Brookfield

Brookfield Renewable
Great Lakes Hydro America, LLC
1024 Central Street
Millinocket, ME 04462

Tel 207.723.4341
Fax 207.723.3948
www.brookfieldrenewable.com

June 3, 2019

Penobscot Mills Project
Millinocket and Dolby Developments
FERC No. 2458

Ms. Shannon Ames, Executive Director
Low Impact Hydropower Institute
329 Massachusetts Avenue, Suite 2
Lexington, MA 02420

Subject: Low Impact Hydropower Institute Application for the Penobscot Mills Project - Dolby & Millinocket Developments

Dear Ms. Ames:

On behalf of the Licensee, Great Lakes Hydro America, LLC (GLHA), please find attached the Application for the Millinocket and Dolby Developments of the Penobscot Mills Project on the West Branch of the Penobscot River in Maine. GLHA is requesting certification of these facilities.

The current application includes the following required submittals:

- Introduction
- LIHI Table B-1 Project Description
- List of hyperlinks to pertinent FERC and regulatory documents for the Developments
- Zones of Effect delineated into upstream regulated West Branch of the Penobscot River; impounded reach upstream of Stone Dam (Quakish Lake) & impounded reach upstream of the Millinocket Intake Structure (Ferguson Pond); bypass reach of the Millinocket Development's Stone Dam, also known as the Back Channel; downstream regulated West Branch of the Penobscot River below the Millinocket Powerhouse to the confluence with the Back Channel at Shad Pond; the impounded reach upstream of Dolby Dam (Dolby Pond); the bypass reach below Dolby Dam; and the downstream regulated West Branch of the Penobscot River below Dolby Dam
- Matrix of Alternative Standards for each Zone of Effect identified evaluating the LIHI certification standards for each requisite criterion including water quality, fish passage and recreation
- Sworn Statement and Waiver Form
- Facility Contacts Form including pertinent NGOs, as appropriate.

Please call me at (207) 755-5606 or email me at Kelly.Maloney@brookfieldrenewable.com if you have any questions or need additional information regarding this submittal.

Sincerely,

Kelly Maloney

Kelly Maloney
Manager, Compliance - Northeast

Cc: J. Cole, N. Stevens, S. Michaud, M. Craig, J. Seyfried, K. Bernier, E. DeLuca

LOW IMPACT HYDROPOWER INSTITUTE

CERTIFICATION APPLICATION FOR THE

PENOBSCOT MILLS PROJECT (FERC NO. 2458)

MILLINOCKET & DOLBY DEVELOPMENTS

June 3, 2019

Brookfield

LOW IMPACT HYDROPOWER INSTITUTE

CERTIFICATION APPLICATION FOR THE

PENOBSCOT MILLS PROJECT (FERC NO. 2458)

MILLINOCKET & DOLBY DEVELOPMENTS

Table of Contents

Index of Tables

Index of Figures

LOW IMPACT HYDROPOWER INSTITUTE

CERTIFICATION APPLICATION FOR THE

PENOBSCOT MILLS PROJECT (FERC NO. 2458)

MILLINOCKET & DOLBY DEVELOPMENTS

1.0 PROJECT DESCRIPTION

1.1 PROJECT FACILITIES AND HISTORY

The Penobscot Mills Project (FERC No. 2458) consists of four hydroelectric developments and a storage dam located in the general vicinity of Millinocket/East Millinocket, Maine. The four hydroelectric developments are located between river miles 2 and 15 on the West Branch of the Penobscot River (West Branch). The four hydroelectric developments, listed in order from upstream to downstream, are: North Twin, Millinocket, Dolby, and East Millinocket. The project developments were originally constructed around the turn of the century to meet the hydromechanical and hydroelectric demands of the Millinocket Mill, constructed in 1900, and the East Millinocket Mill, constructed in 1906. The Millinocket Lake Storage Development contains a pumping station, located on the opposite end of the lake from the Millinocket Lake Dam, that allows water to be pumped up approximately 12 ft from Millinocket Lake to Ambajejus Lake (part of the North Twin impoundment). The project developments are owned and licensed by Great Lakes Hydro America, LLC (GLHA), and they are operated to supply 60 Hz electrical power to the electrical grid.

This application is for the certification of only the Millinocket and Dolby Developments described in greater detail below.

Millinocket Development:

The Millinocket Development is located in the town of Millinocket and consists of 1) Quakish Lake and Ferguson Pond, which together form the Millinocket impoundment having a full pond water surface elevation of 458.7 ft; 2) a concrete dam (Stone Dam) measuring approximately 1,262 ft in length located on the West Branch of the Penobscot River approximately 12.3 river miles above the confluence of the East and West Branches of the Penobscot River; 3) a gatehouse located at Stone Dam, containing ten gates and a sluiceway; 4) three earthen dikes located at various points around Quakish Lake and having a total length of 1,854 ft; 5) five earthen dikes (totaling 3,915 ft in length) located around Ferguson Pond, a "western" canal leading from the gatehouse to Ferguson Pond, Ferguson Pond, and an "eastern" canal that leads from Ferguson Pond to the intake structure, all of which are used to convey water from the gatehouse at Stone Dam to the intake structure located approximately 7,300 ft from Stone Dam; 6) an intake structure containing seven head gates, located at the entrance of the penstocks; 7) six 10-ft-exterior-diameter steel penstocks and one 11-ft-exterior-diameter steel penstock ranging in length from 1,007 ft to 1,024 ft; 8) seven operable

hydroelectric units, of which five are located within the former Grinder Room; 9) a powerhouse commonly referred to as the Generator Room, where two of the hydroelectric units are located; 10) two transformers, one having a rated capacity of 30/40/50 MVA and one at 24/34/40 MVA; and 11) two 60 Hz transmission lines approximately 300 ft in length (one 6.9KV and one 13.8 KV). The Millinocket Development has a station capacity of 37.4 MW[1].

The Millinocket Development recently underwent improvements to its turbine-generating facilities. Specifically, GLHA replaced three 40 Hz generator units at the Millinocket Development (units 3, 4, & 7) with 60 Hz units. An amendment application revising the Exhibit A for the Project to reflect these changes is currently in preparation for submittal to the Federal Energy Regulatory Commission. This application before LIHI represents the post-conversion condition.

Unit	**Turbine Nameplate (HP*0.75)(kW)**	**Generator Nameplate (kW)**	**Hydraulic Capacity (cfs)**	**Authorized Installed**
Millinocket 1	5,235	5,440	662	5,235
Millinocket 2	Inoperable	Inoperable	Inoperable	Inoperable
Millinocket 3	5,250	5,580	695	5,250
Millinocket 4	5,432	5,580	566	5,432
Millinocket 5	5,432	5,510	566	5,432
Millinocket 6	5,432	5,510	566	5,432
Millinocket 7	5,432	5,580	600	5,432
Millinocket 8	5,164	5,440	650	5,164
TOTAL			4,305	37,377

Dolby Development:

The Dolby Development is located on the West Branch of the Penobscot River, between Millinocket and East Millinocket, at approximately 4.2 river miles above the confluence of the East and West Branches. The Development consists of 1) an impoundment having a full pond water surface elevation of 336.2 ft; 2) a concrete and earth-filled dam measuring approximately 1,395 ft in length, including an intake structure and powerhouse integral with the dam containing five operable units and other appurtenant equipment; 3) a 60 Hz substation containing one transformer having a rated capacity of 15/20 MVA and a second transformer with a rated capacity of 5 MVA; and (4) a transmission line extending approximately 2 miles to Powersville Substation. The Dolby Development has a station capacity of 17.8 MW[2].

The Dolby Development is undergoing improvements to its turbine-generating facilities. Specifically, GLHA converted (rewound) one unit (Unit 8) from 40 Hz to 60 Hz and plans

[1] Unit 2, a horizontal Francis unit having a nameplate capacity of 5,250 kW, is currently out of service and does not have a generator associated with it.

[2] Turbine units 1, 3, and 4 have been removed from service. The generators for Units 1, 3, and 4 are currently incapable of grid connection.

to rewind a second unit (Unit 2) and purchase a new generator for Unit 2. An amendment application revising the Exhibit A for the Project to reflect these changes is currently in preparation for submittal to the Federal Energy Regulatory Commission. This application before LIHI represents the post-conversion condition.

Unit	**Turbine Nameplate (HP*0.75)(kW)**	**Generator Nameplate (kW)**	**Hydraulic Capacity (cfs)**	**Authorized Installed**
Dolby 1	Inoperable	Inoperable	Inoperable	Inoperable
Dolby 2	1,350	1,300	400	1,300
Dolby 3	Inoperable	Inoperable	Inoperable	Inoperable
Dolby 4	Inoperable	Inoperable	Inoperable	Inoperable
Dolby 5	5,604	5,300	1,524	5,300
Dolby 6	4,260	4,144	1,200	4,144
Dolby 7	4,260	4,144	1,200	4,144
Dolby 8	2,925	3,510	830	2,925
TOTAL			5,154	17,813

FIGURE 1. PROJECT FACILITIES – MILLINOCKET DEVELOPMENT

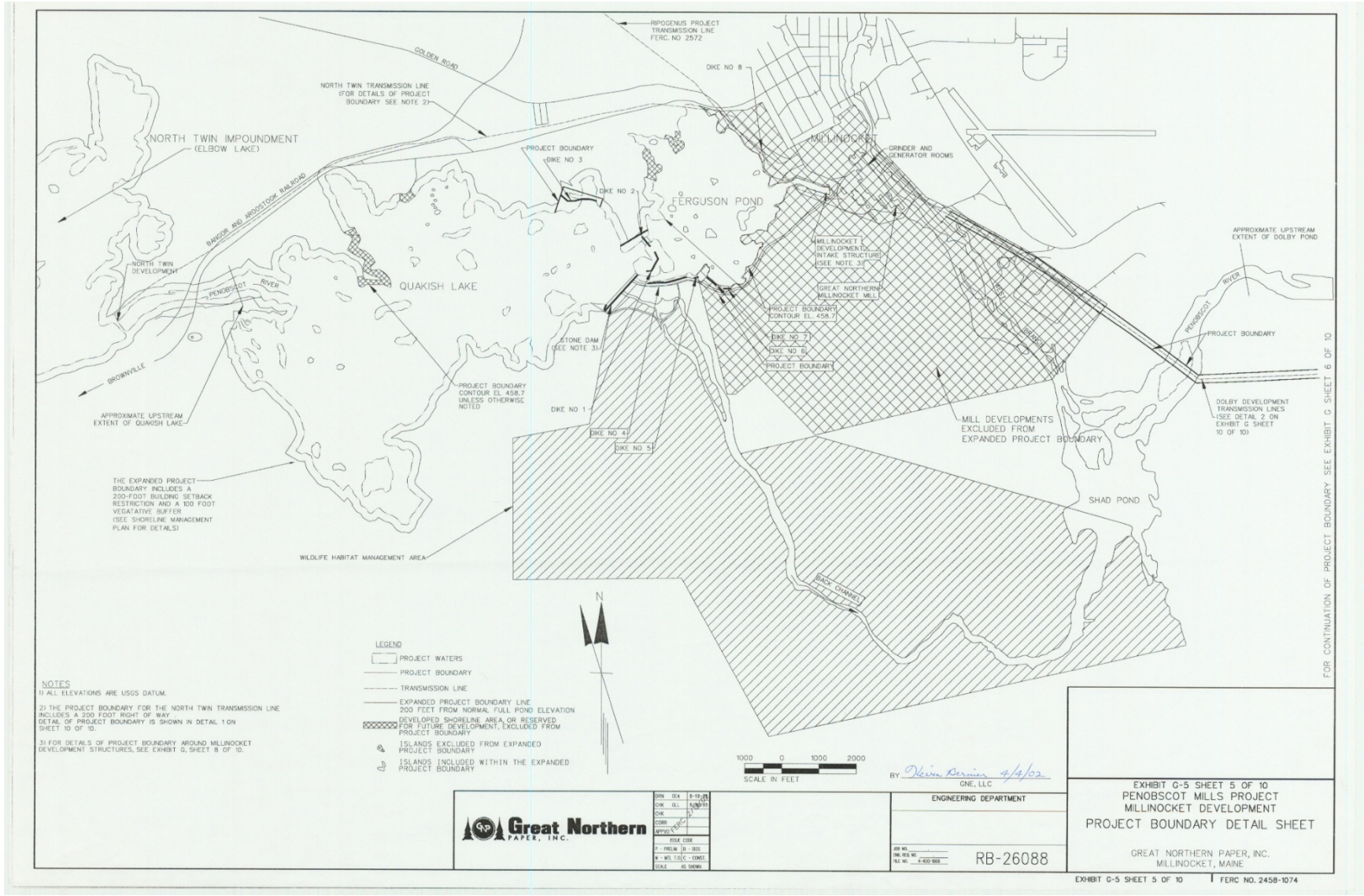


FIGURE 2. PROJECT FACILITIES – DOLBY DEVELOPMENT

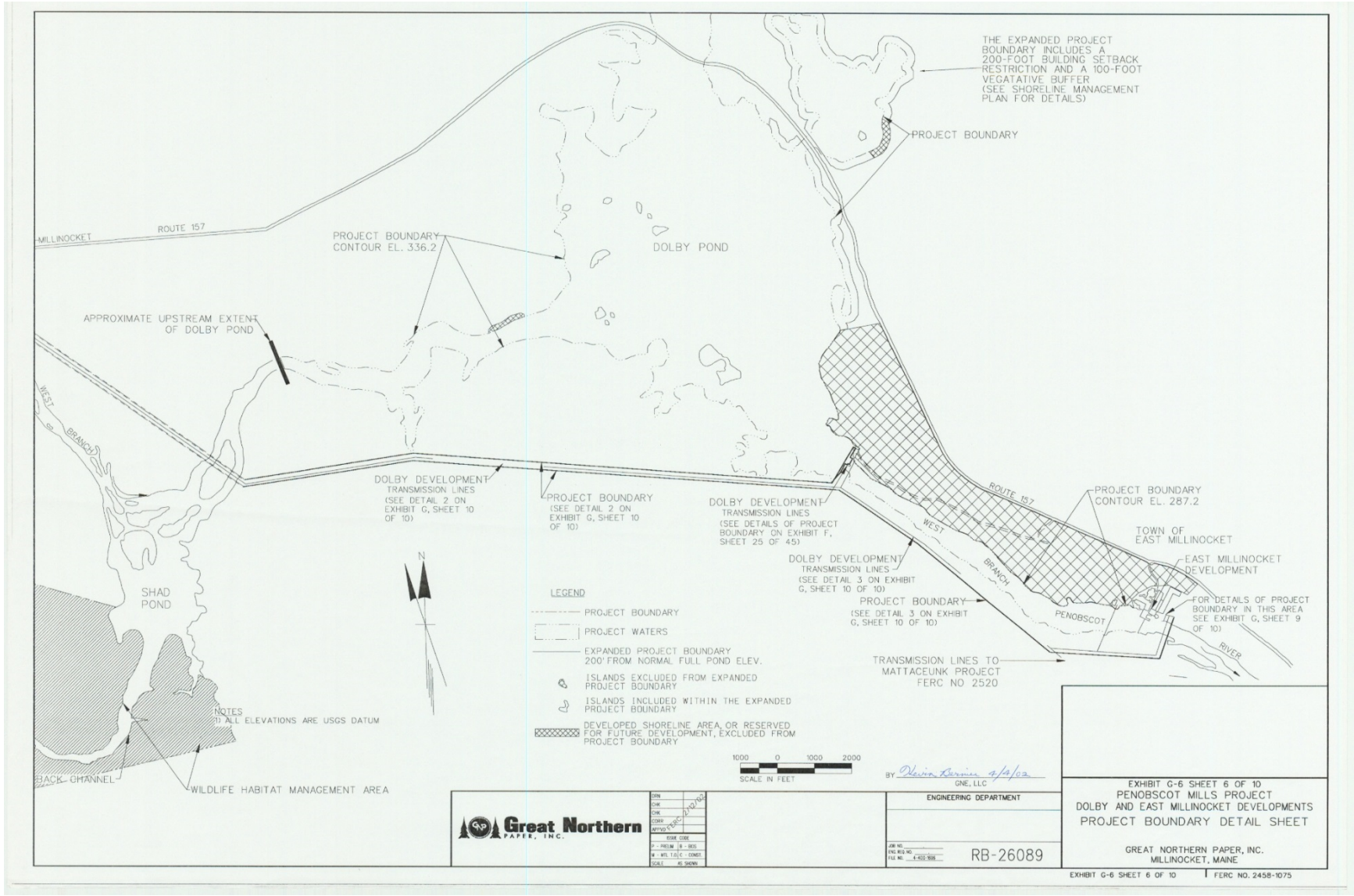


FIGURE 3. AERIAL OF PROJECT – MILLINOCKET DEVELOPMENT

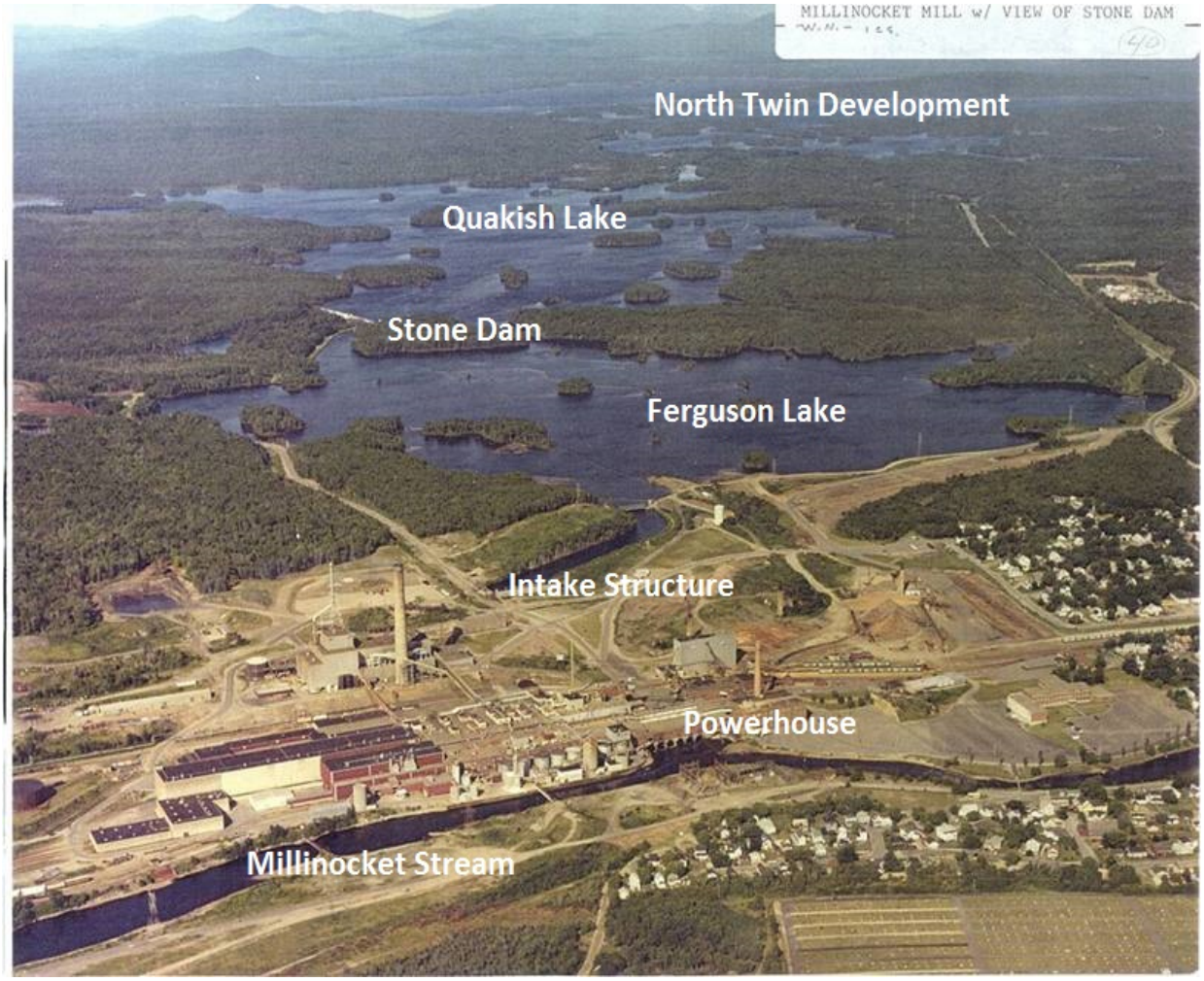
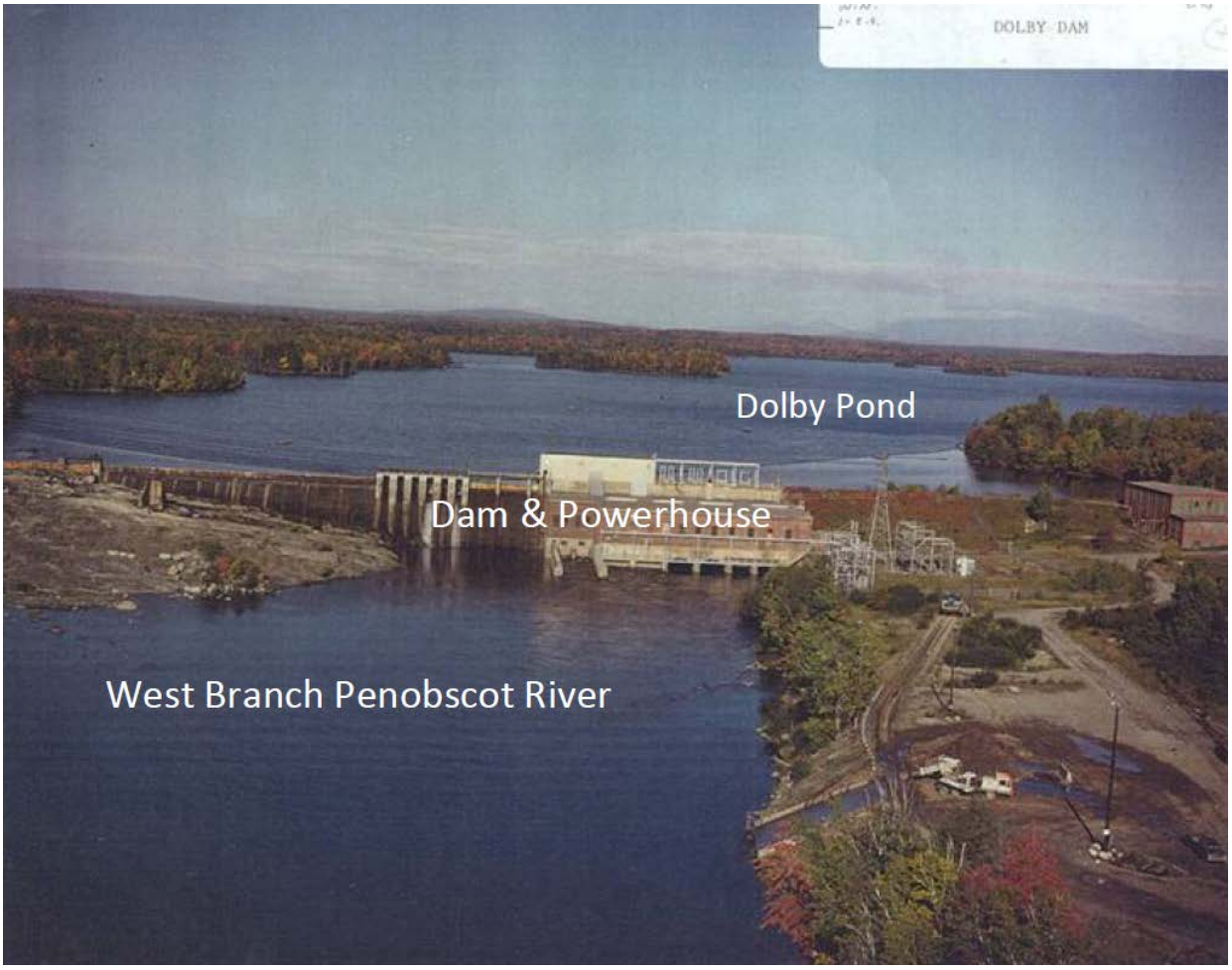


FIGURE 4. AERIAL OF PROJECT – DOLBY DEVELOPMENT



1.2 PROJECT OPERATIONS

GLHA operates the Penobscot Mills Project to maintain an instantaneous minimum flow of 2,000 cfs downstream of the Millinocket Development and a minimum flow of 60 cfs into Millinocket Stream. Operation of the project is managed in conjunction with the water flow and storage of upstream and downstream projects.

Article 401 of the Penobscot Mills Project License requires the following:

Except as temporarily modified by operating emergencies beyond the licensee's control, the licensee shall release a minimum flow of 60 cfs from the Millinocket Lake storage dam to Millinocket Stream from May 1 to October 15 annually, and a minimum flow of 60 cfs or inflow shall be released during the remainder of the year…The licensee shall, within six months of the date of the issuance of this license file for Commission approval a plan for providing and monitoring the minimum flows required above…The licensee shall consult with the Maine Department of Environmental Protection and the U.S. Fish and Wildlife Service in developing the plan.

Article 403 of the Penobscot Mills Project License (and Condition 1.A. of the Project's Water Quality Certification) in part requires the following:

The licensee shall operate the Millinocket, Dolby, and East Millinocket Developments in a run-of-river mode while providing an instantaneous minimum flow of 2,000 cubic feet per second (cfs) to the West Branch of the Penobscot River at Millinocket, for the protection of water quality and aquatic habitat in the Penobscot River. The licensee shall at all times act to minimize the fluctuation of the reservoir surface elevations by maintaining a discharge from each of these developments so that, at any point in time, flows, as measured immediately downstream from the tailraces of the developments, approximate the sum of inflows to the project reservoir.

Run-of-river operation or minimum flows may be temporarily modified if required by operating emergencies beyond the control of the licensee, and for short periods upon mutual agreement between the licensee, the U.S. Fish and Wildlife Service, and the Maine DEP. If the run-of-river operation or minimum flow is so modified, the licensee shall notify the Commission as soon as possible, but no later than 10 days after each such incident.

The Millinocket Development is operated with inflow from the North Twin impoundment. Under normal conditions, the daily outflow from Millinocket Development approximately equals that of the North Twin Development, with an average daily regulation flow variation of about 130 cfs between the two outflows due to tributary inflows. Quakish Lake, the body of water impounded by Stone Dam, is essentially utilized in a run-of-river mode with minor fluctuations, based on inflow of water from the North Twin Development. Quakish Lake has a negligible storage capacity. If Quakish Lake is full and the inflow is greater than the station capacity, water is discharged over the spillway or through the inflatable rubber flashboard system. Leakage flows of approximately 2 to 5 cfs are provided from Stone Dam into the Back Channel, which extends approximately 4.5 miles to the confluence with the West Branch of the Penobscot River at Shad Pond.

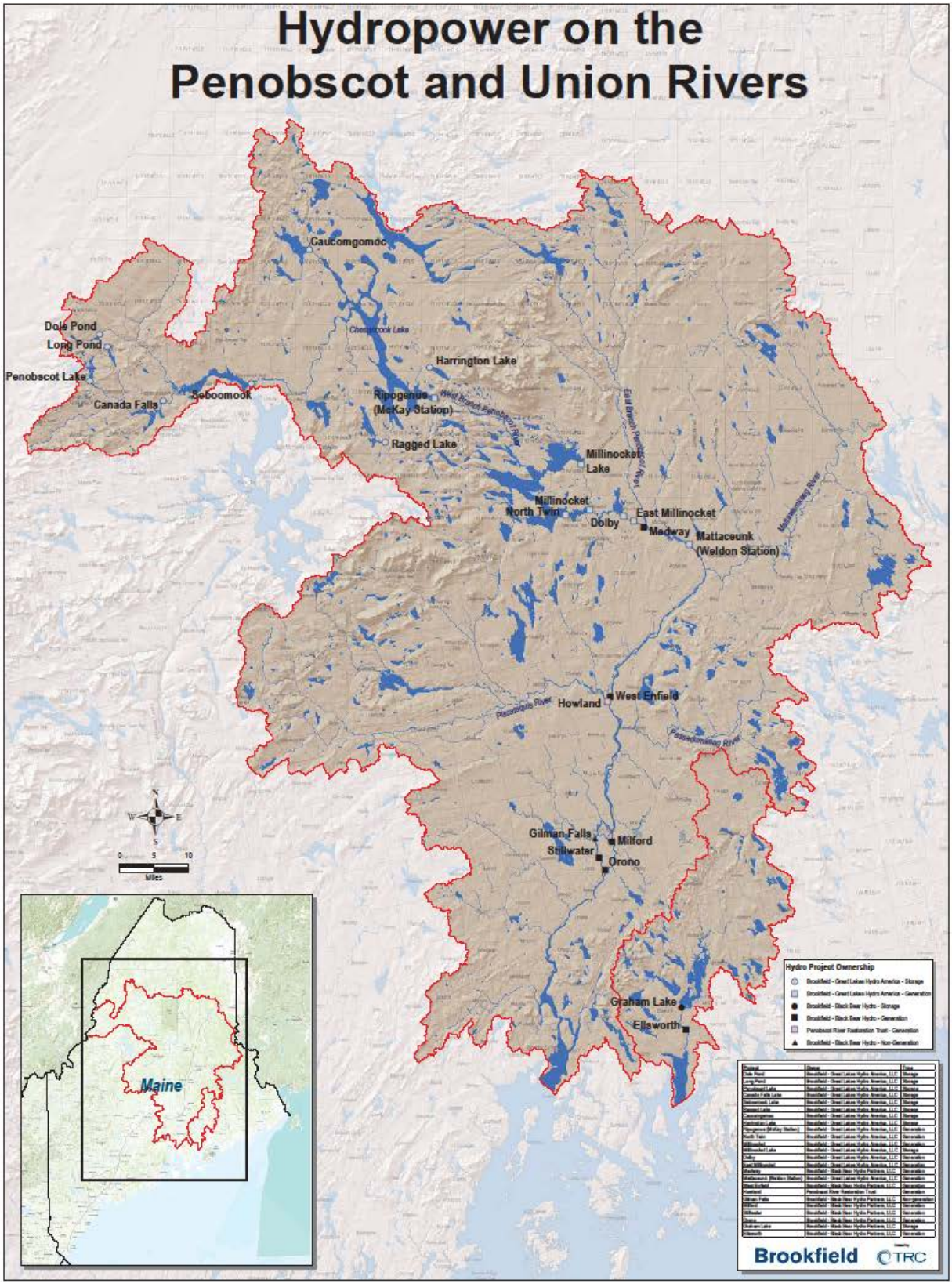
At the Dolby Development, with a slightly larger drainage basin and the addition of Millinocket Stream and other tributary flows, the monthly average outflow is approximately 6% higher than that at the Millinocket Development. The Dolby impoundment is essentially operated as a run-of- river facility with minimal fluctuations. Operation of Dolby Station is dependent on the flow of water from the Millinocket Development, as well as water released from Millinocket Lake Dam. If Dolby Pond is full and the inflow is greater than the station capacity, water is discharged over the spillway or through the waste gates in the dam.

1.3 PROJECT LOCATION

The Millinocket and Dolby Developments are located on the West Branch of the Penobscot River. The next upstream dam from the Millinocket Development is at the North Twin Development, located approximately 2.6 miles upstream. The next downstream dam below the Dolby Development is at the East Millinocket Development, located approximately 1.7 miles downstream.

FIGURE 5. AERIAL OF PROJECT LOCATION – MILLINOCKET AND DOLBY DEVELOPMENTS

FIGURE 6. OVERVIEW MAP OF THE PENOBSCOT WATERSHED



1.4 REGULATORY AND OTHER REQUIREMENTS

1.4.1 FERC LICENSE AND WATER QUALITY CERTIFICATION REQUIREMENTS

The Millinocket and Dolby Developments are operated in a run-of-river mode, pursuant to Article 403 as described above. Article 403 also requires: *The licensee shall, within six months of the date of this license, file for Commission approval a plan for providing and monitoring the run-of-river operations and minimum flows required above. The licensee shall consult with the Maine Department of Environmental Protection and the U.S. Fish and Wildlife Service in developing the plan.* The Water Management Plan for the Penobscot Mills Project was filed by the licensee in April 1997 (see Section 6.0).

With one exception, the modifications to run-of-river and minimum flows that have occurred at the Millinocket and Dolby Developments over the past 5 years have been permitted by the Penobscot Mills FERC license, i.e., they were either operating emergencies beyond the control of GLHA, or they were planned in consultation with resource agencies (see Section 6.0).

On August 10, 2015, a minimum flow excursion occurred at the Millinocket Development due to an error in communication (an e-mail typo) between GLHA's Water Resource Manager and Brookfield's control center, which inadvertently resulted in an incorrect target outflow (1,500 cfs instead of 2,500 cfs) at the upstream North Twin Development. The incorrect outflow in turn resulted in the flow dropping below 2,000 cfs at the downstream Millinocket Development for 2 hours and 17 minutes. On September 30, 2015, FERC determined that the excursion was a violation of Article 403 of the Penobscot Mills license. However, due to GLHA's follow-up actions, which included notification of the appropriate resource agencies and implementation of measures to prevent further such occurrences, FERC stated that no additional enforcement action would be taken. The measures, which GLHA implemented in August 2015, include a secondary validation of flow change calculations, formal communication of flow changes (i.e., including confirmation of understanding between all parties), and direct (three-way) communication of flow changes between the Water Resource Manager, the control center, and field personnel making gate changes (see Section 6.0 for minimum flow excursion report to FERC and FERC notice of violation).

The Penobscot Mills Project Water Quality Certification (WQC) Condition 3 requires: *The applicant shall investigate the extent to which dissolved oxygen deficits in the Dolby impoundment are due to discharges from the Millinocket Mill. The applicant shall submit the results of the dissolved oxygen investigation and a discussion of possible corrective actions, to the DEP in conjunction with the renewal of the Waste Discharge License for the Millinocket Mill.*

Great Northern Paper (GNP), the previous licensee, conducted dissolved oxygen monitoring in the 1990's at Dolby Pond to support licensing of waste discharges from the Millinocket Mill. On August 17, 1999, the DEP issued a letter stating that GNP's dissolved oxygen monitoring results from this effort fulfilled the requirements of WQC Condition 3 for the Penobscot Mills Project.

Other license requirements for resource protection are as follows:

Article 412 - *Within 6 months of the issuance date of the license, the licensee shall file with the Commission approval, a wildlife management plan for the Back Channel. The plan shall provide for, but not be limited to, the following measures: 1. Specific goals of the plan and how they relate to the implementation schedule; 2. Identifying and mapping all area(s) to be managed, and methods of management at each area; 3. Goals, procedures, and densities for snag management; 4. Riparian forested buffers along the entire Back Channel corridor; 5. Placing and maintaining duck boxes throughout the riparian corridor; 6. Managing forest to enhance vegetation species and structure diversity for a variety of native wildlife, with an ·emphasis on waterfowl; 7. Ramping seasonal high flows into the Back Channel to decrease channel scouring and destruction of vegetation; 8. Minimizing adverse effects to forest and riparian systems during implementation of proposed management; and 9. Monitoring and reporting of results. 10. An implementation schedule and provisions for the plan's periodic review and revision. The licensee shall prepare the plan after consultation with the Maine Department of Inland Fisheries and Wildlife, the Maine Department of Environmental Protection, and the U.S. Fish and Wildlife Service.*

A wildlife management plan for the Back Channel area was submitted to FERC on April 16, 1997 and was approved by FERC on February 12, 1998. The Back Channel is the former 4 ½ mile river channel located downstream of Stone Dam and part of the Millinocket Development (designated as Zone 3 – Stone Dam Bypass Reach). The Wildlife Management Plan was developed to enhance forest and habitat diversity and to increase value to wildlife on approximately 2,300 acres of land adjacent to the Back Channel. Wildlife management activities in the Back Channel wildlife area include forest management, waterfowl nesting boxes, and annual mowing/fertilizing to maintain herbaceous conditions favorable for wildlife (see Section 6.0).

On February 12, 2018, GLHA filed its most recent five-year summary report pursuant to the approved Wildlife Management Plan, referenced above. The summary report summarizes past wildlife management activities in and around the Back Channel area, and proposes to continue these activities (e.g., maintaining nest boxes and nest sites, maintaining seeded roads, conducting timber harvests, etc.) for the remainder of the license term. In addition, GLHA filed a request to amend the plan to discontinue the five-year summary reports for the remainder of the license term, as the past 20 years of monitoring have adequately demonstrated the success of wildlife management activities at the Project. This request was approved by FERC on July 12, 2018.

There are no anadromous fish species in the Upper Penobscot River; therefore, fish passage facilities for migratory species are not necessary, nor have they been requested or prescribed for either Development.

Lands within the project boundary are generally limited to those necessary for operation and maintenance of the project and for other project purposes, such as recreation, shoreline control, or protection of environmental resources. Article 418 requires a Shoreline Management Plan (SMP) for lands owned by the licensee around the Penobscot Mills Project impoundments to include:

1. *maps of the project showing the project boundary;*

2. *the criteria used for selecting the buffer zone widths (using for each impoundment a 200-foot distance outward from the impoundment's normal maximum surface elevation);*
3. *substantiation for any proposed deviations for building set-back and buffer zone restrictions*
4. *provisions for maintaining no tree-cutting, vegetative protection zones and building set back restrictions around the project's impoundments;*
5. *descriptions and substantiation for designating the buffer zone; the no-tree cutting, vegetative protection area; and building set-back restrictions;*
6. *allowable uses for the buffer zone lands;*
7. *conditions to be specified for such allowable uses; and*
8. *provisions for maintaining appropriate public access to the project impoundment.*

An SMP for the Penobscot Mills Project was initially submitted to FERC on October 17, 1997. As the result of field surveys conducted to support the conveyance of the Penobscot Mills license and assets to a new licensee (GNE, LLC), the SMP was updated and resubmitted to FERC on September 25, 2001 (see Section 7.0). The SMP details how the licensee oversees and controls the uses allowed within the project boundary, which was expanded after issuance of the Penobscot Mills FERC license in 1996 to include areas within 200 feet of the normal full pond elevation on licensee-owned lands along the Project impoundments, but excluding existing leased lots and shoreline areas reserved for future development. The SMP incorporates license requirements for building setback restrictions (200 feet) and a 100-foot vegetative buffer restriction, and it provides for appropriate public access to project impoundments for recreation. It also describes how the licensee will manage lands within the project boundary to provide for the continued effective management of the renewable forest and water resources on project lands while recognizing and protecting the recreational and other natural resource values on those lands. FERC approved the SMP on February 12, 2002 (see Section 6.0 and 7.0).

GLHA submitted a subsequent minor revision to the SMP to FERC on January 17, 2011, due to additional surveys that identified two small parcels that should not have been included in the SMP. FERC approved these minor SMP revisions on February 16, 2011.

Recreation improvements, pursuant to the Project License Article 414, were implemented as follows:

1. *Space for three vehicles and five trailered vehicles at the Dead Man's Curve boat access site;*
2. *Space for four vehicles at the Route 157 boat access along Dolby Pond; and*
3. *Remove boulders and other obstruction at the shoreline and provide six additional gravel vehicle spaces to the parking area at the Green Bridge boat access site above Quakish Lake.*

The Penobscot Mills Project also has FERC-required recreation monitoring requirements in place per Article 415 of the FERC License, which states in part: *The Licensee, after consultation with U. S. Fish and Wildlife Service (FWS), U.S. National Park Service (NPS), Maine Department of Inland Fisheries and Wildlife (DIFW), Maine Department of Conservation (DOC), and Maine Bureau of Parks and Recreation, shall monitor recreation use of the Penobscot Mills Project area to determine whether existing recreation facilities are meeting recreation needs.*

Monitoring studies shall begin within six years of the date of issuance of the license and shall include at a minimum the collection of annual recreation use data.

Following the required agency consultations, a Recreation Facility Monitoring Plan for 2001 covering the Penobscot Mills and Ripogenus Projects was distributed on April 11, 2001 (see Section 7.0). Monitoring of Project recreation facilities has subsequently been conducted in 2001, 2008, and 2014 following study plans developed for each monitoring effort and coincident with "Form 80" recreation monitoring, to determine if these facilities are meeting recreation needs. The monitoring, which has provided annual usage estimates for the recreation facilities, has demonstrated (with agency and FERC concurrence) that the existing facilities are adequate to meet the current and future recreation needs at these Projects, including at the Millinocket and Dolby Developments. (see Section 6.0)

Article 417 required: *The licensee shall implement the provisions of the Programmatic Agreement among the Federal Energy Regulatory Commission, the Advisory Council on Historic Preservation, and the Maine State Historic Preservation Officer, for managing historic properties that may be affected by license issuing for the continued operation of the Penobscot Mills hydroelectric power projects in the state of Maine, executed on July 1, 1996. The Commission reserves the authority to require changes to any Cultural Resources Management Plan or plans at any time during the term of the license.*

Pursuant to final Cultural Resource Management Plans (CRMPs) that were submitted to FERC on April 9, 1998 for the Ripogenus and Penobscot Mills Projects, annual reports on activities related to the management of historic properties at these Projects are submitted to FERC. However, none of the seven prehistoric archaeological sites identified in the Penobscot Mills CRMP are located at the Millinocket or Dolby Developments.

1.4.2 LIHI CERTIFICATION REQUIREMENTS

As this is an initial application for LIHI Certification, the Millinocket and Dolby Developments are not currently subject to LIHI Certification Conditions.

TABLE 1. FACILITY INFORMATION

Item	*Information Requested*	*Response (include references to further details)*
Name of the Facility	Facility name (use FERC project name or other legal name)	Penobscot Mills Project (FERC No. 2458) - Millinocket Development Dolby Development
Location	River name (USGS proper name)	Penobscot River
	Watershed name (select region, click on the area of interest until the 8-digit HUC number appears. Then identify watershed name and HUC-8 number from the map at: https://water.usgs.gov/wsc/map_index.html)	01020001 - West Branch of the Penobscot River
	Nearest town(s), county(ies), and state(s) to dam	Millinocket Development: Town of Millinocket, Penobscot County, Maine Dolby Development: East Millinocket, Township A Range 7, Penobscot County, Maine
	River mile of dam	Millinocket Development Stone Dam: RM 12.3 Powerhouse: RM 10.8 Dolby Development Dolby Dam and Powerhouse: RM 4.2 *as measured from the confluence of the East and West Branches of the Penobscot River*
	Geographic latitude of dam	Millinocket Development Stone Dam: 45°38'18.65"N Penstock Intake: 45°36'42.79"N Powerhouse: 45°38'49.73"N Dolby Development Dolby Dam and Powerhouse: 45° 37' 57" N
	Geographic longitude of dam	Millinocket Development Stone Dam: 68°43'41.79"W Penstock Intake: 68°42'28.50"W Powerhouse: 68°42'16.40"W Dolby Development Dolby Dam and Powerhouse: 68° 36' 24" W
Facility Owner	Application contact names (Complete the Contact Form in Section B-4 also):	Kelly Maloney, Compliance Manager, Northeast Region

Item	*Information Requested*	*Response (include references to further details)*
	Facility owner company and authorized owner representative name. **For recertifications: If ownership has changed since last certification, provide the date of the change.**	Brookfield Renewable Partners LP Kelly Maloney, Compliance Manager, Northeast Region
	FERC licensee company name (if different from owner)	Great Lakes Hydro America, LLC
Regulatory Status	FERC Project Number (e.g., P-xxxxx), issuance and expiration dates, or date of exemption	FERC No. 2458 Issued October 22, 1996 Expires October 1, 2026
	FERC license type (major, minor, exemption) or special classification (e.g., "qualified conduit", "non-jurisdictional")	Hydropower license for Major Project; Federal Power Act
	Water Quality Certificate identifier, issuance date, and issuing agency name. Include information on amendments.	WQC #L-17166-33-A-N, Issued April 22, 1993 by the Maine Department of Environmental Protection.
	Hyperlinks to key electronic records on FERC e-library website or other publicly accessible data repositories	See Sections 6.0 and 7.0 for hyperlinks to or documentation of relevant records including FERC License and Amendment Orders; Section 401 Water Quality Certification; FERC and regulatory filings; and other key documents.
Powerhouse	Date of initial operation (past or future for pre-operational applications)	Millinocket: Stone Dam and the associated facilities, to include Millinocket Powerhouse, were constructed between 1899 and 1900 to support mill operations that began in November of 1900. Penstocks 1 through 4 and 7 from Ferguson Pond were constructed, along with the rest of the Development, prior to the start of mill operations, while penstocks 5 and 6 were constructed in 1912. Penstocks 1 through 6 initially served hydromechanical units that turned wood grinders. Unit 1 was converted to hydroelectric power production prior to 1990, and Units 2 through 6 were converted to hydroelectric power in 1994. Dolby: 1906
	Total installed capacity (MW) **For recertifications: Indicate if installed capacity has changed since last certification**	Millinocket: 37.4 MW Dolby: 17.8 MW Total for application: 55.2 MW (see Table under Section 1.1)

Item	*Information Requested*	*Response (include references to further details)*
	Average annual generation (MWh) and period of record used **For recertifications: Indicate if average annual generation has changed since last certification**	Millinocket: 178,454 MWh (Period of Record: 2005 to 2018) Dolby: 102,445 MWh (Period of Record: 2005 to 2018)
	Mode of operation (run-of-river, peaking, pulsing, seasonal storage, diversion, etc.) **For recertifications: Indicate if mode of operation has changed since last certification**	Run-of-river with minor fluctuations in headpond elevation and minimum flows of 2,000 cfs (provided by North Twin and upstream storage, if necessary).

<table>
<tr><th>Item</th><th>Information Requested</th><th>Response (include references to further details)</th></tr>
<tr><td></td><td>Number, type, and size of turbines, including maximum and minimum hydraulic capacity of each unit</td><td><u>Millinocket:</u>
7 operable Turbine-Generators,
Horizontal Francis[3]
<table>
<tr><th>Unit</th><th>Max Hydraulic Capacity (cfs)</th><th>Unit Authorized Installed Capacity (MW)</th></tr>
<tr><td>1</td><td>662</td><td>5.2</td></tr>
<tr><td>3</td><td>695</td><td>5.3</td></tr>
<tr><td>4</td><td>566</td><td>5.4</td></tr>
<tr><td>5</td><td>566</td><td>5.4</td></tr>
<tr><td>6</td><td>566</td><td>5.4</td></tr>
<tr><td>7</td><td>600</td><td>5.4</td></tr>
<tr><td>8</td><td>650</td><td>5.2</td></tr>
<tr><td>TOTAL</td><td>4,305</td><td>37.4</td></tr>
</table>
<u>Dolby:</u>
5 operable Turbine-Generators,
Unit 2: Horizontal Francis
Units 5, 6 and 7: Inclined Kaplan
Unit 8: Vertical fixed blade[4]
<table>
<tr><th>Unit</th><th>Max Hydraulic Capacity (cfs)</th><th>Unit Authorized Installed Capacity (MW)</th></tr>
<tr><td>2</td><td>400</td><td>1.3</td></tr>
<tr><td>5</td><td>1,524</td><td>5.3</td></tr>
<tr><td>6</td><td>1,200</td><td>4.1</td></tr>
<tr><td>7</td><td>1,200</td><td>4.1</td></tr>
<tr><td>8</td><td>830</td><td>2.9</td></tr>
<tr><td>TOTAL</td><td>5,154</td><td>17.8</td></tr>
</table></td></tr>
</table>

[3] Unit 2, a horizontal Francis unit having a nameplate capacity of 5,250 kW, is currently out of service and does not have a generator associated with it.

[4] Turbine units 1, 3, and 4 have been removed from service. The generators for Units 1, 3, and 4 are currently incapable of grid connection.

Item	*Information Requested*	*Response (include references to further details)*
	Trashrack clear spacing (inches), for each trashrack	<u>Millinocket:</u> Trashracks measuring approximately 216 feet in length are located upstream of the powerhouse intake gates. Trask racks for the 10-foot diameter penstocks are constructed of 3/8 by 3" bar steel with a clear spacing of 2-5/8 inch. For the 11-foot diameter penstock, the trashrack is constructed of 3/8 by 3" bar steel with a clear spacing of 2-5/8 inch. <u>Dolby:</u> Eight sets of trashracks with a total length of 174 ft are located upstream of the powerhouse unit intakes. Trashracks for unit bays 2 through 4 are constructed of 3/8" bar steel with a clear spacing of 1-11/16" between the bars. Trashracks for unit bays 5 through 8 are constructed of 3/8" bar steel with a clear spacing of 2-5/8" between bars.

Item	*Information Requested*	*Response (include references to further details)*
	Dates and types of major equipment upgrades	<u>Millinocket Development:</u> 1899–1900 - Construction of Stone Dam and related facilities, to include penstocks 1 through 4 and 7) 1912 – Installation of penstocks 5 and 6 1994 – Conversion of Units 2 through 6 to hydroelectric power production (Unit 1 converted prior to 1990) 1997 – Installation of inflatable rubber flashboard system on left section of spillway, and inspection/maintenance overhaul of turbines for Units 4 and 6 1998 - Inspection/maintenance overhaul of turbine for Unit 1 1999 - Inspection/maintenance overhaul of turbine for Units 2 and 6 and upgraded computerized control system known as Energy Optimization System (EOS) 2006 – replacement of runners for Units 4, 5, 6, & 7, 2006-2007- Rehabilitation of intake gate seals 2018 - 2019 - replace three 40 Hz generator units at the Millinocket Development (units 3, 4, & 7) with 60 Hz units <u>Dolby Development:</u> 1906 – 1907 – construction of Dolby Dam and Station with 7 units 1930 – Unit 8 added 1934 – remaining hydromechanical grinders were converted to turbine-generators 1975 – Units 6 and 7 replaced 1987 – Unit 5 replaced 2018: Unit 8 conversion 2019 - 2024: Unit 2 conversion
	Dates, purpose, and type of any recent operational changes	Run-of-river facilities since FERC license issued in 1996, only short-term operational changes for maintenance and inspections. There have been no license modifications pertaining to operational changes.

Item	*Information Requested*	*Response (include references to further details)*
	Plans, authorization, and regulatory activities for any facility upgrades or license or exemption amendments	Millinocket: All Units were previously converted to 60 Hz except for Unit 2 which remains a 40 Hz cycle unit and is considered inoperable. Dolby Development: All Units were previously converted to 60 Hz except for Unit 2, which is planned for conversion beginning in 2019. Turbine units 1, 3, and 4 have been removed from service. The generators for Units 1, 3, and 4 are currently incapable of grid connection.
Dam or Diversion	Date of original construction and description and dates of subsequent dam or diversion structure modifications	Millinocket: 1899–1900 - Construction of Stone Dam and related facilities, to include penstocks 1 through 4 and 7) 1912 – Installation of penstocks 5 and 6 1964 – Construction of overlay on downstream slope of Stone Dam spillway 1974 – Rehabilitation of waste gate structure, to include installation of new gates 1982 – Rehabilitation and post-tensioning of concrete canal wall 1984 – Raising of embankment crests and flattening of downstream slopes 1989–1991 – Rehabilitation of Gatehouse, 1997 – Installation of inflatable rubber flashboard system on left section of spillway and installation of trashrack cleaner in the penstock intake structure 2002–2005 – Performed minor repairs on penstocks to address leaks 2005 – Placement of riprap at Dike No. 4 and raised crest of Dike 8 2006 – Grouting of right abutment of Stone Dam 2006-2007- Rehabilitation of intake gate seals 2008-2017- Relining of penstocks.

Item	*Information Requested*	*Response (include references to further details)*
	Date of original construction and description and dates of subsequent dam or diversion structure modifications (con't)	<u>Dolby Development:</u> 1906 – construction of a concrete and earth-filled dam measuring approximately 1,395' in length, including an intake structure and powerhouse integral with the dam 1942 and 1974 - crest and sections of the downstream face of the spillway were overlaid Mid-1980s - powerhouse draft tube piers were rehabilitated. 1988 - injection grouting of the powerhouse headwall to control leakage 1992 – 1993 - waste gates, operators, and sluices were rehabilitated 1995 - post-tensioned anchors were installed in the 59-foot-long overflow spillway section between the powerhouse and the waste gates and the intake deck upstream of Units 1 through 4 was replaced 2006 – downstream concrete resurfacing of Dolby Dam 2007 – Dolby station headwall grouted

	Dam or diversion structure height including separately, the height of any flashboards, inflatable dams, etc.	<u>Millinocket</u> Stone Dam: A 428-foot-long, 27-foot-high north overflow spillway section with a crest elevation of 456.4 ft and equipped with an inflatable rubber flashboard system 2.75 ft in height. A 52-foot-long, 25-foot-high waste gate structure containing four steel waste gates. A 358-foot-long, 25-foot-high south overflow spillway section with a crest elevation of 456.2 ft and equipped with 2.5-foot-high flashboards. A low, 300-foot-long, concrete gravity abutment section, also referred to as the non-overflow section with a 458.95 ft. A gatehouse integral with the dam that measures approximately 124 feet in length and approximately 16 ft in height and containing ten gate openings and a 12.5 ft sluiceway regulating inflow into Ferguson Pond Three earthen embankments (Dikes 1 through 3) with a total length of approximately 1,854 ft with a maximum height of 10 feet located north of the gatehouse with top elevations of 468 ft, 468.5 ft and 468 ft, respectively. Ferguson Pond/Millinocket Hydro Station: A canal measuring approximately 150 feet in width and 1,400 feet in length that extends from the Stone Dam gatehouse conveying water to Ferguson Pond. A 225-foot-long, 17- to 23-foot-high, post-tensioned, concrete gravity canal wall with a crest elevation of 458.2 ft, equipped with 6-inch-high flashboards. Five earth embankments (Dikes 4 through 8) totaling 3,915 ft in length located around the perimeter of Ferguson Pond with a maximum height of about 15 feet and a top elevation of 462 ft. A canal conveying water from Ferguson Pond to the intake structure measuring 150 ft wide and 1,300 ft long

Item	*Information Requested*	*Response (include references to further details)*
	Dam or diversion structure height including separately, the height of any flashboards, inflatable dams, etc. (con't)	<u>Dolby Development</u> A concrete abutment measuring approximately 27 feet in length adjacent to the southwestern shore. A spillway of four sections having a total length of approximately 521 ft having a crest elevation of 332.2 ft with flashboards extending to El. 336.2 ft and a waste gate structure including six steel gates measuring approximately 6 ft wide by 9 ft, 2 in. high. A 22 ft wide spillway with two concrete abutments measuring approximately 34 feet total in width having a top elevation of 340.7 ft. A 550-ft-long earthen dike extending from the northeastern end of the powerhouse to the northern shore with a top elevation of 343.2 ft, topped with a 12-ft-wide travel surface.

Item	*Information Requested*	*Response (include references to further details)*
	Spillway elevation and hydraulic capacity	<u>Millinocket</u> The spillway at Stone Dam consists of a concrete gravity overflow section. The left (north) portion is equipped with a 2.5-foot-high inflatable rubber flashboard system and the right (south) is equipped with 2.5 foot-high wooden flashboards. The waste gate structure, which includes three approximate 9-foot-wide by 6 foot-high slide gates and one approximate 11-foot-wide by 6-foot-high slide gate, is located between the two overflow sections. The maximum discharge for Stone Dam is 109,000 cfs at elevation 464.2 feet, corresponding to the deck elevation of the head gate section. <u>Dolby Development</u> The spillway at Dolby Dam consists of four sections having a total length of 521 feet extending from the western (right) concrete abutment to the powerhouse. The spillway sections have a crest elevation of 332.2 feet topped with flashboards extending to elevation 336.2 feet. The spillway is divided by a pair of abutments (6 feet wide) of a former log sluice (located approximately 218 feet from the southwestern abutment), which has now been converted to a spillway section, and a waste gate structure located approximately 60 feet from the powerhouse. The maximum discharge at the top of dam elevation of 343.2 feet is 75,000 cfs, calculated with all gates open and the powerhouse shut down.
	Tailwater elevation (provide normal range if available)	<u>Millinocket</u> Tailwater elevation of 440 ft at normal operating maximum powerhouse hydraulic capacity of 4,692 cfs <u>Dolby</u> Tailwater elevation of 287.2 ft at normal operating maximum powerhouse hydraulic capacity of 5,150 cfs

Item	*Information Requested*	*Response (include references to further details)*
	Length and type of all penstocks and water conveyance structures between the impoundment and powerhouse	Millinocket Intake structure with seven gate openings; six gates, each measuring 12 ft, 6 in. by 12 ft, 6 in., control the flow of water into the six 10-ft-diameter penstocks that lead to the units located in the Grinder Room in the former mill complex. The remaining gate, measuring 13 ft, 6 in. by 13 ft, 6 in., controls the flow of water into the 11-ft-diameter penstock that leads to the generating units located in the Generator Room. Penstocks measure approximately 1,007 to 1,024 ft in length and are constructed of steel and buried Dolby The intake structure consists of a concrete substructure measuring approximately 23 ft by 209 ft and is located immediately upstream of the project powerhouse. The intake substructure contains nine water passages that are used to convey the flow of water to the five operable project turbines. Three gate openings measure 10 ft x 11 ft (Units No. 1, 2, & 3 – Units 1 & 3 are inoperable); two measure 6 ft 6 in. x 12 ft (Unit No. 4 - inoperable); three measure 12 ft x 13 ft (Units No. 5, 6, & 7); and one measures 14 ft x 14 ft (Unit No. 8)
	Dates and types of major infrastructure changes	Millinocket See “Dates and types of major equipment upgrades and Date of original construction and description and dates of subsequent dam or diversion structure modifications” section above. Dolby See “Dates and types of major equipment upgrades and Date of original construction and description and dates of subsequent dam or diversion structure modifications” section above.

Item	*Information Requested*	*Response (include references to further details)*
	Designated facility purposes (e.g., power, navigation, flood control, water supply, etc.)	Power
	Source water	Millinocket Quakish Lake at Stone Dam through Ferguson Pond to Millinocket Intake structure; West Branch of the Penobscot River Dolby Dolby Pond Impoundment; West Branch of the Penobscot River
	Receiving water and location of discharge	Millinocket West Branch Penobscot River at confluence with Millinocket Stream Dolby West Branch of the Penobscot River
Conduit	Date of conduit construction and primary purpose of conduit	N/A
Impoundment and Watershed	Authorized maximum and minimum water surface elevations **For recertifications: Indicate if these values have changed since last certification**	Millinocket Quakish Lake and Ferguson Pond have a combined surface area of 1,344 acres at a normal full pond elevation of 458.7 ft and extend about 8,600 ft upstream of the dam. Dolby Dolby Pond has a surface area of 2,048 acres at a normal full pond elevation of 336.2 ft and extends approximately 12,144 ft upstream of the dam.
	Normal operating elevations and normal fluctuation range **For recertifications: Indicate if these values have changed since last certification**	Millinocket Quakish Lake and Ferguson Pond have a normal full pond elevation of 458.7 ft., managed as run-of-river with relatively stable headpond. Dolby Dolby Pond has a normal full pond elevation of 336.2 ft., managed as run-of-river with relatively stable headpond.

Item	*Information Requested*	*Response (include references to further details)*
	Gross storage volume and surface area at full pool **For recertifications: Indicate if these values have changed since last certification**	Millinocket Gross Storage Volume: 8,100-acre-ft Surface Area: 1,344 acres at normal full pond Dolby Gross Storage Volume: 41,956 acre-ft Surface Area: 2,048 acres at normal full pond
	Usable storage volume and surface area **For recertifications: Indicate if these values have changed since last certification**	Millinocket Negligible; run-of-river Dolby Negligible; run-of-river

	Describe requirements related to impoundment inflow, outflow, up/down ramping and refill rate restrictions.	<u>Millinocket</u> Operated in a run-of-river mode where inflow equals outflow with a minimum flow of 2,000 cfs measured downstream at Shad Pond (provided by North Twin and upstream storages, if necessary). Flows in excess of station hydraulic capacity of 4,692 cfs are spilled over Stone Dam. Millinocket ramping rate requirements: Whenever abnormal conditions occur such that a flow cannot be passed through the generators at the Millinocket Powerhouse to achieve the 2,000 cfs minimum flow, the inflatable rubber flashboard system shall be deflated to release flows in an expeditious effort to minimize downriver effects on water quality and aquatic habitat. Except for the initial 2-minute siren warning and a safety flow of 200 cfs for 15 minutes, such flows will not be ramped. The protection of downriver water quality and aquatic habitat is a higher priority than prevention of channel scouring and destruction of vegetation in the Back Channel. During periods of high seasonal flows, the initial 2-minute siren warning and safety flow of 200 cfs for 15 minutes will also be used. Following this 15-minute release, increases of 400 cfs per hour will be made until either the required flow is met, the elevation at Stone Dam is less than 459.45 feet, or the inflatable rubber flashboard system is fully deflated, if necessary. The ramping up of seasonal flows in the Back Channel will be done only after the hydraulic capacity of those units available has been attained. <u>Dolby</u> Operated in a run-of-river mode where inflow equals outflow. Flows in excess of station hydraulic capacity of 5,150 cfs are spilled over the dam spillway. There are

Item	*Information Requested*	*Response (include references to further details)*
		no ramping rate requirements at the Dolby Development.
	Upstream dams by name, ownership and river mile. If FERC licensed or exempt, please provide FERC Project number of these dams. Indicate which upstream dams have downstream fish passage.	<u>Millinocket</u> North Twin, Rivermile 15 Great Lakes Hydro America, LLC; FERC No. 2458, Penobscot Mills Project; has an upstream fishway for resident fish species; no downstream fish passage Millinocket Lake, Rivermile 19 Great Lakes Hydro America, LLC; FERC No. 2458, Penobscot Mills Project; no upstream or downstream fish passage Ripogenus Great Lakes Hydro America, LLC; FERC No. 2572, Ripogenus Project; no upstream or downstream fish passage <u>Dolby</u> Millinocket Development (Stone Dam), Rivermile 12.3 Great Lakes Hydro America, LLC FERC No. 2458, Penobscot Mills Project; no upstream or downstream fish passage
	Downstream dams by name, ownership, river mile and FERC number if FERC licensed or exempt. Indicate which downstream dams have upstream fish passage	<u>Millinocket</u> Dolby Dam, Rivermile 4.2 Great Lakes Hydro America, LLC FERC No. 2458, Penobscot Mills Project; no upstream or downstream fish passage <u>Dolby</u> East Millinocket Dam, Rivermile 2.5 Great Lakes Hydro America, LLC FERC No. 2458, Penobscot Mills Project; no upstream or downstream fish passage Medway Dam, Rivermile 0.7 Black Bear Hydro Partners, LLC FERC No. 2666, Medway Project; upstream eel passage, downstream eel passage
	Operating agreements with upstream or downstream facilities that affect water availability and facility operation	Except for the Medway Project, Great Lakes Hydro America, LLC owns and operates all facilities in the West Branch of the Penobscot River drainage.

<table>
<tr><th>Item</th><th>Information Requested</th><th>Response (include references to further details)</th></tr>
<tr><td></td><td>Area of land (acres) and area of water (acres) inside FERC project boundary or under facility control.</td><td><u>Millinocket</u>
Water: 1,344 acres
Land: 3,857 acres

<u>Dolby</u>
Water: 2,048 acres
Land: 144 acres</td></tr>
<tr><td>Hydrologic Setting</td><td>Average annual flow at the dam, and period of record used</td><td><u>Millinocket</u>
Period of Record June 2010-2018
<table><tr><th>Year</th><th>Average Flow (cfs)</th></tr><tr><td>2010</td><td>3,422</td></tr><tr><td>2011</td><td>4,894</td></tr><tr><td>2012</td><td>3,327</td></tr><tr><td>2013</td><td>3,234</td></tr><tr><td>2014</td><td>3,474</td></tr><tr><td>2015</td><td>3,609</td></tr><tr><td>2016</td><td>3,169</td></tr><tr><td>2017</td><td>3,621</td></tr><tr><td>2018</td><td>3,390</td></tr><tr><td>Average</td><td>3,571</td></tr></table>
<u>Dolby</u>
Period of record used is 2010-2018
<table><tr><th>Year</th><th>Average Flow (cfs)</th></tr><tr><td>2010</td><td>3,891</td></tr><tr><td>2011</td><td>5,181</td></tr><tr><td>2012</td><td>3,576</td></tr><tr><td>2013</td><td>3,869</td></tr><tr><td>2014</td><td>3,660</td></tr><tr><td>2015</td><td>3,644</td></tr><tr><td>2016</td><td>3,598</td></tr><tr><td>2017</td><td>3,975</td></tr><tr><td>2018</td><td>3,567</td></tr><tr><td>Average</td><td>3,885</td></tr></table></td></tr>
</table>

<table>
<tr><th>Item</th><th>Information Requested</th><th>Response (include references to further details)</th></tr>
<tr><td></td><td>Average monthly flows and period of record used</td><td><u>Millinocket</u>
Period of Record June 2010-2018
<table><tr><th>Month</th><th>Average Flow (cfs)</th></tr><tr><td>January</td><td>3,748</td></tr><tr><td>February</td><td>4,133</td></tr><tr><td>March</td><td>3,834</td></tr><tr><td>April</td><td>3,359</td></tr><tr><td>May</td><td>5,295</td></tr><tr><td>June</td><td>3,872</td></tr><tr><td>July</td><td>3,517</td></tr><tr><td>August</td><td>2,977</td></tr><tr><td>September</td><td>3,463</td></tr><tr><td>October</td><td>2,933</td></tr><tr><td>November</td><td>2,661</td></tr><tr><td>December</td><td>3,321</td></tr></table>
<u>Dolby</u>
Period of Record June 2000-2018
<table><tr><th>Month</th><th>Average Flow (cfs)</th></tr><tr><td>January</td><td>3,870</td></tr><tr><td>February</td><td>3,989</td></tr><tr><td>March</td><td>3,960</td></tr><tr><td>April</td><td>4,550</td></tr><tr><td>May</td><td>5,423</td></tr><tr><td>June</td><td>3,876</td></tr><tr><td>July</td><td>3,450</td></tr><tr><td>August</td><td>3,316</td></tr><tr><td>September</td><td>3,695</td></tr><tr><td>October</td><td>3,383</td></tr><tr><td>November</td><td>3,388</td></tr><tr><td>December</td><td>3,989</td></tr></table></td></tr>
<tr><td></td><td>Location and name of closest stream gauging stations above and below the facility</td><td>USGS 01034500 Penobscot River at West Enfield, Maine</td></tr>
<tr><td></td><td>Watershed area at the dam (in square miles). Identify if this value is prorated and provide the basis for proration.</td><td><u>Millinocket</u>
1,890 sq. miles

<u>Dolby</u>
2,108 sq. miles</td></tr>
</table>

Item	*Information Requested*	*Response (include references to further details)*
Designated Zones of Effect	Number of zones of effect	8
	Upstream and downstream locations by river miles	Zone 1: Millinocket Regulated Upstream River Reach; RM 14.1 to 15 Zone 2: Quakish Lake portion of the Millinocket Impoundment and Stone Dam; RM 12.3 to RM 14 Zone 3: Stone Dam Bypass Reach; RM 7.7 to 12.3 Zone 4: Ferguson Pond portion of the Millinocket Impoundment and Intake Structure; RM 11 to 12.3 Zone 5: Millinocket Regulated Downstream River Reach; RM 7.5 to 10 Zone 6: Dolby Pond Impoundment; RM 4.2 to 7.5 Zone 7: Dolby Dam Bypass Reach, RM 4.1 to 4.2 Zone 8: Dolby Regulated Downstream River Reach; 4.1 to 4.2 Stone Dam, River Mile 12.3 Millinocket Powerhouse, River Mile 10.8 Dolby Dam, River Mile 4.2 *as measured form the confluence of the West and East Branches of the Penobscot River*

Item	*Information Requested*	*Response (include references to further details)*
	Type of waterbody (river, impoundment, bypassed reach, etc.)	Zone 1: Millinocket Regulated Upstream River Reach; West Branch of the Penobscot River Zone 2: Quakish Lake portion of the Millinocket Impoundment and Stone Dam Zone 3: Stone Dam Bypass Reach Zone 4: Ferguson Pond portion of the Millinocket Impoundment and Intake Structure Zone 5: Millinocket Regulated Downstream River Reach; West Branch of the Penobscot River Zone 6: Dolby Pond Impoundment Zone 7: Dolby Dam Bypass Reach Zone 8: Dolby Regulated Downstream River Reach; West Branch of the Penobscot River
	Delimiting structures or features	<u>Millinocket</u> Stone Dam Millinocket intake structure and powerhouse North Twin Impoundment (upstream limit of Millinocket Regulated Upstream River Reach) <u>Dolby</u> Dolby Dam Dolby Dam intake structure and powerhouse East Millinocket Impoundment (downstream limit of Dolby Regulated Downstream River Reach)
	Designated uses by state water quality agency	Drinking water supply after treatment; fishing; agriculture; recreation in and on the water; industrial process and cooling water supply; hydroelectric power generation; navigation; and as a habitat for fish and other aquatic life.
Pre-Operational Facilities		
Expected operational date	Date generation is expected to begin	N/A

Item	*Information Requested*	*Response (include references to further details)*
Dam, diversion structure or conduit modification	Description of modifications made to a pre-existing conduit, dam or diversion structure needed to accommodate facility generation. This includes installation of flashboards or raising the flashboard height. Date the modification is expected to be completed	N/A
Change in water flow regime	Description of any change in impoundment levels, water flows or operations required for new generation	N/A

2.0 ZONES OF EFFECT

2.1 MILLINOCKET ZONES OF EFFECT

The water released from the North Twin impoundment flows into a section of the West Branch of the Penobscot River, which comprises Zone 1 – Regulated River Reach Upstream. The Quakish Lake portion of the Millinocket impoundment, impounded by Stone Dam and maintained with stable headpond, represents Zone 2 – Impoundment. Stone Dam discharges excess flows and leakage flows of between 2 and 5 cfs into the Back Channel, approximately 4.5 miles in length and extending to the confluence with the West Branch of the Penobscot River at Shad Pond, which is designated as Zone 3 – Bypass Reach. The Millinocket powerhouse intake is situated at Ferguson Pond, which is hydrologically connected to Quakish Lake through a gate structure at Stone Dam and a canal, and is maintained at the same stable elevation as Quakish Lake and included in Zone 4 – Impoundment. Zone 5 – Regulated River Reach Downstream is the discharge from the Millinocket powerhouse, which outlets to the West Branch of the Penobscot River before combining with flows from Millinocket Stream and the Back Channel.

2.2 DOLBY ZONES OF EFFECT

As discussed above, flows from the Millinocket Development, coupled with Back Channel and Millinocket Stream flows, converge into the West Branch of the Penobscot River and flow into Dolby Pond. While this reach represents the Regulated River Reach Upstream for the Dolby Development, this reach is captured within Zone 5 – Regulated River Reach Downstream for the Millinocket Development. Dolby Pond, which serves as the impoundment for the Dolby Development, is maintained with stable headpond elevation, and is designated as Zone 6 – Impoundment. Dolby Dam has a very short section of high perched ledge immediately downstream of the dam which is designated as Zone 7 – Bypass Reach. Dolby Dam powerhouse, which is integral to the dam, discharges to the West Branch of the Penobscot River. Because the East Millinocket Development backwaters to Dolby Dam, only a short reach of approximately 100 feet is designated as Zone 8 – Regulated River Reach Downstream.

FIGURE 7. ZONES OF EFFECT – MILLINOCKET DEVELOPMENT

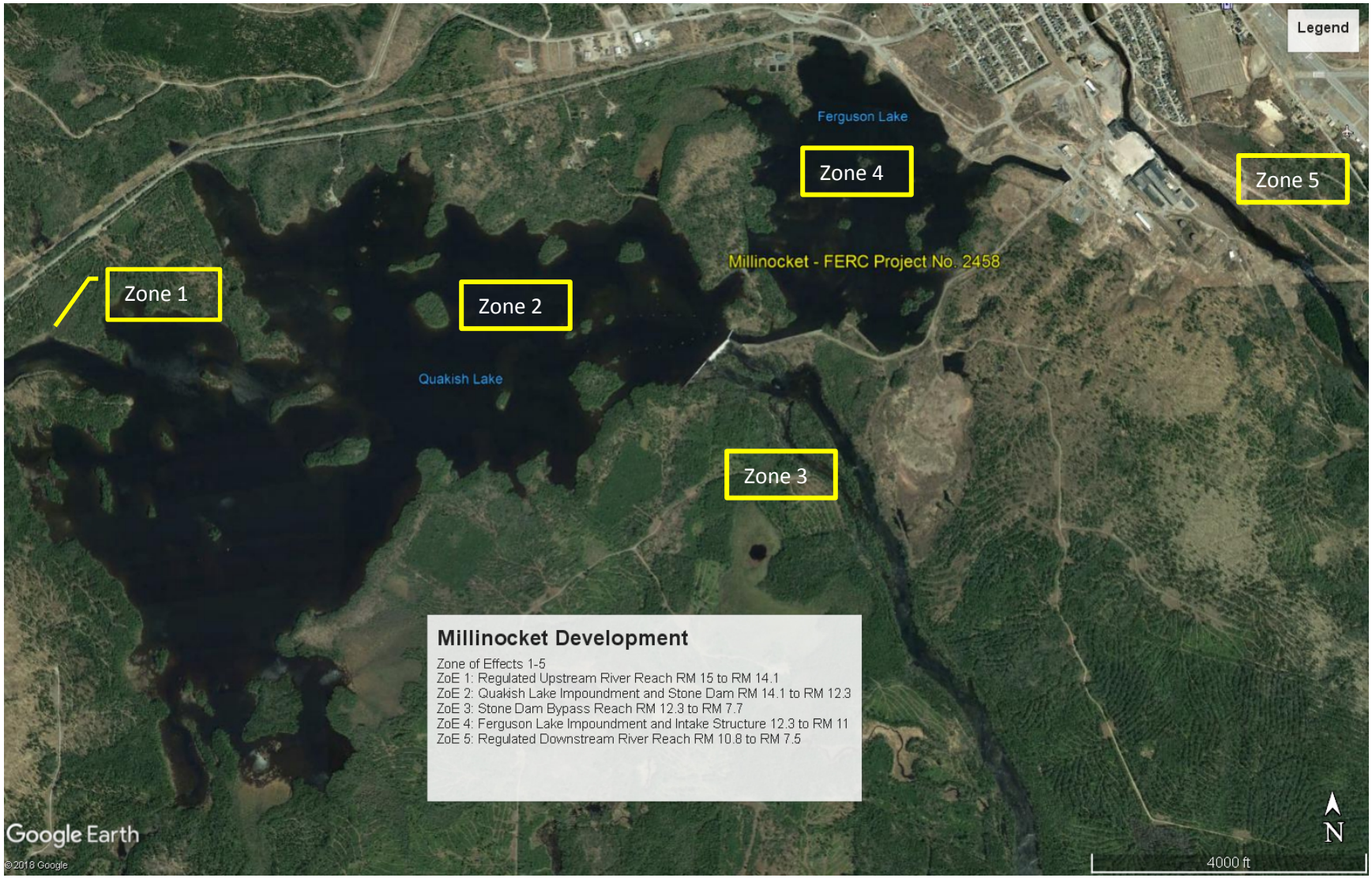
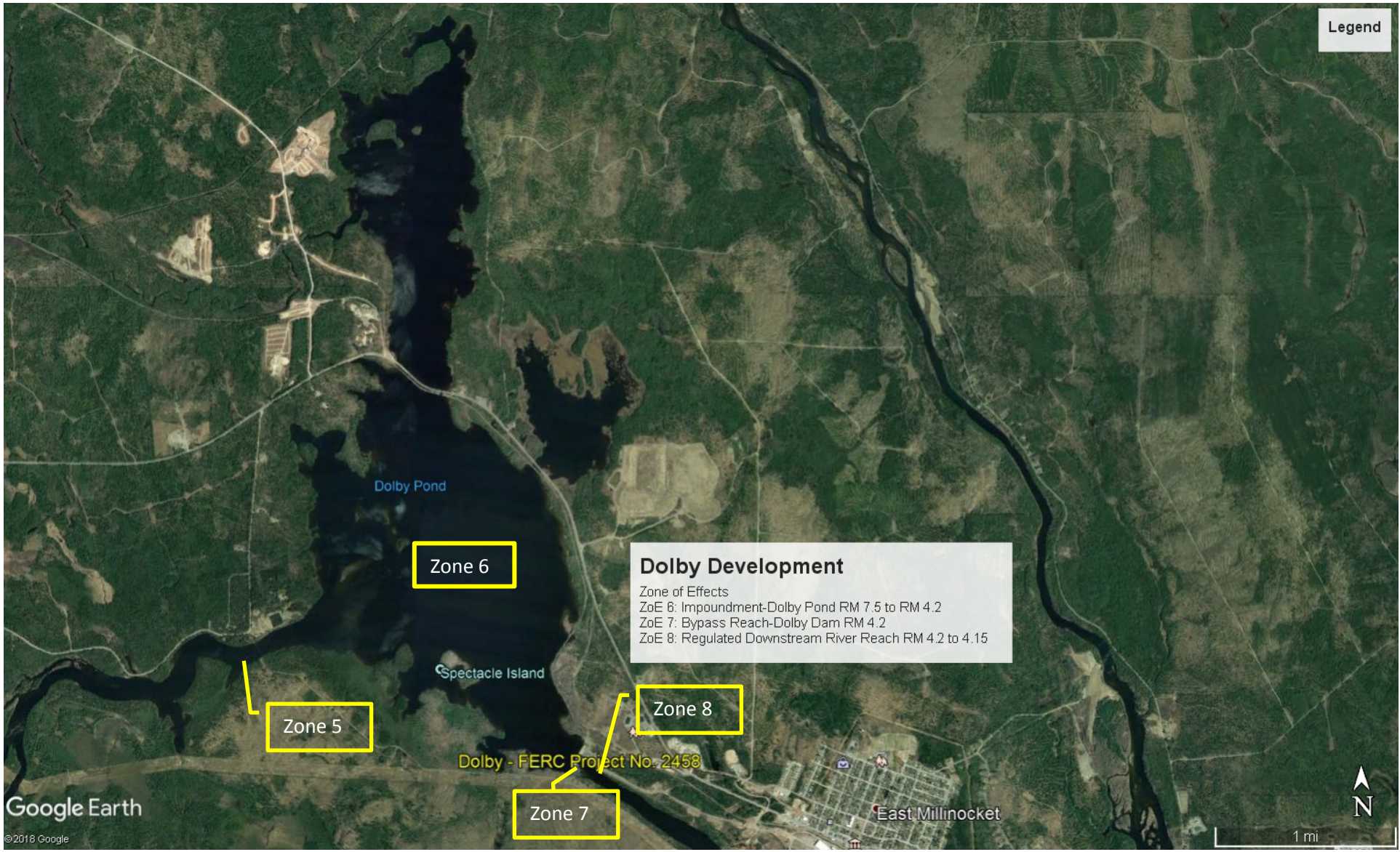


FIGURE 8. ZONES OF EFFECT – DOLBY DEVELOPMENT



2.3 ZONE 1 – MILLINOCKET REGULATED RIVER REACH UPSTREAM

The regulated river reach upstream of the Millinocket Development is identified as Zone of Effect #1 and is located approximately at river miles 15 to 14.1 of the West Branch of the Penobscot River, as measured from the confluence of East and West Branches of the Penobscot River at Nicatou Island.

FIGURE 9. ZONE 1 – MILLINOCKET REGULATED RIVER REACH UPSTREAM

TABLE 2. ZONE 1 – MILLINOCKET REGULATED RIVER REACH UPSTREAM MATRIX OF ALTERNATIVE STANDARDS

Facility Name: Millinocket Development **Zone of Effect: _1 – Regulated River Reach Upstream**

	Criterion	*Alternative Standards*				
		1	*2*	*3*	*4*	*Plus*
A	Ecological Flow Regimes	*X*				
B	Water Quality		*X*			
C	Upstream Fish Passage	*X*				
D	Downstream Fish Passage	*X*				
E	Watershed and Shoreline Protection		*X*			
F	Threatened and Endangered Species Protection		*X*			
G	Cultural and Historic Resources Protection		*X*			
H	Recreational Resources		*X*			

This reach receives flows from the North Twin Development and is outside of the project area for the Millinocket Development. The backwater extent of the Millinocket

Development ends at the normal full pond elevation of Quakish Lake and does not otherwise influence this reach. As such, the water quality of this reach, which is classified as Class B, is not affected by Millinocket operations, as it is upstream of any backwater effect from the Project impoundment. There are no upstream nor downstream fish passage facilities for migratory species in the West Branch of the Penobscot River upstream of the Medway Dam. However, a fish passage facility at the North Twin Dam provides upstream passage for resident species, including landlocked salmon and brook trout, to allow these species to may make their way through this reach from Quakish Lake into North Twin impoundment.

Shoreline lands within the Penobscot Mills project boundary are managed under a Shoreline Management Plan (SMP), including lands adjacent to this reach. However, no aspects of the Millinocket Development affect lands adjacent to this reach. Two species are listed as Threatened in the project area, Canada Lynx and Northern Long-Eared Bat, but they are not affected by project operations, particularly within this Zone of Effect as it is outside of the influence of project operations for the Millinocket Development. There are no prehistoric archaeological sites covered by the Penobscot Mills Project's Cultural Resources Management Plan (CRMP) at the Millinocket Development, nor in this Zone of Effect. A boat launch site known as the Green Bridge Boat Launch Site, with a small parking area, is located in this Zone of Effect and provides fishing/recreation access upstream to North Twin Dam and downstream to Quakish Lake, part of the Millinocket Impoundment.

2.4 ZONE 2 – QUAKISH LAKE PORTION OF THE MILLINOCKET IMPOUNDMENT AND STONE DAM

Quakish Lake, part of the Millinocket impoundment, is located in Indian Purchase Township 3 and Millinocket, Penobscot County, Maine at river miles 14.1 to 12.3 of the West Branch of the Penobscot River as measured from the confluence of the East and West Branches of the Penobscot River at Nicatou Island. There are three earthen dikes located along Quakish Lake on the northeastern side of the gatehouse, and water is impounded by Stone Dam, which discharges to the Back Channel (Zone 3 – Stone Dam Bypass Reach) and regulates flow into Ferguson Pond (Zone 4 – Ferguson Pond portion of the Millinocket Impoundment and Intake Structure).

FIGURE 10. ZONE 2 – QUAKISH LAKE PORTION OF THE MILLINOCKET IMPOUNDMENT AND STONE DAM

TABLE 3. ZONE 2 – QUAKISH LAKE PORTION OF THE MILLINOCKET IMPOUNDMENT AND STONE DAM MATRIX OF ALTERNATIVE STANDARDS

Facility Name: Millinocket Development **Zone of Effect: 2 – Quakish Lake Impoundment**

Criterion		*Alternative Standards*				
		1	*2*	*3*	*4*	*Plus*
A	Ecological Flow Regimes		*X*			
B	Water Quality		*X*			
C	Upstream Fish Passage	*X*				
D	Downstream Fish Passage	*X*				
E	Watershed and Shoreline Protection		*X*			
F	Threatened and Endangered Species Protection		*X*			
G	Cultural and Historic Resources Protection		*X*			
H	Recreational Resources		*X*			

Flows through the Millinocket Development, including those through the impoundment (Quakish Lake and Ferguson Pond) are managed as run-of-river with stable headpond management. The water quality of this reach is classified as Class B. There are no anadromous fish species in this section of the West Branch of the Penobscot River, as there are no upstream nor downstream fish passage facilities for migratory species upstream of the Medway Dam, and

the West Branch of the Penobscot River is not critical habitat for Atlantic salmon. Shoreline lands within the Penobscot Mills project boundary are managed under a SMP, including lands adjacent to Quakish Lake. As the Millinocket Development operates to maintain a stable headpond in Quakish Lake, lands adjacent to this Zone of Effect are generally unaffected by project operations. Two species are listed as Threatened in the project area, Canada Lynx and Northern Long-Eared Bat, but they are not affected by routine project operations. Limited vegetation removal may occur within project lands surrounding Quakish Lake for maintenance purposes, and vegetation management of the dikes also occurs under the 4e rule for Northern Long-Eared Bat. There are no prehistoric archaeological sites covered by the Penobscot Mills Project's CRMP at the Millinocket Development, nor in this Zone of Effect. There are no recreation facilities specifically within this Zone of Effect, though recreation does occur on the impoundment (day use fishing and canoeing) which is accessed via the Green Bridge Boat Launch Site in Zone 1, as discussed above.

2.5 ZONE 3 – STONE DAM BYPASS REACH

Stone Dam Bypass Reach is located between RM 12.3 to RM 7.7 of the West Branch of the Penobscot River as measured from confluence of the East and West Branches of the Penobscot River at Nicatou Island. Stone Dam discharges to this reach, otherwise known as the Back Channel, in times of flows that exceed Millinocket Station capacity and via leakage flows of 2 to 5 cfs under normal operations.

FIGURE 11. ZONE 3 – STONE DAM BYPASS REACH

TABLE 4. ZONE 3 –STONE DAM BYPASS REACH MATRIX OF ALTERNATIVE STANDARDS

Facility Name: Millinocket Development **Zone of Effect: 3 –Stone Dam Bypass Reach**

	Criterion	*Alternative Standards*				
		1	*2*	*3*	*4*	*Plus*
A	**Ecological Flow Regimes**		*X*			
B	**Water Quality**		*X*			
C	**Upstream Fish Passage**	*X*				
D	**Downstream Fish Passage**	*X*				
E	**Watershed and Shoreline Protection**		*X*			
F	**Threatened and Endangered Species Protection**		*X*			
G	**Cultural and Historic Resources Protection**		*X*			
H	**Recreational Resources**		*X*			

As discussed above, the bypass reach of Stone Dam receives leakage flows of 2 to 5 cfs, except in times of high water or when units are down at the Millinocket hydro station when excess flows are released to the Back Channel. Under these conditions, a ramping procedure is put in place at Stone Dam for public safety. Water Quality Certification of this reach was waived by the MDEP during relicensing of the Penobscot Mills Project in the 1990s, although the lowered flows from Stone Dam to this reach since its construction in 1899 are identified in the MDEP's 2016 305(b) list as "Category 4-C impaired by flow diversion". There are no anadromous fish species in this section of the West Branch of the Penobscot River, as there are no upstream nor downstream fish passage facilities for migratory species upstream of the Medway Dam, and the West Branch of the Penobscot River is not critical habitat for Atlantic salmon. Impoundment shoreline lands within the Penobscot Mills project boundary are managed under a SMP, but there are no lands covered by the SMP in the bypass reach. Instead, the lands adjacent to this Zone of Effect comprise the Back Channel Wildlife Area, for which a Back Channel Wildlife Plan has been developed to manage shoreline (riparian) areas for wildlife enhancement. Two species are listed as Threatened in the project area, Canada Lynx and Northern Long-Eared Bat, but they are not affected by routine project operations. There are no prehistoric archaeological sites covered by the Penobscot Mills Project's CRMP at the Millinocket Development, nor in this Zone of Effect. There are also no project recreation sites located within this Zone of Effect. Recreation opportunities within this Zone of Effect include fishing, hunting, and snowmobiling within the Back Channel Wildlife Area, though access is via informal roads and trails.

2.6 ZONE 4 – FERGUSON POND PORTION OF THE MILLINOCKET IMPOUNDMENT AND INTAKE STRUCTURE

Five earthen dikes having a total length of 3,915 ft are located along the perimeter of Ferguson Pond to confine the flowage limits of Ferguson Pond. The eastern canal conveys the water from Ferguson Pond to the intake structure. The Ferguson Pond portion of the Millinocket Impoundment and Intake Structure are located between RM 12.3 to RM 11 of the West Branch of the Penobscot River as measured from the confluence of the East and West Branches of the Penobscot River at Nicatou Island.

FIGURE 12. ZONE 4 – FERGUSON POND PORTION OF THE MILLINOCKET IMPOUNDMENT AND INTAKE STRUCTURE

TABLE 5. ZONE 4 – FERGUSON POND PORTION OF THE MILLINOCKET IMPOUNDMENT AND INTAKE STRUCTURE MATRIX OF ALTERNATIVE STANDARDS

Facility Name: Millinocket Development **Zone of Effect: 4 – Ferguson Pond and Intake Structure**

	Criterion	*Alternative Standards*				
		1	*2*	*3*	*4*	*Plus*
A	Ecological Flow Regimes		X			
B	Water Quality		X			
C	Upstream Fish Passage	X				
D	Downstream Fish Passage	X				
E	Watershed and Shoreline Protection		X			
F	Threatened and Endangered Species Protection		X			
G	Cultural and Historic Resources Protection		X			
H	Recreational Resources		X			

As discussed above, the Millinocket Development is managed as run-of-river with stable headpond management for the Millinocket impoundment. The water quality of this reach is classified as Class C. There are no anadromous fish species in this section of the West Branch of the Penobscot River, as there are no upstream nor downstream fish passage facilities for migratory fish upstream of the Medway Dam, and the West Branch of the Penobscot River is not critical habitat for Atlantic salmon. Impoundment shoreline lands within the Penobscot Mills project boundary are managed under a SMP, including lands adjacent to Ferguson Pond. As the Millinocket Development operates to maintain stable headpond in Ferguson Pond, lands adjacent to this Zone of Effect are generally unaffected by project operations. Two species are listed as Threatened in the project area, Canada Lynx and Northern Long-Eared Bat, but they are not affected by routine project operations. Limited vegetation removal may occur within project lands surrounding Ferguson Pond for maintenance purposes, and vegetation management of the dikes also occurs under the 4e rule for Northern Long-Eared Bat. There are no prehistoric archaeological sites covered by the Penobscot Mills Project's CRMP at the Millinocket Development, nor in this Zone of Effect. There are no formal recreation sites within this Zone of Effect and very limited access to Ferguson Pond, as many surrounding roads are private; however, informal access via Route 11 may occur.

2.7 ZONE 5 – MILLINOCKET REGULATED DOWNSTREAM RIVER REACH

The Millinocket powerhouse discharges to the West Branch of the Penobscot River at the confluence with Millinocket Stream. The Zone of Effect for this reach extends from RM10.8 to RM 7.5 of the West Branch of the Penobscot River as measured from the confluence of the East and West Branches of the Penobscot River at Nicatou Island. This Zone of Effect comprises the reach of the West Branch of the Penobscot River from the tailrace of the Millinocket powerhouse to Dolby Pond (Zone 6 – Dolby Pond Impoundment).

FIGURE 13. ZONE 5 – MILLINOCKET REGULATED DOWNSTREAM RIVER REACH

TABLE 6. ZONE 5 – MILLINOCKET REGULATED DOWNSTREAM RIVER REACH MATRIX OF ALTERNATIVE STANDARDS

Facility Name: Millinocket Development **Zone of Effect: 5– Regulated Downstream River Reach**

	Criterion	*Alternative Standards*				
		1	*2*	*3*	*4*	*Plus*
A	Ecological Flow Regimes		*X*			
B	Water Quality		*X*			
C	Upstream Fish Passage	*X*				
D	Downstream Fish Passage	*X*				
E	Watershed and Shoreline Protection		*X*			
F	Threatened and Endangered Species Protection		*X*			
G	Cultural and Historic Resources Protection		*X*			
H	Recreational Resources		*X*			

As discussed above, the reach of the West Branch of the Penobscot River downstream of the Millinocket powerhouse receives a minimum flow of 2,000 cfs (provided by North Twin and upstream water storage, if necessary). Flows in excess of project capacity or available units are released to the Back Channel (Zone 3 – Stone Dam Bypass Reach). While this reach is Class C, water quality monitoring indicates that this reach meets Class B standards. There are no anadromous fish species in this section of the West Branch of the Penobscot River, as there are no upstream nor downstream fish passage facilities for migratory species upstream of the

Medway Dam, and the West Branch of the Penobscot River is not critical habitat for Atlantic salmon. Impoundment shoreline lands within the Penobscot Mills project boundary are managed under a SMP, but there are no lands covered by the SMP in the West Branch of the Penobscot River reach from the Millinocket Development tailrace to Dolby Pond. As with other Zones of Effect, two species are listed as Threatened in the project area, Canada Lynx and Northern Long-Eared Bat, but they are not affected by routine project operations. There are no prehistoric archaeological sites covered by the Penobscot Mills Project's CRMP at the Millinocket Development, nor in this Zone of Effect. There are no formal recreation facilities in this Zone of Effect and no access from local roads.

2.8 ZONE 6 – DOLBY POND IMPOUNDMENT

Dolby Dam consists of a concrete and earth-filled structure with integral powerhouse. The dam is approximately 1,383 feet long and has a height of approximately 66 feet. The Dolby Pond Impoundment extends from RM 7.5 to RM 4.2 of the West Branch of the Penobscot River as measured from the confluence of the East and West Branches of the Penobscot River at Nicatou Island. Dolby Pond is relatively shallow and has little storage capacity, and the Dolby Development is operated in a run-of-river mode. Flows in excess of the station's hydraulic capacity of 6,000 cfs are discharged over the spillway. The full pond elevation of Dolby Pond is 336.2 feet.

FIGURE 14. ZONE 6 – DOLBY POND IMPOUNDMENT

TABLE 7. ZONE 6 – DOLBY POND IMPOUNDMENT MATRIX OF ALTERNATIVE STANDARDS

Facility Name: Dolby Development **Zone of Effect: 6– Dolby Pond Impoundment**

	Criterion	*Alternative Standards*				
		1	*2*	*3*	*4*	*Plus*
A	Ecological Flow Regimes	*X*				
B	Water Quality		*X*			
C	Upstream Fish Passage	*X*				
D	Downstream Fish Passage	*X*				
E	Watershed and Shoreline Protection		*X*			
F	Threatened and Endangered Species Protection		*X*			
G	Cultural and Historic Resources Protection		*X*			
H	Recreational Resources		*X*			

As discussed above, the Dolby Development is managed as a run-of-river facility with stable headpond management. The water quality of this reach is classified as Class C. There are no anadromous fish species in this section of the West Branch of the Penobscot River, as there are no upstream nor downstream fish passage facilities for migratory species upstream of the Medway Dam, and the West Branch of the Penobscot River is not critical habitat for Atlantic salmon. Impoundment shoreline lands within the Penobscot Mills project boundary are managed under a SMP, including lands adjacent to Dolby Pond. As the Dolby Dam operates to maintain stable headpond in Dolby Pond, lands adjacent to this Zone of Effect are generally unaffected by project operations. Two species are listed as Threatened in the project area, Canada Lynx and Northern Long-Eared Bat, but they are not affected by routine project operations. Limited vegetation removal may occur within project lands surrounding Dolby Pond for maintenance purposes, and vegetation management of the dikes also occurs under the 4e rule for Northern Long-Eared Bat. There are no prehistoric archaeological sites covered by the Penobscot Mills Project's CRMP at the Dolby Development, nor in this Zone of Effect. Recreation sites within this Zone of Effect include two boat launches; one at Dead Man's Curve and one at the Route 157 causeway providing access to the impoundment for recreational activities such as fishing and canoeing.

2.9 ZONE 7 – DOLBY DAM BYPASS REACH

Dolby Dam is comprised of four overflow spillway sections with a combined length of 521 feet and a maximum height of approximately 70 feet; a 76-foot-long, 65-foot-high waste gate section; and a 209-foot-long powerhouse and integral intake structure. The bypass reach is located at RM 4.2of the West Branch of the Penobscot River, as measured from the confluence of the East and West Branches of the Penobscot River at Nicatou Island. The bypass reach is the short section of high perched ledged directly below the dam's overflow spillway sections that receives flows in times of high water (i.e., when the powerhouse capacity is exceeded). The section of ledge is generally above the normal tailwater elevation and is not inundated during normal operations.

FIGURE 15. ZONE 7 – DOLBY DAM BYPASS REACH

TABLE 8. ZONE 7 – DOLBY BYPASS REACH MATRIX OF ALTERNATIVE STANDARDS

Facility Name: Dolby Development **Zone of Effect: 7– Dolby Bypass Reach**

	Criterion	*Alternative Standards*				
		1	*2*	*3*	*4*	*Plus*
A	Ecological Flow Regimes		*X*			
B	Water Quality		*X*			
C	Upstream Fish Passage	*X*				
D	Downstream Fish Passage	*X*				
E	Watershed and Shoreline Protection		*X*			
F	Threatened and Endangered Species Protection		*X*			
G	Cultural and Historic Resources Protection		*X*			
H	Recreational Resources		*X*			

Other than leakage, the bypass reach at Dolby Dam only receives flows when the spillway flashboards are down or are being overtopped; however, this very short stretch of river is perched ledge with no suitable aquatic habitat and no required minimum flows. There are no anadromous fish species in this section of the West Branch of the Penobscot River, as there are

no upstream nor downstream fish passage facilities for migratory species upstream of the Medway Dam, and the West Branch of the Penobscot River is not critical habitat for Atlantic salmon. Impoundment shoreline lands within the Penobscot Mills project boundary are managed under a SMP, but there are no lands covered by the SMP in this bypass reach. Two species are listed as Threatened in the project area, Canada Lynx and Northern Long-Eared Bats, but they are not affected by routine project operations. There are no prehistoric archaeological sites covered by the Penobscot Mills Project's CRMP at the Dolby Development, nor in this Zone of Effect. There are also no project recreation sites located within this Zone of Effect.

2.10 ZONE 8 – DOLBY REGULATED DOWNSTREAM RIVER REACH

Dolby Dam discharges into the West Branch of the Penobscot River and the East Millinocket Development impoundment, which backwaters to the base of Dolby Dam. This Regulated Downstream River Reach extends from RM 4.2 to RM 4.1 of the West Branch of the Penobscot River, as measured from the confluence of the East and West Branches of the Penobscot River at Nicatou Island.

FIGURE 16. ZONE 8 – DOLBY REGULATED DOWNSTREAM RIVER REACH

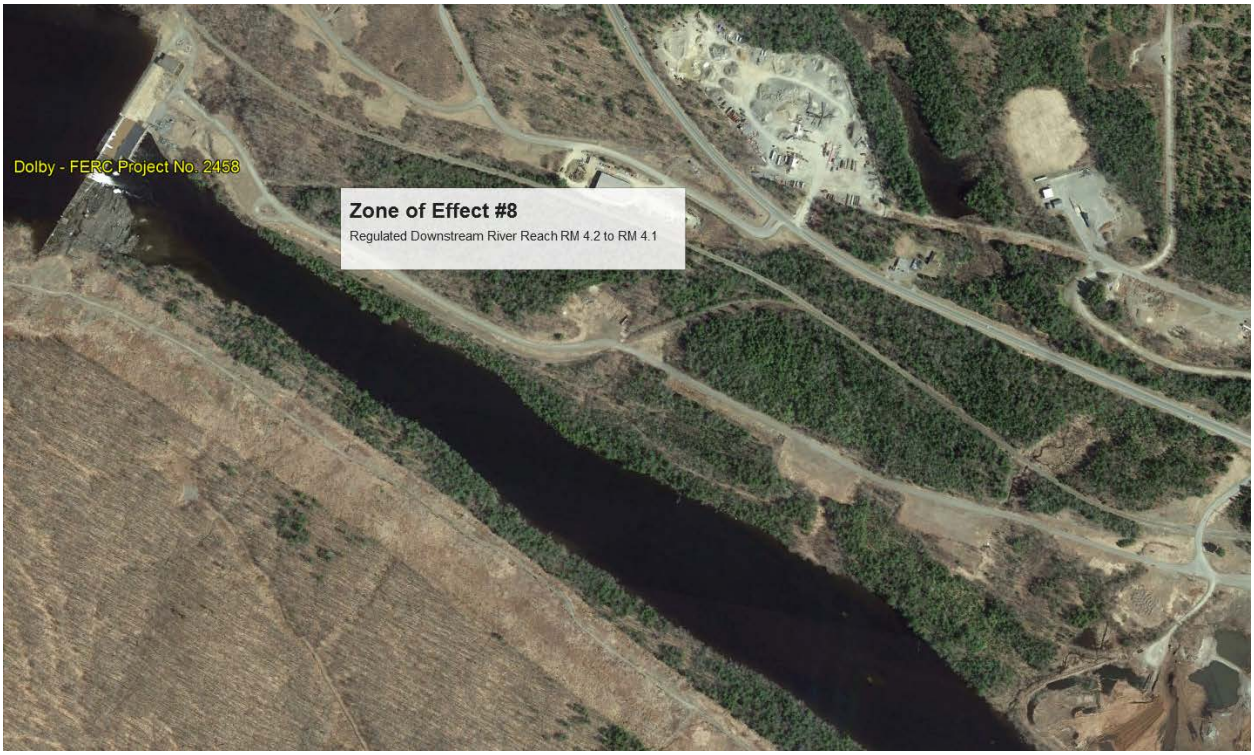


TABLE 9. ZONE 8 – REGULATED DOWNSTREAM RIVER REACH MATRIX OF ALTERNATIVE STANDARDS

Facility Name: Dolby Development **Zone of Effect: 8– Regulated Downstream River Reach**

	Criterion	*Alternative Standards*				
		1	*2*	*3*	*4*	*Plus*
A	**Ecological Flow Regimes**		***X***			
B	**Water Quality**		***X***			
C	**Upstream Fish Passage**	***X***				
D	**Downstream Fish Passage**	***X***				
E	**Watershed and Shoreline Protection**		***X***			
F	**Threatened and Endangered Species Protection**		***X***			
G	**Cultural and Historic Resources Protection**		***X***			
H	**Recreational Resources**		***X***			

Upstream minimum flow requirements (at Millinocket) call for a base flow of 2,000 cfs, which is then passed at Dolby Dam in a run-of-river mode. While this reach is Class C, water quality monitoring indicates that this reach meets Class B standards. There are no anadromous fish species in this section of the West Branch of the Penobscot River, as there are no upstream nor downstream fish passage facilities for migratory species upstream of the Medway Dam, and the West Branch of the Penobscot River is not critical habitat for Atlantic salmon. Impoundment shoreline lands within the Penobscot Mills project boundary are managed under a SMP, but there are no lands covered by the SMP in this reach downstream of Dolby Dam. As with other Zones of Effect, two species are listed as Threatened in the project area, Canada Lynx and Northern Long-Eared Bat, but they are not affected by routine project operations. There are no prehistoric archaeological sites covered by the Penobscot Mills Project's CRMP at the Dolby Development, nor in this Zone of Effect. There are also no project recreation sites located within this Zone of Effect.

3.0 LIHI CERTIFICATION CRITERION

3.1 ECOLOGICAL FLOWS

The stated Low Impact Hydropower Institute goal for Criterion A – Ecological Flow Regimes is "The flow regimes in riverine reaches that are affected by the facility support habitat and other conditions suitable for healthy fish and wildlife resources." A discussion of the applicable standards by Zone of Effect is provided in the Sections below.

3.1.1 ZONE 1 – MILLINOCKET REGULATED RIVER REACH UPSTREAM

Criterion	Standard	Supporting Information
A	**1** The facility operates in a true run-of-river operational mode and there are no bypassed reaches or water diversions associated with the facility	Not Applicable / De Minimis Effect: • For run-of-river facilities, provide details on operations and demonstrate that flows, water levels, and operation are monitored to ensure such an operational mode is maintained. If deviations from required flows have occurred, discuss them and the measures taken to minimize reoccurrence.

The Millinocket Development is operated with inflow from the North Twin impoundment, which is discharged into Zone 1 – Millinocket Regulated River Reach Upstream. Under normal conditions, the daily outflow from the Millinocket Development approximately equals that from the North Twin Development, with an average daily regulation flow variation of about 130 cfs between the two outflows due to tributary inflows. Flows out of North Twin Dam into this reach are calculated from turbine and gate curves based on their settings, along with the head at North Twin Dam.

Because this reach is outside of the project influence of the Millinocket Development, being upstream of the backwater effect of the Millinocket impoundment, a Standard of 1 "Not Applicable" is assigned.

3.1.2 ZONE 2 – QUAKISH LAKE PORTION OF THE MILLINOCKET IMPOUNDMENT AND STONE DAM

Criterion	Standard	Supporting Information
A	**2** The flow regime at the facility was developed in accordance with a, science-based agency recommendation	Agency Recommendation: Identify the proceeding and source, date, and specifics of the agency recommendation applied (NOTE: there may be more than one; identify and explain which is most environmentally protective). • Explain the scientific or technical basis for the agency recommendation, including methods and data used. This is required regardless of whether the recommendation is or is not part of a Settlement Agreement. • Explain how the recommendation relates to agency management goals and objectives for fish and wildlife. • Explain how the recommendation provides fish and wildlife protection, mitigation and enhancement (including in-stream flows, ramping and peaking rate conditions, and seasonal and episodic instream flow variations).

Quakish Lake and Ferguson Pond, which together comprise the Millinocket impoundment and are hydrologically connected via a gate structure and canal at Stone Dam, are operated in run-of-river mode with minimum impoundment fluctuations, such that inflows into the impoundment are discharged equally as outflows through the Millinocket hydro station and/or Stone Dam. Brookfield's National System Control Center (NSCC) continuously monitors the impoundment level and flows. Depending on inflows with a corresponding incremental rise or fall of the impoundment, the NSCC will utilize the generating units at the Millinocket hydro station to stabilize headpond elevations, which ensures run-of-river operations. If headpond elevation maintenance cannot be met through the turbines (i.e., inflows exceed station capacity and/or units are out of service), the inflatable rubber flashboard system at Stone Dam may be deflated to discharge excess flows to the bypass reach.

A 2,000 cfs minimum flow is required in the West Branch of the Penobscot River downstream of the Millinocket Development (at Shad Pond) "for the protection of water quality and aquatic life" as dictated by the Penobscot Mills Project license, the Project's 401 Water Quality Certification, and as codified in the 1997 Water Management Plan, developed in consultation with the Maine Department of Inland Fisheries and Wildlife (MDIFW), Maine Department of Environmental Protection (MDEP), and U.S. Fish and Wildlife Service (USFWS).

Any deviations from run-of-river operations or minimum flow requirements at the Millinocket Development are reported to FERC as described above in Section 1.2.

While this Zone of Effect is operated in run-of-river mode with stable headpond elevations and inflows equal to outflows, such that Standard 1 would apply, the Millinocket Development has a bypass reach (at Stone Dam). As such, a Standard of 2 was selected. Effects of flows to the bypass reach are discussed below in Zone 3.

3.1.3 ZONE 3 – STONE DAM BYPASS REACH

Criterion	Standard	Supporting Information
A	**2** The flow regime at the facility was developed in accordance with a, science-based agency recommendation	Agency Recommendation (see Appendix A for definitions): • Identify the proceeding and source, date, and specifics of the agency recommendation applied (NOTE: there may be more than one; identify and explain which is most environmentally protective). • Explain the scientific or technical basis for the agency recommendation, including methods and data used. This is required regardless of whether the recommendation is or is not part of a Settlement Agreement. • Explain how the recommendation relates to agency management goals and objectives for fish and wildlife. • Explain how the recommendation provides fish and wildlife protection, mitigation and enhancement (including in-stream flows, ramping and peaking rate conditions, and seasonal and episodic instream flow variations).

Instream flow studies conducted during relicensing examined various flow releases on aquatic habitat and the potential for landlocked salmon habitat in the Back Channel including the effects of periodically fluctuating flow releases. However, studies demonstrated that increased flows into the Back Channel may not necessarily provide suitable spawning habitat nor support a landlocked salmon population and would have an adverse impact on the ability to maintain stable impoundment levels at the North Twin impoundment and required minimum flows into the West Branch of the Penobscot River.

As discussed extensively in the 1993 Water Quality Certification, existing flows into the Back Channel of leakage and occasional spillage have persisted since the completion of Stone Dam in 1899. As such, the habitat in that reach has established a baseline equilibrium for over 120 years. In addition, the MDIFW did not support fisheries enhancement of the Back Channel due to prioritization of flows in the system

for other habitat enhancements, and because the existing flow regime continues to provide angling opportunities in this reach.

Ramping of high flows into the Back Channel when released from the inflatable rubber flashboard system is conducted for safety purposes.

3.1.4 ZONE 4 – FERGUSON POND PORTION OF THE MILLINOCKET IMPOUNDMENT AND INTAKE STRUCTURE

Criterion	Standard	Supporting Information
A	**2** The flow regime at the facility was developed in accordance with a, science-based agency recommendation	Agency Recommendation: Identify the proceeding and source, date, and specifics of the agency recommendation applied (NOTE: there may be more than one; identify and explain which is most environmentally protective). • Explain the scientific or technical basis for the agency recommendation, including methods and data used. This is required regardless of whether the recommendation is or is not part of a Settlement Agreement. • Explain how the recommendation relates to agency management goals and objectives for fish and wildlife. • Explain how the recommendation provides fish and wildlife protection, mitigation and enhancement (including in-stream flows, ramping and peaking rate conditions, and seasonal and episodic instream flow variations).

As Ferguson Pond is hydrologically connected to Quakish Lake and is operated in the same run-of-river manner, the discussion in Section 3.1.2 applies to this Zone of Effect and will not be repeated here.

Any deviations from run-of-river operations or minimum flow requirements at the Millinocket Development are reported to FERC as described above in Section 1.2.

3.1.5 ZONE 5 – MILLINOCKET REGULATED DOWNSTREAM RIVER REACH

Criterion	Standard	Supporting Information
A	**2** The flow regime at the facility was developed in accordance with a, science-based agency recommendation	Agency Recommendation (see Appendix A for definitions): • Identify the proceeding and source, date, and specifics of the agency recommendation applied (NOTE: there may be more than one; identify and explain which is most environmentally protective). • Explain the scientific or technical basis for the agency recommendation, including methods and data used. This is required regardless of whether the recommendation is or is not part of a Settlement Agreement. • Explain how the recommendation relates to agency management goals and objectives for fish and wildlife. • Explain how the recommendation provides fish and wildlife protection, mitigation and enhancement (including in-stream flows, ramping and peaking rate conditions, and seasonal and episodic instream flow variations).

A 2,000 cfs minimum flow is required in the West Branch of the Penobscot River downstream from the Millinocket Development "for the protection of water quality and aquatic life" as dictated by the Penobscot Mills Project license, the Project's 401 Water Quality Certification, and as codified in the 1997 Water Management Plan, developed in consultation with MDIFW, MDEP, and the USFWS. Although natural inflows can at times be lower than 2,000 cfs at Millinocket, water storage is typically available in the North Twin impoundment and at storage dams further upriver to ensure passage of the 2,000 cfs minimum flow at Millinocket (the exception being during extreme and infrequent drought conditions). Outflows from Millinocket Lake Dam into Millinocket Stream also contribute to ensuring that the 2,000 cfs minimum flow is met, as Millinocket Stream empties into the West Branch of the Penobscot River at the Millinocket Development tailrace (and upstream of the Shad Pond flow measurement point).

Brookfield's NSCC monitors operations including impoundment elevations and flows through both the Millinocket hydro station turbines and as discharged through dam structures continuously to maintain compliance with requirements for run-of-river operations and minimum flows. As discussed in Section 3.1.2, maintenance of stable headpond elevations assures compliance with run-of-river obligations. Inflows into the Millinocket Development to be passed downstream into the West Branch of the Penobscot River are monitored by the NSCC via North Twin discharges, along with discharges from the Millinocket Lake Dam into Millinocket Stream.

Any deviations from run-of-river operations or minimum flow requirements at the Millinocket Development are reported to FERC as described above in Section 1.2.

While this Zone of Effect is operated in run-of-river mode with stable headpond elevations and inflows equal to outflows, such that Standard 1 would apply, the Millinocket Development has a bypass reach (at Stone Dam). However, only leakage and excess flows are required to be passed into this reach, and this area is managed under the Back Channel Wildlife Management Plan. A Standard of 2 was selected to account for the Back Channel bypass reach. Effects of flows to the bypass reach are discussed in Zone 3.

3.1.6 ZONE 6 – DOLBY POND IMPOUNDMENT

Criterion	Standard	Supporting Information
A	**1** The facility operates in a true run-of-river operational mode and there are no bypassed reaches or water diversions associated with the facility	Not Applicable / De Minimis Effect: • For run-of-river facilities, provide details on operations and demonstrate that flows, water levels, and operation are monitored to ensure such an operational mode is maintained. If deviations from required flows have occurred, discuss them and the measures taken to minimize reoccurrence. • For impoundment zones only, explain water management (e.g., fluctuations, ramping, refill rates) and how fish and wildlife habitat within the zone is evaluated and managed.

The Dolby Development is operated with inflow from the Millinocket Development, which is discharged into Zone 1 – Millinocket Regulated River Reach Upstream and into Zone 3 – Stone Dam Bypass Reach. As Dolby Pond is operated in the same run-of-river manner with stable headpond maintenance as the Millinocket impoundment, the discussion in Section 3.1.2 applies to this Zone of Effect and will not be repeated here.

Any deviations from run-of-river operations at the Dolby Development are reported to FERC as described above in Section 1.2.

While the Dolby Development does have a “bypass reach” for the purposes of this application, it is important to note that the bypass reach is not a true hydrologic bypass reach, as the powerhouse is integral to the dam and spillway. Water released from the dam discharges to approximately the same reach as water released from gates or as spills via overtopping of the flashboards. As such, a Standard of 1 was applied here.

3.1.7 ZONE 7 – DOLBY DAM BYPASS REACH

Criterion	Standard	Supporting Information
A	**2** The flow regime at the facility was developed in accordance with a, science-based agency recommendation	Agency Recommendation (see Appendix A for definitions): • Identify the proceeding and source, date, and specifics of the agency recommendation applied (NOTE: there may be more than one; identify and explain which is most environmentally protective). • Explain the scientific or technical basis for the agency recommendation, including methods and data used. This is required regardless of whether the recommendation is or is not part of a Settlement Agreement. • Explain how the recommendation relates to agency management goals and objectives for fish and wildlife. • Explain how the recommendation provides fish and wildlife protection, mitigation and enhancement (including in-stream flows, ramping and peaking rate conditions, and seasonal and episodic instream flow variations).

The Dolby Development does not have a true hydrologic bypass reach as the dam is integral to the powerhouse. Nevertheless, there is a high perched ledge downstream of the spillway that does not benefit from the backwater effect of the powerhouse tailrace discharge nor the East Millinocket impoundment just downstream. This ledge does not provide any aquatic habitat, being dry under normal operating conditions and sufficiently steep that fish and other aquatic life are not likely to traverse even under inundated conditions.

Due to the minimum flow requirement upstream at Shad Pond for the Millinocket Development, discharges from the Dolby dam and powerhouse typically exceed 2,000 cfs, including waters that may pass the spillway via overtopping and into the bypass reach. The NSCC monitors all discharges from the Dolby powerhouse, and through the gates and via spill at Dolby Dam, pursuant to the FERC and agency-approved 1997 Water Management Plan.

Any deviations from run-of-river operations at the Dolby Development are reported to FERC as described above in Section 1.2.

3.1.8 ZONE 8 – DOLBY REGULATED DOWNSTREAM RIVER REACH

Criterion	Standard	Supporting Information
A	**2** The flow regime at the facility was developed in accordance with a, science-based agency recommendation	Agency Recommendation (see Appendix A for definitions): • Identify the proceeding and source, date, and specifics of the agency recommendation applied (NOTE: there may be more than one; identify and explain which is most environmentally protective). • Explain the scientific or technical basis for the agency recommendation, including methods and data used. This is required regardless of whether the recommendation is or is not part of a Settlement Agreement. • Explain how the recommendation relates to agency management goals and objectives for fish and wildlife. • Explain how the recommendation provides fish and wildlife protection, mitigation and enhancement (including in-stream flows, ramping and peaking rate conditions, and seasonal and episodic instream flow variations).

A 2,000 cfs minimum flow is required to be discharged into the West Branch of the Penobscot River downstream of the Millinocket Development (and upstream of the Dolby Development) "for the protection of water quality and aquatic life" as dictated by the Penobscot Mills Project license, the Project's 401 Water Quality Certification, and as codified in the 1997 Water Management Plan, developed in consultation with MDIFW, MDEP, and the USFWS. Thus, the upstream minimum flow requirements at Millinocket are then passed at Dolby Dam in a run-of-river mode, providing a defacto minimum flow of 2,000 cfs at the Dolby Development.

Brookfield's NSCC continuously monitors operations at Dolby including impoundment elevations and flows through both the Dolby powerhouse turbines and as discharged through gate structures or via overtopping to maintain compliance with requirements for run-of-river operations.

Any deviations from run-of-river operations at the Dolby Development are reported to FERC as described above in Section 1.2.

3.2 WATER QUALITY

The stated Low Impact Hydropower Institute goal for Criterion B – Water Quality is "Water quality is protected in waterbodies directly affected by the facility, including

downstream reaches, bypassed reaches, and impoundments above dams and diversions." A discussion of the applicable standards by Zone of Effect is provided in the Sections below.

3.2.1 ZONE 1 – MILLINOCKET REGULATED RIVER REACH UPSTREAM

Criterion	Standard	Supporting Information
B	**2** The facility is in compliance with all water quality conditions contained in a recent Water Quality Certification or science-based resource agency recommendation providing reasonable assurance that water quality standards will be met for all waterbodies that are directly affected by the facility. Such recommendations, whether based on a generally applicable water quality standard or one that was developed on a site-specific basis, must include consideration of all water quality components necessary to preserve healthy fish and wildlife populations, human uses and recreation.	Agency Recommendation: • If facility is located on a Water Quality Limited river reach, provide a link to the state's most recent impaired waters list and indicate the page(s) therein that apply to facility waters. If possible, provide an agency letter stating that the facility is not a cause of such limitation. • Provide a copy of the most recent Water Quality Certificate and any subsequent amendments, including the date(s) of issuance. If more than 10 years old, provide documentation that the certification terms and conditions remain valid and in effect for the facility (e.g., a letter from the agency). • Identify any other agency recommendations related to water quality and explain their scientific or technical basis. • Describe all compliance activities related to water quality and any agency recommendations for the facility, including on-going monitoring, and how those are integrated into facility operations.

This reach is outside the Millinocket Development and is unaffected by project operations. However, it is the source water for flows into the Millinocket impoundment, which encompasses Quakish Lake and Ferguson Pond. Water quality information for Quakish Lake, including any potential impairments from inflows from the North Twin impoundment, are discussed in Section 3.2.2 below.

3.2.2 ZONE 2 – QUAKISH LAKE PORTION OF THE MILLINOCKET IMPOUNDMENT AND STONE DAM

Criterion	Standard	Supporting Information
B	**2** The facility is in compliance with all water quality conditions contained in a recent Water Quality Certification or science-based resource agency recommendation providing reasonable assurance that water quality standards will be met for all waterbodies that are directly affected by the facility. Such recommendations, whether based on a generally applicable water quality standard or one that was developed on a site-specific basis, must include consideration of all water quality components necessary to preserve healthy fish and wildlife populations, human uses and recreation.	Agency Recommendation: • If facility is located on a Water Quality Limited river reach, provide a link to the state's most recent impaired waters list and indicate the page(s) therein that apply to facility waters. If possible, provide an agency letter stating that the facility is not a cause of such limitation. • Provide a copy of the most recent Water Quality Certificate and any subsequent amendments, including the date(s) of issuance. If more than 10 years old, provide documentation that the certification terms and conditions remain valid and in effect for the facility (e.g., a letter from the agency). • Identify any other agency recommendations related to water quality and explain their scientific or technical basis. • Describe all compliance activities related to water quality and any agency recommendations for the facility, including on-going monitoring, and how those are integrated into facility operations.

The West Branch of the Penobscot River, from the outlet of Elbow Lake (at North Twin Dam) to the outlet of Ferguson Pond and Quakish Lakes, is Class B. 38 M.R.S.A. § 467(7)(C)(1)(e). Class B waters shall be of such quality that they are suitable for the designated uses of drinking water supply after treatment; fishing; recreation in and on the water; industrial process and cooling water supply; hydroelectric power generation, except as prohibited under Title 12, section 403; and navigation; and as habitat for fish and other aquatic life. The habitat shall be characterized as unimpaired. 38 M.R.S.A. § 465(3)(A) The habitat characteristics and aquatic life criteria of Class B are deemed to be met in an existing impoundment classified B if the impounded waters achieve the aquatic life criteria of Class C, provided that any reasonable changes are implemented that do not significantly affect existing energy generation capability and would result in improvement in the habitat and aquatic life of the impounded waters, and further provided that, where the actual quality of the impounded waters attains any more stringent habitat characteristic or aquatic life criteria than required under the assigned classification, the existing water quality must be maintained and protected. 38 M.R.S.A. § 464(10).

The dissolved oxygen content of Class B waters shall be not less than 7 parts per million or 75% of saturation, whichever is higher, except that for the period from

October 1st to May 14th, in order to ensure spawning and egg incubation of indigenous fish species, the 7-day mean dissolved oxygen concentration shall not be less than 9.5 parts per million and the 1-day minimum dissolved oxygen concentration shall not be less than 8.0 parts per million in identified fish spawning areas. 38 M.R.S.A. § 465(3)(B).

Water quality studies conducted as part of relicensing indicate that the dissolved oxygen levels in the Millinocket impoundment meet Class B criteria. All designated uses were deemed to have been met as outlined in the 1993 Water Quality Certification. Specific to aquatic habitat, this designated use was deemed to be met though run-of-river operation (stable impoundment elevations) and a minimum flow of 2,000 cfs that is maintained downstream of the Millinocket Development.

This section of the West Branch of the Penobscot River is not identified as impaired in MDEP's 2016 305(b) report.

3.2.3 ZONE 3 – STONE DAM BYPASS REACH

Criterion	Standard	Supporting Information
B	**2** The facility is in compliance with all water quality conditions contained in a recent Water Quality Certification or science-based resource agency recommendation providing reasonable assurance that water quality standards will be met for all waterbodies that are directly affected by the facility. Such recommendations, whether based on a generally applicable water quality standard or one that was developed on a site-specific basis, must include consideration of all water quality components necessary to preserve healthy fish and wildlife populations, human uses and recreation.	Agency Recommendation: • If facility is located on a Water Quality Limited river reach, provide a link to the state's most recent impaired waters list and indicate the page(s) therein that apply to facility waters. If possible, provide an agency letter stating that the facility is not a cause of such limitation. • Provide a copy of the most recent Water Quality Certificate and any subsequent amendments, including the date(s) of issuance. If more than 10 years old, provide documentation that the certification terms and conditions remain valid and in effect for the facility (e.g., a letter from the agency). • Identify any other agency recommendations related to water quality and explain their scientific or technical basis. • Describe all compliance activities related to water quality and any agency recommendations for the facility, including on-going monitoring, and how those are integrated into facility operations.

The West Branch of the Penobscot River, from the outlet of Ferguson Pond and Quakish Lake to its confluence with the East Branch of the Penobscot River, including all impoundments, is Class C. 38 M.R.S.A. § 467(7)(C)(1)(e).

As discussed in Section 3.1.3, any excess flows and leakage flows of between 2 and 5 cfs are passed into the bypass reach downstream of Stone Dam, and this channel has been established under this flow regime since 1899. Increased flows into the reach were deemed to be unreasonable and impractical, considering the requirements placed on managed water elsewhere in the system for the protection of aquatic habitat in the West Branch of the Penobscot River. As such, Water Quality Certification of this reach was waived by the MDEP during relicensing of the Penobscot Mills Project in the 1990s, although the lowered flows from Stone Dam to this reach since its construction in 1899 are identified in the MDEP's 2016 305(b) list as "Category 4-C impaired by flow diversion".

3.2.4 ZONE 4 – FERGUSON POND PORTION OF THE MILLINOCKET IMPOUNDMENT AND INTAKE STRUCTURE

Criterion	Standard	Supporting Information
B	**2** The facility is in compliance with all water quality conditions contained in a recent Water Quality Certification or science-based resource agency recommendation providing reasonable assurance that water quality standards will be met for all waterbodies that are directly affected by the facility. Such recommendations, whether based on a generally applicable water quality standard or one that was developed on a site-specific basis, must include consideration of all water quality components necessary to preserve healthy fish and wildlife populations, human uses and recreation.	Agency Recommendation: • If facility is located on a Water Quality Limited river reach, provide a link to the state's most recent impaired waters list and indicate the page(s) therein that apply to facility waters. If possible, provide an agency letter stating that the facility is not a cause of such limitation. • Provide a copy of the most recent Water Quality Certificate and any subsequent amendments, including the date(s) of issuance. If more than 10 years old, provide documentation that the certification terms and conditions remain valid and in effect for the facility (e.g., a letter from the agency). • Identify any other agency recommendations related to water quality and explain their scientific or technical basis. • Describe all compliance activities related to water quality and any agency recommendations for the facility, including on-going monitoring, and how those are integrated into facility operations.

As Ferguson Pond is hydrologically connected to Quakish Lake and is operated in the same run-of-river manner, the discussion in Section 3.2.2 applies to this Zone of Effect and will not be repeated here.

Any deviations from run-of-river operations or minimum flow requirements at the Millinocket Development are reported to FERC as described above in Section 1.2.

3.2.5 ZONE 5 – MILLINOCKET REGULATED DOWNSTREAM RIVER REACH

Criterion	Standard	Supporting Information
B	**2** The facility is in compliance with all water quality conditions contained in a recent Water Quality Certification or science-based resource agency recommendation providing reasonable assurance that water quality standards will be met for all waterbodies that are directly affected by the facility. Such recommendations, whether based on a generally applicable water quality standard or one that was developed on a site-specific basis, must include consideration of all water quality components necessary to preserve healthy fish and wildlife populations, human uses and recreation.	Agency Recommendation: • If facility is located on a Water Quality Limited river reach, provide a link to the state's most recent impaired waters list and indicate the page(s) therein that apply to facility waters. If possible, provide an agency letter stating that the facility is not a cause of such limitation. • Provide a copy of the most recent Water Quality Certificate and any subsequent amendments, including the date(s) of issuance. If more than 10 years old, provide documentation that the certification terms and conditions remain valid and in effect for the facility (e.g., a letter from the agency). • Identify any other agency recommendations related to water quality and explain their scientific or technical basis. • Describe all compliance activities related to water quality and any agency recommendations for the facility, including on-going monitoring, and how those are integrated into facility operations.

The West Branch of the Penobscot River, from the outlet of Ferguson Pond and Quakish Lakes to its confluence with the East Branch of the Penobscot River, including all impoundments, is Class C. 38 M.R.S.A. § 467(7)(C)(1)(e). Class C waters shall be of such quality that they are suitable for the designated uses of drinking water supply after treatment; fishing; recreation in and on the water; industrial process and cooling water supply; hydroelectric power generation, except as prohibited under Title 12, section 403; and navigation; and as habitat for fish and other aquatic life. 38 M.R.S.A. § 465(4)(A). The habitat characteristics and aquatic life criteria of Class C are deemed to be met in an existing impoundment classified C, if reasonable changes can be implemented that do not significantly affect existing energy generation capability. If those changes would result in improvement in habitat and aquatic life of the impounded waters, then those changes must be implemented. Where the actual water quality of the impounded waters attains any more stringent habitat characteristic or aquatic life criteria than that required under the assigned classification, the existing water quality must be maintained and protected. 38 M.R.S.A. § 464(10).

The dissolved oxygen content of Class C waters shall be not less than 5 parts per million or 60% of saturation, whichever is higher, except that in identified salmonid spawning areas where water quality is sufficient to ensure spawning, egg incubation and

survival of early life stages, that water quality sufficient for these purposes shall be maintained. 38 M.R.S.A. § 465(4)(8).

Water quality studies conducted as part of relicensing indicate that the dissolved oxygen levels in the West Branch of the Penobscot River downstream of Millinocket Development meet Class C criteria. All designated uses were deemed to have been met as outlined in the 1993 Water Quality Certification. The fishery resource agencies recommended, during relicensing, that a minimum flow of 2,000 cfs be maintained in the West Branch of the Penobscot River at Millinocket in order to protect downstream aquatic habitat, and that the Millinocket Development be operated in run-of-river mode. Specific to aquatic habitat, this designated use was deemed to be met though run-of-river operation (stable impoundment elevations) and a minimum flow of 2,000 cfs maintained downstream of the Millinocket Development.

The West Branch of the Penobscot River between Millinocket Stream and the East Branch of the Penobscot River, which includes Zones 5 – 8, have been historically listed as impaired for aquatic life use because of previously documented non-attainment of dissolved oxygen criteria and problems with nutrient/eutrophication biological indicators. However, water quality has improved in this reach as a result of the closure of the Millinocket and East Millinocket paper mills, and this reach has been proposed by the MDEP for a reclassification from Class C to Class B, based on recent water quality monitoring efforts.

3.2.6 ZONE 6 – DOLBY POND IMPOUNDMENT

Criterion	Standard	Supporting Information
B	**2** The facility is in compliance with all water quality conditions contained in a recent Water Quality Certification or science-based resource agency recommendation providing reasonable assurance that water quality standards will be met for all waterbodies that are directly affected by the facility. Such recommendations, whether based on a generally applicable water quality standard or one that was developed on a site-specific basis, must include consideration of all water quality components necessary to preserve healthy fish and wildlife populations, human uses and recreation.	Agency Recommendation: • If facility is located on a Water Quality Limited river reach, provide a link to the state's most recent impaired waters list and indicate the page(s) therein that apply to facility waters. If possible, provide an agency letter stating that the facility is not a cause of such limitation. • Provide a copy of the most recent Water Quality Certificate and any subsequent amendments, including the date(s) of issuance. If more than 10 years old, provide documentation that the certification terms and conditions remain valid and in effect for the facility (e.g., a letter from the agency). • Identify any other agency recommendations related to water quality and explain their scientific or technical basis. • Describe all compliance activities related to water quality and any agency recommendations for the facility, including on-going monitoring, and how those are integrated into facility operations.

As discussed above, the Dolby impoundment is included in the reach of the West Branch of the Penobscot River classified as Class C. All designated uses were deemed to have been met as outlined in the 1993 Water Quality Certification.

During water quality studies conducted during relicensing, low dissolved oxygen levels were recorded in the bottom of the Dolby impoundment, but were determined by the MDEP not to be related to project operations. The Dolby impoundment, which was previously identified as impaired due to low dissolved oxygen levels as recorded in the bottom of Dolby Pond, was delisted in 2004 from Category 4-C in the MDEP's 305(b) report. New impoundment dissolved oxygen measurements were shown to be in attainment, as the previous deficits were the result of paper mill discharges from upstream sources.

Water quality studies conducted during relicensing indicate that concentrations of metals and mercury were present in higher concentrations in the Dolby impoundment than in those impoundments upstream of the Penobscot Mills Project. The MDEP requested the licensee to conduct a study to determine the interrelationship and impacts of atmospheric deposition and water level fluctuations on concentrations of mercury, cadmium, lead, and other toxic metals on aquatic life in the project waters. Although elevated mercury accumulation rates in the sediment and methyl-mercury

concentrations in the water column were found in the Dolby impoundment, the reasons for the variable mercury contamination rates were inconclusive due to several confounding factors (size of the watershed; stratification effects; thick layers of sawdust in the sediment). Thus, on October 4, 2000, FERC approved the licensee's final mercury contamination report, filed on June 11, 1999 and supplemented on October 6, 1999, agreeing that, due to the confounding factors, the study did not indicate that impoundment operations had any impact on the mercury levels.

3.2.7 ZONE 7 – DOLBY DAM BYPASS REACH

Criterion	Standard	Supporting Information
B	**2** The facility is in compliance with all water quality conditions contained in a recent Water Quality Certification or science-based resource agency recommendation providing reasonable assurance that water quality standards will be met for all waterbodies that are directly affected by the facility. Such recommendations, whether based on a generally applicable water quality standard or one that was developed on a site-specific basis, must include consideration of all water quality components necessary to preserve healthy fish and wildlife populations, human uses and recreation.	Agency Recommendation: • If facility is located on a Water Quality Limited river reach, provide a link to the state's most recent impaired waters list and indicate the page(s) therein that apply to facility waters. If possible, provide an agency letter stating that the facility is not a cause of such limitation. • Provide a copy of the most recent Water Quality Certificate and any subsequent amendments, including the date(s) of issuance. If more than 10 years old, provide documentation that the certification terms and conditions remain valid and in effect for the facility (e.g., a letter from the agency). • Identify any other agency recommendations related to water quality and explain their scientific or technical basis. • Describe all compliance activities related to water quality and any agency recommendations for the facility, including on-going monitoring, and how those are integrated into facility operations.

This reach is effectively the same as Zone 8, discussed below.

3.2.8 ZONE 8 – DOLBY REGULATED DOWNSTREAM RIVER REACH

Criterion	Standard	Supporting Information
B	**2** The facility is in compliance with all water quality conditions contained in a recent Water Quality Certification or science-based resource agency recommendation providing reasonable assurance that water quality standards will be met for all waterbodies that are directly affected by the facility. Such recommendations, whether based on a generally applicable water quality standard or one that was developed on a site-specific basis, must include consideration of all water quality components necessary to preserve healthy fish and wildlife populations, human uses and recreation.	Agency Recommendation: • If facility is located on a Water Quality Limited river reach, provide a link to the state's most recent impaired waters list and indicate the page(s) therein that apply to facility waters. If possible, provide an agency letter stating that the facility is not a cause of such limitation. • Provide a copy of the most recent Water Quality Certificate and any subsequent amendments, including the date(s) of issuance. If more than 10 years old, provide documentation that the certification terms and conditions remain valid and in effect for the facility (e.g., a letter from the agency). • Identify any other agency recommendations related to water quality and explain their scientific or technical basis. • Describe all compliance activities related to water quality and any agency recommendations for the facility, including on-going monitoring, and how those are integrated into facility operations.

As discussed above, the reach of the West Branch of the Penobscot River below Dolby Dam is classified as Class C. All designated uses were deemed to have been met as outlined in the 1993 Water Quality Certification. No impairments were identified for this reach of the West Branch of the Penobscot River in the 2016 303(b) Report.

3.3 UPSTREAM FISH PASSAGE

The stated Low Impact Hydropower Institute goal for Criterion C – Upstream Fish Passage is "The facility allows for the safe, timely, and effective upstream passage of migratory fish. This criterion is intended to ensure that migratory species can successfully complete their life cycles and maintain healthy, sustainable fish and wildlife resources in areas affected by the facility."

Criterion	Standard	Supporting Information
C	**1** The facility does not create a barrier to upstream passage, or there are no migratory fish in the vicinity of the facility and the facility is not the cause of extirpation of species that were present historically.	Agency Recommendation: • Explain why the facility does not impose a barrier to upstream fish passage in the designated zone. Typically, impoundment zones will qualify for this standard since once above a dam and in an impoundment, there is no facility barrier to further upstream movement. • Document available fish distribution data and the lack of migratory fish species in the vicinity. • If migratory fish species have been extirpated from the area, explain why the facility is or was not the cause of this.

There are currently no anadromous fish species present in the West Branch of the Penobscot River, because there are no upstream fish passage facilities for anadromous fish species at the downstream Medway Project and at projects upstream. The West Branch of the Penobscot River is within historical habitat for Atlantic salmon, but it is not designated as critical habitat, and thus is not managed for Atlantic salmon. Likewise, the West Branch of the Penobscot River is not managed for alosines (river herring; American shad). Eels are present in low numbers in the lower portion of the West Branch of the Penobscot River.

The Millinocket and Dolby Developments do not have, and are not required to have, fish passage facilities, as anadromous fish are not present in the reaches occupied by these Developments. As such, all Zones of Effect meet Standard C-1.

3.4 DOWNSTREAM FISH PASSAGE

The stated Low Impact Hydropower Institute goal for Criterion D – Downstream Fish Passage is "The facility allows for the safe, timely, and effective downstream passage of migratory fish. For riverine (resident) fish, the facility minimizes loss of fish from reservoirs and upstream river reaches affected by facility operations. All migratory species can successfully complete their life cycles and to maintain healthy, sustainable fish and wildlife resources in the areas affected by the facility."

Criterion	Standard	Supporting Information
D	**1** The facility does not create a barrier to downstream passage, or there are no migratory fish in the vicinity of the facility; if migratory fish were present historically, the facility did not contribute to the extirpation of such species; the facility does not contribute adversely to the sustainability of riverine fish populations or to their access to habitat necessary for the completion of their life cycles.	Agency Recommendation: • Explain why the facility does not impose a barrier to downstream fish passage in the designated zone, considering both physical obstruction and increased mortality relative to natural downstream movement (e.g., entrainment into hydropower turbines). Typically, tailwater/downstream zones will qualify for this standard since below a dam and powerhouse there is no facility barrier to further downstream movement. Bypassed reach zones must demonstrate that flows in the reach are adequate to support safe, effective and timely downstream migration. • For riverine fish populations that are known to move downstream, explain why the facility does not contribute adversely to the sustainability of these populations or to their access to habitat necessary for successful completion of their life cycles. • Document available fish distribution data and the lack of migratory fish species in the vicinity. • If migratory fish species have been extirpated from the area, explain why the facility is or was not the cause of this.

There are currently no anadromous fish species present in the reach of the West Branch of the Penobscot River, because there are no upstream fish passage facilities for anadromous species at the Medway Project and at projects upstream. The West Branch of the Penobscot River is within historical habitat for Atlantic salmon, but it is not designated as critical habitat. Eels are present in low numbers in the lower portion of the West Branch of the Penobscot River.

None of the facilities of the Millinocket or Dolby Developments have fish passage facilities, and anadromous fish are not present in the reaches occupied by these Developments. As such, all Zones of Effect meet Standard D-1.

3.5 SHORELINE AND WATERSHED PROTECTION

The stated Low Impact Hydropower Institute goal for Criterion E – Shoreline and Watershed Protection is "The facility has demonstrated that sufficient action has been taken to protect, mitigate or enhance the condition of soils, vegetation and ecosystem functions on shoreline and watershed lands associated with the facility." Article 418 requires a Shoreline Management Plan (SMP) for project lands owned by the licensee around the Penobscot Mills Project impoundments. The resulting SMP was initially submitted to FERC on October 17, 1997. As the result of field surveys conducted to support the conveyance of the Penobscot Mills

license and assets to a new licensee (GNE, LLC), the SMP was updated and resubmitted to FERC on September 25, 2001 to correct errors identified during the surveys (SMP attached). The SMP details how the licensee oversees and controls the uses allowed along shoreline areas within the project boundary, which was expanded after FERC license issuance in 1996 to include areas within 200 feet of the normal full pond elevation on licensee-owned lands along the Project impoundments but excluding existing leased lots and shoreline areas reserved for future development. Since it is part of the Penobscot Mills Project, the project boundary was also expanded along the riverine reach downstream of North Twin Dam and upstream of the Millinocket impoundment (Quakish Lake).

The SMP incorporates license requirements for building setback restrictions (200 feet) and a 100-foot vegetative buffer restriction, and it provides for appropriate public access to project impoundments for recreation. It also describes how the licensee will manage lands within the project boundary to provide for the continued effective management of the renewable forest and water resources on project lands while recognizing and protecting the recreational and other natural resource values on those lands. FERC approved the SMP on February 12, 2002.

3.5.1 ZONE 1 – MILLINOCKET REGULATED RIVER REACH UPSTREAM

Criterion	Standard	Supporting Information
E	**2** The facility is in compliance with all government agency recommendations in a license or certificate, such as an approved SMP or equivalent for protection, mitigation or enhancement of shoreline surrounding the project.	Agency Recommendation: • Provide copies or links to any agency recommendations or management plans that are in effect related to protection, mitigation, or enhancement of shoreline surrounding the facility (e.g., Shoreline Management Plans). • Provide documentation that indicates the facility is in full compliance with any agency recommendations or management plans that are in effect.

Zone 1, which comprises the riverine reach downstream of North Twin Dam and upstream of the Millinocket impoundment, has an associated project boundary that is expanded to include shoreline areas within 200 feet of the river; these shoreline areas are thus covered by the Penobscot Mills SMP. Although there are no leased lots excluded from the project boundary in Zone 1, this section of river does include a DOT highway bridge crossing (Route 11), a railroad bridge crossing, and a recreational trail bridge crossing for snowmobiles and ATVs. Zone 1 also includes GLHA's Green Bridge concrete boat launch, which provides boating access upstream to North Twin Dam and downstream to the Millinocket impoundment.

3.5.2 ZONE 2 – QUAKISH LAKE PORTION OF MILLINOCKET IMPOUNDMENT AND STONE DAM

Criterion	Standard	Supporting Information
E	**2** The facility is in compliance with all government agency recommendations in a license or certificate, such as an approved SMP or equivalent for protection, mitigation or enhancement of shoreline surrounding the project.	Agency Recommendation: • Provide copies or links to any agency recommendations or management plans that are in effect related to protection, mitigation, or enhancement of shoreline surrounding the facility (e.g., Shoreline Management Plans). • Provide documentation that indicates the facility is in full compliance with any agency recommendations or management plans that are in effect.

Except for one area not owned by GLHA and one area reserved for future development, the project boundary for the entire Quakish Lake shoreline is expanded to include areas within 200 feet of the normal full pond elevation for the Millinocket impoundment. In addition, all islands within Quakish Lake are included in the Penobscot Mills project boundary. The Penobscot Mills SMP covers all of these shoreline and island areas included in the project boundary.

3.5.3 ZONE 3 – STONE DAM BYPASS REACH

Criterion	Standard	Supporting Information
E	**2** The facility is in compliance with all government agency recommendations in a license or certificate, such as an approved SMP or equivalent for protection, mitigation or enhancement of shoreline surrounding the project.	Agency Recommendation: • Provide copies or links to any agency recommendations or management plans that are in effect related to protection, mitigation, or enhancement of shoreline surrounding the facility (e.g., Shoreline Management Plans). • Provide documentation that indicates the facility is in full compliance with any agency recommendations or management plans that are in effect.

The Zone 3 bypass reach below Stone Dam is encompassed within the 2,300 acre Back Channel Wildlife Area, which is included in the Penobscot Mills project boundary. However, this wildlife area is not covered by the SMP, as it has its own plan for wildlife management activities, including timber harvesting and shoreline (riparian) area protections.

3.5.4 ZONE 4 – FERGUSON POND PORTION OF MILLINOCKET IMPOUNDMENT AND INTAKE STRUCTURE

Criterion	Standard	Supporting Information
E	**2** The facility is in compliance with all government agency recommendations in a license or certificate, such as an approved SMP or equivalent for protection, mitigation or enhancement of shoreline surrounding the project.	Agency Recommendation: • Provide copies or links to any agency recommendations or management plans that are in effect related to protection, mitigation, or enhancement of shoreline surrounding the facility (e.g., Shoreline Management Plans). • Provide documentation that indicates the facility is in full compliance with any agency recommendations or management plans that are in effect.

Except for two areas reserved for future development and areas within the Millinocket mill property, the project boundary for Ferguson Pond shoreline areas owned by GLHA is expanded to include areas within 200 feet of the normal full pond elevation for the Millinocket impoundment. In addition, all islands within Ferguson Pond are included in the Penobscot Mills project boundary. The Penobscot Mills SMP covers all of these shoreline and island areas included in the project boundary.

3.5.5 ZONE 5 – MILLINOCKET REGULATED DOWNSTREAM RIVER REACH

Criterion	Standard	Supporting Information
E	**2** The facility is in compliance with all government agency recommendations in a license or certificate, such as an approved SMP or equivalent for protection, mitigation or enhancement of shoreline surrounding the project.	Agency Recommendation: • Provide copies or links to any agency recommendations or management plans that are in effect related to protection, mitigation, or enhancement of shoreline surrounding the facility (e.g., Shoreline Management Plans). • Provide documentation that indicates the facility is in full compliance with any agency recommendations or management plans that are in effect.

Zone 5 is not in the Penobscot Mills project boundary, and its shoreline areas are not covered by the Penobscot Mills SMP.

3.5.6 ZONE 6 – DOLBY POND IMPOUNDMENT

Criterion	Standard	Supporting Information
E	**2** The facility is in compliance with all government agency recommendations in a license or certificate, such as an approved SMP or equivalent for protection, mitigation or enhancement of shoreline surrounding the project.	Agency Recommendation: • Provide copies or links to any agency recommendations or management plans that are in effect related to protection, mitigation, or enhancement of shoreline surrounding the facility (e.g., Shoreline Management Plans). • Provide documentation that indicates the facility is in full compliance with any agency recommendations or management plans that are in effect.

GLHA holds a hydroelectric easement for portions of the Dolby Pond shoreline and for islands located in the towns of Millinocket and East Millinocket. Except for two developed areas, the project boundary for these shoreline areas is expanded to include areas within 200 feet of the normal full pond elevation for the Dolby impoundment. In addition, the Dolby Pond islands held in easement by GLHA are also included in the Penobscot Mills project boundary. The Penobscot Mills SMP covers all of these shoreline and island areas that are included in the project boundary.

3.5.7 ZONE 7 – DOLBY DAM BYPASS REACH

Criterion	Standard	Supporting Information
E	**2** The facility is in compliance with all government agency recommendations in a license or certificate, such as an approved SMP or equivalent for protection, mitigation or enhancement of shoreline surrounding the project.	Agency Recommendation: • Provide copies or links to any agency recommendations or management plans that are in effect related to protection, mitigation, or enhancement of shoreline surrounding the facility (e.g., Shoreline Management Plans). • Provide documentation that indicates the facility is in full compliance with any agency recommendations or management plans that are in effect.

There are no shoreline areas downstream of Dolby Dam covered by the Penobscot Mills SMP.

3.5.8 ZONE 8 – DOLBY REGULATED DOWNSTREAM RIVER REACH

Criterion	Standard	Supporting Information
E	**2** The facility is in compliance with all government agency recommendations in a license or certificate, such as an approved SMP or equivalent for protection, mitigation or enhancement of shoreline surrounding the project.	Agency Recommendation: • Provide copies or links to any agency recommendations or management plans that are in effect related to protection, mitigation, or enhancement of shoreline surrounding the facility (e.g., Shoreline Management Plans). • Provide documentation that indicates the facility is in full compliance with any agency recommendations or management plans that are in effect.

There are no shoreline areas downstream of Dolby Dam covered by the Penobscot Mills SMP.

3.6 THREATENED AND ENDANGERED SPECIES

The stated Low Impact Hydropower Institute goal for Criterion F – Threatened and Endangered Species Protection is "The facility does not negatively impact federal or state listed species". USFWS IPaC report information and MDIFW MESA information is applicable to all Zones of Effect for the Millinocket and Dolby Developments. These are discussed collectively below.

Criterion	Standard	Supporting Information
F	**2** There are listed species in the area, but the facility has been found by an appropriate resource management agency to have no negative effect on them, or habitat for the species does not exist within the project's affected area or is not impacted by facility operations.	Finding of No Negative Effects: • Identify all federal and state listed species in the facility area based on current data from the appropriate state and federal natural resource management agencies. • Provide documentation that there is no demonstrable negative effect of the facility on any listed species in the area from an appropriate natural resource management agency or provide documentation that habitat for the species does not exist within the ZoE or is not impacted by facility operations.

An Information for Planning and Consultation (IPaC) report and USFWS Official Species List was developed for the Project and is provided in Section 7.0. The following federally-listed Endangered or Threatened species that may be present in the project vicinity: Canada Lynx (Threatened; for which critical habitat in the project vicinity has been identified); Northern Long-Eared Bat (NLEB) (Threatened; for which a Final Section 4(d) rule has been published for activities that may affect the species for streamlined consultation); and Atlantic salmon

(Endangered; which are documented as historically occupying the West Branch of the Penobscot River but for which critical habitat is not present in the project vicinity).

In addition, the following state-listed Endangered, Threatened, and Special Concern species have been documented in the general vicinity of the Penobscot Mills Developments (Millinocket Mill and Dolby) Project Area: Creeper (Special Concern); Tidewater Mucket (State Threatened); Yellow lampmussel (State Threatened); Wood Turtle (Special Concern); and American Eel (Special Concern). Bald eagles have also been documented in the project area but were de-listed on both the state and federal level[5]. In addition, several of species of bats could occur within the project area during migration and/or the breeding season: Little brown bat (State Endangered); Northern long-eared bat (State Endangered); Eastern small-footed bat (State Threatened); Big brown bat (Special Concern); Red bat (Special Concern); Hoary bat (Special Concern); Silver-haired bat (Special Concern); and Tri-colored bat (Special Concern).

With respect to the aquatic species, the Millinocket and Dolby Developments are operated in run of river mode with stable headpond. Periodic dam repairs may require some drawdown for which the resource agencies are notified. In addition, the impoundment may drop below the elevation of 1 ft from normal full pond at times when pinned flashboards fail. Normal routine operations, however, are not anticipated to have a negative effect on mussel and reptile species.

Atlantic salmon and American eel have had historic presence in the West Branch of the Penobscot River, including project waters. However, there is no fish passage or eel passage facilities at the downstream East Millinocket Development and no requirement for anadromous fish passage or eel passage at the Penobscot Mills Project. In addition, Atlantic salmon passage has been focused on the mainstem and East Branch of the Penobscot River, the latter of which provides 75 miles of unimpounded river of high quality (Class AA). As such, no Projects on the West Branch currently have fish passage facilities and therefore, Atlantic salmon are not present in the project area. Only the Medway Project has eel passage; however, very few eels have been recorded as passing the Medway Project, which is located several miles downstream of the Dolby and Millinocket Developments and no eel passage facilities are installed at the East Millinocket Development, which is also downstream. Specifically, eel were only observed passing the Medway Project in 4 out of 12 years of monitoring (2004 – 2015); an average of 7 eels observed per year.

Routine project operations are not anticipated to affect terrestrial species such as bald eagle and bats. There may be periodic vegetation clearing for dam safety, access, and other purposes but these would be conducted in accordance with the Section 4(d) rule using the USFWS streamlined consultation process. As such, no negative effects are anticipated by this periodic activity.

3.7 CULTURAL AND HISTORIC RESOURCES

The stated Low Impact Hydropower Institute goal for Criterion G – Cultural and Historic Resource Protection is "The facility does not unnecessarily impact cultural or historic resources

[5] Eagles continue to be protected under the federal Bald Eagle and Golden Eagle Protection Act ("Eagle Act") as well as other federal laws.

that are associated with the facility's lands and waters, including resources important to local indigenous populations, such as Native Americans." Based on the archaeological Phase I survey and the Phase II archaeological testing report, none of the cultural or historical resources covered by the April 9, 1998 CRMP are located in the Zones of Effect for the Millinocket or Dolby Developments. As such, the application of the G-2 Standard for Cultural and Historic Resources is applicable to all Zones of Effect and discussed collectively below.

Criterion	Standard	Supporting Information
G	**2**	Approved Plan: • Provide documentation of all approved state, federal, and recognized tribal plans for the protection, enhancement, and mitigation of impacts to cultural and historic resources affected by the facility. • Document that the facility is in compliance with all such plans.

Article 417 of the Penobscot Mills Project License implements the Programmatic Agreement for the Project's cultural resources, of which the Cultural Resource Management Plan (CRMP) is a part. Pursuant to final CRMPs that were submitted to FERC on April 9, 1998 for the Ripogenus and Penobscot Mills Projects, annual reports on activities related to the management of historic properties at these Projects are submitted to FERC. However, none of the seven prehistoric archaeological sites identified in the Penobscot Mills CRMP are located at the Millinocket or Dolby Developments, nor in the Zones covered by this application. These seven sites were deemed significant and eligible for listing in the National Register of Historic Places, and their selection was based on an archaeological Phase I survey conducted at the Penobscot Mills Project in the late 1980s and a Phase II archaeological testing report completed circa 1990.

3.8 RECREATIONAL RESOURCES

The stated Low Impact Hydropower Institute goal for Criterion H – Recreation Resources is "The facility accommodates recreation activities on lands and waters controlled by the facility and provides recreational access to its associated lands and waters without fee or charge."

Article 414 requires the licensee to construct, operate and maintain specified recreational facilities, including parking for three vehicles at the Dead Man's Curve boat access site, four vehicle parking spaces at the Route 157 boat access at Dolby Pond and removal of obstructions, and provide six parking spaces at the Green Bridge boat access site above Quakish Lake. These improvements were completed in the late 1990s, and photos of the Green Bridge boat launch site and the two boat launches for the Dolby Development can be found in the 2016 Environmental Inspection Report (see hyperlink in Section 6.0).

Article 415 requires the licensee to monitor recreational use. Specifically, and as discussed in Section 1.4.1, Article 415 states: The licensee, after consultation with the U.S. Fish and Wildlife Service (FWS), U.S. National Park Service (NPS), Maine Department of Inland

Fisheries and Wildlife (DIFW), Maine Department of Conservation (DOC), and Maine Bureau of Parks and Recreation, shall monitor recreation use of the Penobscot Mills project area to determine whether, existing recreation facilities are meeting recreation needs. Monitoring studies shall begin within six years of the date of issuance of the license and shall include at a minimum the collection of annual recreation use data. Every six years during the term of the license, the licensee shall file a report with the Commission on the monitoring results. This report shall include:

1. Annual recreational use figures;
2. A discussion of the adequacy of the licensee's recreation facilities at the project site to meet recreation demand;
3. A description of the methodology used to collect all study data;
4. If there is a need for additional facilities, a recreation plan proposed by the licensee to accommodate recreational demand in the project area;
5. If there is need for additional facilities, the licensee's design of recreational facilities shall conform to the national standards established by the Architectural and Transportation Barriers Compliance Board pursuant to the Americans with Disabilities Act of 1990;
6. Documentation of agency consultation and agency comments on the report after it has been prepared and provided to the agencies; and
7. Specific descriptions of how the agency comments are accommodated by the report.

Recreation Facility Monitoring Reports for the Project (provided as links in Section 6.0) were filed in October 2002; April 2009; and April 2015. The next Recreation Facility Monitoring Report is due April 2021. Recreation use at the Millinocket Development, as reported in the 2015 Recreation Report, was 410 daytime recreational use days and 0 nighttime use visits. Recreation use at the Dolby Development, as reported in the 2015 Recreation Report, was 2,245 daytime recreational use days and 0 nighttime use visits.

Article 416 requires the licensee to file a plan for establishing and collecting fees for recreational facilities. The conclusion of the Report, filed with the FERC on October 6, 1997 (provided as a link in Section 6.0), is “For the term of the current Penobscot Mills license, (the Licensee) proposes to continue its current policy of providing free use of all Penobscot Mills recreational facilities”.

Article 420 requires the licensee to consult with the Maine Department of Conservation (DOC) to determine the need for a study to mark or remove submerged hazards to recreational boaters using Millinocket Lake and the North Twin Impoundment. These water bodies are not located within the project boundary for the Millinocket or Dolby Developments.

The Millinocket and Dolby Developments are also subject to the requirements of Part 8, including safety signage. Inspections of Part 8 signs are scheduled annually at the start of the recreation season, and signs are replaced, as necessary.

FERC’s most recent Environmental Inspection report was issued on December 28, 2016 for the Penobscot Mills Project, after the inspection was conducted on September 8, 2016. A link of the report and follow up letter are provided in section 6.5. The inspection report

identified the following requirements related to recreation resources within the project lands: a) the licensee was required to review the Form 80 report for the North Twin Development and the Dolby Development to determine if the roadside parks are project facilities or not, and b) the licensee was required to replace the Part 8 sign at the North Twin boat ramp and repair the Millinocket Lake Boat Ramp. As outlined in FERC's letter dated December 28, 2016, the roadside parks were located during the inspection and were determined to be State of Maine Department of Transportation Rest Areas that are not Commission-approved sites. The Part 8 sign for the North Twin Boat Launch, outside of the project boundary for the Millinocket and Dolby Developments, was documented as deteriorated to the point of being illegible. The sign was replaced by December 31, 2016. Repairs to the Millinocket Lake Boat Ramp, also outside of the project boundary of the Millinocket and Dolby Developments, were completed on November 11, 2016. No follow up actions were identified for the Millinocket or Dolby Development recreational facilities.

3.8.1 ZONE 1 – MILLINOCKET REGULATED RIVER REACH UPSTREAM

Criterion	Standard	Supporting Information
G	**2** The facility demonstrates compliance with resource agency recommendations for recreational access or accommodation (including recreational flow releases), or any enforceable recreation plan in place for the facility.	Agency Recommendation: • Document any comprehensive resource agency recommendations and enforceable recreation plan that is in place for recreational access or accommodations. • Document that the facility is in compliance with all such recommendations and plans.

The recreation facility improvements identified in Article 414 were all completed before October 1998, and maintenance of these sites has been completed as needed since 1998. The Green Bridge Boat Launch site located in this Zone of Effect provides public access to the Quakish Lake portion of the Millinocket Impoundment. Pursuant to Article 415 recreational use of the facility is monitored periodically and as reported in the 2015 recreational monitoring report only fishing activities were observed in this Zone of Effect. GLHA will continue to periodically monitor use, update facilities, and maintain and improve the existing sites as needed in conjunction with interested parties (See Section 6.5.5. for linked reports and FERC correspondence).

3.8.2 ZONE 2 – QUAKISH LAKE PORTION OF THE MILLINOCKET IMPOUNDMENT AND STONE DAM

Criterion	Standard	Supporting Information
G	**2** The facility demonstrates compliance with resource agency recommendations for recreational access or accommodation (including recreational flow releases), or any enforceable recreation plan in place for the facility.	Agency Recommendation: • Document any comprehensive resource agency recommendations and enforceable recreation plan that is in place for recreational access or accommodations. • Document that the facility is in compliance with all such recommendations and plans.

There are no recreational facilities in this Zone of Effect, but the impoundment is accessed via the boat launch in the regulated upstream reach known as the Green Bridge Site. Recreational use in this Zone of Effect consists of light fishing (see linked reports in Section 6.5.5. pursuant to Article 415 as noted in Zone 1).

3.8.3 ZONE 3 – STONE DAM BYPASS REACH

Criterion	Standard	Supporting Information
G	**2** The facility demonstrates compliance with resource agency recommendations for recreational access or accommodation (including recreational flow releases), or any enforceable recreation plan in place for the facility.	Agency Recommendation: • Document any comprehensive resource agency recommendations and enforceable recreation plan that is in place for recreational access or accommodations. • Document that the facility is in compliance with all such recommendations and plans.

There are no formal recreation facilities within this Zone of Effect. The Back Channel Wildlife Area, which provides opportunities for hunting, fishing, and snowmobiling via informal roads and trails is located in the Zone of Effect.

3.8.4 ZONE 4 – FERGUSON POND PORTION OF THE MILLINOCKET IMPOUNDMENT AND INTAKE STRUCTURE

Criterion	Standard	Supporting Information
G	**2** The facility demonstrates compliance with resource agency recommendations for recreational access or accommodation (including recreational flow releases), or any enforceable recreation plan in place for the facility.	Agency Recommendation: • Document any comprehensive resource agency recommendations and enforceable recreation plan that is in place for recreational access or accommodations. • Document that the facility is in compliance with all such recommendations and plans.

There are no recreation facilities in this reach; however, public access is available via the shoreline along Route 11. As reported in the latest Recreation Facilities Monitoring Report linked in section 6.5.5, light recreation use (fishing) was identified for the Millinocket impoundment, including Ferguson Pond.

3.8.5 ZONE 5 – MILLINOCKET REGULATED DOWNSTREAM RIVER REACH

Criterion	Standard	Supporting Information
G	**2** The facility demonstrates compliance with resource agency recommendations for recreational access or accommodation (including recreational flow releases), or any enforceable recreation plan in place for the facility.	Agency Recommendation: • Document any comprehensive resource agency recommendations and enforceable recreation plan that is in place for recreational access or accommodations. • Document that the facility is in compliance with all such recommendations and plans.

There are no recreation facilities in this reach. GLHA has boater barriers in place to prevent public access to the tailrace to prevent public safety issues. The shoreline is largely in an industrial complex of the former paper mill, gated off to the general public.

3.8.6 ZONE 6 – DOLBY POND IMPOUNDMENT

Criterion	Standard	Supporting Information
G	**2** The facility demonstrates compliance with resource agency recommendations for recreational access or accommodation (including recreational flow releases), or any enforceable recreation plan in place for the facility.	Agency Recommendation: • Document any comprehensive resource agency recommendations and enforceable recreation plan that is in place for recreational access or accommodations. • Document that the facility is in compliance with all such recommendations and plans.

The recreation facility improvements identified in Article 414 were all completed before October 1998, and maintenance of these sites has been completed as needed since 1998. The two boat launch sites located at Dead Man's Curve and the Route 157 causeway in this Zone of Effect provide public access to Dolby Pond. Pursuant to Article 415, recreational use of the facility is monitored periodically. As reported in the 2015 recreational monitoring report, only fishing and canoeing activities were observed in this Zone of Effect. GLHA will continue to periodically monitor use, update facilities, and maintain and improve the existing sites as needed in conjunction with interested parties (see Section 6.5.5. for linked reports and FERC correspondence).

3.8.7 ZONE 7 – DOLBY DAM BYPASS REACH

Criterion	Standard	Supporting Information
G	**2** The facility demonstrates compliance with resource agency recommendations for recreational access or accommodation (including recreational flow releases), or any enforceable recreation plan in place for the facility.	Agency Recommendation: • Document any comprehensive resource agency recommendations and enforceable recreation plan that is in place for recreational access or accommodations. • Document that the facility is in compliance with all such recommendations and plans.

There are no recreation facilities in this reach. Public access is prohibited in this Zone of Effect, as the dam and hydro station are gated by the current owners of the mill properties (not GLHA). GLHA has barriers in place to prevent public access to the dams/intakes to prevent public safety concerns, including recreation in the immediate reach below the spillway.

3.8.8 ZONE 8 – DOLBY REGULATED DOWNSTREAM RIVER REACH

Criterion	Standard	Supporting Information
G	**2** The facility demonstrates compliance with resource agency recommendations for recreational access or accommodation (including recreational flow releases), or any enforceable recreation plan in place for the facility.	Agency Recommendation: • Document any comprehensive resource agency recommendations and enforceable recreation plan that is in place for recreational access or accommodations. • Document that the facility is in compliance with all such recommendations and plans.

There are no recreation facilities in this zone of effect - see discussion for Zone of Effect 7 – Dolby Bypass Reach.

4.0 SWORN STATEMENT AND WAIVER FORM

All applications for LIHI Certification must include the following sworn statement before they can be reviewed by LIHI:

SWORN STATEMENT

As an Authorized Representative of Great Lakes Hydro America, LLC, the Undersigned attests that the material presented in the application is true and complete.

The Undersigned acknowledges that the primary goal of the Low Impact Hydropower Institute's certification program is public benefit, and that the LIHI Governing Board and its agents are not responsible for financial or other private consequences of its certification decisions.

The Undersigned further acknowledges that if LIHI Certification of the applying facility is granted, the LIHI Certification Mark License Agreement must be executed prior to marketing the electricity product as LIHI Certified®.

The Undersigned further agrees to hold the Low Impact Hydropower Institute, the Governing Board and its agents harmless for any decision rendered on this or other applications, from any consequences of disclosing or publishing any submitted certification application materials to the public, or on any other action pursuant to the Low Impact Hydropower Institute's certification program.

Company Name: Great Lakes Hydro America LLC.

Authorized Representative:

Name: Thomas Uncher

Title: VP, Operations

Authorized Signature: TT Uh

Date: June 3, 2019

5.0 CONTACTS FORM

5.1 APPLICANT RELATED CONTACTS

Facility Owner: Great Lakes Hydro America LLC.	
Name and Title	Tom Uncher, Vice President
Company	Great Lakes Hydro America, LLC
Phone	518-743-2018
Email Address	Tom.Uncher@brookfieldrenewable.com
Mailing Address	150 Main St. Lewiston Maine 04240
Facility Operator (if different from Owner):	
Name and Title	James Cole, Senior Operations Manager
Company	Great Lakes Hydro America, LLC
Phone	207-723-4341 Ext, 127
Email Address	James.Cole@brookfieldrenewable.com
Mailing Address	1024 Central Street, Millinocket, Maine 04462
Consulting Firm / Agent for LIHI Program (if different from above):	
Name and Title	
Company	
Phone	
Email Address	
Mailing Address	
Compliance Contact (responsible for LIHI Program requirements):	
Name and Title	Kelly Maloney; Manager, Compliance - Northeast
Company	Brookfield Renewable
Phone	(207) 755-5606
Email Address	Kelly.Maloney@brookfieldrenewable.com
Mailing Address	150 Main Street, Lewiston, Maine 04240
Party responsible for accounts payable:	
Name and Title	Judith Charette Manger, Accounts Payable, Finance & Accounting
Company	Brookfield Renewable
Phone	819-561-8099
Email Address	Judith.charette@brookfieldrenewable.com
Mailing Address	41 Victoria, Gatineau, QC, Canada J8X2A1

5.2 CURRENT AND RELEVANT STATE, FEDERAL, AND TRIBAL RESOURCE AGENCY CONTACTS WITH KNOWLEDGE OF THE FACILITY

Agency Contact (Check areas of responsibility: Flows__, Water Quality __, Fish/Wildlife Resources __, Watersheds __, T/E Spp. __, Cultural/Historic Resources _x_, Recreation __):	
Agency Name	Advisory Council on Historic Preservation
Name and Title	John M Fowler, Executive Director
Phone	202-517-0200
Email address	jfowler@achp.gov
Mailing Address	401 F Street N.W. Suite 308 Washington, DISTRICT OF COLUMBIA 20001-2637
Agency Contact (Check areas of responsibility: Flows__, Water Quality _x_, Fish/Wildlife Resources __, Watersheds __, T/E Spp. __, Cultural/Historic Resources __, Recreation __):	
Agency Name	Maine Department of Environmental Protection
Name and Title	Mark Bergeron, Director
Phone	207-215-4397
Email address	Mark.Bergeron@maine.gov
Mailing Address	Central Maine Regional Office, 17 State House Station, Augusta, Maine 04333
Agency Contact (Check areas of responsibility: Flows__, Water Quality __, Fish/Wildlife Resources _x_, Watersheds __, T/E Spp. __, Cultural/Historic Resources __, Recreation __):	
Agency Name	National Marine Fisheries Service
Name and Title	Jeff Murphy; Penobscot SHRU
Phone	(207) 866-7379
Email address	Jeff.Murphy@noaa.gov
Mailing Address	Maine Field Station, 17 Godfrey Drive, Orono, Maine 04473
Agency Contact (Check areas of responsibility: Flows__, Water Quality __, Fish/Wildlife Resources __, Watersheds __, T/E Spp. __, Cultural/Historic Resources __, Recreation __):	
Agency Name	Maine Department of Environmental Protection
Name and Title	Kathy Davis Howatt, Hydropower Coordinator
Phone	207-446-2642
Email address	kathy.howatt@maine.gov
Mailing Address	Central Maine Regional Office, 17 State House Station, Augusta, Maine 04333
Agency Contact (Check areas of responsibility: Flows__, Water Quality __, Fish/Wildlife Resources _x_, Watersheds __, T/E Spp. __, Cultural/Historic Resources __, Recreation __):	
Agency Name	Maine Department of Inland Fisheries and Wildlife
Name and Title	Kevin Dunham, Regional Fisheries Biologist
Phone	207-732-4131
Email address	Kevin.Dunham@maine.gov
Mailing Address	16 Cobb Road, Enfield, Maine 04493
Agency Contact (Check areas of responsibility: Flows__, Water Quality __, Fish/Wildlife Resources __, Watersheds __, T/E Spp. __, Cultural/Historic Resources __, Recreation __):	
Agency Name	Maine Dept. of Agriculture, Conservation & Forestry
Name and Title	Kathleen Leyden, Director
Phone	207-287-5254
Email address	Kathleen.Leyden@maine.gov
Mailing Address	93 State House Station, Augusta, Maine 04333-0038

Agency Contact (Check areas of responsibility: Flows__, Water Quality __, Fish/Wildlife Resources _x_, Watersheds __, T/E Spp. __, Cultural/Historic Resources __, Recreation __):	
Agency Name	Maine Department of Marine Resources
Name and Title	Gail Wippelhauser Marine Resources Scientist
Phone	207-624-6349
Email address	gail.wippelhauser@maine.gov
Mailing Address	21 State House Station, Augusta, Maine 04333
Agency Contact (Check areas of responsibility: Flows__, Water Quality __, Fish/Wildlife Resources _x_, Watersheds __, T/E Spp. __, Cultural/Historic Resources __, Recreation __):	
Agency Name	NOAA
Name and Title	Sean P McDermott, Fisheries Biologist
Phone	(978) 281-9113
Email address	sean.mcdermott@noaa.gov
Mailing Address	55 Great Republic Drive, Gloucester, MASSACHUSETTS 01930-2237
Agency Contact (Check areas of responsibility: Flows__, Water Quality __, Fish/Wildlife Resources __, Watersheds __, T/E Spp. __, Cultural/Historic Resources _x_, Recreation __):	
Agency Name	Maine Historic Preservation Commission
Name and Title	Kirk Mohney; Director
Phone	(207) 287-3811
Email address	Kirk.Mohney@maine.gov
Mailing Address	55 Capitol Street, 65 State House Station, Augusta, Maine 04333
Agency Contact (Check areas of responsibility: Flows__, Water Quality __, Fish/Wildlife Resources __, Watersheds __, T/E Spp. __, Cultural/Historic Resources _x_, Recreation __):	
Agency Name	Passamaquoddy Native American Nation
Name and Title	Pleasant Point Reservation Tribal Building Office
Phone	207-853-2481
Mailing Address	Route No. 190 Perry, Maine 04667
Agency Contact (Check areas of responsibility: Flows__, Water Quality __, Fish/Wildlife Resources __, Watersheds _x_, T/E Spp. __, Cultural/Historic Resources __, Recreation __):	
Agency Name	U.S. National Park Service
Name and Title	Kevin Mendik, ESQ. NPS Hydro Program Coordinator
Phone	617-223-5299
Email address	kevin_mendik@NPS.gov
Mailing Address	15 State Street 10th floor, Boston, Massachusetts 02109

5.3 CURRENT STAKEHOLDER CONTACTS THAT ARE ACTIVELY ENGAGED WITH THE FACILITY

Stakeholder Contact (Check areas of interest: Flows__, Water Quality __, Fish/Wildlife Resources __, Watersheds __, T/E Spp. __, Cultural/Historic Resources _X, Recreation __):	
Stakeholder Organization	Penobscot Indian Nation
Name and Title	Mark Chavaree, Legal Counsel
Phone	207-817-7324
Email address	
Mailing Address	6 River Road, Indian Island, Old Town, Maine 04468
Stakeholder Contact (Check areas of interest: Flows_X_, Water Quality _X_, Fish/Wildlife Resources __, Watersheds __, T/E Spp. __, Cultural/Historic Resources __, Recreation __):	
Stakeholder Organization	Penobscot Indian Nation
Name and Title	Dan Kusnierz; Water Resources Program Manager
Phone	207-817-7361
Email address	Dan.Kusnierz@penobscotnation.org
Mailing Address	12 Wabanaki Way, Indian Island, ME 04468

6.0 FERC AND REGULATORY INFORMATION

6.1 FERC LICENSE AND AMENDMENT ORDERS

- https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=3058862 - October 22, 1996 - Order Issuing New License

6.2 WATER QUALITY CERTIFICATION, AMENDMENTS, AND REPORTS

- https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=10377857 - April 22, 1993 Water Quality Certification
- https://www.maine.gov/dep/water/monitoring/classification/reclass/BEP_2018_ReclassProposals_ForBEP_Dec_final.pdf - 2016 Water Quality Monitoring Report for the State of Maine

6.3 SETTLEMENT AND OTHER AGREEMENTS

- 1993 Whitewater Outfitters Settlement Agreement – hyperlink unavailable; included in Section 7.0

6.4 PERMITS

- 2018 Maine Pollution Discharge Elimination System Permits for the Millinocket and Dolby Developments - hyperlink unavailable; included in Section 7.0

6.5 COMPLIANCE PLANS AND MONITORING REPORTS

- https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=14452962 - FERC December 28, 2016 - Environmental Inspection Report
- https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=14453759 - FERC Letter to GLHA December 28, 2016 regarding the responses to the 11/2/16 and 11/29/16 letters discussing the Environmental Inspection
- https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=8251002 - Stone Dam flashboard modifications
- https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=11735044 - FERC's Final Environmental Impact Statement for the Ripogenus Hydro Project et al under P-2572 et al. Volume 2, Part 1 of 2.
- https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=11738150 - FERC's Final Environmental Impact Statement for the Ripogenus Hydro Project et al under P-2572 et al. Volume 2, Part 2 of 2

6.5.1 Ecological Flows and Water Quality

- https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=9064103:1 – Water level and Flow Management Plan
- https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=8183436 - FERC Order Approving Water Level and Flow Management Plan
- MDEP approval of Dolby DO monitoring report - hyperlink unavailable; included in Section 7.0
- https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=8337994 - May 31, 1999 Mercury Report to FERC
- https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=144537 - October 6, 1999 Mercury Report supplement to FERC:
- https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=10866885 - FERC October 4, 2000 Approval of Mercury Report:
- https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=13961005 - GLHA's August 19, 2015 minimum flow excursion report to FERC:
- https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=14000950 - FERC's September 30, 2015 notice of violation
- https://www.maine.gov/dep/water/monitoring/classification/reclass/BEP_2018_ReclassProposals_ForBEP_Dec_final.pdf - 2016 Water Quality Monitoring Report for the State of Maine

6.5.2 Shoreline and Watershed Protection

- Shoreline Management Plan - hyperlink unavailable; included in Section 7.0
- https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=6012718 - FERC February 12, 2002 approval of SMP
- https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=12536605 - GLHA January 17, 2011 update to SMP:
- https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=12565382 - FERC February 16, 2011 approval of SMP revisions:
- https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=9063759 - April 16, 1997 Back Channel Wildlife Management Plan
- https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=10804895 – February 12, 1998 FERC Order Approving Back Channel Wildlife Management Plan
- https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=14820182 - GLHA's February 12, 2018 Back Channel wildlife 5-year report
- https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=14970535 - FERC's July 12, 2018 approval of GLHA's Back Channel wildlife 5-year report and amendment of the Back Channel Wildlife Management Plan's reporting requirements

6.5.3 Threatened and Endangered Species

- IPAC Report (attached in Section 7.0)
- MDIFW MESA Species Information (attached in Section 7.0

6.5.4 CULTURAL AND HISTORIC RESOURCES

Cultural and Historic Resource Reports not otherwise filed as Privileged are provided via hyperlink below.

- https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=8177205 - Cultural Resource Management Plan
- https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=8158340 - April 9, 1998 Revised Cultural Resources Management Plan
- https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=10809851 – FERC Order Approving Cultural Resources Management Plan

6.5.5 RECREATIONAL RESOURCES

- Recreation Monitoring Plan – hyperlink unavailable; included in Section 7.0
- https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=8178403 – 1997 Recreation Facilities Fee Plan
- https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=13867626 - May 5, 2015 FERC Letter to Great Lakes Hydro America, LLC discussing the Recreation Facility Monitoring Reports for the Penobscot Mills and Ripogenus Hydroelectric Projects under P-2458 et al.
- https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=13858681 - April 28, 2015 Penobscot Mills Project 2458, Article 415; Ripogenus Project 2572, Article 411; Recreation Facility Monitoring Reports
- https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=12049156 - June 17, 2009 FERC letter to GLHA discussing the Recreation Facility Monitoring Reports for the Penobscot Mills and Ripogenus Hydroelectric Projects under P-2458
- https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=11983088 - April 2, 2009 Brookfield Renewable Power submit FERC Form 80 recreation facility data report for 2008 under P-2458
- https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=10626803 - November 18, 2002 FERC approval of recreation facility monitoring report
- https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=10658577 - October 18, 2002 Recreation Facility Monitoring Report

6.6 LICENSE AND CERTIFICATION COMPLIANCE

Dolby Development

- https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=13202792 - GLHA March 12, 2013 Minimum Flow and Run of River Excursion Events at Penobscot Mills Project 2458
- https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=15070524 - Letter order accepting Great Lakes Hydro America, LLC's modifications to run-of-river operation – Article 403 of the Penobscot Mills Project under P-2458

- https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=14861362 - Letter informing Great Lakes Hydro America LLC that the 3/3/2018 deviation from run-of-river operations that occurred on 3/3/18 will not be considered a violation of the license re the Penobscot Mill Project under P-2458
- https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=14774068 - Letter informing Great Lakes Hydro America LLC that the deviation from the run-of-river operations that occurred on 10/2/17 will not be considered a violation of the license re the Penobscot Mill Project under P-2458
- https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=13816643 - Letter informing Great Lakes Hydro America LLC that the Notification of Deviations from run-of-river operations that occurred from 1/27-1/29/15 and on 3/13/15, are not violations of license Article 403 re the Penobscot Mills Project under P-2458
- https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=13064186 - Letter informing Great Lakes Hydro America LLC that the 7/5/12 minimum flow deviation will not be considered a violation of Article 403 re the Penobscot Mills Hydroelectric Project under P-2458
- https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=15070524 - FERC October 15, 2018 - Order accepting Great Lakes Hydro America, LLC's Modifications to Run-of-River Operation - Article 403
- https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=14970529 - FERC July 12, 2018 - Order accepting Great Lakes Hydro America, LLC's Modifications to Run-of-River Operation - Article 403

Millinocket

- https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=15170599 - February 27, 2019 Letter to FERC regarding Run of River Excursions
- https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=15116057 - From FERC Letter informing GLHA Minimum Flow Deviations not a violation
- https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=15078658 - October 22, 2018 Letter to FERC regarding Minimum Flow Excursion
- https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=14970529 - From FERC Letter order accepting Great Lakes Hydro America, LLC's 6/19/18 filing of the Modifications to Run-of-River Operation
- https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=14952023 - To FERC 20180619 Penobscot Mills; Flow and Water Level Modifications for Flashboard Maintenance and Dam Safety Inspections
- https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=14879126 - To FERC 20180406 Penobscot Mills Project, Millinocket Development; Construction Documentation for Steel Penstock #3 Rehabilitation under P-2458. Availability: CEII
- https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=14768965 - To FERC 20171201 FERC Project 2458-ME; Penobscot Mills Project, Generating Station Frequency Conversion and Upgrade Plans; Millinocket and Dolby Developments

- https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=14708540 - From FERC Letter to Kevin Bernier re the filed notifications of deviations from License Conditions for the Penobscot Mills Project et al under P-2458 et al.
- https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=14529081 - To FERC 20170322 Penobscot Mills Project (FERC No. 2458); Millinocket Development; March 14-15, 2017 Flow Disruption due to Winter Storm
- https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=14355457 - From FERC Letter informing GLHA, LLC. that the Run-of-River Operations deviations that occurred on 6/20/16, 6/27/16, 7/28/16, and 8/4/16 will not be considered violations of Article 403 of the Penobscot Mills Project under P-2458
- https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=14336550 - To FERC Great Lakes Hydro America, LLC's August 4, 2016 Flow Disruption due to Lightning Storm Penobscot Mills Project (FERC No. 2458).
- https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=14288479 - To FERC Great Lakes Hydro America, LLC 20160624 Penobscot Mills, Article 403 Compliance; Flow Distribution due to Millinocket Hydro Unit Trip under P-2458
- https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=14055694 - From FERC Letter informing GLHA, LLC. that the Run-of-River Operations deviations that occurred on 9/9/2015 are not violations of license Articles 403 and 408 of the Penobscot Mills Project under P-2458.
- https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=14000950 - From FERC Letter to GLHA, LLC regarding the August 10, 2015 deviation from the run-of-river operation at the Millinocket Development, part of Penobscot Mills Project under P-2458
- https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=13987900 – September 15, 2015 Penobscot Mills Project, Articles 403 and 408 Compliance; Flow Excursions due to Lightning Storm and Station Trips under P-2458
- https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=13966411 - To FERC 20150824 Ripogenus Project 2572; Article 402; Penobscot Mills P-2458; Article 403 Compliance; Flow Excursion due to transmission line trip and station outages
- https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=13961005 - To FERC 20150819 Penobscot Mills Project P-2458; Article 403; Millinocket Development Minimum Flow Excursion
- https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=13540056 - From FERC Letter informing Brookfield Renewable Power, Inc. et al that the minimum flow excursion will not be considered violations of license article 403 re the Penobscot Mills Project under P-2458
- https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=13445105 - To FERC 20140123 Penobscot Mills Project 2458; Article 403 Compliance; Millinocket Development flow excursion of Brookfield Renewable Power under P-2458
- https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=13331928 - To FERC Report of Millinocket Development Excursion due to lightning strike dated 08/20/2013
- https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=13202792 - To FERC 20130312 Minimum Flow and Run of River Excursion Events at Millinocket, Dolby, and East Millinocket Developments; Penobscot Mills P-2458

7.0 SUPPORTING DOCUMENTATION

- Shoreline Management Plan
- Recreation Monitoring Plan
- Maine Department of Environmental Protection letter acknowledging dissolved oxygen monitoring
- 2018 Maine Pollution Discharge Elimination System Permit for the Millinocket Development
- 2018 Maine Pollution Discharge Elimination System Permit for the Dolby Development
- 1993 Whitewater Outfitters Settlement Agreement
- USFWS IPaC Report
- MDIFW MESA Information

Great Northern
PAPER, INC.

One Katahdin Avenue
Millinocket, ME 04462-1398
(207) 723-5131
ISO 9002 Certified

Project No. 2458
GNP File No. 1-8603/1

September 25, 2001

The Secretary
Federal Energy Regulatory Commission
Mail Code: DLC, HL-11.2
888 First Street, N.E.
Washington, D.C. 20426

RE: Penobscot Mills Project No. 2458; Great Northern Paper, Inc.

Please find attached an original and seven copies of revised Exhibit G drawings and a revised Shoreline Management Plan for Great Northern Paper's (GNP's) Penobscot Mills Project (FERC No. 2458). These drawings and documents were revised as the result of field surveys of project hydro and associated facilities. These surveys were necessary in order to identify the assets to be conveyed from GNP to GNE, LLC as required by the Commission's order dated May 19, 2000 conditionally approving the transfer of the license. The following Exhibit G drawings have been revised and are attached:

FERC No. 2458-1057
FERC No. 2458-1058
FERC No. 2458-1059
FERC No. 2458-1060
FERC No. 2458-1061
FERC No. 2458-1062
FERC No. 2458-1063
FERC No. 2458-1064
FERC No. 2458-1065

The drawings reflect several changes to the Penobscot Mills FERC Project Boundary that GNP is requesting as the result of the field survey:

1. Removal of Dolby Pond shoreline area from FERC boundary – a portion of GNP's landfill in East Millinocket (licensed in 1984 prior to issuance of the Penobscot Mills license) is within the expanded project boundary and should be removed.

2. Adjustment of Future Development Area on Ferguson Pond – the future development area on Ferguson Pond was adjusted during the field survey as much of it was found to be swampy and unsuitable for development.

3. Adjustment of Developed Shoreline Areas – on developed sections of shoreline, actual survey data were used to depict the developed areas. Additionally, some end lots were adjusted to meet minimum size requirements for Maine Land Use Regulation Commission regulations.

Some sections of developed shoreline (e.g., south end of South Twin Lake near Route 11) were found to be unoccupied and unsuitable for development. These areas should be removed from the developed shoreline classification and included in the FERC project boundary.

GNP requests that one short section (approximately 100 feet) of shoreline on the east shore of Ambajejus Lake (in parcel 10 on the Shoreline Management Plan map) be removed from the FERC boundary as it was found to be within a highly developed section of shoreline during the survey.

4. Removal and addition of islands to FERC Project boundary – six islands on Ambajejus Lake (5 in Spencer Cove and 1 in the main part of the lake) and one island on North Twin Lake, which were previously designated as being within the FERC boundary, were found to be leased during the field survey. These islands should therefore be removed from the FERC Project boundary. Conversely, two islands on Ambajejus Lake and one island on Millinocket Lake should be added to the FERC Project boundary since they don't have leases on them as previously thought.

5. Removal of portions of Recreation Areas from project boundary – five recreation areas were set aside in 1966 at the North Twin impoundment for future recreation needs. Three of these (3, 4 and 5) had existing leases on them at the time. Recreation Area No. 3 has 17 leases (all granted in the 60's) leaving virtually no shoreline that isn't leased. Recreation Area No. 4 ~~has~~ one lease granted in 1936, while Recreation Area No. 5 has two leases which were granted in 1955 and 1966.

   Due to the large number of existing leases, GNP requests that Recreation Area No. 3 be dropped from the project boundary. Also, GNP requests that the three leases in Recreation Area Nos. 4 and 5 be excluded from the project boundary consistent with the Penobscot Mills license issued by the Commission in 1996 (which excluded all leases from the expanded project boundary).

Most of these adjustments are minor and, therefore, are difficult to see on the maps. Final shoreline footage figures (i.e., exhibit 4 in the Penobscot Mills Shoreline Management Plan) for developed shoreline areas reflect these survey adjustments. The increased shoreline detail provided by the field survey along with improved mapping accuracy also resulted in shoreline footages which were higher than previous estimates.

Based on the actual survey results, undeveloped shoreland in the expanded project boundary was found to be approximately 2,318 acres while the developed acreage was 901 acres. Each category was slightly increased from earlier estimates due to more accurate survey data, improved mapping ability, and the adjustments listed above. Future development and mill properties remained unchanged from previous estimates at 385 and 125 acres, respectively.

Other changes made to the Exhibit G drawings include (1) the addition of non-project future development areas on Millinocket Lake, North Twin impoundment, Quakish Lake and Ferguson Pond, (2) correcting the North Twin impoundment full pond level to 491.92 feet, (3) changes to make the drawings easier to read including a change in how the maps show project and non-project areas (especially islands), and (4) other minor corrections including designating that the North Twin transmission line right of way was not centered on the poles and towers as a result of the maintenance construction in 1998.

A revised Shoreline Management Plan for the Penobscot Mills Project (originally approved by the Commission on January 4, 1999) is also attached for Commission approval. This plan, which was originally required by Article 418 of the Penobscot Mills license, provides details on the 200-foot extension of the project boundary around the impoundments of the Penobscot Mills Project. As indicated by Article 418, the Commission determined that the project boundary should only be expanded on GNP-owned land around the project impoundments, and that existing leased lots should be excluded from the project boundary. The plan also describes how GNP manages and enforces uses and activities within the project boundary.

This plan, especially the detailed shoreline boundary map in Exhibit 3 and the Table for Highly Developed Shoreline Areas found in Exhibit 4, has been updated to reflect the field survey results and project boundary changes indicated above. This revised Shoreline Management Plan is also being forwarded concurrently to all agency recipients of the original 1997 plan for review and comment.

Sincerely,

Brian R. Stetson
Manager, Environmental & Government Affairs

KRB/blw
Attachments

cc: Mr. Herb Hartman, DOC, BP&L
Ms. Elizabeth Jones, FERC
Mr. Jeffrey Martin, GNP
Mr. Andrew Raddant, DOI
Mr. Gordon Russell, F&WS
Mr. John Williams, LURC
Town of East Millinocket
Town of Millinocket

Bcc: FERC Compliance Team (cover letter by E-mail only)

Complete packages to:

Marcia McKeague
Dan Corcoran
Kevin Bernier
Ben Lund
Gary Litke

Great Northern Paper, Inc.

SHORELINE MANAGEMENT PLAN

Penobscot Mills Project
FERC No. 2458-009

October 17, 1997

(Revised September 2001)

Submitted by
Great Northern Paper, Inc.
One Katahdin Avenue
Millinocket, Maine 04462-1398

Table of Contents

TABLE OF EXHIBITS

I. Introduction

A. Overview of Penobscot Mills Project

On October 22, 1996, the Federal Energy Regulatory Commission (FERC) granted the application of Great Northern Paper, Inc. (GNP) for a new license pursuant to the Federal Power Act for GNP to continue to operate and maintain the 70.6 megawatt (MW) Penobscot Mills Hydroelectric Project No. 2458-009, located on the West Branch of the Penobscot River and Millinocket Stream in Piscataquis and Penobscot Counties, Maine. FERC License, p. 1. A copy of the FERC license is attached as Exhibit 1. The Penobscot Mills Project consists of four hydropower developments (North Twin, Millinocket, Dolby and East Millinocket) and a storage development (Millinocket Lake Storage Development). Id. The Penobscot Mills Project, together with GNP's Ripogenus Hydroelectric Project, are part of an integrated system that GNP developed to provide baseload electrical power to meet a portion of the energy needs of GNP's paper mills in Millinocket and East Millinocket. FERC License, p. 1-2, 6-7. GNP has been involved in papermaking operations in Millinocket since 1900 and in East Millinocket since 1907. Environmental Impact Statement ("EIS"), p. 1-3. The Penobscot Mills Project was originally licensed by FERC in 1968. The current license granted October 22, 1996 is for a term of 30 years. FERC License, p. 2.

GNP did not propose any major new construction or project modifications as part of its FERC relicensing. FERC License, p. 2. The total installed generator capacity of the project is 70.6 MW and the average annual generation is about 386,400 megawatt-hours (MWh). FERC License, p. 6. The dependable capacity is 36.4 MW, based on a project flow of 2,800 cubic feet per second with an 85% exceedence value. Id. GNP

operates the Millinocket Lake and North Twin developments in a store and release mode which allows GNP to maximize annual energy generation by generally keeping the flow of water within the project's hydraulic capacity and thus maximizing baseload energy generation for the mills. FERC license, p. 7. The store and release method of operation also has the effect of modulating seasonal variations in streamflows thereby reducing the risk of downstream flooding. FERC License, p. 7.

GNP operates the Millinocket, Dolby and East Millinocket developments in the Penobscot Mills Project in a run-of-river (outflow equaling inflow) mode. Id.

B. Shoreline Management Plan History

Prior to the October 22, 1996 license, FERC had generally designated the project boundary around the Penobscot Mills Project's shorelines at or near the normal full pond elevation for each of the project's impoundments. FERC License, p. 26; Application Exhibit G. During the development of the EIS prepared in connection with the relicensing, certain intervenors and agencies recommended an expansion of the project boundary outward 500 feet around all of the project impoundments in order to protect aesthetic resources, water quality, wildlife habitat and recreational opportunity. FERC License, p. 27; EIS, p. 4-59. GNP proposed no expansion of the project boundary and instead proposed to rely on adherence to existing land use controls imposed by the Maine Land Use Regulation Commission (LURC). FERC License, p. 26.

In the new license, FERC rejected the recommendation to expand the project boundary by 500 feet around all project impoundments, citing significant costs and the absence of a clear need to provide such additional protection. FERC License, p. 27.

FERC expressed a concern that local zoning ordinances alone would not be an adequate substitute for GNP's obligation to control land use for areas around project impoundments in order to fulfill project purposes, including public access to project lands and waters and the protection of aesthetic, vegetative, and water quality resources. FERC License, p. 26-27. Thus, FERC required an expansion of the project boundary and, pursuant to Article 418, required GNP to submit, by October 22, 1997, a Shoreline Management Plan (the "Shoreline Plan") for GNP's lands within the expanded project boundary. FERC License, Article 418.

The expanded project boundary includes areas within 200 feet of the normal full pond elevation on GNP-owned lands on the project impoundments but excluding existing leased lots. FERC License, p. 28. The license generally requires the Shoreline Plan to include for these areas a 200 foot building setback restriction and a 100-foot vegetative buffer restriction, and to provide for appropriate public access to project impoundments for recreation. FERC License, Article 418. The license also requires that the Plan include substantiation for any proposed deviations from the buffer zone restrictions. Id.

C. Overview of Shoreline Plan

This Shoreline Plan is submitted to satisfy the requirements of Article 418 by setting forth the proposed means by which GNP will manage those portions of its lands that are within the expanded project boundary in compliance with the license. GNP proposes to implement a Shoreline Management Program whereby GNP will oversee and control the uses allowed within the project boundary. Under the Program, GNP will be responsible for ensuring that: (1) no buildings are constructed within 200 feet of the normal full pond elevation on lands within the project boundary except as expressly

allowed by FERC and by this Plan; (2) a vegetative buffer zone will be established on project lands whereby no timber harvesting will occur within 100 feet of the normal full pond elevation and timber harvesting outside of that zone will be conducted in compliance with applicable state law; and (3) other uses will be allowed only if they are allowed under the FERC license and this Plan, and if they are allowed under applicable federal, state and local laws.

This Shoreline Plan describes how GNP will manage lands within the project boundary to provide for the continued effective management of the renewable forest and water resources on project lands while recognizing and protecting the recreational and other natural resource values on those lands. The overall objectives of the Shoreline Plan are:

- to protect water quality and quantity for present and potential uses, including hydroelectric power generation consistent with the terms of GNP's FERC license, and including public access to project lands and impoundments;

- to prohibit additional commercial and residential structures within 200 feet of the normal full pond elevation on project lands except as set forth in this Shoreline Plan;

- to prohibit timber harvesting within 100 feet of the normal full pond elevation on project lands and to describe how GNP will conduct forest management activities, including timber harvesting, on lands outside of the 100-foot vegetative buffer zone;

- to provide for the continued protection of the natural resource and recreational values of these areas consistent with the land use activities described in this Shoreline Plan and allowed under GNP's FERC license.

II. Development of Shoreline Management Plan

This Shoreline Plan was developed by GNP to comply with Article 418 of GNP's license. In accordance with that Article, on August 19, 1997, GNP sent a draft of the Shoreline Plan to the Department of the Interior (DOI), the Maine Land Use Regulation Commission (LURC), and the Towns of Millinocket and East Millinocket for their respective comments. Exhibit 2 contains the comment letters provided to GNP by these agencies and Towns. In addition, GNP also provided a copy of the draft Shoreline Plan to the Conservation Law Foundation (CLF) on behalf of the Conservation Coalition. A copy of the comment letter received on the Plan from CLF, on behalf of itself, the Appalachian Mountain Club and American Rivers, is also included in Exhibit 2. Set forth below is a description of the major recommendations on the Shoreline Plan, and a discussion of how those recommendations have been addressed in the Plan.

A. Consultation with Department of Interior

DOI's comments on GNP's draft Shoreline Plan are contained in a letter dated September 25, 1997. The major recommendations and GNP's responses are as follows:

1. *DOI defers to FERC regarding GNP's proposal to exclude certain highly-developed shoreline areas and the mill properties from the expanded project boundary, but notes that, by eliminating certain areas from the project boundary, one of the project purposes – maximizing public access – is compromised.*

As noted in DOI's letter, even if highly-developed shoreline areas and the mill properties are excluded from the expanded project boundary, there are still approximately 2,600 acres[1] of GNP-owned project shoreline that are within the expanded project

[1] The 2,600-acre figure was taken out of GNP's draft Shoreline Plan circulated to DOI and others for comment. Upon review of the acreage figures, GNP has determined that this number underestimated the total acreage that would be included within the expanded project boundary even if the mill properties and the highly-developed segments are excluded. As corrected, this figure should have been approximately 2,700 acres. GNP has used the corrected information in the remainder of this Plan.

boundary. The additional exclusion of approximately 385 acres from the project shoreline to allow for future development – which GNP has added to this Plan in response to comments from the Town of Millinocket (see Section II.C below) – will still leave over 2,300 acres of shoreline within the expanded project boundary. Clearly, there is ample shoreline to accommodate public access to project lands and impoundments. In the circumstances, GNP believes that there is adequate justification for excluding certain limited portions of shoreline, as further explained below and in Section III of this Plan.

The exclusion of the mill properties in the Towns of Millinocket and East Millinocket is justified because these properties pose very different risks and concerns than does the remainder of the project shoreline. Access through either of the mill sites would raise a host of safety and security issues for GNP and the public. These industrialized sites can be dangerous for those who are not properly trained and advised of the various hazards on the site. Undertaking such training for members of the public who might wish to pass through these properties in order to access project impoundments is clearly not practical. To suggest that providing public access through either of these sites might be more convenient ignores these important safety and security issues.

Furthermore, as noted in Section III.A.1 of the Shoreline Plan, GNP needs to maintain its flexibility to conduct its industrial activities on these sites free from the kinds of development and use restrictions that are appropriate for other portions of the expanded project boundary.

Lastly, the mill sites do not provide recreational opportunities to the public in the way that other portions of the shoreline around the project impoundments do. As to the possible need to use these sites for public access to project impoundments in the future,

review of the project boundary map (Exhibit 3) reveals that there are areas adjacent to both mill sites where the project boundary will be expanded, and therefore public access points will be available even if the mill sites are excluded. Through Article 414, FERC has already determined what additional facilities are necessary to enhance public access. FERC License, Article 414. Among the improvements required are improvements to boat launches at Green Bridge and Dead Man's Curve, both of which provide public access to the West Branch below Stone Dam or the Back Channel Wildlife Management Area – the example used by DOI. Public access to the Back Channel is also available from other areas such as Millinocket Stream/Shad Pond. Therefore, FERC has already addressed public access to these areas and there is no need to create a safety and security hazard by seeking to provide access through GNP's mill property.

In short, providing for public access to project impoundments through GNP's mill properties is unworkable, unsafe, and unnecessary given the availability and adequacy of existing access points, and given the existence of ample shoreline within the project boundary which can be used to address future access needs. Exclusion of the mill sites will decrease the total amount of land area within the expanded project boundary by approximately 125 acres. GNP therefore continues to exclude the mill properties from the expanded project boundary.

With respect to highly-developed segments of the project shoreline, DOI has deferred to FERC on the appropriateness of excluding these segments as units rather than individually excluding the numerous lease lots on the project impoundments. The basis on which GNP has excluded these areas is set forth in Section III.A.2. To summarize, it would be unnecessarily complex and burdensome for FERC and GNP to try to administer

a highly convoluted project boundary such as would be created by excluding individual lease lots in areas that are highly developed. As noted in the Environmental Impact Statement, there are over 800 leases of camp lots on the Penobscot Mills project impoundments, and it simply is not practical to seek to exclude each of these leases individually. Because the vast majority of the unleased areas that are within segments to be exempted are not developable due to site conditions, there would be very little public benefit to be gained by such an approach. The existence of over 2,300 acres of shoreline area that will remain within the expanded project boundary under this Shoreline Plan demonstrates that there will be more than enough area available to accommodate public access needs in the future. GNP therefore seeks to treat highly-developed segments as a unit and exempt them from the expanded project boundary.

With respect to areas reserved for future development, the explanation for GNP's exemption from the expanded project boundary of parcels to allow for possible future development is set forth in Sections II.C. and III.A.3 below. Again, GNP emphasizes that, even with the areas exempted as outlined above, there is still ample project shoreline available to address possible future access needs within the expanded project boundary. In addition, there is also public access that is afforded simply because of the existence of numerous leased lots on the project impoundments. GNP does not believe that public access will be compromised by the exclusion of these limited areas – approximately 385 acres in total area – from the expanded project boundary.

2. *DOI recommends that GNP continue to seek opportunities to expand its resource protection measures through the use of shoreline buffer zones and conservation easements at the Penobscot Mills project.*

GNP agrees that it is important to continue to seek ways to work with State and federal agencies and other entities to develop appropriate resource protection measures within and outside the project area. As it has in the past, GNP will continue to seek those opportunities in the future.[2]

3. *DOI recommends that GNP make every effort to accommodate the public's needs for access to project lands and waters.*

GNP agrees and will continue to work to accommodate the need for public access to project lands and waters as appropriate. Through Article 415 of the Penobscot Mills Project license, GNP is required to conduct monitoring studies and file a report every six years addressing, among other things, the adequacy of GNP's recreational facilities to meet recreation demand. The adequacy of public access to project impoundments will be assessed as part of GNP's obligations under Article 415.

4. *DOI recommends that GNP clarify whether forest management activities, including timber harvesting and road construction, within the expanded project boundary, would be subject to Article 419 and would require consultation with State and federal resource agencies.*

GNP agrees that Article 419 of the Penobscot Mills license governs construction of new roads and the replacement, expansion, realignment, or maintenance of existing roads on lands within the project boundary. GNP has explained in the Shoreline Plan how it will comply with Article 419 with regard to any such road work on project lands. Section IV.B.2 and IV.B.3.

With respect to forestry, neither Article 419 nor any other portion of the FERC license requires GNP to consult with resource agencies on its forest management

[2] DOI also recommends that GNP show all conservation areas on the map submitted with the Shoreline Plan. GNP declines to do so. Article 418 requires GNP to submit a map showing the project boundary. Nothing in Article 418 suggests that other areas subject to separate voluntary or regulatory conservation measures – many of which are not within the project boundary – should be shown on the map.

activities, including timber harvesting. Indeed, Article 418 sets forth the requirements for the Shoreline Plan and specifically imposes a vegetative buffer zone of 100 feet on project land. That buffer zone has been incorporated into GNP's Shoreline Plan. Section III.B.2. Had FERC intended to restrict forest management activities beyond the 100-foot vegetative buffer zone, GNP assumes it would have done so in Article 418 or elsewhere in the project license. It did not. Therefore, the Shoreline Plan explains that GNP will continue to conduct its forest management activities, including timber harvesting, on the 100-foot portion of the expanded project boundary that is not within the vegetative buffer zone. GNP will conduct these activities in compliance with applicable requirements of State and local law. Section IV.A.2.

B. Consultation with Maine Land Use Regulation Commission

LURC's comments on GNP's draft Shoreline Plan are contained in a letter dated September 19, 1997. The major recommendations and GNP's responses are as follows:

1. *Although the Shoreline Plan generally provides a higher level of protection than LURC's own regulations, there may be instances where the Commission's regulations are more stringent than the Plan.*

GNP agrees that, as a general matter, the Shoreline Plan provides a greater degree of protection than would otherwise be provided by LURC's regulations. In those instances where LURC's regulations are more stringent, GNP agrees that the more stringent requirement will apply. Indeed, GNP acknowledges in the Plan that any proposed structures or activities on project lands will be allowed only if they comply with applicable requirements of federal, State and local laws and regulations. *See, e.g.*, page 36.

2. *LURC notes that it would have been simpler if the 200-foot expanded project boundary had coincided with LURC's 250-foot shoreline protection zone.*

While this comment may be true as a theoretical matter, GNP does not support any further expansion of the project boundary beyond what the license has already decided on this issue.

C. Consultation with The Town of Millinocket

The Town of Millinocket's comments on GNP's draft Shoreline Plan are contained in a letter dated September 22, 1997. The major recommendation and GNP's response are as follows.

1. The Town repeats a request it has made in the past that GNP be allowed to set aside shoreline areas to allow for future development.

In response to this request, and as further explained in Section III.A.3 below, GNP has excluded segments from the project boundary in order to accommodate possible future development on certain project impoundments. The segments excluded are shown in green on the attached project boundary map (Exhibit 3).

In total, GNP has excluded approximately 385 acres from the expanded project boundary in order to allow for possible future development. Two of the impoundments -- Millinocket Lake and North Twin Lake -- already have a significant numbers of camps. A small portion of Elbow Pond is also included because it is contiguous with the parcel exempted on North Twin Lake, and a small strip on Quakish Lake is reserved for possible future development near to the Town of Millinocket. GNP has also excluded several of the larger islands within Pemadumcook Lake, Millinocket Lake and Elbow Pond for future development since these islands are proximate to existing developed shoreline areas. Finally, GNP has excluded two small segments on Ferguson Pond to allow for future commercial or other development near an existing commercial area owned by the

water company. Exclusion of these areas still leaves over 2,300 acres of shoreline on the project's nine subimpoundments that is within the expanded project boundary.

While seeking to accommodate the Town's request to set aside areas for future development, GNP has sought to cluster these areas, and to locate them adjacent to existing developed areas and away from more remote areas. Furthermore, GNP notes that any such development, while outside of the project boundaries and therefore outside of FERC's jurisdiction, would remain subject to applicable requirements of State law, including requirements of the Land Use Regulation Commission. Thus, even if these areas are excluded from the project boundary, any development of the area will still be subject to review and approval from LURC.

D. Consultation with the Town of East Millinocket

The Town of East Millinocket responded to GNP's draft Shoreline Plan by letter dated September 29, 1997. The Town reviewed the Plan but did not have any comments or objections.

E. Comments of Conservation Law Foundation on Behalf of Certain Environmental Groups

Although not required by the terms of the FERC license, GNP provided a copy of its draft Shoreline Plan to CLF on behalf of the Conservation Coalition. GNP did so because of the pending Request for Rehearing which seeks a formal consultation role for the Conservation Coalition. CLF (on behalf of itself, the Appalachian Mountain Club and American Rivers) provided comments on GNP's draft Shoreline Plan by letter dated August 29, 1997, but which was not provided to GNP until September 29, 1997. GNP assumes that the date on CLF's letter was simply a typographical error.

Because the Coalition has requested the opportunity to comment on GNP's Shoreline Plan, and in order to avoid having to go back and reopen the Plan should FERC grant the Coalition's request to consult on this Plan, GNP sets forth below its responses to CLF's comments.

1. *CLF contends that the general land use article (Article 419) allows for exemptions to the buffer zone restrictions that defeat the purposes of implementing the buffer zone.*

This argument has already been made to FERC through CLF's Request for Rehearing and GNP assumes that FERC will make its determination on this particular issue in the context of its decision on that Request. GNP therefore does not believe it is appropriate to enter into a lengthy discussion of the justification for the general land use article in the context of this Shoreline Plan. GNP does note, however, that through the issuance of the license, FERC has already determined that the general land use article should be included in the Penobscot Mills license. CLF has not provided any information to support treating GNP differently than other licensees with regard to the inclusion of this article.

Furthermore, the two specific provisions about which CLF expresses concern – Article 419(d)(7) and Article 419(d)(5) – are both provisions under which FERC retains a measure of control over the amount and type of development that can occur. GNP is obligated by the terms of the license to submit a letter to the Office of Hydropower Licensing prior to conveying any interest in project lands under Article 419(d)(5) or (d)(7). GNP is also required to consult with certain federal and State resource agencies prior to submitting that letter. Any such development must also comply with other applicable provisions of federal, State and local law. In the circumstances, it is difficult

to understand why CLF believes there will not be appropriate controls on any action sought to be authorized under those sections of the license.

2. *CLF contends that including highly-developed segments within the project boundary will ensure that new development will be consistent with the recreational and natural resource values of the project.*

The FERC license specifically requires GNP to exclude leased areas from the project boundary. FERC License p. 28. GNP presumes that FERC made this decision based at least in part on the extensive testimony from existing camp owners who were concerned about having their camp lots come within FERC's jurisdiction and oversight. FERC's decision on this issue is clear and has already been made.

The Shoreline Plan simply builds on the FERC's decision on this issue by seeking to exempt highly-developed areas as units rather than creating a convoluted project boundary that will be difficult to administer. GNP's reasons for excluding these areas are explained in Section II.A.1 above and in Section III below, and are not reiterated here.

3. *CLF requests that the shoreline buffer be extended to those portions of the shoreline of Millinocket Lake on which GNP owns a divided interest.*

GNP does not own a divided interest in any land on Millinocket Lake and this comment is therefore not applicable. GNP can only assume that CLF is using incorrect information since GNP's ownership is a matter of public record.

Even if GNP did own a divided interest in lands on the project impoundments, GNP disagrees that such lands should be included within the expanded project boundary. The FERC license makes clear that the expanded project boundary applies only to GNP-owned lands. If FERC intended to also include lands on which GNP owns a divided interest, it would have done so in the license.

4. *CLF argues that the Conservation Coalition should be provided notice and an opportunity to comment on actions that may affect public areas and the protection of aesthetic, vegetative and water quality resources of the project.*

In the Penobscot Mills project license, FERC has made a specific determination of the appropriate resource agencies and others that should be notified and consulted in connection with the numerous actions to be taken under the project license. GNP will provide notice and will consult as required under the license. Any additional notice or consultation is not required and GNP opposes any such additional notice and consultation requirements.

5. *CLF requests that the Plan include as one of its overall objectives the protection of the unique, undeveloped overall character of the project area.*

GNP declines to make this change. The project area is a working forest that has been managed by GNP and others for many years. There are also currently over 800 leased lots on the project impoundments. It is simply not accurate to suggest that the entire project area is undeveloped. With respect to areas reserved for possible future development, GNP has specifically steered away from the most remote portions of these impoundments, but the fact remains that portions of the impoundments are already developed. The additional objective requested by CLF is neither factually accurate nor pertinent to the objectives of the Shoreline Plan.

6. *CLF requests that the Plan be amended to state that structures and uses allowed on project lands are those permitted under the standard land use article or those that are required by and that otherwise comply with federal, State and local law.*

GNP clarified the language at page 22 of the Plan to state that structures and uses allowed are those permitted under FERC's general land use article and that otherwise comply with federal, State or local law.

7. *CLF requests that the Plan state that public access within the project boundary will remain open to the public unless the areas need to be closed for the purpose of safety or the protection of property or for other "similar" reasons not currently foreseen by GNP.*

GNP has made the requested change at page 28 of the Plan.

III. Determination of Project Boundary and Buffer Zones

A. Project Boundary

FERC has determined that a 200-foot expansion of the project boundary on GNP-owned lands around the Penobscot Mills Project's nine subimpoundments is appropriate, and that the project boundary should exclude lots currently under lease on these impoundments. Because of special considerations discussed below regarding GNP's mill properties in Millinocket and East Millinocket and segments of the project shoreline and islands that are highly developed with camp lot leases, certain limited portions of the GNP-owned project shoreline are excluded from the project boundary. In addition, in response to a request from the Town of Millinocket, GNP has also excluded segments on certain project impoundments to allow for possible future development. Even excluding these areas, the expanded project boundary encompasses an area of over 2,300 acres.

Attached as Exhibit 3 is a map depicting the project boundary as redrawn to comply with FERC license Article 418(1). The map shows the areas on which the project boundary has been expanded 200 feet outward from the normal full pond elevation on GNP-owned lands on each of the project's nine subimpoundments. The map also shows the following areas excluded from the project boundary: (1) the mill properties (grey

cross-hatched areas),[3] the 200-foot shoreline portions of which total approximately 125 acres, (2) areas that are highly-developed with camp leases (blue), which total approximately 901 acres, and (3) areas excluded to allow for future development (green), which total approximately 385 acres. The basis for excluding each of these areas is set forth below.

1. Exclusion of Mill Properties from Project Boundary.

GNP's mill properties in the Towns of Millinocket[4] and East Millinocket pose very different considerations with respect to allowable uses and current conditions than does the remainder of the project shoreline around the project's nine subimpoundments. They are industrial properties on which GNP has conducted its papermaking operations for many decades, and they do not represent a recreational or aesthetic resource to the public. Because of these different considerations, and because GNP must retain the flexibility to erect structures and conduct its papermaking activities free from the kinds of development and use restrictions that are appropriate for the remainder of the project shoreline, GNP has excluded these two properties from the expansion of the project boundary, as shown on Exhibit 3. Other GNP-owned land within the Town of Millinocket is treated in the same fashion as the remainder of the GNP-owned land around the project impoundments and is included within the expanded project boundary.

[3] Note that the grey cross-hatched area in the Town of East Millinocket includes both the mill property and the Town's industrial park which is located more than 200-feet back from the impoundment shoreline.
[4] With respect to the mill property in Millinocket, there is a small segment of the shoreline of Ferguson Pond along the northernmost shore that is adjacent to and contiguous with the mill property. This segment contains a portion of State Route 11 which is immediately adjacent to the impoundment and between the impoundment and GNP's Golden Road. Although a portion of this parcel is owned by GNP, the area is excluded from the expanded project boundary because it is part of the mill property.

2. Exclusion of Highly-Developed Segments from Project Boundary

As noted in the EIS, GNP has granted over 800 leases of camp lots on its land around the project's impoundments and on islands within the impoundments. EIS, p. 3-48. In many instances, these leases are concentrated on certain portions of the project shoreline and islands. Segments of highly-developed shoreline exist on seven of the project's nine subimpoundments: Millinocket Lake, Ambajejus Lake, Pemadumcook Lake, North Twin Lake, South Twin Lake, Quakish Lake and Dolby Pond. On some of these highly-developed segments of the shoreline, there are small pockets between existing leases which are not currently leased. Similarly, some of the islands that include leased lots also include areas that are not currently leased. The vast majority of these unleased pockets are not developable due to lot size, slope, wetlands or other site conditions.

The FERC license directs that existing camp lot leases be excluded from the project boundary. On segments that are highly developed, however, attempting to exclude leased lots individually would create a project boundary that goes in and out avoiding numerous leased lots in order to include small pockets of largely undevelopable land in areas that are already devoted to camp lots. Similarly, for islands that contain leases, seeking to treat the leased areas as excluded from the project boundary while including any remaining areas as within the project boundary would create a convoluted project boundary. The result would be a shoreline management scheme that is both unnecessarily complex and burdensome to administer.

Given the difficulty and confusion that would be created for FERC, GNP and lessees by seeking to differentiate leased and unleased segments within highly-developed

areas and islands with leases, GNP has instead treated such areas as units. For islands, GNP has treated most islands on which there are leases as excluded from the project boundary, regardless of whether a portion of the island is not subject to an existing lease. Islands on which there are no current leases are included within the project boundary.

For GNP-owned shoreline areas around the impoundments, GNP has treated each area on which there are leases as a separate shoreline parcel. Where there are two or more leases on a given parcel, GNP has treated the parcels as a unit rather than treating the leased lots individually. These areas are marked in blue and sequentially numbered by impoundment on Exhibit 3.

As noted above, some of the highly-developed shoreline segments include areas that are not currently leased. Attached as Exhibit 4 is a Table which provides, for each of these parcels (other than islands) containing one or more leases, an approximation of: (1) the total amount of shoreline footage in the parcel; (2) the amount of shoreline footage that is currently leased, and (3) the amount of shoreline footage, if any, that is not currently leased.[5] For each impoundment, summary information is also provided estimating the percentage of the impoundment shoreline that is exempted from the project boundary and the percentage of these segments that is exempted but not currently under lease. The Table describes only those portions of the project boundary that are excluded

[5] GNP has made revisions in the table and to Exhibit 3 since the draft was circulated for consultation. These changes are minor and reflect corrected information on leased and unleased shoreline areas. One minor inaccuracy in Exhibit 3 that was not corrected is the expanded project boundary shown at the town line between Millinocket and Indian Township No. 3 on Quakish Lake just to the east of the parcel labeled Parcel 1. The portion of the expanded project boundary on the town line that extends into the Town of Millinocket from Indian Township No. 3 (approximately ½ acre of land) is actually land that is not owned by GNP. Although the lot has no shore frontage, it does extend to within 200 feet of the impoundment and would therefore be within the expanded project boundary if it were owned by GNP, which it is not. The expanded project boundary should therefore stop at the Millinocket/Indian Township No. 3 town line. This does not affect the long strip of GNP-owned shoreline that is within the Town of Millinocket along Quakish Lake and Ferguson Pond.

because of the exclusion of the highly-developed segments shown in blue on Exhibit 3. GNP has provided separately in Section III.A (page 16-17) above information on the total acreage that is exempted from the expanded project boundary based on exclusion of the highly-developed segments (blue segments), the mill properties, and the areas for future development (green segments).

As can be seen from Exhibits 3 and 4, the highly-developed segments represent in total only a fraction of the total project boundary. With regard to the portion of these segments that is not currently leased but is exempted from the project boundary, these portions will remain subject to applicable development restrictions of State and local law. For these segments, a significant administrative benefit to both FERC and GNP will be gained by treating the segments as a unit rather than excluding individual leases.

3. Exclusion of Areas for Possible Future Development

The Town of Millinocket, in its comments on the draft Shoreline Plan, requested that GNP be allowed to reserve areas for future development. In response to this request, GNP has excluded segments from the project boundary that can be used for possible future development on certain project impoundments. In total, GNP has excluded approximately 385 acres of project shoreline from the expanded project boundary to allow for such future development. These areas are shown in green on Exhibit 3.

Two of the impoundments -- Millinocket Lake and North Twin Lake -- already have a significant number of camps and GNP has reserved for future development areas adjacent to this existing development. A small portion of Elbow Pond is also included because it is contiguous with the parcel exempted on North Twin Lake. A small strip on Quakish Lake is reserved for possible future development near to the Town of

Millinocket. GNP has also excluded several of the larger islands within Pemadumcook Lake, Millinocket Lake and Elbow Pond for future development since these islands are proximate to existing developed shoreline areas. Finally, GNP has excluded two small segments on Ferguson Pond to allow for future commercial or other development near an existing commercial area owned by the water company. Exclusion of these areas still leaves over 2,300 acres of shoreline on the project's nine subimpoundments that is within the expanded project boundary.

GNP has sought to cluster these areas, and to locate them adjacent to existing developed areas and away from more remote areas. Furthermore, any development in these areas, while outside of the project boundaries and therefore outside of FERC's jurisdiction, would remain subject to applicable requirements of State law, including requirements of the Land Use Regulation Commission. Thus, even if these areas are excluded from the project boundary, any development of the area will still be subject to review and approval from LURC. It is worth noting that none of the impoundments on which GNP has reserved land for possible future development was rated by LURC as a remote or undeveloped lake in LURC's Wildlands Lake Assessment. In excluding these areas, GNP has sought to balance the Town's interest in accommodating possible future development with the preservation of the important recreational and aesthetic values of the project shoreline.

B. Buffer Zone Restrictions

GNP proposes to meet FERC's requirements relating to management of the shoreline areas within the project boundary through the imposition of buffer zones as described below, and the implementation of a Shoreline Management Program as

described in Section IV. Within the expanded project boundary, FERC specifically requires GNP to create two buffer zones to address building setbacks and timber harvesting within the project boundary. The license generally requires a 200-foot building setback restriction and a 100-foot vegetative buffer zone within which no timber harvesting can occur. GNP will designate and enforce these restrictions as follows.

1. Building Setback

GNP will comply with FERC's requirement for a 200 foot building setback through the implementation of its Shoreline Management Program which specifically describes the uses that would be allowed on project lands. Under this program, the structures and uses allowed are those permitted under FERC's standard land use article (Article 419 of the Penobscot Mills license attached as Exhibit 1), and that otherwise comply with federal, State or local law. GNP, with FERC's oversight, will remain responsible for controlling the amount, type and location of any structures and activities on project lands in accordance with the Shoreline Management Program described in Section IV of this Shoreline Plan.

GNP employs managers, professional foresters, engineers and technicians with expertise in managing GNP's forest land, its pulp and paper mills, and its hydroelectric facilities. These land management and environmental professionals will be responsible for overseeing GNP's program to assure that the use of project lands is in compliance with FERC license requirements, including this Shoreline Plan, and other applicable requirements of law.

2. Vegetative Buffer Zone

In accordance with Article 418, GNP will maintain a 100-foot vegetative buffer zone within the expanded project boundary around the nine subimpoundments that comprise the Penobscot Mills Project. Within this zone, timber harvesting will not be conducted. While no timber harvesting would be allowed within the vegetative buffer zone, minimal tree and brush clearing to allow for the structures and activities otherwise permitted under the FERC license and this Shoreline Plan will be permitted.

GNP's staff of professional foresters will be responsible for overseeing timber harvesting activities within the project boundary and for ensuring that no harvesting occurs within the vegetative buffer zone. GNP has over 100 years of experience in managing forest land and over 30 years of managing timber harvesting on its lands in compliance with applicable State and local environmental laws and regulations.

Consistent with GNP's practices on all of its lands, when GNP plans to conduct harvesting activities on project lands, it will first identify the requirements that govern harvesting practices on those lands, including the requirements of this Shoreline Plan and any applicable State and local laws. GNP foresters will prepare written management plans describing areas to be harvested, the type of harvesting method to be used, the volumes of wood to be removed, and measures to be used to protect sensitive areas, including the 100-foot vegetative buffer. Where necessary, vegetative buffer zones will be marked by flagging or painting the boundary line.

Outside of the vegetative buffer zone, timber harvesting will be conducted in accordance with applicable requirements of the Maine Forest Practices Act, the Land Use

Regulation Law and any applicable local ordinances, as further described below in Section IV.A.2.

C. Overview of Shoreline Management Program and Enforcement

In order to ensure that the requirements of the FERC license and this Shoreline Plan are met, GNP will implement the Shoreline Management Program described in detail in Section IV below to manage the amount, type and location of uses and structures on project lands. The general program elements are as follows.

When a project is proposed to be conducted on lands within the project boundary, either by GNP or another entity, GNP will review the proposal and the proposed site to determine whether the structure or activity is appropriate for the location. A particular activity may or may not be considered appropriate for any given location based on a variety of site-specific or more general factors. Assuming that GNP determines that the proposed activity or structure is appropriate for a given location, GNP would then determine whether it is allowable under the FERC license and this Shoreline Plan. If the proposal is of a type that requires GNP to notify FERC or to obtain prior approval from FERC under Article 419, then GNP will be responsible for ensuring that such notification is properly and timely made, and that any necessary FERC approval is obtained.

Once GNP has reviewed the proposal and obtained any necessary FERC approval, GNP will allow the use to proceed provided that certain requirements are met. Requirements may vary depending on the type of project involved, but in each case GNP will require that, prior to the start of any construction, all necessary federal, State or local permits or approvals be obtained and, for projects conducted by others, that notification is provided to GNP that all such approvals have been obtained.

GNP will also require that notification be provided when construction is completed and, for projects conducted by others, that they certify to GNP that the project has been completed in accordance with any applicable laws, permits, or approvals. GNP will then undertake to review each site to ensure that all program requirements and FERC license requirements have been met. As part of this program, GNP will be responsible for taking appropriate action to ensure that FERC requirements, as well as other federal, State and local requirements are met.

Because GNP will require that anyone wishing to conduct activities or erect structures within the project boundary demonstrate that all necessary federal, State or local approvals have been obtained, GNP anticipates that appropriate federal, State and local agencies will be the primary means of ensuring compliance with regulatory requirements. GNP, however, will implement the Shoreline Management Program described above and in Section IV to ensure that activities within the project boundary are conducted in compliance with the FERC license and this Shoreline Plan.

If at any time GNP becomes aware that any such structure or activity is in significant violation of GNP's program or applicable law, including the FERC license, GNP will take appropriate actions to ensure that such violations are promptly addressed. Possible actions to address significant non-compliance include:

- notification to the grantee of non-compliance with GNP requirements or federal, State or local laws;
- withdrawal of permission to continue activity on GNP lands (e.g., cancellation of lease, termination of contract)
- notification to appropriate federal, State or local agencies of possible violations.

Shoreline Management Program Highlights

1. GNP review of proposed structure or activity for
   - site/structure appropriateness
   - compliance with GNP programs/plans
   - compliance with FERC license requirements generally
   - compliance with Shoreline Plan requirements specifically
2. Require that federal, State and local permits or approvals be obtained
3. Require certification to GNP that all permits and approvals have been obtained
4. Notify GNP following project completion and certify compliance with approvals
5. GNP site review following construction to determine compliance
6. GNP to take appropriate actions to ensure correction of significant noncompliance

IV. The Shoreline Management Program: Allowed Uses and Conditions on Project Lands

GNP will manage activities within the project boundary in accordance with the Shoreline Management Program described in this section which is designed to comply with the terms of GNP's FERC license. Under Articles 418 and 419 of the FERC license, GNP retains the authority to grant permission for certain types of use and occupancy of project lands and waters and to convey certain interests in project lands provided that the requirements of the license are met. In the following sections, GNP sets forth the program it will implement to manage these allowable uses of project lands in compliance with FERC's requirement that such uses and occupancies be consistent with the protection and enhancement of the scenic, recreational, and other environmental values of the project. FERC License, p. 57. As further described below, GNP will retain the responsibility for supervising and controlling the uses and occupancies of all project lands to ensure that FERC license requirements and requirements of this Shoreline Plan are met.

For ease of reference, GNP has separated out the major types of use that it anticipates will occur on project lands and has included individual sections describing its plans for conducting and managing such uses. Those uses are: (1) recreation and public access; (2) timber harvesting and associated roadbuilding; and (3) hydroelectric and associated facilities. In addition, GNP has provided a detailed description of how it will manage the development of these and other uses and structures on project lands in accordance with what is allowed under FERC's standard land use article, Article 419.

A. Major Land Uses Allowed on Project Lands

1. Recreation and Public Access

GNP has maintained a policy of open access to its lands for over 100 years and will continue to allow public access to lands within the newly-designated project boundary. With the exception of project lands on which there are project facilities relating to the generation of hydroelectric power, all of the lands within the project boundary are open to the public and will remain so, in accordance with the FERC license, unless particular areas need to be closed to the public for reasons of public safety, protection of property, safe management of the land for timber harvesting, or for other similar reasons not currently foreseen by GNP.

Currently, the public uses the project area for a variety of recreational purposes. As described in the final Environmental Impact Statement (EIS), uses include fishing, swimming, boating, hunting, ice fishing, camping, hiking, snowmobiling, canoeing, cross-country skiing, waterskiing, sailing, and sightseeing. EIS, at 3-34. GNP expects that all of these uses will continue to occur with the potential for moderate increases in levels of use on both project lands and non-project lands. GNP has no reason to believe that significant increases or decreases in the level of use will occur.

The Penobscot Mills Project is part of GNP's land ownership near Millinocket and East Millinocket. Access to the project's nine subimpoundments is over GNP's land management roads, State Road, or Route 11. Also, Route 157 between Millinocket and East Millinocket provides access to Dolby Pond.

In addition to road access, GNP and others currently maintain facilities that allow for public access and recreation on the project's impoundments. Those facilities consist of the following:

1. Campsites
2. The South Twin Lake picnic area
3. Ambajejus Lake beach
4. A public boat launch at Ambajejus Lake
5. A public boat launch at Partidge Cove on South Twin Lake
6. A private boat launch (Barton's Marina) on South Twin Lake
7. A private boat dock at the North Woods Trading Post on Ambajejus Lake
8. A private boat put-in at Norcross on Elbow Pond
9. Two public boat launches, a private boat launch, and a boat put-in on Millinocket Lake
10. A public boat put-in at Green Bridge on Quakish Lake
11. Two public boat put-ins on Dolby Pond
12. A picnic area on Dolby Pond

In addition to these existing facilities, the FERC license required GNP to construct additional recreational facilities or improvements as set forth in Article 414 of the license by October 22, 1998. Those facilities are as follows:

1. Space for three vehicles and five trailered vehicles at the existing Dead Man's Curve boat access site (#11 above) on Dolby Pond;
2. Space for four vehicles at the existing Route 157 boat access site (#11 above) along Dolby Pond; and

3. Remove boulders and other obstructions at the shoreline and provide six additional gravel vehicle spaces to the parking area at the existing Green Bridge boat access site (#10 above) above Quakish Lake.

Should it become necessary at any time during the license term for GNP to repair, reconstruct or maintain existing recreational facilities or other existing facilities within the project boundary, GNP retains the right to do so. FERC approval for such activities would not be required.

GNP will continue to allow public access to its lands within the project boundary for the same kinds of recreational experiences as are currently enjoyed by the public. Public use of the lands within the project boundary is heavy (EIS, p. 3-35), and GNP will continue to monitor the types and amount of use of project lands in accordance with Article 415 of the FERC license. Pursuant to Article 415, GNP, in consultation with various federal and State agencies, is required to begin monitoring studies within 6 years of license issuance to determine whether existing recreational facilities are adequate, and to file a recreational use report with FERC every six years which includes any recommendations for additional facilities. The adequacy of recreational facilities will be addressed through GNP's compliance with Article 415. Under the terms of GNP's FERC license, GNP is responsible for maintaining public access and managing recreational use on project lands.

GNP does not anticipate or intend that major changes in the levels or types of recreational use of project lands will occur, and it is not GNP's intent to promote or encourage a significant increase in the type or intensiveness of the recreational uses of the project lands. It is possible, however, that GNP or others may want to add to or improve the recreational facilities available on project lands during the term of the FERC license.

Such facilities would be allowed on project lands if and to the extent that they are allowable under the FERC license, either through the means established under Article 415 discussed above, or through the FERC standard land use article (Article 419) as discussed below.

Most commercial and residential structures are not allowed on project lands under the terms of the FERC license. If, however, there is a need for additional structures on project lands in order to manage recreational use or for another purpose, GNP will evaluate whether such structures would be permissible under the FERC license and applicable law. Such structures might include, without limitation, caretaker quarters, service or storage buildings, service or access roads, power or communication lines, sanitary stations or privies, gates, entry contact stations, water taps, parking areas, directional signs, waste disposal areas, campsites, boat launching facilities, access sites and picnic areas. Such structures as are necessary and appropriate may be allowed provided they fit within the restrictions of the FERC license and provided that other provisions of federal, State or local law would allow for such structures. GNP's compliance with Article 415 is a separate matter the specifics of which will be addressed pursuant to that Article. With respect to Article 419, however, the applicable requirements, and the program GNP will implement to ensure compliance with those requirements, depend upon the type of structure or use proposed and are further described below in the sections detailing how the general land uses allowed under Article 419 will be managed.

2. Timber Harvesting

GNP will continue to conduct its forest management activities, including timber harvesting and associated road building, on its lands within and adjacent to the project area. Under the FERC license, GNP retains the right to conduct timber harvesting and to construct roads on project lands, although no timber harvesting will be conducted within the vegetative buffer zone as required under the FERC license. Outside of the 100-foot vegetative buffer zone, GNP will continue to conduct timber harvesting operations and associated roadbuilding in accordance with applicable State and local law and the terms of the FERC license.

Several different but overlapping State and local regulatory programs govern GNP's timber harvesting within the project boundary but outside of the vegetative buffer zone. First, LURC's timber harvesting regulations contain restrictions on timber harvesting in Protection and Development Subdistricts, including the P-GP, P-SL and D-RS subdistricts which cover most of the project lands outside of the vegetative buffer zone. LURC Regs. §10.17(A)(5). For Protection Subdistricts, the LURC land use standards allow for forest management activities, including timber harvesting, without a permit from LURC, provided that the requirements in the regulations are met. For timber harvesting activities that do not meet these requirements, and for timber harvesting in the D-RS Development Subdistrict, a permit must be obtained from LURC.

GNP anticipates that most of its timber harvesting within the project boundary will be conducted in compliance with the LURC standards and will not require a LURC permit. The principal requirements of the timber harvesting standards for Protection Subdistricts, in combination with the 100-foot vegetative buffer zone prohibition,

currently require that GNP observe the following restrictions on timber harvesting within the project boundary:

1. Except when surface waters are frozen, skid trails and skid roads shall not utilize stream channels bordered by a P-SL1 Protection Subdistrict except to cross such channels with a culvert or bridge according to the water crossing requirements of the LURC regulations.

2. In all P-SL1 and P-GP subdistricts, at distances between 100 feet and 200 feet of the normal high water mark (the latter being the limit of the project boundary), harvesting activities may not create single openings greater than 14,000 square feet in the forest canopy, and single canopy openings of over 10,000 square feet may not be closer than 100 feet apart.

3. In all P-SL1 and P-GP subdistricts, at distances between 100 feet and 200 feet of the normal high water mark (the latter being the limit of the project boundary), harvesting shall not remove more than 40 percent of the volume (determined as equivalent to basal area) on each acre involved of trees 6 inches in diameter and larger measured at 4 1/2 feet above ground level in a 10-year period. Removal of trees less than 6 inches in diameter, measured as above, is permitted if otherwise in conformance with the LURC regulations.

4. In all P-SL1 and P-GP subdistricts, no accumulation of slash shall be left within 50 feet of the normal high water mark of surface water protected by the P-SL1 or P-GP subdistricts, and outside of the 50 foot area, all slash larger than 3 inches in diameter shall be disposed of in such a manner that no part extends more than 4 feet above the ground.

5. Skid trails and other sites where the operation of timber harvesting machinery results in the exposure of mineral soil shall be located to conform to the specific requirements in the LURC regulations relating to slopes and filter strip widths.

6. Timber harvesting operations will be conducted such that slash is not left below the normal high water mark of standing water or stream channels downstream from where they drain 300 acres or more.

7. Timber harvesting operations and skid roads and skid trails will comply with requirements designed to avoid sedimentation or damage to stream channels.

8. GNP will conduct timber harvesting operations in such a way as to reasonably avoid sedimentation of surface waters.

9. Notice of timber harvesting operations shall be provided to LURC prior to commencement of operations.

GNP will follow LURC's requirements applicable to timber harvesting on project lands between 100 and 200 feet of the normal high water mark on lands within the project boundary.

If GNP conducts timber harvesting within the project boundary that does not meet the standards for Protection Subdistricts or if it conducts timber harvesting operations in the D-RS Development Subdistrict, GNP will first obtain a permit from LURC as required. Among the requirements for obtaining such a permit, GNP will have to demonstrate that the proposed harvesting will not have an undue adverse effect on existing uses, scenic character, and natural and historic resources in the area affected, and that the harvesting will not cause unreasonable soil erosion or reduction in the capacity of the land to absorb and hold water. 12 M.R.S.A. § 685-B(4)(C) & (D). Through these permitting requirements, LURC ensures that proposed harvesting activities will not result in undue adverse environmental and aesthetic impacts.

In the organized Towns of Millinocket and East Millinocket where the LURC standards do not apply, GNP conducts some limited timber harvesting activities. These activities will continue to occur in compliance with any applicable ordinance provisions of these Towns, except that, in accordance with the FERC license, GNP will conduct no harvesting activities within the 100-foot vegetative buffer zone.

In addition to the LURC timber harvesting regulations and any applicable requirements of the Millinocket and East Millinocket ordinances, GNP also complies with the requirements of the Maine Forest Practices Act, 12 M.R.S.A. § 8867 - 8869, which governs timber harvesting throughout the State. The Forest Practices Act and its

regulations contain performance standards for clearcutting, regeneration standards, pre-harvest notification requirements, requirements for annual reporting to the State, and requirements for regularly updated forest management and harvest plans prepared by licensed professional foresters. For lands within the project boundary but outside of the 100-foot vegetative buffer zone, GNP will comply with the requirements of the Maine Forest Practices Act and its implementing regulations.

3. Hydroelectric and Associated Facilities

The FERC license describes the hydroelectric facilities that are part of the Penobscot Mills Project. FERC License, p. 36-43. The license also contains several Articles that require GNP to construct certain additional facilities or improvements to address environmental, recreational or other project purposes.[6] GNP will comply with these requirements and any additional requirements that FERC may impose. GNP also reserves the right to construct or maintain other structures that may be required by any federal, State or local governmental body.

B. Structures and Uses Allowed Under Article 419

GNP retains the right under its FERC license to allow certain specific uses of project lands and water consistent with Article 419 of its FERC license -- the general land use article. Some of the activities discussed above would be covered by Article 419's requirements and, in addition, Article 419 allows for other uses and structures not specifically mentioned elsewhere in this Shoreline Plan. The following sections describe how GNP will implement its Shoreline Management Program so as to comply with the

---

[6] *See, e.g,* Articles 406-407 (fishways); Article 408 (water levels in North Twin impoundment); Article 409 (togue monitoring); Article 410 (wetlands enhancement); Article 411 (artificial nesting structures); Article 412 (wildlife management in Back Channel); Article 413 (fish stocking); Articles 414-415 (recreational facilities); Article 417 (historic properties); and Article 420 (submerged hazards).

requirements of Article 419 relating to structures and uses covered by that Article. Although the focus of the discussion in this Section is on compliance with Article 419's requirements, it should be noted that all activities conducted by GNP or others on GNP land remain subject to all applicable requirements of federal, State and local laws and regulations.

1. Article 419(b) Uses

In accordance with Article 419(b) of the license for the Penobscot Mills Project, GNP retains the right, without prior FERC approval, to use and occupy project lands for landscape plantings, non-commercial piers, erosion control structures, and food plots or wildlife enhancement projects. The specific uses allowed pursuant to Article 419(b) are:

- Landscape plantings.
- Non-commercial piers, landings, boat docks, or similar structures and facilities that can accommodate no more than 10 water craft at a time and where such facility is intended to serve single-family type dwellings.
- Embankments, bulkheads, retaining walls, or similar structures for erosion control to protect the existing shoreline.
- Food plots and other wildlife enhancement.

GNP will implement the program described below to allow the Article 419(b) uses on lands within the project boundary:

Before conducting or granting permission to conduct any of these activities on project lands, GNP will review the proposed use to ensure that: (i) it does not unreasonably compromise the project's scenic, recreational and other environmental values; and (ii) to the extent feasible and desirable, multiple use and occupancy of facilities for access to project lands and waters will be required. If the proposed use involves construction of bulkheads or retaining walls, GNP will first inspect the proposed

construction site, consider whether planting of vegetation or use of riprap would be adequate to control erosion at the site, and determine that the proposed construction is needed and would not change the basic contour of the reservoir shoreline.

If GNP determines that the proposed use meets these criteria, then GNP will conduct or allow the use provided that GNP or the grantee shall first be required to obtain all necessary federal, State and local approvals prior to construction. GNP will require, as a condition of such use, that the grantee provide a certification to GNP prior to the start of any construction or use governed by this section that all such approvals have been obtained.

GNP will require anyone undertaking a use subject to this section to notify GNP when the construction has been completed, so that GNP can review the project to ensure that all requirements of the license and this Shoreline Plan have been met. GNP will also require, as a condition of allowing the use governed by this section, that such use be maintained in good repair and comply with all applicable State and local health and safety requirements. If the use is by GNP rather than a grantee, then GNP shall remain responsible for maintaining the use in good repair and in compliance with applicable requirements.

SUMMARY OF PROGRAM FOR ARTICLE 419(b) USES

- GNP reviews proposed use for compliance with license and compatibility with project resources and multiple use objectives
- GNP allows the use subject to GNP or grantee obtaining any necessary federal, State or local approvals
- Grantee certifies to GNP that all such approvals have been obtained
- Grantee notifies GNP when construction is completed
- GNP reviews construction/use to ensure compliance
- GNP requires maintaining use in good repair as a condition of continuing the use

2. Article 419(c) Uses

In accordance with Article 419(c) of the license for the Penobscot Mills Project, GNP retains the right under both the license and the easement to erect, or to grant easements, rights-of-way across, or leases of project lands to allow others to erect, certain utility structures, roads, and transmission lines provided that GNP complies with the conditions of Article 419(c), including the requirement to provide annual notice to FERC by means of a report filed by January 31st of each year. Article 419(c) covers the following uses on project lands:

- Replacement, expansion, realignment, or maintenance of bridges or roads where all necessary State and federal approvals have been obtained.
- Storm drains and water mains.
- Sewers that do not discharge into project waters.
- Minor access roads.
- Telephone, gas, and electric utility distribution lines.

- Non-project overhead electric transmission lines that do not require erection of support structures within the project boundary.
- Submarine, overhead, or underground major telephone distribution cables or major electric distribution lines (69-kV or less).
- Water intake or pumping facilities that do not extract more than one million gallons per day from a project reservoir.

For the uses described above, GNP will institute a program to ensure that such uses are consistent with the requirements of the license. The program will operate as follows.

Before undertaking or conveying any interest in project lands for the uses described in this section, GNP will consult with federal and State fish and wildlife or recreation agencies, as appropriate, and the State Historic Preservation Officer. Following such consultation, and prior to undertaking or conveying any interest for these uses, GNP will review the proposed use to determine that it is not inconsistent with the report on recreational resources submitted with GNP's FERC application as part of Exhibit E. As part of the review and consultation described above, GNP may impose requirements on the use, such as requirements to screen adverse visual features or to modify the proposal as necessary to minimize adverse impacts to the visual, environmental or recreational resources of the project area.

If the review and consultation described above indicate that the proposed use can be conducted consistent with project purposes, GNP will allow the use. If a conveyance is involved, GNP will prepare an appropriate instrument of conveyance to allow the use. The instrument will include the following covenants running with the land: (i) the use of the lands conveyed shall not endanger health, create a nuisance, or otherwise be incompatible with overall project recreational use; (ii) the grantee shall take all reasonable precautions to insure that the construction, operation, and maintenance of

structures or facilities on the conveyed lands will occur in a manner that will protect the scenic, recreational, and environmental values of the project; and (iii) the grantee shall not unduly restrict public access to project waters.

The instrument of conveyance will require that the grantee obtain all necessary federal, State and local approvals prior to beginning construction, and certify to GNP that all such approvals have been obtained. If the structure or use is proposed by GNP, then GNP will be responsible for obtaining such approvals. The instrument of conveyance may also include other conditions or requirements necessary to address issues of concern to GNP or raised by consulting agencies, or otherwise to ensure compliance with the license and applicable laws.

GNP recognizes that FERC retains the authority to require GNP to take reasonable remedial action to correct any violation of the terms and conditions of the license, including Article 419, for the protection and enhancement of the project's scenic, recreational, and other environmental values. In order to minimize the potential for any such violations, GNP will require all entities granted any interests under this section to notify GNP when projects have been completed and that they have been completed substantially in compliance with all proposals and applicable requirements of the conveyance and of federal, State and local law. GNP will inspect the project and any associated structures and will take action to ensure that significant violations are promptly corrected in accordance with this Shoreline Plan.

GNP will maintain a record of all Article 419(c) uses on project lands, whether conducted by GNP or any other entity to whom GNP grants any right to such uses. By January 31st of each year, GNP will submit a report to FERC describing each

conveyance made, the type of interest conveyed, the location of the lands subject to the conveyance, and the nature of the use for which the interest was conveyed.

SUMMARY OF PROGRAM FOR ARTICLE 419(c) USES

- GNP reviews proposed use for compliance with FERC license, impact on project resources
- GNP consults with appropriate federal and State agencies and incorporates recommendations as appropriate
- GNP conveys interest to allow use, with appropriate restrictions and conditions, including requirement for grantee to obtain all required federal, State and local approvals, or obtains such approvals for GNP projects.
- Grantee certifies to GNP that all approvals have been obtained
- Grantee notifies GNP of project completion in compliance with all permits and approvals
- GNP inspects project to ensure compliance with license and Shoreline Plan
- GNP retains obligation to ensure ongoing compliance with license
- GNP maintains records of all Article 419(c) uses and provides annual report to FERC
- GNP remains responsible to require ongoing repair and maintenance as appropriate

3. Article 419(d) Uses

In accordance with Article 419(d) of the license for the Penobscot Mills Project, GNP retains the right to erect, or to convey to others fee title to, easements, rights of way across, or leases of project lands for certain types of uses, including new bridges or roads, sewer or effluent lines, pipelines, electric transmission lines, private and public marinas, recreational development, and other uses on parcels of land 5 acres or less. In order to allow such uses, GNP must comply with the conditions of Article 419(d) requiring prior notice to FERC. Article 419(d) covers the following uses of project lands:

- Construction of new bridges or roads for which all necessary State and federal approvals have been obtained.
- Sewer or effluent lines that discharge into project waters, for which all necessary federal and State water quality certification or permits have been obtained.
- Other pipelines that cross project lands or waters but do not discharge into project waters.
- Non-project overhead electric transmission lines that require erection of support structures within the project boundary, for which all necessary federal and State approvals have been obtained.
- Private or public marinas that can accommodate no more than 10 water craft at a time and are located at least one-half mile (measured over project waters) from any other private or public marina.
- Recreational development consistent with the report on recreational resources submitted as part of Exhibit E to GNP's FERC application.
- Other uses, if: (i) the amount of land conveyed for a particular use is five acres or less; (ii) all of the land conveyed is located at least 75 feet, measured horizontally, from project waters at normal surface elevation; and (iii) no more than 50 total acres of project lands for each project development are conveyed under this clause in any calendar year.

For the uses described above, GNP will institute a program to ensure that such uses are consistent with the requirements of the license. The program will operate as follows:

For lands within the project boundary, before undertaking or conveying any interest for the uses described in this section, GNP will consult with federal and State fish and wildlife or recreation agencies, as appropriate, and the State Historic Preservation Officer about the proposed use. Following such consultation and prior to allowing any of the uses described in this section, GNP will, at least 60 days prior to undertaking any use listed above or conveying any interest to allow such use, submit a letter to the Director, Office of Hydropower Licensing, stating GNP's intent to undertake the use or convey the interest, describing the type of interest to be conveyed, the location of the lands involved, the nature of the proposed use, the identity of any federal or State agency official consulted, and any federal or State approvals required for the proposed use. If the Director, within 45 days from the filing date, notifies GNP that an application for prior approval is required, then GNP will proceed to obtain such prior approval in accordance with the Director's requirements. If no notice is received within the 45 days, then GNP will proceed as discussed below without filing an application for prior approval.

In conjunction with its consultation with government agencies, including FERC, and prior to undertaking the use or conveying any interest in project lands for such use, GNP will review the proposed use to determine that it is not inconsistent with GNP's report on recreational resources submitted as part of Exhibit E to the FERC license application.

If the review and consultation described above indicate that the proposed use can be conducted in accordance with the FERC license, GNP will undertake the use or prepare an appropriate instrument of conveyance to allow the use. Any instrument of conveyance will include the following covenants running with the land: (i) the use of the

lands conveyed shall not endanger health, create a nuisance, or otherwise be incompatible with overall project recreational use; (ii) the grantee shall take all reasonable precautions to insure that the construction, operation, and maintenance of structures or facilities on the conveyed lands will occur in a manner that will protect the scenic, recreational, and environmental values of the project; and (iii) the grantee shall not unduly restrict public access to project waters.

The instrument of conveyance will require that the grantee obtain all necessary federal, State and local approvals prior to beginning construction, and certify to GNP that all such approvals have been obtained. If the structure or use is proposed by GNP rather than a grantee, GNP will remain responsible for obtaining all such approvals. Any instrument of conveyance may also include other conditions or requirements necessary to address issues raised by GNP or by consulting agencies, or otherwise to ensure compliance with the license and applicable laws.

GNP recognizes that FERC retains the authority to require GNP to take reasonable remedial action to correct any violation of the terms and conditions of the license, including Article 419, for the protection and enhancement of the project's scenic, recreational, and other environmental values. In order to minimize the potential for any such violations, GNP will require all entities granted any interests under this section to notify GNP when projects have been completed and to certify that they have been completed in compliance with all proposals and applicable requirements of the conveyance and of federal and State law. GNP will inspect the project and any associated structures and will take action to ensure that any violations are promptly corrected.

SUMMARY OF PROGRAM FOR ARTICLE 419(d) USES

- GNP reviews proposed use for compliance with FERC license, impact on project resources
- GNP consults with appropriate federal and State agencies and incorporates recommendations as appropriate
- At least 60 days prior to construction, GNP notifies FERC of the proposed project and provides required information
- GNP obtains prior FERC approval for project, if required
- GNP conveys interest to allow use, with appropriate restrictions and conditions, including requirement for grantee to obtain all required federal, State and local approvals, or GNP obtains such approvals itself for GNP projects
- Grantee certifies to GNP that all approvals have been obtained
- Grantee notifies GNP when project has been completed in compliance with all approvals
- GNP inspects project to ensure compliance with license, Shoreline Plan and this program
- GNP remains responsible to require ongoing repair and maintenance as appropriate

V. CONCLUSION

Through the implementation of the Shoreline Management Program described above for lands within the expanded project boundary, GNP will have in place an appropriate mechanism for ensuring that shoreline management on project lands will comply with the requirements of the FERC license, will ensure public access to project lands and waters, and will conserve natural resources in the project area.

Brookfield Power

New England Operations
Great Lakes Hydro America, LLC
1024 Central Street
Millinocket, ME 04462

Tel +1 (207) 723-4341
Fax +1 (207) 723-3948
www.brookfieldpower.com

April 28, 2008

FERC No. 2458
Penobscot Mills Project

GLHA Files: 2458/1 & 2572/1

FERC No. 2572
Ripogenus Project

Dear Consulting Agency:

Subject: Penobscot Mills Project (FERC No. 2458), Article 415
Ripogenus Project (FERC No. 2572), Article 411
Final Recreation Facility Monitoring Plan

The Ripogenus and Penobscot Mills FERC licenses require Great Lakes Hydro America, LLC (GLHA) to periodically monitor recreation use in the project areas to determine whether existing recreation facilities are meeting recreation needs. On February 22, 2008, GLHA distributed a draft plan for conducting this study in 2008. Comments (see attached) were received from the Maine Department of Environmental Protection (DEP) and the Maine Department of Conservation (DOC). The DEP had no comments on the study plan, and the DOC provided clarification on the recreation data that they could provide to the study.

DOC's comments have been incorporated into the final plan (see attached) for conducting this study in 2008. As noted in the draft study plan, GLHA intends to monitor project recreational facilities from May through September in 2008 in cooperation with the DOC, Maine North Woods (NMW), and Katahdin Forest Management (KFM). GLHA will survey public boat launches and picnic areas associated with the projects to determine existing use, while the DOC and NMW will provide use data on campsites that they manage around the Ripogenus Project impoundment. KFM will provide commercial rafting data for the McKay Station raft put-in site through the State of Maine, as a per-person commercial fee is collected from outfitters for rafting trips down the West Branch of the Penobscot River. Private boat launches, along with several primitive and unmanaged campsites, will not be monitored.

Please feel free to call (207-723-4341, x118) or write if you have any questions on the attached final recreation facility 2008 monitoring plan for the Ripogenus and Penobscot Mills projects.

Sincerely,

Kevin Bernier

Kevin Bernier
Environmental & FERC Compliance Specialist

KB/m

Attachments

cc: Dana Murch, DEP
Tim Obrey, IF&W - Greenville
Fred Seavey, F&WS
Kathy Eickenberg, DOC
Brian Stetson, GLHA
Matt Ayotte, GLHA
Steve Timpano, IF&W
Richard Dill, IF&W - Enfield
Matt LaRoche, DOC
Kevin Mendik, NPS
David Preble, GLHA
Russell Smith, GLHA

STATE OF MAINE
DEPARTMENT OF CONSERVATION
22 STATE HOUSE STATION
AUGUSTA, MAINE
04333-0022

JOHN ELIAS BALDACCI
GOVERNOR

PATRICK K. McGOWAN
COMMISSIONER

March 10, 2008

Kevin Bernier
Great Lakes Hydro America, LLC
1024 Central Street
Millinocket, ME 04462

RE: Draft Proposed Recreation Facility Monitoring Plan
Penobscot Mills (FERC # 2458) and Ripogenus Projects (FERC # 2572)

Dear Kevin,

The Maine Bureau of Parks and Lands (Bureau) has reviewed your draft plan to monitor recreation use in 2008 for facilities within the Penobscot Mills and Ripogenus Projects, and submits the following comments related to DOC's participation:

The Bureau collects public use data from a variety of registration methods, including staff registration, self-registration, and a registration process administered under a contract with North Maine Woods, Inc. These data streams are consolidated into a single database by bureau staff, and include information on entry and exit points and/or campsites visited by park visitors. Registration forms also include a space where visitors may indicate that they are participating in the PRC "River Trip," which is defined to mean that visitors intend to visit the Upper West Branch of the PRC and portions of the Chesuncook Lake District.

The Bureau is unable to provide custom interpretation from data from this public use database, but agrees to provide a copy of data collected in this database for calendar year 2008 to Brookfield Power for the purposes of data analysis and interpretation.

That said, the Bureau has considerable first hand knowledge and understanding of uses and facilities within the Penobscot River Corridor. Based on this experience, and together with any new data provided as a result of GLHA's 2008 monitoring effort, the Bureau expects to provide comments on public recreation facility needs as part of GLHA's required recreation needs assessment.

Thank you for the opportunity to provide comments on your proposed recreation facility monitoring plan.

Sincerely,

Kathy Eickenberg
Senior Planner

Cc FERC recreation consultation agencies

BUREAU OF PARKS AND LANDS
WILLARD R. HARRIS, JR. DIRECTOR

www.maine.gov/doc
PHONE: (207) 287-3821
FAX: (207) 287-6170
FAX: (207) 287-8111
TTY: (207) 287-2213

From: Murch, Dana P [Dana.P.Murch@maine.gov]
Sent: Wednesday, March 05, 2008 3:58 PM
To: Wiley, Martha; Obrey, Tim; Fred Seavey, F&WS; Eickenberg, Katherine; Stetson, Brian; Ayotte, Matthew; Timpano, Steve; Dill, Richard; LaRoche, Matt; Kevin Mendik, NPS; Preble, David; Smith, Russell
Cc: Bernier, Kevin; Day, Julie
Subject: RE: Draft Recreation Facility Monitoring Plan

Martha, the DEP has no comments on the proposed monitoring plan.

Dana Murch

From: Wiley, Martha [mailto:martha.wiley@brookfieldpower.com]
Sent: Friday, February 22, 2008 9:01 AM
To: Murch, Dana P; Obrey, Tim; Fred Seavey, F&WS; Eickenberg, Katherine; Stetson, Brian; Ayotte, Matthew; Timpano, Steve; Dill, Richard; LaRoche, Matt; Kevin Mendik, NPS; Preble, David; Smith, Russell
Cc: Bernier, Kevin; Day, Julie
Subject: Draft Recreation Facility Monitoring Plan

Martha Wiley (For Kevin Bernier)
Engineering/Operations Assistant
Brookfield Power New England
Northern Operations
Tel: 207-723-4341, Ext. 104
Fax: 207-723-4597
martha.wiley@brookfieldpower.com

RECREATION FACILITY MONITORING PLAN

Ripogenus and Penobscot Mills Projects

Introduction

Article 415 of the Penobscot Mills Project license (FERC No. 2458) and Article 411 of the Ripogenus Project license (FERC No. 2572) require Great Lakes Hydro America, LLC (GLHA) to monitor recreation use of the project areas to determine whether existing recreation facilities are meeting recreation needs. The Articles are identical, and read as follows:

> *"The licensee, after consultation with the U.S. Fish and Wildlife Service (FWS), U. S. National Park Service (NPS), Maine Department of Inland Fisheries and Wildlife (DIFW), Maine Department of Conservation (DOC), and Maine Bureau of Parks and Recreation, shall monitor recreation use of the Ripogenus (and Penobscot Mills) project area to determine whether existing recreation facilities are meeting recreation needs. Monitoring studies shall begin within six years of the issuance date of this license, and shall include at a minimum the collection of annual recreation use data.*
>
> *Every six years during the term of the license, the licensee shall file a report with the Commission on the monitoring results. This report shall include:*
>
> 1. *Annual recreation use figures;*
> 2. *A discussion of the adequacy of the licensee's recreation facilities at the project site to meet recreation demand;*
> 3. *A description of the methodology used to collect all study data;*
> 4. *If there is a need for additional facilities, a recreation plan proposed by the licensee to accommodate recreational demands in the project area;*
> 5. *If there is need for additional facilities, the licensee's design of recreational facilities and how such design takes into account the national standards established by the Architectural and Transportation Barriers Compliance Board pursuant to the Americans with Disabilities Act of 1990;*
> 6. *Documentation of agency consultation and agency comments on the report after it has been prepared and provided to the agencies; and*
> 7. *Specific descriptions of how the agency comments are accommodated by the report.*
>
> *The licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations prior to filing the report with the Commission."*

The license Articles originated during second stage consultations in 1990 with the U. S. Fish and Wildlife Service (U.S. F&WS), the Maine Department of Conservation (DOC), and the Maine Department of Inland Fisheries and Wildlife (IF&W). Each of these agencies suggested that post-licensing consultation should be conducted periodically to evaluate the adequacy of the recreational facilities and access at the projects.

The licensee at that time (Great Northern Paper, or GNP) agreed to continue to evaluate the adequacy of the recreation facilities in the project areas to meet demand, keeping in mind that the provisions of the conservation easement (where many of these facilities are located) call for traditional types of recreational opportunity and facilities which do not encourage significant increases in recreational use. Based on the recreation studies conducted (circa 1990) in preparation for relicensing the projects, GNP concluded that the level of recreational facilities provided was adequate at that time to accommodate both the current and projected need.

RECREATION FACILITY MONITORING PLAN

Ripogenus and Penobscot Mills Projects

The specific language of these Articles originated from a May 24, 1993 correspondence to the Federal Energy Regulatory Commission (FERC) from the U. S. Department of the Interior (DOI) responding to GNP's March 25, 1993 public notice for the relicensing of the Ripogenus and Penobscot Mills projects. In that correspondence, the DOI stated that GNP's plans for access in the project area were adequate; however, periodic assessments of recreation use were necessary to ensure that the recreation facilities are sufficient. The DOI then outlined their suggestions for post-license recreation monitoring in their Section 10(j) recommendations, from which FERC generated the Articles for recreational facility monitoring indicated above.

FERC summarized the recreation facilities for the Ripogenus and Penobscot Mills projects in a table (Table 3-8) contained in their Final Environmental Impact Statement (FEIS) for these two projects, which was published in 1996. This table is reproduced as Table 1 of this study plan.

For the two projects combined, the FEIS identified 6 public boat launches, 4 private boat launches, 4 public boat put-ins, 23 campsites, and several formal and informal picnic areas. In addition, there are facilities at McKay Station for rafters and kayakers including parking areas, privies, and a generator with compressor for inflating rafts. Numerous access sites are also available at the projects for anglers, boaters, and other recreationists.

Four of the boat launches (Caribou, Green Bridge, Dead Man's Curve, and Route 157 at Dolby Flowage) were improved as required by the 1996 FERC licenses by increasing parking and improving access. These improvements, which were all completed by October 1998, were required by separate recreation license articles (Article 410 of the Ripogenus license and Article 414 of the Penobscot Mills license).

Monitoring of the Ripogenus and Penobscot Mills recreation facilities was conducted in 2001 as required by these license requirements. Both the study plan (finalized on April 13, 2001) and the monitoring report (submitted to FERC on October 18, 2002) were prepared in consultation with the resource agencies.

Subsequent to the 2001 studies, improvements were made to the Chesuncook Dam Point and South Twin boat launches. The Chesuncook launch was improved in 2003 by relocating the access site totally onto GLHA property and by adding ripped ledge to facilitate vehicle traction. A vault privy was also constructed at the launch site in 2004. Improvements were made at the South Twin boat launch in 2005 by expanding the parking area and by adding signage.

Table 1

Table 3-8. Recreation facilities summary (Source: Staff)

Lakes	Surface Area	Recreational Use	Activities	Facilities	# Private Leases	# Commercial Leases	Access Points
RIPOGENUS PROJECT - Ripogenus Lake - Caribou Lake - Chesuncook Lake	29,270 acres	Light	Swimming Fishing Ice Fishing Snowmobiling X-C Skiing Boating Canoeing Camping Sightseeing	- 18 campsites	60	3	2 Public Boat Launches - Chesuncook Dam Point - Umbazooksus Stream 1 Private Boat Launch - Allagash Gateway Campsite 1 Informal Boat Launch - Western Shore Caribou Lake
PENOBSCOT MILLS PROJECT NORTH TWIN - N. Twin Lake - S. Twin Lake - Pemadumcook Lake - Ambajejus Lake - Elbow Lake	17,790 acres	Heavy	Fishing Boating Waterskiing Swimming Snowmobiling Ice Fishing Canoeing X-C Skiing	- S. Twin Lake Picnic Area - Ambajejus Lake Beach - 3 campsites	703	4	2 Public Boat Launches - Ambajejus Lake - Partridge Cove (S. Twin) 2 Private Boat Launches - Barton's Marina - North Woods Trading Post 1 Public Boat Put-In - Norcross (Elbow Lake)
MILLINOCKET LAKE	8,640 acres	Heavy	Fishing Boating Waterskiing Swimming Snowmobiling Ice Fishing Canoeing X-C Skiing	- 2 campsites	120	7	2 Public Boat Launches - Millinocket Lake - Millinocket Dam 1 Private Boat Launch - Robinson Twin Pines Camp 1 Informal Boat Put-In - Near Robinson's Twin Pines Camp
MILLINOCKET - Quakish Lake - Ferguson Pond	1,606 acres	Light	Fishing Canoeing Ice Fishing		0	0	1 Public Boat Put-In - Green Bridge
DOLBY POND	2,048 acres	Light	Fishing Canoeing Ice Fishing	Dolby Picnic Area	0	0	2 Public Boat Put-Ins - Dead Man's Curve (Jerry Brook) - Rt. 157 (Dolby Flowage)
E. MILLINOCKET	128 acres	Restricted	None		0	0	None

RECREATION FACILITY MONITORING PLAN

Ripogenus and Penobscot Mills Projects

Methodology

Unlike the relicensing studies during the 1980's, a gate system is not currently maintained for all visitors to the Ripogenus Project area. North Maine Woods (NMW), an organization of large and small landowners who jointly manage 3.5 million acres of forestland in northern Maine, does maintain a gate system that encompasses the northern portions of the Ripogenus Project. However, there is still no opportunity to have check point attendants collect all of the recreational information as there was in the 1980's. In order to assess whether recreational facilities are meeting current demand, GLHA proposes a season-long (May - September) recreational survey in 2008 conducted in coordination with the DOC and NMW.

The DOC, who manages and monitors recreational use along the Penobscot River Corridor ("PRC", which includes the Ripogenus impoundment), currently collects public use data from a variety of registration methods, including staff registration, self-registration, and a registration process administered under a contract with NMW. These data streams are consolidated into a single database by DOC staff, and include information on entry and exit points and/or campsites visited by recreationists. Registration forms also include a space where visitors may indicate that they are participating in the PRC "River Trip", which means that visitors intend to visit both the Upper West Branch portion of the PRC and the Ripogenus impoundment portion. Although the DOC is unable to provide custom interpretation of the data from this database, they have agreed to provide a copy of the 2008 data to GLHA for the purpose of data analysis and interpretation to allow GLHA to estimate use of the campsites on the Ripogenus impoundment.

NMW will assist this study by providing recreational use information for the two campsites at the northern end of the Ripogenus impoundment (Umbazooksus West and Umbazooksus West). Both of these campsites are within the NMW gate system, and both are managed by NMW.

In addition to the recreational use information collected by the DOC and NMW, GLHA will survey the public boat launches and picnic areas of the Ripogenus and Penobscot Mills Projects from May through September in 2008. Survey days will be randomly pre-selected from two strata: weekend/holidays and weekdays. A GLHA clerk will patrol the recreational facilities on the survey days recording information on the number of people utilizing each recreational site. Each survey day will be 10 hours in length, and the survey hours (either 7 a.m. to 5 p.m., or 10 a.m. to 8 p.m.) will be selected randomly to remove any bias. Furthermore, the travel route used by the clerk will also be randomly selected on each survey day. The recreational survey data can then be computerized and stratified to produce estimates of the total number of recreationists utilizing each facility for the season.

RECREATION FACILITY MONITORING PLAN

Ripogenus and Penobscot Mills Projects

Katahdin Forest Management and the State of Maine already collect information on the use of the raft put-in facilities at McKay Station since a per-person commercial fee is collected for their use. These data will be summarized in 2008 for inclusion in the 2008 recreation report.

These survey methodologies will provide recreational use figures for the recreational facilities as required by the license articles, and provide a basis for determining whether the facilities are adequate for existing recreational demand.

There are no plans to include any private boat launches at the project impoundments in the survey, nor the five campsites identified in Table 1 on Millinocket Lake and the North Twin impoundment. The boat launches are privately owned for commercial purposes and are not managed by GLHA, while the five campsites are very primitive and difficult to access sites which are also not managed under GLHA's recreational program.

File ~~[illegible]~~
1-8663/5
Copy Jeff ✓
Ed
Kevin 8-23-99

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

ANGUS S. KING, JR.
GOVERNOR

MARTHA KIRKPATRICK
COMMISSIONER

August 17, 1999

RECEIVED
AUG 1? 1999
By ____________

Brian Stetson
Manager, Environmental and Government Affairs
Great Northern Paper
One Katahdin Avenue
Millinocket, ME 04462-1398

RE: Compliance Status
Great Northern Hydro Projects

Dear Brian:

Thank you for your phone call in response to my letter of August 10 regarding outstanding 401 certification compliance items on Great Northern Paper's hydro projects.

With respect to the Dolby Pond DO study, I have found a copy of Great Northern's DO monitoring results (letter from Richard Kroeger to Gregg Wood dated December 29, 1994). This filing fulfills the requirement of the certification condition.

With respect to navigational hazard studies, I am now aware that FERC has extended the filing deadline for the study results to May 1, 2000 (this applies to both the Millinocket Lake and North Twin Lake studies). The DEP accepts this as the new certification compliance deadline.

Please be advised that compliance is currently up-to-date for all five Penobscot Mills developments (see enclosed Compliance Status Reports).

I apologize for any inconvenience.

Sincerely,

Dana Paul Murch

Dana Paul Murch
Dams & Hydro Supervisor

Enclosure

COMPLIANCE STATUS REPORT

PROJECT: PENOBSCOT MILLS

LOCATION: Millinocket, et al.
West Branch Penobscot River

FERC No. 2458

Date license issued: 10/22/1996

DEP # L-17166

Date 401 cert issued: 04/22/1993

CONDITION NUMBER	DESCRIPTION	DATE DUE	DATE APPROVED
1(C)	Minimum Flow Monitoring Plan	04/22/1997	**10/09/1997**
2(B)	Water Level Monitoring Plan	04/22/1997	**10/09/1997**
3	Dolby Dissolved Oxygen Study Results	08/01/1999	**Filed with DEP 12/29/1994**
4	Cooperation With DEP & EPA on Toxic Metals Study	As determined by DEP & EPA	**Study plan approved 02/04/1997****
5(B)	North Twin Fishway Repair Plan	10/22/1997	**01/05/1998**
6(B)	North Twin Togue Monitoring Study Plan	10/22/1997	**01/05/1998**
6(C)	North Twin Togue Study Results	Per study plan*	
7(B)	Wetlands Enhancement Plan	10/22/1997	**01/05/1998**
8(B)	North Twin Navigational Hazard Study Plan	04/22/1997	**10/03/1997**
8(C)	North Twin Navigational Hazard Study Results	05/01/2000	
9(B)	Recreational Access Facilities Plan	04/22/1997	**10/13/1997**

* Monitoring reports to be filed by Jan 31 annually; monitoring to be discontinued when successful togue reproduction has been demonstrated.

** Study plan approved 02/04/1997. Final report filed with DEP & FERC 05/31/1999. No additional studies required at this time.

c\compliance\penobscot mills

COMPLIANCE UP TO DATE AS OF 08/17/1999

COMPLIANCE STATUS REPORT

PROJECT: PENOBSCOT MILLS STORAGE

LOCATION: Millinocket, et al. Millinocket Stream

FERC No. 2458

Date license issued: 10/22/1996

DEP # L-17166

Date 401 cert issued: 04/22/1993

CONDITION NUMBER	DESCRIPTION	DATE DUE	DATE APPROVED
1(C)	Minimum Flow Monitoring Plan	04/22/1997	**10/09/1997**
2(C)	Water Level Monitoring Plan	04/22/1997	**10/09/1997**
3(A)	Annual Brook Trout Stocking (no compliance filing required)	Per agreement with IF&W	**On-going**
3(B)	Brook Trout Stocking and Monitoring Plan	04/22/1997	**10/13/1997**
3(C)	Brook Trout Stocking and Monitoring Report/Revised Stocking Plan	After 5 yrs of stocking*	
4	Wetlands Enhancement Plan	10/22/1997	**01/05/1998**
5	Cooperation With DEP & EPA on Toxic Metals Study	As determined by DEP & EPA	**Study plan approved 02/04/1997****
6(B)	Millinocket Lake Navigational Hazard Study Plan	04/22/1997	**10/03/1997**
6(C)	Millinocket Lake Navigational Hazard Study Results	05/01/2000	

* Monitoring reports to be filed annually.

** Study plan approved 02/04/1997. Final report filed with DEP & FERC 05/31/1999. No additional studies required at this time.

c\compliance\penobscot mills storage

COMPLIANCE UP TO DATE AS OF 08/17/1999

STATE OF MAINE

Department of Environmental Protection

Paul R. LePage
GOVERNOR

Paul Mercer
COMMISSIONER

June 4, 2018

Mr. Kevin Bernier
Great Lakes Hydro America, LLC
1024 Central Street
Millinocket, ME. 04462

RE: Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0037371
Maine Waste Discharge License #W009101-5R-B-R
Final Permit

Dear Mr. Bernier:

Enclosed please find a copy of your **final** MEPDES permit/WDL which was approved by the Department of Environmental Protection. Please read the permit and its attached conditions carefully. You must follow the conditions in the order to satisfy the requirements of law. Any discharge not receiving adequate treatment is in violation of State Law and is subject to enforcement action.

Any interested person aggrieved by a Department determination made pursuant to applicable regulations, may appeal the decision following the procedures described in the attached DEP FACT SHEET entitled "*Appealing a Commissioner's Licensing Decision.*"

If you have any questions regarding the matter, please feel free to call me at 485-2404.

Sincerely,

Irene Saumur
Division of Water Quality Management
Bureau of Water Quality

Enc.

cc: Clarissa Trasko, DEP/EMRO, Lori Mitchell, DEP/CMRO Olga Vergara, USEPA
Sandy Mojica, USEPA Marelyn Vega, USEPA

AUGUSTA
17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 287-7688 FAX: (207) 287-3435

BANGOR
106 HOGAN ROAD
BANGOR, MAINE 04401
(207) 941-4570 FAX: (207) 941-4584

PORTLAND
312 CANCO ROAD
PORTLAND, MAINE 04103
(207) 822-6300 FAX: (207) 822-6303

PRESQUE ISLE
1235 CENTRAL DRIVE, SKYWAY PARK
PRESQUE ISLE, MAINE 04769-2094
(207) 764-6477 FAX: (207) 764-1507

web site: www.maine.gov/dep

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
17 STATE HOUSE STATION
AUGUSTA, ME 04333

DEPARTMENT ORDER

IN THE MATTER OF

GREAT LAKES HYDRO AMERICA LLC	)	MAINE POLLUTANT DISCHARGE
MILLINOCKET, PENOBSCOT CO., MAINE	)	ELIMINATION SYSTEM PERMIT
COOLING WATER DISCHARGE	)	AND
MILLINOCKET HYDRO STATION	)	
ME0037371	)	WASTE DISCHARGE LICENSE
W009101-5R-B-R **APPROVAL**	)	**RENEWAL**

Pursuant to the provisions of the Federal Water Pollution Control Act, Title 33 USC, Section 1251, *et. seq.* and 38 M.R.S. Sections 413 and 414-A *et. seq.*, and 06-096 CMR 582 (Regulations Relating to Temperature, effective date February 18, 1989, as amended), the Department of Environmental Protection (Department hereinafter) has considered the application of GREAT LAKES HYDRO AMERICA LLC (GLHA/permittee hereinafter) with its supportive data, agency review comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

APPLICATION SUMMARY

GLHA has submitted a timely and complete application to the Department for renewal of Maine Pollutant Discharge Elimination System (MEPDES) permit #ME0037371/Maine Waste Discharge License (WDL) #W009101-5R-A-N which was issued by the Department on July 16, 2013 and expires on July 16, 2018. The WDL authorized the discharge of up to 22,000 gallons per day of non-contact cooling water from one outfall and an unspecified quantity of storm water runoff from two roof drains from two additional outfalls from the Millinocket Hydro Station to the Millinocket Stream, Class C, in Millinocket, Maine.

PERMIT SUMMARY

This permitting action is carrying forward all the terms and conditions of the previous permitting action.

CONCLUSIONS

BASED on the findings in the attached Fact Sheet dated June 4, 2018, and subject to the Conditions listed below, the Department makes the following conclusions:

1. The discharge, either by itself or in combination with other discharges, will not lower the quality of any classified body of water below such classification.

2. The discharge, either by itself or in combination with other discharges, will not lower the quality of any unclassified body of water below the classification which the Department expects to adopt in accordance with state law.

3. The provisions of the State's antidegradation policy, 38 M.R.S. §464(4)(F), will be met, in that:

   (a) Existing in-stream water uses and the level of water quality necessary to protect and maintain those existing uses will be maintained and protected;

   (b) Where high quality waters of the State constitute an outstanding natural resource, that water quality will be maintained and protected;

   (c) Where the standards of classification of the receiving water body are not met, the discharge will not cause or contribute to the failure of the water body to meet the standards of classification;

   (d) Where the actual quality of any classified receiving water body exceeds the minimum standards of the next highest classification that higher water quality will be maintained and protected; and

   (e) Where a discharge will result in lowering the existing water quality of any water body, the Department has made the finding, following opportunity for public participation, that this action is necessary to achieve important economic or social benefits to the State.

4. The discharge will be subject to effluent limitations that require application of best practicable treatment as defined in Maine law, 38 M.R.S., §414-A(1)(D).

ACTION

THEREFORE, the Department APPROVES the application of GREAT LAKES HYDRO AMERICA LLC, to discharge up to 22,000 gallons per day of non-contact cooling water at a temperature not to exceed 95 degrees Fahrenheit and an unspecified quantity of storm water runoff from two roof drains from the Millinocket Hydro Station to Millinocket Stream, Class C, in Millinocket, Maine, as described above, SUBJECT TO ALL APPLICABLE STANDARDS AND REGULATIONS AND THE FOLLOWING CONDITIONS:

1. "*Maine Pollutant Discharge Elimination System Permit Standard Conditions Applicable To All Permits*," revised July 1, 2002, copy attached.

2. The attached Special Conditions, including any effluent limitations and monitoring requirements.

3. This permit becomes effective upon the date of signature below and expires at midnight five (5) years after that date. If a renewal application is timely submitted and accepted as complete for processing prior to the expiration of this permit, the terms and conditions of this permit and all subsequent modifications and minor revisions thereto remain in effect until a final Department decision on the renewal application becomes effective. [*Maine Administrative Procedure Act*, 5 M.R.S. § 10002 and *Rules Concerning the Processing of Applications and Other Administrative Matters*, 06-096 CMR 2(21)(A) (effective October 12, 2015)].

DONE AND DATED AT AUGUSTA, MAINE, THIS 6th DAY OF June, 2018.

COMMISSIONER OF ENVIRONMENTAL PROTECTION

BY: Michael Kuhns
for Paul Mercer, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application April 17, 2018.
Date of application acceptance April 17, 2018.

Filed
JUN 07 2018
State of Maine
Board of Environmental Protection

Date filed with Board of Environmental Protection _____

This Order prepared by Irene Saumur, Bureau of Water Quality

ME0037371 2018

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. The discharge shall not contain a visible oil sheen, foam, or floating solids at any time that would impair the designated uses or habitat characteristics of the receiving waters or would otherwise lower the quality of the receiving water below its assigned classification.

2. The discharge shall not impart color, taste, turbidity, toxicity, or other properties that would impair the designated uses or habitat characteristics of the receiving waters or would otherwise lower the quality of the receiving water below its assigned classification.

3. The permittee shall notify Department immediately of the discharge of any pollutants other than heat from the facility. The permittee shall also notify Department of any changes in facility design, operation or generating capacity that may affect the flow or temperature of the cooling water discharge.

4. All miscellaneous facility leakage and lubrication waters that may become contaminated with oil or grease shall be subject to Best Management Practices (BMPs) designed to prevent the release of contaminants to the waters of the state. Within 90 days of permit issuance, BMPs shall be developed by the permittee and shall be available in writing for Department review and approval upon request. BMPs may consist of, but not be limited to, the following, as appropriate: development and implementation of a spill prevention plan; use of oil absorbent pads or booms and/or physical berms to contain spills or leaks of hydraulic and lubrication oils; and the treatment of water collected in floor drains and sumps through an oil/grease trap or oil-water separator. Where bearing cooling water is used, BMPs shall include the maintenance of a written log or record of bearing oil levels and maintenance activities. Where floor drains and sumps are used, BMPs shall include (1) written procedures for the cleaning and maintenance of any oil-grease trap, oil skimmer or oil-water separator and (2) maintenance of a written log or record of visual inspections of sumps for oil and grease and of actions taken to prevent the discharge of oil or grease from the facility.

B. AUTHORIZED DISCHARGES

The permittee is authorized to discharge only in accordance with: 1) the permittee's General Application for Waste Discharge Permit accepted for processing on April 17, 2018, and 2) the terms and conditions of this permit; and 3) only from the outfall(s) identified in this permit. Discharges from any other point source are not authorized under this permit, and must be reported in accordance with Standard Condition D(1)(f), *Twenty-four hour reporting*, of this permit.

SPECIAL CONDITIONS

C. NOTIFICATION REQUIREMENT

In accordance with Standard Condition D, the permittee shall notify the Department of any substantial change in the volume or character of pollutants being discharged.

D. REOPENING OF PERMIT FOR MODIFICATIONS

Based upon site inspections, additional site specific or any other pertinent information or test results obtained during the term of this permit, the Department may, at anytime and with notice to the permittee, modify this permit to establish limitations or require additional monitoring, inspections and/or reporting based on the new information.

E. SEVERABILITY

In the event that any provision, or part thereof, of this permit is declared to be unlawful by a reviewing court, the remainder of the permit shall remain in full force and effect, and shall be construed and enforced in all respects as if such unlawful provision, or part thereof, had been omitted, unless otherwise ordered by the court.

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

STANDARD CONDITIONS APPLICABLE TO ALL PERMITS

CONTENTS

A. GENERAL PROVISIONS

1. **General compliance.** All discharges shall be consistent with the terms and conditions of this permit; any changes in production capacity or process modifications which result in changes in the quantity or the characteristics of the discharge must be authorized by an additional license or by modifications of this permit; it shall be a violation of the terms and conditions of this permit to discharge any pollutant not identified and authorized herein or to discharge in excess of the rates or quantities authorized herein or to violate any other conditions of this permit.

2. Other materials. Other materials ordinarily produced or used in the operation of this facility, which have been specifically identified in the application, may be discharged at the maximum frequency and maximum level identified in the application, provided:

(a) They are not

(i) Designated as toxic or hazardous under the provisions of Sections 307 and 311, respectively, of the Federal Water Pollution Control Act; Title 38, Section 420, Maine Revised Statutes; or other applicable State Law; or
(ii) Known to be hazardous or toxic by the licensee.

(b) The discharge of such materials will not violate applicable water quality standards.

3. Duty to comply. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of State law and the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

(a) The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Clean Water Act, and 38 MRSA, §420 or Chapter 530.5 for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.
(b) Any person who violates any provision of the laws administered by the Department, including without limitation, a violation of the terms of any order, rule license, permit, approval or decision of the Board or Commissioner is subject to the penalties set forth in 38 MRSA, §349.

4. Duty to provide information. The permittee shall furnish to the Department, within a reasonable time, any information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Department upon request, copies of records required to be kept by this permit.

5. Permit actions. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

6. Reopener clause. The Department reserves the right to make appropriate revisions to this permit in order to establish any appropriate effluent limitations, schedule of compliance or other provisions which may be authorized under 38 MRSA, §414-A(5).

7. Oil and hazardous substances. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities or penalties to which the permittee is or may be subject under section 311 of the Federal Clean Water Act; section 106 of the Federal Comprehensive Environmental Response, Compensation and Liability Act of 1980; or 38 MRSA §§ 1301, et. seq.

8. Property rights. This permit does not convey any property rights of any sort, or any exclusive privilege.

9. Confidentiality of records. 38 MRSA §414(6) reads as follows. "Any records, reports or information obtained under this subchapter is available to the public, except that upon a showing satisfactory to the department by any person that any records, reports or information, or particular part or any record, report or information, other than the names and addresses of applicants, license applications, licenses, and effluent data, to which the department has access under this subchapter would, if made public, divulge methods or processes that are entitled to protection as trade secrets, these records, reports or information must be confidential and not available for public inspection or examination. Any records, reports or information may be disclosed to employees or authorized representatives of the State or the United States concerned with carrying out this subchapter or any applicable federal law, and to any party to a hearing held under this section on terms the commissioner may prescribe in order to protect these confidential records, reports and information, as long as this disclosure is material and relevant to any issue under consideration by the department."

10. Duty to reapply. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.

11. Other laws. The issuance of this permit does not authorize any injury to persons or property or invasion of other property rights, nor does it relieve the permittee if its obligation to comply with other applicable Federal, State or local laws and regulations.

12. Inspection and entry. The permittee shall allow the Department, or an authorized representative (including an authorized contractor acting as a representative of the EPA Administrator), upon presentation of credentials and other documents as may be required by law, to:

(a) Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
(b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
(c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
(d) Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

B. OPERATION AND MAINTENACE OF FACILITIES

1. General facility requirements.

(a) The permittee shall collect all waste flows designated by the Department as requiring treatment and discharge them into an approved waste treatment facility in such a manner as to

maximize removal of pollutants unless authorization to the contrary is obtained from the Department.

(b) The permittee shall at all times maintain in good working order and operate at maximum efficiency all waste water collection, treatment and/or control facilities.

(c) All necessary waste treatment facilities will be installed and operational prior to the discharge of any wastewaters.

(d) Final plans and specifications must be submitted to the Department for review prior to the construction or modification of any treatment facilities.

(e) The permittee shall install flow measuring facilities of a design approved by the Department.

(f) The permittee must provide an outfall of a design approved by the Department which is placed in the receiving waters in such a manner that the maximum mixing and dispersion of the wastewaters will be achieved as rapidly as possible.

2. Proper operation and maintenance. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

3. Need to halt or reduce activity not a defense. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

4. Duty to mitigate. The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

5. Bypasses.

(a) Definitions.

(i) Bypass means the intentional diversion of waste streams from any portion of a treatment facility.

(ii) Severe property damage 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.

(b) Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs (c) and (d) of this section.

(c) Notice.

(i) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass.

(ii) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in paragraph D(1)(f), below. (24-hour notice).

(d) Prohibition of bypass.

(i) Bypass is prohibited, and the Department may take enforcement action against a permittee for bypass, unless:

(A) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
(B) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
(C) The permittee submitted notices as required under paragraph (c) of this section.

(ii) The Department may approve an anticipated bypass, after considering its adverse effects, if the Department determines that it will meet the three conditions listed above in paragraph (d)(i) of this section.

6. Upsets.

(a) Definition. Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit 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.

(b) Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph (c) of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

(c) Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

(i) An upset occurred and that the permittee can identify the cause(s) of the upset;
(ii) The permitted facility was at the time being properly operated; and
(iii) The permittee submitted notice of the upset as required in paragraph D(1)(f) , below. (24 hour notice).
(iv) The permittee complied with any remedial measures required under paragraph B(4).

(d) Burden of proof. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

C. MONITORING AND RECORDS

1. General Requirements. This permit shall be subject to such monitoring requirements as may be reasonably required by the Department including the installation, use and maintenance of monitoring equipment or methods (including, where appropriate, biological monitoring methods). The permittee shall provide the Department with periodic reports on the proper Department reporting form of monitoring results obtained pursuant to the monitoring requirements contained herein.

2. Representative sampling. Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. If effluent limitations are based wholly or partially on quantities of a product processed, the permittee shall ensure samples are representative of times when production is taking place. Where discharge monitoring is required when production is less than 50%, the resulting data shall be reported as a daily measurement but not included in computation of averages, unless specifically authorized by the Department.

3. Monitoring and records.

(a) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

(b) Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years, the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application. This period may be extended by request of the Department at any time.

(c) Records of monitoring information shall include:

(i) The date, exact place, and time of sampling or measurements;
(ii) The individual(s) who performed the sampling or measurements;
(iii) The date(s) analyses were performed;
(iv) The individual(s) who performed the analyses;
(v) The analytical techniques or methods used; and
(vi) The results of such analyses.

(d) Monitoring results must be conducted according to test procedures approved under 40 CFR part 136, unless other test procedures have been specified in the permit.

(e) State law provides that any person who tampers with or renders inaccurate any monitoring devices or method required by any provision of law, or any order, rule license, permit approval or decision is subject to the penalties set forth in 38 MRSA, §349.

D. REPORTING REQUIREMENTS

1. Reporting requirements.

(a) Planned changes. The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

(i) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or

(ii) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under Section D(4).

(iii) The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan;

(b) Anticipated noncompliance. The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

(c) Transfers. This permit is not transferable to any person except upon application to and approval of the Department pursuant to 38 MRSA, § 344 and Chapters 2 and 522.

(d) Monitoring reports. Monitoring results shall be reported at the intervals specified elsewhere in this permit.

(i) Monitoring results must be reported on a Discharge Monitoring Report (DMR) or forms provided or specified by the Department for reporting results of monitoring of sludge use or disposal practices.

(ii) If the permittee monitors any pollutant more frequently than required by the permit using test procedures approved under 40 CFR part 136 or as specified in the permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Department.

(iii) Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Department in the permit.

(e) Compliance schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

(f) Twenty-four hour reporting.

(i) The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance

has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

(ii) The following shall be included as information which must be reported within 24 hours under this paragraph.

(A) Any unanticipated bypass which exceeds any effluent limitation in the permit.
(B) Any upset which exceeds any effluent limitation in the permit.
(C) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Department in the permit to be reported within 24 hours.

(iii) The Department may waive the written report on a case-by-case basis for reports under paragraph (f)(ii) of this section if the oral report has been received within 24 hours.

(g) Other noncompliance. The permittee shall report all instances of noncompliance not reported under paragraphs (d), (e), and (f) of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph (f) of this section.

(h) Other information. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or information.

2. Signatory requirement. All applications, reports, or information submitted to the Department shall be signed and certified as required by Chapter 521, Section 5 of the Department's rules. State law provides that any person who knowingly makes any false statement, representation or certification in any application, record, report, plan or other document filed or required to be maintained by any order, rule, permit, approval or decision of the Board or Commissioner is subject to the penalties set forth in 38 MRSA, §349.

3. Availability of reports. Except for data determined to be confidential under A(9), above, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Department. As required by State law, effluent data shall not be considered confidential. Knowingly making any false statement on any such report may result in the imposition of criminal sanctions as provided by law.

4. Existing manufacturing, commercial, mining, and silvicultural dischargers. In addition to the reporting requirements under this Section, all existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Department as soon as they know or have reason to believe:

(a) That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

(i) One hundred micrograms per liter (100 ug/l);
(ii) Two hundred micrograms per liter (200 ug/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony;
(iii) Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with Chapter 521 Section 4(g)(7); or
(iv) The level established by the Department in accordance with Chapter 523 Section 5(f).

(b) That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following ``notification levels":

(i) Five hundred micrograms per liter (500 ug/l);
(ii) One milligram per liter (1 mg/l) for antimony;
(iii) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with Chapter 521 Section 4(g)(7); or
(iv) The level established by the Department in accordance with Chapter 523 Section 5(f).

5. Publicly owned treatment works.

(a) All POTWs must provide adequate notice to the Department of the following:

(i) Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to section 301 or 306 of CWA or Chapter 528 if it were directly discharging those pollutants.
(ii) Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.
(iii) For purposes of this paragraph, adequate notice shall include information on (A) the quality and quantity of effluent introduced into the POTW, and (B) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

(b) When the effluent discharged by a POTW for a period of three consecutive months exceeds 80 percent of the permitted flow, the permittee shall submit to the Department a projection of loadings up to the time when the design capacity of the treatment facility will be reached, and a program for maintaining satisfactory treatment levels consistent with approved water quality management plans.

E. OTHER REQUIREMENTS

1. Emergency action - power failure. Within thirty days after the effective date of this permit, the permittee shall notify the Department of facilities and plans to be used in the event the primary source of power to its wastewater pumping and treatment facilities fails as follows.

(a) For municipal sources. During power failure, all wastewaters which are normally treated shall receive a minimum of primary treatment and disinfection. Unless otherwise approved, alternate power supplies shall be provided for pumping stations and treatment facilities. Alternate power supplies shall be on-site generating units or an outside power source which is separate and independent from sources used for normal operation of the wastewater facilities.

(b) For industrial and commercial sources. The permittee shall either maintain an alternative power source sufficient to operate the wastewater pumping and treatment facilities or halt, reduce or otherwise control production and or all discharges upon reduction or loss of power to the wastewater pumping or treatment facilities.

2. Spill prevention. (applicable only to industrial sources) Within six months of the effective date of this permit, the permittee shall submit to the Department for review and approval, with or without conditions, a spill prevention plan. The plan shall delineate methods and measures to be taken to prevent and or contain any spills of pulp, chemicals, oils or other contaminates and shall specify means of disposal and or treatment to be used.

3. **Removed substances.** Solids, sludges trash rack cleanings, filter backwash, or other pollutants removed from or resulting from the treatment or control of waste waters shall be disposed of in a manner approved by the Department.

4. **Connection to municipal sewer.** (applicable only to industrial and commercial sources) All wastewaters designated by the Department as treatable in a municipal treatment system will be cosigned to that system when it is available. This permit will expire 90 days after the municipal treatment facility becomes available, unless this time is extended by the Department in writing.

F. DEFINITIONS. For the purposes of this permit, the following definitions shall apply. Other definitions applicable to this permit may be found in Chapters 520 through 529 of the Department's rules

Average means the arithmetic mean of values taken at the frequency required for each parameter over the specified period. For bacteria, the average shall be the geometric mean.

Average monthly discharge limitation means the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month. Except, however, bacteriological tests may be calculated as a geometric mean.

Average weekly discharge limitation means the highest allowable average of daily discharges over a calendar week, calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

Best management practices ("BMPs") means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the State. 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.

Composite sample means a sample consisting of a minimum of eight grab samples collected at equal intervals during a 24 hour period (or a lesser period as specified in the section on monitoring and reporting) and combined proportional to the flow over that same time period.

Continuous discharge means a discharge which occurs without interruption throughout the operating hours of the facility, except for infrequent shutdowns for maintenance, process changes, or other similar activities.

Daily discharge means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the average measurement of the pollutant over the day.

Discharge Monitoring Report ("DMR") means the EPA uniform national form, including any subsequent additions, revisions, or modifications for the reporting of self-monitoring results by permittees. DMRs must be used by approved States as well as by EPA. EPA will supply DMRs to any approved State upon request. The EPA national forms may be modified to substitute the State Agency name, address, logo, and other similar information, as appropriate, in place of EPA's.

Flow weighted composite sample means a composite sample consisting of a mixture of aliquots collected at a constant time interval, where the volume of each aliquot is proportional to the flow rate of the discharge.

Grab sample means an individual sample collected in a period of less than 15 minutes.

Interference means a Discharge which, alone or in conjunction with a discharge or discharges from other sources, both:

(1) Inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal; and
(2) Therefore is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent State or local regulations): Section 405 of the Clean Water Act, the Solid Waste Disposal Act (SWDA) (including title II, more commonly referred to as the Resource Conservation and Recovery Act (RCRA), and including State regulations contained in any State sludge management plan prepared pursuant to subtitle D of the SWDA), the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act.

Maximum daily discharge limitation means the highest allowable daily discharge.

New source means any building, structure, facility, or installation from which there is or may be a discharge of pollutants, the construction of which commenced:

(a) After promulgation of standards of performance under section 306 of CWA which are applicable to such source, or
(b) After proposal of standards of performance in accordance with section 306 of CWA which are applicable to such source, but only if the standards are promulgated in accordance with section 306 within 120 days of their proposal.

Pass through means a discharge which exits the POTW into waters of the State in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation).

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 NPDES general permit (Chapter 529). 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.

Person means an individual, firm, corporation, municipality, quasi-municipal corporation, state agency, federal agency or other legal entity.

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 or vessel or other floating craft, from which pollutants are or may be discharged.

Pollutant means dredged spoil, solid waste, junk, incinerator residue, sewage, refuse, effluent, garbage, sewage sludge, munitions, chemicals, biological or radiological materials, oil, petroleum products or byproducts, heat, wrecked or discarded equipment, rock, sand, dirt and industrial, municipal, domestic, commercial or agricultural wastes of any kind.

Process wastewater means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.

Publicly owned treatment works ("POTW") means any facility for the treatment of pollutants owned by the State or any political subdivision thereof, any municipality, district, quasi-municipal corporation or other public entity.

Septage means, for the purposes of this permit, any waste, refuse, effluent sludge or other material removed from a septic tank, cesspool, vault privy or similar source which concentrates wastes or to which chemicals have been added. Septage does not include wastes from a holding tank.

Time weighted composite means a composite sample consisting of a mixture of equal volume aliquots collected over a constant time interval.

Toxic pollutant includes any pollutant listed as toxic under section 307(a)(1) or, in the case of sludge use or disposal practices, any pollutant identified in regulations implementing section 405(d) of the CWA. Toxic pollutant also includes those substances or combination of substances, including disease causing agents, which after discharge or upon exposure, ingestion, inhalation or assimilation into any organism, including humans either directly through the environment or indirectly through ingestion through food chains, will, on the basis of information available to the board either alone or in combination with other substances already in the receiving waters or the discharge, cause death, disease, abnormalities, cancer, genetic mutations, physiological malfunctions, including malfunctions in reproduction, or physical deformations in such organism or their offspring.

Wetlands means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

Whole effluent toxicity means the aggregate toxic effect of an effluent measured directly by a toxicity test.

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT
AND
MAINE WASTE DISCHARGE LICENSE

FACT SHEET

Date: **June 4, 2018**

PERMIT NUMBER: **ME0037371**
LICENSE NUMBER: **W009101-5R-B-R**

NAME AND ADDRESS OF APPLICANT:

GREAT LAKES HYDRO AMERICA LLC
1024 Central Street
Millinocket, Maine 04462

COUNTY: **Penobscot**

NAME AND ADDRESS WHERE DISCHARGE(S) OCCUR(S):

MILLINOCKET HYDRO STATION
Millinocket, Maine

COGNIZANT OFFICIAL AND TELEPHONE NUMBER: **Mr. Kevin Bernier**
Kevin.bernier@brookfieldrenewable.com
(207) 723-4341 Ext. 118

1. APPLICATION SUMMARY

a. Application: Great Lakes Hydro America LLC (GLHA) has submitted an application to the Department for a new combination Maine Pollutant Discharge Elimination System (MEPDES) permit #ME0037371/Maine Waste Discharge License (WDL) #W009101-5R-A-N (permit hereinafter). GLHA is seeking authorization to discharge of up to 22,000 gallons per day of non-contact cooling water from one outfall and an unspecified quantity of storm water runoff from two roof drains from two additional outfalls from the Millinocket Hydro Station to the Millinocket Stream, Class C, in Millinocket, Maine. See **Attachment A** of this Fact Sheet for a location map of the facility.

1. APPLICATION SUMMARY

b. Source Description: The source of the discharge is a hydroelectric generating facility. The discharge consists of non-contact cooling water. The discharge flow rate is limited to 15 gallons per minute (gpm) or 22,000 gallons per day (gpd) which is the design capacity of an oil/water separator in which the cooling water discharge passes through prior to discharge to the tailrace of the facility via a 4-inch diameter pipe. The permittee refers to this outfall as Outfall #003 in the permit application materials.

The facility discharges intermittent storm water runoff from two roof drains associated with the powerhouse. Outfall #001 is referred to as the North Roof Drain and discharges directly to Millinocket Stream via a 6-inch diameter outfall pipe. Outfall #002 is referred to as the South Roof Drain and discharges to the tailrace of the facility along with Outfall #003. See **Attachment B** of this Fact Sheet for a schematic of the facility.

2. CONDITIONS OF PERMITS

Maine law, 38 M.R.S. §414-A, requires that the effluent limitations prescribed for discharges require application of best practicable treatment, be consistent with the U.S. Clean Water Act, and ensure that the receiving waters attain the State water quality standards as described in Maine's Surface Water Classification System. "Best practicable treatment" (BPT) means the methods of reduction, treatment, control and handling of pollutants for a category or class of discharge sources that are best calculated to protect and improve the quality of the receiving water and that are consistent with the requirements of the Federal Clean Water Act.

Maine law, 38 M.R.S. §420, and Department Regulation Chapter 530, *Surface Water Toxics Control Program* requires the regulation of toxic substances at the levels set forth for Federal Water Quality Criteria as published by the U.S. Environmental Protection Agency pursuant to the Clean Water Act.

Maine law, 38 M.R.S. §414-A requires that a discharge, either by itself or in combination with other discharges, not lower the quality of any classified body of water below its assigned classification. Therefore, discharges shall be subject to any additional effluent limitations required to meet applicable water quality standards.

3. RECEIVING WATER QUALITY STANDARDS

Maine law, 38 M.R.S. §467(7)(C)(2)(d) states that Millinocket Stream from the confluence of the West Branch Canal to its confluence with the West Branch of the Penobscot River is classified as a Class C waterway. Maine law, 38 M.R.S. §465(4) describes the classification standards for Class C waters.

Maine law 38 M.R.S. §465(4)(B) (as amended via P.L. 2005, Chapter 409) states in part, *The dissolved oxygen content of Class C water may be not less than 5 parts per million or 60% of saturation, whichever is higher, except that in identified salmonid spawning areas where water quality is sufficient to ensure spawning, egg incubation and survival of early life stages, that water quality sufficient for these purposes must be maintained. In order to provide additional protection for the growth of indigenous fish, the following standards apply.*

(1) The 30-day average dissolved oxygen criterion of a Class C water is 6.5 parts per million using a temperature of 22 degrees centigrade or the ambient temperature of the water body, whichever is less, if:

(a) A license or water quality certificate other than a general permit was issued prior to March 16, 2004 for the Class C water and was not based on a 6.5 parts per million 30-day average dissolved oxygen criterion; or

(b) A discharge or a hydropower project was in existence on March 16, 2005 and required but did not have a license or water quality certificate other than a general permit for the Class C water.

(1) This criterion for the water body applies to licenses and water quality certificates issued on or after March 16, 2004.

(2) In Class C waters not governed by subparagraph (1), dissolved oxygen may not be less than 6.5 parts per million as a 30-day average based upon a temperature of 24 degrees centigrade or the ambient temperature of the water body, whichever is less. This criterion for the water body applies to licenses and water quality certificates issued on or after March 16, 2004.

Maine law 38 M.R.S. §465(4) (as amended via P.L. 2005, Chapter 409) also states in part *Discharges to Class C waters may cause some changes to aquatic life, provided that the receiving waters shall be of sufficient quality to support all species of fish indigenous to the receiving waters and maintain the structure and function of the resident biological community.*

3. RECEIVING WATER QUALITY STANDARDS (cont'd)

Maine law 38 M.R.S. §464(13) states, *"Measurement of dissolved oxygen in riverine impoundments. Compliance with dissolved oxygen criteria in existing riverine impoundments must be measured as follows.*

A. Compliance with dissolved oxygen criteria may not be measured within 0.5 meters of the bottom of existing riverine impoundments

B. Where mixing is inhibited due to thermal stratification in an existing riverine impoundment, compliance with numeric dissolved oxygen criteria may not be measured below the higher of:

(1) The point of thermal stratification when such stratification occurs; or

(2) The point proposed by the department as an alternative depth for a specific riverine impoundment based on all factors included in section 466, subsection 11-A and for which a use attainability analysis is conducted if required by the United States Environmental Protection Agency

For purposes of this paragraph, "thermal stratification" means a change of temperature of at least one degree Celsius per meter of depth, causing water below this point in an impoundment to become isolated and not mix with water above this point in the impoundment.

C. Where mixing is inhibited due to natural topographical features in an existing riverine impoundment, compliance with numeric dissolved oxygen criteria may not be measured within that portion of the impoundment that is topographically isolated. Such natural topographic features may include, but not be limited to, natural deep holes or river bottom sills.

Notwithstanding the provisions of this subsection, dissolved oxygen concentrations in existing riverine impoundments must be sufficient to support existing and designated uses of these waters. For purposes of this subsection, "existing riverine impoundments" means all impoundments of rivers and streams in existence as of January 1, 2001, and not otherwise classified as GPA.

4. REGULATIONS RELATING TO TEMPERATURE

The Department's Chapter 582, *Regulations Relating to Temperature* states that no discharge shall cause the ambient temperature of any freshwater body to be raised more than 5 degrees Fahrenheit, nor shall any discharge cause the temperature of any waters to exceed the U.S. Environmental Protection Agency's (EPA) national ambient water quality criteria established to protect all species of fish that are indigenous to the receiving waters. When the ambient temperature of any body of

4. REGULATIONS RELATING TO TEMPERATURE (cont'd)

When the ambient temperature of any body of water naturally exceeds the applicable EPA criteria, no thermal discharge may be allowed which alone or in combination with other discharges would raise the ambient temperature of the receiving water more than 0.5 degrees Fahrenheit. The Department has established that cold water fish species are indigenous to all Maine rivers and streams. EPA has established maximum temperatures for the protection of growth and survival of cold water fish as follows: a weekly average temperature of 66 degrees Fahrenheit; and a daily maximum temperature of
73 degrees Fahrenheit.

5. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

EPA has not promulgated National Effluent Guidelines for non-contact cooling water. The Department has made a Best Professional Judgment (BPJ) determination that BPT for hydro project cooling water is no treatment. The Department has calculated that under worst case conditions of maximum cooling water flow (22,000 GPD), maximum cooling water temperature (assumed 95 degrees Fahrenheit, based on staff analysis of industry data), and 7Q10 receiving water flow (2,216 cfs), and without any treatment to reduce thermal loading, the discharge will raise the ambient temperature of the receiving water by less than $1/1000^{th}$ of a degree Fahrenheit. Therefore, the Department has determined that neither effluent limitations nor monitoring requirements are necessary to ensure that applicable water quality standards are met.

6. PUBLIC COMMENTS

Public notice of this application was made in the Bangor Daily News on or about April 11, 2018. The Department receives public comments on an application until the date a final agency action is taken on that application. Those persons receiving copies of draft permits shall have at least 30 days in which to submit comments on the draft or to request a public hearing, pursuant to Chapter 522 of the Department's rules.

7. DEPARTMENT CONTACTS

Additional information concerning this permitting action may be obtained from and written comments should be sent to:

Irene Saumur
Department of Environmental Protection
Bureau of Water Quality
Division of Water Quality Management
17 State House Station
Augusta, Maine 04333-0017
Telephone (207) 485-2404
e-mail: irene.saumur@maine.gov

8. RESPONSE TO COMMENTS

During the period of April 11, 2018 through issuance of the permit, the Department solicited comments from the permittee, state and federal agencies and interested parties on the proposed draft MEPDES permit and Maine WDL to be issued for the proposed discharge from Great Lakes Hydro America, LLC. The Department did not receive any substantial comments from any party. Therefore, no Response to Comments has been prepared.

ATTACHMENT A

Brookfield

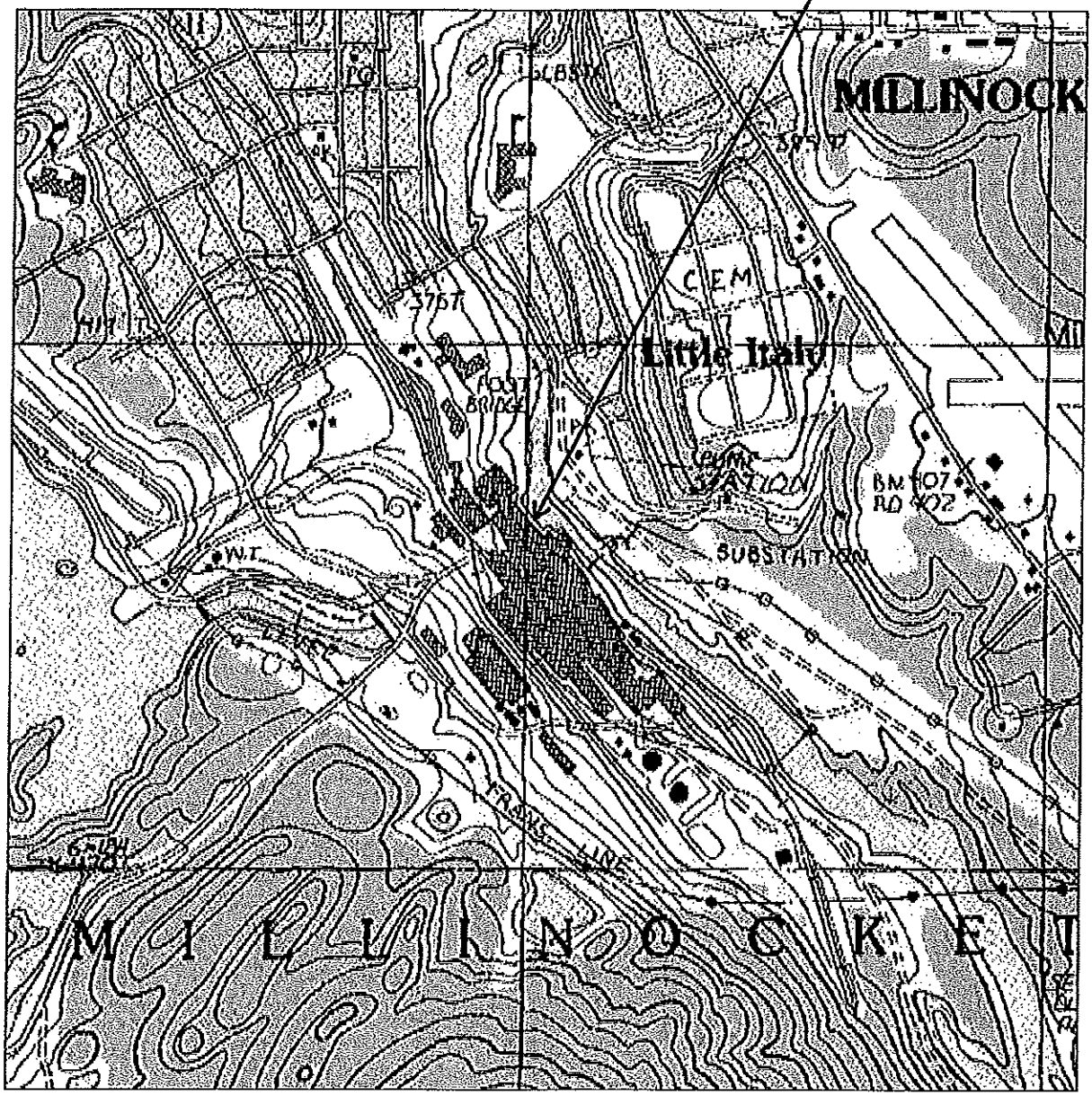
Brookfield Renewable Energy Group
New England Regional Operations Center
Great Lakes Hydro America, LLC
1024 Central Street
Millinocket, Maine 04462

Tel 207.723.4341
Fax 207.723.3948
www.brookfieldrenewable.com

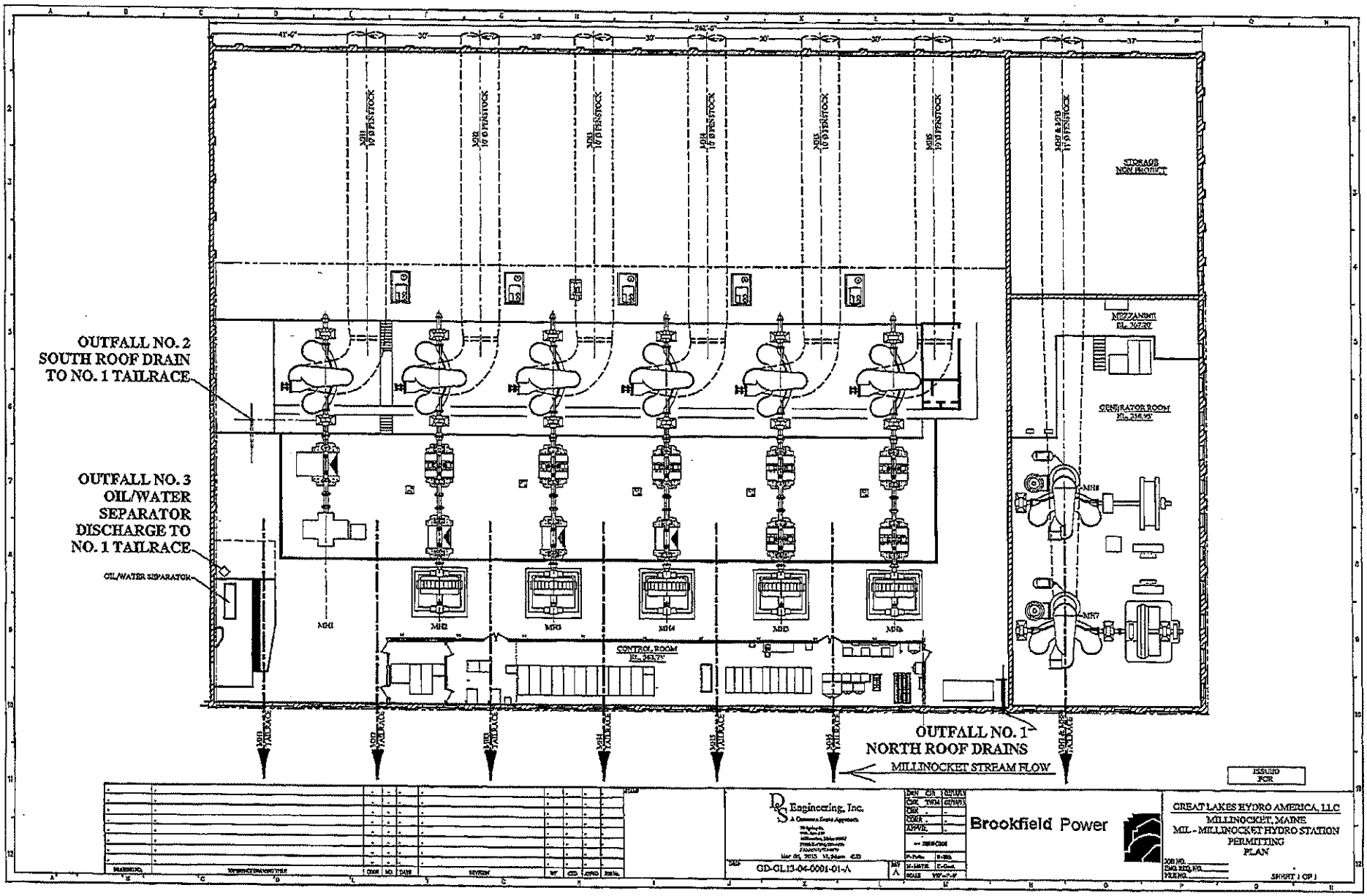
Attachment: #11

USGS Map Name: Millinocket, ME Map MRC: 45068F6
Map Center: N45.64662° W68.70430° Datum: NAD27

Great Lakes Hydro America LLC
Millinocket Hydro Station Discharge #1, 2, 3
1 Katahdin Ave
Millinocket, ME 04662
N 45° 38' 50.4" W 68° 42'15.6"



ATTACHMENT B


OUTFALL NO. 2
SOUTH ROOF DRAIN
TO NO. 1 TAILRACE
OUTFALL NO. 3
OIL/WATER
SEPARATOR
DISCHARGE TO
NO. 1 TAILRACE
OIL/WATER SEPARATOR
STORAGE
NON PROJECT
MEZZANINE
GENERATOR ROOM
CONTROL ROOM
OUTFALL NO. 1
NORTH ROOF DRAINS
MILLINOCKET STREAM FLOW
ISSUED
FOR
Brookfield Power
GREAT LAKES HYDRO AMERICA, LLC
MILLINOCKET, MAINE
MIL - MILLINOCKET HYDRO STATION
PERMITTING
PLAN
GD-GL13-04-0001-01-A

DEP INFORMATION SHEET

Appealing a Department Licensing Decision

Dated: March 2012 **Contact: (207) 287-2811**

SUMMARY

There are two methods available to an aggrieved person seeking to appeal a licensing decision made by the Department of Environmental Protection's ("DEP") Commissioner: (1) in an administrative process before the Board of Environmental Protection ("Board"); or (2) in a judicial process before Maine's Superior Court. An aggrieved person seeking review of a licensing decision over which the Board had original jurisdiction may seek judicial review in Maine's Superior Court.

A judicial appeal of final action by the Commissioner or the Board regarding an application for an expedited wind energy development (35-A M.R.S.A. § 3451(4)) or a general permit for an offshore wind energy demonstration project (38 M.R.S.A. § 480-HH(1) or a general permit for a tidal energy demonstration project (38 M.R.S.A. § 636-A) must be taken to the Supreme Judicial Court sitting as the Law Court.

This INFORMATION SHEET, in conjunction with a review of the statutory and regulatory provisions referred to herein, can help a person to understand his or her rights and obligations in filing an administrative or judicial appeal.

I. ADMINISTRATIVE APPEALS TO THE BOARD

LEGAL REFERENCES

The laws concerning the DEP's *Organization and Powers*, 38 M.R.S.A. §§ 341-D(4) & 346, the *Maine Administrative Procedure Act*, 5 M.R.S.A. § 11001, and the DEP's *Rules Concerning the Processing of Applications and Other Administrative Matters* ("Chapter 2"), 06-096 CMR 2 (April 1, 2003).

HOW LONG YOU HAVE TO SUBMIT AN APPEAL TO THE BOARD

The Board must receive a written appeal within 30 days of the date on which the Commissioner's decision was filed with the Board. Appeals filed after 30 calendar days of the date on which the Commissioner's decision was filed with the Board will be rejected.

HOW TO SUBMIT AN APPEAL TO THE BOARD

Signed original appeal documents must be sent to: Chair, Board of Environmental Protection, c/o Department of Environmental Protection, 17 State House Station, Augusta, ME 04333-0017; faxes are acceptable for purposes of meeting the deadline when followed by the Board's receipt of mailed original documents within five (5) working days. Receipt on a particular day must be by 5:00 PM at DEP's offices in Augusta; materials received after 5:00 PM are not considered received until the following day. The person appealing a licensing decision must also send the DEP's Commissioner a copy of the appeal documents and if the person appealing is not the applicant in the license proceeding at issue the applicant must also be sent a copy of the appeal documents. All of the information listed in the next section must be submitted at the time the appeal is filed. Only the extraordinary circumstances described at the end of that section will justify evidence not in the DEP's record at the time of decision being added to the record for consideration by the Board as part of an appeal.

WHAT YOUR APPEAL PAPERWORK MUST CONTAIN

Appeal materials must contain the following information at the time submitted:

1. *Aggrieved Status.* The appeal must explain how the person filing the appeal has standing to maintain an appeal. This requires an explanation of how the person filing the appeal may suffer a particularized injury as a result of the Commissioner's decision.
2. *The findings, conclusions or conditions objected to or believed to be in error.* Specific references and facts regarding the appellant's issues with the decision must be provided in the notice of appeal.
3. *The basis of the objections or challenge.* If possible, specific regulations, statutes or other facts should be referenced. This may include citing omissions of relevant requirements, and errors believed to have been made in interpretations, conclusions, and relevant requirements.
4. *The remedy sought.* This can range from reversal of the Commissioner's decision on the license or permit to changes in specific permit conditions.
5. *All the matters to be contested.* The Board will limit its consideration to those arguments specifically raised in the written notice of appeal.
6. *Request for hearing.* The Board will hear presentations on appeals at its regularly scheduled meetings, unless a public hearing on the appeal is requested and granted. A request for public hearing on an appeal must be filed as part of the notice of appeal.
7. *New or additional evidence to be offered.* The Board may allow new or additional evidence, referred to as supplemental evidence, to be considered by the Board in an appeal only when the evidence is relevant and material and that the person seeking to add information to the record can show due diligence in bringing the evidence to the DEP's attention at the earliest possible time in the licensing process or that the evidence itself is newly discovered and could not have been presented earlier in the process. Specific requirements for additional evidence are found in Chapter 2.

OTHER CONSIDERATIONS IN APPEALING A DECISION TO THE BOARD

1. *Be familiar with all relevant material in the DEP record.* A license application file is public information, subject to any applicable statutory exceptions, made easily accessible by DEP. Upon request, the DEP will make the material available during normal working hours, provide space to review the file, and provide opportunity for photocopying materials. There is a charge for copies or copying services.
2. *Be familiar with the regulations and laws under which the application was processed, and the procedural rules governing your appeal.* DEP staff will provide this information on request and answer questions regarding applicable requirements.
3. *The filing of an appeal does not operate as a stay to any decision.* If a license has been granted and it has been appealed the license normally remains in effect pending the processing of the appeal. A license holder may proceed with a project pending the outcome of an appeal but the license holder runs the risk of the decision being reversed or modified as a result of the appeal.

WHAT TO EXPECT ONCE YOU FILE A TIMELY APPEAL WITH THE BOARD

The Board will formally acknowledge receipt of an appeal, including the name of the DEP project manager assigned to the specific appeal. The notice of appeal, any materials accepted by the Board Chair as supplementary evidence, and any materials submitted in response to the appeal will be sent to Board members with a recommendation from DEP staff. Persons filing appeals and interested persons are notified in advance of the date set for Board consideration of an appeal or request for public hearing. With or without holding a public hearing, the Board may affirm, amend, or reverse a Commissioner decision or remand the matter to the Commissioner for further proceedings. The Board will notify the appellant, a license holder, and interested persons of its decision.

II. JUDICIAL APPEALS

Maine law generally allows aggrieved persons to appeal final Commissioner or Board licensing decisions to Maine's Superior Court, see 38 M.R.S.A. § 346(1); 06-096 CMR 2; 5 M.R.S.A. § 11001; & M.R. Civ. P 80C. A party's appeal must be filed with the Superior Court within 30 days of receipt of notice of the Board's or the Commissioner's decision. For any other person, an appeal must be filed within 40 days of the date the decision was rendered. Failure to file a timely appeal will result in the Board's or the Commissioner's decision becoming final.

An appeal to court of a license decision regarding an expedited wind energy development, a general permit for an offshore wind energy demonstration project, or a general permit for a tidal energy demonstration project may only be taken directly to the Maine Supreme Judicial Court. See 38 M.R.S.A. § 346(4).

Maine's Administrative Procedure Act, DEP statutes governing a particular matter, and the Maine Rules of Civil Procedure must be consulted for the substantive and procedural details applicable to judicial appeals.

ADDITIONAL INFORMATION

If you have questions or need additional information on the appeal process, for administrative appeals contact the Board's Executive Analyst at (207) 287-2452 or for judicial appeals contact the court clerk's office in which your appeal will be filed.

Note: The DEP provides this INFORMATION SHEET for general guidance only; it is not intended for use as a legal reference. Maine law governs an appellant's rights.

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

PAUL R. LEPAGE
GOVERNOR

MELANIE LOYZIM
ACTING COMMISSIONER

December 3, 2018

Mr. Kevin Bernier
Great Lakes Hydro America LLC
1024 Central Street
Millinocket, ME. 04462
Kevin.Bernier@brookfieldrenewable.com

RE: Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0036528
Maine Waste Discharge License #W008077-5R-F-R
Final Permit – Dolby Hydro

Dear Mr. Bernier:

Enclosed please find a copy of your final MEPDES permit and Maine WDL renewal which was approved by the Department of Environmental Protection. Please read this permit/license renewal and its attached conditions carefully. You must follow the conditions in the order to satisfy the requirements of law. Any discharge not receiving adequate treatment is in violation of State Law and is subject to enforcement action.

Any interested person aggrieved by a Department determination made pursuant to applicable regulations, may appeal the decision following the procedures described in the attached DEP FACT SHEET entitled "Appealing a Commissioner's Licensing Decision."

If you have any questions regarding the matter, please feel free to call me at 485-2404.

Sincerely,

Irene M Saumur

Irene Saumur
Division of Water Quality Management
Bureau of Water Quality

Enc.

cc: Gary Brooks, DEP/EMRO
Sandy Mojica, USEPA
Marelyn Vega, USEPA
Lori Mitchell, DEP/CMRO
Shelley Puleo, USEPA

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL
PROTECTION
17 STATE HOUSE STATION
AUGUSTA, ME 04333

DEPARTMENT ORDER

IN THE MATTER OF

GREAT LAKES HYDRO AMERICA, LLC	)	MAINE POLLUTANT DISCHARGE
EAST MILLINOCKET, PENOBSCOT CTY, MAINE	)	ELIMINATION SYSTEM PERMIT
COOLING WATER DISCHARGE	)	AND
DOLBY HYDRO PROJECT	)	
ME0036528	)	WASTE DISCHARGE LICENSE
W008077-5R-F-R **APPROVAL**	)	**RENEWAL**

Pursuant to the provisions of the Federal Water Pollution Control Act, Title 33 USC, Section 1251, et. seq. and 38 M.R.S. §413 and §414-A et. seq., and 06-096 CMR Chapter 582 (Regulations Relating to Temperature, effective date February 18, 1989, as amended), the Department of Environmental Protection (Department hereinafter) has considered the application of GREAT LAKES HYDRO AMERICA, LLC (GLHA hereinafter) with its supportive data, agency review comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

APPLICATION SUMMARY

GLHA has submitted a timely and complete application to the Department for renewal of Maine Pollutant Discharge Elimination System (MEPDES) permit #ME0036528/Maine Waste Discharge License (WDL) #W008077-5R-E-R which was issued by the Department on December 19, 2013 and is scheduled to expire on December 19, 2018. The WDL authorized the discharge of 364,320 gallons per day of non-contact cooling water from a single outfall at the Dolby Hydro Project, to the West Branch of the Penobscot River, Class C, in East Millinocket, Maine.

PERMIT SUMMARY

This permitting action carries forward all the terms and conditions established in the previous permitting action except that it is increasing number of outfalls to more accurately reflect the configuration of the facility.

CONCLUSIONS

BASED on the findings in the attached Fact Sheet dated December 3, 2018, and subject to the Conditions listed below, the Department makes the following conclusions:

1. The discharge, either by itself or in combination with other discharges, will not lower the quality of any classified body of water below such classification.

2. The discharge, either by itself or in combination with other discharges, will not lower the quality of any unclassified body of water below the classification which the Department expects to adopt in accordance with state law.

3. The provisions of the State's antidegradation policy, 38 M.R.S. §464(4)(F), will be met, in that:

   (a) Existing in-stream water uses and the level of water quality necessary to protect and maintain those existing uses will be maintained and protected;

   (b) Where high quality waters of the State constitute an outstanding national resource, that water quality will be maintained and protected;

   (c) Where standards of classification of the receiving water body are met or, where the standards of classification of the receiving water body are not met, the discharge will not cause of contribute to the failure of the water body to meet the standards of classification;

   (d) Where the actual quality of any classified receiving water body exceeds the minimum standards of the next highest classification, that higher water quality will be maintained and protected; and

   (e) Where a discharge will result in lowering the existing quality of any water body, the Department has made the finding, following opportunity for public participation, that this action is necessary to achieve important economic or social benefits to the State.

4. The discharge will be subject to effluent limitations that require application of best practicable treatment.

ACTION

THEREFORE, the Department APPROVES the application of GREAT LAKES HYDRO AMERICA, LLC, to discharge up to 364,320 gallons per day of non-contact cooling water at a temperature not to exceed 95 degrees Fahrenheit from nine outfalls, at the Dolby Hydro Project to the West Branch of the Penobscot River, Class C, in East Millinocket, Maine, as described above, SUBJECT TO ALL APPLICABLE STANDARDS AND REGULATIONS AND THE FOLLOWING CONDITIONS:

1. "*Maine Pollutant Discharge Elimination System Permit Standard Conditions Applicable To All Permits,*" revised July 1, 2002, copy attached.

2. The attached Special Conditions, including any effluent limitations and monitoring requirements.

3. This permit and the authorization to discharge become effective upon the date of signature below and expire at midnight five (5) years from the effective date. If a renewal application is timely submitted and accepted as complete for processing prior to the expiration of this permit, the authorization to discharge and the terms and conditions of this permit and all modifications and minor revisions thereto remain in effect until a final Department decision on the renewal application becomes effective. [*Maine Administrative Procedure Act*, 5 M.R.S. § 10002 and *Rules Concerning the Processing of Applications and Other Administrative Matters*, 06-096 CMR 2(21)(A) (last amended June 9, 2018)]

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

DONE AND DATED AT AUGUSTA, MAINE, THIS 4 DAY OF December, 2018.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
For Melanie Loyzim, Acting Commissioner

Date of initial receipt of application: August 31, 2018
Date of application acceptance: September 6, 2018.

Date filed with Board of Environmental Protection: _____.

Filed
DEC 4 2018
State of Maine
Board of Environmental Protection

This Order prepared by Irene Saumur, Bureau of Water Quality

ME0036528 12/3/18

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. The discharge is limited to a flow of 364,320 gallons per day from nine outfalls and a daily maximum temperature of 95°F.

2. The discharge must not contain a visible oil sheen, foam, or floating solids at any time that would impair the designated uses or habitat characteristics of the receiving waters or would otherwise lower the quality of the receiving water below its assigned classification.

3. The discharge must not impart color, taste, turbidity, toxicity, or other properties that would impair the designated uses or habitat characteristics of the receiving waters or would otherwise lower the quality of the receiving water below its assigned classification.

4. The permittee must notify Department immediately of the discharge of any pollutants other than heat from the facility. The permittee shall also notify Department of any changes in facility design, operation or generating capacity that may affect the flow or temperature of the cooling water discharge.

5. All miscellaneous facility leakage and lubrication waters that may become contaminated with oil or grease are subject to Best Management Practices (BMPs) designed to prevent the release of contaminants to the waters of the state. Within 90 days of permit issuance, BMPs must be developed by the permittee and must be available in writing for Department review and approval upon request. BMPs may consist of, but not be limited to, the following, as appropriate: development and implementation of a spill prevention plan; use of oil absorbent pads or booms and/or physical berms to contain spills or leaks of hydraulic and lubrication oils; and the treatment of water collected in floor drains and sumps through an oil/grease trap or oil-water separator. Where bearing cooling water is used, BMPs must include the maintenance of a written log or record of bearing oil levels and maintenance activities. Where floor drains and sumps are used, BMPs shall include (1) written procedures for the cleaning and maintenance of any oil-grease trap, oil skimmer or oil-water separator and (2) maintenance of a written log or record of visual inspections of sumps for oil and grease and of actions taken to prevent the discharge of oil or grease from the facility.

SPECIAL CONDITIONS

B. UNAUTHORIZED DISCHARGES

The permittee is authorized to discharge only in accordance with: 1) the permittee's General Application for Waste Discharge Permit, accepted for processing on September 6, 2018; 2) the terms and conditions of this permit; and 3) only from the Outfalls listed in the Action section on page three of this Permit. Discharges of waste water from any other point source are not authorized under this permit, and shall be reported in accordance with Standard Condition D(1)(f), *Twenty-four hour reporting*, of this permit.

C. NOTIFICATION REQUIREMENT

In accordance with Standard Condition D, the permittee must notify the Department of any substantial change in the volume or character of pollutants being discharged.

D. REOPENING OF PERMIT FOR MODIFICATIONS

Based upon site inspections, additional site specific or any other pertinent information or test results obtained during the term of this permit, the Department may, at anytime and with notice to the permittee, modify this permit to establish limitations or require additional monitoring, inspections and/or reporting based on the new information.

E. SEVERABILITY

In the event that any provision, or part thereof, of this permit is declared to be unlawful by a reviewing court, the remainder of the permit shall remain in full force and effect, and shall be construed and enforced in all aspects as if such unlawful provision, or part thereof, had been omitted, unless otherwise ordered by the court.

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

AND

MAINE WASTE DISCHARGE LICENSE

FACT SHEET

Date: **December 3, 2018**

PERMIT NUMBER: **ME0036528**

LICENSE NUMBER: **W008077-5R-F-R**

NAME AND ADDRESS OF APPLICANT:

Great Lakes Hydro America, LLC
1024 Central Street
Millinocket, ME. 04462

COUNTY: **Penobscot County**

NAME AND ADDRESS WHERE DISCHARGE(S) OCCUR(S):

Dolby Hydro Project
East Millinocket, ME. 04462

COGNIZANT OFFICIAL AND TELEPHONE NUMBER: **Mr. Kevin Bernier**
(207) 723-4341
Kevin.Bernier@Brookfieldrenewable.com

1. APPLICATION SUMMARY

a. Application: Great Lakes Hydro America, LLC (GLHA) has submitted a timely application to the Department for renewal of Maine Pollutant Discharge Elimination System (MEPDES) permit #ME0036528/Maine Waste Discharge License (WDL) #W008077-5R-E-R which was issued by the Department on December 19, 2013 and is scheduled to expire on December 19, 2018. The WDL authorized the discharge of up to 364,320 gallons per day of non-contact cooling water from one outfall at the Dolby Hydro Project, to the West Branch of the Penobscot River, Class C, in East Millinocket, Maine.

2. PERMIT SUMMARY

a. Terms and Conditions: This permitting action carries forward all the terms and conditions established in the previous permitting action except that it is increasing number of outfalls to more accurately reflect the current configuration of the facility.

b. History: The most current relevant regulatory actions and or significant events include the following:

March 8, 1999 - The Department issued WDL #W008077-5R-A-N for a five-year term.

January 12, 2001 – The State of Maine received authorization from the EPA to administer the National Pollutant Discharge Elimination System (NPDES) permitting program in Maine.

July 11, 2002 - The Department issued transfer order #W008077-5R-B-T transferring the 3/8/99 WDL from Great Northern Paper to Great Lakes Hydro America, LLC.

March 9, 2004 – The Department issued combination MEPDES permit #ME0036528/WDL #W008077-5R-C-R for a five-year term.

February 3, 2009 – Great Lakes Hydro America, LLC submitted a timely and complete application to the Department to renew the March 9, 2004 permit.

March 16, 2009 – The Department issued combination MEPDES permit #ME0036528/WDL #W008077-5R-D-R for a five-year term.

December 19, 2013 – The Department issued combination MEPDES permit #ME0036528/WDL#W008077-5R-E-R for a five-year term.

August 31, 2018 – GLHA, LLC submitted a timely application for renewal of combination MEPDES permit #ME0036528 / WDL#W008077-5R-E-R. The application was accepted for processing on September 6, 2018 and assigned WDL #W008077-5R-F-R.

c. Source Description: The source of the discharge is a hydroelectric generating facility. The discharge consists of non-contact turbine and thrust bearing cooling water and oil/water separators. The discharge flow rate is variable, depending on cooling needs, up to a maximum flow of 364,320 gallons per day (maximum cooling system capacity, based on information from applicant). The discharge occurs from nine outfalls.

2. PERMIT SUMMARY (cont'd)

Other miscellaneous discharges from the facility consist of shaft lubrication waters, foundation leakage waters, and/or leakage from wicket gates and other equipment. In the event of unplanned leaks, spills or equipment failure, these discharges may become contaminated with hydraulic or lubrication oil and grease.

All miscellaneous facility leakage and lubrication waters that may become contaminated with oil or grease are subject to Best Management Practices (BMPs) designed to prevent the release of contaminants to the waters of the State. Within 90 days of permit issuance, the permittee shall develop written BMPs and shall make the BMPs available to the Department for review and comment upon request. BMPs must consist of, but not be limited to, the following, as appropriate: development and implementation of a spill prevention plan; use of oil absorbent pads or booms and/or physical berms to contain spills or leaks of hydraulic and lubrication oils; and the treatment of water collected in floor drains and sumps through an oil/grease trap or oil-water separator.

Where bearing cooling water is used, BMPs must include the maintenance of a written log or record of bearing oil levels and maintenance activities. Where floor drains and sumps are used, BMPs must include (1) written procedures for the cleaning and maintenance of any oil-grease trap, oil skimmer or oil-water separator and (2) maintenance of a written log or record of visual inspections of sumps for oil and grease and of actions taken to prevent the discharge of oil or grease from the facility. A process flow diagram submitted by the permittee is included as Attachment A of this Fact Sheet.

3. CONDITIONS OF PERMITS

Maine law, 38 M.R.S. §414-A, requires that the effluent limitations prescribed for discharges, including, but not limited to, effluent toxicity, require application of best practicable treatment (BPT), be consistent with the U.S. Clean Water Act, and ensure that the receiving waters attain the State water quality standards as described in Maine's Surface Water Classification System. In addition, 38 M.R.S., §420 and Department rule 06-096 CMR Chapter 530, *Surface Water Toxics Control Program,* require the regulation of toxic substances not to exceed levels set forth in Department rule 06-096 CMR Chapter 584, *Surface Water Quality Criteria for Toxic Pollutants*, and that ensure safe levels for the discharge of toxic pollutants such that existing and designated uses of surface waters are maintained and protected.

4. RECEIVING WATER QUALITY STANDARDS

Classification of major river basins, 38 M.R.S., §467(12)(A)(4) classifies the West Branch of the Penobscot River as having Class C waters.

Class C waters shall be of such quality that they are suitable for the designated uses of drinking water after treatment; fishing; recreation in and on the water; industrial process and cooling water supply; hydroelectric power generation, except as prohibited under Title 12, section 403; navigation; and as habitat for fish and other aquatic life. The dissolved oxygen content of Class C waters shall be not less than 5 parts per million or 60% of saturation, whichever is higher, except that in identified salmonid spawning areas where whatever quality is sufficient to ensure spawing, egg incubation and survival of early life stages, that water quality sufficient for these purposes must be maintained.

Discharges to Class C waters may cause some changes to aquatic life, provided that the receiving waters shall be of sufficient quality to support all species of fish indigenous to the receiving waters and maintain the structure and function of the resident biological community

5. REGULATIONS RELATING TO TEMPERATURE

The Department's Chapter 582, *Regulations Relating to Temperature* states that no discharge shall cause the ambient temperature of any freshwater body to be raised more than 5 degrees Fahrenheit, nor shall any discharge cause the temperature of any waters to exceed the U.S. Environmental Protection Agency's (EPA) national ambient water quality criteria established to protect all species of fish that are indigenous to the receiving waters. When the ambient temperature of any body of water naturally exceeds the applicable EPA criteria, no thermal discharge may be allowed which alone or in combination with other discharges would raise the ambient temperature of the receiving water more than 0.5 degrees Fahrenheit.

The Department has established that cold water fish species are indigenous to all Maine rivers and streams. EPA has established maximum temperatures for the protection of growth and survival of cold water fish as follows: a weekly average temperature of 66 degrees Fahrenheit; and a daily maximum temperature of 73 degrees Fahrenheit.

6. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

EPA has not promulgated National Effluent Guidelines for non-contact cooling water. The DEP has made a Best Professional Judgment (BPJ) determination that BPT for hydro project cooling water is no treatment.

The Department has calculated that, under worst case conditions of maximum cooling water flow (364,320) gallons per day, maximum cooling water temperature (assumed 95 degrees Fahrenheit, based on staff analysis of industry data), and 7Q10 receiving water flow (2010 cfs), and without any treatment to reduce thermal loading, the discharge will raise the ambient temperature of the receiving water by only $1/100^{th}$ of a degree Fahrenheit.

6. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

Therefore, the Department has determined that neither effluent limitations nor monitoring requirements are necessary to ensure that applicable water quality standards are met.

7. PUBLIC COMMENTS

Public notice of this application was made in the Bangor Daily News on or about August 29, 2018. The Department receives public comments on an application until the date a final agency action is taken on that application. Those persons receiving copies of draft permits shall have at least 30 days in which to submit comments on the draft or to request a public hearing, pursuant to Chapter 522 of the Department's rules.

8. DEPARTMENT CONTACTS

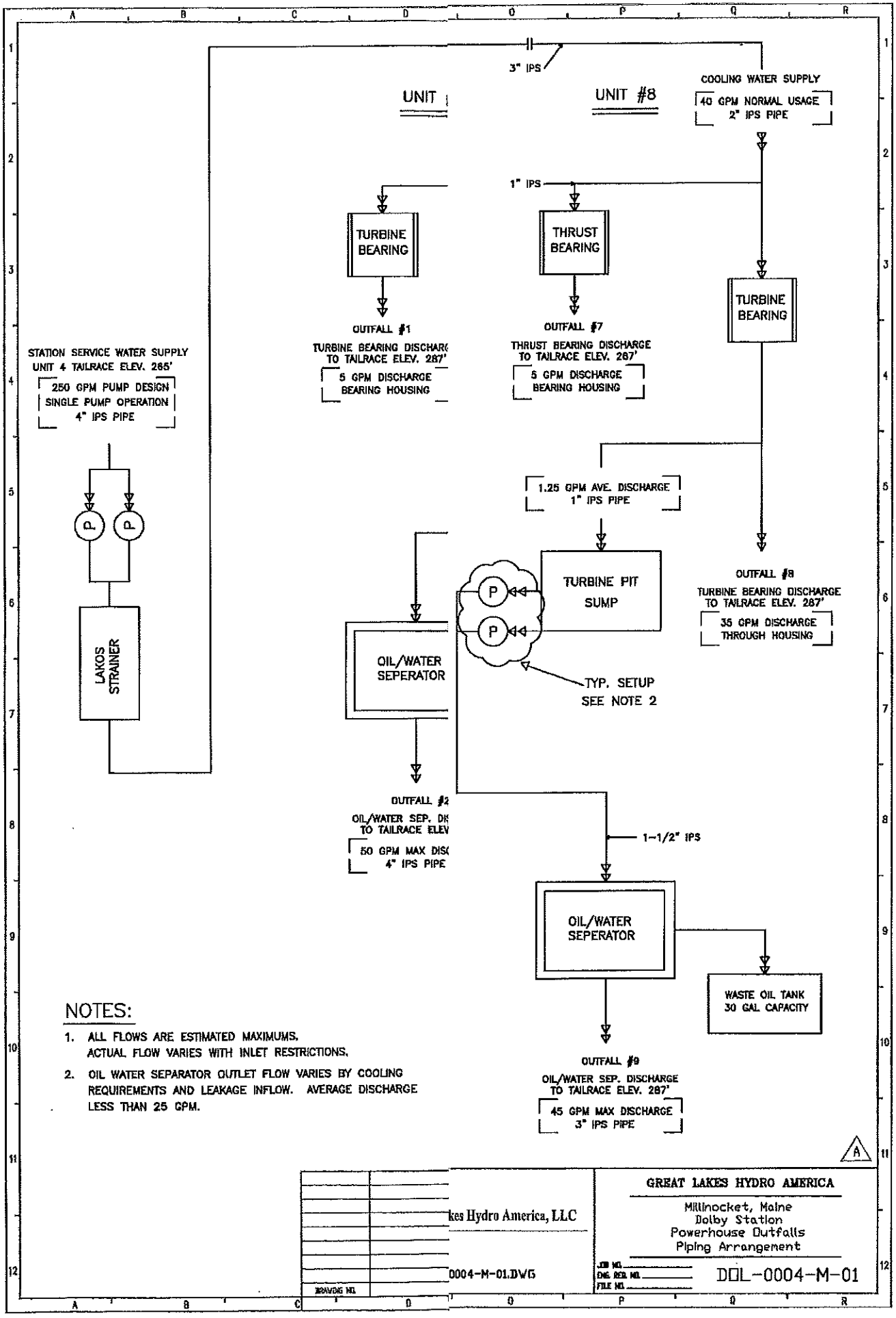
Additional information concerning this permitting action may be obtained from and written comments should be sent to:

Irene Saumur
Department of Environmental Protection
Bureau of Water Quality
Division of Water Quality Management
17 State House Station
Augusta, Maine 04333-0017
Telephone (207) 485-2404
irene.saumur@maine.gov

9. RESPONSE TO COMMENTS

During the period of October 25, 2018 through issuance of the permit, the Department solicited comments from the permittee, state and federal agencies and interested parties on the proposed draft MEPDES permit and Maine WDL to be issued for the proposed discharge from Great Lakes Hydro America, LLC. The Department did not receive any substantial comments from any party. Therefore, no Response to Comments has been prepared.

ATTACHMENT A



NOTES:

1. ALL FLOWS ARE ESTIMATED MAXIMUMS. ACTUAL FLOW VARIES WITH INLET RESTRICTIONS.
2. OIL WATER SEPARATOR OUTLET FLOW VARIES BY COOLING REQUIREMENTS AND LEAKAGE INFLOW. AVERAGE DISCHARGE LESS THAN 25 GPM.

kes Hydro America, LLC

0004-M-01.DWG

DRAWING NO.

GREAT LAKES HYDRO AMERICA

Millinocket, Maine
Dolby Station
Powerhouse Outfalls
Piping Arrangement

JOB NO.
DWG. REF. NO.
FILE NO.

DOL-0004-M-01

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

STANDARD CONDITIONS APPLICABLE TO ALL PERMITS

CONTENTS

A. GENERAL PROVISIONS

1. **General compliance.** All discharges shall be consistent with the terms and conditions of this permit; any changes in production capacity or process modifications which result in changes in the quantity or the characteristics of the discharge must be authorized by an additional license or by modifications of this permit; it shall be a violation of the terms and conditions of this permit to discharge any pollutant not identified and authorized herein or to discharge in excess of the rates or quantities authorized herein or to violate any other conditions of this permit.

2. Other materials. Other materials ordinarily produced or used in the operation of this facility, which have been specifically identified in the application, may be discharged at the maximum frequency and maximum level identified in the application, provided:

(a) They are not

(i) Designated as toxic or hazardous under the provisions of Sections 307 and 311, respectively, of the Federal Water Pollution Control Act; Title 38, Section 420, Maine Revised Statutes; or other applicable State Law; or
(ii) Known to be hazardous or toxic by the licensee.

(b) The discharge of such materials will not violate applicable water quality standards.

3. Duty to comply. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of State law and the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

(a) The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Clean Water Act, and 38 MRSA, §420 or Chapter 530.5 for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.
(b) Any person who violates any provision of the laws administered by the Department, including without limitation, a violation of the terms of any order, rule license, permit, approval or decision of the Board or Commissioner is subject to the penalties set forth in 38 MRSA, §349.

4. Duty to provide information. The permittee shall furnish to the Department, within a reasonable time, any information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Department upon request, copies of records required to be kept by this permit.

5. Permit actions. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

6. Reopener clause. The Department reserves the right to make appropriate revisions to this permit in order to establish any appropriate effluent limitations, schedule of compliance or other provisions which may be authorized under 38 MRSA, §414-A(5).

7. Oil and hazardous substances. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities or penalties to which the permittee is or may be subject under section 311 of the Federal Clean Water Act; section 106 of the Federal Comprehensive Environmental Response, Compensation and Liability Act of 1980; or 38 MRSA §§ 1301, et. seq.

8. Property rights. This permit does not convey any property rights of any sort, or any exclusive privilege.

9. Confidentiality of records. 38 MRSA §414(6) reads as follows. "Any records, reports or information obtained under this subchapter is available to the public, except that upon a showing satisfactory to the department by any person that any records, reports or information, or particular part or any record, report or information, other than the names and addresses of applicants, license applications, licenses, and effluent data, to which the department has access under this subchapter would, if made public, divulge methods or processes that are entitled to protection as trade secrets, these records, reports or information must be confidential and not available for public inspection or examination. Any records, reports or information may be disclosed to employees or authorized representatives of the State or the United States concerned with carrying out this subchapter or any applicable federal law, and to any party to a hearing held under this section on terms the commissioner may prescribe in order to protect these confidential records, reports and information, as long as this disclosure is material and relevant to any issue under consideration by the department."

10. Duty to reapply. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.

11. Other laws. The issuance of this permit does not authorize any injury to persons or property or invasion of other property rights, nor does it relieve the permittee if its obligation to comply with other applicable Federal, State or local laws and regulations.

12. Inspection and entry. The permittee shall allow the Department, or an authorized representative (including an authorized contractor acting as a representative of the EPA Administrator), upon presentation of credentials and other documents as may be required by law, to:

(a) Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
(b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
(c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
(d) Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

B. OPERATION AND MAINTENACE OF FACILITIES

1. General facility requirements.

(a) The permittee shall collect all waste flows designated by the Department as requiring treatment and discharge them into an approved waste treatment facility in such a manner as to

maximize removal of pollutants unless authorization to the contrary is obtained from the Department.

(b) The permittee shall at all times maintain in good working order and operate at maximum efficiency all waste water collection, treatment and/or control facilities.

(c) All necessary waste treatment facilities will be installed and operational prior to the discharge of any wastewaters.

(d) Final plans and specifications must be submitted to the Department for review prior to the construction or modification of any treatment facilities.

(e) The permittee shall install flow measuring facilities of a design approved by the Department.

(f) The permittee must provide an outfall of a design approved by the Department which is placed in the receiving waters in such a manner that the maximum mixing and dispersion of the wastewaters will be achieved as rapidly as possible.

2. Proper operation and maintenance. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

3. Need to halt or reduce activity not a defense. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

4. Duty to mitigate. The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

5. Bypasses.

(a) Definitions.

(i) Bypass means the intentional diversion of waste streams from any portion of a treatment facility.

(ii) Severe property damage 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.

(b) Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs (c) and (d) of this section.

(c) Notice.

(i) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass.

(ii) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in paragraph D(1)(f), below. (24-hour notice).

(d) Prohibition of bypass.

(i) Bypass is prohibited, and the Department may take enforcement action against a permittee for bypass, unless:

(A) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
(B) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
(C) The permittee submitted notices as required under paragraph (c) of this section.

(ii) The Department may approve an anticipated bypass, after considering its adverse effects, if the Department determines that it will meet the three conditions listed above in paragraph (d)(i) of this section.

6. Upsets.

(a) Definition. Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit 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.

(b) Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph (c) of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

(c) Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

(i) An upset occurred and that the permittee can identify the cause(s) of the upset;
(ii) The permitted facility was at the time being properly operated; and
(iii) The permittee submitted notice of the upset as required in paragraph D(1)(f) , below. (24 hour notice).
(iv) The permittee complied with any remedial measures required under paragraph B(4).

(d) Burden of proof. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

C. MONITORING AND RECORDS

1. General Requirements. This permit shall be subject to such monitoring requirements as may be reasonably required by the Department including the installation, use and maintenance of monitoring equipment or methods (including, where appropriate, biological monitoring methods). The permittee shall provide the Department with periodic reports on the proper Department reporting form of monitoring results obtained pursuant to the monitoring requirements contained herein.

2. Representative sampling. Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. If effluent limitations are based wholly or partially on quantities of a product processed, the permittee shall ensure samples are representative of times when production is taking place. Where discharge monitoring is required when production is less than 50%, the resulting data shall be reported as a daily measurement but not included in computation of averages, unless specifically authorized by the Department.

3. Monitoring and records.

(a) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

(b) Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years, the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application. This period may be extended by request of the Department at any time.

(c) Records of monitoring information shall include:

(i) The date, exact place, and time of sampling or measurements;
(ii) The individual(s) who performed the sampling or measurements;
(iii) The date(s) analyses were performed;
(iv) The individual(s) who performed the analyses;
(v) The analytical techniques or methods used; and
(vi) The results of such analyses.

(d) Monitoring results must be conducted according to test procedures approved under 40 CFR part 136, unless other test procedures have been specified in the permit.

(e) State law provides that any person who tampers with or renders inaccurate any monitoring devices or method required by any provision of law, or any order, rule license, permit approval or decision is subject to the penalties set forth in 38 MRSA, §349.

D. REPORTING REQUIREMENTS

1. Reporting requirements.

(a) Planned changes. The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

(i) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or

(ii) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under Section D(4).

(iii) The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan;

(b) Anticipated noncompliance. The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

(c) Transfers. This permit is not transferable to any person except upon application to and approval of the Department pursuant to 38 MRSA, § 344 and Chapters 2 and 522.

(d) Monitoring reports. Monitoring results shall be reported at the intervals specified elsewhere in this permit.

(i) Monitoring results must be reported on a Discharge Monitoring Report (DMR) or forms provided or specified by the Department for reporting results of monitoring of sludge use or disposal practices.

(ii) If the permittee monitors any pollutant more frequently than required by the permit using test procedures approved under 40 CFR part 136 or as specified in the permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Department.

(iii) Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Department in the permit.

(e) Compliance schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

(f) Twenty-four hour reporting.

(i) The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance

has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

(ii) The following shall be included as information which must be reported within 24 hours under this paragraph.

(A) Any unanticipated bypass which exceeds any effluent limitation in the permit.
(B) Any upset which exceeds any effluent limitation in the permit.
(C) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Department in the permit to be reported within 24 hours.

(iii) The Department may waive the written report on a case-by-case basis for reports under paragraph (f)(ii) of this section if the oral report has been received within 24 hours.

(g) Other noncompliance. The permittee shall report all instances of noncompliance not reported under paragraphs (d), (e), and (f) of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph (f) of this section.

(h) Other information. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or information.

2. Signatory requirement. All applications, reports, or information submitted to the Department shall be signed and certified as required by Chapter 521, Section 5 of the Department's rules. State law provides that any person who knowingly makes any false statement, representation or certification in any application, record, report, plan or other document filed or required to be maintained by any order, rule, permit, approval or decision of the Board or Commissioner is subject to the penalties set forth in 38 MRSA, §349.

3. Availability of reports. Except for data determined to be confidential under A(9), above, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Department. As required by State law, effluent data shall not be considered confidential. Knowingly making any false statement on any such report may result in the imposition of criminal sanctions as provided by law.

4. Existing manufacturing, commercial, mining, and silvicultural dischargers. In addition to the reporting requirements under this Section, all existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Department as soon as they know or have reason to believe:

(a) That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

(i) One hundred micrograms per liter (100 ug/l);
(ii) Two hundred micrograms per liter (200 ug/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony;
(iii) Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with Chapter 521 Section 4(g)(7); or
(iv) The level established by the Department in accordance with Chapter 523 Section 5(f).

(b) That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following ``notification levels'':

(i) Five hundred micrograms per liter (500 ug/l);
(ii) One milligram per liter (1 mg/l) for antimony;
(iii) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with Chapter 521 Section 4(g)(7); or
(iv) The level established by the Department in accordance with Chapter 523 Section 5(f).

5. Publicly owned treatment works.

(a) All POTWs must provide adequate notice to the Department of the following:

(i) Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to section 301 or 306 of CWA or Chapter 528 if it were directly discharging those pollutants.
(ii) Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.
(iii) For purposes of this paragraph, adequate notice shall include information on (A) the quality and quantity of effluent introduced into the POTW, and (B) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

(b) When the effluent discharged by a POTW for a period of three consecutive months exceeds 80 percent of the permitted flow, the permittee shall submit to the Department a projection of loadings up to the time when the design capacity of the treatment facility will be reached, and a program for maintaining satisfactory treatment levels consistent with approved water quality management plans.

E. OTHER REQUIREMENTS

1. Emergency action - power failure. Within thirty days after the effective date of this permit, the permittee shall notify the Department of facilities and plans to be used in the event the primary source of power to its wastewater pumping and treatment facilities fails as follows.

(a) For municipal sources. During power failure, all wastewaters which are normally treated shall receive a minimum of primary treatment and disinfection. Unless otherwise approved, alternate power supplies shall be provided for pumping stations and treatment facilities. Alternate power supplies shall be on-site generating units or an outside power source which is separate and independent from sources used for normal operation of the wastewater facilities.

(b) For industrial and commercial sources. The permittee shall either maintain an alternative power source sufficient to operate the wastewater pumping and treatment facilities or halt, reduce or otherwise control production and or all discharges upon reduction or loss of power to the wastewater pumping or treatment facilities.

2. **Spill prevention.** (applicable only to industrial sources) Within six months of the effective date of this permit, the permittee shall submit to the Department for review and approval, with or without conditions, a spill prevention plan. The plan shall delineate methods and measures to be taken to prevent and or contain any spills of pulp, chemicals, oils or other contaminates and shall specify means of disposal and or treatment to be used.

3. **Removed substances.** Solids, sludges trash rack cleanings, filter backwash, or other pollutants removed from or resulting from the treatment or control of waste waters shall be disposed of in a manner approved by the Department.

4. **Connection to municipal sewer.** (applicable only to industrial and commercial sources) All wastewaters designated by the Department as treatable in a municipal treatment system will be cosigned to that system when it is available. This permit will expire 90 days after the municipal treatment facility becomes available, unless this time is extended by the Department in writing.

F. DEFINITIONS. For the purposes of this permit, the following definitions shall apply. Other definitions applicable to this permit may be found in Chapters 520 through 529 of the Department's rules

Average means the arithmetic mean of values taken at the frequency required for each parameter over the specified period. For bacteria, the average shall be the geometric mean.

Average monthly discharge limitation means the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month. Except, however, bacteriological tests may be calculated as a geometric mean.

Average weekly discharge limitation means the highest allowable average of daily discharges over a calendar week, calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

Best management practices ("BMPs") means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the State. 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.

Composite sample means a sample consisting of a minimum of eight grab samples collected at equal intervals during a 24 hour period (or a lesser period as specified in the section on monitoring and reporting) and combined proportional to the flow over that same time period.

Continuous discharge means a discharge which occurs without interruption throughout the operating hours of the facility, except for infrequent shutdowns for maintenance, process changes, or other similar activities.

Daily discharge means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the average measurement of the pollutant over the day.

Discharge Monitoring Report ("DMR") means the EPA uniform national form, including any subsequent additions, revisions, or modifications for the reporting of self-monitoring results by permittees. DMRs must be used by approved States as well as by EPA. EPA will supply DMRs to any approved State upon request. The EPA national forms may be modified to substitute the State Agency name, address, logo, and other similar information, as appropriate, in place of EPA's.

Flow weighted composite sample means a composite sample consisting of a mixture of aliquots collected at a constant time interval, where the volume of each aliquot is proportional to the flow rate of the discharge.

Grab sample means an individual sample collected in a period of less than 15 minutes.

Interference means a Discharge which, alone or in conjunction with a discharge or discharges from other sources, both:

(1) Inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal; and
(2) Therefore is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent State or local regulations): Section 405 of the Clean Water Act, the Solid Waste Disposal Act (SWDA) (including title II, more commonly referred to as the Resource Conservation and Recovery Act (RCRA), and including State regulations contained in any State sludge management plan prepared pursuant to subtitle D of the SWDA), the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act.

Maximum daily discharge limitation means the highest allowable daily discharge.

New source means any building, structure, facility, or installation from which there is or may be a discharge of pollutants, the construction of which commenced:

(a) After promulgation of standards of performance under section 306 of CWA which are applicable to such source, or
(b) After proposal of standards of performance in accordance with section 306 of CWA which are applicable to such source, but only if the standards are promulgated in accordance with section 306 within 120 days of their proposal.

Pass through means a discharge which exits the POTW into waters of the State in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation).

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 NPDES general permit (Chapter 529). 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.

Person means an individual, firm, corporation, municipality, quasi-municipal corporation, state agency, federal agency or other legal entity.

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 or vessel or other floating craft, from which pollutants are or may be discharged.

Pollutant means dredged spoil, solid waste, junk, incinerator residue, sewage, refuse, effluent, garbage, sewage sludge, munitions, chemicals, biological or radiological materials, oil, petroleum products or byproducts, heat, wrecked or discarded equipment, rock, sand, dirt and industrial, municipal, domestic, commercial or agricultural wastes of any kind.

Process wastewater means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.

Publicly owned treatment works ("POTW") means any facility for the treatment of pollutants owned by the State or any political subdivision thereof, any municipality, district, quasi-municipal corporation or other public entity.

Septage means, for the purposes of this permit, any waste, refuse, effluent sludge or other material removed from a septic tank, cesspool, vault privy or similar source which concentrates wastes or to which chemicals have been added. Septage does not include wastes from a holding tank.

Time weighted composite means a composite sample consisting of a mixture of equal volume aliquots collected over a constant time interval.

Toxic pollutant includes any pollutant listed as toxic under section 307(a)(1) or, in the case of sludge use or disposal practices, any pollutant identified in regulations implementing section 405(d) of the CWA. Toxic pollutant also includes those substances or combination of substances, including disease causing agents, which after discharge or upon exposure, ingestion, inhalation or assimilation into any organism, including humans either directly through the environment or indirectly through ingestion through food chains, will, on the basis of information available to the board either alone or in combination with other substances already in the receiving waters or the discharge, cause death, disease, abnormalities, cancer, genetic mutations, physiological malfunctions, including malfunctions in reproduction, or physical deformations in such organism or their offspring.

Wetlands means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

Whole effluent toxicity means the aggregate toxic effect of an effluent measured directly by a toxicity test.

DEP INFORMATION SHEET

Appealing a Department Licensing Decision

Dated: November 2018 **Contact: (207) 287-2452**

SUMMARY

There are two methods available to an aggrieved person seeking to appeal a licensing decision made by the Department of Environmental Protection's (DEP) Commissioner: (1) an administrative process before the Board of Environmental Protection (Board); or (2) a judicial process before Maine's Superior Court. An aggrieved person seeking review of a licensing decision over which the Board had original jurisdiction may seek judicial review in Maine's Superior Court.

A judicial appeal of final action by the Commissioner or the Board regarding an application for an expedited wind energy development (35-A M.R.S. § 3451(4)) or a general permit for an offshore wind energy demonstration project (38 M.R.S. § 480-HH(1)) or a general permit for a tidal energy demonstration project (38 M.R.S. § 636-A) must be taken to the Supreme Judicial Court sitting as the Law Court.

This information sheet, in conjunction with a review of the statutory and regulatory provisions referred to herein, can help a person to understand his or her rights and obligations in filing an administrative or judicial appeal.

I. ADMINISTRATIVE APPEALS TO THE BOARD

LEGAL REFERENCES

The laws concerning the DEP's *Organization and Powers*, 38 M.R.S. §§ 341-D(4) & 346; the *Maine Administrative Procedure Act*, 5 M.R.S. § 11001; and the DEP's *Rules Concerning the Processing of Applications and Other Administrative Matters* ("Chapter 2"), 06-096 C.M.R. ch. 2.

DEADLINE TO SUBMIT AN APPEAL TO THE BOARD

The Board must receive a written appeal within 30 days of the date on which the Commissioner's decision was filed with the Board. Appeals filed more than 30 calendar days after the date on which the Commissioner's decision was filed with the Board will be dismissed unless notice of the Commissioner's license decision was required to be given to the person filing an appeal (appellant) and the notice was not given as required.

HOW TO SUBMIT AN APPEAL TO THE BOARD

Signed original appeal documents must be sent to: Chair, Board of Environmental Protection, 17 State House Station, Augusta, ME 04333-0017. An appeal may be submitted by fax or e-mail if it contains a scanned original signature. It is recommended that a faxed or e-mailed appeal be followed by the submittal of mailed original paper documents. The complete appeal, including any attachments, must be received at DEP's offices in Augusta on or before 5:00 PM on the due date; materials received after 5:00 pm are not considered received until the following day. The risk of material not being received in a timely manner is on the sender, regardless of the method used. The appellant must also send a copy of the appeal documents to the Commissioner of the DEP; the applicant (if the appellant is not the applicant in the license proceeding at issue); and if a hearing was held on the application, any intervenor in that hearing process. All of the information listed in the next section of this information sheet must be submitted at the time the appeal is filed.

INFORMATION APPEAL PAPERWORK MUST CONTAIN

Appeal materials must contain the following information at the time the appeal is submitted:

1. *Aggrieved Status.* The appeal must explain how the appellant has standing to maintain an appeal. This requires an explanation of how the appellant may suffer a particularized injury as a result of the Commissioner's decision.
2. *The findings, conclusions, or conditions objected to or believed to be in error.* The appeal must identify the specific findings of fact, conclusions regarding compliance with the law, license conditions, or other aspects of the written license decision or of the license review process that the appellant objects to or believes to be in error.
3. *The basis of the objections or challenge.* For the objections identified in Item #2, the appeal must state why the appellant believes that the license decision is incorrect and should be modified or reversed. If possible, the appeal should cite specific evidence in the record or specific licensing requirements that the appellant believes were not properly considered or fully addressed.
4. *The remedy sought.* This can range from reversal of the Commissioner's decision on the license or permit to changes in specific permit conditions.
5. *All the matters to be contested.* The Board will limit its consideration to those matters specifically raised in the written notice of appeal.
6. *Request for hearing.* If the appellant wishes the Board to hold a public hearing on the appeal, a request for public hearing must be filed as part of the notice of appeal, and must include an offer of proof in accordance with Chapter 2. The Board will hear the arguments in favor of and in opposition to a hearing on the appeal and the presentations on the merits of an appeal at a regularly scheduled meeting. If the Board decides to hold a public hearing on an appeal, that hearing will then be scheduled for a later date.
7. *New or additional evidence to be offered.* If an appellant wants to provide evidence not previously provided to DEP staff during the DEP's review of the application, the request and the proposed evidence must be submitted with the appeal. The Board may allow new or additional evidence, referred to as supplemental evidence, to be considered in an appeal only under very limited circumstances. The proposed evidence must be relevant and material, and (a) the person seeking to add information to the record must show due diligence in bringing the evidence to the DEP's attention at the earliest possible time in the licensing process; or (b) the evidence itself must be newly discovered and therefore unable to have been presented earlier in the process. Specific requirements for supplemental evidence are found in Chapter 2 § 24.

OTHER CONSIDERATIONS IN APPEALING A DECISION TO THE BOARD

1. *Be familiar with all relevant material in the DEP record.* A license application file is public information, subject to any applicable statutory exceptions, and is made easily accessible by the DEP. Upon request, the DEP will make application materials available during normal working hours, provide space to review the file, and provide an opportunity for photocopying materials. There is a charge for copies or copying services.
2. *Be familiar with the regulations and laws under which the application was processed, and the procedural rules governing your appeal.* DEP staff will provide this information on request and answer general questions regarding the appeal process.
3. *The filing of an appeal does not operate as a stay to any decision.* If a license has been granted and it has been appealed, the license normally remains in effect pending the processing of the appeal. Unless a stay of the decision is requested and granted, a license holder may proceed with a project pending the outcome of an appeal, but the license holder runs the risk of the decision being reversed or modified as a result of the appeal.

WHAT TO EXPECT ONCE YOU FILE A TIMELY APPEAL WITH THE BOARD

The Board will formally acknowledge receipt of an appeal, and will provide the name of the DEP project manager assigned to the specific appeal. The notice of appeal, any materials accepted by the Board Chair as supplementary evidence, any materials submitted in response to the appeal, and relevant excerpts from the DEP's application review file will be sent to Board members with a recommended decision from DEP staff. The appellant, the license holder if different from the appellant, and any interested persons are notified in advance of the date set for Board consideration of an appeal or request for public hearing. The appellant and the license holder will have an opportunity to address the Board at the Board meeting. With or without holding a public hearing, the Board may affirm, amend, or reverse a Commissioner decision or remand the matter to the Commissioner for further proceedings. The Board will notify the appellant, the license holder, and interested persons of its decision.

II. JUDICIAL APPEALS

Maine law generally allows aggrieved persons to appeal final Commissioner or Board licensing decisions to Maine's Superior Court (see 38 M.R.S. § 346(1); 06-096 C.M.R. ch. 2; 5 M.R.S. § 11001; and M.R. Civ. P. 80C). A party's appeal must be filed with the Superior Court within 30 days of receipt of notice of the Board's or the Commissioner's decision. For any other person, an appeal must be filed within 40 days of the date the decision was rendered. An appeal to court of a license decision regarding an expedited wind energy development, a general permit for an offshore wind energy demonstration project, or a general permit for a tidal energy demonstration project may only be taken directly to the Maine Supreme Judicial Court. See 38 M.R.S. § 346(4).

Maine's Administrative Procedure Act, DEP statutes governing a particular matter, and the Maine Rules of Civil Procedure must be consulted for the substantive and procedural details applicable to judicial appeals.

ADDITIONAL INFORMATION

If you have questions or need additional information on the appeal process, for administrative appeals contact the Board's Executive Analyst at (207) 287-2452, or for judicial appeals contact the court clerk's office in which your appeal will be filed.

Note: The DEP provides this INFORMATION SHEET for general guidance only; it is not intended for use as a legal reference. Maine law governs an appellant's rights.

2458/10
2572/10

9/2/93

SETTLEMENT AGREEMENT
PENOBSCOT MILLS/RIPOGENUS
FERC PROJECT NOS. 2458-009; 2572-005

This Settlement Agreement ("Agreement") is entered into between the Maine Professional River Outfitters, an association of river outfitting companies and its member companies ("MEPRO"), and Great Northern Paper, Inc. ("Great Northern") of Millinocket, Maine.

The purpose of this Agreement is to set forth the terms upon which MEPRO agrees to withdraw its opposition and express support for the issuance to Great Northern of new licenses from the Federal Energy Regulatory Commission (FERC) for the Ripogenus and Penobscot Mills projects (the "Projects") or the "Licenses").

The parties agree as follows:

1. MEPRO and Great Northern share a common interest in the continued viability of Great Northern's paper making operations in the Millinocket area, and the growth and vitality of the commercial whitewater rafting business on the West Branch of the Penobscot River, both of which bring jobs and economic benefits to the region. Therefore, the Parties commit to working together in partnership to assure a healthy future for their industries and an enlightened and balanced stewardship of the river resource that supports their industries.

2. MEPRO hereby withdraws its opposition to Great Northern's applications to FERC for the Licenses and enthusiastically supports the timely issuance by FERC of Licenses which incorporate the terms and conditions of this Agreement.

3. The terms of this Agreement with respect to recreational flows, fees, and facilities will help assure a strong outfitting industry with significant employment and economic benefits to the region, as well as helping assure the viability of Great Northern's paper operations in the Millinocket area.

4. For the term of the Licenses, and subject to the agreement of any governmental agency, if necessary, including without limitation, the FERC, the Maine Department of Inland Fisheries and Wildlife and the Maine Land Use Regulation Commission ("LURC"), Great Northern will operate its hydroelectric facilities to provide the following whitewater recreational flows below McKay Station during the periods indicated:

May 1 to September 15

	Sun	Mon	Tues	Wed	Thur	Fri	Sat
CFS Normal Year	2300	2200	2000	2000	2000	2200	2300
CFS Wet/Dry Year	2200	2000	1800	1800	1800	2000	2200

September 16 to October 1

	Sat	Sun
CFS Normal Year	2300	2300
CFS Wet/Dry Year	2200	2200

Such flows shall be minimum flows for each hourly period (measured on the basis of an hourly average), and said flows shall be available for use by commercial rafting trips between the hours of 8:30 a.m. and 5:00 p.m. from McKay Station to Abol Bridge.

Great Northern shall, following emergency outage situations, restore the whitewater recreational flows noted above as quickly and as practically possible below McKay Station, but in no event in more than three days.

5. For the term of the Licenses, Great Northern will maintain a recorded telephone message to provide daily information on actual releases from McKay Station and Ripogenus Dam, whether scheduled or not. Great Northern shall further notify a designated representative of MEPRO as soon as practical, by phone, of any unscheduled release from Ripogenus Dam. The name of said representative shall be provided to Great Northern by MEPRO prior to May 1 of each year.

6. Great Northern shall install and maintain for the term of the Licenses, three (3) staff gauges, to measure on an approximate basis, flow levels at McKay Station, Abol Bridge and Telos Bridge. The gauges shall show the approximate river flow in increments of 200 cfs.

7. Great Northern's current McKay Station fee to MEPRO members of $2.00 per rafting customer, which is calculated to offset the actual costs of providing and maintaining facilities used principally by commercial rafting enterprises and their customers, will only be increased during the term of the Licenses, as necessary, to reimburse Great Northern for actual costs incurred in providing and maintaining such facilities. Great Northern and MEPRO will cooperate in seeking opportunities for MEPRO or its members, instead of Great Northern, to provide, manage and maintain such facilities and services, thereby

reducing the cost of the same to Great Northern and thus, minimizing the fee to be paid by MEPRO members.

8. The gate fee, so called, charged by Great Northern for each rafting customer entering Great Northern's gated lands by bus or van for the purpose of commercial rafting shall be reduced to $2.00 per person and may only be increased thereafter, on a yearly basis, to the same extent as the Consumer Price Index increases (rounded to the nearest 5 cents).

9. Great Northern will impose no fees for rafting access or use other than those described in Paragraphs 7 and 8 above.

10. If approval of this Agreement is required by FERC and if FERC should fail to approve this Agreement in its entirety, or if FERC should fail to issue the Licenses on the terms set forth above to Great Northern; or if any Licenses are issued in draft or final form which are inconsistent with this Agreement, either party may, within 30 days of the Commission's action (or inaction, if requested to act), withdraw from this Agreement upon providing written notice to the other party. In the event of such withdrawal, this Agreement shall be of no force and effect, and MEPRO may reinstate its opposition to issuance of the Licenses.

11. In any new leases or extensions, renewals or amendments of existing leases of land or islands bordering those stretches of the West Branch of the Penobscot River where commercial rafting takes place, Great Northern will provide that the lessee may not charge fees to any MEPRO member company for passage past such leaseholds; or for brief, non-intrusive river-oriented stops by the banks which do not materially impact on the lessees' rights to use and enjoy their leaseholds. Great Northern shall have the sole discretion to determine whether a use by MEPRO for which a lessee seeks to impose a fee meets the terms of this paragraph. To the extent any such charges are presently imposed, Great Northern shall use its best efforts to negotiate with its lessees the elimination of such charges.

12. This Agreement shall become effective upon the later of (a) issuance by FERC of a final Order approving the Agreement; (b) issuance of any necessary amendments to the Water Quality Certificates granted by the Maine Land Use Regulation Commission or Maine Department of Environmental Protection as a result of this Agreement or any action by FERC; or (c) issuance of Licenses by FERC of at least a thirty (30) year term in accordance with this Agreement.

Nothing in this paragraph shall be construed to prevent the parties from agreeing to earlier implementation of any of the provisions of this Agreement that may legally be implemented without governmental approval.

13. This Agreement may only be modified by written consent of both parties to this Agreement and is subject to any change in law or regulation which may affect the terms hereof.

WHEREFORE, this Agreement is hereby executed this Second day of September, 1993 on behalf of the parties by the following individuals who are authorized to do so.

Great Northern Paper, Inc.

By: _____
Brian R. Stetson

By: _____
James B. Carson

Member Companies of MEPRO:

By: _____

EASTERN RIVER EXPEDITIONS, INC.

MEPRO

By: _____
John M. Connelly, III

CRABAPPLE WHITEWATER

By: _____

DOWNEAST WHITEWATER

By: _____

MAINE WHITEWATER, INC.

By: _____

NEW ENGLAND WHITEWATER CENTER

By: _____

NORTH AMERICAN WHITEWATER

By: _____

NORTH COUNTRY RIVERS, INC.

By: _____

NORTHERN OUTDOORS

By: _____

PROFESSIONAL RIVER RUNNERS

By: _____

UNICORN RAFTING EXPEDITIONS, INC.

By: _____

VOYAGERS WHITEWATER

By: _____

WILDERNESS EXPEDITIONS, INC.

By: _____

3238.1-ENV

IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

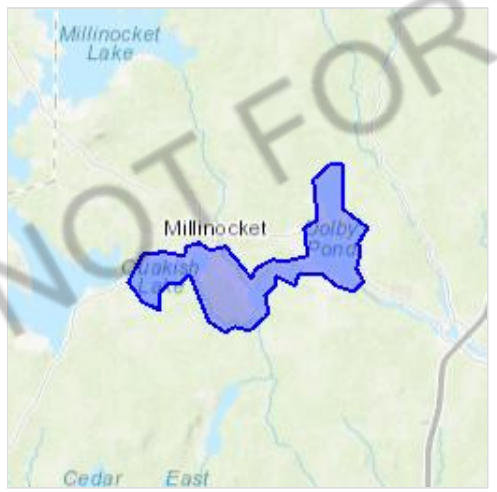
Project information

NAME

Millinocket and Dolby LIHI Application

LOCATION

Penobscot County, Maine



DESCRIPTION

LIHI Application for Millinocket and Dolby Developments

Local office

Maine Ecological Services Field Office

(207) 469-7300
(207) 902-1588

MAILING ADDRESS
P. O. Box A
East Orland, ME 04431

PHYSICAL ADDRESS
306 Hatchery Road
East Orland, ME 04431

http://www.fws.gov/mainefieldoffice/index.html

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Log in to IPaC.
2. Go to your My Projects list.
3. Click PROJECT HOME for this project.
4. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information.
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS

Canada Lynx Lynx canadensis There is **final** critical habitat for this species. Your location overlaps the critical habitat. https://ecos.fws.gov/ecp/species/3652	Threatened
Northern Long-eared Bat Myotis septentrionalis No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9045	Threatened

Fishes

NAME	STATUS
Atlantic Salmon Salmo salar There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/2097	Endangered

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

This location overlaps the critical habitat for the following species:

NAME	TYPE
Canada Lynx Lynx canadensis https://ecos.fws.gov/ecp/species/3652#crithab	Final

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php

- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)
Bald Eagle Haliaeetus leucocephalus This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Dec 1 to Aug 31
Canada Warbler Cardellina canadensis This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 20 to Aug 10

Olive-sided Flycatcher Contopus cooperi — Breeds May 20 to Aug 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3914

Rusty Blackbird Euphagus carolinus — Breeds May 10 to Jul 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Wood Thrush Hylocichla mustelina — Breeds May 10 to Aug 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

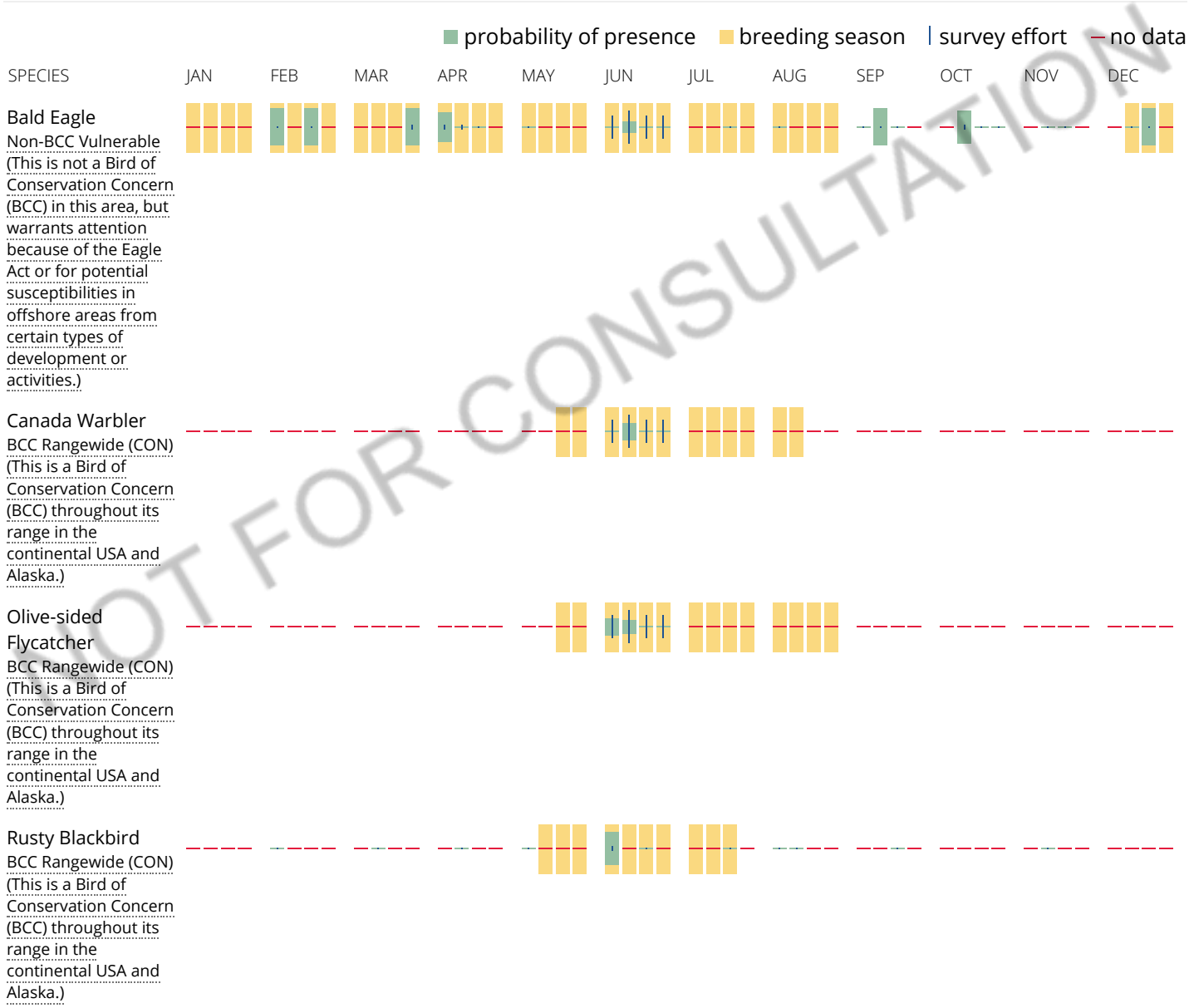
Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

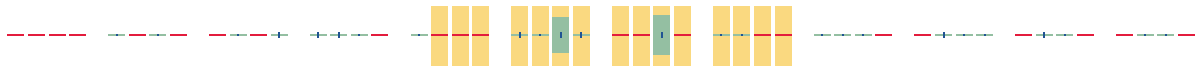
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Wood Thrush
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures and/or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ “What does IPaC use to generate the migratory birds potentially occurring in my specified location”. Please be aware this report provides the “probability of presence” of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the “no data” indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ “Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds” at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER EMERGENT WETLAND

- PEM1E
- PEM1Eh
- PEM1Eb
- PEM1Fh
- PEM1/SS1Eh
- PEM1F
- PEM1/SS4E
- PEM1Fb

FRESHWATER FORESTED/SHRUB WETLAND

- PSS1E
- PSS1Eh
- PFO4Ea
- PFO4E
- PFO4/1E
- PFO4Eh
- PFO4Ba

- PSS1/EM1Fh
- PSS1F
- PSS4Eh
- PSS4/1Eh
- PFO1Eh
- PSS4E
- PSS3/1Eh
- PSS1Eb
- PSS1Fh
- PFO1E
- PSS1Fb
- PSS1/3E
- PFO1/4E
- PSS3Ba
- PSS1/4Eh
- PSS1/4E
- PSS1Ex
- PSS1/EM1Eh

FRESHWATER POND

- PUBKx
- PUBHh
- PUB/FO5Fb
- PUBK
- PUBHx
- PUBH
- PUBF
- PUBFb
- PUBFh
- PUBFx

LAKE

- L1UBH
- L1UBHh

RIVERINE

- R2UBH
- R3UBH
- R5UBH
- R3USA
- R4SBC

A full description for each wetland code can be found at the National Wetlands Inventory website

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use

of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Maine Ecological Services Field Office
P. O. Box A
East Orland, ME 04431
Phone: (207) 469-7300 Fax: (207) 902-1588
http://www.fws.gov/mainefieldoffice/index.html

In Reply Refer To: May 30, 2019
Consultation Code: 05E1ME00-2019-SLI-0792
Event Code: 05E1ME00-2019-E-01927
Project Name: Millinocket and Dolby LIHI Application

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies the threatened, endangered, candidate, and proposed species and designated or proposed critical habitat that may occur within the boundary of your proposed project or may be affected by your proposed project. This species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC Web site at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the Endangered Species Consultation Handbook at: http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

This species list also identifies candidate species under review for listing and those species that the Service considers species of concern. Candidate species have no protection under the Act but are included for consideration because they could be listed prior to completion of your project. Species of concern are those taxa whose conservation status is of concern to the Service (i.e., species previously known as Category 2 candidates), but for which further information is needed.

If a proposed project may affect only candidate species or species of concern, you are not required to prepare a Biological Assessment or biological evaluation or to consult with the Service. However, the Service recommends minimizing effects to these species to prevent future conflicts. Therefore, if early evaluation indicates that a project will affect a candidate species or species of concern, you may wish to request technical assistance from this office to identify appropriate minimization measures.

Please be aware that bald and golden eagles are not protected under the Endangered Species Act but are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.). Projects affecting these species may require development of an eagle conservation plan: http://www.fws.gov/windenergy/eagle_guidance.html Information on the location of bald eagle nests in Maine can be found on the Maine Field Office Web site: http://www.fws.gov/mainefieldoffice/Project%20review4.html

Additionally, wind energy projects should follow the wind energy guidelines: http://www.fws.gov/windenergy/ for minimizing impacts to migratory birds and bats. Projects may require development of an avian and bat protection plan.

Migratory birds are also a Service trust resource. Under the Migratory Bird Treaty Act, construction activities in grassland, wetland, stream, woodland, and other habitats that would result in the take of migratory birds, eggs, young, or active nests should be avoided. Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g.,

cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm and at: http://www.towerkill.com; and at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Maine Ecological Services Field Office
P. O. Box A
East Orland, ME 04431
(207) 469-7300

Project Summary

Consultation Code: 05E1ME00-2019-SLI-0792

Event Code: 05E1ME00-2019-E-01927

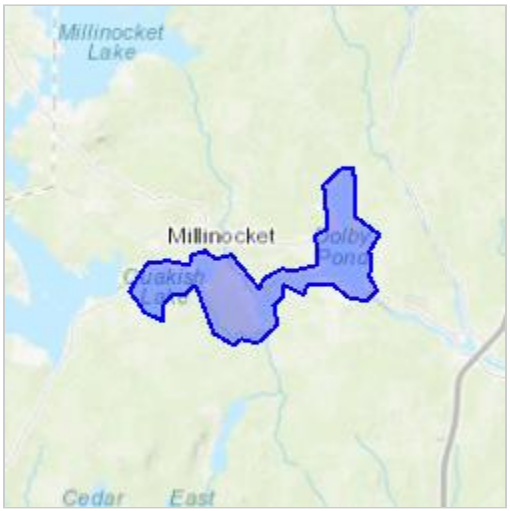
Project Name: Millinocket and Dolby LIHI Application

Project Type: DAM

Project Description: LIHI Application for Millinocket and Dolby Developments

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/45.65043961733225N68.62252071186367W



Counties: Penobscot, ME

Endangered Species Act Species

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Canada Lynx *Lynx canadensis* Population: Wherever Found in Contiguous U.S. There is **final** critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3652	Threatened
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Fishes

NAME	STATUS
Atlantic Salmon *Salmo salar* Population: Gulf of Maine DPS There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2097	Endangered

Critical habitats

There is 1 critical habitat wholly or partially within your project area under this office's jurisdiction.

NAME	STATUS
Canada Lynx *Lynx canadensis* https://ecos.fws.gov/ecp/species/3652#crithab	Final

Maloney, Kelly

Subject: FW: RE Penobscot projects endangered and threatened species list inquiry

Begin forwarded message:

From: "Settele, Rebecca" <Rebecca.Settele@maine.gov>
Date: May 8, 2019 at 11:37:17 AM EDT
To: "Frechette, Allison" <Allison.Frechette@brookfieldrenewable.com>
Cc: "Perry, John" <John.Perry@maine.gov>
Subject: RE: RE Penobscot projects endangered and threatened species list inquiry

Hi Allison,

Here is the information for the Penobscot Mills Development. If you could send the Androscoggin River development request to IFWEnvironmentalreview@maine.gov we can get started on that.

The following state-listed Endangered, Threatened, and Special Concern species have been documented in the general vicinity of the Penobscot Mills Developments (Millinocket Mill and Dolby) Project Area. Note that this list should not be considered all-inclusive:

Creeper (Special Concern)
Tidewater Mucket (State Threatened)
Yellow lampmussel (State Threatened)
Wood Turtle (Special Concern)
American Eel (Special Concern)

Note: Bald eagles have been documented in the Project area. Until recently, bald eagles were listed as a Species of Special Concern in Maine. However, eagles continue to be protected under the federal Bald Eagle and Golden Eagle Protection Act ("Eagle Act") as well as other federal laws.

In addition, while a comprehensive statewide inventory for bats has not been completed it is likely that several of species of bats occur within the project area during migration and/or the breeding season.

Little brown bat (State Endangered)
Northern long-eared bat (State Endangered)
Eastern small-footed bat (State Threatened)
Big brown bat (Special Concern)
Red bat (Special Concern)
Hoary bat (Special Concern)
Silver-haired bat (Special Concern)
Tri-colored bat (Special Concern)

Finally, please note that this list does not include any listed species of migratory birds that are likely found in the area during spring and fall migrations.

It is not known what effects, if any, the operations of the project may have on any of the species listed above.

Please let us know if you need additional information.

Becca Settele
Wildlife Biologist
Maine Dept of Inland Fisheries & Wildlife
Wildlife Division
650 State St
Bangor ME 04401
(207)941-4438
mefishwildlife.com | facebook | twitter

From: Frechette, Allison [mailto:Allison.Frechette@brookfieldrenewable.com]
Sent: Monday, May 06, 2019 2:49 PM
To: Settele, Rebecca <Rebecca.Settele@maine.gov>
Cc: Perry, John <John.Perry@maine.gov>
Subject: RE: RE Penobscot projects endangered and threatened species list inquiry

Hi Becca,

Thank you for the information provided on the Milford Project, I wanted to follow up to see if you could also provide us with a list for the Penobscot Mills Developments (Millinocket Mill & Dolby)? I had included these 2 projects in my initial request but maybe they got overlooked. I am also working on projects on the Androscoggin River (Deer Rips & A-3) development of the Gulf Island Project do you have a contact you can provide me with for that region?

Kind regards,
Allison Frechette
Compliance Specialist
North America

Brookfield Renewable
150 Main Street, Lewiston, ME 04240
T 207.755.5600 C 207.399.3932
Allison.Frechette@brookfieldrenewable.com
www.brookfieldrenewable.com