)[a]	Means the federal law codified at 33 U.S.C. 1251-1387, also referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972
Commissioner[a]	Means the commissioner of the Alaska Department of Environmental Conservation or the commissioner's designee
Continuous cover	Means areas of bark and wood debris that are estimated to cover 100 % of the ocean bottom, as measured within a three-foot-square sample plot and will, at DEC's

	discretion, include boulders, rock outcrops, ridges, and other protrusions within an area of continuous coverage that are not covered by bark
Daily Discharge[a]	Means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for the purposes of sampling. For pollutants measured in units of mass, the “daily discharge” is calculated as the total mass of the pollutant discharged over the day. For pollutants with a limitation expressed in other units of measurement, the “daily discharge” is calculated as the average measurement of the pollutant over the day.
Datum	A datum defines the position of the spheroid, a mathematical representation of the earth, relative to the center of the earth. It provides a frame of reference for measuring locations on the surface of the earth by defining the origin and orientation of latitude and longitude lines.
Department[a]	Means the Alaska Department of Environmental Conservation
Director[a]	Means the commissioner or the commissioner’s designee assigned to administer the APDES program or a portion of it, unless the context identifies an EPA director
Discharge[a]	When used without qualification, discharge means the discharge of a pollutant
Discharge of a Pollutant[a]	Means any addition of any pollutant or combination of pollutants to waters of the United States from any point source or to waters of the contiguous zone or the ocean from any point source other than a vessel or other floating craft that is being used as a means of transportation. Discharge includes any addition of pollutants into waters of the United States from surface runoff that is collected or channeled by humans; discharges through pipes, sewers, or other conveyances owned by a state, municipality, or other person that do not lead to a treatment works; discharges through pipes, sewers, or other conveyances leading into privately owned treatment works; and does not include an addition of pollutants by any indirect discharger.
Discontinuous cover	Means areas of bark and wood debris that are estimated to cover 10% or more of the ocean bottom, but less than 100%, as measured within a three-foot square sample plot.
Domestic Wastewater[c]	Means waterborne human wastes or graywater derived from dwellings, commercial buildings, institutions, or similar structures. "Domestic wastewater" includes the contents of individual removable containers used to collect and temporarily store human wastes.
Ecosystem[b]	Means a system made up of a community of animals, plants, and bacteria and the system’s interrelated physical and chemical environment
Effluent[b]	Means the segment of a wastewater stream that follows the final step in a treatment process and precedes discharge of the wastewater stream to the receiving environment

Effluent limitation	Means any restriction imposed by the Director on quantities, discharge rates, and concentrations of “pollutants” which are “discharged” from “point sources” into “waters of the United States,” the waters of the “contiguous zone,” or the ocean
Estimated	Means a way to estimate the discharge volume. Approvable estimations include, but are not limited to, the number of persons per day at the facility, volume of potable water produced per day, lift station run time, etc.
Excluded area	Means an area not authorized as a receiving water under a permit
Fish[b]	Means any of the group of cold-blooded vertebrates that live in water and have permanent gills for breathing and fins for locomotion
Float-off LTF	Means an LTF where logs or log bundles are placed on tidelands or ramps and the incoming tide floats the logs or log bundles into marine waters
General APDES permit	Means an APDES “permit” issued under 40 CFR §122.28 authorizing a category of discharges under the CWA within a geographical area
Gray Water[b]	Means wastewater from a laundry, kitchen, sink, shower, bath, or other domestic source that does not contain excrement, urine, or combined storm water
Log transfer facility	Means a facility which is constructed in whole or in part in waters of the United States and which is utilized for the purpose of transferring commercially harvested logs to or from a vessel or log raft, including the formation of a log raft.
Low angle slide	Means an LTF which consists of two or more parallel rails. Logs are placed on the rails by a log stacker or front end loader. Logs or log bundles are either pushed into the water with the log stacker or front end loader, or slide into the water through gravity
Maximum Daily Discharge Limitation[a]	Means the highest allowable “daily discharge”
Mean[b]	Means the average of values obtained over a specified period and, for fecal coliform analysis, is computed as a geometric mean
Mean higher high water	Means the average of the higher of the two daily high tides observed over a given period of time
Mean Lower Low Water[b]	Means the tidal datum plane of the average of the lower of the two low waters of each day, as would be established by the National Geodetic Survey, at any place subject to tidal influence
Measured	Means the actual volume of wastewater discharged using appropriate mechanical or electronic equipment to provide a totalized reading. Measure does not provide a recorded measurement of instantaneous rates.
Mixing Zone[b]	Means a volume of water adjacent to a discharge in which wastes discharged mix with the receiving water

Month	Means the time period from the 1st of a calendar month to the last day in the month
National Pollutant Discharge Elimination System (NPDES)	Means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 402, 318, and 405 of the CWA.
New Discharger	As used in this permit, means an operator applying for coverage under this permit for discharges not covered previously under an APDES or NPDES general or individual permit.
New Log Transfer Facility	Means a log transfer facility which has not commenced the discharge of pollutants at a particular site prior to the effective date of this general APDES permit.
Off-shore log transfer facility	Means a log transfer facility where logs are moved between a vessel or helicopter and off-shore marine waters, or an off-shore log storage area which is not adjacent to a shore-based LTF.
Permit	Means an authorization, license, or equivalent control document issued by EPA or an "approved state" to implement the requirements of 40 CFR Parts 122, 123 and 124. "Permit" includes an APDES "general permit." Permit does not include any permit which has not yet been the subject of final agency action, such as a "draft permit" or a "proposed permit."
Permittee	Means a company, organization, association, entity, or person who is issued a wastewater permit and is responsible for ensuring compliance, monitoring, and reporting as required by the permit. Permittees as used in this permit is intended to refer to the operator, or the discharger as the context indicates and that party's facility or responsibilities. The use of ''Permittees'' and ''Permittees'' refers to a particular facility and not to all facilities operated by a particular entity. For example, ''Permittees must submit'' means must submit something for that particular facility. Likewise, ''all Permittees discharges'' would refer only to discharges at that one facility
Point source	Means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff
Principal Executive Officer[a]	Means the chief executive officer of the agency or a senior executive officer having responsibility for the overall operations of a principal geographic unit of division of the agency

Pollutant[a]	Means dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials (except those regulated under 42 U.S.C. 2011), heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial, municipal, or agricultural waste discharged into water
Practicable alternative	Means an alternative available and capable of being done after taking into consideration costs, existing technology, and logistics in light of overall project purposes
Project area	Means the entire marine operating area of an LTF, either shore-based or offshore, including the following components: shore-based log transfer devices; shore-based log transfer, rafting, and storage areas; helicopter drop areas; vessel and barge loading and unloading areas; off-shore log storage areas not adjacent to a shore-based LTF; bulkheads, ramps, floating walkways, docks, pilings, dolphins, anchors, buoys and other marine appurtenances; and the marine water and ocean bottom underlying and connecting these features
Quality Assurance Project Plan (QAPP)	Means a system of procedures, checks, audits, and corrective actions to ensure that all research design and performance, environmental monitoring and sampling, and other technical and reporting activities are of the highest achievable quality
Quarter	Means the time period of three months based on the calendar year beginning with January
Receiving Water Body	Means lakes, bays, sounds, ponds, impounding reservoirs, springs, wells, rivers, streams, creeks, estuaries, marshes, inlets, straits, passages, canals, the Pacific Ocean, Gulf of Alaska, Bering Sea, and Arctic Ocean, in the territorial limits of the state, and all other bodies of surface water, natural or artificial, public or private, inland or coastal, fresh or salt, which are wholly or partially in or bordering the state or under the jurisdiction of the state. (See “Waters of the U.S.” at 18 AAC 83.990(77))
Remediation Plan	Means the plan containing practices to minimize additional bark accumulation that is required to be developed and approved by DEC when the continuous coverage of bark and wood debris exceeds both 1.0 acre and a thickness of 10 centimeters at any point.
Report	Report results of analysis
Responsible Corporate Officer[a]	Means a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function or any other person who performs similar policy or decision making functions for the corporation The Responsible Corporate Officer can also be the manager of one or more manufacturing, production, or operating facilities if the requirements of 18 AAC 83.385(a)(1)(B)(i)-(iii) are met.
Rotation Period	Means the planned number of years between the formation or the regeneration of a crop or stand of trees and its final cutting at a specified stage of maturity. In Southeast

	Alaska, the typical length of time it takes for a seedling to grow to commercial size is 80-100 years. However, the duration may vary, depending upon the land management objectives for a given area.
Scribner scale	A log scale used for calculating sawn wood product volume from a tree or log
Severe Property Damage[a]	Means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
Sheen[b]	Means an iridescent appearance on the water surface
Shellfish[b]	Means a species of crustacean, mollusk, or other aquatic invertebrate with a shell or shell-like exoskeleton in any stage of its life cycle
Shore-based log transfer facility	Means a log transfer facility where logs are moved between land and water.
Trace coverage	Means areas of bark and wood debris that are estimated to cover less than 10% of the ocean bottom and having a depth under one inch, as measured within a three-foot square sample plot
Total Maximum Daily Loads (TMDLs)	A TMDL is the sum of the allowable loads of a single pollutant from all contributing point and nonpoint sources. It is a calculation of the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards, and an allocation of that amount to the pollutant's sources. A TMDL stipulates wasteload allocations (WLAs) for point source discharges, load allocations (LAs) for nonpoint sources, and a margin of safety (MOS).
Twice per year	Means two time periods during the calendar year: October through April and May through September
Use Description	Means one of four classifications (see Part 1.4) to describe the range of use for log transfer operations. The intensity and duration of site use will vary over time and the descriptions for each use provide a benchmark description relating to operating levels and characteristics.
Upset[a]	Means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
Water Depth	Means the depth of the water between the surface and the seafloor as measured at MLLW (0.0)

Wastewater Treatment	Means any process to which wastewater is subjected in order to remove or alter its objectionable constituents and make it suitable for subsequent use or acceptable for discharge to the environment
Waters of the United States or Waters of the U.S.	Has the meaning given in 18 AAC 83.990(77)
Zone of Deposit	Means the total area of the bottom in marine or estuarine waters in which DEC has authorized the deposit of substances in exceedance of the water quality criteria in 18 AAC 70.020(b) and the antidegradation requirement in 18 AAC 70.010(c). For LTFs authorized to discharge under this general APDES permit, DEC has defined the ZOD as the outer boundary of the project area.

Appendix D

Acronyms

The following acronyms are common terms that may be found in an Alaska Pollutant Discharge Elimination System (APDES) permit.

18 AAC 15	Alaska Administrative Code. Title 18 Environmental Conservation, Chapter 15: Administrative Procedures
18 AAC 70	Alaska Administrative Code. Title 18 Environmental Conservation, Chapter 70: Water Quality Standards
18 AAC 72	Alaska Administrative Code. Title 18 Environmental Conservation, Chapter 72: Wastewater Disposal
18 AAC 83	Alaska Administrative Code. Title 18 Environmental Conservation, Chapter 83: Alaska Pollutant Discharge Elimination System

All chapters of Alaska Administrative Code, Title 18 are available at the Alaska Administrative Code database http://www.legis.state.ak.us/cgi-bin/folioisa.dll/aac

40 CFR	Code of Federal Regulations Title 40: Protection of Environment
AAC	Alaska Administrative Code
ACMP	Alaska Coastal Management Program
ADEC	Alaska Department of Environmental Conservation
Ag	Silver
Al	Aluminum
As	Arsenic
APDES	Alaska Pollutant Discharge Elimination System
AS	Alaska Statutes
AS 46.03	Alaska Statutes Title 46, Chapter 03: Environmental Conservation. Available at http://www.legis.state.ak.us/default.htm
ATTF	Alaska Timber Task Force Guidelines
BOD_5	Biochemical Oxygen Demand, 5-day
BMP	Best Management Practice
Cd	Cadmium
CFR	Code of Federal Regulations
COD	Chemical Oxygen Demand
Cr^{+3}	Chromium (III) or Trivalent Chromium
Cr^{+6}	Chromium (VI) or Hexavalent Chromium
Cu	Copper

CWA	Clean Water Act
DMR	Discharge Monitoring Report
DO	Dissolved Oxygen
EPA	U.S. Environmental Protection Agency
FC	Fecal Coliform Bacteria
Fe	Iron
GPD or gpd	Gallons per day
GPY or gpy	Gallons per year
Hg	Mercury
IC_{25}	Inhibition Concentration 25%
I/I	Infiltration and Inflow
LC_{50}	Lethal Concentration 50%
LTF	Log transfer facility.
MBF	Thousand Board Feet
MMBF	Million Board Feet
MDL	Method Detection Limit
mg/L	Milligrams per Liter
MGD or mgd	Million gallons per day
ML	Minimum Level
MLLW	Mean Lower Low Water
MZ	Mixing Zone
N/A	Not Applicable
Ni	Nickel
NOEC	No Observed Effect Concentration
NOI	Notice of Intent
Pb	Lead
POTW	Publicly Owned Treatment Works
PQL	Practical Quantification Limit
QA	Quality Assurance
QA/QC	Quality Assurance/Quality Control
QAPP	Quality Assurance Project Plan
QC	Quality Control

RL	Reporting Limit
RWC	Receiving Water Concentration
Se	Selenium
SIU	Significant Industrial User
SU	Standard Units
TIE	Toxicity Identification Evaluation
TRC	Total Residual Chlorine
TRE	Toxicity Reduction Evaluation
TSS	Total Suspended Solids
TUc	Toxic Unit, Chronic
µg/L	Micrograms per Liter
U.S.C.	United States Code
WQS	Water Quality Standards
WWTF	Wastewater Treatment Facility
Zn	Zinc

References

1. DEC (Alaska Department of Environmental Conservation). 2003. 18 AAC 70 Water Quality Standards, as amended through May 27, 1999. State of Alaska, Department of Environmental Conservation.
2. DEC (Alaska Department of Environmental Conservation) April 2012, Alaska Pollutant Discharge Elimination System Program Regulations, 18 AAC 83
3. DEC (Alaska Department of Environmental Conservation) Alaska Statute 46.03
4. DEC (Alaska Department of Environmental Conservation).July 14, 2010. Policy and Procedure Guidance for Interim Antidegradation Implementation Methods, dated July 14, 2010. State of Alaska, Department of Environmental Conservation.
5. DEC (Alaska Department of Environmental Conservation) November 2, 2009, APDES Multi-Sector General Permit for Storm Water Discharges Associated with Industrial Activities (MSGP), http://dec.alaska.gov/water/wnpspc/pdfs/ADECMSGPCoverPage.pdf
6. DEC (Alaska Department of Environmental Conservation). August 24,1999, Section 401 Certifications of the 2000 LTF General Permits

7. DEC (Alaska Department of Environmental Conservation) 1998, 2002-2003, 2004, 2006, 2008, 2010, and 2012, Final Integrated Water Quality Monitoring and Assessment Reports, http://dec.alaska.gov/water/wqsar/waterbody/integratedreport.htm

8. DNR (Alaska Department of Natural Resources) November 2000, Central/Southern Southeast Area Plan, http://dnr.alaska.gov/mlw/planning/areaplans/cs_southeast/

9. DNR (Alaska Department of Natural Resources) October 2002, Northern Southeast Area Plan, http://dnr.alaska.gov/mlw/planning/areaplans/nseap/

10. DNR (Alaska Department of Natural Resources) December 2004, Kodiak Area Plan, http://dnr.alaska.gov/mlw/planning/areaplans/kodiak/

11. DNR (Alaska Department of Natural Resources) May 2008, Prince of Wales Island Area Plan Amendment, http://dnr.alaska.gov/mlw/planning/areaplans/wales/amend/

12. DNR (Alaska Department of Natural Resources) April 1995, Yakataga Area Plan, http://dnr.alaska.gov/mlw/planning/areaplans/yakataga/

13. EPA (U.S. Environmental Protection Agency) July 27, 2007, Fact Sheet for NPDES Permit AKG700000 and AKG701000

14. R.D. Kathman, S.F Cross, and M. Waldichuk, Department of Fisheries and Oceans Fisheries Research Branch, West Vancouver Laboratory, June 1984, Effects of Wood Waste on the Recruitment of Potential of Marine Benthic Communities

15. E.R. McGreer, R.D. Munday, and M. Waldichuk (Department of Fisheries and Oceans, Fisheries Research Branch, August 1985, Effects of Wood Waste for Ocean Disposal on the Recruitment of Marine Macrobenthic Communities

16. NOAA (National Marine Fisheries Service) Essential Fish Habitat Mapper, http://www.habitat.noaa.gov/protection/efh/efhmapper/index.html

17. NOAA (National Marine Fisheries Service), November 2011, Impacts to Essential Fish Habitat from Non-fishing Activities in Alaska

18. NOAA (National Marine Fisheries Service) April 2014, Endangered, Threatened, and Candidate Species under NMFS's Authority in Alaska, https://alaskafisheries.noaa.gov/protectedresources/esa/ak_nmfs_species.pdf

19. Public Law 100-4 Section 407, http://www.gpo.gov/fdsys/pkg/STATUTE-101/pdf/STATUTE-101-Pg7.pdf

20. Sealaska Corporation, copyright 2013. Shareholder FAQ http://www.sealaska.com/page/shareholder_faq

21. URS Alaska, LLC, Preliminary Draft Ocean Discharge Criteria Evaluation for General Permits AKG70000 and AKG701000 for Log Transfer Facilities in State Waters, 2014.

22. USFWS and NOAA (US Fish & Wildlife Service and the National Marine Fisheries Service) February 18, 2014, Endangered, Threatened, Proposed, Candidate and Delisted Species in Alaska, Includes species managed by the US Fish & Wildlife Service and the National Marine Fisheries Service https://alaskafisheries.noaa.gov/protectedresources/esa/ak_specieslst.pdf

23. USFWS (US Fish & Wildlife Service) IPaC – Information, Planning, and Conservation System, http://ecos.fws.gov/ipac/