

Brookfield

Renewable

January 8, 2021

Bonny Eagle Project
FERC No. 2529

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 Bonny Eagle Project

Dear Ms. Ames:

On behalf of the Licensee, Brookfield White Pine Hydro, LLC (BWPH), please find attached the revised Application for the Bonny Eagle Project on the Saco River in Maine. BWPH is requesting certification of the facilities of the Project. BWPH submitted an initial certification application to the Low Impact Hydropower Institute LIHI) on June 30, 2020. LIHI completed the Initial Intake Review on September 3, 2020.

The current application includes the following required submittals as revised in response to the LIHI Intake Review:

- 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 Bonny Eagle intake structure and diversion dam; bypass reach of the Bonny Eagle Project (known as the New River Channel below the diversion dam); and the tailrace below the Bonny Eagle Dam.
- Matrix of Alternative Standards for each Zone of Effect identified evaluating the LIHI certification standards for each requisite criterion including water quality, fish passage and recreation
- Sworn Statement and Waiver Form
- Facility Contacts Form including pertinent NGOs, as appropriate.

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

Sincerely,



Kelly Maloney
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
BONNY EAGLE PROJECT (FERC No. 2529)

January 2021



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Table of Contents

1.0	PROJECT DESCRIPTION	1
1.1	PROJECT FACILITIES	1
1.2	PROJECT OPERATIONS.....	10
1.3	PROJECT LOCATION	10
1.4	REGULATORY AND OTHER REQUIREMENTS	12
	1.4.1 FERC LICENSE AND WATER QUALITY CERTIFICATION REQUIREMENTS	12
	1.4.2 LIHI CERTIFICATION REQUIREMENTS.....	13
2.0	ZONES OF EFFECT	23
2.1	ZONE OF EFFECT 1 - PROJECT IMPOUNDMENT	25
2.2	ZONE OF EFFECT 2– PROJECT BYPASS REACH (NEW RIVER CHANNEL)	26
2.3	ZONE OF EFFECT 3 – PROJECT TAILRACE	28
3.0	LIHI CERTIFICATION CRITERION	31
3.1	ECOLOGICAL FLOWS	33
	3.1.1 ZONE 1 – IMPOUNDMENT	34
	3.1.2 ZONE 2 –BYPASS REACH & ZONE 3 – TAILRACE	36
3.2	WATER QUALITY	39
3.3	UPSTREAM FISH PASSAGE	40
	3.3.1 ZONE 1 - IMPOUNDMENT	45
	3.3.2 ZONE 2 – BYPASS REACH AND ZONE 3 - TAILRACE	46
3.4	DOWNSTREAM FISH PASSAGE.....	46
	3.4.1 ZONE 1 – IMPOUNDMENT AND ZONE 2 – BYPASS REACH	49
	3.4.2 ZONE 3 – TAILRACE	50
3.5	SHORELINE AND WATERSHED PROTECTION	51
	3.5.1 ZONE 1 - IMPOUNDMENT	52
	3.5.2 ZONE 2 – BYPASS REACH AND ZONE 3 – TAILRACE	55
3.6	THREATENED AND ENDANGERED SPECIES	56

3.7	CULTURAL AND HISTORIC RESOURCES	57
3.7.1	ZONE 1 – IMPOUNDMENT	58
3.7.2	ZONE 2 – BYPASS REACH & ZONE 3 – TAILRACE	59
3.8	RECREATIONAL RESOURCES	59
3.8.1	ZONE 1 – IMPOUNDMENT	61
3.8.2	ZONE 2 – BYPASS REACH	66
3.8.3	ZONE 3 – TAILRACE	66
4.0	SWORN STATEMENT AND WAIVER FORM.....	68
5.0	CONTACTS FORM	69
5.1	APPLICANT RELATED CONTACTS	69
5.2	CURRENT AND RELEVANT STATE, FEDERAL, AND TRIBAL RESOURCE AGENCY CONTACTS WITH KNOWLEDGE OF THE FACILITY	70
5.3	CURRENT STAKEHOLDER CONTACTS THAT ARE ACTIVELY ENGAGED WITH THE FACILITY.....	72
6.0	FERC AND REGULATORY INFORMATION	73
6.1	FERC LICENSE AND AMENDMENT ORDERS.....	73
6.2	WATER QUALITY CERTIFICATION, AMENDMENTS, AND REPORTS	73
6.3	SETTLEMENT AND OTHER AGREEMENTS.....	73
6.4	PERMITS.....	73
6.5	COMPLIANCE PLANS AND MONITORING REPORTS.....	74
6.5.1	ECOLOGICAL FLOWS AND WATER QUALITY.....	74
6.5.2	UPSTREAM AND DOWNSTREAM FISH PASSAGE	74
6.5.3	SHORELINE AND WATERSHED PROTECTION	75
6.5.4	THREATENED AND ENDANGERED SPECIES	75
6.5.5	CULTURAL AND HISTORIC RESOURCES	75
6.5.6	RECREATIONAL RESOURCES	76
6.6	LICENSE AND CERTIFICATION COMPLIANCE	76
7.0	SUPPORTING DOCUMENTATION	77
7.1.1	CONFIDENTIAL – PROVIDED UNDER SEPARATE COVER	77

Index of Tables

Table 1-1.	Facility Information.....	14
Table 2-2.	Zone 1 – Project Impoundment Matrix of Alternative Standards	26
Table 2-3.	Zone 2 – Project Bypass Reach Matrix of Alternative Standards.....	28

Table 2-4.	Zone 3 – Project Tailrace Matrix of Alternative Standards.....	29
Table 3-1	Standards Matrix Summary	32

Index of Figures

Figure 1-1.	Bonny Eagle Project Boundary.....	2
Figure 1-2.	Bonny Eagle Project Facilities	3
Figure 1-3.	Bonny Eagle Project Area - Aerial	4
Figure 1-4.	Bonny Eagle Intake, Powerhouse and Tailrace - Aerial	5
Figure 1-5.	Bonny Eagle Dam and Powerhouse, Diversion Dam, And Bypass Reach (New River Channel)- Aerial	6
Figure 1-6	Bonny Eagle Powerhouse and Tailrace – Photograph	7
Figure 1-7	Diversion Dam and Bypass Reach - Aerial Photo	8
Figure 1-8	Bonny Eagle Upstream Eel Passage Photos	9
Figure 1-9.	Overview Map of the Watershed	11
Figure 2-1.	Zones of Effect	24
Figure 2-2.	Zone 1 – Project Impoundment	25
Figure 2-3.	Zone 2 – Project Bypass Reach (New River Channel)	27
Figure 2-4.	Zone 3 – Project Tailrace.....	29
Figure 3-1.	Project Wetlands.....	54

Low Impact Hydropower Institute
Certification Application for the
Bonny Eagle Project (FERC No. 2529)

1.0 PROJECT DESCRIPTION

1.1 PROJECT FACILITIES

The Bonny Eagle Project consists of a 350-foot long diversion dam, a 164-foot long dam (constituting the intake) and two earth embankments on the main river channel, a powerhouse containing six generating units, a 347-acre impoundment and appurtenant facilities. The nameplate generator capacity of the Project is 7.2 MW. The diversion dam is located at the so called "New River" channel while the intake and earth dikes are situated in a narrow gorge on the main river channel; a fairly large island (Bonny Eagle Island) separates the two channels. The dams create a riverine impoundment extending approximately 6.6 miles upstream.

The project is owned and licensed by Brookfield White Pine Hydro, LLC (BWPH), and is located between river miles 32.6 and 26 on the Saco River. The Bonny Eagle Project is located on the Saco River in York and Cumberland Counties, Maine. The dams and generating station are located in the Towns of Hollis and Standish, with the tailrace extending into the Town of Buxton. The impoundment is located in the Towns of Hollis, Standish and Limington.

The "New River" channel diversion dam consists of a 339 ft long concrete gravity spillway section with a permanent crest at elevation 212 ft and topped with a 4.5 ft high rubber dam and a minimum flow section with a permanent crest at elevation 208 ft with a 9-foot inflatable gate designed to pass a minimum flow of 25 cfs in the new channel river. The main dam is comprised of a 164 ft long intake structure and sluice, with a top elevation of 225 ft flanked by stone riprapped earth embankments with crest elevations at 228 ft (east shore is 370 feet long and west shore is 250 feet long). Eight penstock entrances are located in the intake with 3/8 in. bar steel trashrack with 2 in. clear spacing. Six of the penstocks are 13 feet in diameter and supply water to the main turbine-generator units (two of the penstocks are connected to retired pilot exciters and are not used). The powerhouse is located approximately 35 feet downstream from the intake and is 144 feet long by 77 feet wide housing six generators. The normal tailwater elevation is 180.6 ft and the tailwater is partially backwatered by the downstream West Buxton Project impoundment.

The Bonny Eagle impoundment at the normal full pond elevation of 216.3 ft is approximately 347 acres in area. It extends upstream approximately 6.6 miles and is 700 ft. wide at the broadest point. The Project boundary generally extends to elevation 218 ft to encompass additional flowage rights. The net or usable storage within the normal 4.3-foot operating range of the Project is approximately 1,150 acre-feet. Maximum depth of the impoundment is approximately 40 feet (near the intake).

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

FIGURE 1-1. BONNY EAGLE PROJECT BOUNDARY

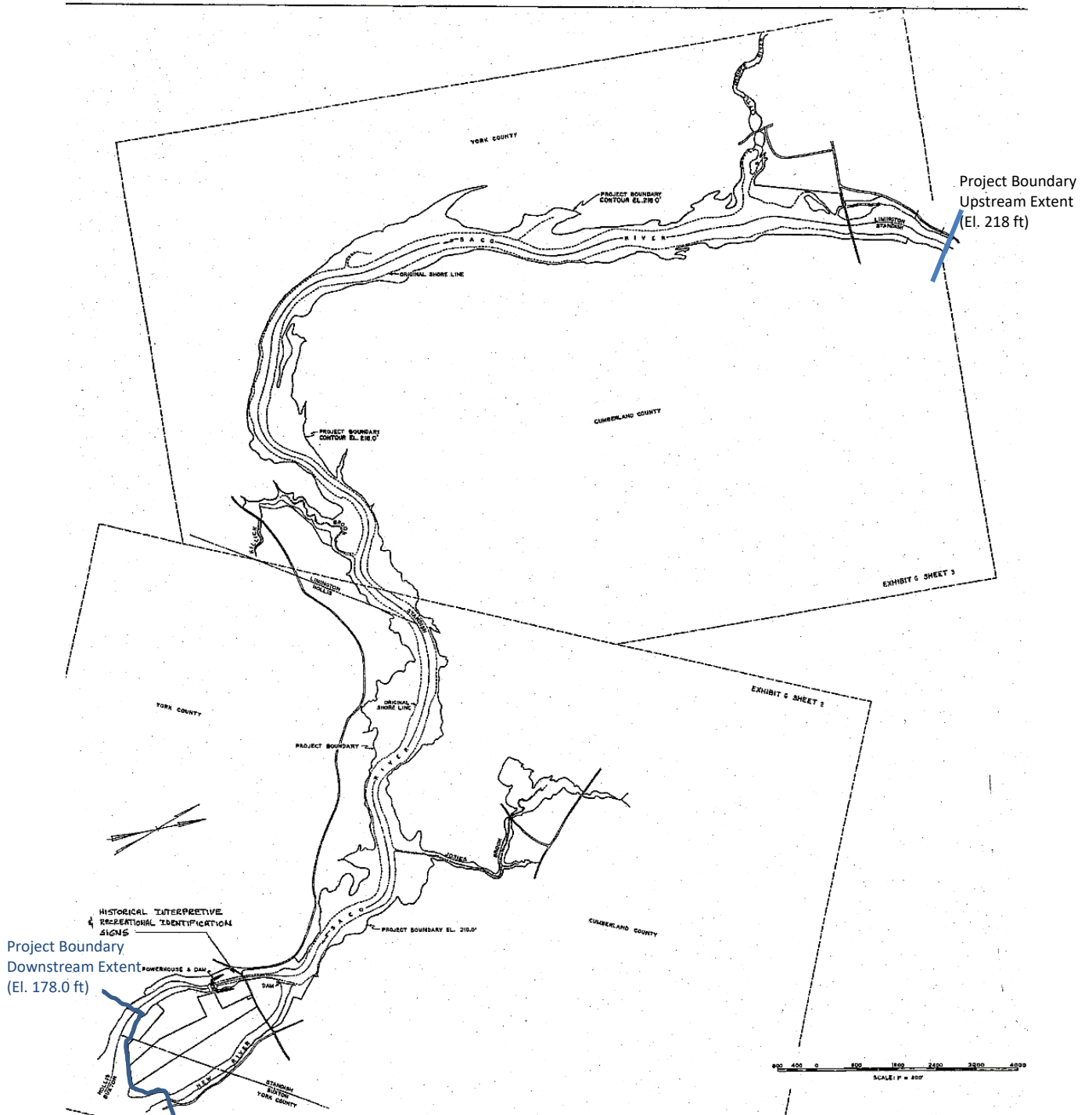


FIGURE 1-2. BONNY EAGLE PROJECT FACILITIES

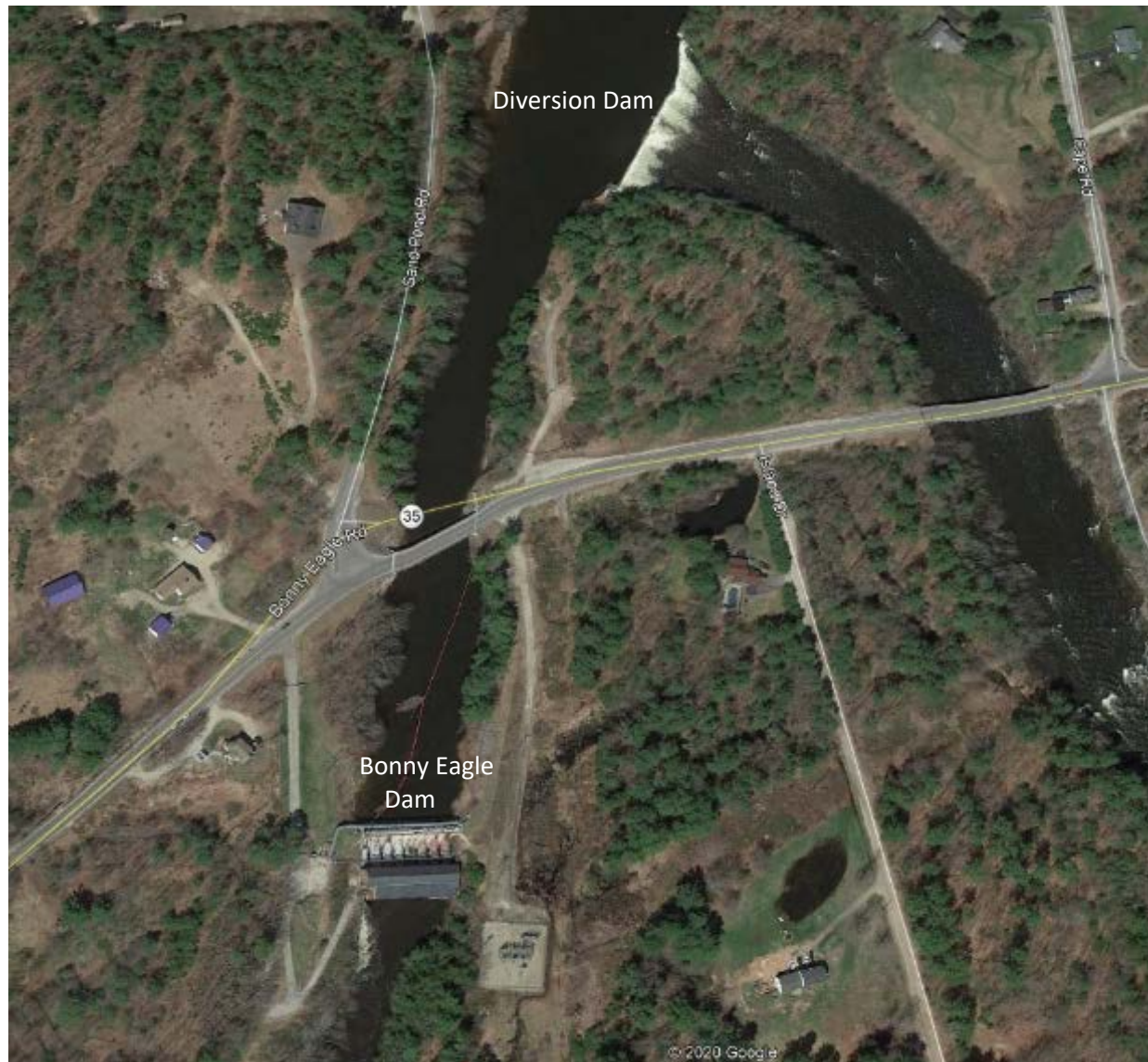


FIGURE 1-3. BONNY EAGLE PROJECT AREA - AERIAL

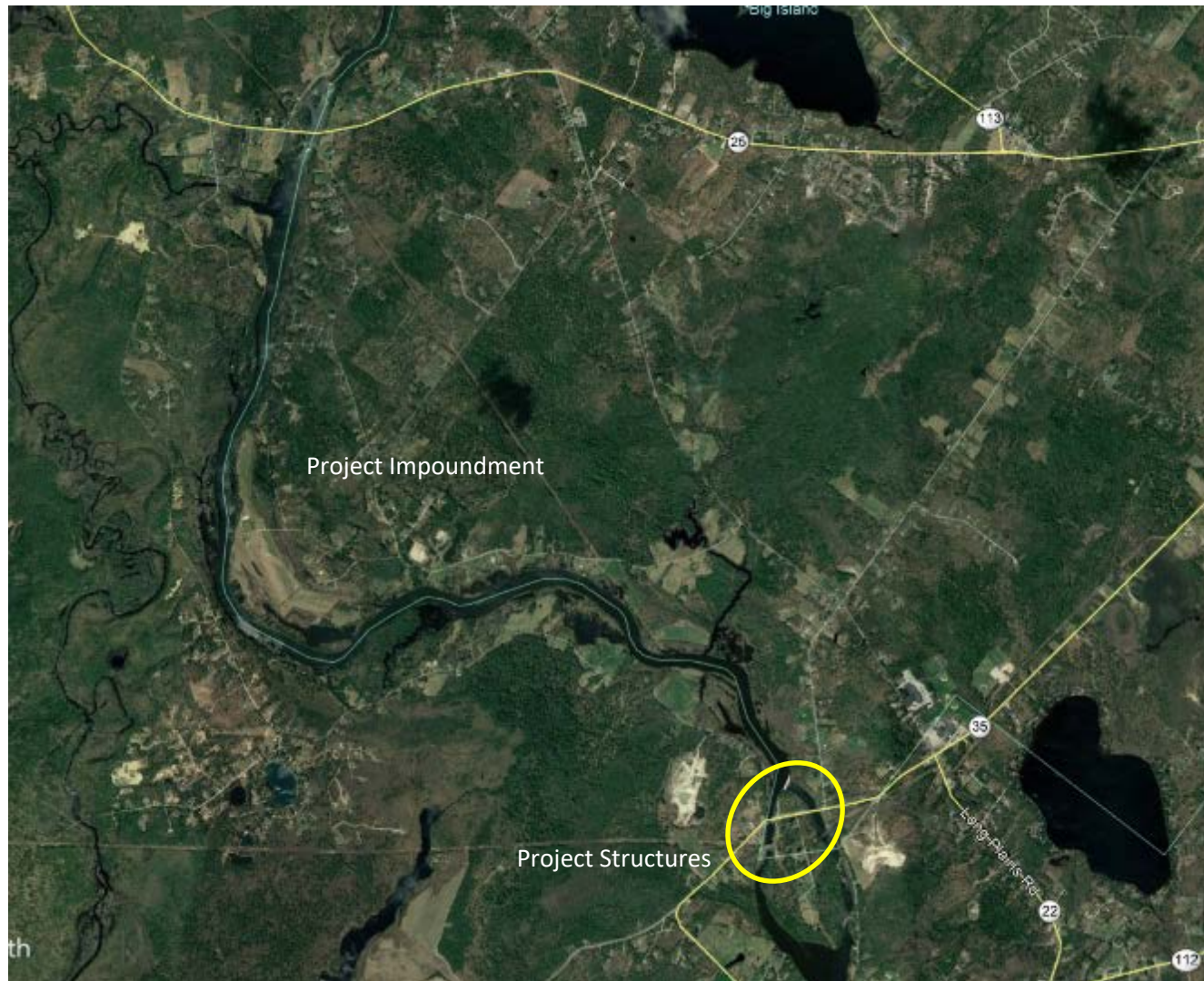


FIGURE 1-4. BONNY EAGLE INTAKE, POWERHOUSE AND TAILRACE - AERIAL



FIGURE 1-5. BONNY EAGLE DAM AND POWERHOUSE, DIVERSION DAM, AND BYPASS REACH (NEW RIVER CHANNEL)- AERIAL



FIGURE 1-6 BONNY EAGLE POWERHOUSE AND TAILRACE – PHOTOGRAPH



FIGURE 1-7 DIVERSION DAM AND BYPASS REACH - AERIAL PHOTO



FIGURE 1-8 BONNY EAGLE UPSTREAM EEL PASSAGE PHOTOS



1.2 PROJECT OPERATIONS

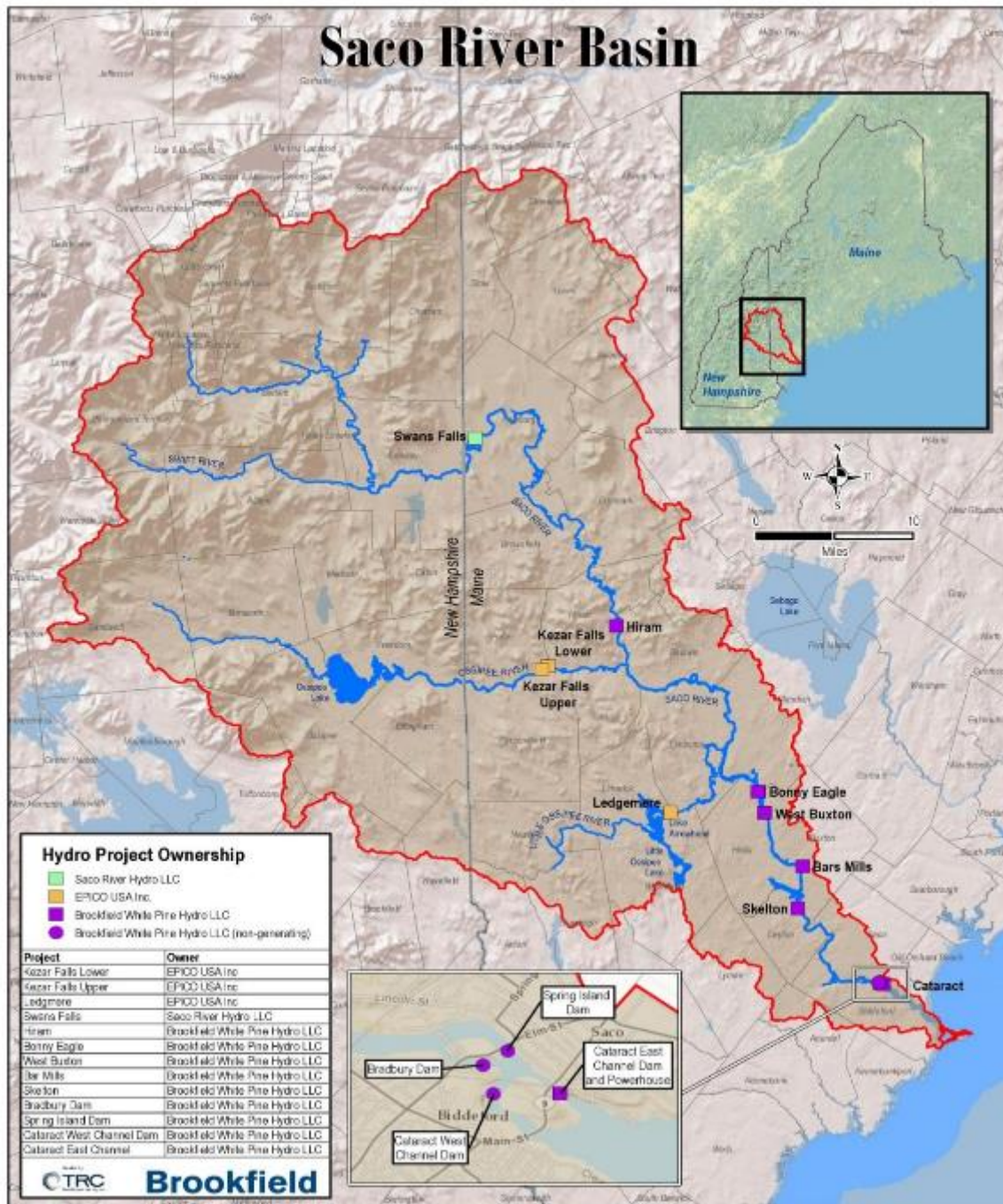
BWPH operates the Bonny Eagle Project as an intermittent peaking facility with seasonal run of river facility. From April 1 through June 30, the Project is operated in run of river mode with only 1 ft of fluctuation from the normal full pond (216.3 ft) allowed and minimum bypass reach flows of 25 cfs. From July 1 through September 30, a fluctuation of 4.5 ft from normal full pond (216.3 ft) is allowed with a total Project minimum flow, including at least 25 cfs in the bypass reach, of 400 cfs. From October 1 through November 15, the same reservoir fluctuation is allowed but a total Project minimum flow, inclusive of a 25 cfs minimum bypass reach flow, of 600 cfs is required. For the remainder of the year, the 4.5 fluctuation from full pond is authorized, with a 250 cfs minimum Project flow including the 25 cfs minimum bypass reach flow.

During normal operations, the project releases flows depending on electrical demand, available storage, and river flow and the bypass reach receives a minimum flow of 25 cfs. During high flow periods, all six generator units may be run 24 hours a day, with flows in excess of 4,500 cfs being passed as spillage over the New River Channel dam into the bypass reach.

1.3 PROJECT LOCATION

The Project is located approximately 21.0 river miles above the head-of-tide at Saco and 26 miles from the mouth of the river at Camp Ellis/Hills Beach. The river passes through the Project area in a generally northwest to southeast direction. The Bonny Eagle Project is the fifth most upstream of seven hydroelectric projects located on the main stem of the Saco River. Six of these projects are owned by the Licensee, Brookfield White Pine Hydro, LLC.

FIGURE 1-9. OVERVIEW MAP OF THE WATERSHED



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.

Operations

The Project is operated in a seasonal run of river mode with an intermittent peaking mode allowed for the maintenance of shoreline wetland communities, pursuant to Article 401 and conditions 1 and 2 of the Project's Section 401 Water Quality Certification (WQC) as discussed in Section 3.1. Flows in the Saco River are dictated by the provisions of the "Instream Flow Agreement for Hydroelectric Projects on the Saco River", which is incorporated by reference into the 401 WQC and provided in Section 7.0. The Project impoundment has a seasonal fluctuation of one foot for three months in the spring/early summer and 4.5 ft for the remainder of the year. Minimum flows are also seasonally variant from run of river operations to 600 cfs with a year-round instantaneous minimum flow of 25 cfs required in the New River bypass reach.

Article 403 required the filing of a plan to monitor compliance with water level and minimum flow requirements. The Plan was filed on August 27, 1998 and accepted by the FERC on November 19, 1998 (see Section 6.0).

Excursions from run of river flows and headpond elevations are reported to the resource agencies and to FERC. On July 23, 2018 a minimum flow disruption occurred at the project, it was not considered a license violation. (See section 6.6 for FERC and Brookfield correspondence.)

Fish Passage

Fish passage requirements at the Project were originally dictated by the 1994 Saco River Fish Passage Agreement, that was incorporated into the new license under Articles 404, 405 and 406, and have been updated pursuant to the 2007 Saco River Fish Passage Agreement and the 2019 Amendment to the Saco River Fish Passage Agreement. Article 404 required interim downstream fish passage while Article 405 required permanent downstream fish passage. The final design drawings for the permanent downstream fish passage facilities were filed with the commission on September 28, 1998 and supplemented on January 29, 1999. The plans were approved by the FERC on July 13, 1999. As built drawing for the final downstream fish passage facilities were filed on March 14, 2001 and approved by the Commission on May 5, 2001. Article 406 requires the construction of upstream fish passage facilities as determined to be necessary by the agencies; for which the schedule of implementation has been established in the 2019 Amendment to the Saco River Settlement Agreement.

Article 407 of the Project license requires downstream fish passage monitoring. Article 407 was modified by the FERC's December 17, 1999 Order Modifying and Approving Downstream Fish Passage Facilities Study Plan which provides downstream passage for Atlantic

salmon smolts. BWPH requested to discontinue downstream monitoring until the upstream fish passage facility is installed. This request was approved by FERC on July 17, 2019. Article 408 requires upstream fish passage monitoring. Article 406 was modified by order on July 18, 2007, which incorporated the terms of the 2007 Saco River Fish Passage Settlement Agreement into the Bonny Eagle license, which has been modified further by the 2019 Amendment to the Saco River Fish Passage Settlement Agreement. To that end, upstream passage facilities, and subsequent testing of the upstream and downstream facilities, are required to be operational at the Bonny Eagle Project by May 1, 2029.

The Bonny Eagle Project does have upstream eel passage installed, pursuant to the 2007 Saco River Fish Passage Settlement Agreement and the 2019 Amendment to the Settlement Agreement and has operational downstream fish passage as discussed elsewhere in this application.

Aquatic and Terrestrial Resources

Article 411 required monitoring of wetlands in the project area as discussed in Section 3.5. The wetland enhancement plan was filed with the Commission on August 27, 1998 and approved by FERC on September 17, 1998.

Recreation

Recreation facilities required as part of the 1998 FERC license included a picnic and day use facility on Bonny Eagle Island (Article 414), a canoe portage trail (Article 413) and interpretive signage at the Bonnie Eagle powerhouse (Article 415). While the canoe portage trail and interpretive signage were completed and as-built drawings for the portage filed with the Commission on June 30, 2000; the Bonny Eagle picnic area was removed due to vandalism and community opposition, as approved by FERC on October 31, 2000. Recreation monitoring and reporting at the Project are required under Article 412 as discussed in Section 3.8.

Cultural Resources

The Project has a Programmatic Agreement and Cultural Resources Management Plan pursuant to Article 416 as discussed in Section 3.7. BWPH is required to file annual reports for activities conducted under the PA by February 15 each year (see Section 7.0). The Bonny Eagle Powerhouse is eligible for inclusion on the National Register of Historic Places.

1.4.2 LIHI CERTIFICATION REQUIREMENTS

As this is an initial application for LIHI Certification, the Bonny Eagle Project is not currently subject to LIHI Certification Conditions.

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)	Bonny Eagle Project (FERC No. 2529)
Reason for applying for LIHI Certification	<ol style="list-style-type: none"> 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) 	<ol style="list-style-type: none"> Yes, MA RPS for both Yes, as a secondary channel but usually trade at a discount to MA RPS No, but potentially in the future Possibly, RPS/Voluntary RECs are still the primary reason for applying Possibly, RPS/Voluntary RECs are still the primary reason for applying
	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	Usually a 100% of the facility's output would be qualified for MA RPS RECs.
Location	River name (USGS proper name)	Saco River
	Watershed name - Select region, click on the area of interest until the 8-digit HUC number appears. Then identify watershed name and HUC-8 number from the map at: https://water.usgs.gov/wsc/map_index.html	01060002 - Saco
	Nearest town(s), <u>county(ies)</u> , and state(s) to dam	Hollis, Standish, Buxton, and Limington York and Cumberland Counties Maine
	River mile of dam above mouth River mile of diversion dam	RM 26.0 RM 26.2
	Geographic latitude of dam Geographic latitude of diversion dam	43° 41' 15" N 43° 41' 30" N
	Geographic longitude of dam Geographic longitude of diversion dam	70° 36' 41" W 70° 36' 36" W
Facility Owner	Application contact names (Complete the Contact Form in Section B-4 also):	Kelly Maloney, Compliance Manager, Northeast Region

Item	Information Requested	Response (include references to further details)
	Facility owner company and authorized owner representative name. For recertifications: If ownership has changed since last certification, provide the effective date of the change.	Brookfield Renewable Partners LP Kelly Maloney, Compliance Manager, Northeast Region
	FERC licensee company name (if different from owner)	Brookfield White Pine Hydro, LLC
Regulatory Status	FERC Project Number (e.g., P-xxxxx), issuance and expiration dates, or date of exemption	FERC No. 2529 Issued February 26, 1998 Expires January 31, 2038
	FERC license type (major, minor, exemption) or special classification (e.g., "qualified conduit", "non-jurisdictional")	Hydropower license for Major Project; Federal Power Act
	Water Quality Certificate identifier, issuance date, and issuing agency name. Include information on amendments.	WQC #L-17650-33-F-N, Issued August 22, 1997 by the Maine Department of Environmental Protection. See section 6.2 and section 7.0 for WQC and agency validation letter.
	Hyperlinks to key electronic records on FERC e-library website or other publicly accessible data repositories ¹	See Sections 6.0 and 7.0 for hyperlinks to or documentation of relevant records including FERC License and Amendment Orders; Section 401 Water Quality Certification; FERC and regulatory filings; and other key documents. 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 pre-operational applications)	1955
	Total installed capacity (MW) For recertifications: Indicate if installed capacity has changed since last certification	7.2 MW (Bonny Eagle and West Buxton are in the ISO-NE market as a single combined node / asset.)
	Average annual generation (MWh) and period of record used For recertifications: Indicate if average annual generation has changed since last certification	LTA annual modeled generation is 44,478 MWh, average over the last 5 years is 39,067 MWh

Item	Information Requested	Response (include references to further details)
	<u>Mode of operation</u> (run-of-river, peaking, pulsing, seasonal storage, diversion, etc.) For recertifications: Indicate if mode of operation has changed since last certification	Intermittent peaking/seasonal run of river
	Number, type, and size of turbine/generators, including maximum and minimum hydraulic capacity and maximum and minimum output of each turbine and generator unit	6 horizontal – shaft Double-runner Francis units All Units 1-6: Max 822 cfs Total station capacity 4,932cfs
	Trashrack clear spacing (inches) for each trashrack	All trashracks consist of 3/8 in. bar steel with 2 in. clear spacing
	Approach water velocity (ft/s) at each intake if known	Unknown
	Dates and types of major equipment upgrades For recertifications: Indicate only those since last certification	2019 - #6 turbine replaced with new unit designed and installed by Norcan; no changes to unit capacities, flow or power output.
	Dates, purpose, and type of any recent operational changes For recertifications: Indicate only those since last certification	Intermittent facility since FERC license issued in 1998, only short-term operational changes for maintenance and inspections. There have been no license modifications pertaining to operational changes other than the installation of fish passage facilities requiring the provision of specific flow
	Plans, authorization, and regulatory activities for any facility upgrades or license or exemption amendments	None
Dam or Diversion	Date of original dam or diversion construction and description and dates of subsequent dam or diversion structure modifications	Diversion Dam (new river Channel): Concrete gravity, date of construction unknown Main Dam: Earth and concrete, built before 1910; installation of rubber dam 2011
	Dam or diversion structure length, height including separately the height of any flashboards, inflatable dams, etc. and describe seasonal operation of flashboards and the like	<u>Diversion Dam</u> - Spillway section: permanent crest @ elevation 212 ft with a 4.5 ft rubber dam, min flow section crest @ 208 ft with 9 ft inflatable gate <u>Main Dam</u> - Earth embankments: crest elevation @ 228 ft, Intake section: elevation @ 225 ft
	Spillway maximum hydraulic capacity	Diversion dam spillway @ permanent crest @ elevation 212 ft; hydraulic capacity 43,800 cfs

<i>Item</i>	<i>Information Requested</i>	<i>Response (include references to further details)</i>
	Length and type of each penstock and water conveyance structure between the impoundment and powerhouse	<p>Six penstocks of steel construction; 13 feet in diameter and supplying water to the main turbine-generator units. They each have two steel headgates, each 7 feet 9 inches wide by 15 feet high.</p> <p>NOTE: 2 smaller penstocks are 4 1/2 feet in diameter and supply water for the two turbine-driven pilot exciters; these have been retired in place. The single headgates to each of these penstocks are of timber construction; these have been retired in place.</p>
	Designated facility purposes (e.g., power, navigation, flood control, water supply, etc.)	Power
Conduit Facilities Only	Date of conduit construction and primary purpose of conduit	N/A
	Source water	N/A
	Receiving water and location of discharge	N/A
Impoundment and Watershed	Authorized maximum and minimum impoundment water surface elevations For recertifications: Indicate if these values have changed since last certification	<p>No max Min: 4/1 to 6/30 215.3 ft Rubber Dam up 212 ft Rubber Dam down Min: 7/1 to 3/31 211.8 ft Rubber Dam up 212 ft Rubber Dam down</p>
	Normal operating elevations and normal fluctuation range For recertifications: Indicate if these values have changed since last certification	<p>There is no FERC high level license limit at this site. However, the owner does have an administrative operating limit of 218.3 ft. to protect the dike embankment.</p> <p>Normal full pond is 216.3 ft</p> <p>There is a FERC low head pond level limit. From April 1st to June 30th the pond draw-down limit is 1 foot from full pond to 215.30 ft. when Rubber dams are inflated. From July 1st to March 31st the pond can be drawn down 4.5 feet from a normal full pond to 211.80 ft.</p>
	Gross storage volume and surface area at full pool For recertifications: Indicate if these values have changed since last certification	<p>Gross Storage Volume: 1,150 acre-feet</p> <p>Surface Area: 347 acres</p>

<i>Item</i>	<i>Information Requested</i>	<i>Response (include references to further details)</i>
	Usable storage volume and surface area For recertifications: Indicate if these values have changed since last certification	Usable Storage Volume: 1,150 acre-feet
	Describe requirements related to impoundment inflow and outflow, elevation restrictions (e.g., fluctuation limits, seasonality) up/down ramping and refill rate restrictions.	Per water quality certification and license (see section 1.4 above and discussion in section 3.2 below)
	Upstream dams by name, ownership and river mile. If FERC licensed or exempt, please provide FERC Project number of these dams. Indicate which upstream dams have downstream fish passage.	Hiram Project, River mile 46 Brookfield White Pine Hydro, LLC FERC No. 2530, no upstream or downstream fish passage or eel passage.

	<p>Downstream dams by name, ownership, river mile and FERC number if FERC licensed or exempt. Indicate which downstream dams have upstream fish passage</p>	<p>West Buxton, River mile 24 Brookfield White Pine Hydro, LLC; FERC No. 2531, Downstream anadromous fish passage, no upstream fish passage; upstream eel passage, no downstream eel passage date set for implementation in 2019 agreement see section 6.2</p> <p>Bar Mills, River mile 20 Brookfield White Pine Hydro, LLC; FERC No. 2194, no upstream fish passage, downstream anadromous fish passage; upstream eel passage on spillway of bypass reach, no downstream eel passage date set in 2019 agreement see section 6.2</p> <p>Skelton Project, River mile 15.6 Brookfield White Pine Hydro, LLC; FERC No. 2527, upstream and downstream fish passage; upstream eel passage, no downstream eel passage date set in 2019 agreement see section 6.2</p> <p>Cataract, River mile 6.3 Brookfield White Pine Hydro, LLC; FERC No. 2528</p> <p>Cataract East- Upstream anadromous passage in the form of elevator and trap (1993), Downstream anadromous passage in the form of a sluice as well as controlled spills. Upstream eel passage present. Downstream eel passage in the form of nightly unit shutdowns from September 1 through November 30 for 8 hours per night every night</p> <p>Cataract West- (no generation) Upstream anadromous passage in the form of a denil (1993). Downstream anadromous passage in the form of a sluice. Upstream eel passage present. Downstream eel passage in the form of nightly unit shutdowns on east channel from September 1 through November 30 for 8 hours per night every night</p>
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Item	Information Requested	Response (include references to further details)	
		Springs and Bradbury- currently have a fish lock at each site for anadromous passage. A new Natural like fishway was constructed in 2019 also at the Springs side. They are low head dams, all flows go over spillway or open gates, no downstream passage is required. Upstream eel passage at both sites in the form of a ramp.	
	Operating agreements with upstream or downstream facilities that affect water availability and facility operation	Instream Flow Agreement for Hydroelectric Projects on the Saco River	
	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: 347 acres at normal full pond elevation of 216.3 ft Land: Undetermined; includes lands encompassing project structures and Bonny Eagle Island and flowage rights (i.e.the Project boundary generally extends to elevation 218 ft to encompass additional flowage rights)	
Hydrologic Setting	Average annual flow at the dam, and period of record used	Year	Average Flow (cfs)
		2005	4294
		2006	3843
		2007	2679
		2008	4090
		2009	3692
		2010	3337
		2011	3789
		2012	2924
		2013	2753
		2014	2954
		2015	2167
		2016	2152
		2017	3362
		2018	2920

Item	Information Requested	Response (include references to further details)																										
	Average monthly flows and period of record used	<table><tr><th>Month</th><th>Average Flow (cfs)</th></tr><tr><td>1</td><td>3031</td></tr><tr><td>2</td><td>2258</td></tr><tr><td>3</td><td>3381</td></tr><tr><td>4</td><td>7134</td></tr><tr><td>5</td><td>4872</td></tr><tr><td>6</td><td>2890</td></tr><tr><td>7</td><td>2095</td></tr><tr><td>8</td><td>1557</td></tr><tr><td>9</td><td>1242</td></tr><tr><td>10</td><td>2591</td></tr><tr><td>11</td><td>3813</td></tr><tr><td>12</td><td>3650</td></tr></table>	Month	Average Flow (cfs)	1	3031	2	2258	3	3381	4	7134	5	4872	6	2890	7	2095	8	1557	9	1242	10	2591	11	3813	12	3650
	Month	Average Flow (cfs)																										
	1	3031																										
	2	2258																										
3	3381																											
4	7134																											
5	4872																											
6	2890																											
7	2095																											
8	1557																											
9	1242																											
10	2591																											
11	3813																											
12	3650																											
	Location and name of closest stream gaging stations above and below the facility	Upstream: Cornish USGS gauge Downstream: N/A																										
	Watershed area at the dam (in square miles). Identify if this value is prorated from gage locations and provide the basis for proration calculation.	1,560 sq. miles not prorated																										
	Other facility specific hydrologic information	None																										
Designated Zones of Effect	Numbers and names of each of zone of effect	Zone 1 – Impoundment Zone 2 –Bypass Reach Zone 3 –Main Stem of Saco River																										
	River mile of upstream and downstream limits of each zone of effect	Zone 1 – Project Impoundment RM 32.6 – RM 26 Zone 2 – Project Bypass Reach RM 26.2 – RM 25.5 Zone 3 – Project Tailrace RM 26 – RM 25.5																										
	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																										

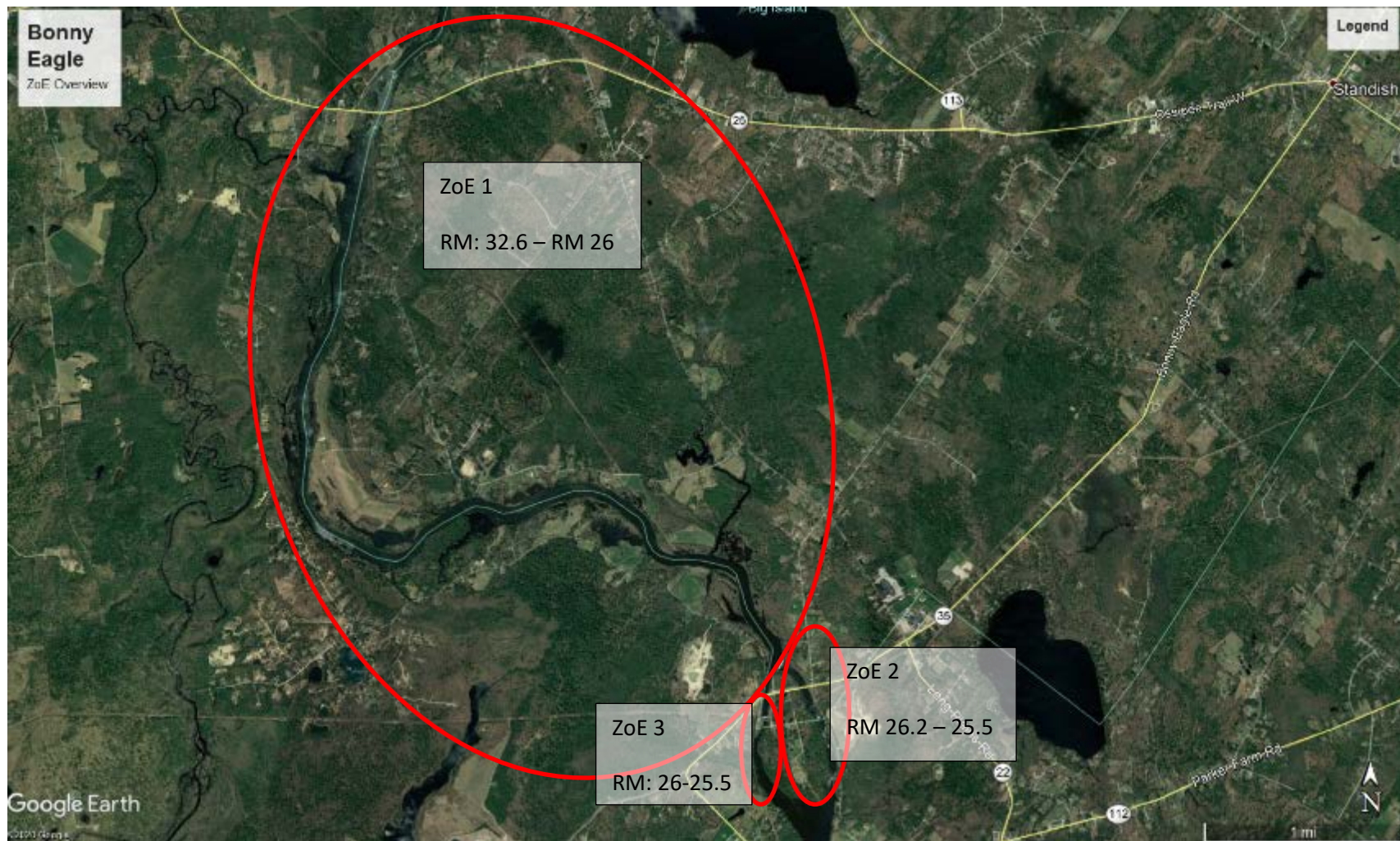
Pre-Operational Facilities		
<i>Expected operational date</i>	Date generation is expected to begin	N/A
<i>Dam, diversion structure or conduit modification</i>	Description of modifications made to a pre-existing conduit, dam or diversion structure needed to accommodate facility generation. This includes installation of flashboards or raising the flashboard height. Date the modification is expected to be completed	N/A
<i>Change in water flow regime</i>	Description of any change in impoundment levels, water flows or operations required for new generation	N/A

2.0 ZONES OF EFFECT

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

The powerhouse and Diversion Dam are the delineating features for the Zones of Effects. The impoundment (designated as Zone of Effect 1 – Impoundment) is backwatered by the dam and integral powerhouse in the main river channel, extending upstream to the upper extent of the project boundary. The Diversion Dam discharges to a channel to the east of Bonny Eagle Island, designated as Zone of Effect 2 – Bypass Reach. The dam and integral powerhouse discharge to a reach to the west of Bonny Eagle Island designated as Zone of Effect 3 – Tailrace. The Bypass Reach converges with the Tailrace at the southern terminus of Bonny Eagle Island.

FIGURE 2-1. ZONES OF EFFECT



2.1 ZONE OF EFFECT 1 - PROJECT IMPOUNDMENT

Zone 1 Impoundment- River Miles 32.6-26.0: The projects 347-acre impoundment is located in the Towns of Hollis, Standish and Limington. The normal impoundment elevation is 216.3 ft, the average width is 430 ft with a length of 6.6 miles.

FIGURE 2-2. ZONE 1 – PROJECT IMPOUNDMENT



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

Facility Name: Bonny Eagle

Zone of Effect: 1 – Impoundment

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

Flows into Zone 1 are provided by the mainstem of the Saco river. The Bonny Eagle impoundment is operated as run-of-river with stable headpond management with the ability in the license to draw the level 4.5 ft seasonally. The net or usable storage within the normal 4.5-foot operating range of the Project is approximately 1,150 acre-feet. Maximum depth of the impoundment is approximately 40 feet (near the intake). 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. 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 Saco River for maintenance purposes and such activities are regulated by the Saco River Corridor Commission (SRCC).

Recreation in the impoundment consists of fishing and boating provided by access at the Maine Department of Transportation Rest Area at the upper most extent of the impoundment.

Phase III archaeological field surveys have been completed along the Bonny Eagle Project impoundment, the “Quickwater” site is discussed in section 3.7.1.

2.2 ZONE OF EFFECT 2– PROJECT BYPASS REACH (NEW RIVER CHANNEL)

Zone 2 Bypass Reach (New River Channel) - River mile 26.2-25.5: The "New River" channel diversion dam consists of a spillway section and a minimum flow section with concrete abutments at both ends. The spillway section is a concrete gravity structure measuring 339 feet in length with a permanent crest at elevation 212 ft. It has a 4.5-foot-high rubber dam – inflatable bladder that is divided into two spans with an intermediate pier. The minimum flow section has a crest at elevation 208 ft with a 9-foot inflatable gate designed to pass a minimum flow of 25 cfs in the bypass reach.

FIGURE 2-3. ZONE 2 – PROJECT BYPASS REACH (NEW RIVER CHANNEL)



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

Facility Name: Bonny Eagle

Zone of Effect: 2 – Project Bypass Reach

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

Flows into the “New River” bypass reach channel are provided through the diversion dam as either the required 25 cfs minimum year round flow or 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 Bonny Eagle station and upstream eel passage is provided in the bypass reach at the diversion dam. The implementation schedule for future fish passage at Bonny Eagle is discussed in greater detail in section 3.3 and 3.4. in accordance with existing agreements and license requirements. 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 Saco River for maintenance purposes, which is regulated by the SRCC.

No formal recreation sites are located within the bypass reach due to public safety concerns, occasional fishing is observed in this reach and accessed by informal roadside parking.

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 Bonny Eagle tailrace is formed initially by the arched substructure of the powerhouse. The tailwater extends from the powerhouse down the natural river channel. The normal tailwater elevation at the powerhouse is el. 180.6 ft. The tailwater is partially backwatered by the downstream West Buxton Project (FERC No. 2531) impoundment.

FIGURE 2-4. ZONE 3 – PROJECT TAILRACE



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

Facility Name: Bonny Eagle

Zone of Effect: 3 – Project Tailrace

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

Flows into the tailrace of the Bonny Eagle Project are provided by generation flows through the powerhouse. This reach of the Saco River is Class A.

Downstream anadromous fish passage exists at the powerhouse, there are currently no upstream passage facilities the dates of implementation for which are discussed below in section 3.3 and 3.4 along with further discussion of the upstream eel passage 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 Saco River for maintenance purposes as regulated by the SRCC.

Recreation in this reach includes fishing, swimming and boating provided by access by boat or the canoe portage trail. The trail begins in the powerhouse channel on river right, immediately after going under the Route 35 road bridge. The trail proceeds up the river bank to the station access road, proceeding down the road past the station. The trail then enters the vegetation and continues down the slope to the river below the powerhouse.

There are no cultural resources in this zone of effect.

3.0 LIHI CERTIFICATION CRITERION

The Project is operated as a seasonal run of river and intermittent peaking 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 Saco River. 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 Name, and Standard Selected (including PLUS if selected)	River Mile at upper and lower extent of Zone	A	B	C	D	E	F	G	H
		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	32.6 – 26.0	1	2	1	2	2	2	2	2
#2 Bypass Reach (New River Channel)	26.2 – 25.5	2	2	2	2	2	2	1	1
#3 Tailrace	26.0 – 25.5	2	2	2	1	2	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 impoundment elevation restrictions, with a seasonal run of river mode of operation, pursuant to the requirements of Article 401 and Condition 1 of the Project’s WQC, as discussed for Zone 1 below. In addition, there are minimum bypass reach flow requirements for the “New River” channel as dictated by Article 402 and Condition 2 of the Project’s WQC, as discussed for Zone 2 below. The tailrace, Zone 3, receives flows from generation and required minimum flows pursuant to Article 401 and Condition 1 and the backwater effects from the West Buxton Project downstream as well as the minimum and spill flows discharged to the bypass reach, which converges with the tailrace downstream.

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

Article 403 – Monitoring of Water Levels and Minimum Flows

The licensee shall, within 180 days from the date of issuance of this license, file with the Commission, for approval, a plan to monitor reservoir water levels required by Article 401 and minimum flows required by Article 402 to ensure that the fish resources in the Bonny Eagle reservoir and downstream are adequately protected under the required reservoir water level regime and the minimum flow release regime, respectively. The licensee shall prepare the plan after consultation with the U.S. Fish and Wildlife Service (FWS), the Maine Department of Environmental Protection (Maine DEP), and the Maine Department of Inland Fisheries and Wildlife (Maine Fisheries and Wildlife).

The plan shall include: (1) the location and a description of the equipment used for monitoring, (2) a schedule for installation; (3) the method and frequency of data collection; and (4) a provision for providing the data to FWS, Maine DEP, and Maine Fisheries and Wildlife within 30 days from the date of the request from these agencies.

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 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.

The Commission reserves the right to require changes to the plan. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

The Plan was filed on August 27, 1998 and accepted by the FERC on November 19, 1998 (see Section 6.0).

3.1.1 ZONE 1 – IMPOUNDMENT

Criterion	Standard	Supporting Information
A	1	<p>Not Applicable / De Minimis Effect:</p> <ul style="list-style-type: none"> For impoundment zones only, explain water management (e.g., fluctuations, ramping, refill rates) and how fish and wildlife habitat within the zone is evaluated and managed. NOTE: this is required information, but it will not be used to determine whether the Ecological Flows criterion has been satisfied. All impoundment zones can apply Criterion A-1 to pass this criterion.

Brookfield's NSCC monitors operations including impoundment elevations and flows through the Bonny Eagle 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. However, the owner does have an administrative operating limit of 218.3 ft. to protect the dike embankment. There is a FERC low head pond level limit at Bonny Eagle. From April 1 to June 30 the pond draw-down limit is 1 foot from full pond to 215.30 feet when rubber dams are inflated. From July 1 to March 31 the pond can be drawn down 4.5 feet from normal full pond to 211.80 feet. In addition to the flow requirements listed below, 200 cfs is provided for downstream passage from April 1 to December 31.

Minimum flows are required for the bypass reach (year-round 25 cfs) and from the Project (bypass and powerhouse flows inclusive) as discussed below. Any deviations for impoundment elevations and minimum flow requirements at the Project are reported to FERC, deviations are attached in section 6.6.

Article 401 dictates water level management at the Project; the text of Article 401 is as follows:

Article 401 - Water Levels

The licensee shall maintain water levels in the Bonny Eagle impoundment in accordance with the following schedule:

(a) From April 1 through June 30, no more than one foot below normal full pond elevation when the New River Channel dam flashboards are in place, and no more than one foot below the New River Channel dam spillway crest elevation when the flashboards are not in place;

{b) From July 1 through March 31, no more than 4.5 feet below the normal full pond elevation when the New River Channel dam flashboards are in place, and no more than 4.5 feet below the New River Channel dam spillway crest when the flashboards are not in place.

This water level regime may be temporarily modified by: (1) Commission approved maintenance activities; (2) operating emergencies beyond the control of the licensee that may include, but are not limited to, equipment failure or other temporary abnormal operating conditions resulting from extremes in inflows to the project, power supply emergencies, and for public health and safety reasons; or (3) for short periods upon mutual agreement among the licensee, the U.S. Fish and Wildlife Service, the Maine Department of Environmental Protection, and the Maine Department of Inland Fisheries and Wildlife. If the water level regime is so

modified, the licensee shall notify the Commission and the resource agencies as soon as possible, but no later than ten days after each such incident.

Condition 1 of the Water Quality Certification likewise dictates water level management and states:

1. WATER LEVELS

A. The applicant shall maintain water levels at the Bonny Eagle Project in accordance with the provisions of the "Instream Flow Agreement for Hydroelectric Projects on the Saco River." Specifically, except as temporarily modified by (1) approved maintenance activities, (2) inflows to the project area, (3) flashboard release or maintenance, (4) operating emergencies beyond the applicant's control, as defined below, or (5) agreement between the applicant and appropriate state and/or federal agencies, water levels in the project impoundment shall be maintained as follows:

- From April 1 through June 30 annually, no more than one foot below normal full pond elevation (flashboard crest) when the flashboards are in place, and no more than one foot below the New Channel Dam" spillway crest elevation when the flashboards are not in place; and*
- From July 1 through March 31 annually, no more than 4.5 feet below normal full pond elevation (flashboard crest) when the flashboards are in place, and no more than one foot below the "New Channel Dam" spillway crest elevation when the flashboards are not in place.*

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 water levels in the impoundment as required by Part A of this condition. These plans shall be reviewed by and must receive approval of the DEP Bureau of Land and Water Quality.

The fluctuation regime for the Bonny Eagle Project was determined in part due to its benefits to the existing wetlands and reservoir wildlife within the project boundary. The following excerpt and further discussion of these benefits can be found in section 4.2.1.1.3 of the Final Environmental Impact Statement for the Saco River (linked in section 6.1). *"The Eco-Analysts'(1993c) reservoir study showed that the extent of wetland is greater under the present operation than it would be at a stable water level (i.e., operation in run-of-river mode). If the project were operated in a run-of-river mode, Eco-Analysts predicts that a minimum of 15 percent (about 52 acres) of the existing wetlands would be lost...We conclude that CMP's current and proposed operation of Bonny Eagle reservoir would maintain the present high value for wildlife diversity and abundance as shown in the studies conducted."*

As also reported in Section 3.3.1.2 of the Final Environmental Impact Statement for the Saco River, the impacts to aquatic habitat from the drawdown are limited. *"In summary, CMP (1991) reports that, with several exceptions, the main channel areas of the reservoir provided only small quantities of suitable fish spawning or nursery habitat for the primary game species in the reservoir. The upper end of the reservoir immediately below Limington Rips provides quality smallmouth bass habitat, with its coarse substrate, more riverine characters, and abundant*

velocity refuges. ..The backwater areas, however, provide excellent rearing and foraging habitat for several species of fish...Thus, the total area of habitat dewatered within the reservoir during a 4 ft drawdown was about 15.8 percent of the total area...much of the dewatered habitat was considered clay and sand habitat (20.2 acres), generally not regarded as quality fish habitat and only minimal amounts of gravel, cobble and boulder substrate (<1 acre total) were dewatered..."

The water level management regime is also a function of the Saco River Instream Flow Settlement Agreement, the terms of which, including water levels in the Bonny Eagle impoundment, were incorporated into the Project license. Parties to the Settlement Agreement include the US Fish and Wildlife Service (USFWS), Maine Department of Inland Fisheries and Wildlife (MDIFW), Maine Department of Marine Resources (MDMR), Saco River Salmon Club (SRSC), Atlantic Salmon Federation (ASF), Maine Chapter of the Atlantic Salmon Federation (MCASF), Maine Department of Environmental Protection (MDEP), Maine Atlantic Salmon Authority (MASA), Maine State Planning Office (MSPO), Trout Unlimited (TU), Maine Council of Trout Unlimited (MCTU), American Rivers, New Hampshire Department of Fish and Game (NHFGD) and the Cities of Saco and Biddeford.

3.1.2 ZONE 2 –BYPASS REACH & ZONE 3 – TAILRACE

Criterion	Standard	Supporting Information
A	2 The flow regime at the facility was developed in accordance with a, science-based agency recommendation	<p>Agency Recommendation: Identify the proceeding and source, date, and specifics of the agency recommendation applied (NOTE: there may be more than one; identify and explain which is most environmentally protective).</p> <ul style="list-style-type: none"> • Explain the scientific or technical basis for the agency recommendation, including methods and data used. This is required regardless of whether the recommendation is or is not part of a Settlement Agreement. • Explain how the recommendation relates to agency management goals and objectives for fish and wildlife. • Explain how the recommendation provides fish and wildlife protection, mitigation and enhancement (including in-stream flows, ramping and peaking rate conditions, and seasonal and episodic instream flow variations).

The bypass reach flows are regulated through the diversion dam equipped with a rubber dam. The rubber dam is utilized to provide desired flows and operated to maintain minimum flows and headpond levels as required by license.

A year-round release of an instantaneous minimum flow of 25 cfs from the New River Channel Dam to the bypass reach is required. Additional minimum flows from the powerhouse are

required and the minimum flow to the bypass reach is inclusive to the total minimum flow requirements pursuant to Article 402 and Condition 2 of the WQC.

Article 402 – Minimum Flows

The licensee shall operate the Bonny Eagle Project and release minimum flows annually as follows:

- a. From April through June 30, operate run-of-river with outflow approximately equal to inflow, with up to one-foot drawdown of the project impoundment;*
- b. From July 1 through September 30, release an instantaneous minimum flow of 400 cubic feet per second (cfs) or inflow, whichever is less;*
- c. From October 1 through November 15, or for an alternate six week period mutually agreed upon by the licensee, the U.S. Fish and Wildlife Service, the Maine Department of Inland Fisheries and Wildlife, the Maine Department of Marine Resources, and the Maine Atlantic Salmon Authority, release an instantaneous minimum flow of 600 cfs or inflow, whichever is less; this fall flow period shall be no less and no more than six weeks except upon mutual agreement among the licensee and fisheries agencies and shall start no sooner than September 1 and no later than October 1;*
- d. From November 16 through March 31, release an instantaneous minimum flow of 250 cfs or inflow, whichever is less; and*
- e. Year-round, release an instantaneous minimum flow of 25 cfs from the New River Channel dam. This minimum flow to the New River Channel shall be included in the total minimum flows required above.*

This flow regime may be temporarily modified by: (1) Commission-approved maintenance activities; (2) operating emergencies beyond the control of the licensee that may include, but are not limited to, equipment failure or other temporary abnormal operating conditions resulting from extremes in inflows to the project, power supply emergencies, and for public health and safety reasons; or (3) for short periods upon mutual agreement among the licensee, the U.S. Fish and Wildlife Service, the Maine Department of Environmental Protection, the Maine Department of Marine Resources, the Maine Atlantic Salmon Authority, and the Maine Department of Inland Fisheries and Wildlife. If the minimum flow regime is so modified, the licensee shall notify the Commission and the resource agencies as soon as possible, but no later than ten days after each such incident.

Condition 2 of the Project Water Quality Certification dictates required minimum flows into the bypass reach (New River Channel). Condition 2 states:

2. MINIMUM FLOWS

A. The applicant will provide flow releases from the Bonny Eagle Project in accordance with the provisions of the “Instream Flow Agreement for Hydroelectric Projects on the Saco River”. Specifically, except as temporarily modified by (1) approved maintenance activities, (2) inflows to the project area, (3) flashboard release or maintenance, (4) operating emergencies beyond the applicant's control, as defined below, or (5) agreement between the applicant and appropriate state and/or federal agencies, the following minimum flows shall be released from the project:

- From April 1 through June 30 annually, run-of-river operation, with outflow approximately equal to inflow, while allowing for up to a one-foot drawdown of the impoundment;*

- *From July 1 through September 30 annually, an instantaneous minimum flow of 400 cfs or inflow, whichever is less;*
- *From October 1 through November 15 annually, or for such alternate six-week period as may be mutually agreed to by the applicant and state and federal fisheries agencies, as described below, an instantaneous minimum flow of 600 cfs or inflow, whichever is less;*
- *From November 16 through March 31 annually, an instantaneous minimum flow of 250 cfs or inflow, whichever is less; and an instantaneous year-round minimum flow of 25 cfs from the diversion dam into the New River Channel.*
- *All required flows, except for the minimum flow required in the New River Channel, shall be the sum of flows from the powerhouse and the New River Channel.*

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. As provided in the "Instream Flow Agreement for Hydroelectric Projects on the Saco River," the start of the fall flow period may be changed during any year by mutual agreement among the applicant, U.S. Fish and Wildlife Service, Department of Inland Fisheries and Wildlife, the Department of Marine Resources, and the Atlantic Salmon Authority based on the following considerations: (1) expected flow and weather conditions; (2) biological factors such as fish migration or spawning periods; and/or (3) anticipated electrical need for or value of CMP's generation. The fall flow period shall be no less and no more than six weeks, except upon mutual agreement among the parties listed above, and shall start no sooner than September 1 and no later than October 1. Any changes in the timing of the fall flow period will change the ending date of the summer flow period and the beginning date of the winter flow period accordingly for that year.

D. 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 flows required by Part A of this condition. These plans shall be reviewed by and must receive approval of the DEP Bureau of Land and Water Quality.

The tailrace receives flows from Project generation and the minimum required Project flows can be provided via the bypass reach, through the powerhouse, or a combination of both, as discussed below:

- The facility is run-of-river from April 1 to June 30.
- A minimum flow of 400 cfs or inflow, whichever is less, from July 1 through September 30.
- A minimum flow of 600 cfs or inflow, whichever is less, from October 1 through November 15.
- A minimum flow of 250 cfs or inflow, whichever is less, from November 16 to March 31.
- Year-round release of an instantaneous minimum flow of 25 cfs from the New River Channel Dam. This minimum flow to the bypass reach is inclusive to the total minimum flow requirements.

As with the impoundment, Brookfield's NSCC monitors operations including flows through both the powerhouse and diversion dam at the Bonny Eagle 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.

Flows into the New River Channel of 25 cfs were dictated by the 1998 Saco River Instream Flow Agreement, increasing flows from leakage and periodic spill events to a continuous flow of 25 cfs, which was determined to have beneficial effects on water quality and aquatic habitat in the reach as areas normally only periodically wetted during spill events would be continuously inundated. Water velocities would increase, and stagnation and retention times would decrease. Macroinvertebrate species, especially those of limited mobility, would benefit from the increased flows. Additionally, given the substrate in the bypassed reach DO levels would be improved.

As reported in the Final Environmental Impact Statement (FERC, 1996), an assessment of the aquatic habitat of the bypass reach was conducted for relicensing and determined that the New River Channel is unlikely to support the natural reproduction of salmonids due to unsuitable spawning substrate (i.e. the New River Channel is composed almost entirely of fractured bedrock overlain with boulders) and fluctuating flow conditions as a result of high flows passed as spill. For the tailrace, USFWS estimated limited spawning habitat (support of 4 spawning Atlantic salmon), due to the prevalence of bedrock.

In addition, as discussed above, the water level management regime is also a function of the Saco River Instream Flow Settlement Agreement, the terms of which, including minimum flows required at the Project, were incorporated into the Project license. Parties to the Settlement Agreement include the USFWS, MDIFW, MDMR, MDEP, and NHFGD, among others.

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
B	2 The facility is in compliance with all water quality conditions contained in a recent Water Quality Certification or science-based resource agency recommendation providing reasonable assurance that water quality standards will be met for all waterbodies that are directly affected by the facility. Such recommendations, whether based on a generally applicable water quality standard or one that was developed on a site-specific basis, must include consideration of all water quality components necessary to preserve healthy fish and wildlife populations, human uses and recreation.	Agency Recommendation: <ul style="list-style-type: none"> • If facility is located on a Water Quality Limited river reach, provide a link to the state's most recent impaired waters list and indicate the page(s) therein that apply to facility waters. If possible, provide an agency letter stating that the facility is not a cause of such limitation. • Provide a copy of the most recent Water Quality Certificate and any subsequent amendments, including the date(s) of issuance. If more than 10 years old, provide documentation that the certification terms and conditions remain valid and in effect for the facility (e.g., a letter from the agency). • Identify any other agency recommendations related to water quality and explain their scientific or technical basis. • Describe all compliance activities related to water quality and any agency recommendations for the facility, including on-going monitoring, and how those are integrated into facility operations.

The Project is operated as a run of river facility with flow requirements discussed previously in section 3.1 under FERC and agency approved operations and monitoring plans. 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 that provides confirmation the WQC terms and conditions remain valid and in effect for The Bonny Eagle Project (see Section 7).

Collectively, the Department finds that Brookfield has made provisions to monitor and mitigate the impacts of the BEHP on the waters of the Saco River. Further, over several years, Brookfield and previous license holders, have consulted and collaborated with the fisheries resource agencies to develop and enhance fish passage facilities and mitigate the impacts of the Project. The Department finds that the Terms and Conditions set forth by the Project WQC are valid and Brookfield and has taken steps to fulfill the Conditions of the WQC. Therefore, the Department supports LIHI recertification of the Bonney Eagle Project.

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.”

Upstream fish passage requirements at the Project were originally dictated by the 1994 Saco River Fish Passage Agreement, that was incorporated into the new license under Article 406, as follows:

Article 406. Upstream Fish Passage

The licensee shall file with the Commission, for its approval, a plan and schedule for the construction, operation, and maintenance of such interim, permanent, or both interim and permanent upstream facilities as are determined to be necessary based upon assessments conducted by the Maine Atlantic Salmon Authority (Maine Salmon Authority), the Maine Department of Marine Resources (Maine DMR), the Maine Department of Inland Fisheries and Wildlife (Maine Fisheries and Wildlife), the U.S. Fish and Wildlife Service (FWS), and the National Marine Fisheries Service (NMFS) pursuant to the Saco River Fish Passage Agreement (filed with the Commission on November 23, 1994) and Annex 1: Assessment Process and Criteria (filed with the Commission on April 5, 1996), or as may be prescribed by the U.S. Department of Interior (Interior) under Section 18 of the Federal Power Act. If it is determined, based upon the agencies' assessments, that such fish passage facilities are necessary, and/or such facilities are prescribed by Interior:

- (a) The licensee shall file a plan and schedule for interim upstream fish passage facilities at least 90 days prior to implementation of such interim passage;*
- (b) The licensee shall file functional design drawings for permanent upstream passage facilities at least 180 days prior to the commencement of construction of such facilities. The licensee shall include with the drawings: (1) site locations; (2) quantification of flows to operate the facilities; (3) an operation and maintenance schedule; and (4) measures to control erosion and sedimentation during construction.*
- (c) Any requirement for construction of permanent upstream fish passage facilities at the Bonny Eagle Project will provide for completion at least two years before or two years after completion of such facilities at the Bar Mills Project No. 2194, West Buxton Project No. 2531, and Hiram Project No. 2530; and no permanent upstream passage facilities will be required to be operational at the Bonny Eagle Project before May 1, 2005.*

The licensee shall prepare the plan and drawings required in (a) and (b) above, after consultation with FWS, NMFS, Maine DMR, Maine Salmon Authority, and Maine Fisheries and Wildlife. The licensee shall include with the plan and drawings, as appropriate, documentation of consultation, copies of comments and recommendations on the plan or drawings and schedule. after they have been prepared and provided to the agencies, and specific descriptions of how agencies' comments are accommodated by the licensee's facilities. The licensee shall allow a minimum of 30 days to comment and make recommendations before filing the plan or drawings 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 any proposed facilities. Upon Commission approval, the licensee shall implement the proposal, including any changes required by the Commission. As-built drawings of any permanent upstream fish passage facilities shall be filed in accordance with the requirements of Article 301. At the same time the licensee files as-built drawings with the Commission, as-built drawings shall also be filed with the above listed resource agencies.

Article 406 was modified by order on July 18, 2007, which incorporated the terms of the 2007 Saco River Fish Passage Settlement Agreement into the Bonny Eagle license as follows:

(A) *The licensee's March 27, 2007 filing of the 2000-2005 final assessment report – Saco River fish passage adequately fulfills the reporting requirements under the licenses for the Cataract Project, Skelton Project, Bar Mills Project, West Buxton Project, Bonny Eagle Project, and Hiram Project and is approved. The licensee shall no longer file assessment reports on the need for upstream fish passage.*

(B) *The licensee's recommendations for fish passage and fisheries management at the Skelton Project (FERC No. 2527), Cataract Project (FERC No. 2528), Bonny Eagle Project (FERC No. 2529), Hiram Project (FERC No. 2530), and West Buxton Project (FERC No. 2531), as modified by paragraphs (D) through (F) below, is approved.*

(C) *The licensee shall have both upstream and downstream eel passage operational at the projects by the following dates:*

<i>PROJECT</i>	<i>UPSTREAM EEL PASSAGE OPERATIONAL DATE</i>	<i>DOWNSTREAM EEL PASSAGE OPERATIONAL DATE</i>
<i>Cataract-East and West Channel Dams</i>	<i>June 1, 2008</i>	<i>September 1, 2011</i>
<i>Cataract-Springs/ Bradbury Dam</i>	<i>June 1, 2010</i>	<i>n/a</i>
<i>Skelton</i>	<i>June 1, 2012</i>	<i>September 1, 2024</i>
<i>West Buxton</i>	<i>June 1, 2016</i>	<i>September 1, 2028</i>
<i>Bonny Eagle</i>	<i>June 1, 2018</i>	<i>September 1, 2030</i>
<i>Hiram</i>	<i>June 1, 2020</i>	<i>September 1, 2032</i>

The licensee shall provide a single permanent upstream anadromous fish passage facility at each of the projects according to the following schedule:

<i>PROJECT</i>	<i>OPERATIONAL DATE</i>
<i>West Buxton</i>	<i>May 1, 2019</i>
<i>Bonny Eagle</i>	<i>May 1, 2022</i>
<i>Hiram</i>	<i>May 1, 2025</i>

The licensee shall notify the Commission within 30 days of each facility being completed and operational. Revised Exhibit F drawings showing each facility as-built shall be filed, for Commission approval, within 180 days of completion of each facility.

(D) *The licensee shall develop, in consultation with the U.S. Fish and Wildlife Service (FWS), National Marine Fisheries Service (NMFS), and Maine Atlantic Salmon Commission (MASC), a plan for a three-year study of Atlantic salmon kelts to determine/examine downstream passage routes at select Saco River sites. The plan shall include, at a minimum, the following: (1) a phase one desktop study to determine which project have the most potential to*

delay/affect kelt passage; (2) a phase two study which focuses on the passage routes at no more than two selected projects; (3) conducting the study in the spring (3 months) using 20 to 30 fish per year and yield the equivalent information of a radio-telemetry study. The plan shall include a description of the goals and objectives that are to be met, results to be reported, as well as a schedule for implementing the study. The licensee shall submit the plan to the FWS, NMFS, and MASC by April 1, 2009 and allow the agencies at least 30 days to comment and provide recommendations on the plan. By July 1, 2009, the licensee shall file its proposed plan with the Commission, for approval, and include all agency comments and recommendations and any response comments by the licensee. The Commission reserves the right to require changes to the plan.

(E) The licensee shall conduct a two-year semi-quantitative study of downstream passage effectiveness for clupeids (using, for example, standardized observations, video cameras, and rotary screw traps, or similar methods) at the Cataract Project during the summers of 2007 and 2008; at the Skelton Project during the summers of 2009 and 2010; and sequentially at the West Buxton Project and Bonny Eagle Project beginning the year after 6 adult clupeids per acre of impoundment (approximately 790 fish at West Buxton and 2,080 fish at Bonny Eagle) are passed or stocked above the specific project. Prior to conducting the studies, the licensee shall file a study plan which describes the goals of the study and expectation of results, as well as a description of what is to be included in the summary report to be prepared upon completion of each study. Each study plan shall include a schedule for implementing the study and filing each summary 20070718-3030 Issued by FERC OSEC 07/18/2007 in Docket#: P-2527-064 Project No. 2527-064 et al. 16 report. The study plan shall be prepared in consultation with the U.S. Fish and Wildlife Service (FWS), National Marine Fisheries Service (NMFS), and Maine Department of Marine Resources (Maine DMR). The licensee shall allow the agencies 30 days to make comments and recommendations before filing the study plan with the Commission for approval. The licensee's filing shall include any comments or recommendations on the plan and the licensee's response to any comments or recommendations received. The Commission reserves the right to require changes to the plan.

(F) The licensee shall conduct an electro-fishing survey of smallmouth and largemouth bass populations in the West Buxton Project impoundment in 2007, in the Bonny Eagle impoundment in 2008, and in the Lake Arrowhead impoundment in 2009, and provide standard bass population data to the Maine Department of Inland Fisheries and Wildlife and the Commission by March 31, 2008, March 31, 2009, and March 31, 2010, respectively, before introduction of alewife into the impoundment or upstream waters occur. The sample data provided for each bass survey shall include sample dates and location, habitat type, sampling depth, gear type, time and duration of the sample and prevailing weather conditions. The standard bass population data (population descriptive metrics) reported shall include number of bass collected during the sampling, species (largemouth or smallmouth), catch per unit effort, weight and length, condition factor, and population age structure and growth rates using scale samples for all Age 1+ bass. The licensee shall provide the U.S. Fish and Wildlife Service, National Marine Fisheries Service, Maine Department of Marine Resources, Maine Atlantic Salmon Commission, and MDIFW with numeric abundance data for other species collected during the bass population survey.

(G) *This order constitutes final Commission action. Requests for rehearing by the Commission may be filed within 30 days of the date of issuance of this order, pursuant to 18 C.F.R. ' 385.713.*

The Settlement Agreement was once again modified in 2019 and by order dated July 17, 2019, FERC incorporated the terms of the revised Settlement Agreement into the licenses of the Saco River Projects, including Bonny Eagle as follows:

(A) *Brookfield White Pine Hydro, LLC's filing of its amended Saco River Fish Passage Assessment, filed on May 8, 2019, for the Skelton Project (FERC No. 2527), Cataract Project (FERC No. 2528), Bonny Eagle Project (FERC No. 2529), Hiram Project (FERC No. 2530), West Buxton Project (FERC No. 2531) and the Bar Mills Project (FERC No. 2194), is approved.*

(B) *The licensee shall provide a single permanent upstream anadromous fish passage facility at each of the projects according to the following schedule:*

<i>PROJECT</i>	<i>OPERATIONAL DATE</i>
<i>Bar Mills</i>	<i>May 1, 2025</i>
<i>West Buxton</i>	<i>May 1, 2027</i>
<i>Bonny Eagle</i>	<i>May 1, 2029</i>
<i>Hiram</i>	<i>May 1, 2032</i>

The licensee shall notify the Commission within 30 days of each facility being completed and operational. Revised Exhibit F drawings showing each facility as-built shall be filed, for Commission approval, within 180 days of completion of each facility.

(C) *Construction and improvements at Cataract East and West and Skelton projects and the Springs Island nature-like fishway (NLF), shall be completed no later than May 1, 2020. The licensee will conduct no less than two (2) years of upstream and downstream fish passage studies for adult and juvenile alewife and American beginning in the spring of 2021 or the Spring following the completion of the NLF.*

(D) *At least 60 days prior to the start of construction, the licensee shall submit one copy of its plans and specifications and supporting design document to the Commission's Division of Dam Safety and Inspections (D2SI)—New York Regional Engineer, and two copies to the Commission (one of these shall be a courtesy copy to the Director, D2SI). The submittal must also include as part of preconstruction requirements: a Quality Control and Inspection Program Temporary Construction Emergency Action Plan, and Soil Erosion and Sediment Control Plan. The licensee may not begin construction until the D2SI—New York Regional Engineer has reviewed and commented on the plans and specifications, determined that all preconstruction requirements have been satisfied, and authorized start of construction.*

(E) *This order constitutes final agency action. Any party may file a request for rehearing of this order within 30 days from the date of its issuance, as provided in (§) 313(a) of the Federal Power Act, 16 U.S.C. § 825l (2012), and the Commission's regulations at 18 CFR § 385.713 (2018). The filing of a request for rehearing does not operate as a stay of the effective date of this order, or of any other date specified in this order. The licensee's failure to file a request for rehearing shall constitute acceptance of this order.*

The Bonny Eagle Project does not have upstream fish passage installed to date, pursuant to the 2019 Amendment to the Settlement Agreement but has operational upstream eel passage, discussed below, and has downstream fish passage as discussed in section 3.4 of this application. Monitoring of the effectiveness of the upstream fish passage facility is a requirement of Article 408, which will be completed following the construction of upstream fish passage facilities at the Project.

Article 408. Upstream Fish Passage Monitoring

The licensee shall, at least 180 days prior to commencement of construction of upstream fish passage facilities, file for Commission approval, a plan and schedule to monitor the effectiveness of the upstream fish passage facilities required in article 406. The licensee shall design the monitoring plan after consultation with the U.S. Fish and Wildlife Service, the National Marine Fisheries Service, the Maine Department of Marine Resources, the Maine Atlantic Salmon Authority, and the Maine Department of Inland Fisheries and Wildlife. The licensee shall include with the plan, documentation, copies of comments and recommendations on the plan and schedule after they have been prepared and provided to the agencies, and specific descriptions of how agencies' comments are accommodated by the licensee's plan. The licensee shall allow a minimum of 30 days 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 proposed plan. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

3.3.1 ZONE 1 - IMPOUNDMENT

Criterion	Standard	Instructions
C	1	<p><u>Not Applicable / De Minimis Effect:</u></p> <ul style="list-style-type: none"> • 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.

As discussed below, fish passage at the Bonny Eagle Project are dictated by a series of fish passage Settlement Agreements in 1997, 2007 and 2019. (See section 6.3 and 6.5.2 for links to agreements and agency correspondence). Upstream fish passage is not required at the Project until 2029, however, upstream eel passage facilities were installed in 2018. There is unimpeded movement of fish and eel within the impoundment.

3.3.2 ZONE 2 – BYPASS REACH AND ZONE 3 - TAILRACE

Criterion	Standard	Instructions
C	2	<p><u>Agency Recommendation:</u></p> <ul style="list-style-type: none"> • Identify the proceeding and source, date, and specifics of the agency recommendation applied (NOTE: there may be more than one; identify and explain which is most environmentally protective). • Explain the scientific or technical basis for the agency recommendation, including methods and data used. This is required regardless of whether the recommendation is or is not part of a Settlement Agreement. • 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)

The Bonny Eagle upstream eel passage located on the bypass reach next to the rubber dam was operational from June 1 through September 30 in 2019. In 2019, 784 American eels passed at the Bonny Eagle eel passage and ranged in size from 85 mm to 185 mm. There were 634 eels passed in its first year of operation 2018. 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 1994 Saco River Fish Passage Agreement, that was incorporated into the new license under Articles 404 and 405, as follows:

Article 404. Interim Downstream Fish Passage

The licensee shall, within 60 days from the date of issuance of this license, file with the Commission for approval a plan and schedule for the construction and operation of interim downstream fish passage facilities. These facilities shall become operational at such time as anadromous fish have been released upstream and shall continue to be operational until permanent downstream fish passage facilities have been constructed and become operational under this license. The licensee shall prepare the plan after consultation with the U.S. Fish and Wildlife Service, the National Marine Fisheries Service, the Maine Department of Marine Resources, the Maine Atlantic Salmon Authority, and the Maine Department of Inland Fisheries and Wildlife. The licensee shall include with the plan, documentation of consultation, copies of comments on the plan and schedule after they have been prepared and provided to the agencies, and specific 'descriptions of how agencies comments are accommodated by the licensee's 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 proposed facilities. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

Article 405. Permanent Downstream Fish Passage

The licensee shall, within 180 days from the date of issuance of this license, file with the Commission for approval, functional design drawings of downstream fish passage facilities. The downstream fish passage facilities shall be constructed and operational within two years from the date of issuance of this license. The licensee shall include with the design drawings: (1) site locations; (2) quantification of flows to operate the facilities; (3) operation and maintenance Project No. 2529-005 -24- schedules; and (4) measures to control erosion and sedimentation during construction. The licensee shall prepare the drawings and plans after consultation with the U.S. Fish and Wildlife Service, the National Marine Fisheries Service, the Maine Department of Marine Resources, the Maine Atlantic Salmon Authority, and the Maine Department of Inland Fisheries and Wildlife. The licensee shall include with the drawing's documentation of consultation, copies of comments and recommendations on the drawings and schedule after they have been prepared and provided to the agencies, and specific descriptions of how agencies comments are accommodated by the licensee's facilities. The licensee shall allow a minimum of 30 days to comment and make recommendations before filing the drawings 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 proposed facilities. Upon Commission approval, the licensee shall implement the proposal, including any changes required by the Commission. As-built drawings of the downstream fish passage facilities shall be filed in accordance with the requirements of Article 301. At the same time the licensee files as-built drawings with the Commission, as-built drawings shall also be filed with the resource agencies.

The final design drawings for the permanent downstream fish passage facilities were filed with the Commission on September 28, 1998 and supplemented on January 29, 1999 with agency concurrence. The plans were approved by the FERC on July 13, 1999. As-built drawings for the final downstream fish passage facilities were filed on March 14, 2001 and approved by the Commission on May 5, 2001. For the 2019 passage season, the Bonny Eagle downstream bypass was opened on March 30 (flow of 200 cfs) and remained in operation until December 16.

The Project is scheduled to install downstream eel passage by 2030 as discussed above in section 3.3. Monitoring of the fishways is required pursuant to Article 407 as follows:

Article 407. Downstream Fish Passage Monitoring

The licensee shall, within 180 days from the date of issuance of this license, file for Commission approval, a plan and schedule to monitor the effectiveness of the downstream fish passage facilities required in Article 405. The licensee shall design the monitoring plan after consultation with the U.S. Fish and Wildlife Service, the National Marine Fisheries Service, the Maine Department of Marine Resources, the Maine Atlantic Salmon Authority, and the Maine

Department of Inland Fisheries and Wildlife. The licensee shall include with the plan, documentation of consultation, copies of comments and recommendations on the plan and schedule after they have been prepared and provided to the agencies, and specific descriptions of how agencies' comments are accommodated by the licensee's plan. The licensee shall allow a minimum of 30 days 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 proposed plan. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission. The results of the monitoring must be submitted to the Commission according to the approved schedule, along with comments from the consulted agencies on the results. If the monitoring results indicate that further measures are necessary to effectively pass anadromous fish, the licensee shall provide, for Commission approval, these measures and an implementation schedule. These measures shall include structural and operational changes necessary to ensure that anadromous fish effectively pass the project.

Article 407 was modified by the FERC's December 17, 1999 Order Modifying and Approving Downstream Fish Passage Facilities Study Plan which provides downstream passage for Atlantic salmon smolts. BWPH requested to discontinue downstream monitoring until the upstream fish passage facility is installed. This request was approved by FERC on July 17, 2019.

3.4.1 ZONE 1 – IMPOUNDMENT AND ZONE 2 – BYPASS REACH

Criterion	Standard	Supporting Information
D	<p>2</p> <p>The facility is in compliance with a science-based resource agency recommendation for downstream fish passage or fish protection, which may include provisions for appropriate monitoring and effectiveness determinations</p>	<p>Agency Recommendation:</p> <ul style="list-style-type: none"> • Explain why the facility does not impose a barrier to downstream fish passage in the designated zone, considering both physical obstruction and increased mortality relative to natural downstream movement (e.g., entrainment into hydropower turbines). Typically, tailwater/downstream zones will qualify for this standard since below a dam and powerhouse there is no facility barrier to further downstream movement. Bypassed reach zones must demonstrate that flows in the reach are adequate to support safe, effective and timely downstream migration. • For riverine fish populations that are known to move downstream, explain why the facility does not contribute adversely to the sustainability of these populations or to their access to habitat necessary for successful completion of their life cycles. • Document available fish distribution data and the lack of migratory fish species in the vicinity. • If migratory fish species have been extirpated from the area, explain why the facility is or was not the cause of this.

The impoundment provides approximately 6.6 miles of unimpeded river reach for downstream migrating fish and eel. There are no obstructions to passage in Zone 1.

The Bonny Eagle Dam provides a continuous minimum flow of 25 cfs into the bypass reach channel. The bypass reach is managed year-round to support MDIFW recreational trout stocking efforts for a seasonal trout fishery. Approximately 350 Brown trout and 600 Brook trout are stocked into this reach annually.

The downstream anadromous fish passage facility consists of a sluiceway within the power canal that is located immediately adjacent to the powerhouse with a gated entry located at the end of the intake structure (intake trashracks are 3/8-inch bar steel with 2-inch clear spacing). The sluice is a concrete flume approximately 7 feet wide by 100 feet long and the sluice gate extends approximately 5.3 feet below full impoundment level. The downstream anadromous fish passage is open annually (as conditions allow) from April 1 through December 31 to pass 200 cfs.

Adult river herring (at approximately 5 to 7 fish per surface acre) are transported from the Cataract East Channel fish lift and stocked above the Bonny Eagle Project. No other migratory species is present in project waters as upstream fish passage is not provided at the Project nor at dams located downstream and shad and Atlantic salmon are not stocked above the Bonny Eagle Project. Stocking records for river herring in the Saco River above the Bonny Eagle Project are as follows:

YEAR	TOTAL ADULT RIVER HERRING STOCKED
2015	1500
2016	0 (Due to low Herring Run)
2017	1627
2018	1582
2019	1060
2020	1500

3.4.2 ZONE 3 – TAILRACE

Criterion	Standard	Supporting Information
D	<p>1</p> <p>Not Applicable/De Minimis Effect: The facility does not create a barrier to downstream passage, or there are no migratory fish in the vicinity of the facility; if migratory fish were present historically, the facility did not contribute to the extirpation of such species; the facility does not contribute adversely to the sustainability of riverine fish populations or to their access to habitat necessary for the completion of their life cycles</p>	<ul style="list-style-type: none"> • Explain why the facility does not impose a barrier to downstream fish passage in the designated zone, considering both physical obstruction and increased mortality relative to natural downstream movement (e.g., entrainment into hydropower turbines). Typically, tailwater/downstream zones will qualify for this standard since below a dam and powerhouse there is no facility barrier to further downstream movement. Bypassed reach zones must demonstrate that flows in the reach are adequate to support safe, effective and timely downstream migration. • For riverine fish populations that are known to move downstream, explain why the facility does not contribute adversely to the sustainability of these populations or to their access to habitat necessary for successful completion of their life cycles. • Document available fish distribution data and the lack of migratory fish species in the vicinity. • If migratory fish species have been extirpated from the area, explain why the facility is or was not the cause of this.

There is no impedance to downstream migration below the Bonny Eagle Dam. There are downstream passage facilities for fish at the Project as discussed below.

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.”

Issuance of the project license included two monitoring requirements for macroinvertebrates and wetland communities as follows:

Article 409 – Monitoring of Macroinvertebrate Community

The licensee shall, within 180 days from the date of issuance of this license, file for Commission approval, a plan to monitor the macroinvertebrate community downstream of the West Buxton Project No. 2531 to determine whether the macroinvertebrate community is meeting applicable aquatic life standards under the minimum flow regime required by Article 402. The licensee shall include with the plan: (1) an implementation schedule with duration of monitoring; (2) a description of the sampling sites; (3) sampling methodology and frequency of sampling; and, (4) a description of how data will be analyzed. The licensee shall provide a report to the consulting resource agencies listed in the paragraph below, and to the Commission, within 120 days of completion of the monitoring. The report shall include recommendations for any measures necessary to protect and enhance the macroinvertebrate community. The licensee shall prepare the plan 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 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 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. The Commission reserves the right to require changes to the plan. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission. If the results of the monitoring indicate that changes in project structures or operations, including alternative flow releases, are necessary to protect and enhance the macroinvertebrate community, the Commission may direct the licensee to modify project structures or operations.

The Macroinvertebrate Monitoring Plan was filed with the Commission on August 28, 1998 and a report was filed on May 25, 2001 and supplemented on July 12, and October 4, 2001. The licensee's monitoring plan, approved by FERC's November 1998 order, required the licensee to monitor the macroinvertebrate community immediately downstream from the West Buxton Project, which is the first un-impounded, riverine reach below the Bonny Eagle Project. The summary and conclusions of this report are as follows and the full report is linked in section 6.5.1.

1. The Saco River is a sixth order river.
2. The substrates in the study area were predominantly coarse, eroded rubble and gravel and were covered with filamentous algae.

3. The structure and function of the invertebrate community of the Saco River appears healthy. The community is dominated by collector organisms which is to be expected in a river of this size. Indications of enrichment are the large numbers of organisms, particularly filter feeders and the large number of taxa represented.
4. Based on the results of this study, the community below West Buxton Project has improved since 1991.
5. It is ECO-ANALYSTS INC. professional opinion that the Saco River attains Biological Water Quality Standards for Class A based on 38 §464, subsection 11.

The Wetlands Protection and Enhancement Plan is discussed below under Zone 1 – Impoundment as the protections were implemented for wetlands sites adjacent to the impoundment and lands along Zone 2 – Bypass Reach and Zone 3 – Tailrace are very limited.

3.5.1 ZONE 1 - IMPOUNDMENT

Criterion	Standard	Supporting Information
E	2	<u>Agency Recommendation:</u> <ul style="list-style-type: none"> • Provide copies or links to any agency recommendations or management plans that are in effect related to protection, mitigation, or enhancement of shoreline surrounding the facility (e.g., Shoreline Management Plans). • Provide documentation that indicates the facility is in full compliance with any agency recommendations or management plans that are in effect.

The current project boundary encloses the dam and powerhouse; which is backwatered by the downstream FERC Hydroelectric Project West Buxton. The project boundary follows the reservoir shoreline up to the 218 ft NGVD elevation (see Exhibit G in Section 6.0) to encompass flowage rights. There are no significant shoreline lands along the impoundment. A small parcel upstream of the powerhouse includes the canoe portage trail.

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. The Project is not required to have a Shoreline Management Plan, pursuant to FERC licenses and amendments (see Section 6.0).

Brookfield conducts a yearly wetlands assessment of identified areas and a formal report is submitted every 5 years in accordance with Article 411 of the Project license, which states:

Article 411 - Bonny Eagle Wetlands Protection and Enhancement Requirements

Within 180 days after the issuance of the license, the licensee shall file with the Commission for its approval, a plan to enhance wetlands at sites 1, 2, and 4, totaling 15 acres in area, as identified in Central Maine Power Company's July 1, 1993 response to the Commission's information request of May 29, 1992, and Central Maine Power Company's associated report entitled "Wetland Assessment and Enhancement Opportunity Evaluation of the Bonny Eagle Hydroelectric Project," (Wetland Report) by Eco-Analysts, Inc. The plan shall include, at a minimum:

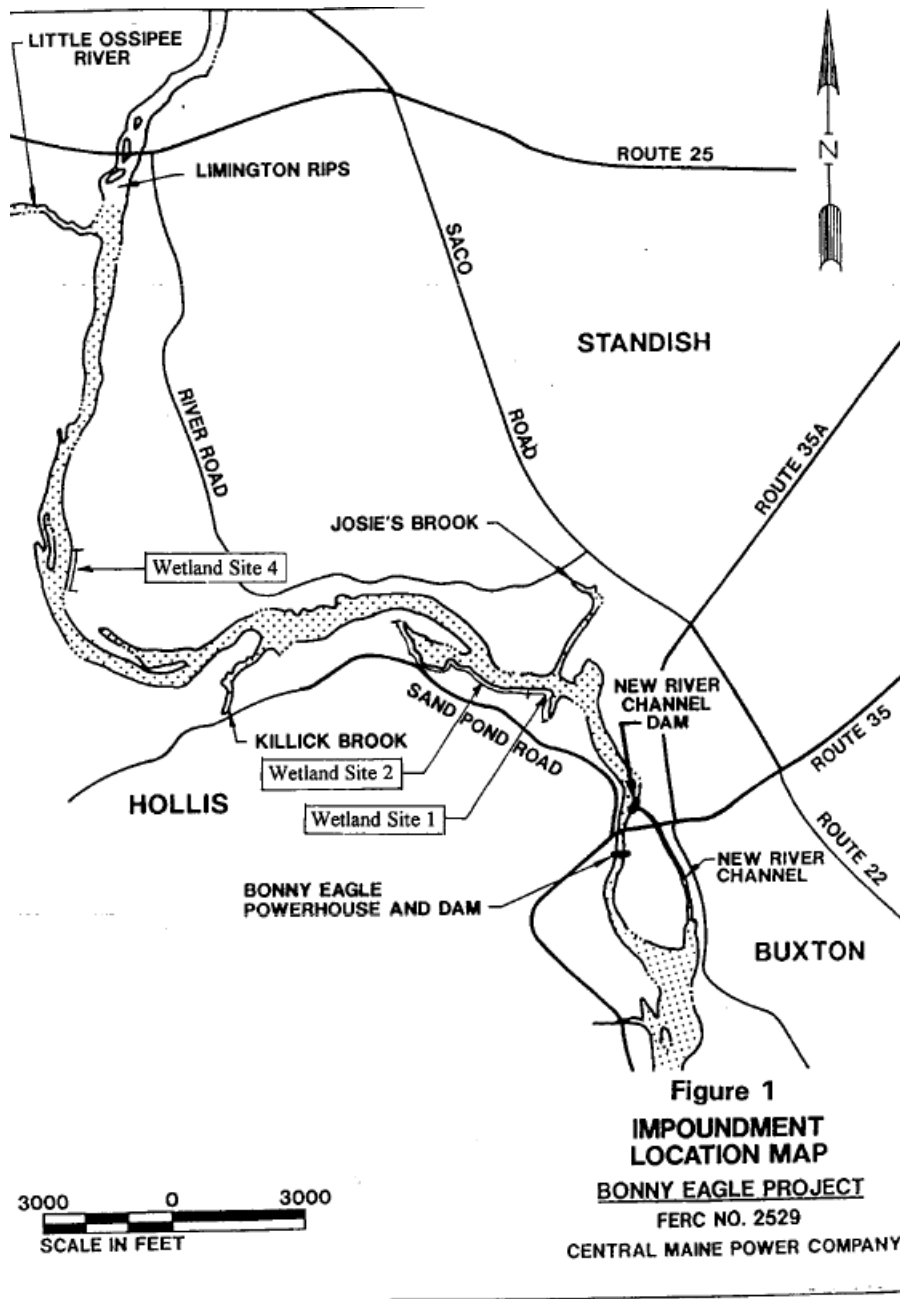
- a. details of the final design of wetlands enhancement measures, which shall include, but be not limited to: (1) creation of a buffer, at least 100 feet wide, along the impoundment shoreline to keep agricultural activity (e.g., crops and livestock) away from the water; (2) seeding of disturbed and eroded shoreline with suitable plants; and (3) protection of the buffer areas from disturbance to allow natural vegetation to become established;*
- b. a monitoring program which: (1) evaluates the effectiveness of the wetlands enhancement measures at sites 1, 2 and 4; and (2) sets out steps to be taken if the wetland enhancement measures at these sites are not effective (such as, but not limited to, modifying the enhancement measures at sites 1, 2, and 4, or enhancing other sites identified in the Wetland Report);*
- c. a procedure to provide recommendations to the agencies and the Commission for alternative wetland enhancement if monitoring indicates that the implemented wetland enhancement is not successful; (d) schedules for: (1) "implementing wetlands enhancements; (2) conducting and filing the results of the monitoring program; and (3) filing recommendations for alternative wetlands enhancement measures, including schedules for implementation and monitoring.*

The licensee shall prepare the plan after consultation with the US Fish and Wildlife Service and the Maine Department of Inland Fish and Wildlife. The licensee shall include with the plan documentation of consultation with the agencies before preparing the plan, copies of agency comments or recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how all the agency comments were accommodated by the plan. The licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations prior to filing plans 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 plan, including any changes required by the Commission.

The Wetlands Enhancement and Protection Plan was filed with the Commission on August 27, 1998 and approved by FERC on September 17, 1998. The Plan outlined protection measures and monitoring for three wetland sites (see figure below) and annual 5 year reporting requirements. Specifically, as discussed within the Plan, Site 1 is a 21.3 acre parcel, approximately 2.9 acres of which lie within the project boundary; Site 2 is a portion of the riparian area of at least four parcels of land owned by others and wholly within the project boundary; Site 4 is mostly outside of the project boundary. The protection measures included revegetation of disturbed areas within the 100 ft buffer strip around the wetlands, discontinuing leases for agricultural uses within the buffer zone, installing fencing on areas within the project boundary, and monitoring. While protection measures and buffers were put in place on lands

owned by the license but outside of the project boundary, these lands were not incorporated into the project boundary.

FIGURE 3-1. PROJECT WETLANDS



Following approval of the Plan, the Wetlands Enhancement and Protection Reports were filed with the Commission on April 16, 2003; March 21, 2008, January 2, 2014; and April 3, 2019. As indicated in the most recent filed Wetlands Monitoring Report (2019):

Riparian buffer sites 1 and 2 are well vegetated with trees, shrubs, and herbaceous vegetation and the soils are stable as observed during the current inspection. There was no evidence of livestock grazing or other agricultural activities. Both sites are in sound ecological condition and providing high value wildlife habitat. Native vegetation has become established at each site and soils are stable with no evidence of erosion. There is a minor amount of passive recreational activity at Site 1. There is a primitive boat launch and recreational activities at Site 2. The buffer at site 4 is vegetated with native grasses, sedges, perennial forbs, and other herbaceous species. The site is stable and providing high quality wildlife habitat. The site was last tilled in 2009 and the soil has not been disturbed since then. The bank along the Saco River is heavily vegetated with shrubs and trees. There are no areas with the potential for erosion and sedimentation on any of the sites. All three sites are meeting the goals and objectives of the Bonny Eagle Project Wetland Protection and Enhancement Plan. Wildlife species observed within and adjacent to the three buffer sites include wood ducks, mallards, great blue heron, downy woodpecker, eastern gray squirrel, white-tailed deer, American goldfinch, snapping turtle, bald eagle, red-winged blackbird, northern harrier, belted kingfisher, and eastern wild turkey.

3.5.2 ZONE 2 – BYPASS REACH AND ZONE 3 – TAILRACE

Criterion	Standard	Instructions
E	1	Not Applicable / De Minimis Effect:
		<ul style="list-style-type: none"> • If there are no lands with significant ecological value associated with the facility, document and justify this (e.g., describe the land use and land cover within the FERC project or facility boundary, and absence of critical habitat for protected species).
		<ul style="list-style-type: none"> • Document that there have been no Shoreline Management Plans or similar protection requirements for the facility.

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 has identified the Blanding’s Turtle as the only state-listed Endangered or Threatened species that may be present in the project vicinity. In addition, several species of bat have the potential to episodically occur in the Project area during the migration and/or breeding season including the state endangered little brown bat and NLEB, and the state threatened eastern small-footed bat.

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 There are listed species in the area, but the facility has been found by an appropriate resource management agency to have no negative effect on them, or habitat for the species does not exist within the project’s affected area or is not impacted by facility operations.	Finding of No Negative Effects: <ul style="list-style-type: none">• Identify all federal and state listed species in the facility area based on current data from the appropriate state and federal natural resource management agencies.• Provide documentation that there is no demonstrable negative effect of the facility on any listed species in the area from an appropriate natural resource management agency or provide documentation that habitat for the species does not exist within the 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 including amphibians and reptiles. However, as stated, routine operations would not be anticipated to affect these species, wetlands protections are in place at the Project 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."

The Project has a Programmatic Agreement and Cultural Resources Management Plan pursuant to Article 416, which states.

Article 416. Programmatic Agreement and Cultural Resource Management Plan

The licensee shall implement the provisions of the "Programmatic Agreement Among the Federal Energy Regulatory Commission, the Advisory Council on Historic Preservation, and the Maine State Historic Preservation Officer for 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, including but not limited to any cultural Resources Management Plan for the Bonny Eagle Project. In the event that the Programmatic Agreement is terminated, the licensee shall implement the provisions of its approved cultural Resources Management Plan. The Commission reserves the authority to require changes to the cultural Resources Management Plan at any time during the term of the license. If the Programmatic Agreement is terminated prior to Commission approval of the cultural Resources Management Plan, the licensee shall obtain Commission approval before engaging in any ground disturbing activities or taking any other action that may affect any historic properties within the project's area of potential effect.

The 1993 Programmatic Agreement identifies the following Historic project facilities and Archaeological sites and is linked in section 6.3.

Historic Project Facilities: The Bonny Eagle Project--the powerhouse and dam structures--is eligible for listing on the NRHP. The Bonny Eagle facility is a long eight-bay brick structure featuring a narrow metal truss gable roof over the generator equipment and a shed roof over the controls. The plant's notable features are its multi-pane wooden tilt-out sash in openings except for the new windows on the lower level of the downstream side; decorative brick

corbelled cornice; round-arched brick openings framing the penstocks; and an unaltered interior containing a significant collection of early twentieth century hydro power generating machinery.

Archaeological Sites: Phase I and phase II testing, and subsequent field visits by MHPC staff have resulted in the identification of 10 aboriginal sites eligible for inclusion on NRHP. The 10 eligible sites are ME 7-4, ME 7-7, ME 7-12, ME 7-6, ME 7-9, ME 7-11, ME 7-13, ME 7-16, ME 7-19, and ME 7-21.

An October 27, 1993 Programmatic Agreement (PA) for the Bonny Eagle Project 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). Although the Bonny Eagle Powerhouse is eligible for inclusion on the National Register of Historic Places (NRHP), there are no cultural or historic Project resources on the NRHP.

3.7.1 ZONE 1 – IMPOUNDMENT

Criterion	Standard	Supporting Information
G	2	<u>Approved Plan:</u> <ul style="list-style-type: none">• Provide documentation of all approved state, federal, and recognized tribal plans for the protection, enhancement, and mitigation of impacts to cultural and historic resources affected by the facility.• Document that the facility is in compliance with all such plans.

Phase III archaeological field surveys have been completed along the Bonny Eagle Project impoundment. A report on the “Quickwater” site is in preparation by BWPH’s archaeological consultant. This report will demonstrate that the site is no longer potentially eligible for listing in the NRHP; once filed with the Maine Historic Preservation Commission, this report will complete cultural resources management studies at this Project.

Although FERC no longer responds to BWPH’s annual reports required by the PA, their environmental inspection reports (most recently dated December 18, 2019) have shown that BWPH is in compliance with its cultural resource obligations at the Bonny Eagle Project.

3.7.2 ZONE 2 – BYPASS REACH & ZONE 3 – TAILRACE

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: <ul style="list-style-type: none"> • 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 1993 PA and subsequent annual reports and archaeological field surveys have identified no cultural resources in Zone 2 or Zone 3. To ensure that any cultural resources potentially present in this Zone 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.”

Recreation facilities required as part of the 1998 FERC license included a picnic and day use facility on Bonny Eagle Island (Article 414), a canoe portage trail (Article 413) and interpretive signage at the Bonnie Eagle powerhouse (Article 415). Specifically, Article 413 states:

Article 413. - Canoe Portage

Within 180 days from the date of issuance of this license, the licensee shall file with the Commission, for approval, a finalized plan to provide a new canoe portage at the Bonny Eagle Project's Main River Dam in accordance with the provisions outlined in Central Maine Power Company's conceptual plan filed on February 22, 1995. The final plan shall include, at a minimum, detailed design drawings and a schedule for installing the enhancement measures described in the conceptual plan. The licensee shall prepare the aforementioned plan after consultation with the Maine Department of Conservation and the National Park Service. 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 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. The Commission reserves the right to require changes to the plan. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission. The measures implemented shall be shown on the as-built drawings filed pursuant to Article 301 of this license.

Article 414 required the licensee to construct a picnic facility on Eagle Island off of Route 35 and adjacent to the New River Channel. The Bonny Eagle Island picnic area was not developed pursuant to amended Articles 412 and 414 (see links to amendment orders in section 6.1 or section 6.5.6). The licensee's proposed plan for parking, picnic tables, grills, signs, angler and whitewater boating access to the upper reach of the New River Channel, and a portable toilet in the future was filed on August 28, 1998 and approved by the Commission. However, as part of consultation during permitting of the picnic area, local opposition to the site was expressed including the Town of Standish and the Saco River Corridor Commission, who denied a permit to construct the facility. As a result, the Bonny Eagle picnic area was removed as a requirement due to concerns about vandalism and community opposition, as approved by FERC on October 31, 2000.

Article 415 states:

Article 415 – Recreation Signage

The licensee, within one year of receiving a license, shall install signs in the project area that identify all project recreation areas open to the public and shall install an interpretive sign near the Bonny Eagle Project's powerhouse describing its historic features. The installed signs shall include, at a minimum, directional signs on Route 35 and Route 25 to the Bonny Eagle Project recreational facilities, signs identifying the informal boat launch access areas, and signs identifying the new canoe portage around the dam. The Licensee shall design the interpretive sign describing the project's historic features in consultation with the Maine Historic Preservation Commission. The final Exhibit F and Exhibit G drawings required by Article 301 should show the location of the installed signs in the project area. In addition, the licensee shall maintain or arrange for the maintenance of the signs during the term of the license.

The canoe portage trail and interpretive signage were completed and as-built drawings for the portage filed with the Commission on June 30, 2000.

The 2019 FERC Environmental Inspection report provided the following comments on recreation facilities at Bonny Eagle.

All facilities were in place and available for public use. The licensee currently limits access to Bonny Eagle Island to vehicles (although vehicles park on road edge) and the plans to install the picnic/day use area are on hold until further Commission notice. The issues surrounding the access restrictions and development of this facility have not changed. A canoe portage trail and put in/take out is provided. At the Limington Rapids recreation site, the Part 8 sign was found to be missing and will be replaced. This was included in the October 2, 2019 follow-up letter. The facility is constructed by the licensee but currently maintained and operated by the Maine DOT and contains parking, restrooms and picnic facilities. The site is a popular day use area for swimming/wading in summer and kayaking during high water events.

As noted by FERC, the Part 8 signage for the Limington Rapids recreation site was replaced.

Recreation monitoring and reporting at the Project are required under Article 412. Specifically:

Article 412 - Recreation Requirements

The licensee, after consultation with the Maine Department of Conservation, the Maine Atlantic Salmon Authority, the Maine Department of Marine Resources, the Maine Department of Inland Fisheries and Wildlife, the Maine Department of Transportation, the National Park Service, and the U.S. Fish and Wildlife Service, shall monitor recreational use of the project area to determine whether existing recreation facilities are meeting recreation needs. Monitoring studies shall begin within six years of the issuance of this license and be reported to the Commission in accordance with Section 8 of the Commission's regulations (18 C.F.R. § 8.11), which requires the filing of "FERC Form No. 80." The report shall include:

- (1) annual recreation use figures;*
- (2) a discussion of the adequacy of the Licensee's recreation facilities at the project site to meet recreation demand, including a discussion regarding the need for a hard surface boat launch along the impoundment;*
- (3) a discussion regarding the adequacy of the Limington Rips recreation area, which is currently maintained by the Maine Department of Transportation;*
- (4) a description of the methodology used to collect all study data;*
- (5) if there is a need for additional facilities, a recreation plan proposed by the licensee to accommodate recreation needs in the project area;*
- (6) documentation of agency consultation and agency comments on the report after it has been prepared and provided to the agencies; and*
- (7) specific descriptions of how the agencies' comments are accommodated by the report.*

Article 412 was amended on January 13, 2004 to state that a report on the feasibility of Bonny Eagle Island picnic area is no longer required as part of the recreation monitoring report. Recreation reports filed pursuant to Article 412 are provided in Section 6.0.

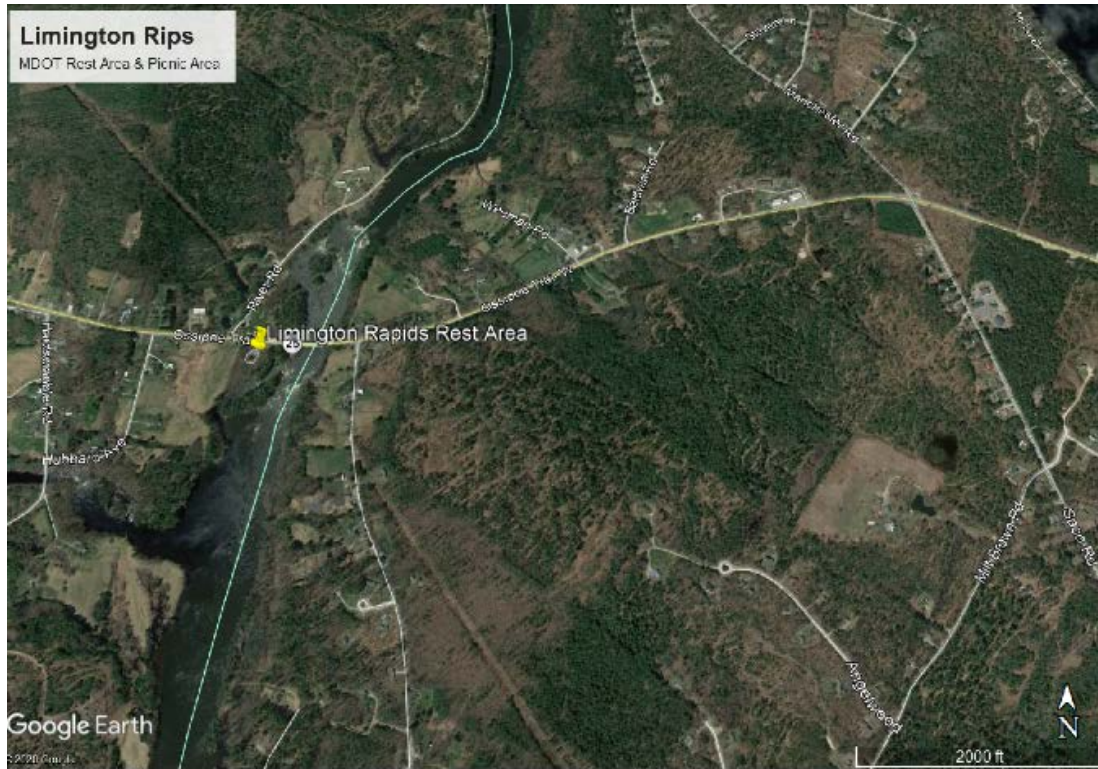
3.8.1 ZONE 1 – IMPOUNDMENT

Criterion	Standard	Supporting Information
H	2 The facility demonstrates compliance with resource agency recommendations for recreational access or accommodation (including recreational flow releases), or any enforceable recreation plan in place for the facility.	Agency Recommendation: <ul style="list-style-type: none">• Document any comprehensive resource agency recommendations and enforceable recreation plan that is in place for recreational access or accommodations.• Document that the facility is in compliance with all such recommendations and plans.

Project recreation sites that provide the public with access to the project impoundment include:

- The Maine Department of Transportation Limington Rips Rest Area
- Canoe Portage Trail
- Private Boat Launch

The Limington Rapids Rest Area is leased to and maintained by the Maine Department of Transportation (MDOT). This area features parking, restrooms, picnic tables, some located under wooden pavilions. A small bridge and a short walk will bring you to small stone island within the Saco River. A short walk along the river leads to a beach area.



The parking area and restrooms at Limington Rapids MDOT Rest Area are shown in the photo below.



Shoreline access to the impoundment is available at the Limington Rapids MDOT Rest Area, as shown in the photo below.



A picnic area is also available at the Limington Rapids MDOT Rest Area (see photo below).



A portage trail provides access for recreationists around the powerhouse located on the mainstem of the Saco river (see below) and is located adjacent to the impoundment. The egress is located just upstream of the dam and powerhouse on the west side of Bonny Eagle Island. The trail follows the powerhouse access road for a portion of its length and the ingress is located at the powerhouse tailrace.



The egress of the canoe portage trail and signage is shown in the photo below.



In addition, a small, private boat launch provides access to the impoundment. This is not a project recreation site and the current owner provides access to the public for a fee. The boat launch is a small, trailered boat launch open to the public. It includes a state public right of way with limited parking.



3.8.2 ZONE 2 – BYPASS REACH

Criterion	Standard	Supporting Information
H	1 The facility does not occupy lands or waters to which the public can be granted safe access and does not otherwise impact recreational opportunities in the vicinity of the facility	<u>Not Applicable/De Minimus Effect :</u> Document that the facility does not occupy lands or waters to which public access can be granted and that the facility does not otherwise impact recreational opportunities in the facility area.

No formal recreation sites within the bypass reach due to public safety concerns. However, in the bypass reach, informal road side parking is utilized for fishing access below the diversion dam and moderate use observed in the spring, summer and fall.

3.8.3 ZONE 3 – TAILRACE

Criterion	Standard	Supporting Information
H	2 The facility demonstrates compliance with resource agency recommendations for recreational access or accommodation (including recreational flow releases), or any enforceable recreation plan in place for the facility.	Agency Recommendation: <ul style="list-style-type: none">• Document any comprehensive resource agency recommendations and enforceable recreation plan that is in place for recreational access or accommodations.• Document that the facility is in compliance with all such recommendations and plans.

Limited recreation activities occur within the project tailrace. Access to the tailrace is limited to watercraft from below the project or from the canoe portage trail by foot. As discussed above, a formal canoe portage trail is maintained by the Licensee to allow boaters access though very little use is observed. The canoe portage trail providing ingress to the Project tailrace is shown in the photo below.



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: 

Date: 1/8/21

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 <u>X</u> , 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 <u>X</u> , Fish/Wildlife Resources __, Watersheds __, 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 <u>X</u> , Watersheds __, 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 <u>X</u> , Fish/Wildlife Resources <u>X</u> , Watersheds <u>X</u> , T/E Spp. __, Cultural/Historic Resources __, Recreation __):	
Agency Name	Maine Department of Environmental Protection
Name and Title	Kathy Davis Howatt, Hydropower Coordinator
Phone	207-446-2642
Email address	kathy.howatt@maine.gov
Mailing Address	Central Maine Regional Office, 17 State House Station, Augusta, Maine 04333
Agency Contact (Check areas of responsibility: Flows __, Water Quality __, Fish/Wildlife Resources <u>X</u> , Watersheds __, T/E Spp. __, Cultural/Historic Resources __, Recreation __):	
Agency Name	Maine Department of Inland Fisheries and Wildlife
Name and Title	James Pellerin, Regional Fisheries Biologist
Phone	207-657-5765
Email address	James.pellerin@maine.gov
Mailing Address	15 Game Farm Rd., Gray ME, 04039
Agency Contact (Check areas of responsibility: Flows __, Water Quality __, Fish/Wildlife Resources __, Watersheds <u>X</u> , T/E Spp. __, Cultural/Historic Resources __, Recreation <u>X</u>):	
Agency Name	Maine Dept. of Agriculture, Conservation & Forestry
Name and Title	Kathleen Leyden, Director
Phone	207-287-5254
Email address	Kathleen.Leyden@maine.gov
Mailing Address	93 State House Station, Augusta, Maine 04333-0038

Agency Contact (Check areas of responsibility: Flows __, Water Quality __, Fish/Wildlife Resources <u>X</u> , 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 <u>X</u> , Watersheds __, T/E Spp. __, Cultural/Historic Resources __, Recreation __):	
Agency Name	NOAA
Name and Title	Sean P McDermott, Fisheries Biologist
Phone	(978) 281-9113
Email address	sean.mcdermott@noaa.gov
Mailing Address	55 Great Republic Drive, Gloucester, MASSACHUSETTS 01930-2237
Agency Contact (Check areas of responsibility: Flows __, Water Quality __, Fish/Wildlife Resources __, Watersheds __, T/E Spp. __, Cultural/Historic Resources <u>X</u> , Recreation __):	
Agency Name	Maine Historic Preservation Commission
Name and Title	Kirk Mohny; Director
Phone	(207) 287-3811
Email address	Kirk.Mohny@maine.gov
Mailing Address	55 Capitol Street, 65 State House Station, Augusta, Maine 04333
Agency Contact (Check areas of responsibility: Flows __, Water Quality __, Fish/Wildlife Resources __, Watersheds <u>X</u> , 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	Saco River Corridor Commission
Name and Title	Dalyn Houser
Phone	207-625-8123
Email address	dalyn@srcc-maine.org
Mailing Address	81 Maple Street, P.O. Box 283, Cornish, Maine 04020-0283
Stakeholder Contact (Check areas of interest: Flows___, Water Quality ___, Fish/Wildlife Resources _X_, Watersheds ___, T/E Spp. ___, Cultural/Historic Resources ___, Recreation ___):	
Stakeholder Organization	Saco River Salmon Alliance
Name and Title	Garry Kasten, Treasurer
Phone	207-332-8037
Email address	gkasten42@gmail.com
Mailing Address	PO Box 115, Saco, ME 04072

6.0 FERC AND REGULATORY INFORMATION

6.1 FERC LICENSE AND AMENDMENT ORDERS

- 19980227 Order Issuing New License
<https://elibrary.ferc.gov/eLibrary/filedownload?fileid=8137289>
- 20001101 Order modifying Article 412
<https://elibrary.ferc.gov/eLibrary/filedownload?fileid=3204706>
- 20020614 Order Amending Licensing re FPL Energy Miane Hydro under P-2325 et al. -
<https://elibrary.ferc.gov/eLibrary/filedownload?fileid=9514317>
- 19961003 Final environ impact statement for Cataract, Skelton, Bar Mills, West Buxton, Bonney Eagle, Hiram & Shawmut Falls Projects in Saco River Basin
<https://elibrary.ferc.gov/eLibrary/filedownload?fileid=8243374>
- 20100331 Proposal to install rubber dam
<https://elibrary.ferc.gov/eLibrary/filedownload?fileid=12307285> and
<https://elibrary.ferc.gov/eLibrary/filedownload?fileid=12307286>
- 20110304 NextEra Energy Maine Operating Services, LLC Revised Exhibit A, and Revised Exhibit F Drawings for Bonny Eagle Hydroelectric Project under P-2529.
<https://elibrary.ferc.gov/eLibrary/filedownload?fileid=12579010>
- 20120627 Order approving revised Exhibit A and F Drawing re FPL Energy Maine Hydro LLC under P-2529. <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=13016156>

6.2 WATER QUALITY CERTIFICATION, AMENDMENTS, AND REPORTS

- September 2, 1997 Water Quality Certification
<https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=8189502>
- Maine Department of Environmental Protection 2016 303(d) List:
https://www.maine.gov/dep/water/monitoring/305b/2016/28-Feb-2018_2016-ME-IntegratedRptLIST.pdf

6.3 SETTLEMENT AND OTHER AGREEMENTS

- October 27, 1993 Programmatic Agreement
<https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=11317831>
- April 30, 1997 Instream Flow Agreement for the Saco River
<https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=8196699>
- March 26, 2007 Saco River Fisheries Assessment Agreement
<https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=11295612>
 - 20190508 2019 Amendment to 2007 Saco River Fish Passage Assessment Agreement of Brookfield White Pine Hydro LLC under P-2527
<https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=15241985>

6.4 PERMITS

- None

6.5 COMPLIANCE PLANS AND MONITORING REPORTS

- 20191218 Environmental Inspection Report inspected on September 19, 2019
<https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=15426598>

6.5.1 ECOLOGICAL FLOWS AND WATER QUALITY

- 19981119 Order approving minimum flow and pond level monitoring plan
<https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=3141734>
- 19980828 Bonny Eagle Minimum Flow & Pond Level Monitoring Plan
<https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=8339317>
- 19980828 Bonny Eagle Macroinvertebrate Monitoring Plan
<https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=73364>
- 19981119 Order approving macroinvertebrate monitoring recommendations
<https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=6003817>
- 20010525 Macroinvertebrate monitoring report, in accordance with the Commission's requirements of Article 409
<https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=12878>
- 20011009 Order approving macroinvertebrate monitoring recommendations
<https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=3235039>

6.5.2 UPSTREAM AND DOWNSTREAM FISH PASSAGE

- 20200326 Brookfield Renewable Energy Group submits the 2019 Saco Diadromous fisheries report for the Cataract Project et al under P-2528
<https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=15493694>
- 20190717 Order Approving Revised Fish Passage Assessment and Fish Passage Installation Schedule re Brookfield White Pine Hydro, LLC under P-2527
<https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=15310087>
- 20190508 2019 Amendment to 2007 Saco River Fish Passage Assessment Agreement of Brookfield White Pine Hydro LLC under P-2527
<https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=15241985>
- 20190424 order approving Brookfield White Pine Hydro, LLC's 03/26/19 filing of the 2015-2017 Downstream Passage Evaluation Report for Juvenile Clupeids Plan for the Bar Mills Project
<https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=15226906>
- 20190326 Report of Brookfield Renewable Energy Group under P-2528, et. al..2018 Saco River Diadromous Fish Passage Report
<https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=15195104>
- 20190326 Report of Brookfield Renewable Energy Group under P-2194, et. al. Bar Mills, West Buxton, and Bonny Eagle Downstream Fish Passage update.
<https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=15195105>
- 20170331 Brookfield Renewable Energy Group 2016 Saco River Diadromous Fish Passage Report under P-2528
<https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=14553036>
- 20160413 Letter to Brookfield White Pine Hydro, LLC re the 2015 downstream passage evaluation report for juvenile clupeids for the Bar Mills Project et al

under P-2194

<https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=14202372>

- 20150430 Order Approving Study Plan to Evaluate Movement and Behavior of Juvenile Clupeids re Brookfield White Pine Hydro, LLC under P-2194
<https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=13862867>
- 20130304 Order amending downstream fish passage facilities study plan and interim downstream fish passage study plan, Articles 407 & 404 for the FPL Energy Maine Hydro LLC under P-2529 et al.
<https://elibrary.ferc.gov/eLibrary/filedownload?fileid=13195206>
- 20070725 Order Modifying and Approving Fish Passage Assessment Report and Recommendations for Fish Passage and Fisheries Management
<https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=11527160>
- 20070718 Order modifying and approving Fish Passage Assessment Report and recommendations for Fish Passage and Fisheries Management
<https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=11401105>

6.5.3 SHORELINE AND WATERSHED PROTECTION

- 20190403 Report of Brookfield Renewable Energy Group under P-2529. Bonny Eagle 5-year wetlands monitoring report
<https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=15204911>
- 20170210 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
<https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=13458624>
- 20140102 Bonny Eagle Wetlands Protection and Enhancement 5 year status report (Article 411)
<https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=13429137>
- 19980918 Order approving wetland protection and enhancement plan
<https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=10813699>

6.5.4 THREATENED AND ENDANGERED SPECIES

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

6.5.5 CULTURAL AND HISTORIC RESOURCES

- 2020214 Saco, Presumpscot, Kennebec and Androscoggin River Projects; Annual Cultural Resource Report
<https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=15464914>
- 20190214 Brookfield Renewable Power Annual Cultural Resource Report
<https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=15239013>
- 20180613 Annual Cultural Resource Programmatic Agreement Report
<https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=14945550>

- 20170214 Final Annual Archaeological Report submittal
<https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=14492841>

6.5.6 RECREATIONAL RESOURCES

- 20030930 Recreation Monitoring Report
<https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=9791744>
- 20040113 Order approving Recreation Monitoring Report & Amending Article 412
<https://elibrary.ferc.gov/eLibrary/filedownload?fileid=10039331>
- 20200417 Order Granting Extension of Time for Recreation Monitoring and Reporting Pursuant to Article 412 re Brookfield White Pine Hydro, LLC under P-2529
<https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=15511776>
- 20150415 Recreation Report / Form of Brookfield Renewable Energy Group
<https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=13840132>
- 20001101 Order modifying Article 412
<https://elibrary.ferc.gov/eLibrary/filedownload?fileid=3204706>
- 20040113 Order approving Recreation Monitoring Report & Amending Article 412
<https://elibrary.ferc.gov/eLibrary/filedownload?fileid=10039331>

6.6 LICENSE AND CERTIFICATION COMPLIANCE

- 20200804 Flow Disruption Excursion Report to FERC
<https://elibrary.ferc.gov/eLibrary/filedownload?fileid=15600320>
- 20200618 Flow Disruption Excursion Report to FERC
<https://elibrary.ferc.gov/eLibrary/filedownload?fileid=15568624>
- 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 Bonny Eagle Hydroelectric Project under P-2529.
<https://elibrary.ferc.gov/eLibrary/filedownload?fileid=15635809>
- 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 Bonny Eagle Hydroelectric Project under P-2529.
<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 Bonny Eagle Project
<https://elibrary.ferc.gov/eLibrary/filedownload?fileid=13458604>

7.0 SUPPORTING DOCUMENTATION

- Instream Flow Agreement for Hydroelectric Projects on the Saco River
- 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

INSTREAM FLOW AGREEMENT FOR HYDROELECTRIC PROJECTS ON THE SACO RIVER

April 30, 1997

BACKGROUND AND PARTIES

This is a settlement agreement ("Agreement") regarding instream flows at hydroelectric generating projects on the Saco River that are currently undergoing licensing proceedings before the Federal Energy Regulatory Commission (FERC), including the Skelton (FERC No. 2527), and Bonny Eagle (FERC No. 2529) projects, as well as the proceedings to exempt Swans Falls (FERC No. 11365) from licensing. This Agreement also applies to Central Maine Power Company's (CMP), Cataract (FERC No. 2528), Bar Mills (FERC No. 2194), West Buxton (FERC No. 2531), and Hiram (FERC No. 2530) projects. Figure 1 is a map of the Saco River region showing the locations of the projects.

Following the signing of the *Saco River Fish Passage Agreement* (dated May 24, 1994) and its addendum entitled *Annex 1: Assessment Process and Criteria* (dated January 20, 1995), Central Maine Power Company invited the parties to the Saco River Fish Passage Agreement to enter into negotiations to decide instream flow requirements for hydroelectric generating projects owned by CMP on the Saco River. Swans Falls Corporation, owner of the Swans Falls project, also elected to participate in the negotiations. In May 1995, the parties met for the first time, and began a series of meetings that has resulted in this Agreement.

The parties to this agreement are listed below:

Central Maine Power Company (CMP)
U.S. Department of Interior, Fish and Wildlife Service (USFWS)
Maine Department of Inland Fisheries and Wildlife (MDIFW)
Maine Department of Marine Resources (MDMR)
Saco River Salmon Club (SRSC)
Atlantic Salmon Federation (ASF)
Maine Council, Atlantic Salmon Federation (MCASF)
Maine Department of Environmental Protection (MDEP)
Swans Falls Corporation (Swans Falls)
Maine Atlantic Salmon Authority (MASA)
Maine State Planning Office (SPO)
Trout Unlimited (TU)
Maine Council, Trout Unlimited (MCoTU)
American Rivers, Inc.
New Hampshire Department of Fish & Game
City of Saco
City of Biddeford

While not parties to this Agreement, other interested organizations were informed in writing of each negotiation session, were sent copies of minutes of each negotiation session and were sent copies of working drafts of the Agreement. These organizations were the following:

Maine Department of Conservation (MDOC)
U.S. Department of Commerce, National Marine Fisheries Service
U.S. Forest Service, White Mountain National Forest
U.S. Environmental Protection Agency
Saco River Corridor Commission

The parties met periodically from May 1995 through February 1997. During this period, CMP and other parties collected and presented field data, economic data, and conducted various computer simulations of flow regimes within the Saco River. The parties themselves conducted several field visits. The terms of this Agreement are based on facts, findings and other considerations specific to the Saco River projects.

PRINCIPAL OBJECTIVES AND CONSIDERATIONS

1. At several points during the settlement discussions that led to this Agreement, the parties established and revised a list of objectives that they were seeking to balance. The parties acknowledge that this Agreement balances the following objectives and considerations to their satisfaction:
 - a. Improve the habitat for Atlantic salmon, American shad and river herring sufficiently to allow self-sustaining populations, and improve habitat for resident fish and aquatic communities, focusing on the Hiram to Bonny Eagle reach which provides the most valuable spawning and rearing habitat for Atlantic salmon in the Saco River downstream of Swans Falls;
 - b. Provide for and improve a zone of passage for anadromous fish and spawning habitat below the Skelton dam;
 - c. Provide for spawning and rearing of clupeids (American shad and river herring) below the Skelton dam;
 - d. Contribute to restoration of the natural hydrology and riverine ecosystems by reducing the difference between the minimum and maximum flows;
 - e. Maintain and improve the habitat for resident aquatic life in the West Buxton to Bar Mills reach;
 - f. Meet the State of Maine's minimum water quality standards below the Bonny

Eagle and Skelton projects;

- g. Ensure continued hydro power generation in the Saco River basin in a cost-effective manner for the project owners, and in a manner which provides for flexibility in hydro power operations to meet changing peak and off-peak demands.
2. The parties acknowledge that the instream flows at the various projects are interdependent, and that flows established at an upstream project may have an effect on the operations of projects downstream, and on the downstream aquatic communities.
3. The parties recognize that the FERC has completed a Final Environmental Impact Statement (FEIS) for the Saco River Projects (FERC-FEIS 0077, August 1996) which recommends that the Commission should relicense the Bonny Eagle and Skelton projects with certain conditions that, when considered in the context of the entire Saco River basin, are not entirely satisfactory to any of the parties. The parties recognize further that certain resource values may be enhanced by altering the current licensed instream flow requirements at the Hiram Project.

TERMS AND CONDITIONS

Therefore, the undersigned parties agree to the following terms and conditions:

Swans Falls Project

4. The parties agree that instream flow and pond level requirements for the Swans Falls project shall be run-of-river¹ operation year-round with head pond levels maintained within one foot of normal pond elevation of 395.9 feet (normal pond level is approximately six inches below the top of the spillway flashboards) during normal operations.

Hiram Project

5. The parties agree that the instream flow and pond level requirements for the Hiram project shall be:
 - a. A minimum flow of 300 cubic feet per second (cfs), or inflow, whichever is less, from November 16 through September 30, with pond drawdown limited to

¹ Run-of-river operation is defined as outflow equal to inflow, with pond level variation limited to one foot or less during normal operation.

two (2) feet or less from full pond elevation during normal operation or from spillway crest when the flashboards are down;

- b. Run-of-river operation from October 1 through November 15, with pond drawdown limited to one (1) foot or less from full pond elevation or from the spillway crest when the flashboards are down. The timing of this six week fall flow period may be varied as described in paragraph 11 below.

Bonny Eagle Project

- 6. The parties agree that the instream flow and pond level requirements for the Bonny Eagle project shall be:
 - a. Run-of-river operation from April 1 through June 30, with head pond drawdown limited to one (1) foot or less from full pond elevation or from the spillway crest when the flashboards are down;
 - b. A minimum flow of 400 cfs, or inflow, whichever is less, from July 1 through September 30, with head pond drawdown limited to four and one-half (4.5) feet or less from full pond elevation, or one foot or less from the spillway crest when the flashboards are down;
 - c. A minimum flow of 600 cfs, or inflow, whichever is less, from October 1 through November 15, with head pond drawdown limited to four and one-half (4.5) feet or less from full pond elevation, or one foot or less from the spillway crest when the flashboards are down. The timing of this six week fall flow period may be varied as described in paragraph 11 below;
 - d. A minimum flow of 250 cfs, or inflow, whichever is less, from November 16 through March 31, with head pond drawdown limited to four and one-half (4.5) feet or less from full pond elevation, or one foot or less from the spillway crest when the flashboards are down;
 - e. A minimum flow of 25 cfs year-round in the New River Channel. The minimum flow in the New River Channel is inclusive in the total minimum flows listed in 6a through 6d above for this project (*not in addition to* those flows).

West Buxton Project

- 7. The parties agree that the FERC and MDEP current license and water quality certification conditions at West Buxton will not change, and that the instream flows

from the West Buxton project will be determined by the instream flows required at the Bonny Eagle project as described in paragraph 6 above.

Bar Mills Project

8. The parties agree that the FERC current license conditions at Bar Mills will not change, and that the instream flows from the Bar Mills project will be determined by the instream flows required at the Bonny Eagle project described in paragraph 6 above.

Skelton Project

9. The parties agree that the instream flow and pond level requirements for the Skelton project shall be as follows:
 - a. Run-of-river operation from April 1 through June 30, with head pond drawdown limited to one (1) foot or less from full pond elevation during normal operations;
 - b. A minimum flow of 400 cfs "guaranteed" from July 1 through September 30, with head pond drawdown limited to four (4) feet or less from full pond elevation.

"Guaranteed" means that at times when inflow to the Skelton headpond drops below 400 cfs, CMP will continue to provide 400 cfs below the Skelton project by drawing from the Skelton headpond. This use of the headpond storage to supplement outflow will be discontinued if the headpond elevation drops four feet below full pond elevation, such as may occur when extended natural low flow conditions are experienced. Under these circumstances, the outflow from the Skelton Project will be equal to the inflow. When inflow to the headpond is greater than 400 cfs, a minimum flow of 400 cfs will be provided.
 - c. A minimum flow of 600 cfs, or inflow, whichever is less, from October 1 through November 15, with head pond drawdown limited to four (4) feet or less from full pond elevation. The timing of this six week flow period may be varied as described in paragraph 11 below.
 - d. A minimum flow of 400 cfs "guaranteed" (defined as in 9b above) from November 16 through March 31, with head pond drawdown limited to four (4) feet or less from full pond.
 - e. CMP agrees to complete instream habitat improvements to provide boulder clusters in the area below the Skelton dam as previously proposed by CMP in

the application for new license submitted to FERC, December 1991, at page E.3.1-118 and 119.

- f. CMP and MDEP agree to discuss the timing and extent of scheduled maintenance draw downs of the Skelton headpond in the Skelton 401 water quality certification process.

Cataract Project

- 10. The parties agree that the current FERC and MDEP license and water quality certification conditions at Cataract will not change, and that the instream flows at Cataract will be determined by the instream flows required at the Skelton Project as described in paragraph 9 above.

ADDITIONAL TERMS

- 11. The start of the fall period for required instream flows (see 5b, 6c and 9c above) may be changed in any year by mutual agreement among CMP and the U.S. Fish and Wildlife Service, Maine Department of Inland Fisheries and Wildlife, Maine Department of Marine Resources, and Maine Atlantic Salmon Authority based on:
 - a) expected flow and weather conditions,
 - b) biological factors such as fish migration or spawning periods, and/or
 - c) anticipated electrical need for or value of CMP's generation (e.g. plant outages).

The fall flow period shall be no less and no more than six weeks except upon mutual agreement among the parties listed in this section, and shall start no sooner than September 1 and no later than October 1. Any changes in the timing of the fall flow period will accordingly change the ending date of the summer period and the beginning date of the winter period. If the parties do not reach an agreement in a given year, then the start of the fall period for that year shall be October 1 as established in paragraphs 5b, 6c, and 9c herein.

- 12. The MDEP has determined that the flows in this Agreement are expected to meet water quality standards for flowing/riverine aquatic habitat below the Bonny Eagle (specifically the reach below West Buxton) and Skelton projects, and for dissolved oxygen below the Skelton Project. CMP agrees to conduct follow-up studies of aquatic communities and dissolved oxygen as required by the MDEP in the Bonny Eagle and Skelton Section 401 water quality certifications (PL. 92-500, as amended). CMP

acknowledges that, if instream flows required by this Agreement do not allow State water quality standards to be met in the reaches below the Bonny Eagle (or West Buxton) or Skelton dams, then the MDEP may require CMP to increase minimum instream flows from the Bonny Eagle and/or Skelton projects as MDEP deems necessary, based on the results of the follow-up studies, to meet applicable water quality standards below these projects. The parties to this Agreement hereby agree that, should increased minimum flows at Bonny Eagle or Skelton be required by the MDEP, the parties will meet and in good faith attempt to renegotiate the terms of this Agreement using a consensus process. If the parties are unable to come to mutual agreement on new or altered terms and conditions for minimum flows within the scope of this Agreement, then CMP may give notice to the other parties that it no longer intends to be bound by the terms of this Agreement. If CMP gives such notice pursuant to this paragraph only, then the parties agree that such notice makes this Agreement null and void as it pertains to CMP projects. The parties will then be free to petition the FERC, pursuant to the regulations of the FERC as appropriate, to amend the licenses.

MDEP agrees to incorporate the pertinent terms and conditions of this Agreement, as they pertain to the Bonny Eagle and Skelton Projects, into the water quality certifications for those projects. The MDEP reserves the right to require the appropriate studies and to increase minimum flows as it deems necessary to meet applicable water quality standards for aquatic habitat below the Hiram project and in the bypass reach at the Bar Mills project at the time of relicensing for these projects.

13. The parties acknowledge that the Assessment process described in Annex 1 to the Saco River Fish Passage Agreement (dated January 20, 1995) provides a forum (i.e. the Saco River Coordinating Committee, or SRCC) and an opportunity to evaluate the overall success of the anadromous fish restoration effort for American shad, river herring, and Atlantic salmon in the Saco River, and to determine what the limiting factors are in that restoration program. While this Instream Flow Agreement prescribes no specific studies related to flows, the SRCC may include evaluation of minimum flows in its Assessment studies. The parties agree that if, after thoroughly evaluating and addressing all other limiting factors, the Assessment process yields substantial evidence that the minimum flows established in this Agreement are a significant limiting factor to the restoration program for American shad, river herring or Atlantic Salmon, then the parties will meet and in good faith attempt to renegotiate the terms of this Agreement using a consensus process. If the parties are unable to come to mutual agreement on new or altered minimum flows within the scope of this Agreement, then the current terms and conditions of this Agreement shall continue to apply. Similarly, if a project owner develops substantial evidence that the minimum flows established in this Agreement are in excess of those flows that are necessary to support the restoration of American shad, river herring or Atlantic salmon, then the parties

agree to meet and in good faith attempt to renegotiate the terms of this Agreement using a consensus process. If the parties are unable to come to mutual agreement on new or altered minimum flow terms and conditions within the scope of this Agreement, then the current terms and conditions of this Agreement shall continue to apply.

Implementation of any renegotiated terms is contingent upon approval of those terms by the FERC and MDEP as necessary.

14. The instream flows and pond level requirements in this Agreement may be temporarily modified by operating emergencies beyond the Licensee's or Exemptee's control, as defined herein; by maintenance activities approved by the Maine Department of Environmental Protection and/or FERC; by inflows to the project area; by flashboard release or maintenance; or by agreement among Licensee or Exemptee and, as appropriate, the Maine Department of Environmental Protection, U.S. Fish and Wildlife Service, Maine Department of Inland Fisheries and Wildlife, Maine Atlantic Salmon Authority and Maine Department of Marine Resources.

Operating emergencies beyond the Licensee's or Exemptee'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.

15. The parties agree that in low water or drought periods, or in the event of equipment failure, the project owner may not be able to maintain the flows or pond levels in this Agreement at all times. The project owner will notify the agencies listed in paragraph 14 whenever it anticipates or experiences drought or hydrologic conditions that may prohibit its ability to meet the instream flows or pond levels agreed upon herein.

16. This Agreement shall be effective upon execution by the appropriate authorities representing the following parties:

Central Maine Power Company, the Maine Department of Inland Fisheries and Wildlife, the Maine Department of Marine Resources, the Maine Atlantic Salmon Authority, the Maine State Planning Office, the U.S. Fish and Wildlife Service, Saco River Salmon Club, Trout Unlimited, Maine Council of Trout Unlimited, Atlantic Salmon Federation, Maine Council of the Atlantic Salmon Federation, American Rivers, Inc., the City of Saco, the City of the Biddeford, Swans Falls Corporation, the New Hampshire Department of Fish and Game, and the Maine Department of Environmental Protection.

17. The participants agree to provide written comments to FERC recommending inclusion of the applicable terms of this Agreement into the Hiram, Bonny Eagle and Skelton

FERC licenses, and into the Swans Falls exemption from license, and to revoke all prior recommendations and/or terms and conditions with regard to instream flows and pond level requirements for the Bonny Eagle, Skelton and Swans Falls projects.

18. The implementation of the provisions of this Agreement that pertain to CMP projects is contingent upon the incorporation by FERC of all of the applicable instream flow and pond level conditions of this Agreement into the Bonny Eagle and Skelton project licenses. Implementation of these provisions will take place according to the schedule established in the new FERC licenses.

The implementation of the provisions of this Agreement that pertain to Swans Falls is contingent upon the incorporation by FERC of all of the applicable instream flow and pond level conditions of this Agreement into the Swans Falls project license exemption. Implementation of these provisions will take place according to the schedule established in the FERC license exemption.

19. CMP will petition the FERC, within six (6) months of the issuance of new FERC licenses for the Bonny Eagle and Skelton projects which include the applicable terms and conditions of this Agreement, to amend the existing license for the Hiram Project to incorporate the applicable terms of this Agreement. Implementation of the provisions of this Agreement that apply to Hiram will take place according to the schedule established in the amended FERC license. The parties agree that the licenses for Cataract, Bar Mills, and West Buxton do not need to be amended, as these projects are expected to meet the agreed instream flows due to the flows required herein from the Bonny Eagle and Skelton projects. The applicable state and federal fish and wildlife agencies will incorporate the terms and conditions of this Agreement into the license exemption for the Swans Falls Project. Implementation of the provisions of this Agreement that apply to Swans Falls will take place according to the schedule established in the license exemption.
20. This Agreement supersedes all prior agreements and recommendations, whether written or oral, made by parties with regard to instream flows and pond levels in the Saco River. However, this Agreement shall not supersede nor amend the October 25, 1991 Water Release Agreement among CMP and the cities of Saco and Biddeford.
21. This Agreement applies only to the facts and circumstances regarding specific projects on the Saco River, and shall have no precedential effect in other regulatory cases under the jurisdiction of the Maine DEP or FERC. This Agreement shall not establish any legally binding principles for other cases regarding determination of instream or minimum flows; project operation to protect or restore aquatic habitat or fish populations; water quality standards for aquatic habitat; the legal jurisdiction of any regulatory agency affected by this agreement; the type of proceedings or format chosen

for regulatory approvals or settlement negotiations; or, the support or non-objections by any party to any other federal or state regulatory approvals.

22. This Agreement shall terminate, unless extended by the parties, upon the expiration of the new licenses, or subsequent annual licenses, of the Skelton and Bonny Eagle projects.
23. This Agreement shall bind and inure to the benefit of the successors and assigns of the signing parties.
24. The parties will endeavor to resolve in good faith any dispute that may arise in carrying out this Agreement, using a consensus process which shall include meetings between the parties with a facilitator if appropriate. The intent of the parties is to maintain the spirit of cooperation and understanding that led to this Agreement.
25. Nothing in this Agreement shall be construed as obligating the U.S. government or the State of Maine, their officers, agents or employees, to expend any funds in excess of appropriations or other amounts authorized by law.

SIGNATURES

We, the undersigned, having the authority to bind our respective parties, agree to the terms of this Agreement, and will represent and support this Agreement in applicable proceedings before the Federal Energy Regulatory Commission and other regulatory bodies:

Central Maine Power Company

David H. Gager June 20, 1997
Its President & CEO Date

Maine Department of Environmental Protection

Eric Salomon 6/20/97
Its COMMISSIONER Date

Maine Atlantic Salmon Authority

William H. Nichols 6/25/97
Its Chairman Date

Maine Department of Inland Fisheries and Wildlife

Charles B. O'Neil 6/20/97
Its Commissioner Date

Maine Department of Marine Resources

Robin Alden 6/20/97
Its Commissioner Date

U.S. Fish and Wildlife Service

[Signature] 6/15/97
Its Date

Saco River Salmon Club

Edward J. Gray 6/20/97
Its Director Date

Maine Council, Trout Unlimited

[Signature] 6/20/97
Its Council Chairman Date

Swans Falls Corporation

Lawrence J. Keady
Its Date

Maine Council, Atlantic Salmon Federation

Louis Bonnet 6/26/97
Its Date

City of Saco

Mark D. Johnston 6/26/97
Its Mayor Date

City of Biddeford

[Signature] 6/26/97
Its City Manager Date

Atlantic Salmon Federation

Wah Hui 6/25/97
Its REGIONAL DIRECTOR Date

Maine State Planning Office

[Signature] 6/20/97
Its Director Date

American Rivers, Inc.

Rebecca Wadden 7/8/97
Its President Date

Trout Unlimited

[Signature] 6/20/97
Its For Charles E. Garvin Date
CEO

New Hampshire Department of Fish and Game

Wayne E. Vella 7/9/97
Its Director Date

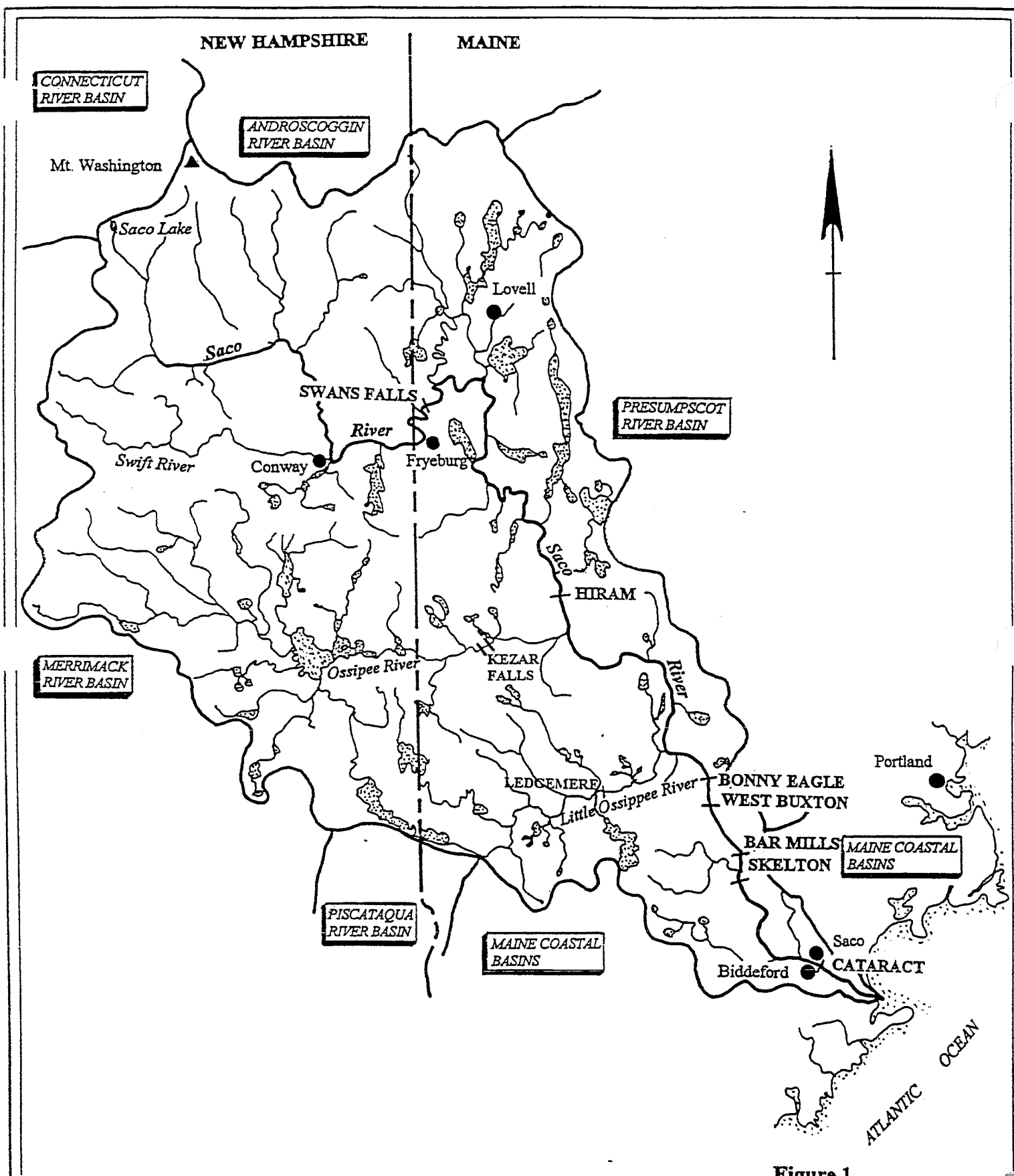


Figure 1
Saco River Basin
with
Hydroelectric Generating Facilities



JANET T. MILLS
GOVERNOR

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION



GERALD D. REID
COMMISSIONER

November 24, 2020

Matt LeBlanc
Brookfield Renewable
150 Main Street
Lewiston, Maine 04240

Subject: Bonney Eagle Project (FERC No. 2529) - Comments to Water Quality Certification
Terms and Conditions – LIHI Recertification

Matt LeBlanc:

In response to a written request by Brookfield Renewable Energy Group, LLC (Applicant, Brookfield), on November 4, 2020, related to recertification of the Bonney Eagle Hydroelectric Project (BEHP) by the Low Impact Hydro Institute (LIHI), the Maine Department of Environmental Protection (Department or MDEP) reviewed the Terms and Conditions of the Water Quality Certification (WQC) for the BEHP. The BEHP is located on the Saco River in the Towns of Hollis, Limington and Standish. These towns are located in York and Cumberland counties, Maine. Here, the Department outlines how Brookfield has addressed the Conditions of the WQC for the above Project.

The Bonney Eagle WQC, #L-17650-33-F-N was issued by the Department on August 22, 1997. On May 4, 2010, in Order #L-20154-34-B-N, the Department issued a permit for the installation of an inflatable crest at the BEHP. On November 13, 2017, the Department issued a Condition Compliance Order, #L-17650-33-M-C, which approved the design and operations plans for the upstream eel passage facilities at the Project. Pertinent Conditions to LIHI Recertification and how the Applicant has addressed terms and Conditions of these orders are as follows:

1. MINIMUM FLOWS

In the 1997 WQC, Condition 2 stipulates that the minimum flows of the BEHP shall be maintained as follows:

From April 1 through June 30 annually, run-of-river operation, with outflow approximately equal to inflow, while allowing for up to a one-foot drawdown of the impoundment;

From July 1 through September 30 annually, an instantaneous minimum flow of 400 cfs or inflow, whichever is less;

AUGUSTA
17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 287-7688 FAX: (207) 287-7826

BANGOR
106 HOGAN ROAD, SUITE 6
BANGOR, MAINE 04401
(207) 941-4570 FAX: (207) 941-4584

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

PRESQUE ISLE
1235 CENTRAL DRIVE, SKYWAY PARK
PRESQUE ISLE, MAINE 04769
(207) 764-0477 FAX: (207) 760-3143

From October 1 through November 15 annually, or for such alternative six-week period as may be mutually agreed to by the applicant and state and federal fisheries agencies as described below, an instantaneous minimum flow of 600 cfs or inflow, whichever is less;

From November 16 through March 31 annually, an instantaneous flow minimum flow of 250 cfs or inflow, whichever is less; and

An instantaneous year-round minimum flow of 25 cfs from the diversion dam into the “New River Channel”.

All required flows, except for the minimum flow required in the “New River Channel”, shall be the sum of flows from the powerhouse and the “New River Channel”.

All WQC Terms and Conditions for minimum flows are valid and are currently upheld by the applicant.

2. WATER LEVELS

In the 1997 WQC, Condition 1 stipulates that the head pond of the BEHP shall be maintained as follows:

From April 1 through June 30 annually, no more than one foot below normal full pond elevation when flashboards are in place (216.3 feet¹), and no more than one foot below the “New Channel Dam” spillway crest elevation when the flashboards are not in place (212.0 feet);

From July 1 through March 31 annually, no more than 4.5 feet below normal pond elevation (flashboard crest) when the flashboards are in place (216.3 feet), and no more than one foot below the “New Channel Dam” spillway crest elevation when the flashboards are not in place (212.0 feet).

The May 4, 2010, Order #L-20154-34-B-N, authorized the installation of an inflatable crest across the spillway at the BEHP. The inflatable crest, which replaced the 4.3-foot-high existing flashboards, satisfied the same dimensions of the existing flashboards and did not change the full pond elevation at the Project. All WQC Terms and Conditions for water levels are valid and currently upheld by the applicant.

3. FISH PASSAGE

Between June 1994 and the present time, the various owners of the hydro projects on the Saco River, including Brookfield, have worked with federal and state resource agencies and other interested parties to develop the Saco River Fish Passage Agreement in order to provide fish passage over dams along the main stem of the Saco River. The 2007 Settlement Agreement incorporated fish passage recommendations and other fisheries management measures agreed to by the licensee and the resource agencies, based upon the finding and conclusions of the 2000 – 2005 fish passage assessment report. Current passage efforts on the Saco River include

¹ Local datum

installation and operation of a fish lift at the Cataract East Channel Dam, a Denil fishway at the Cataract West Channel Dam, a fish lock at the Bradbury Dam and a nature-like fishway at the Springs Dam, for which construction was completed in 2019. Passage enhancements were completed at West Channel through the construction of a flow deflection wall in 2020. At the East Channel Dam, construction of a lower flume extension to enhance attraction flow, is slated for 2021. Additionally, there is a fish lift at the Skelton Dam and an existing upstream eel ladder at the Bar Mills Project and at the West Buxton Project; these eel ways are maintained and operated by Brookfield fishway personnel.

Condition 3 (A, B, C and D) of the 1997 WQC identify upstream and downstream fish passage requirements at the BEHP. Condition 3 (A, B and C) stipulate interim downstream passage via controlled spills and downstream flows, the construction of permanent downstream passage facilities and the submittal of final design and operational plans for downstream facilities. Currently, there are no fish passage facilities at the downstream Bar Mills and West Buxton Dams and anadromous fish species are not trucked in sufficient numbers upstream of Bonney Eagle to warrant downstream fish passage activities. Condition 3(D) requires the construction of permanent or interim upstream passage facilities in accordance with the above-mentioned Agreement. On July 17, 2019, FERC issued an Order Approving the Revised Fish Passage Assessment and Installation Schedule. This order stipulates that upstream fish passages are to be operational at the BE Project by May 01, 2029.

In the 1997 WQC, Condition #3 (E) required Brookfield to submit final design and operational plans for an upstream eel passage prepared in consultation with the fisheries resource agencies. The November 2017 Department Order approved proposed design and operations plans for the upstream eel passage facilities at the Project and MDEP determined that Brookfield satisfied the terms of Condition #3 (E). According to correspondence with the Applicant, construction of the upstream eel passage facilities will begin in late November to early December 2020, will take approximately three weeks to complete and will be operational in the Spring of 2021. In the November 2017 Order, Condition 2 states that after the facility is constructed, an effectiveness study shall be conducted in consultation with the fisheries resource agencies and reasonable, cost effective adjustments shall be made to the facility, as needed, to improve fish passage effectiveness. The results of such effectiveness studies shall be submitted to the Department.

All WQC Terms and Conditions for fish passage are currently valid and in accordance with the 2019 Revised Fish Passage Agreement. Fulfillment of the fish passage Terms and Conditions specified WQC and the updated 2019 Agreement are in progress.

Summary

Collectively, the Department finds that Brookfield has made provisions to monitor and mitigate the impacts of the BEHP on the waters of the Saco River. Further, over several years, Brookfield and previous license holders, have consulted and collaborated with the fisheries resource agencies to develop and enhance fish passage facilities and mitigate the impacts of the Project. The Department finds that the Terms and Conditions set forth by the Project WQC are valid and Brookfield has taken steps to fulfill the Conditions of the WQC. Therefore, the Department supports LIHI recertification of the Bonney Eagle Project.

Maine DEP Letter to Brookfield
Bonney Eagle Hydroelectric Project
November 24, 2020

Thank you for the opportunity to comment on the LIHI Recertification. If you have any questions, please contact me by phone at (207) 446-1619 or by email at

Christopher.Sferra@maine.gov.

Sincerely,

A handwritten signature in cursive script, appearing to read "Chris O. Sferra".

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

This species list also identifies candidate species under review for listing and those species that the Service considers species of concern. Candidate species have no protection under the Act but are included for consideration because they could be listed prior to completion of your project. Species of concern are those taxa whose conservation status is of concern to the Service (i.e., species previously known as Category 2 candidates), but for which further information is needed.

If a proposed project may affect only candidate species or species of concern, you are not required to prepare a Biological Assessment or biological evaluation or to consult with the Service. However, the Service recommends minimizing effects to these species to prevent future conflicts. Therefore, if early evaluation indicates that a project will affect a candidate species or species of concern, you may wish to request technical assistance from this office to identify appropriate minimization measures.

Please be aware that bald and golden eagles are not protected under the Endangered Species Act but are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.). Projects affecting these species may require development of an eagle conservation plan: http://www.fws.gov/windenergy/eagle_guidance.html Information on the location of bald eagle nests in Maine can be found on the Maine Field Office Web site: <http://www.fws.gov/mainefieldoffice/Project%20review4.html>

Additionally, wind energy projects should follow the wind energy guidelines: <http://www.fws.gov/windenergy/> for minimizing impacts to migratory birds and bats. Projects may require development of an avian and bat protection plan.

Migratory birds are also a Service trust resource. Under the Migratory Bird Treaty Act, construction activities in grassland, wetland, stream, woodland, and other habitats that would result in the take of migratory birds, eggs, young, or active nests should be avoided. Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g.,

cellular, digital television, radio, and emergency broadcast) can be found at:
<http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm> and at:
<http://www.towerkill.com>; and at:
<http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Maine Ecological Services Field Office

P. O. Box A
East Orland, ME 04431
(207) 469-7300

Project Summary

Consultation Code: 05E1ME00-2020-SLI-1001

Event Code: 05E1ME00-2020-E-03428

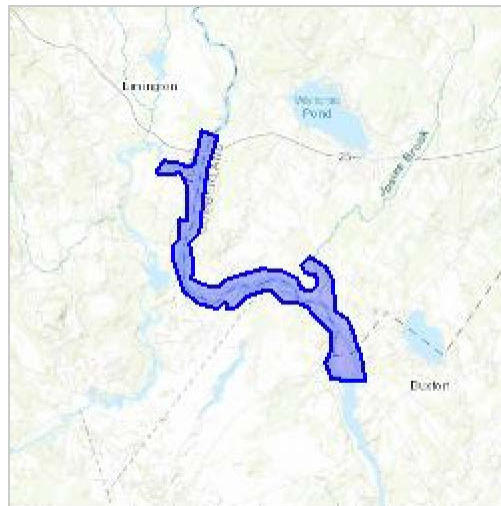
Project Name: Bonny Eagle LIHI Certification

Project Type: DAM

Project Description: Bonny Eagle Project and Surrounding Waters

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://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: https://ecos.fws.gov/ecp/species/9045	Threatened

Flowering Plants

NAME	STATUS
Small Whorled Pogonia <i>Isotria medeoloides</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1890	Threatened

Critical habitats

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



STATE OF MAINE
DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY
177 STATE HOUSE STATION
AUGUSTA, MAINE 04333

JANET T. MILLS
GOVERNOR

AMANDA E. BEAL
COMMISSIONER

December 22, 2020

Allison Frechette
Brookfield Renewable
1024 Central Street
Millinocket, ME 04462

Via email: allison.frechette@brookfieldrenewable.com

Re: Rare and exemplary botanical features in proximity to: LIHI Certification of Existing Bonny Eagle Hydroelectric Project, Hollis 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 December 7, 2020 for information on the presence of rare or unique botanical features documented from the vicinity of the project in Hollis 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

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,

A handwritten signature in cursive script, appearing to read "Krist Puryear".

Kristen Puryear | Ecologist | Maine Natural Areas Program
207-287-8043 | kristen.puryear@maine.gov

Rare and Exemplary Botanical Features within 4 miles of Project: Brookfield Renewable, Bonny Eagle Hydroelectric Project, Hollis and Standish, Maine

Common Name	State Status	State Rank	Global Rank	Date Last Observed	Occurrence Number	Habitat
Dwarf Bulrush						
	T	S1	G5	1985-09-26	2	Open wetland, not coastal nor rivershore (non-forested, wetland)
Fall Fimbry						
	SC	S2S3	G5	2012	1	Open wetland, not coastal nor rivershore (non-forested, wetland)
	SC	S2S3	G5	2018-08-24	2	Open wetland, not coastal nor rivershore (non-forested, wetland)
Fern-leaved False Foxglove						
	SC	S3	G5	1916-08-29	15	Dry barrens (partly forested, upland),Hardwood to mixed forest (forest, upland)
Hollow Joe-pye Weed						
	SC	S2	G5?	2011-07-14	10	Open wetland, not coastal nor rivershore (non-forested, wetland),Old field/roadside (non-forested, wetland or upland)
	SC	S2	G5?	2011-10-22	21	Open wetland, not coastal nor rivershore (non-forested, wetland),Old field/roadside (non-forested, wetland or upland)
MacGregor's Rye						
	SC	S2	G5	2017-07-25	18	<null>
	SC	S2	G5	2018-08-24	19	<null>
Mountain-laurel						
	SC	S2	G5	1998-12-09	27	Conifer forest (forest, upland),Hardwood to mixed forest (forest, upland)
	SC	S2	G5	2002-01-23	21	Conifer forest (forest, upland),Hardwood to mixed forest (forest, upland)
Narrow-leaved Goldenrod						
	T	S2	G5	2018-08-24	5	Open wetland, not coastal nor rivershore (non-forested, wetland)
	T	S2	G5	2017-07-27	1	Open wetland, not coastal nor rivershore (non-forested, wetland)
Northern Blazing Star						
	T	S1	G5?T3	1996-08	10	Dry barrens (partly forested, upland)
	T	S1	G5?T3	2012-10-10	11	Dry barrens (partly forested, upland)

Rare and Exemplary Botanical Features within 4 miles of Project: Brookfield Renewable, Bonny Eagle Hydroelectric Project, Hollis and Standish, Maine

Common Name	State Status	State Rank	Global Rank	Date Last Observed	Occurrence Number	Habitat
Scarlet Oak						
	E	S1	G5	1916-08	2	Hardwood to mixed forest (forest, upland)
Slippery Elm						
	PE	SH	G5	1898-07	4	Hardwood to mixed forest (forest, upland)
Small Rabbit Tobacco						
	PE	SH	G4G5T3?	1916-08-29	1	Hardwood to mixed forest (forest, upland)
Small Whorled Pogonia						
	E	S2	G2G3	2001-06-28	15	Hardwood to mixed forest (forest, upland)
Summer Grape						
	T	S2	G5T5	2018-08-24	10	Hardwood to mixed forest (forest, upland), Rocky summits and outcrops (non-forested, upland)
Wild Chess						
	E	S1	G5	1933-07-28	4	Dry barrens (partly forested, upland)

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.

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:

- **Size**: Size of community or population relative to other known examples in Maine. Community or population's viability, capability to maintain itself.
- **Condition**: 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>

From: [Perry, John](#)
To: [Frechette, Allison](#)
Subject: RE: Bonny Eagle Hydropower Project listed species data inquiry
Date: Wednesday, January 06, 2021 4:09:23 PM
Attachments: [image003.png](#)

Hi Allison,

The following State-listed Endangered, Threatened, and Special Concern species have been documented in the general vicinity of the Bonny Eagle Hydroelectric Project on the Saco River in Hollis, Maine:

- Blanding's Turtle (State Endangered)
- Eastern Ribbon Snake (Special Concern)
- Pygmy Snaketail (Special Concern)
- Common Sanddragon (Special Concern)
- American Eel (Special Concern)
- Great Blue Heron (Special Concern)
- Wood Turtle (Special Concern)
- Bald Eagle--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 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)

MDIFW databases do not indicate the presence of other State-listed Endangered, Threatened, or Special Concern Species in Project area; however, to our knowledge limited formal surveys have been conducted. It is possible that other rare species may be resident or transient in the Project area based on location, habitats present, and life history requirements, including one or more rare species of migratory birds during spring and fall migrations. Therefore, the list above should not be considered all-inclusive.

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.

John

John Perry
Environmental Review Coordinator
Maine Department of Inland Fisheries and Wildlife
284 State Street, 41 SHS
Augusta, Maine 04333-0041
Tel (207) 287-5254; Cell (207) 446-5145
Fax (207) 287-6395
www.mefishwildlife.com



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: Wednesday, January 06, 2021 12:50 PM

To: Perry, John <John.Perry@maine.gov>

Subject: FW: Bonny Eagle Hydropower Project listed species data inquiry

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, hope you had a terrific holiday break and are enjoying a healthy and happy New Year!

Brookfield's Bonny Eagle Projects LIHI application is awaiting submittal on our correspondence with the Maine Department of Inland Fisheries and Wildlife on any potential listed species within the project boundary. Can you please advise on the status of my request submitted on 12/7/20?

Thank you,
Allison

From: Frechette, Allison

Sent: Monday, December 07, 2020 10:30 AM

To: Perry, John <John.Perry@maine.gov>

Subject: RE: Bonny Eagle Hydropower Project listed species data inquiry

I've attached a link to google earth view of the project location along with our Exhibit G maps that show the project boundary. Let me know if you need anything further, thank you!

Allison Frechette
Compliance Specialist

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

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From: Perry, John <John.Perry@maine.gov>
Sent: Monday, December 07, 2020 10:05 AM
To: Frechette, Allison <Allison.Frechette@brookfieldrenewable.com>
Subject: RE: Bonny Eagle Hydropower Project listed species data inquiry

Hi Allison,

Could you please send a map that depicts the project boundary?

Thanks!

John

John Perry
Environmental Review Coordinator
Maine Department of Inland Fisheries and Wildlife
284 State Street, 41 SHS
Augusta, Maine 04333-0041
Tel (207) 287-5254; Cell (207) 446-5145
Fax (207) 287-6395
www.mefishwildlife.com



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From: Frechette, Allison <Allison.Frechette@brookfieldrenewable.com>

Sent: Monday, December 07, 2020 9:07 AM

To: Perry, John <John.Perry@maine.gov>

Subject: Bonny Eagle Hydropower Project listed species data inquiry

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Good morning John,

Brookfield is applying for LIHI certification for its Bonny Eagle Hydroelectric project in Hollis, Maine. Can you assist us in gathering data of any listed species within the project boundary?

Kind regards,
Allison Frechette
Compliance Specialist

T 800.371.7774

C 207.320.1440

allison.frechette@brookfieldrenewable.com

www.brookfieldrenewableUS.com

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