

August 2, 2021

North Gorham Project FERC No. 2519-ME

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 North Gorham Project

Dear Ms. Ames:

On behalf of the Licensee, Brookfield White Pine Hydro, LLC (BWPH), please find attached the Initial Application for the North Gorham Project on the Presumpscot River in Maine. BWPH is requesting certification of the facilities of the Project.

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 Project
- Zones of Effect delineated into the impounded reach upstream of North Gorham dam and powerhouse; bypass reach of the North Gorham Project spillway; and the tailrace below the North Gorham powerhouse.
- 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 <u>Kelly.Maloney@brookfieldrenewable.com</u> if you have any questions or need additional information regarding this submittal.

Sincerely,

Kell Malomey

Kelly Maloney Manager, Compliance - Northeast

Cc: J. Rancourt, N. Stevens, S. Michaud, M. Swett, J. Seyfried, M. LeBlanc, A. Frechette

LOW IMPACT HYDROPOWER INSTITUTE CERTIFICATION APPLICATION FOR THE NORTH GORHAM PROJECT (FERC No. 2519-ME)

August 2021



LOW IMPACT HYDROPOWER INSTITUTE

CERTIFICATION APPLICATION FOR THE

NORTH GORHAM PROJECT (FERC NO. 2519-ME)

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Low Impact Hydropower Institute

Certification Application for the

North Gorham Project (FERC No. 2519-ME)

1.0 PROJECT DESCRIPTION

1.1 PROJECT FACILITIES

The North Gorham Project consists of a stone masonry and concrete dam about 1,009 ft long consisting of a non-overflow masonry wall section about 600.5 feet long, an intake section about 51.5 ft long and 28 feet high with four gates 9.5 feet wide by 9.5 feet high, protected by trashracks with 1.25 inch clear spacing, a sluice gate section about 47 feet long with four submerged sliding gates 4 feet wide by 5 feet high, a spillway section about 256.5 feet long, a sluice section about 15.5 feet long, and a cutoff wall section about 38 feet long. Water from the dam is fed to the powerhouse via four 8 foot diameter steel penstocks extending approximately 50 – 70 feet downstream to two surge chambers. The powerhouse is about 58 feet wide and 71 feet long with two 1,460 hp turbines connected to two generating units each having 1,125 kw of generating capacity at a power factor of 0.75 kw/kVA. The impoundment has a gross storage capacity of about 1,300 acre-feet and a surface area of 98 acres at elevation 221.8 feet msl.

The project is owned and licensed by Brookfield White Pine Hydro LLC (BWPH), and is located between river miles 19.5 and 20.6 on the Presumpscot River. The North Gorham Project is located on the Presumpscot River in the Towns of Gorham, North Windham, Windham, and Standish, Maine in and Cumberland Counties, Maine. The dam and generating station are located in the Towns of Gorham and Windham, with the impoundment extending into the Towns of Standish and North Windham.

The Project has a downstream fish passage facility and an upstream eel passage facility.







FIGURE 1-2. NORTH GORHAM PROJECT FACILITIES



FIGURE 1-3. NORTH GORHAM PROJECT AREA - AERIAL



FIGURE 1-4. NORTH GORHAM INTAKE, POWERHOUSE, SPILLWAY, BYPASS REACH AND TAILRACE - AERIAL

FIGURE 1-5 NORTH GORHAM POWERHOUSE INTAKE AND PENSTOCKS





FIGURE 1-6 NORTH GORHAM DAM NON-OVERFLOW SECTION



FIGURE 1-7 DAM DEEP SLUICE GATE SECTION, SPILLWAY AND BYPASS REACH



FIGURE 1-8 NORTH GORHAM POWERHOUSE



FIGURE 1-9 NORTH GORHAM UPSTREAM EEL PASSAGE

1.2 PROJECT OPERATIONS

BWPH operates the North Gorham Project in run of river mode with a minimum flow of 222 cfs provided via the powerhouse and/or spillway. During normal operations, the project releases flows into the powerhouse tailrace depending on electrical demand and river flow. During high flow periods, both generator units may be run 24 hours a day, with flows in excess of 833 cfs being passed as spillage over the spillway or through the deep gates into the bypass reach. Inflows to the Project are significantly affected by Sebago Lake, which has a surface area of 45 sq. mi. and controls nearly 99 percent of flows to the upstream drainage. In addition, the downstream fish passage facility at North Gorham includes the use of the Project's deep flood gates in conjunction with a man-made plunge pool and an overflow outlet weir designed to pass resident fish safely by the Project. The deep floodgates are typically opened in the spring for a 2 week period to pass excess spring runoff and then used intermittently during the remainder of the year to pass high flows.

1.3 PROJECT LOCATION

The Project is located approximately 19.5 river miles above the head-of-tide at the Smelt Hill Project. The river passes through the Project area in a generally north to south direction. The North Gorham Project is the seventh most upstream of eight hydroelectric projects located on the main stem of the Presumpscot River. Only the North Gorham Project is owned by the Licensee, Brookfield White Pine Hydro LLC for all assets on the Presumpscot River.





1.4 REGULATORY AND OTHER REQUIREMENTS

1.4.1 FERC LICENSE AND WATER QUALITY CERTIFICATION REQUIREMENTS

Project license requirements and compliance activities are discussed by resource area in Section 3.0. A summary of the requirements and general update of compliance is provided below.

The FERC license was issued on November 22, 1993 and incorporated the Section 401 Water Quality Certification was issued by the Maine Department of Environmental Protection (MDEP) on September 28, 1992 (L-17475-33-A-N). The FERC issued an Order on Rehearing that modified several license articles on October 31, 1995. Specifically, Articles 401 and 402 required the Licensee to notify the Commission of any excursions within 10 days; the 1995 Order changed this to 30 days although it is BWPH's practice to report in 10 days. The Order on Rehearing also modified the language of Article 406 pertaining to the Programmatic Agreement, as reflected in Section 3.7. The MDEP issued an amended WQC on February 26, 1996 (L-17475-33-D-M) which modified Conditions 1 and 2 to clarify exceptions to normal operating conditions for minimum flows and water levels, as discussed below.

Operations

The Project is operated in run of river mode with a 222 cfs minimum flow and stable headpond elevations, pursuant to Article 401 and 402 of the Project license and Conditions 1 and 2 of the Project's Section 401 Water Quality Certification (WQC) as discussed in Section 3.1.

Article 401, as amended on October 31, 1995, states:

The Licensee shall release from the North Gorham Project into the Presumpscot River a minimum flow of 222 cubic feet per second, as measured immediately downstream the project tailrace, or inflow to the project reservoir, whichever is less, for the protection and enhancement of fish and wildlife resources in the Presumpscot River. This flow may be temporarily modified if required by operating emergencies beyond the control of the Licensee, and for short periods upon agreement between the Licensee and the Maine Department of Environmental Protection. If the flow is so modified, the Licensee shall notify the Commission as soon as possible, within 30 days after each such incident.

Condition 1 of the Project Water Quality Certification, as amended on February 26, 1996, dictates required minimum flows into the regulated river reach. Condition 1 states:

1. MINIMUM FLOWS

A. Except as temporarily modified by approved maintenance activities or operating emergencies beyond the applicant's control as defined below instantaneous minimum flow release of 222 cubic feet per second (cfs) or inflow, whichever is less, shall be maintained from the project at all times.

B. Operating emergencies beyond the applicant's control include, but may not be limited.to, equipment failure or other temporary abnormal operating condition, generating unit operation or interruption under power supply emergencies, and orders from local, state, or federal law enforcement or public safety authorities.

Article 402, as amended on October 31, 1995, states:

The Licensee shall operate the North Gorham Project to minimize fluctuations of the reservoir surface elevation for the protection of fishery resources in the North Gorham impoundment. The Licensee shall act at all times to maintain the reservoir elevation, as measured immediately upstream of the project dam, within one foot of the normal water surface elevation of 221.8 feet mean sea level. This mode of operation 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 and the Maine Department of Environmental Protection. If this mode of operation is so modified, the Licensee shall notify the Commission as soon as possible, but within 30 days after each such incident.

Condition 2 of the Water Quality Certification, as amended on February 26, 1996 likewise dictates water level management and states:

- 2. WATER LEVELS
- A. Except as temporarily modified by approved maintenance activities or by inflows to the project area or by operating emergencies beyond the applicant's control, as defined below, or upon mutual agreement between the Applicant and the Department, water levels in the North Gorham impoundment shall be maintained within one foot of normal surface elevation of 221.8 feet USGS tum (crest of spillway).
- B. Operating emergencies beyond the applicant's control include, but may not be limited to, equipment failure or flashboard failure, or other temporary abnormal operating condition, generating unit operation or interruption under power supply emergencies, and order from local, state, or federal law enforcement or public safety authorities.

Article 403 required the filing of a plan to monitor compliance with water level and minimum flow requirements.

Specifically, Article 403 states:

Within 90 days from the effective date of this license, the Licensee shall file with the Commission, for approval, a plan to provide for and monitor compliance with the water surface elevation restrictions and minimum instream flow requirements, as stipulated by Articles 401 and 402. The plan shall include, but not be limited to, a description of the level of automatic or staffed facility operation, details on the proposed location, design and calibration of the monitoring equipment, the method of data collection, and a provision for providing collected data to the U.S. Fish and Wildlife Service (FWS), the U.S. Geological Survey (USGS), the Maine Department of Environmental Protection (DEP), and the Maine Department of Inland Fisheries and Wildlife (DIFW) within 30 days from the date of the agencies' request for the data. The monitoring plan shall also include a schedule for:

(1) implementation of the program;

(2) consultation with the appropriate Federal and state agencies concerning the data from the monitoring; and

(3) filing the data, agency comments, and Licensee's response to agency comments with the Commission.

The Licensee shall prepare the plan after consultation with the FWS, the USGS, the DEP, and the DIFW. The Licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The Licensee shall allow a minimum of 30 days for the agencies to comment and make recommendations before filing the plan with the Commission. If the Licensee does not adopt a recommendation, the filing shall include the Licensee's reasons, based on project-specific information. The Commission reserves the right to require changes to the plan. Upon Commission approval, the Licensee shall implement the water surface elevation monitoring plan, including any changes required by the Commission.

The Operations and Flow Monitoring Plan was filed on March 29, 1994 and approved by the FERC on May 2, 1994 (see Section 6.0).

Excursions from run of river flows and headpond elevations are reported to the resource agencies and to FERC. In the last 5 years, three excursions have occurred at the Project.

On December 16, 2017, one of the Project's PLCs failed which resulted in the inability of the National System Control Center (NSCC) to remotely monitor and operate the facility. The facility was placed into local control and BWPH staff set the spill gates to pass inflows and checked on the facility three times per day to verify continued compliance. However, when BWPH staff arrived onsite on December 17, the headpond had dropped 2.5 feet below the crest elevation of the dam. The deviation was a result of inaccurate gate position settings to pass expected inflows. The FERC considered the incident to be a violation of license due to operator error.

On July 21, 2018, a minimum flow disruption occurred as Unit No. 2 unexpectedly tripped offline causing the river flow to drop from approximately 300 cfs, to below the License required 222 cfs for approximately 42 minutes, to a low point of 25 cfs, which spilled over the dam during the flow disruption. Spill increased from approximately 25 cfs to 94 cfs during the disruption as a result of spill. A technician was immediately dispatched to the site to conduct a downstream public safety check and to restore flow. The NSCC did not remotely operate gates at the Project for public safety concerns. After a thorough inspection of the Unit No. 2 trip, the root cause remains unknown. The FERC determined that the Unit No. 2 trip occurred for an undetermined reason and was not a violation of license.

On January 30, 2021, Unit No. 2 tripped offline causing the station flow to drop from approximately 355 cfs to 175 cfs. The NSCC began opening a waste gate to resume flow, when Unit. No. 1 tripped offline. The minimum flow was restored by 4:55 a.m., resulting in a flow disruption of approximately 13 minutes. The root cause of the unexpected unit trip was icing on the intake racks. On May 14, 2021 the FERC determined the event was not a violation.

Fish Passage

The Project has downstream fish passage and an upstream eel passage facility; only the former of which is required by the license and the Section 401 water quality certification. Specifically, Article 404 states:

Within 180 days from the effective date of this license, the Licensee shall file, for Commission approval, detailed functional design drawings of the Licensee's proposed downstream fish passage facilities together with a schedule to install the facilities. The schedule shall include provisions for the facilities to be installed and operational within 2 years from the effective date of this license. The Licensee shall also file an operation and maintenance plan and schedule for ensuring efficient operation and maintenance of the downstream fish passage facilities. The plan shall include, at a minimum, a description of facility oversight and personnel commitments, and identify back-up equipment and supplies that shall be maintained to ensure fast repairs in the event of fishway breakdown. The Licensee shall prepare the aforementioned drawings, operation and maintenance plan, and schedules after consultation with the U.S. Fish and Wildlife Service, the Maine Department of Environmental Protection, and the Maine Department of Inland Fisheries and Wildlife. The Licensee shall include with the drawings and operation and maintenance plan documentation of consultation, copies of comments and recommendations on the drawings, plan, and schedules after they have been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the Licensee's facilities. The Licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the drawings, plan, and schedules with the Commission. If the Licensee does not adopt a recommendation, the filing shall include the Licensee's reasons, based on project-specific information. Pursuant to Article 301, the Licensee shall file asbuilt drawings of the fish passage, recreation facilities, etc. The Commission reserves the right to require changes to the proposed facilities, operation and maintenance plan, and schedule. Upon Commission approval, the Licensee shall *implement* the proposal, including any changes required by the Commission.

Condition 3.A. of the water quality certification states:

Downstream fish passage facilities shall be installed and operational at the North Gorham Dam within two years following the issuance of a new FERC license for the project, provided that within this period the Department of Inland Fisheries and Wildlife amends it existing Presumpscot River Management Plan to include the waters of the North Gorham Project.

Condition 3.B. of the water quality certification states:

The applicant shall, in accordance with the schedule established in a new FERC license for the project, submit functional design drawings, a construction schedule, and operating and maintenance plans for the downstream fish passage facility required by Part A of this condition, prepared in consultation with state and federal fisheries agencies. These submittals shall be .reviewed by and must receive approval of state and federal fisheries agencies, FERC, and the DEP Bureau of Land Quality Control prior to facilities construction.

The downstream fish passage facility at North Gorham includes the use of the Project's deep flood gates in conjunction with a man-made plunge pool area (approximately 180 feet long by 60 feet wide by 6 feet deep), and an overflow outlet weir designed to pass resident fish safely by the Project. The deep floodgates are also typically opened in the spring for a 2 week period to pass excess spring runoff and then used intermittently during the remainder of the year to pass high flows.

The North Gorham Project does have upstream eel passage installed, pursuant to the requirements of the existing LIHI certification, as discussed in Section 3.3. Downstream eel passage is currently being designed in consultation with the agencies.

Recreation

Recreation facilities required as part of the 1993 FERC license included the downstream Fishing Access and Carry In Boat Access and a downstream Day Use Site.

Article 408, as amended, required improvements to access to the tailrace for recreation. Article 408 states:

Eighteen months after the effective date of the license, the Licensee shall file with the Commission, for approval, and upon approval implement, a tailrace access improvement plan for: (1) relocating the parking area and constructing a lighted parking lot with spaces for 5-6 cars; (2) improving the tailrace access trail; and (3) closing the existing access to vehicle traffic. The plan shall include: (1) provisions for protecting properties listed on or eligible for the National Register of Historic Places (2) a discussion of how the needs of the disabled were considered in the design and construction of the facilities; (3) a description of signs to be used in order to identify the recreational facilities; (4) drawings and specifications for each recreation facility; (5) the entity responsible for operating and maintaining the facilities; (6) erosion and sediment control measures that shall be implemented during construction, if applicable; and (7) a construction and improvement schedule. The License shall prepare the tailrace access improvement plan after consultation with the Maine Historic Preservation Commission, the U. S. Fish and Wildlife Service, the Maine Department of Inland Fisheries and Wildlife, the Maine Department of Conservation, and the Town of Windham. The Licensee shall include copies of comments and recommendations on the plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The Licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan with the Commission. If the Licensee does not adopt a recommendation, the filing shall include the Licensee's reasons, based on project-specific information.

Condition 4.A and B of the water quality certification requires project recreation facilities be constructed and states:

Public recreational access facilities shall be provided in the project area as described in the applicant's Water Quality Certification Application. The applicant shall, in accordance with the schedule established in a new FERC license for the project, submit a schedule for providing recreational facilities as required by Part A of this condition. This schedule shall be reviewed by the Department of Conservation and must receive approval of the DEP Bureau of Land Quality Control.

Article 407, as amended, requires monitoring of recreational use at the Project. Article 407 states:

The Licensee, after consultation with the U.S. Fish and Wildlife Service, the Maine Department of Inland Fisheries and Wildlife, the Maine Department of Conservation, and the Towns of Gorham and Windham, shall monitor recreational use of the project area to determine whether existing recreation facilities are meeting recreation needs. Monitoring studies shall begin from the effective date of the license and be filed according to the Commission's schedule for the FERC Form 80. Every 6 years during the term of the license, the Licensee shall file a report with the Commission on the monitoring results. The report shall include: (1) annual recreation use figures; (2) an evaluation of the fisheries program and status reports of the vandalism, theft, and loitering problems in the Towns of Gorham and Windham; (3) a discussion of the adequacy of the Licensee's recreational access and facilities relative to the evaluation and status reports in item (2); (4) any plans to control or accommodate visitation in the project area; (5) documentation of agency consultation agency comments on the report after it has been prepared and provided to the agencies; and (6) specific descriptions of how the agencies' comments are accommodated by the report. The Licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the report with the Commission.

Article 407 was amended per FERC Order issued May 7, 1997 to require filing of the recreation report by June 15 of each year in which FERC Form 80 is due. Article 407 was amended again per FERC Order issued Aug. 12, 2003 to change deadline for filing results of recreation use monitoring to six months after the due date of the Form 80.

Cultural Resources

The Project has a Programmatic Agreement pursuant to Article 406 as discussed in Section 3.7. Article 406, as amended, states:

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 Historic Preservation Officer for the Management of Historic Structures and Eligible Archaeological Sites That May Be Affected By New Licenses Issuing To Central Maine Power Company and Kennebec Water Power Company For Ten Hydroelectric Or Storage Projects In Maine", executed on October 27, 1993.

BWPH is required to file annual reports for activities conducted under the PA by February 15 each year (see Section 7.0).

1.4.2 LIHI CERTIFICATION REQUIREMENTS

The North Gorham Project is subject to the following LIHI Certification Conditions.

Condition 1. Within 90 days of LIHI certification, the Owner shall proactively initiate discussions with MDMR and USFWS regarding future construction of an upstream fish passage facility for American eel at the site and implementation of appropriate measures to facilitate safe downstream passage for American eel. The siting and design work on the upstream passage structures shall be initiated within the first two years of LIHI certification; construction and operation shall be completed as soon as practicable, but no later than the end of the five-year LIHI certification period. The facility shall be designed, sited, and constructed in consultation with and approval from the MDMR and USFWS. Within three years of the issuance of this certification, the downstream passage measures timeline shall be established in agreement with the resource agencies and a formal commitment for installation at a future date shall be made. If additional time is needed to accommodate required design activities, regulatory approval, or other extenuating circumstances beyond the control of the Owner, an extension may be requested. The Owner shall provide LIHI with an annual report on the status of these actions, along with the plan, schedule and status of new fish passage implementation, as part of their annual compliance statement.

Construction of the upstream eel passage facility has been completed, however modifications are currently being made during the first year of shake down to improve upstream passage conditions.

The downstream passage measures timeline and formal commitment was to be filed with LIHI within three years of LIHI certification (not later than November 2019 based on the issuance date). Consultation with the agencies on the downstream passage plan is ongoing as agencies have expressed concern regarding velocities encountered at the deep sluice gates. A request for an extension of time to comply with this deadline was filed on December 18, 2020 and again on March 31, 2020. BWPH is actively engaged with the Maine Department of Marine Resources and the US Fish and Wildlife Service on the design and implementation of downstream eel passage measures and will keep LIHI apprised when final designs and plans are completed.

Condition 2. The Owner shall proactively contact the MIF&W and USFWS a minimum of 60 days prior to any construction activities affecting lands not already developed or structures that may provide roosting habitat for the Northern Long-eared Bat, to determine if any special measures are needed to ensure no or minimal impact occurs to state and/or federally listed protected species identified as possibly occurring at the site. The MIF&W shall also be contacted within 60 days prior to any planned drawdown of the impoundment that would expose a significant portion of the river bottom, to avoid impacts to the Brook Floater. The Owner shall work with the MIF&W and USFWS to implement appropriate measures should they be needed. The Owner shall advise LIHI of any such events, including the results of any activities conducted to minimize such impacts. Such notification shall be provided as part of the annual compliance statement to LIHI. There have been no construction activities affecting undeveloped lands or structures that may provide habitat for NLEB for the certification period. There were no significant planned or unplanned drawdowns at the Project during the certification period.

TABLE 1-1.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)	North Gorham Project (FERC No. 2519- ME)
Reason for applying for LIHI Certification	 To participate in state RPS program and specify the state and the total MW/MWh associated with that participation (value and % of facility total Mw/MWh). To participate in voluntary REC market (e.g., Green-e) To satisfy a direct energy buyer's purchasing requirement To satisfy the facility's own corporate sustainability goals For the facility's corporate marketing purposes Other (describe) 	100% of the output participates in the MA Class II RPS program.
	If applicable, amount of annual generation (MWh and % of total generation) for which RECs are currently received or are expected to be received upon LIHI Certification	LTA 10.40 GWh - 100% of the output participates in the MA Class II RPS program
Location	River name (USGS proper name)	Presumpscot 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: <u>https://water.usgs.gov/wsc/map_index.ht</u> <u>ml</u>	01060001 - Presumpscot
	Nearest town(s), <u>county(ies)</u> , and state(s) to dam	Standish, North Windham, Windham, and Gorham Cumberland Counties Maine
	River mile of dam above mouth	RM 19.5
	Geographic latitude of dam	43º48'09.00" N
	Geographic longitude of dam	70º26′59.81″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	Brookfield Renewable Partners LP
	owner representative name.	Kelly Maloney, Compliance Manager,
	For recertifications: If ownership has	Northeast Region
	changed since last certification, provide	
	the effective date of the change.	
	FERC licensee company name (if different from owner)	Brookfield White Pine Hydro LLC
Regulatory	FERC Project Number (e.g., P-xxxxx),	FERC No. 2519
Status	issuance and expiration dates, or date of	Issued November 22, 1993
	exemption	Expires December 31, 2034
	FERC license type (major, minor,	Hydropower license for Major Project;
	exemption) or special classification (e.g.,	Federal Power Act
	"qualified conduit", "non-jurisdictional")	
	Water Quality Certificate identifier,	WQC #L-17475-33-A-N, Issued September
	issuance date, and issuing agency name.	28, 1992 by the Maine Department of
	Include information on amendments.	Environmental Protection. See section 6.2
		and section 7.0 for WQC and agency
		validation letter.
	Hyperlinks to key electronic records on	See Sections 6.0 and 7.0 for hyperlinks to
	FERC e-library website or other publicly	or documentation of relevant records
	accessible data repositories ¹	including FERC License and Amendment
		Orders; Section 401 Water Quality
		Certification; FERC and regulatory filings;
		and other key documents.
		Amendments have been primarily
		associated with specific plans filed
		pursuant to license requirements and are
		discussed by resource.
Powerhouse	Date of initial operation (past or future for	The hydroelectric development was
	pre-operational applications)	originally constructed in 1900-1901, and
		the powerhouse contains two turbines
		and generators that were installed in
		1925-1926.
	Total installed capacity (MW)	2.25 MW
	For recertifications: Indicate if installed	
	capacity has changed since last	
	certification	
	Average annual generation (MWh) and	LTA annual modeled generation is 10258
	period of record used	MWh, average over the last 5 years is
	For recertifications: Indicate if average	10553 MWh
	annual generation has changed since last	
	certification	

Item	Information Requested	Response (include references to
		further details)
	Mode of operation (run-of-river, peaking,	Run of river
	pulsing, seasonal storage, diversion, etc.)	
	For recertifications: Indicate if mode of	
	operation has changed since last	
	Certification	2 herizontel sheft Devikle wynner
	Number, type, and size of	2 norizontal – shart Double-runner
	and minimum hydraulic canacity and	Francis units
	and minimum nyuraulic capacity and	office 1 and 2. Max Rated. 475, Max
	turbing and generator unit	Total station capacity: Max Pated: 050:
		May actual 833 cfs
		Station hydraulic canacity is
		limited by tailwater
	Trashrack clear spacing (inches) for each	All trashracks consist of 3/8 in. bar steel
	trashrack	with 1.5 in. clear spacing
	Approach water velocity (ft/s) at each	Unknown
	intake if known	
	Dates and types of major equipment	None
	upgrades	
	For recertifications: Indicate only those	
	since last certification	
	Dates, purpose, and type of any recent	Only short-term operational changes for
	operational changes	maintenance and inspections. There have
	For recertifications: indicate only those	been no license modifications pertaining
		installation of col passage facilities
		requiring the provision of specific flow
	Plans, authorization, and regulatory	None
	activities for any facility upgrades or	
	license or exemption amendments	
Dam or	Date of original dam or diversion	Stone and concrete, built in 1915.
Diversion	construction and description and dates of	
	subsequent dam or diversion structure	
	modifications	
	Dam or diversion structure length, height	970 ft 6 inches long
	including separately the height of any	24 ft high
	flashboards, inflatable dams, etc. and	No Flashboards
	describe seasonal operation of	
	flashboards and the like	
	Spillway maximum hydraulic capacity	Spillway permanent crest elevation 221.8
		tt; hydraulic capacity 2,153 cfs
	Length and type of each penstock and	Four penstocks of 8 ft diameter steel
	water conveyance structure between the	
	impoundment and powerhouse	

Item	Information Requested	Response (include references to
		further details)
	Designated facility purposes (e.g., power,	Power
	navigation, flood control, water supply,	
Constait	etc.)	N1/A
Conduit	Date of conduit construction and primary	N/A
Facilities Only	Source water	N/A
		N/A
	Receiving water and location of discharge	N/A
Impoundment	Authorized maximum and minimum	Normal full pond elevation of 221.8 ft
and Watershed	impoundment water surface elevations	1 ft allowable fluctuation to 220.8 ft
	For recertifications: Indicate if these	
	values have changed since last	
	certification	
	Normal operating elevations and normal	There is no FERC high level license limit
	fluctuation range	at this site.
	For recertifications: Indicate if these	Normal full pond is 221.8 ft
	values have changed since last	There is a FERC low head pond level limit
	certification	of 1 ft from normal full pond to 220.8 ft.
	Gross storage volume and surface area at	Gross Storage Volume: 1,300 ac ft
	full pool	
	For recertifications: Indicate if these	Surface Area: 98 acres
	values have changed since last	
	certification	
	Usable storage volume and surface area	Usable Storage Volume: negligible
	For recertifications: Indicate if these	
	values have changed since last	Surface Area: 98 acres
	certification	
	Describe requirements related to	Per water quality certification and license
	impoundment inflow and outflow,	(see section 1.4 above and discussion in
	elevation restrictions (e.g., fluctuation	section 3.2 below)
	limits, seasonality) up/down ramping and	
	Lingtroam dams by pame, ownership and	Eal Mair SADDI EEDC No. 2084 22.1 DNA
	river mile. If EERC licensed or exempt	Linctream and downstream eel passage:
	please provide FERC Project number of	downstream fish passage no unstream
	these dams. Indicate which unstream	fish nassage
	dams have downstream fish passage	

Item	Information Requested	Response (include references to
		further details)
	Downstream dams by name, ownership, river mile and FERC number if FERC licensed or exempt. Indicate which downstream dams have upstream fish passage	further details) Cumberland Mills Dam, SAPPI, not FERC licensed, 6.5 RM Saccarappa, SAPPI, FERC No. 2897, 7.7 RM; Breached Mallison Falls, SAPPI, FERC No. 2932, 12.8 RM Little Falls, SAPPI, FERC No. 2941, 13.2 RM Gambo, SAPPI, FERC No. 2931, 15 RM Dundee, SAPPI, FERC No. 2942, 18.1 RM Upstream fish and eel passage is installed at the non-jurisdictional Cumberland Mills Dam. Upstream eel passage is installed at all of the other sites. Upstream fish passage is under construction at the breached Saccarappa Project and upstream fish passage facilities are required at all of the other sites pursuant to the FERC Order approving the Surrender and Decommissioning of the Saccarappa Project and Amending the Mallison Falls, Little Falls, Gambo and Dundee Licenses issued April 18, 2019 predicated on trigger numbers (https://elibrary.ferc.gov/eLibrary/filedo wnload2filoid=15221415)
		<u>willoud: inclu-15221415</u>)
	Operating agreements with upstream or downstream facilities that affect water availability and facility operation	NA
	Area of land (acres) and area of water (acres) inside FERC project boundary or under facility control. Indicate locations and acres of flowage rights versus fee- owned property.	Water: 98 acres at normal full pond elevation of 221.8 ft Land: 44.6; includes lands encompassing project structures and recreation sites (i.e.the Project boundary generally extends to elevation 221.8 ft in the impoundment)

Item	Information Requested	Response (in	clude references to
		further details)	
Hydrologic	Average annual flow at the dam, and	2015-2020	
Setting	period of record used	Year	Average Flow (cfs)
		2015	567
		2016	575
		2017	733
		2018	612
		2019	805
		2020	640
	Average monthly flows and period of	2015-2020	
	record used	Month	Average Flow (cfs)
		1	797
		2	690
		3	655
		4	865
		5	737
		6	546
		7	589
		8	568
		9	378
		10	436
		11	726
		12	899
	Location and name of closest stream	Upstream: USGS gag	e at Sebago Lake
	gaging stations above and below the facility	near North Windham (01063995)	
		Downstream: USGS gage at Westbrook	
		(#01064118)	
	Watershed area at the dam (in square	444 sq. miles not prorated	
	miles). Identify if this value is prorated		
	from gage locations and provide the basis		
	for proration calculation.		
	Other facility specific hydrologic	None	
	information		
Designated	Numbers and names of each of zone of	Zone 1 –Impoundme	nt
Zones of Effect	effect	Zone 2–Bypass Reac	า
		Zone 3 – Tailrace/Dov	wnstream Regulated
		Reach	
	River mile of upstream and downstream	Zone 1 - Project Imp	oundment RM 20.0 –
	limits of each zone of effect	RM 21.1	
		Zone 2 – Project Byp	ass Reach RM 19.04
		- RM 20	
		Zone 3 – Project Tail	race/Downstream
		Regulated Reach RM	20 – KIVI 18.8

Item	Information Requested	Response (include references to
		further details)
	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 Date generation is expected to begin	N/A
Pre-Operational I	Facilities	
Expected operational date	Date generation is expected to begin	N/A
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	Description of any change in	N/A
water flow	impoundment levels, water flows or	
regime	operations required for new generation	

2.0 ZONES OF EFFECT

The North Gorham Project is delineated into three Zones of Effect: Impoundment, Bypass Reach and Tailrace/Downstream as shown in Figure 2-1 and discussed in greater detail below.

FIGURE 2-1. ZONES OF EFFECT



2.1 ZONE OF EFFECT 1 - PROJECT IMPOUNDMENT

Zone 1 Impoundment- River Miles 21.1-20.0: The projects 98-acre impoundment is located in the Towns of North Gorham and Windham Hill. The normal impoundment elevation is 221.8 ft, the average width is 480 ft with a length of 1.1 miles.

FIGURE 2-2. ZONE 1 – PROJECT IMPOUNDMENT



TABLE 2-1. ZONE 1 – PROJECT IMPOUNDMENT MATRIX OF ALTERNATIVE STANDARDS

Facility Name:	North Gorham
•	

Zone of Effect: 1 – Impoundment

			Alternative Standards			
Criterion		1	2	3	4	Plus
Α	Ecological Flow Regimes	X				
В	Water Quality		X			
С	Upstream Fish Passage	X				
D	Downstream Fish Passage		X			
Ε	Watershed and Shoreline Protection		X			
F	Threatened and Endangered Species Protection		X			
G	Cultural and Historic Resources Protection	X				
Η	Recreational Resources		X			

Flows into Zone 1 are provided by the mainstem of the Presumpscot River. The North Gorham impoundment is operated as run-of-river with stable headpond management with the ability in the license to draw the level 1 ft for operational flexibility. The water quality of this reach is classified as Class A.

There are no anadromous fish in the project area except for eel as there are no fish passage facilities at Projects downstream. Resident salmonid species are present in the project area as they migrate from the upstream Sebago Lake Project. Two species are listed as Threatened in the project area, Small whorled pogonia and Northern Long-Eared Bat, but they are not affected by routine project operations. Limited vegetation removal may occur within project lands surrounding the Presumpscot River for maintenance purposes and such activities are regulated by the Presumpscot River Corridor Commission (SRCC).

Recreation in the impoundment consists of fishing generally provided by access by private landowners or via the shoreline at the Dam Day Use Site. There is no boat launch providing access to the Project impoundment.

There are no cultural resources in this zone of effect.

2.2 ZONE OF EFFECT 2– PROJECT BYPASS REACH

Zone 2 Bypass Reach - River mile 19.04-20.0: The deep sluice gate. section is 47 ft long with a top elevation of 225:5 ft with four submerged gates, 4 ft wide by 5 ft high. The sills of the gates are at elevation 200.4 ft. The concrete spillway section extends from the deep sluice gate section in a northeasterly direction for 25 ft 6 in. and then an additional 231 ft in an easterly direction. Maximum height of the structure is approximately 24 feet. Crest of the spillway is at elevation 221.8 ft. There is no minimum required flow.
FIGURE 2-3. ZONE 2 – PROJECT BYPASS REACH



TABLE 2-2. ZONE 2 – PROJECT BYPASS REACH MATRIX OF ALTERNATIVE STANDARDS

Facility Name: North Gorham

Zone of Effect: <u>2 – Project Bypass Reach</u>

		Alternative Standards				
	Criterion		2	3	4	Plus
Α	Ecological Flow Regimes		X			
В	Water Quality		X			
С	Upstream Fish Passage		X			
D	Downstream Fish Passage		X			
Ε	Watershed and Shoreline Protection	X				
F	Threatened and Endangered Species Protection		X			
G	Cultural and Historic Resources Protection	X				
Η	Recreational Resources		X			

Flows into the bypass reach channel are provided via spill when inflows exceed the capacity of the powerhouse. The water quality of this reach is classified as Class A.

Downstream fish passage is present at the North Gorham station for resident species only as there is no anadromous fish passage on the river. Upstream eel passage is provided in the bypass reach. Two species are listed as Threatened in the project area, Small whorled pogonia and Northern Long-Eared Bat, but they are not affected by routine project operations. Limited vegetation removal may occur within project lands surrounding the Presumpscot River for maintenance purposes, which is regulated by the SRCC.

The formal recreation site (Tailrace Fishing Access) is located within the bypass reach, occasional fishing is observed in this reach.

There are no cultural resources in this zone of effect.

2.3 ZONE OF EFFECT 3 – PROJECT TAILRACE

Zone 3 Tailrace (Main River Stem) – River mile 26-25.5: The North Gorham tailrace is formed initially by the powerhouse. The tailwater extends from the powerhouse down 150 ft to join the bypass reach to form the mainstem river channel. The normal tailwater elevation at the powerhouse is 187.4 ft. The tailwater is partially backwatered by the downstream Dundee Project impoundment.

FIGURE 2-4. ZONE 3 – PROJECT TAILRACE



TABLE 2-3. ZONE 3 – PROJECT TAILRACE MATRIX OF ALTERNATIVE STANDARDS

		Alternative Standards				
	Criterion		2	3	4	Plus
Α	Ecological Flow Regimes		X			
В	Water Quality		X			
С	Upstream Fish Passage		X			
D	Downstream Fish Passage	X				
Ε	Watershed and Shoreline Protection	X				
F	Threatened and Endangered Species Protection		X			
G	Cultural and Historic Resources Protection	X				
Η	Recreational Resources		X			

Facility Name: North Gorham Zone of Effect: <u>3 – Project Tailrace</u>

Flows into the tailrace of the North Gorham Project are provided by generation flows through the powerhouse. This reach of the Presumpscot River is Class A.

Downstream anadromous fish passage does not exist at the powerhouse, as there are currently no upstream passage facilities. As discussed above, downstream passage for resident species is provided in the bypass reach. Downstream eel passage is being developed in consultation with the agencies as upstream eel passage is present at the bypass reach. Two species are listed as Threatened in the project area, Small whorled pogonia and Northern Long-Eared Bat, but they are not affected by routine project operations. Limited vegetation removal may occur within project lands surrounding the Presumpscot River for maintenance purposes as regulated by the SRCC.

The Tailrace Fishing Access and Carry In Boat Launch is located in this Zone of Effect. Recreation in this reach includes fishing, swimming and boating provided by access by boat or from the shoreline.

Archaeological surveys at the North Gorham Project identified one archaeological site in the area of probable effect that could be eligible for listing on the National Register of Historic Places: the Great Falls site (ME 13-34). This site is discussed in section 3.7.1.

3.0 LIHI CERTIFICATION CRITERION

The Project is operated as a run of river facility with agency required minimum flows. Lands within the project boundary are limited to those required for project operations (including flowage rights), project, and project recreation facilities. There are no documented endangered or threatened aquatic species in this reach of the Presumpscot River and no passage for anadromous fish in the river due to a lack of fish passage at downstream and upstream facilities. Downstream passage for resident species is provided at the Project. Eel passage is provided at upstream and downstream facilities and is currently being finalized for the North Gorham Project. The Small Whorled Pogonia and the Northern Long Eared Bat range is identified in the vicinity of the Project, the Project has no effect on the species as there are no tree-clearing activities or corridor maintenance activities. Cultural sites are present within and adjacent to the project boundary, but project operations have no effect on these resources. The project has a FERC approved recreation monitoring plan in place.

TABLE 3-1 STANDARDS MATRIX SUMMARY

		CRITERION							
Zone No., Zone	River Mile	А	В	С	D	Ε	F	G	Н
Name, and Standard Selected (including PLUS if selected)	and lower extent of Zone	Ecological Flows	Water Quality	Upstream Fish Passage	Downstream Fish Passage	Shoreline and Watershed Protection	Threatened and Endangered Species	Cultural and Historic Resources	Recreational Resources
#1 Impoundment	21.1 - 20	1	2	1	2	2	2	1	2
#2 Bypass Reach	19.04 – 20.0	2	2	2	2	1	2	1	2
#3 Tailrace/Downstream	20.0 – 18.8	2	2	2	1	1	2	1	2

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.

The Project is subject to run of river mode of operation, pursuant to the requirements of Article 402 and Condition 2 of the Project's WQC, as discussed for Zone 1 below. In addition, there are minimum flow requirements as dictated by Article 401 and Condition 1 of the Project's WQC, as discussed for Zone 3 below. The tailrace, Zone 3, receives flows from generation and required minimum flows pursuant to Article 401 and Condition 2 and the backwater effects from the Dundee Project downstream as well as spill flows discharged to the bypass reach, which converges with the tailrace downstream. This instream flow release—recommended by the agencies --is the aquatic base flow (222 cfs), calculated as 0.5 cfs per square mile of drainage area.

Article 403 required the filing of a plan to monitor compliance with water level and minimum flow requirements. The Plan was filed on April 1, 1994 and accepted by the FERC on May 2, 1994 (see Section 6.0).

Criterion	Standard	Supporting Information
Α	1	Not Applicable / De Minimis Effect:
	The facility operates in a true run-of-river	 For impoundment zones only, explain
	operational mode and there are no	water management (e.g., fluctuations,
	bypassed reaches or water diversions	ramping, refill rates) and how fish and
	associated with the facility; or the facility is	wildlife habitat within the zone is evaluated
	located within an existing water conduit	and managed. NOTE: this is required
	that does not discharge into natural	information, but it will not be used to
	waterways	determine whether the Ecological Flows
		criterion has been satisfied. All
		impoundment zones can apply Criterion A-
		1 to pass this criterion.

3.1.1 ZONE 1 – IMPOUNDMENT

Brookfield's NSCC monitors operations including impoundment elevations and flows through the North Gorham project and as discharged through dam structures continuously to maintain compliance with requirements for operations and minimum flows. There is no FERC high level license limit at this site. There is a FERC low head pond level limit at North Gorham of 221.8 ft.

Any deviations for impoundment elevations at the Project are reported to FERC, deviations are attached in section 6.6.

As discussed above, Article 401, as amended, and WQC Condition 1, dictate water level management at the Project.

Criterion	Standard	Supporting Information
Α	2	Agency Recommendation:
	The flow regime at the facility was	Identify the proceeding and source, date, and
	developed in accordance with a, science-	specifics of the agency recommendation
	based 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).

3.1.2 ZONE 2 – BYPASS REACH & ZONE 3 – TAILRACE/DOWNSTREAM

A year-round release of an instantaneous minimum flow of 222 cfs from the Dam to the regulated downstream river reach is required and is provided by the powerhouse and/or spillway bypass reach flows. Minimum flows are required pursuant to Article 401, as amended by FERC Order on Rehearing dated October 31, 1995, and Condition 1 of the WQC, as amended February 26, 1996.

The tailrace receives flows from Project generation and the minimum required Project flows can be provided to the downstream regulated river reach via the bypass reach, through the powerhouse, or a combination of both. FERC determined in its Environmental Assessment that "the aquatic base flow--222 cfs--would protect and maintain aquatic and wildlife resources in Presumpscot River downstream of the project".

As with the impoundment, Brookfield's NSCC monitors operations including flows through both the powerhouse and spillway at the North Gorham Project continuously to maintain compliance with requirements for operations and minimum flows. Any deviations from run-of-river operations or minimum flow requirements at the Project are reported to FERC; deviations are attached in section 6.6.

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." The applicable standard applies to all Zones of Effect and is discussed collectively for all reaches.

Criterion	Standard	Supporting Information
В	2	Agency Recommendation:
	The facility is in compliance with all water	 If facility is located on a Water Quality
	quality conditions contained in a recent	Limited river reach, provide a link to the
	Water Quality Certification or science-	state's most recent impaired waters list and
	based resource agency recommendation	indicate the page(s) therein that apply to
	providing reasonable assurance that	facility waters. If possible, provide an agency
	water quality standards will be met for all	letter stating that the facility is not a cause of
	waterbodies that are directly affected by	such limitation.
	the facility. Such recommendations,	 Provide a copy of the most recent Water
	whether based on a generally applicable	Quality Certificate and any subsequent
	water quality standard or one that was	amendments, including the date(s) of
	developed on a site-specific basis, must	issuance. If more than 10 years old, provide
	include consideration of all water quality	documentation that the certification terms
	components necessary to preserve	and conditions remain valid and in effect for
	healthy fish and wildlife populations,	the facility (e.g., a letter from the agency).
	human uses and recreation.	 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 Project is operated as a run of river facility with flow requirements discussed previously in section 3.1 under FERC and an agency approved operations and monitoring plan. The Project meets all water quality standards for Class A waters pursuant to the Projects Water Quality Certification attached in section 6. The Project is not within waters that are identified on the MDEP 303(d) list of impaired waters. The following summary is from the Maine DEP letter dated May 7, 2021, that provides confirmation the WQC terms and conditions remain valid and in effect for The North Gorham Project (see Section 7).

"...based on its review, the Department confirms that the North Gorham Hydro Facility is in compliance with minimum flow and impoundment water level fluctuation requirements pursuant to the WQC.

The Department confirms that the WQC issued on September 24, 1992 and subsequently modified on February 26, 1996 is still valid and is the most recent WQC issued by the Department for the North Gorham Hydro Project.

The Department reviewed its file on the North Gorham Hydro Project and confirms that the facility is in compliance with all other conditions pursuant to the WQC."

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."

The North Gorham Project does not have upstream fish passage installed to date, due to a lack of fish passage for anadromous species at downstream facilities and no current requirement to install, but the Project has operational upstream eel passage, discussed below, and has downstream fish passage as discussed in section 3.4 of this application.

Criterion	Standard	Instructions
C	1 The facility does not create a barrier to upstream 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	 Not Applicable / De Minimis Effect: 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 not or was not the cause of the extirpation.

3.3.1 ZONE 1 - IMPOUNDMENT

Upstream fish passage is not required at the Project, however, upstream eel passage facilities were installed in 2021. There is unimpeded movement of resident fish and eel within the impoundment.

cy Recommendation:
entify the proceeding and source, ate, and specifics of the agency commendation applied (NOTE: there ay be more than one; identify and cplain which is most environmentally rotective). cplain the scientific or technical basis or the agency recommendation, cluding methods and data used. This required regardless of whether the commendation is or is not part of a ettlement Agreement. escribe any provisions for fish passage onitoring or effectiveness eterminations that are part of the gency recommendation, and how uses are being implemented. rovide evidence that required passage cilities are being operated and aintained as mandated (e.g. meets

3.3.2 ZONE 2 – BYPASS REACH AND ZONE 3 – TAILRACE/DOWNSTREAM

The North Gorham upstream eel passage located on the bypass reach was installed in 2020 and is being refined during the 2021 shakedown year. The eel passage is a condition of the current LIHI certification, which is the proceeding under which this facility is required. The scientific/technical basis for the agency recommendation is part of the record for the previous LIHI certification. Photos of the eelway are presented in Section 1.1.

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."

Downstream fish passage requirements at the Project were originally dictated by the license under Articles 404 and 405, as follows:

Article 404. Within 180 days from the effective date of this license, the Licensee shall file, for Commission approval, detailed functional design drawings of the Licensee's proposed downstream fish passage facilities together with a schedule to install the facilities. The schedule

shall include provisions for the facilities to be installed and operational within 2 years from the effective date of this license.

The Licensee shall also file an operation and maintenance plan and schedule for ensuring efficient operation and maintenance of the downstream fish passage facilities. The plan shall include, at a minimum, a description of facility oversight and personnel commitments, and identify back-up equipment and supplies that shall be maintained to ensure fast repairs in the event of fishway breakdown.

The Licensee shall prepare the aforementioned drawings, operation and maintenance plan, and schedules after consultation with the U.S. Fish and Wildlife Service, the Maine Department of Environmental Protection, and the Maine Department of Inland Fisheries and Wildlife. The Licensee shall include with the drawings and operation and maintenance plan documentation of consultation, copies of comments and recommendations on the drawings, plan, and schedules after they have been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the Licensee's facilities. The Licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the drawings, plan, and schedules with the Commission. If the Licensee does not adopt a recommendation, the filing shall include the Licensee's reasons, based on project-specific information.

Pursuant to Article 301, the Licensee shall file as-built drawings of the fish passage, recreation facilities, etc. The Commission reserves the right to require changes to the proposed facilities, operation and maintenance plan, and schedule. Upon Commission approval, the Licensee shall implement the proposal, including any changes required by the Commission.

Pursuant to Section 18 of the Federal Power Act (FPA), Department of the Interior USFWS prescribed downstream fish passage facilities for the North Gorham Project and that the Licensee should submit final plans to the USFWS for approval prior to constructing the downstream fishway. Department of the Interior also reserved its authority to prescribe fishways at the North Gorham Project, as indicated in Article 405.

Article 405. Authority is reserved to the Commission to require the Licensee to construct, operate, and maintain, or to provide for the construction, operation, and maintenance of such fishways as may be prescribed by the Secretary of the Interior.

The Maine Department of Inland Fisheries and Wildlife's (MDIFW) fisheries management plan for the Presumpscot River, includes stocking salmon and trout in the project area. In conjunction with the MDIFW's plan to enhance the salmonid fishery, downstream passage of salmon and trout from North Gorham impoundment into Dundee Pond is provided at the Project pursuant to Article 404.

Criterion	Standard	Supporting Information
D	2	Agency Recommendation:
	The facility is in compliance with a	 Identify the proceeding and source, date,
	science-based resource agency	and specifics of the agency recommendation
	recommendation for downstream fish	applied (NOTE: there may be more than one;
	passage or fish protection, which may	identify and explain which is most
	include provisions for appropriate	environmentally protective).
	monitoring and effectiveness	 Explain the scientific or technical basis for
	determinations	the agency recommendation, including
		methods and data used. This is required
		regardless of whether the recommendation is
		part of a Settlement Agreement or not.
		 Describe any provisions for fish passage
		monitoring or effectiveness determinations
		that are part of the agency recommendation,
		and how these are being implemented.
		 Provide evidence that required passage
		facilities are being operated and maintained
		as mandated (e.g. meets season,
		coordination with agencies)

3.4.1 ZONE 1 – IMPOUNDMENT AND ZONE 2 – BYPASS REACH

The impoundment provides approximately 1.1 miles of unimpeded river reach for downstream migrating resident fish and eel. There are no obstructions to passage in Zone 1. The North Gorham Pond is not stocked. According to the MDIFW, the pond does support Brook Trout, Brown Trout, and Salmon that drop down from the Eel Weir bypass. The Eel Weir bypass is scheduled to receive 1,600 Brook Trout and 600 Salmon annually; however, the availability of additional fish may increase the number and species of salmonids stocked. These fish eventually drop down into the North Gorham tailwater where they then provide benefit to the fishermen below the facility.

The North Gorham Dam provides downstream passage facilities providing egress into the bypass reach channel. The downstream fish passage facility at North Gorham includes the use of the Project's deep flood gates in conjunction with a man-made plunge pool area (approximately 180 feet long by 60 feet wide by 6 feet deep), and an overflow outlet weir designed to pass resident fish safely by the Project. The deep floodgates are typically opened in the spring for a 2 week period to pass excess spring runoff and then used intermittently during the remainder of the year to pass high flows.

The gates are operated pursuant to the Downstream Fish Passage Operations & Maintenance Plan describes dated September 5, 1995 and approved by FERC Order dated November 14, 1995. The November 1995 Order required a report be submitted annually by January 31 to FERC and the resource agencies that describes the operation and maintenance activities at the Project for downstream fish passage in the previous year (see Section 6.0).

Criterion	Standard	Supporting Information
D	1	Not Applicable/De Minimis Effect:
	The facility does not create a barrier to	 Explain why the facility does not impose a
	downstream passage, or there are no	barrier to downstream fish passage in the
	migratory fish in the vicinity of the	designated zone, considering both physical
	facility; if migratory fish were present	obstruction and increased mortality relative
	historically, the facility did not contribute	to natural downstream movement (e.g.,
	to the extirpation of such species; the	entrainment into hydropower turbines).
	facility does not contribute adversely to	Typically, tailwater/downstream zones will
	the sustainability of riverine fish	qualify for this standard since below a dam
	populations or to their access to habitat	and powerhouse there is no facility barrier to
	necessary for the completion of their life	further downstream movement. Bypassed
	cycles	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.

3.4.2 ZONE 3 – TAILRACE/DOWNSTREAM

There is no impedance to downstream migration below the North Gorham Dam. There are downstream passage facilities for resident fish at the Project and downstream passage facilities are being developed for eel.

Yearly the North Gorham Pond Tailrace/Bypass is stocked with Brown Trout MDIFW. Spring yearling are stocked annually. This Presumpscot River program enhances the recreational value of fishing by providing a better fish population for anglers.

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."

The Project is not required to have a Shoreline Management Plan, pursuant to FERC licenses and amendments (see Section 6.0). Project lands are managed pursuant to the FERC Standard Land Use Article 409, which states:

- a) In accordance with the provisions of this article, the Licensee shall have 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 and waters for certain types of use and occupancy, without prior Commission approval. The Licensee may exercise the authority only if the proposed use and occupancy is consistent with the purposes of protecting and enhancing the scenic, recreational, and other environmental values of the project. For those purposes, the Licensee shall also have continuing responsibility to supervise and control the use and occupancies for which it grants permission, and to monitor the use of, and ensure compliance with the covenants of the instrument of conveyance for, any interests that it has conveyed, under this article. If a permitted use and occupancy violates any condition of this article or any other condition imposed by the Licensee for protection and enhancement of the project's scenic, recreational, or other environmental values, or if a covenant of a conveyance made under the authority of this article is violated, the Licensee shall take any lawful action necessary to correct the violation. For a permitted use or occupancy, that action includes, if necessary, canceling the permission to use and occupy the project lands and waters and requiring the removal of any non-complying structures and facilities.
- b) The type of use and occupancy of project lands and waters for which the Licensee may grant permission without prior Commission approval are: (1) landscape plantings; (2) noncommercial piers, landings, boat docks, or similar structures and facilities that can accommodate no more than 10 watercraft at a time and where said facility is intended to serve single-family type dwellings; and (3) embankments, bulkheads, retaining walls, or similar structures for erosion control to protect the existing shoreline. To the extent feasible and desirable to protect and enhance the project's scenic, recreational, and other environmental values, the Licensee shall require multiple use and occupancy of facilities for access to project lands or waters. The Licensee shall also ensure, to the satisfaction of the Commission's authorized representative, that the use and occupancies for which it grants permission are maintained in good repair and comply with applicable state and local health and safety requirements. Before granting permission for construction of bulkheads or retaining walls, the Licensee shall: (1) inspect the site of the proposed construction, (2) consider whether the planting of vegetation or the use of riprap would be adequate to control erosion at the site, and (3) determine that the proposed construction is needed and would not change the basic contour of the reservoir shoreline. To implement this paragraph (b), the Licensee may, among other things, establish a program for issuing permits for the specified types of use and occupancy of project lands and waters, which may be subject to the payment of a reasonable fee to cover the Licensee's costs of administering the permit program. The Commission reserves the right to require the Licensee to file a description of its standards, guidelines, and procedures for implementing this paragraph (b) and to require modification of those standards, guidelines, or procedures.
- c) The Licensee may convey easements or rights-of-way across, or leases of, project lands for: (1) replacement, expansion, realignment, or maintenance of bridges and

roads for which all necessary state and federal approvals have been obtained; (2) storm drains and water mains; (3) sewers that do not discharge into project waters; (4) minor access roads; (5) telephone, gas, and electric utility distribution lines; (6) nonproject overhead electric transmission lines that do not require erection of support structures within the project boundary; (7) submarine, overhead, or underground major telephone distribution cables or major electric distribution lines (69-kV or less); and (8) water intake or pumping facilities that do not extract more than one million gallons per day from a project reservoir. No later than January 31 of each year, the Licensee shall file three copies of a report briefly describing for each conveyance made under this paragraph (c) during the prior calendar year, 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.

- d) The Licensee may convey fee title to, easements or rights-of-way across, or leases of project lands for: (1) construction of new bridges or roads for which all necessary state and federal approvals have been obtained; (2) sewer or effluent lines that discharge into project waters, for which all necessary federal and state water quality certification or permits have been obtained; (3) other pipelines that cross project lands or waters but do not discharge into project waters; (4) 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; (5) private or public marinas that can accommodate no more than 10 watercraft at a time and are located at least onehalf mile from any other private or public marina; (6) recreational development consistent with an approved Exhibit R or approved report on recreational resources of an Exhibit E; and (7) 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 the edge of the project reservoir at normal maximum surface elevation; and (iii) no more than 50 total acres of project lands for each project development are conveyed under this clause (d)(7) in any calendar year. At least 45 days before conveying any interest in project lands under this paragraph (d), the Licensee must submit a letter to the Director, Office of Hydropower Licensing, stating its intent to convey the interest and briefly describing the type of interest and location of the lands to be conveyed (a marked exhibit G or K map may be used), 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. Unless the Director, within 45 days from the filing date, requires the Licensee to file an application for prior approval, the *Licensee may convey the intended interest at the end of that period.*
- e) The following additional conditions apply to any intended conveyance under paragraph (c) or (d) of this article: (1) Before conveying the interest, the Licensee shall consult with federal and state fish and wildlife or recreation agencies, as appropriate, and the State Historic Preservation Officer. (2) Before conveying the interest, the Licensee shall determine that the proposed use of the lands to be conveyed is not inconsistent with any approved exhibit R or approved report on recreational resources of an exhibit E; or, if the project does not have an approved exhibit R or approved report on recreational resources, that the lands to be conveyed do not have recreational value. (3) The instrument of conveyance must include covenants running with the land adequate to ensure that: (i) the use of the lands conveyed shall not endanger health, create a nuisance, or otherwise be incompatible

with overall project recreational use; and (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. (4) The Commission reserves the right to require the Licensee to take reasonable remedial action to correct any violation of the terms and conditions of this article, for the protection and enhancement of the project's scenic, recreational, and other environmental values.

- f) The conveyance of an interest in project lands under this article does not in itself change the project boundaries. The project boundaries may be changed to exclude land conveyed under this article only upon approval of revised exhibit G or K drawings (project boundary maps) reflecting exclusion of that land. Lands conveyed under this article will be excluded from the project only upon a determination that the lands are not necessary for project purposes, such as operation and maintenance, flowage, recreation, public access, protection of environmental resources, and shoreline control, including shoreline aesthetic values. Absent extraordinary circumstances, proposals to exclude lands conveyed under this article from the project shall be consolidated for consideration when revised exhibit G or K drawings would be filed for approval for other purposes.
- g) The authority granted to the Licensee under this article shall not apply to any part of the public lands and reservations of the United States included within the project boundary.

The Standard Land Use Article requires the license to convey permission for structures in project lands and waters "only if the proposed use and occupancy is consistent with the purposes of protecting and enhancing the scenic, recreational, and other environmental values of the project" and requires the licensee to ensure this to be continued through ongoing monitoring. Among the measures permitted are shoreline erosion control measures with certain specifications.

Criterion	Standard	Supporting Information
E	2 The facility is in compliance with all government agency recommendations in a license, exemption, water quality certificate, or other authorization, such as an approved SMP or equivalent for protection, mitigation or enhancement of shoreline surrounding the facility	 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.

3.5.1 ZONE 1 - IMPOUNDMENT

The current project boundary encloses the dam and powerhouse; which is backwatered by the downstream FERC Hydroelectric Project Dundee. The project boundary follows the

reservoir shoreline up to the 221.8 ft NGVD elevation (see Exhibit G in Section 6.0) to encompass flowage rights to the normal full pond elevation. There are no significant shoreline lands along the impoundment. A small parcel adjacent to the powerhouse includes the Day Use Area.

BBHP's ownership is limited to those lands within the project boundary. Therefore, BBHP only has the ability to manage limited shoreline and submerged lands below the corresponding full pool elevation for the Project. Several state laws and local regulations are designed to manage land development in the vicinity of the project area in accordance with certain objectives. Any development or ground disturbance on private lands adjacent to the Project requires the appropriate permits and must adhere to the design and development standards of the appropriate town zoning regulations.

Criterion	Standard	Instructions
E	1	Not Applicable / De Minimis Effect:
	There are no lands associated with the	 If there are no lands with significant
	facility under the direct or indirect	ecological value associated with the
	ownership or control of the facility owner	facility, document and justify this (e.g.,
	that have been identified as having	describe the land use and land cover
	significant ecological value for protecting	within the FERC project or facility
	water quality, aesthetics, or lowimpact	boundary, and absence of critical habitat
	recreation, and the facility is not subject to	for protected species).
	any Shoreline Management Plan (SMP) or	 Document that there have been no
	similar protection plan	Shoreline Management Plans or similar
		protection requirements for the facility.

3.5.2 ZONE 2 – BYPASS REACH AND ZONE 3 – TAILRACE/DOWNSTREAM

The current project boundary encloses the dam and powerhouse and follows the tailrace and bypass reach shorelines encompassing portions of the island that separates the bypass reach from the tailrace (see Exhibit G in Section 6.0). There are no significant shoreline lands along the tailrace or bypass reach.

As with those lands along the impoundment, BBHP's ownership is limited to those lands within the project boundary. Therefore, BBHP only has the ability to manage limited shoreline and submerged lands below the corresponding tailrace elevation for the Project. Several state laws and local regulations are designed to manage land development in the vicinity of the project area in accordance with certain objectives. Any development or ground disturbance on private lands adjacent to the Project requires the appropriate permits and must adhere to the design and development standards of the appropriate town zoning regulations. The Project is not required to have a Shoreline Management Plan, pursuant to FERC licenses and amendments (see Section 6.0).

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".

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: 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). Small Whorled Pogonia is also identified as having the potential to occur within the project area and is listed as Endangered.

An inquiry with the Maine Department of Inland Fisheries and Wildlife regarding statelisted Endangered or Threatened species that may be present in the project vicinity. No statelisted Endangered or Threatened species are documented in the project vicinity though the Little brown bat (State Endangered), Northern long-eared bat (State Endangered), and Eastern small-footed bat (State Threatened) were identified as likely to occur during the migration and/or breeding seasons.

Several species of Special Concern are identified as either documented in the project vicinity or have the potential to occur, as listed below. Those documented in the project vicinity are:

- American Eel
- Creek Chubsucker

State listed Special Concern species of bats that may occur within the project area during migration and/or the breeding season:

- Big brown bat
- Red bat
- Hoary bat
- Silver-haired bat
- Tri-colored bat

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.

The discussion of the effects of the Project on listed species, and the applicable standards, are consistent within the Zones of Effect. As such, this resource is discussed by species collectively for all Zones of Effect.

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

Routine project operations are not anticipated to affect NLEB or other bat species. 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 for NLEB using the USFWS streamlined consultation process and would be extremely limited given how little land is located within the project boundary. In addition, vegetation removal within 250 ft of any waterway is regulated by the Maine Department of Environmental Protection Shoreland Zoning Act. As such, no negative effects are anticipated by this periodic activity.

Given that project lands are limited to those for project operations (including flowage rights) it is anticipated that the described growing conditions below for the small whorled pogonia would not be anticipated within project lands. *"Small whorled pogonia typically occurs in mid-successional mixed woods with sparse shrub and herb layers and thick leaf litter. It often occurs near intermittent streamlets or where a hardpan impedes water percolation into the soil."* (https://www.maine.gov/dacf/mnap/features/isotmed.htm)

Other state listed RTE botanical species have the potential to be present within the project boundary. However, as stated, routine operations would not be anticipated to affect these species and vegetation removal is regulated by the Maine Department of Environmental Protection Shoreland Zoning Act.

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 that are associated with the facility's lands and waters, including resources important to local indigenous populations, such as Native Americans."

There are no historic structures at the North Gorham Project. According to the FERC EA, "Archaeological surveys at the North Gorham Project identified one archaeological site in the area of probable effect that could be eligible for listing on the National Register of Historic Places (NRHP): the Great Falls site (ME 13-34). With a total areal extent of about 900 square meters, this site would have been well situated for fishing below the falls. Recovered artifacts include five tools, 30 flakes, and 20 fire-cracked rock fragments and one possible feature. The site is predominantly bedrock at its northern end, but is undergoing moderate erosion at its southern end...The site's eligibility hasn't been determined, but it's likely--judging from the data recovered to date--that the site is eligible." The SHPO determined that because recreation and recreation development could affect the site, its eligibility be determined. FERC required that the Tailrace Access Improvement Plan include an evaluation of the Great Falls site and if eligible, include adequate provisions to mitigate the effects of the recreational development in consultation with the SHPO. The licensee contracted MAAR Associates to conduct an archeological study at the site and provided a complete summary of the excavation and findings. The consultant concluded that the site is not considered eligible for nomination to the NRHP.

The Project has a Programmatic Agreement and Cultural Resources Management Plan pursuant to Article 406, as amended by the FERC Order on Rehearing, which states.

Article 406. 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 Historic Preservation Officer for the Management of Historic Structures and Eligible Archaeological Sites That May Be Affected By New Licenses Issuing To Central Maine Power Company and Kennebec Water Power Company For Ten Hydroelectric Or Storage Projects In Maine", executed on October 27, 1993. In the event that the Programmatic Agreement is terminated, the following provisions of the Programmatic Agreement will become conditions of the license: the Cultural Resources Management Plan contained in Section II, Paragraph F (1) of Section III and the Appendix.

The December 9, 1993 Programmatic Agreement is linked in section 6.3 and requires filing of annual summary reports with FERC and the State Historic Preservation Officer (SHPO) on activities conducted during the previous year and planned for the ensuing year. BWPH is required to file these annual reports by February 15 each year (see Section 7.0).

Criterion	Standard	Supporting Information
G	1 There are no cultural or historic resources present on facility lands that can be potentially threatened by construction or operations of the facility, or facility operations have not adversely affected those that are or were historically present.	Not Applicable / De Minimis Effect: • Document that there are no cultural or historic resources located on facility lands that can be affected by construction or operations of the facility. • Document that the facility construction and operation have not in the past, nor currently adversely affect any cultural or historic resources that are present on facility lands.

The discussion of the effects of the Project on cultural and historic resources, and the applicable standards, are consistent within the Zones of Effect. As such, this resource is discussed by species collectively for all Zones of Effect.

To ensure that any cultural resources potentially present at the Project are protected, the PA requires that BWPH consult with the SHPO prior to any Project-related land-clearing or ground-disturbing activities in this Zone.

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."

There are three recreation facilities at the Project: Tailrace Access Area (West Shore), Tailrace Access and Carry In Boat Launch (East Shore) and Day Use Recreation Site. The recreation facilities are shown in the figure below.

FIGURE 5. NORTH GORHAM RECREATION SITES



Recreation facilities required as part of the 1993 FERC license included improvements to the tailrace recreation facilities (Article 408). Article 408 states:

Eighteen months after the effective date of the license, the Licensee shall file with the Commission, for approval, and upon approval implement, a tailrace access improvement plan for: (1) relocating the parking area and constructing a lighted parking lot with spaces for 5-6 cars; (2) improving the tailrace access trail; and (3) closing the existing access to vehicle traffic. The plan shall include:

- 1) provisions for protecting properties listed on or eligible for the National Register of Historic Places
- 2) a discussion of how the needs of the disabled were considered in the design and construction of the facilities;
- *a description of signs to be used in order to identify the recreational facilities;*
- 4) drawings and specifications for each recreation facility;
- 5) the entity responsible for operating and maintaining the facilities;
- *6) erosion and sediment control measures that shall be implemented during construction, if applicable; and*
- 7) a construction and improvement schedule.

The License shall prepare the tailrace access improvement plan after consultation with the Maine Historic Preservation Commission, the U. S. Fish and Wildlife Service, the Maine Department of Inland Fisheries and Wildlife, the Maine Department of Conservation, and the Town of Windham. The Licensee shall include copies of comments and recommendations on the plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The Licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan with the Commission. If the Licensee does not adopt a recommendation, the filing shall include the Licensee's reasons, based on project-specific information. 17 Pursuant to Article 301, the Licensee shall file the asbuilt drawings of the recreation facilities. The Commission reserves the right to require changes to the plan. No land-disturbing or land-clearing activities shall begin until the Licensee is notified by the Commission that the plan is approved. Upon Commission approval, the Licensee shall implement the plan, including any changes required by the Commission.

FERC's Order Approving the Tailrace Access Improvement Plan, dated February 16, 1996, approved the proposed improvements to the tailrace including construction of a new parking lot and upgraded access trail and carry-in launch below the Dam on the eastern shore. As discussed above, there is also a tailrace fishing access on the western shore of the tailrace and a Day Use Area on the impoundment adjacent to the dam.

Recreation monitoring and reporting at the Project are required under Article 407. Specifically, Article 407 states:

The Licensee, after consultation with the U.S. Fish and Wildlife Service, the Maine Department of Inland Fisheries and Wildlife, the Maine Department of Conservation, and the Towns of Gorham and Windham, shall monitor recreational use of the project area to determine whether existing recreation facilities are meeting recreation needs. Monitoring studies shall begin from the effective date of the license and be filed according to the Commission's schedule for the FERC Form 80. Every 6 years during the term of the license, the Licensee shall file a report with the Commission on the monitoring results. The report shall include:

(1) annual recreation use figures;

(2) an evaluation of the fisheries program and status reports of the vandalism, theft, and loitering problems in the Towns of Gorham and Windham;

(3) a discussion of the adequacy of the Licensee's recreational access and facilities relative to the evaluation and status reports in item (2);

(4) any plans to control or accommodate visitation in the project area;

(5) documentation of agency consultation agency comments on the report after it has been prepared and provided to the agencies; and

(6) specific descriptions of how the agencies' comments are accommodated by the report.

The Licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the report with the Commission.

Article 407 was amended on May 7, 1997 to require filing of the recreation report by June 15 of each year in which FERC form No. 80 is due. Article 407 was amended per Order issued August 12, 2003 to change deadline for filing results of recreation use monitoring to six months after the due date of the form 80. Recreation reports filed pursuant to Article 407 are provided in Section 6.0.

In 2002, there was an estimated 16,539 daytime recreational trips made to the North Gorham Project. Recreational usage was greatest in the summer, with approximately 70 percent of the trips (11,517 trips). Usage at the North Gorham Project was lowest in the spring, with only 1,831 trips (11 percent). Fall recreational usage was estimated to be 3,191 trips (19 percent of total use) in 2002. No wintertime usage was evaluated at the Project in 2002.

In 2014, the North Gorham Project was visited during an estimated 4,200 daytime recreation days. No nighttime use, as identified by camping activity, was recorded at the Project. The FERC Form 80 process also requires an estimate of the Peak Use Weekend. This is defined as weekends when recreational use is at its peak for the season (typically, Memorial Day, July 4th and Labor Day). It was estimated that a total of 35 recreation days were spent at the Project during the peak use weekend in 2014.

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

3.8.1 ZONE 1 – IMPOUNDMENT

The Day Use Recreation site provides the public with shoreline access to the project impoundment. Picnic facilities are installed and the public is permitted to use the far southern portion of the dike area as a swim beach. This site was used at 50% capacity in 2002 and at 30% capacity in 2014.

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

3.8.2 ZONE 2 – BYPASS REACH & ZONE 3 TAILRACE/DOWNSTREAM

Access to the tailrace and bypass reach is provided via the Tailrace Angling Access sites and the Carry In Boat Launch. The western shore Tailrace Angling Access site consists of SSSSS. The eastern shore Tailrace Angling access site and Carry-In Boat Access includes a carry-in boat launch installed downstream of the dam in the town of Windham, to provide adequate small boat and canoe access to the tail waters of the Project. This same area is open to bank fishing. The site is leased to the town of Windham and is also maintained by the town.

In 2002, the Tailrace Angling Access site (western shore) was used at 50% capacity and the Tailrace Angling Access and Carry-In Boat Launch (eastern shore) was used at 40% capacity. In 2014, these sites were used at 30% capacity.

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 Brookfield White Pine Hydro, 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:

Authorized Representative:

Name: Thomas Uncher

Title: VP, Operations

Authorized Signature: TTU

5.0 CONTACTS FORM

5.1 APPLICANT RELATED CONTACTS

Facility Owner: Brookfield White Pine Hydro LLC.		
Name and Title	Tom Uncher, Vice President	
Company	Brookfield White Pine Hydro, 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	Joel Rancourt, Senior Operations Manager	
Company	Brookfield White Pine Hydro, LLC	
Phone	207-458-6775	
Email Address	Joel.Rancourt@brookfieldrenewable.com	
Mailing Address	28 Weston St., Skowhegan Maine 04976	
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, Wa	atersheds, T/E Spp, Cultural/Historic Resources, Recreation):	
Agency Name	Maine Department of Environmental Protection	
Name and Title	Nick Livesay, Director	
Phone	207530-0965	
Email address	Nick.Livesay@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_, W	/atersheds, T/E Spp, Cultural/Historic Resources, Recreation):	
Agency Name	National Marine Fisheries Service	
Name and Title	Bjorn Lake	
Phone	978-281-9252	
Email address	Bjorn.Lake@noaa.gov	
Mailing Address	15 Carlson Lane, Falmouth, MA 02540	
Agency Contact (Check areas of responsibility: Flows , Water Quality X , Fish/Wildlife		
Agency Contact (Check areas of responsibility: Flows, Water Quality _X_, Fish/Wildlife	
Agency Contact (Resources _X_, W	Check areas of responsibility: Flows, Water Quality _X_, Fish/Wildlife /atersheds _X_, T/E Spp, Cultural/Historic Resources, Recreation):	
Agency Contact (Resources _X_, W Agency Name	Check areas of responsibility: Flows, Water Quality _X_, Fish/Wildlife /atersheds _X_, T/E Spp, Cultural/Historic Resources, Recreation): Maine Department of Environmental Protection	
Agency Contact (Resources _X_, W Agency Name Name and Title	Check areas of responsibility: Flows, Water Quality _X_, Fish/Wildlife /atersheds _X_, T/E Spp, Cultural/Historic Resources, Recreation): Maine Department of Environmental Protection Kathy Davis Howatt, Hydropower Coordinator	
Agency Contact (Resources _X_, W Agency Name Name and Title Phone	Check areas of responsibility: Flows, Water Quality _X_, Fish/Wildlife /atersheds _X_, T/E Spp, Cultural/Historic Resources, Recreation): Maine Department of Environmental Protection Kathy Davis Howatt, Hydropower Coordinator 207-446-2642	
Agency Contact (Resources _X_, W Agency Name Name and Title Phone Email address	Check areas of responsibility: Flows, Water Quality _X_, Fish/Wildlife /atersheds _X_, T/E Spp, Cultural/Historic Resources, Recreation): Maine Department of Environmental Protection Kathy Davis Howatt, Hydropower Coordinator 207-446-2642 <u>kathy.howatt@maine.gov</u>	
Agency Contact (Resources _X_, W Agency Name Name and Title Phone Email address Mailing Address	Check areas of responsibility: Flows, Water Quality _X_, Fish/Wildlife /atersheds _X_, T/E Spp, Cultural/Historic Resources, Recreation): Maine Department of Environmental Protection Kathy Davis Howatt, Hydropower Coordinator 207-446-2642 <u>kathy.howatt@maine.gov</u> Central Maine Regional Office, 17 State House Station, Augusta, Maine 04333	
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Agency Contact (Resources _X_, W Agency Name Name and Title Phone Email address Mailing Address Agency Contact (Resources _X_, W Agency Name Name and Title	Check areas of responsibility: Flows, Water Quality _X_, Fish/Wildlife /atersheds _X_, T/E Spp, Cultural/Historic Resources, Recreation): Maine Department of Environmental Protection Kathy Davis Howatt, Hydropower Coordinator 207-446-2642 <u>kathy.howatt@maine.gov</u> Central Maine Regional Office, 17 State House Station, Augusta, Maine 04333 Check areas of responsibility: Flows, Water Quality, Fish/Wildlife /atersheds, T/E Spp, Cultural/Historic Resources, Recreation): Maine Department of Inland Fisheries and Wildlife James Pellerin, Regional Fisheries Biologist	
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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_, W	/atersheds, T/E Spp, Cultural/Historic Resources, Recreation):	
Agency Name	NOAA	
Name and Title	Sean P McDermott, Fisheries Biologist	
Phone	(978) 281-9113	
Email address	<u>sean.mcdermott@noaa.gov</u>	
Mailing Address	55 Great Republic Drive, Gloucester, MASSACHUSETTS 01930-2237	
Agency Contact (Check areas of responsibility: Flows, Water Quality, Fish/Wildlife	
Resources, Wa	atersheds, 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, Wa	atersheds _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 _X_, T/E Spp, Cultural/Historic Resources _, Recreation):		
Stakeholder		
Organization		
Name and Title		
Phone		
Email address		
Mailing Address		
Stakeholder Contact (Check areas of interest: Flows, Water Quality, Fish/Wildlife		
Resources _X_, W	/atersheds, T/E Spp, Cultural/Historic Resources, Recreation):	
Stakeholder		
Organization		
Name and Title		
Phone		
Email address		
Mailing Address		

6.0 FERC AND REGULATORY INFORMATION

6.1 FERC LICENSE AND AMENDMENT ORDERS

- Order issuing new license re Central ME Power Co filing for North Gorham Proj-2519 <u>https://elibrary.ferc.gov/eLibrary/filedownload?fileid=11983025</u>
- Order on Central ME Power Co rehearing of FERC's 931122 order re North Gorham P-2519. - <u>https://elibrary.ferc.gov/eLibrary/filedownload?fileid=3026420</u>

6.2 WATER QUALITY CERTIFICATION, AMENDMENTS, AND REPORTS

- Water Quality Certification Attached in Section 7.0
- Maine Department of Environmental Protection 2016 303(d) List: <u>https://www.maine.gov/dep/water/monitoring/305b/2016/28-Feb-2018_2016-ME-IntegratedRptLIST.pdf</u>

6.3 SETTLEMENT AND OTHER AGREEMENTS

• NA

6.4 PERMITS

None

6.5 COMPLIANCE PLANS AND MONITORING REPORTS

- Order approving revised Exhibit A re Central ME Power Co's North Gorham Proj-2519 <u>https://elibrary.ferc.gov/eLibrary/filedownload?fileid=3462875</u>
- Order approving as-built Exh F for Central Maine Power's North Gorham Proj (P-2519 https://elibrary.ferc.gov/eLibrary/filedownload?fileid=3005699
- Order amending license, revising project boundary & approving as-built drawing for North Gorham Hydroelectric Proj-2519 re Central ME Power Co. -<u>https://elibrary.ferc.gov/eLibrary/filedownload?fileid=3069170</u>

6.5.1 ECOLOGICAL FLOWS AND WATER QUALITY

- Central ME Power Co submits per Art 403, minimum flow & pond level compliance monitoring plan re North Gorham Proj under P-2519. https://elibrary.ferc.gov/eLibrary/filedownload?fileid=10673476
- Order approving & modifying minimum flow & reservoir elevation gaging plan & schedule re Central ME Power Co's North Gorham Proj-2519. -<u>https://elibrary.ferc.gov/eLibrary/filedownload?fileid=3462147</u>

- Letter informing Brookfield White Pine Hydro LLC that the reservoir level deviation that occurred on 12/17/2017 will be considered a violation of license re the North Gorham Hydroelectric Project under P-2519. -<u>https://elibrary.ferc.gov/eLibrary/filedownload?fileid=14822938</u>
- Letter informing Brookfield White Pine Hydro, LLC that the Minimum flow deviation that occurred on July 21, 2018 will not be considered a violation of Article 401 re the North Gorham Hydroelectric Project under P-2519. -<u>https://elibrary.ferc.gov/eLibrary/filedownload?fileid=15103310</u>
- Headpond Report of Brookfield Renewable Energy Group under P-2519. <u>https://elibrary.ferc.gov/eLibrary/filedownload?fileid=14785132</u>
- Brookfield White Pine Hydro LLC submits the minimum flow disruption report for the North Gorham Project under P-2519. <u>https://elibrary.ferc.gov/eLibrary/filedownload?fileid=15712542</u>
- Report of Brookfield Renewable Energy Group under P-2519. https://elibrary.ferc.gov/eLibrary/filedownload?fileid=14990523

6.5.2 UPSTREAM AND DOWNSTREAM FISH PASSAGE

- Order approving fish passage drawings, construction schedule & operation & maintenance plan re Central ME Power Co's North Gorham Proj-2519. <u>https://elibrary.ferc.gov/eLibrary/filedownload?fileid=3462711</u>
- Central Maine Power submits operations & maintenance plan for North Gorham downstream fish passage facil (P-2519). <u>https://elibrary.ferc.gov/eLibrary/filedownload?fileid=10715243</u>
- Order approving downstream fish passage facility operation & maintenance plan re Central ME Power, North Gorham Proj-2519 -<u>https://elibrary.ferc.gov/eLibrary/filedownload?fileid=3027524</u>
- Letter requesting Brookfield White Pine Hydro, LLC to submit a complete response within 60 days re the status of American eel Passage at the North Gorham Hydroelectric Project under P-2519 -<u>https://elibrary.ferc.gov/eLibrary/filedownload?fileid=14963605</u>
- Annual Downstream Fish Passage Report 2015 https://elibrary.ferc.gov/eLibrary/filedownload?fileid=13750163
- Central ME Power Co submits requested info for North Gorham P-2519 re installation of safe downstream passage for landlocked salmon etc. <u>https://elibrary.ferc.gov/eLibrary/filedownload?fileid=10683570</u>
- Central Maine Power Co submits operations & maintenance rept for downstream fish passage facil re North Gorham Proj-2519. <u>https://elibrary.ferc.gov/eLibrary/filedownload?fileid=8221809</u>
- Central Maine Power submits operation & maintenance rept re North Gorham down stream fish passage facility under P-2519 <u>https://elibrary.ferc.gov/eLibrary/filedownload?fileid=111041</u>
- North Gorham 2020 Annual Downstream Fish Passage O&M Update/Report under P-2519. <u>https://elibrary.ferc.gov/eLibrary/filedownload?fileid=15689008</u>

- Brookfield Renewable Energy Group Annual downstream fish passage O&M report/update under P-2519. https://elibrary.ferc.gov/eLibrary/filedownload?fileid=15449989
- Brookfield Renewable Energy Group 2018 Annual Downstream Fish Passage O&M Report for th North Gorham station under P-2519. https://elibrary.ferc.gov/eLibrary/filedownload?fileid=15126022
- Report of Brookfield Renewable Energy Group under P-2519. Update on the status of North Gorham upstream eel passage plans and study plan. <u>https://elibrary.ferc.gov/eLibrary/filedownload?fileid=15007506</u>
- 2017 North Gorham (FERC No. 2519) downstream fish passage annual operations and maintenance report <u>https://elibrary.ferc.gov/eLibrary/filedownload?fileid=14802993</u>
- Brookfield Renewable submits the 2017 operations and maintenance report of the Downstream Fish Passage Facility for the North Gorham Project under P-2519. <u>https://elibrary.ferc.gov/eLibrary/filedownload?fileid=14810914</u>
- Brookfield Renewable Energy Group's Annual North Gorham downstream fish passage operations and maintenance report for 2016 under P-2519. <u>https://elibrary.ferc.gov/eLibrary/filedownload?fileid=14476876</u>

6.5.3 SHORELINE AND WATERSHED PROTECTION

• NA

6.5.4 THREATENED AND ENDANGERED SPECIES

- USFWS IPAC Report (See Section 7)
- MNAP Report (See Section 7)
- MDIFW Report (See Section 7)

6.5.5 CULTURAL AND HISTORIC RESOURCES

- Ltr order accepting Central ME Power Co 970107 filed annual summary rept of activities conducted under programmatic agreement (PA) for North Gorham Proj-2519. <u>https://elibrary.ferc.gov/eLibrary/filedownload?fileid=8217971</u>
- 20180613 Annual Cultural Resource Programmatic Agreement Report <u>https://elibrary.ferc.gov/eLibrary/filedownload?fileid=14945090</u>
- Nextera Energy submits the Programmatic Agreement Compliance Actions for 2012 and the proposals for 2013 re the Gulf Island-Deer Rips Project under P-2283 et al. <u>https://elibrary.ferc.gov/eLibrary/filedownload?fileid=13181187</u>
- Brookfield Renewable submits the Annual Cultural Resource Report for the Bonny Eagle Project under P-2529 et al. https://elibrary.ferc.gov/eLibrary/filedownload?fileid=15717097

- 2020214 Saco, Presumpscot, Kennebec and Androscoggin River Projects; Annual Cultural Resource Report under P-2527, et al <u>https://elibrary.ferc.gov/eLibrary/filedownload?fileid=15464909</u>
- Brookfield Renewable Power Annual Cultural Resource Report under P-2529, et al. <u>https://elibrary.ferc.gov/eLibrary/filedownload?fileid=15162322</u>

6.5.6 RECREATIONAL RESOURCES

- Order modifying & approving Central ME Power Co tailrace access improvement plan for North Gorham Hydroelec Proj- 2519 -<u>https://elibrary.ferc.gov/eLibrary/filedownload?fileid=3035287</u>
- Ltr order to Central Maine Power Co accepting material re Art 407 recreational use monitoring for North Gorham Proj, P-2519 <u>https://elibrary.ferc.gov/eLibrary/filedownload?fileid=8192353</u>
- Order approving Recreation Monitoring Report pursuant to Article 407 re FPL Energy Maine Hydro LLC's North Gorham Hydroelectric Proj-2519. -<u>https://elibrary.ferc.gov/eLibrary/filedownload?fileid=10038887</u>
- Letter order accepting TRC Engineering's 9/28/09 filing of Recreation Monitoring Report for the North Gorham Hydroelectric Project under P-2519. -<u>https://elibrary.ferc.gov/eLibrary/filedownload?fileid=12201566</u>
- Order Granting Extension of Time to File Recreation Monitoring Report Pursuant to Article 407 re Brookfield White Pine Hydro, LLC under P-2519. -<u>https://elibrary.ferc.gov/eLibrary/filedownload?fileid=15511792</u>
- Order Granting Extension of Time for Recreation Monitoring and Reporting re Brookfield White Pine Hydro, LLC et -<u>https://elibrary.ferc.gov/eLibrary/filedownload?fileid=15728235</u>
- Central Maine Power Co submits licensed hydropower devel recreation rept for North Gorham Proj-2519. FORM 80 <u>https://elibrary.ferc.gov/eLibrary/filedownload?fileid=9065688</u>
- Central Maine Power discusses compliance w/Art 407, recreational monitoring at North Gorham Dam & recommends no changes or additions to recreation facils at this time under O02519 <u>https://elibrary.ferc.gov/eLibrary/filedownload?fileid=8205193</u>
- Form 80: Hydro Recreation Report of FPL Energy Maine under P-2519 ET AL https://elibrary.ferc.gov/eLibrary/filedownload?fileid=9669451
- Recreation Monitoring Report of FPL Energy Maine Hydro, LLC under P-2529 ET AL. Filing for Saco River Projects:Bonny Eagle, Cataract, and Skelton; Presumpscot River Project:North Gorham https://elibrary.ferc.gov/eLibrary/filedownload?fileid=9791743
- NextEra Energy Maine Operating Services, LLC files the 2009 North Gorham Recreation Monitoring Report for Project 2519 <u>https://elibrary.ferc.gov/eLibrary/filedownload?fileid=12158765</u>
- 2015 FERC Form 80 Recreation Report Monitoring-Filing of Methodology for Gulf Island-Deer Rips et under P-2283 et al. <u>https://elibrary.ferc.gov/eLibrary/filedownload?fileid=13828369</u>

- Letter requesting Brookfield White Pine Hydro, LLC to submit within 90 days the Additional Information Request for 2015 Recreation Monitoring Report required under Article 407 re the North Gorham Project under P-2519. <u>https://elibrary.ferc.gov/eLibrary/filedownload?fileid=13902022</u>
- Brookfield Renewable Energy Group submits notification of changes to the normal operation schedule for the recreation facilities at the Indian Pond Project et al under P-2142, et. al.. <u>https://elibrary.ferc.gov/eLibrary/filedownload?fileid=15508402</u>
- Brookfield Renewable Energy Group submits a Notification of Recreation Facility Closures and Request for Extension of Time to Conduct Recreation Monitoring Due to Continued Covid-19 Outbreak under P-2142, et. al <u>https://elibrary.ferc.gov/eLibrary/filedownload?fileid=15716214</u>

6.6 LICENSE AND CERTIFICATION COMPLIANCE

- 20200804 Flow Disruption Excursion Report to FERC <u>https://elibrary.ferc.gov/eLibrary/filedownload?fileid=15600320</u>
- 20200618 Flow Disruption Excursion Report to FERC <u>https://elibrary.ferc.gov/eLibrary/filedownload?fileid=15568624</u>
- 20201006 Letter informing Brookfield White Pine Hydro, LLC that the minimum flow deviations that occurred on 06/18/2020 and 08/04/2020 will not be considered violations of Article 402 for the North Gorham Hydroelectric Project under P-2519. <u>https://elibrary.ferc.gov/eLibrary/filedownload?fileid=15635809</u>
- 20181129 Letter informing Brookfield White Pine Hydro, LLC that the Minimum Flow Deviation that occurred on July 23, 2018 will not be considered a violation of Article 402 for the North Gorham Hydroelectric Project under P-2519. https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=15105335
- 20180802 Minimum Flow Disruption Report https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=14991511
- 20140210 Letter informing Brookfield White Pine Hydro LLC that their request for an extension of time is moot re the Wetland Protection and Enhancement Five Year Status Report for the North Gorham Project <u>https://elibrary.ferc.gov/eLibrary/filedownload?fileid=13458604</u>

7.0 SUPPORTING DOCUMENTATION

- Maine Department of Environmental Water Quality Certificate February 26, 1996
- Maine Department of Environmental Water Quality Certificate Validation Letter
- IPAC Report
- MNAP Report
- MDIFW List of State Listed Threatened and Endangered Species

7.1.1 CONFIDENTIAL – PROVIDED UNDER SEPARATE COVER

• Programmatic Agreement


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

DEPARTMENT ORDER

IN THE MATTER OF

CENTRAL MAINE POWER COMPANY)	MAINE WATER QUALITY PROGRAM;
GORHAM, CUMBERLAND COUNTY, MAINE	. · ·)	FEDERAL CLEAN WATER ACT
NORTH GORHAM HYDRO PROJECT)	
L-17475-33-A-N (APPRO	VAL))	WATER QUALITY CERTIFICATION

Pursuant to the provisions of 38 M.R.S.A. Section 464 <u>et seq.</u>, and Section 401 of the Federal Water Pollution Control Act (a.k.a. Clean Water Act), the Department of Environmental Protection has considered the application of CENTRAL MAINE POWER COMPANY (CMP) with its supportive data, agency review comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

- 1. APPLICATION SUMMARY
 - a. <u>Application</u>: The applicant proposes the continued operation of the existing North Gorham Hydro Project, located on the Presumpscot River in the Towns of Gorham, Standish and Windham, Cumberland County, Maine (See Exhibit 1).
 - b. <u>Existing Project Features</u>: The existing project consists of a dam with its associated impoundment (North Gorham Pond), penstocks, a powerhouse, and appurtenant structures (See Exhibit 2). The project was originally constructed in 1900-1901.
 - i. Project Dam. The North Gorham dam is located approximately 2 miles downstream of Sebago Lake on the Presumpscot River in Gorham, Maine. The dam is 970 feet long, constructed of stone masonry and concrete with a maximum height of 24 feet. The structure consists of a 600 foot non-overflow masonry wall, a 51 foot intake, a 47 foot gated section, a 256 foot spillway and a 15 foot sluice.
 - ii. North Gorham Pond Impoundment. The impoundment created by the dam has a surface area of 98 acres at normal full pond elevation of 221.8 feet (USGS), a maximum depth of 23 feet and extends 1.1 miles upstream to the tailrace of the Eel Weir Dam powerhouse (FERC No. 2984).
 - iii. Penstocks. The project facility has four 8-foot diameter steel penstocks which extend 50 feet to 70 feet downstream of the intake to the surge chambers at the powerhouse.
 - iv. Powerhouse. The powerhouse is located approximately 80 feet downstream of the intake in the dam and is constructed of brick on a stone masonry foundation. The superstructure measures approximately 58 feet wide by 71 feet long. The powerhouse contains two turbine-generator units with a total rated generating capacity of 2,250 kilowatts (kW) at a normal operating

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head of 34.4 feet. Total hydraulic capacity is 950 cubic feet per second (cfs).

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- vi. Tailrace. There is a tailrace for each of the two units which discharges from the base of the surge chambers and along the sides of the powerhouse. The two discharge areas meet after passing by the remaining powerhouse structure. Normal tailwater elevation is 187.4 feet, which is essentially the headpond elevation of the downstream Dundee Project.
- c. Existing Project Operation: Operation of the North Gorham Project is completely dependent upon flows released from Sebago Lake by the S.D. Warren Company at the Eel Weir Project. Using flow received from the upstream project, North Gorham is normally operated as a run-of-river (outflow equals inflow) project. The average annual river flow is approximately 657 cfs. Each of the two turbine units has a maximum hydraulic capacity of 475 cfs and a combined minimum hydraulic capacity of approximately 190 cfs. On an annual basis, flows exceed the maximum capacity approximately 14% of the time and are lower than 190 cfs less than 5% of the time. During normal flow periods, the generating units are operated to maintain the impoundment at approximately its normal full pond elevation of 221.8' (USGS).

Water released from Eel Weir passes through the trashracks at the North Gorham intake structure, travels through the four 8-foot diameter steel penstocks and enters the surge chambers in the powerhouse. The surge chambers contain waterwheels that connect to the generators, thus producing power.

- d. <u>Summary of Proposal</u>: The applicant proposes to operate the existing project in accordance with several measures for the protection or enhancement of, or mitigation of impacts on public resources. These measures include:
 - Passing a minimum flow from the project of 222 cfs (0.5 cfsm) or inflow, whichever is less;
 - Providing a downstream fish bypass at the project dam;
 - Developing a formal parking area and trail accessing the carry-in boat launch downstream of the project on the Windham side of the river; and
 - Initiating periodic reviews of project recreational facility status and needs.

2. JURISDICTION

The proposed continued operation of the project qualifies as an "activity...which may result in (a) discharge into the navigable water (of the United States)" under the Clean Water Act (CWA), 33 USC 1251 <u>et</u> <u>seq</u>. Section 401 of the CWA requires that any applicant for a federal

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license or permit to conduct such an activity obtain a certification that the activity will comply with applicable State water quality standards.

The project has been licensed as a water power project under the Federal Power Act (Project No. 2519). The initial project license was issued on December 6, 1966 and expires on December 31, 1993. The licensee has filed an Application for New License to continue to operate the project for another 40 years. This application is currently pending before the Federal Energy Regulatory Commission.

The Department has been designated by the Governor of the State as the certifying agency for issuance of Section 401 Water Quality Certification for hydropower projects located in organized municipalities subject to the Department's regulatory jurisdiction. The project is located in whole in the Towns of Gorham, Standish, and Windham, all of which are organized municipalities subject to the Department's jurisdiction.

- 3. APPLICABLE WATER QUALITY STANDARDS
 - a. <u>Classification</u>: The Presumpscot River is currently classified as Class A from the outlet of Sebago Lake to its confluence with Dundee Pond. 38 M.R.S.A. Section 467(9)(A).
 - b. <u>Designated Uses</u>: Class A waters shall be of such quality that they are suitable for the designated uses of drinking water after disinfection; fishing; recreation in and on the water; industrial process and cooling water supply; hydroelectric power generation; and as habitat for fish and other aquatic life. The aquatic life and bacteria content shall be as naturally occurs. 38 M.R.S.A. Section 465(2)(A).

The habitat characteristics and aquatic life criteria of Class A are deemed to be met in an existing impoundment classified A 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. Section 464(10).

- c. <u>Numeric Standards</u>: The dissolved oxygen (DO) content of Class A waters shall be not less than 7 parts per million or 75% of saturation, whichever is higher. 38 M.R.S.A. Section 465(2)(B).
- d. <u>Narrative Standards</u>: Discharges to Class A waters shall be permitted only if the discharged effluent will be equal to or better than the existing water quality of the receiving waters. 38 M.R.S.A. Section

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e. <u>Antidegradation</u>: The Department may only approve water quality certification if the standards of classification of the waterbody and the requirements of the State's antidegradation policy will be met. The Department may approve water quality certification for a project affecting a waterbody in which the standards of classification are not met if the project does not cause or contribute to the failure of the waterbody to meet the standards of classification. 38 M.R.S.A. Section 464(4)(F).

4. DISSOLVED OXYGEN

- a. <u>Existing Conditions</u>: Within the project area, there are no known major industrial or sewage effluents or other point sources of pollution. In July 1986 and 1987 the applicant conducted water quality sampling, in consultation with the Department, within the project boundaries of the Presumpscot River. The data collected show that even at relatively high temperatures and low flows, DO was above 90% saturation and 7 ppm both above and below the Project.
- b. <u>Applicant's Proposal</u>: The applicant proposes to continue to operate the project as a run-of-river facility while providing a minimum flow release of 222 cfs or inflow, whichever is less.
- c. <u>Discussion</u>: The available data indicates that Class A DO standards are currently being met in the waters of the Presumpscot River affected by the project. The applicant's proposals to continue to operate the project in a run-of-river mode and to provide a minimum flow release of 222 cfs or inflow, whichever is less, should be adequate to maintain compliance with Class A DO standards.
- 5. FISH
 - a. <u>Existing Resources</u>: The Presumpscot River supports a number of both warmwater and coldwater fish species including smallmouth bass, largemouth bass, perch, pickerel, hornpout, sucker, minnows and landlocked salmon. The salmon drop down into the project impoundment and tailwater from Sebago Lake during high flow events. Historically, the Presumpscot River supported runs of Atlantic salmon and shad. The applicant conducted surveys and determined that there are no federally listed threatened or endangered species of fish known to occur in the project area.
 - b. <u>Existing Management Plans</u>: The Maine Department of Marine Resources (DMR) states that it has no plans to restore anadromous species upstream of the Cumberland Mills Dam which is located 13 miles downstream of the project.

The Atlantic Sea-Run Salmon Commission (ASRSC) states that it has no plans to restore Atlantic salmon to the Presumpscot River.

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In the past, the Maine Department of Inland Fisheries and Wildlife (DIF&W) has managed the project waters primarily for resident warmwater species. The DIF&W does have coldwater fisheries management objectives for the upper reach of the Presumpscot that are identified in a plan entitled, "Presumpscot River, Eel Weir By-pass Reach, Strategic Plan for Fisheries Management" (Plan) (Pierce, August 1985). The objectives of the plan are to: maximize the potential habitat for landlocked salmon; provide for controlled downstream passage facilities at the Eel Weir Dam; maintain existing public access and enhanced safe parking; allowance of an annual harvest of between 150 and 250 salmon; and provide angling diversity via limited brook trout stocking. In conjunction with the goals of the plan, DIF&W requested during consultation that the applicant develop functional design and operational plans for downstream passage for salmon and trout dropping down from Sebago Lake and North Gorham Pond into Dundee Pond. The DIF&W has been awaiting the establishment of a minimum flow in the Eel Weir by-pass reach which would be adequate to maximize the potential habitat units for landlocked salmon and allow for the implementation of its Plan.

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On January 7, 1992, the Federal Energy Regulatory Commission issued an order which established a minimum flow in the by-pass channel of the Eel Weir Hydro Project. The DIF&W reports that it has now implemented its fisheries management plan for the Upper Presumpscot River and began stocking landlocked salmon in North Gorham Pond and brook trout in the Eel Weir by-pass during the spring of 1992.

c. Applicant's Proposals:

- i. Water Levels. The applicant proposes to continue operating the Project in a run-of-river mode in order to maintain the impoundment level within one foot of its normal full pond elevation of 221.8 feet.
- ii. Minimum Flows. The applicant proposes to pass a minimum flow of 222 cfs or inflow, whichever is less, from the Project under normal operating conditions.
- iii. Fish Passage. The applicant proposes to provide a downstream fish bypass at the project dam by modifying the existing trash sluice (See Exhibit 2) predicated on three conditions: clarification or extension of DIF&W's Presumpscot River Management Plan goals relative to North Gorham project waters; issuance by FERC of a minimum flow order for the Eel Weir Project; and full implementation by DIFW of its fish management plan, including stocking in the Presumpscot River between the Eel Weir and North Gorham Dams.
- d. <u>Discussion</u>: The applicant's proposals to provide a minimum flow of 222 cfs or inflow, to maintain full pond elevation during normal operations, and to provide downstream fish passage by modifying the existing trash sluice have been accepted by ASRSC, DIF&W, and DMR.

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These proposals appear to be adequate to achieve and maintain suitable use of the waters affected by the project as habitat for fish.

The applicant has expressed concern that the DIF&W Plan sets specific management goals only for the by-pass reach and does not specifically address the waters of the North Gorham project. The DIF&W comments that there have historically been salmon in the by-pass and in North Gorham Pond as a direct result of salmon dropping down from Sebago Lake at the Eel Weir Dam. For the past two years, the DIF&W has been stocking North Gorham pond to enhance that fishery. DIF&W intends to amend the Plan to incorporate Dundee Pond (below the North Gorham Project) and North Gorham Pond as waters to be managed.

- 6. OTHER AQUATIC LIFE
 - a. Existing Resources: The project impoundment and surrounding shoreline support limited populations of wildlife species including: beaver, mink, river otter and muskrat. The applicant has conducted surveys and determined that there are no rare or unusual invertebrate or vertebrate species in the project area.
 - b. <u>Applicant's Proposals</u>: The applicant proposes to continue operating the Project in a run-of-river mode to maintain the impoundment level within one foot of its normal full pond elevation of 221.8 feet, and to pass a minimum flow of 222 cfs or inflow, whichever is less, from the Project under normal operating conditions.
 - c. <u>Discussion</u>: The applicant's proposals to maintain impoundment levels within one foot of its normal full pond elevation of 221.8 feet and to provide a minimum flow release of 222 cfs or inflow have been accepted by the DEP's Bureau of Water Quality Control as being adequate to achieve and maintain suitable use of the waters affected by the project as habitat for aquatic life other than fish.
- 7. FISHING AND RECREATION IN AND ON THE WATER
 - a. <u>Existing Facilities and Use</u>: General recreation use at the Project presently consists of swimming, boating, and fishing (from shore and from boats). The project area receives minimal use compared to the major recreational attraction in the area, Sebago Lake, which is two miles upstream. Sebago Lake has recreational facilities which include: Sebago Lake State Park, eight public boat launch sites, commercial campgrounds, day use picnic areas, and a variety of other commercial businesses associated with recreation.
 - b. Existing Management Plans: In 1989, the applicant developed a Comprehensive Recreational Facilities Plan which was designed to meet current and anticipated public recreational needs at CMP-owned hydro projects. The plan analyzes recreational needs on a local and regional basis.

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c. Applicant's Proposals: Utilizing recommendations made by the Recreational Facilities Plan, the applicant proposes the following measures:

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- . Relocate and improve the existing informal parking area and trail serving the carry-in boat access site on the east side of the river downstream of the tailrace (See Exhibit 1);
- . Lease a parcel of land on the shore of the impoundment to the Town of Gorham for recreational management (See Exhibit 1);
- Develop and install a public informational signage program; and
- Periodically assess recreational needs at the project site in consultation with the appropriate State agencies.
- d. Discussion: The Maine Department of Inland Fisheries and Wildlife has commented on the need to provide improved access to the project impoundment to allow public utilization of the fishery resources currently available and the enhanced resources likely to be available in the near future.

The applicant's proposals to maintain and improve existing recreational facilities and to periodically assess future recreational needs appear to be adequate to achieve and maintain suitable use of waters affected by the project for fishing and recreation in and on the water.

- 8. HYDROELECTRIC POWER GENERATION
 - a. Existing Energy Generation: The project generates an average of 11,147,823 kilowatt-hours (kWH) of electricity annually. This is equivalent to the energy that would be produced by burning 18,579 barrels of oil or 5165 tons of coal each year. Project power is fed to a substation for use by the applicant's residential, commercial, and industrial customers.
 - b. Existing Energy Policies/Plans: The State of Maine has adopted an Energy Resources Plan (Office of Energy Resources, October 1987) designed to "promote the present and future economic well-being of Maine residents and businesses by ensuring the availability of reliable energy at the lowest possible cost." Specifically, the Plan calls for the State to:
 - Encourage cost-effective energy conservation measures in the public sectors and least cost planning in the electric and gas industries;
 - Promote the environmentally-sound development and use of costeffective indigenous and renewable energy resources;

Pursue strategies designed to reduce the cost of all imported

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energy and to increase the availability of natural gas in the state; and

Encourage the diversification of energy investments in Maine.

With respect to hydroelectric power, the Plan recommends that the development of hydropower be encouraged in a manner consistent with the Maine Rivers Act and that the upgrading of existing hydroelectric dams be examined during relicensing.

c. <u>Applicant's Proposal</u>: The applicant has determined that turbine and generator efficiencies are relatively good and that the project is reasonably developed and operated, and therefore is not proposing any fundamental changes or redevelopment.

The applicant is proposing to enhance the project's natural resources by constructing and operating a downstream fish passage facility at the project dam. The passage of flows through any future downstream fish passage will reduce generation flows by approximately 2% and generation by 3.5% annually.

d. <u>Discussion</u>: As proposed, the North Gorham Hydro Project will continue to provide cost-effective indigenous and renewable electricity.

BASED on the above Findings of Fact, and subject to the Conditions listed below, the Department makes the following CONCLUSIONS:

- 1. The continued operation of the project will result in the affected surface waters being suitable for all Class A designated uses provided that:
 - i. the project is operated as run-of-river (outflow equals inflow) while providing a minimum flow of 222 cubic feet per second (cfs) or inflow, whichever is less;
 - ii. the impoundment level is maintained within one foot of its full pond elevation of 221.8 feet;
 - iii. downstream fish passage is provided, and
 - iv. existing recreational management is continued and periodic assessments of status and need are conducted.
- 2. The continued operation of the project will result in Class A numeric standards for dissolved oxygen being met in the affected waters provided that the facility is operated as run-of-river (outflow equals inflow) while providing a minimum flow of 222 cubic feet per second (cfs) or inflow, whichever is less.

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As modified by order 2/26/96.

3. The continued operation of the project will result in Class A narrative standards for aquatic life being met in the affected waters provided that the facility is operated as run-of-river (outflow equals inflow) while providing a minimum flow of 222 cubic feet per second (cfs) or inflow, whichever is less.

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4. The continued operation of the project will comply with the State's antidegradation policy provided that the project is modified and operated in accordance with the conclusions reached above.

THEREFORE, the Department GRANTS certification that there is a reasonable assurance that the continued operation of the North Gorham Hydro Project, as described above, will not violate applicable water quality standards, SUBJECT TO THE FOLLOWING CONDITIONS:

1. MINIMUM FLOWS

A. Except as temporarily modified by operating emergencies beyond the * applicant's control as defined below, an instantaneous minimum flow release of 222 cubic feet per second (cfs) or inflow, whichever is less, shall be maintained from the project at all times. (or upon mutual agreement between the applicant and the Department B. Operating emergencies beyond the applicant's control include, but may

approved maintenance activities, or

- B. Operating emergencies beyond the applicant's control include, but may not be limited to, equipment failure or other temporary abnormal operating condition, generating unit operation or interruption under power supply emergencies, and orders from local, state, or federal law enforcement or public safety authorities.
- C. The applicant shall, in accordance with the schedule established in a new FERC license for the project, submit plans for providing and monitoring the minimum flow required in Part A of this condition. These plans shall be reviewed by and must receive approval of the DEP Bureau of Land Quality Control.
- 2. WATER LEVELS
- * A. Except as temporarily modified by approved maintenance activities or by inflows to the project area or by operating emergencies beyond the applicant's control, as defined below, water levels in the North Gorham impoundment shall be maintained within one foot of normal surface elevation of 221.8 feet USGS datum (crest of spillway)

or flashboard failure

* CONDITIONS 1(A), 2(A), 2(B) MODIFIED by L-17475-33-D-M, FEB. 26, 1996

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C. The applicant shall, in accordance with the schedule established in a new FERC license for the project, submit plans for providing and monitoring the water levels in the North Gorham impoundment as required in Part A of this condition. These plans shall be reviewed by and must receive approval of the DEP Bureau of Land Quality Control.

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3. FISH PASSAGE FACILITIES

- A. Downstream fish passage facilities shall be installed and operational at the North Gorham Dam within two years following the issuance of a new FERC license for the project, provided that within this period the Department of Inland Fisheries and Wildlife amends it existing Presumpscot River Management Plan to include the waters of the North Gorham Project.
- B. The applicant shall, in accordance with the schedule established in a new FERC license for the project, submit functional design drawings, a construction schedule, and operating and maintenance plans for the downstream fish passage facility required by Part A of this condition, prepared in consultation with state and federal fisheries agencies. These submittals shall be reviewed by and must receive approval of state and federal fisheries agencies, FERC, and the DEP Bureau of Land Quality Control prior to facilities construction.

4. RECREATIONAL FACILITIES

- A. Public recreational access facilities shall be provided in the project area as described in the applicant's Water Quality Certification Application.
- B. The applicant shall, in accordance with the schedule established in a new FERC license for the project, submit a schedule for providing recreational facilities as required by Part A of this condition. This schedule shall be reviewed by the Department of Conservation and must receive approval of the DEP Bureau of Land Quality Control.

5. LIMITS OF APPROVAL

This approval is limited to and includes the proposals and plans contained in the application and supporting documents submitted and affirmed to by the applicant. All variances from the plans and proposals contained in said documents are subject to the review and approval of the Board or Department prior to implementation.

6. COMPLIANCE WITH ALL APPLICABLE LAWS

The applicant shall secure and appropriately comply with all applicable federal, state and local licenses, permits, authorizations, conditions, agreements and orders required for the operation of the project.

7. Effective Date This water certification shall be effective on the date of issuance of a new hydropower project license by the Federal Energy ...

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Regulatory Commission (FERC) and shall expire with the expiration of this FERC license.

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DONE AND DATED AT AUGUSTA, MAINE, THIS 24th DAY OF September 1992

DEPARTMENT OF ENVIRONMENTAL PROTECTION

By Dean C. Marriott Commissioner

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application <u>11/08/91</u>. Date application accepted for processing <u>12/30/91</u>.

Date filed with Board of Environmental Protection



L1747533AN.DOC





STATE OF MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION





May 7, 2021

Brookfield White Pine Hydro 150 Main St. Lewiston, ME 04240 **ATTN: Kelly Maloney**

RE: LIHI Certification for North Gorham Hydro Project

Dear Ms. Maloney:

The Department of Environmental Protection (Department) was contacted by Brookfield White Pine Hydro (BWPH) on February 17, 2021 regarding the Low Impact Hydro Institute (LIHI) certification application for the North Gorham Hydro Project (FERC No. 2519). BWPH requested that the Department verify that project operations are in compliance with its FERC License and Water Quality Certificate (WQC). Specifically, BWPH requested the following from the Department:

- Confirmation that the North Gorham Hydro Project is in compliance with the 1. minimum flow requirement of 222 cfs and that impoundment water level fluctuations have been kept within one foot of the normal pond elevation of 221.8 feet USGS datum.
- Confirmation that the WQC effective on February 26, 1996 is still valid and is the 2. most recent WQC issued by the Department.
- 3. Confirmation that the facility is in compliance with all other conditions pursuant to the WQC.

The Department reviewed impoundment water level and outflow data from 2017-2020. This data was provided on April 26, 2021 by BWPH after being requested by the Department. On December 17, 2017, water levels fell below the minimum pond elevation of 220.8 feet USGS datum over one period due to a Programmable Logic Controller (PLC) failure. This issue was resolved on December 18, 2017 and was considered a violation of the FERC license upon review by the agency. Additionally, water levels were greater than the maximum pond elevation of 222.8 over several short periods but corresponded to high flows in the Presumpscot River. Similarly, water levels were lower than the minimum 221.8 over several short periods corresponding with low flows. On July 21, 2018, flows fell below the minimum flow of 222 cfs when Unit 2 at the Project tripped offline unexpectedly. This flow diversion was reported to FERC and was determined not to be a violation by the agency. Other than this occurrence, daily average flows over the 4-year period were greater than the minimum flow requirement of 222

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cfs. Therefore, based on its review, the Department confirms that the North Gorham Hydro Facility is in compliance with minimum flow and impoundment water level fluctuation requirements pursuant to the WQC.

The Department confirms that the WQC issued on September 24, 1992 and subsequently modified on February 26, 1996 is still valid and is the most recent WQC issued by the Department for the North Gorham Hydro Project.

The Department reviewed its file on the North Gorham Hydro Project and confirms that the facility is in compliance with all other conditions pursuant to the WQC.

Thank you for the opportunity to comment on the LIHI recertification for the North Gorham Hydroelectric Project. Please feel free to contact me at (207) 446-1619 or via email at Christopher.Sferra@maine.gov if you have any questions regarding these comments.

Sincerely,

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Christopher O. Sferra Hydropower Program, Project Manager Maine Department of Environmental Protection



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: Consultation Code: 05E1ME00-2020-SLI-1001 Event Code: 05E1ME00-2020-E-03428 Project Name: North Gorham LIHI Certification

April 19, 2020

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: <u>http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF</u>

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: <u>http://www.fws.gov/windenergy/eagle_guidance.html</u> Information on the location of bald eagle nests in Maine can be found on the Maine Field Office Web site: <u>http://www.fws.gov/mainefieldoffice/Project%20review4.html</u>

Additionally, wind energy projects should follow the wind energy guidelines: <u>http://www.fws.gov/windenergy/</u> 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: <u>http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm</u> and at: <u>http://www.towerkill.com</u>; and at: <u>http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html</u>

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: 05E1ME00-2020-SLI-1001

Event Code: 05E1ME00-2020-E-03428

Project Name: North Gorham LIHI

Certification Project Type: DAM

Project Description: North Gorham Project and Surrounding Waters

Project Location:

Approximate location of the project can be viewed in Google Maps: <u>https://</u>www.google.com/maps/place/43.70955970008076N70.65988341190125W



Counties: Cumberland, ME | York, ME

Endangered Species Act Species

There is a total of 2 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 Fisheries¹, 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
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/9045</u>	Threatened
Flowering Plants	STATUS

Small Whorled Pogonia *Isotria medeoloides*

No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/1890</u> Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

Hi Allison,

The following state-listed Endangered, Threatened, and Special Concern species have been documented in the general vicinity of the North Gorham Hydro Project Area. Note that this list should not be considered all-inclusive:

American Eel (Special Concern) Creek Chubsucker (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.

Thanks,

Becca Settele Wildlife Biologist Maine Dept of Inland Fisheries & Wildlife Wildlife Division 650 State St Bangor ME 04401 Office (207)941-4438 Cell (207) 592-3846 <u>mefishwildlife.com | facebook | twitter</u>

Correspondence to and from this office is considered a public record and may be subject to a request under the Maine Freedom of Access Act. Information that you wish to keep confidential should not be included in email correspondence.

From: Frechette, Allison <Allison.Frechette@brookfieldrenewable.com>
Sent: Monday, February 22, 2021 1:52 PM
To: Perry, John <John.Perry@maine.gov>
Subject: North Gorham Project - Presumpscot River Data Request

EXTERNAL: This email originated from outside of the State of Maine Mail System. Do not click links or open attachments unless you recognize the sender and know the content is safe. Good Afternoon John,

I am reaching out to request data on state listed species at the North Gorham Hydro Project on the Presumpscot River in Cumberland County. This data is being complied for a LIHI recertification application of the North Gorham Hydro Project, there will be no changes to water flows above or below the dam. Let me know if you require anything further for this request. Attached is an approximate project boundary google kmz file thank you for your assistance with these requests!

Allison Frechette Compliance Specialist

T 800.371.7774 C 207.320.1440 allison.frechette@brookfieldrenewable.com www.brookfieldrenewableUS.com



View Important disclosures and information about our e-mail policies here.



STATE OF MAINE DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY

> 177 STATE HOUSE STATION AUGUSTA, MAINE 04333

Amanda E. Beal Commissioner

JANET T. MILLS GOVERNOR

February 25, 2021

Allison Frechette Brookfield Renewable 150 Main Street Lewiston, ME 04240

Via email: allison.frechette@brookfieldrenewable.com

Re: Rare and exemplary botanical features in proximity to: North Gorham Hydro Project, LIHI Certification, Presumpscot River, Gorham, Windham, and Standish, Maine

Dear Ms. Frechette:

I have searched the Maine Natural Areas Program's Biological and Conservation Data System files in response to your request received February 22, 2021 for information on the presence of rare or unique botanical features documented from the vicinity of the North Gorham Hydro LIHI Certification project in Gorham, Windham, and Standish, Maine. Rare and unique botanical features include the habitat of rare, threatened, or endangered plant species and unique or exemplary natural communities. Our review involves examining maps, manual and computerized records, other sources of information such as scientific articles or published references, and the personal knowledge of staff or cooperating experts.

Our official response covers only botanical features. For authoritative information and official response for zoological features you must make a similar request to the Maine Department of Inland Fisheries and Wildlife, 284 State Street, Augusta, Maine 04333.

According to the information currently in our Biological and Conservation Data System files, there are no rare botanical features documented specifically within the project area. This lack of data may indicate minimal survey efforts rather than confirm the absence of rare botanical features. You may want to have the site inventoried by a qualified field biologist to ensure that no undocumented rare features are inadvertently harmed.

If a field survey of the project area is conducted, please refer to the enclosed supplemental information regarding rare and exemplary botanical features documented to occur in the vicinity of the project site. The list may include information on features that have been known to occur historically in the area as well as recently field-verified information. While historic records have not been documented in several years, they may persist in the area if suitable habitat exists. The enclosed list identifies features with potential to occur in the area, and it should be considered if you choose to conduct field surveys.

This finding is available and appropriate for preparation and review of environmental assessments, but it is not a substitute for on-site surveys. Comprehensive field surveys do not exist for all natural areas in Maine, and in the absence of a specific field investigation, the Maine Natural Areas Program cannot provide a definitive statement on the presence or absence of unusual natural features at this site.

MOLLY DOCHERTY, DIRECTOR MAINE NATURAL AREAS PROGRAM BLOSSOM LANE, DEERING BUILDING



Phone: (207) 287-804490 www.maine.gov/dacf/mnap Letter to Brookfield Comments RE: North Gorham Hydro LIHI Certification February 25, 2021 Page 2 of 2

The Maine Natural Areas Program (MNAP) is continuously working to achieve a more comprehensive database of exemplary natural features in Maine. We would appreciate the contribution of any information obtained should you decide to do field work. MNAP welcomes coordination with individuals or organizations proposing environmental alteration or conducting environmental assessments. If, however, data provided by MNAP are to be published in any form, the Program should be informed at the outset and credited as the source.

The Maine Natural Areas Program has instituted a fee structure of \$75.00 an hour to recover the actual cost of processing your request for information. You will receive an invoice for \$150.00 for two hours of our services.

Thank you for using MNAP in the environmental review process. Please do not hesitate to contact me if you have further questions about the Natural Areas Program or about rare or unique botanical features on this site.

Sincerely,

Lisa St. Hilaire

Lisa St. Hilaire | Information Manager | Maine Natural Areas Program 207-287-8044 | <u>lisa.st.hilaire@maine.gov</u>

Rare and Exemplary Botanical Features within 4 miles of

Project: North Gorham Hydro Project, LIHI recertification, Presumpscot River, Gorham, Windham, and Standish, Maine

Common Name	State Status	State Rank	Global Rank	Date Last Observed	Occurrence Number	Habitat
Columbia Water-meal						
	SC	S2	G5	2016-09-12	11	Open water (non-forested, wetland)
Great Rhododendro	on					
	Т	S1	G5	1992	3	Conifer forest (forest, upland),Hardwood to mixed forest (forest, upland)
Hollow Joe-pye We	ed					
	SC	S2	G5?	2011-10-22	22	Open wetland, not coastal nor rivershore (non-forested, wetland),Old field/roadside (non-forested, wetland or upland)
Nodding Pogonia						
	Т	S2	G4?	2010-08-18	11	Hardwood to mixed forest (forest, upland)
	Т	S2	G4?	2010-08-18	5	Hardwood to mixed forest (forest, upland)
Pitch Pine Bog						
	<null></null>	S2	G3G5	2004-06-21	10	Forested wetland, Coastal non-tidal wetland (non-forested, wetland)
Pocket Swamp						
	<null></null>	S2	G5	2002-08-08	11	Forested wetland, Hardwood to mixed forest (forest, upland)
Red Maple Swamp						
	<null></null>	S5	G3G5	2004-06-21	16	Forested wetland
Scarlet Oak						
	E	S1	G5	1999-10-03	10	Hardwood to mixed forest (forest, upland)
	E	S1	G5	1916-08	2	Hardwood to mixed forest (forest, upland)
Small Whorled Poge	onia					
	E	S2	G2G3	2018-06-15	18	Hardwood to mixed forest (forest, upland)
Spicebush						
	SC	S3	G5	2006-06-11	11	Forested wetland
Maine Natural Areas P	rogram		Page 1 of 1			www.maine.gov/dacf/mnap

STATE RARITY RANKS

- **S1** Critically imperiled in Maine because of extreme rarity (five or fewer occurrences or very few remaining individuals or acres) or because some aspect of its biology makes it especially vulnerable to extirpation from the State of Maine.
- **S2** Imperiled in Maine because of rarity (6-20 occurrences or few remaining individuals or acres) or because of other factors making it vulnerable to further decline.
- **S3** Rare in Maine (20-100 occurrences).
- S4 Apparently secure in Maine.
- **S5** Demonstrably secure in Maine.
- SU Under consideration for assigning rarity status; more information needed on threats or distribution.
- **SNR** Not yet ranked.
- **SNA** Rank not applicable.
- **S#?** Current occurrence data suggests assigned rank, but lack of survey effort along with amount of potential habitat create uncertainty (e.g. S3?).
- **Note:** State Rarity Ranks are determined by the Maine Natural Areas Program for rare plants and rare and exemplary natural communities and ecosystems. The Maine Department of Inland Fisheries and Wildlife determines State Rarity Ranks for animals.

GLOBAL RARITY RANKS

- G1 Critically imperiled globally because of extreme rarity (five or fewer occurrences or very few remaining individuals or acres) or because some aspect of its biology makes it especially vulnerable to extinction.
- **G2** Globally imperiled because of rarity (6-20 occurrences or few remaining individuals or acres) or because of other factors making it vulnerable to further decline.
- G3 Globally rare (20-100 occurrences).
- G4 Apparently secure globally.
- G5 Demonstrably secure globally.
- **GNR** Not yet ranked.
- Note: Global Ranks are determined by NatureServe.

STATE LEGAL STATUS

- **Note:** State legal status is according to 5 M.R.S.A. § 13076-13079, which mandates the Department of Conservation to produce and biennially update the official list of Maine's **Endangered** and **Threatened** plants. The list is derived by a technical advisory committee of botanists who use data in the Natural Areas Program's database to recommend status changes to the Department of Conservation.
- **E** ENDANGERED; Rare and in danger of being lost from the state in the foreseeable future; or federally listed as Endangered.
- **T** THREATENED; Rare and, with further decline, could become endangered; or federally listed as Threatened.

NON-LEGAL STATUS

- **SC** SPECIAL CONCERN; Rare in Maine, based on available information, but not sufficiently rare to be considered Threatened or Endangered.
- **PE** Potentially Extirpated; Species has not been documented in Maine in past 20 years or loss of last known occurrence has been documented.

Visit our website for more information on rare, threatened, and endangered species! http://www.maine.gov/dacf/mnap

ELEMENT OCCURRENCE RANKS - EO RANKS

Element Occurrence ranks are used to describe the quality of a rare plant population or natural community based on three factors:

- <u>Size</u>: Size of community or population relative to other known examples in Maine. Community or population's viability, capability to maintain itself.
- <u>Condition</u>: For communities, condition includes presence of representative species, maturity of species, and evidence of human-caused disturbance. For plants, factors include species vigor and evidence of human-caused disturbance.
- **Landscape context**: Land uses and/or condition of natural communities surrounding the observed area. Ability of the observed community or population to be protected from effects of adjacent land uses.

These three factors are combined into an overall ranking of the feature of **A**, **B**, **C**, or **D**, where **A** indicates an **excellent** example of the community or population and **D** indicates a **poor** example of the community or population. A rank of **E** indicates that the community or population is **extant** but there is not enough data to assign a quality rank. The Maine Natural Areas Program tracks all occurrences of rare (S1-S3) plants and natural communities as well as A and B ranked common (S4-S5) natural communities.

Note: Element Occurrence Ranks are determined by the Maine Natural Areas Program for rare plants and rare and exemplary natural communities and ecosystems. The Maine Department of Inland Fisheries and Wildlife determines Element Occurrence ranks for animals.

Visit our website for more information on rare, threatened, and endangered species! http://www.maine.gov/dacf/mnap