Brookfield

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June 17, 2019

Deer Rips & A-3 Developments FERC No. 2283

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

### Subject: Low Impact Hydropower Institute Application for Certification for the Deer Rips and Androscoggin No. 3 Developments at the Gulf Island-Deer Rips Project (FERC No. 2283);

Dear Ms. Ames:

On behalf of the Licensee, Brookfield White Pine Hydro LLC., please find attached the Application for Low Impact Hydropower Institute (LIHI) Certification for the Deer Rips and Androscoggin No. 3 (A-3) developments part of the Gulf Island Project on the Androscoggin River in Maine. The Draft Initial Application Package for certification was submitted to LIHI on January 10, 2019. An Intake Review was completed by LIHI with follow up questions and clarifications on March 6, 2019. The current application for full certification review includes the following required submittals:

- Table B-1 Project Description
- List of hyperlinks to pertinent FERC and regulatory documents for the Project
- Zones of Effect delineated into the impounded reaches upstream of the Deer Rips/A-3 Dam; bypass reach from Deer Rips/A-3 Dam to A-3 Powerhouse; downstream regulated Androscoggin River mainstem below A-3 and Deer Rips Powerhouses
- Matrix of Alternative Standards for each Zone of Effect identified evaluating the LIHI certification standards for each requisite criteria 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,

Kells Malomey

Kelly Maloney Manager, Compliance - Northeast

Attachments:

Cc:

S. Michaud, N. Stevens, S. Mascarenhas, K. Murphy, P. McDonough, E. Thone, S. Faulds, T. Mapletoft

LOW IMPACT HYDROPOWER INSTITUTE CERTIFICATION APPLICATION FOR THE DEER RIPS/A-3 DEVELOPMENT OF THE GULF ISLAND - DEER RIPS PROJECT (FERC NO. 2283-ME)

6/10/2019



LOW IMPACT HYDROPOWER INSTITUTE

**CERTIFICATION APPLICATION FOR THE** 

DEER RIPS/A-3 DEVELOPMENT OF THE

### GULF ISLAND - DEER RIPS PROJECT (FERC NO. 2283-ME)

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### Low Impact Hydropower Institute

### **Certification Application for the**

### Gulf Island – Deer Rips Project (FERC No. 2283-ME)

#### **1.0 PROJECT DESCRIPTION**

### 1.1 PROJECT FACILITIES AND HISTORY

The Gulf Island/Deer Rips/Androscoggin No. 3 (A-3) Project is located in the cities of Lewiston and Auburn, Maine, on the Androscoggin River which extends from the United States/Canadian border to where it joins the Kennebec River at Merrymeeting Bay. The Project is a two-dam, three-powerhouse project consisting of the Gulf Island Dam and the Deer Rips/A-3 Dam (located 1.3 miles downstream of the Gulf Island Dam). The Deer Rips/A3 dam consists of a concrete gravity spillway equipped with rubber dams, an intake and canal that conveys water to the Deer Rips Powerhouse and the A-3 Powerhouse on the opposite bank. The A-3 Development was constructed in 1927-1928 and the Deer Rips Development was constructed in 1902-1904. This application is for the Deer Rips/A-3 development of the Gulf Island Project.

The Deer Rips/A-3 Dam consists a concrete gravity dam, totaling 933.7 feet long, with a maximum height of 50 feet consisting of: (1) an earthen embankment forming the left abutment; (2) A3 headgate section); (3) a 738.2-foot-long spillway section, with a crest elevation of 201.7 feet NGVD, topped with a 4.55 foot-high inflatable rubber dam, (4) a concrete waste gate section, about 55.5 feet long, with two deep gates, each seven feet in diameter; and (5) Deer Rips canal intake and abutment section. The normal pond elevation is 205.7 ft NGVD. The top of the rubber dams are approximately 206.1 ft NGVD. The impoundment is 130-acre with a usable storage capacity of 1,200 acre-feet.

The Deer Rips Development consists of a 96-foot-long headworks section, located on the west end of the dam, with eight steel gates, each measuring 14 feet high by seven feet wide, leading to a canal, measuring 650 feet long by 75 feet wide by an average of 22 feet deep. The concrete, steel, and brick powerhouse, measuring 47 feet wide by 136 feet long, with a 32-foot-wide by 57-foot-long addition is equipped with five horizontal twin-runner Francis turbine-generator units and two vertical Francis turbine-generator units, having an installed capacity of 7,038 kW and a hydraulic capacity of 3,936 cfs. The Development has a normal tailrace elevation of 173.7 feet NGVD;

The A-3 Development consists of a 45-foot-long by 38-foot-wide forebay, located on the east end of the dam and leading to the A-3 powerhouse, with a 3.25-foot-high inflatable rubber dam to elevation 207 ft NGVD, and stoplog slots and two steel gates, each measuring 14 feet high by 17.5 feet wide. The concrete, steel, and brick powerhouse, measuring 44 feet wide by 52 feet long, is equipped with one vertical fixed-blade turbine-generator unit, having an installed capacity of 4,500 kW and a hydraulic capacity of 2,000 cfs. The Development has a normal tailrace elevation of about 173.0 ft NGVD;

The Project is operated as a run of the river facility with agency required minimum flows. There are no diadromous fish species in the upper Androscoggin River, therefore, fish passage facilities are not necessary nor have been requested or prescribed. Lands within the project boundary are limited to

those required for project operations and structures and project recreation facilities. The Project has a FERC approved Recreation Plan in place. There are no documented endangered or threatened aquatic species in this reach of the Androscoggin River.

#### FIGURE 1. PROJECT FACILITIES





FIGURE 2. DEER RIPS AND A-3 DAM AND POWERHOUSES



### FIGURE 3. DEER RIPS AND A-3 SPILLWAY AERIAL





### **1.2 PROJECT OPERATIONS**

The Deer Rips/A-3 Development is operated in run of river mode with the Deer Rips/A-3 impoundment maintained within one foot of full pond. An hourly average seasonal minimum flow of 1,700 cfs from May 1 through November 30 and 1,400 cfs from December 1 through April 30, or inflow, whichever is less, is provided for the protection and enhancement of water quality and fishery resources in the Androscoggin River. Down ramping of flows from the Deer Rips Development from full generating flow to the required minimum flow is restricted to a rate no faster than linearly over 20 minutes.

Upstream storage reservoirs are used to regulate river flow in the Androscoggin River. During the summer months, river flow is released at a uniform rate from the Errol Dam (FERC No. 3133), located about 116 miles upstream of the Deer Rips/A-3 Development. Overall, flows are released in accordance with the 1983 Androscoggin River Headwater Benefits Agreement (see Section 7.0).

### 1.3 PROJECT LOCATION

The Gulf Island Project (consisting of the Gulf Island and Deer Rips/A-3 Developments) is located on the Androscoggin River. There are numerous dams upstream from the Project. The closest upstream dams (from upstream to downstream) are dams at Riley, Jay, Otis and Livermore with the most downstream being approximately 25 miles from the Gulf Island Project.

The closest downstream dam to the Deer Rips/A-3 Development is Lewiston Falls Dam and Monty Station, approximately 3-4 miles downstream. Heavily populated portions of the cities of Lewiston and Auburn are located 3 to 4 miles downstream of the Project.

From the Deer Rips/A-3 Development downstream, the topography is generally flat along the riverbanks, making for a wide floodplain nearly to Worumbo Dam in Lisbon Falls, approximately 19 miles downstream. Downstream of Worumbo Dam, the riverbanks are much steeper, forming a narrow river valley for another 5 miles. Pejepscot Dam is located in this stretch of river approximately 22 miles downstream of the Project. Below this location (River Mile 24.0) for another 1.5 miles, the valley changes to a wider floodplain again prior to reaching the narrower river channel at Brunswick Dam (located 27 miles downstream of the Project). Below Brunswick Dam, the topography again changes to a wide river valley along a tidal area for another 4+ miles to Mustard Island.



### **1.4** REGULATORY AND OTHER REQUIREMENTS

#### 1.4.1 FERC LICENSE AND WATER QUALITY CERTIFICATION REQUIREMENTS

<u>Operations</u> - The Deer Rips and A3 Development is operated in a run-of-river mode, pursuant to Article 404, which requires stable headpond, and Article 405, which dictates minimum flows.

Article 404 Lake Level Restrictions states:

The licensee shall maintain lake levels in Gulf Island Pond and Deer Rips reservoir in accordance with condition 1.A of the water quality certification (attached as Appendix A to this license) issued September 21, 2005, by the Maine Department of Environmental Protection. For purposes of compliance with this condition, the licensee shall implement the lake level restrictions upon approval of the plan required by Article 407 of this license. In addition, full pond is defined as 262.0 feet National Geodetic Vertical Datum (NGVD) for Gulf Island Pond and 205.7 feet NGVD for the Deer Rips reservoir.

#### Article 405 Minimum Instream Flows states:

The licensee shall release from the Gulf Island-Deer Rips Project into the Androscoggin River downstream from the confluence of the Deer Rips and the Androscoggin No. 3 tailraces, a seasonal minimum flow of 1,700 cubic feet per second (cfs) from May 1 through November 30 and 1,400 cfs from December 1 through April 30, or inflow, whichever is less, for the protection and enhancement of water quality and fishery resources in the Androscoggin River downstream from the Gulf Island-Deer Rips Project.

Article 406 Down-ramping of Flows states:

The licensee shall restrict down-ramping of flows downstream from the project in accordance with condition 3.A of the water quality certification (attached as Appendix A to this license) issued September 21, 2005, by the Maine Department of Environmental Protection. For purposes of compliance with this condition, the licensee shall implement the down-ramping restriction upon approval of the plan required by Article 407 of this license.

Article 407 requires a *Project Operations and Flow Monitoring Plan* to monitor compliance with project operations, including lake level restrictions, minimum flows, and down-ramping of flows discharged from the Project, as required by Articles 404, 405, and 406, respectively, and conditions 1.A and 3.A of the water quality certification. The original Plan, filed March 30, 2007 and approved by FERC on July 10, 2007 was revised to clarify compliance reporting requirements and acknowledge the installation of the rubber dam at the Deer Rips/A-3 Dam. In its March 9, 2012 order approving the Project Operations and Flow Monitoring Plan, FERC revised the Plan to read: "The output is scanned through the SCADA system and the data is <u>documented on a calculated hourly average basis</u> and archived for future reference and compliance purposes." As such, minimum flows are monitored on an hourly average basis at the Project, rather than instantaneous.

Compliance with project operations, including lake level restrictions, minimum flows, and down-ramping of flows discharged from the Project, are required by License Articles 404, 405, and 406, respectively, as discussed above, and conditions 1.A and 3.A of the water quality certification, issued September 21,

2005, by the Maine Department of Environmental Protection (Maine DEP). The Gulf Island – Deer Rips Project Water Quality Certification (WQC) Condition 1A, 2A and 3A require:

### 1. WATER LEVEL

A. Except as temporarily modified by (I) approved maintenance activities, (2) extreme hydrologic conditions, as define below, (3) emergency electrical system conditions, as defined below, or (4) agreement between the applicant and appropriate state and/or federal agencies, water levels in the project impoundments shall be maintained as follows:

- In Gulf Island Pond, within one foot of full pond level from May I through June 30 and within four feet of full pond from July I through April 30 annually; and
- In the Deer Rips impoundment, within one foot of full pond under run-of-river operation at all times.

### 2. MINIMUM FLOWS

A. Except as temporarily modified by(1) approved maintenance activities, (2) extreme hydrologic conditions, as define below, (3) emergency electrical system conditions, as defined below, or (4) agreement between the applicant and appropriate state and/or federal agencies, an instantaneous minimum flow of 1,430 cfs or inflow, whichever is less, shall be released from the project dams at all times.

### 3. DOWNRAMPING OF FLOWS

A. Except as temporarily modified by (1) approved maintenance activities, (2) extreme hydrologic conditions, as define below, (3) emergency electrical system conditions, as defined below, or (4) agreement between the applicant and appropriate state and/or federal agencies, the down ramping of flows from the Deer Rips development from full generating flow to the required minimum flow shall be restricted to a rate no faster than linearly over 20 minutes.

The WQC for the Project also requires the Gulf Island Pond Oxygenation Project, which requires supplemental oxygenation of the Gulf Island Pond, which discharges to the Deer Rips/A-3 impoundment. The WQC was modified in 2010 to accommodate changes in monitoring and oxygenation levels (see Section 6.0).

With a couple of exceptions, the modifications to run-of-river and minimum flows that have occurred at the Deer Rips-A3 Development have been permitted by the Project's FERC license, i.e., they were either operating emergencies beyond the control of BWPH, or they were planned in consultation with resource agencies (see Section 6.0). The following excursions from run of river and minimum flows were reported to the FERC within the last five years:

- Headpond excursion that occurred on January 8, 2018 when the rubber dam was down at the Deer Rips/A-3 Dam. The cause was that the alarm scheme for the headwater level limits was not modified to account for the rubber dam being down. FERC determined the event was not a violation on March 7, 2018.
- Run-of-river disruption that occurred on September 30, 2017 due to a unit trip and an inadvertent Programmable Logic Controller (PLC) inflation of rubber dam No. 3 upon the KT1L

and K22 station supply breakers opening. The Deer Rips and Androscoggin 3 Development was out of service and all canal gates and waste gates were in local control so Brookfield Renewable's National System Control Center (NSCC) was unable to respond remotely. Flows from the Development dropped below the minimum of 1,700 cfs for approximately 20 minutes.

- Run-of-river disruption that occurred on July 23, 2017 when the Deer Rips hydro units tripped offline and river flows dropped below the minimum flow requirement of 1,700 cfs for approximately one hour and twenty-four minutes. FERC determined this event was not a violation on October 4, 2017.
- Run-of River disruption that occurred on September 25, 2014 when units at the A-3 Development tripped off-line, which caused the flow to drop below the minimum flow of 1,700 cfs for approximately 21 minutes. During testing of the station's battery bank, a corroded battery connector bolt was discovered to have caused the trip. FERC determined this not a violation on March 18, 2015.
- Headpond deviation that occurred on February 5, 2014 as a result of a failed post insulator at the Gulf Island substation which caused the Gulf Island Development to trip off-line and cease flows from the Development. This caused the impoundment of the downstream Deer Rips-A-3 Development to fall below its required minimum reservoir elevation for approximately 1 hour. FERC determined this event was not a violation on May 9, 2014.

Other license requirements are as follows:

<u>Threatened and Endangered Species</u> - Article 409 *Threatened and Endangered Species Management Plan* requires the filing of a "plan to protect the federally listed threatened bald eagle (Haliaeetus leucocephalus) and its habitat in the project area." This Plan was updated in 2018 (see Section 6.0) as discussed in detail in Section 3.6.

<u>Cultural Resources</u> - Article 410 *Programmatic Agreement* requires the implementation of the Programmatic Agreement for the Project for the "Management of Historic Structures and Eligible Archaeological Sites that may be affected by New Licenses issued...and including but not limited to the Cultural Resources Management Plan (CRMP) for the project." This Plan was filed on April 18, 2007 and discussed in Section 3.7.

<u>Recreation and Land Management</u> - Article 411 of the license requires the development of a Recreation Plan for the Project and Article 412 requires that the Licensee file a land and trail management plan. As per Articles 411 and 412 of the Project license, the Licensee ensures that the recreation plan and the land and trail management plan are consistent with Condition 7 of the water quality certification. The recreation and land/trail management plans provide:

- a plan and schedule for renovation of existing and development of new public recreational facilities;
- a description of long term maintenance responsibilities for the facilities;
- a methodology to monitor and track recreational use and activity occurring within the Project boundary consistent with Form 80 and license requirements;

- a discussion on coordination and compliance with the cultural resources management plan and the Programmatic Agreement pursuant to Article 410 of the license;
- a review and assessment of Licensee fee-owned lands within the Project boundary; and,
- a policy and methodology for the use of Project lands.

The Recreation Plan and Land and Trails Management Plan were filed November 7, 2008. Land use assessments and recreation monitoring required by the Plans is discussed in Section 3.8.

Documentation associated with the above referenced license and water quality certification condition compliance, such as resource management plans, are provided as hyperlinks in Section 6.0.

### 1.4.1 LIHI CERTIFICATION REQUIREMENTS

As this is an initial application for LIHI Certification, the Deer Rips/A-3 Development is not currently subject to LIHI Certification Conditions.

### TABLE 1.FACILITY INFORMATION

Item	Information Requested	Response (include references to further details)		
Name of the Facility	Facility name (use FERC project name or other legal name)	Gulf Island-Deer Rips (FERC Project No.2283) (Certifying the Deer Rips and Androscoggin No.3 Development)		
Location	River name (USGS proper name)	Androscoggin River		
	Watershed name (select region, click on the area of interest until the 8-digit HUC number appears. Then identify watershed name and HUC-8 number from the map at: <u>https://water.usgs.gov/wsc/map_index.ht</u> <u>ml</u> )	Androscoggin HUC: 01030003		
	Nearest town(s), county(ies), and state(s) to dam	Lewiston and Auburn, Androscoggin, Maine		
River mile of dam 3.		3.71 miles above Little Androscoggin River, Androscoggin River mile 33.7 (as measured from Brick Island)		
	Geographic latitude of dam	Latitude 44°08'06.87" N		
	Geographic longitude of dam	Longitude 70°12'05.36" W		
Facility Owner	Application contact names (Complete the Contact Form in <u>Section B-4</u> also):	Kelly Maloney Manager, Compliance Northeast		
Facility owner company and authorized owner representative name. For recertifications: If ownership has changed since last certification, provide the date of the change		Brookfield White Pine Hydro LLC Kelly Maloney		
	FERC licensee company name (if different from owner)	Brookfield Renewable		
Regulatory Status	FERC Project Number (e.g., P-xxxx), issuance and expiration dates, or date of exemption	FERC P-2283, Issue Aug. 23, 2006 Expire Aug. 1, 2048		
	FERC license type (major, minor, exemption) or special classification (e.g., "qualified conduit", "non-jurisdictional")	Hydroelectric Operating License, Federal Power Act		
	Water Quality Certificate identifier, issuance date, and issuing agency name. Include information on amendments.	DEP #L-17100-33-O-N Dated Sept. 21, 2005, State of Maine Department of Environmental Protection		

ltem	Information Requested	Response (include references to further
	Hyperlinks to key electronic records on FERC e-library website or other publicly accessible data repositories	See hyperlink list below for relevant records including FERC License Orders; Section 401 Water Quality Certification; FERC and regulatory filings; and other key documents.
Powerhouse	Date of initial operation (past or future for pre-operational applications) Total installed capacity (MW) For recertifications: Indicate if installed capacity has changed since last	Deer Rips: November 12, 1904 A-3: July 23, 1928 Provide the total nameplate capacity for each development and for application as a whole
	certification	Deer Rips: 7.245 MW A-3 (post uprate): 4.5 MW
	Average annual generation (MWh) and period of record used For recertifications: Indicate if average annual generation has changed since last certification	Provide average annual generation values for each development and for the application as a whole Deer Rips: 36,879 (MWh) A-3: 29,467 (MWh)
	Mode of operation (run-of-river, peaking, pulsing, seasonal storage, diversion, etc.) For recertifications: Indicate if mode of operation has changed since last certification	Run-of-river
	Number, type, and size of turbines, including maximum and minimum hydraulic capacity of each unit	Deer Rips: 5 horizontal twin-runner Francis turbine-generator units, 2 vertical Francis turbine-generator units Unit 1: 1,341Hp; 585cfs Unit 2: 1,045Hp; 456cfs Unit 3: 1,341Hp; 585cfs Unit 4: 1,073Hp; 450cfs Unit 5: 1,073Hp; 450cfs Unit 5: 1,073Hp; 450cfs Unit 6: 2,414Hp; 790cfs Unit 6: 2,414Hp; 790cfs Unit 7: 1,610Hp; 620cfs
		Capacity: 2,000 cfs.

Item	Information Requested	Response (include references to further details)
	Trashrack clear spacing (inches), for each trashrack	Deer Rips - six trashracks having 3/8-inch steel bars at 2-1/4 inch openings, and a seventh trashrack with 1/4-inch steel bars with 2-1/2 inch spacing A-3 - two trashracks having 3/8-inch steel bars at 3-1/2 inch openings
	Dates and types of major equipment upgrades	Inflatable Rubber Dam Installation at Deer Rips Dam, Unit Rewind at A-3 Powerhouse (see FERC and Regulatory Information)
	Dates, purpose, and type of any recent operational changes	None
	Plans, authorization, and regulatory activities for any facility upgrades or license or exemption amendments	Inflatable Rubber Dam Installation at Deer Rips Dam, Unit Rewind at A-3 Powerhouse (see FERC and Regulatory Information)
Dam or Diversion	Date of original construction and description and dates of subsequent dam or diversion structure modifications	A-3: 1927-1928 Deer Rips: 1902-1904
	Dam or diversion structure height including separately, the height of any flashboards, inflatable dams, etc.	Average 25' Max 50'
	Spillway elevation and hydraulic capacity	Deer Rips Dam: Permanent crest is at elevation 201.45'; inflatable rubber dam brings spillway elevation to 206' Deer Rips: 3,936cfs; A-3: 2,000cfs; Total hydraulic capacity: 5,936cfs
	Tailwater elevation (provide normal range if available)	Deer Rips: 173.0' A-3: 173.0'
	Length and type of all penstocks and water conveyance structures between the impoundment and powerhouse	Deer Rips: 94-foot-long headworks Section, 650' long by 75' wide & 22' avg. depth canal, no penstocks A-3: 45-foot-long by 38-foot-wide forebay with 2 gates(17.5'x14'), no penstocks
	Dates and types of major infrastructure changes	2018/2019 Unit Rewind at A-3 Powerhouse (see FERC and Regulatory Information)
	Designated facility purposes (e.g., power, navigation, flood control, water supply, etc.)	Power, Flood Control
	Source water	Androscoggin River

Item	Information Requested	Response (include references to further details)
	Receiving water and location of discharge	Androscoggin River
Conduit	Date of conduit construction and primary purpose of conduit	N/A
Impoundment and	Authorized maximum and minimum water surface elevations	Max 205.7ft (USGS)
Watershed	For recertifications: Indicate if these values have changed since last certification	Min 204.7ft (USGS)
	Normal operating elevations and normal fluctuation range For recertifications: Indicate if these values have changed since last certification	Within one foot of 205.7 feet (USGS)
	Gross storage volume and surface area at full pool For recertifications: Indicate if these values have changed since last certification	1.200 acre-ft. 130 acres
	Usable storage volume and surface area For recertifications: Indicate if these values have changed since last certification	Negligible
	Describe requirements related to impoundment inflow, outflow, up/down ramping and refill rate restrictions.	Run of river operations which includes stable headpond (within 1 foot of normal full pond); the down ramping of flows from the Deer Rips development from full generating flow to the required minimum flow shall be restricted to a rate no faster than linearly over 20 minutes.

Item	Information Requested	Response (include references to further
		details)
	Upstream dams by name, ownership and	Androscoggin River
	river mile. If FERC licensed or exempt,	Errol Project (FERC #3133), Errol
	please provide FERC Project number of	Hydroelectric LP & Brookfield White Pine
	these dams. Indicate which upstream	Hydro LLC, River Mile 170.1;
	dams have downstream fish passage.	Pontook Project (FERC #2861), Pontook
		Operating LP, River Mile 152.4;
		Sawmill Project (FERC #2422), Great Lakes
		Hydro America LLC, River Mile 139.2;
		Riverside Project (FERC #2423), Great
		Lakes Hydro America LLC, River Mile
		138.8;
		J. Brodie Smith Project (FERC #2287),
		Central Rivers Power, River Mile 138.2;
		Cross Project (FERC #2326), Great Lakes
		Hydro America LLC, River Mile 136.9;
		Cascade Project (FERC #2327), Great
		Lakes Hydro America LLC, River Mile
		136.3;
		Gorham Project (FERC #2311), Great
		Lakes Hydro America LLC, River Mile
		133.2;
		Central Rivers Power, River Mile130.4;
		Sheiburne Project (FERC #2300), Great
		Lakes Hydro America LLC, River Mile 127.6
		Opper & Mildule Dalli (FERC NO.2333), Pumford Falls Dowor Company, River mile
		90.9 and 90.7. Riley Project (FERC # 8277)
		Fagle Creek Renewable Energy LLC River
		Mile 69 3.
		lav (River Mile 66 6) Otis (River Mile
		63.8). Livermore Falls (FFRC # 2375) Fagle
		Creek Renewable Energy LLC. River Mile
		61.2:
		Gulf Island Project (FERC #2283),
		Brookfield White Pine Hydro LLC, River
		Mile 35.0;
	Downstream dams by name, ownership,	Lewiston Falls Project (FERC # 2302),
	river mile and FERC number if FERC	Brookfield White Pine Hydro LLC, River
	licensed or exempt. Indicate which	Mile 30.8
	downstream dams have upstream fish	Worumbo Project (FERC # 3428), Brown
	passage	Bear II Hydro, Inc., River Mile 15.7;
		Pejepscot Project (FERC # 4784), Topsham
		Hydro Partners LP, River Mile 12.5;
		Brunswick Project (FERC # 2284),
		Brookfield White Pine Hydro LLC, River
		Mile 8.0

Item	Information Requested	Response (include references to further details)
	Operating agreements with upstream or	1983 Androscoggin River Headwater
	downstream facilities that affect water	Benefits Agreement
	availability and facility operation	
	Area of land (acres) and area of water	107 acres
	(acres) inside FERC project boundary or	
	under facility control.	
Hydrologic	Average annual flow at the dam, and	2008-2018: 6,437cfs
Setting	period of record used	
	Average monthly flows and period of	Jan: 4,686cfs
	record used	Feb: 4,475cfs
		Mar: 7,164cfs
		Apr: 14,840cfs
		May: 11,191cfs
		Jun: 6,034cfs
		Jul: 3,852cfs
		Aug: 3,257cfs
		Sept: 3,188cfs
		Oct: 4,393cfs
		Nov: 5,785cfs
		Dec: 5,522cfs
	Location and name of closest stream	Above – USGS 01054500 Androscoggin
	gauging stations above and below the	River at Rumford, Maine
	facility	Below – USGS 01059000 Androscoggin
		River near Auburn, Maine
	Watershed area at the dam (in square	2,865 Square miles
	miles). Identify if this value is prorated	
	and provide the basis for proration.	
Designated	Number of zones of effect	3
Zones of	Upstream and downstream locations by	Zone 1 Impoundment: RM 35.0 – 33.7
Effect	river miles	Zone 2 Bypass Reach: RM 33.70 – 33.65
		Zone 3 Downstream River Reach: RM
		33.65 – 33.1
	Type of waterbody (river, impoundment,	Zone 1- Impoundment
	bypassed reach, etc.)	Zone 2 - Bypass Reach
		Zone 3 - Regulated Downstream River
		Reach
	Delimiting structures or features	Zone 1-Impoundment: Deer Rips Dam –
		Gult Island Dam
		Zone 2-Bypass Reach: Deer Rips Dam -
		Deer Rips Powerhouse, Deer Rips Power
		Canal, A-3 Forebay, and A-3 Powerhouse.
		Zone 3-Downstream Regulated River
		Reach: A-3 Powerhouse and Deer Rips
		Powerhouse

ltem	Information Requested	Response (include references to further details)
	Designated uses by state water quality	Drinking water supply after treatment;
	agency	fishing; agriculture; recreation in and on
		the water; industrial process and cooling
		water supply; hydroelectric power
		generation; navigation; and as a habitat
		for fish and other aquatic life.
Pre-Operationa	l Facilities	
Expected	Date generation is expected to begin	N/A
operational		
date		
Dam,	Description of modifications made to a	N/A
diversion	pre-existing conduit, dam or diversion	
structure or	structure needed to accommodate facility	
conduit	generation. This includes installation of	
modification	flashboards or raising the flashboard	
	height.	
	Date the modification is expected to be	
	completed	
Change in	Description of any change in	N/A
water flow	impoundment levels, water flows or	
regime	operations required for new generation	

### 2.0 ZONES OF EFFECT

The Androscoggin River Gulf Island Project is a two-dam, three-powerhouse project consisting of the Gulf Island Dam and the Deer Rips/Androscoggin No. 3 Dam development (located 1.3 miles downstream of the Gulf Island Dam).

The Gulf Island Development discharges into the Deer Rips/A-3 impoundment, which comprises Zone 1 – Impoundment. The impoundment extends from the Deer Rips/A-3 Dam, at RM 33.6 to the base of the Gulf Island Dam at RM 35.4. The Deer Rips/A-3 Dam consists of a concrete gravity spillway equipped with rubber bladders, an intake and canal that conveys water to the Deer Rips Powerhouse, the Deer Rips Powerhouse, and the A-3 Powerhouse on the opposite bank.

Water released from the dam upstream of the powerhouse discharges comprises Zone 2 – Bypass Reach. Zone 2 extends approximately 250 feet from the Deer Rips/A-3 Dam to the point of discharge from the A3 Powerhouse.

The flow released from the Deer Rips/A-3 Dam, collectively with the discharge from the Deer Rips and A-3 powerhouses comprise Zone 3 – Regulated Downstream River Reach. Zone 3 extends from the A-3 powerhouse discharge approximately 600 feet to the discharge of the Deer Rips Powerhouse and further approximately 800 feet downstream to the extent of the project boundary.

### FIGURE 6. ZONES OF EFFECT



### 2.1 ZONE 1 - IMPOUNDMENT

Flows through the Deer Rips and A-3 Development, as released from the upstream Gulf Island Development, are managed as run-of-river. The Deer Rips/A-3 Impoundment extends approximately 1.3 miles from the Deer Rips/A-3 Dam to the base of the Gulf Island Development.

### FIGURE 7. ZONE 1 - IMPOUNDMENT



 TABLE 2.
 ZONE 1 – IMPOUNDMENT MATRIX OF ALTERNATIVE STANDARDS

Facility Name: <u>Deer Rips and Androscoggin No. 3</u> Zone of Effect: <u>1 – Impoundment</u>

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

The water quality of this reach is classified as Class C. The Gulf Island Pond Oxygenation Project ensures compliance of Androscoggin River water discharged from the Gulf Island Development to the impoundment of the Deer Rips and A-3 Development for dissolved oxygen levels.

There are no anadromous fish species in this section of the Androscoggin River, as there are neither upstream nor downstream fish passage facilities present at the Project nor at dams upstream and downstream of the Deer Rips and A-3 Development. The impoundment provides unimpeded access, however, for fish movements along its 1.3 mile reach.

As the Deer Rips and A3 Development operates to maintain a stable headpond, lands adjacent to this Zone of Effect are generally unaffected by project operations. No threatened species are affected by routine project operations. Limited vegetation removal may occur within project lands for maintenance purposes and vegetation management of the dams. Limited recreation does occur on the impoundment (day use fishing, boating and canoeing) as originating from the canoe portage ingress around the Gulf Island Dam at the upstream extent and as originating from the canoe portage egress around Deer Rips/A-3 Dam at the downstream extent.

### 2.2 ZONE 2 – BYPASS REACH

The Deer Rips/A-3 bypass reach extends approximately 250 feet downstream of the spillway until the confluence of the flow from the A-3 powerhouse. There are no required minimum flows specific to the bypass reach, which is comprised of ledge bedrock. Flows to this reach occur in times of spill exceeding the capacities of the powerhouses or when units are offline.

FIGURE 8. ZONE 2 – BYPASS REACH AND DEER RIPS CANAL AND POWERHOUSE AND A-3 POWERHOUSE



### TABLE 3. ZONE 2 – BYPASS REACH MATRIX OF ALTERNATIVE STANDARDS

Facility Name: <u>Deer Rips and Androscoggin No. 3</u> Zone of Effect: <u>2 – Bypass Reach</u>

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

As with the other zones, the water quality of this reach is classified as Class C. Given the lack of fish passage at other dams downstream of the Deer Rips/A-3 Dam, there are no anadromous fish species in this section of the Androscoggin River. Run of river flows with a seasonal minimum are passed via a combination of powerhouse discharges and spill from the Dam into the bypass reach, as appropriate.

There are no lands adjacent to this reach as it is surrounded by the spillway. No threatened species are affected by routine project operations. There is no access to this reach of the river.

### 2.3 ZONE 3 – REGULATED DOWNSTREAM RIVER REACH

This reach of the Androscoggin River extends approximately 1,400 feet from the downstream extend of Zone 2 – Bypass Reach to the limit of the project boundary. The impoundment of the Lewiston Falls Project backwaters approximately to the project boundary, limiting the hydrologic influence of the Project. This reach includes the discharges from both Deer Rips and A-3 Powerhouses.



### FIGURE 9. ZONE 3 – REGULATED DOWNSTREAM RIVER REACH

#### TABLE 4. ZONE 3 – REGULATED DOWNSTREAM RIVER REACH MATRIX OF ALTERNATIVE STANDARDS

Facility Name: <u>Deer Rips and Androscoggin No. 3</u> Zone of Effect: <u>3 – Regulated Downstream River</u> <u>Reach</u>

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

The classification of Zone 3 Regulated Downstream River Reach is Class C. As discussed above, there are no anadromous fish species in this section of the Androscoggin River and therefore fish passage facilities are not necessary, nor have they been prescribed. Except in times of high water, beyond the control of the Project, lands adjacent to this Zone of Effect are generally unaffected by project operations. No threatened species are affected by routine project operations. Limited vegetation removal may occur within project lands for maintenance purposes and vegetation management of the powerhouses. Recreational access to this reach is available from the ingress of the canoe portage trail around the Deer Rips/A-3 Dam and some boating activity within this Zond of Effect may occur as originating from the downstream Lewiston Falls Project.

### **3.0 LIHI CERTIFICATION CRITERION**

The Project is operated as a run of the river facility with agency required minimum flows. There are no diadromous fish species in the upper Androscoggin River, therefore, fish passage facilities are not necessary nor have been requested or prescribed. Lands within the project boundary are limited to those required for project operations, project, and project recreation facilities. There are no documented endangered or threatened aquatic species in this reach of the Androscoggin 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 plan in place.

### 3.1 ECOLOGICAL FLOWS

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

### 3.1.1 ZONE 1 – PROJECT IMPOUNDMENT

Criterion	Standard	Supporting Information
Α	1	Not Applicable / De Minimis Effect:
	The facility operates in a true run-of-river	<ul> <li>For run-of-river facilities, provide details</li> </ul>
	operational mode and there are no	on operations and demonstrate that flows,
	bypassed reaches or water diversions	water levels, and operation are monitored
	associated with the facility; or the facility is	to ensure such an operational mode is
	located within an existing water conduit	maintained. If deviations from required
	that does not discharge into natural	flows have occurred, discuss them and the
	waterways	measures taken to minimize reoccurrence.

The Project is operated in run-of-river mode with minimal impoundment fluctuations. The low headwater level limit with all rubber dams up is 204.7'. The low headwater level limit with a rubber dam down is typically the dam crest of 201.7'. When flow is reduced from Gulf Island below Deer Rips' station capacity, the bladder(s) are inflated to make the flow cut to prevent having to refill Deer Rips for an extended period.

Brookfield's NSCC monitors operations including impoundment elevations and flows through both the Deer Rips and A-3 Powerhouses and as discharged through dam structures continuously to maintain compliance with requirements for run-of-river operations and minimum flows. As discussed in Section 3.1.1, maintenance of stable headpond elevations assures compliance with run-of-river obligations.

Any deviations from run-of-river operations or minimum flow requirements at the Development are reported to FERC as described above in Section 1.2. Fish and wildlife habitat in this zone is assessed and reported every five years to FERC (see FERC and Regulatory Information for the 2017 Land Assessment Status Update).

For resident fish in the Gulf Island impoundment (and that may, via spill make their way into the Deer Rips/A-3 impoundment), the one foot fluctuation target for run of river habitat enhances any bass spawning and nursery habitat that may be present in the impoundment and enhances aquatic invertebrate habitat.

A Licensee "Recreation Plan and Land and Trails Management Plan" was submitted to FERC in November 2008 pursuant to Articles 411 and 412 of the Gulf Island-Deer Rips Hydro Project license. This plan adopted land management, land use, and shoreline policies that provide protection to the resources, including deer wintering areas (DWAs), inland waterfowl and wading bird habitat (IWWHs) and bald eagle habitat, within the Project boundary.

In accordance with FERC's Order Modifying and Approving Recreation Plan and Land/Trail Management Plan (March 25, 2010), FPL Energy Maine Hydro LLC (NextEra Energy), the former licensee of the Gulf Island Project conducted an assessment of lands, regardless of ownership, within 200 feet of the highwater elevation of the impoundment (Wildlife and Habitat Assessment March 2011). The assessment included an analysis of significant wildlife habitat data obtained from the Maine Department of Inland Fisheries and Wildlife (MDIFW) that identified several mapped DWAs and IWWHs areas within 200 feet of the shoreline. There is currently no known evidence of significant risk of damage to essential wildlife habitat, such as DWAs, IWWHs, and bald eagle nesting, through excessive or inappropriate development, and no demonstrated need for additional lands that might be necessary for project purposes.

The field inspections indicated that riparian wildlife habitat found along the Project's shorelines is generally in good condition. Much of the area is forested and has not been widely impacted by residential or commercial development, even near major road crossings. Forest management activity is evident in a number of locations adjacent to the Project. Tree harvesting, however, has not adversely impacted the riparian zone and does not detract from the wildlife habitat present. The field inspections indicated that at least one of the riparian owners is managing his lands with wildlife habitat stewardship in mind. The evidence observed included the installation of bird houses and plantings of conservation wildflower mixes at a log landing.

There are also several land areas adjacent to the Project's shorelines that are managed for agricultural uses such as corn and hay production. These land uses do not adversely impact wildlife habitat values found in the riparian zone. These fields provide some diversity for the wildlife habitat in the area, and are used by and benefit wildlife species such as red-tailed hawk, wild turkey, and white-tailed deer.

Wildlife observed within and adjacent to the Project boundary includes wood frog, green frog, spotted salamander, northern water snake, garter snake, numerous song birds, wild turkey, ruffed grouse, red-tailed hawk, broad-winged hawk, sharp-shinned hawk, Cooper's hawk, merlin, bald eagle, osprey, great blue heron, Canada goose, mallard, black duck, wood duck, common merganser, spotted sandpiper, solitary sandpiper, least sandpiper, Eastern chipmunk, woodchuck, muskrat, and beaver. Signs and tracks observed throughout the Project riparian zone indicate that raccoon, mink, red fox, beaver, muskrat, and white-tailed deer are common. Bobcat tracks were observed in one area on the west shore of the Project.

Criterion	Standard	Supporting Information
Α	2	Agency Recommendation (see Appendix A
	The flow regime at the facility was	for definitions):
	developed in accordance with a, science-	<ul> <li>Identify the proceeding and source, date,</li> </ul>
	based agency recommendation	and specifics of the agency
		recommendation applied (NOTE: there may
		be more than one; identify and explain
		which is most environmentally protective).
		<ul> <li>Explain the scientific or technical basis for</li> </ul>
		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.
		<ul> <li>Explain how the recommendation relates</li> </ul>
		to agency management goals and
		objectives for fish and wildlife.
		<ul> <li>Explain how the recommendation</li> </ul>
		provides fish and wildlife protection,
		mitigation and enhancement (including in-
		stream flows, ramping and peaking rate
		conditions, and seasonal and episodic
		instream flow variations).

### 3.1.2 ZONE 2 – PROJECT BYPASS REACH

The bypass reach comprises a very short portion of the overall project and is bedrock ledge. This reach receives water during times of high flow in excess of the capacity of the Deer Rips and A-3 powerhouses or when units are down. There is no agency recommended minimum flow specific to the bypass reach. Minimum flows at the Deer Rips/A-3 Development are provided as a combination of powerhouse generation flows and spills released at the Deer Rips/A-3 Development into Zone 3 – Regulated Downstream River Reach.

In response to concerns expressed by state and federal fisheries agencies regarding the impacts of flow releases from the project dams on fisheries, the Licensee conducted instream flow studies below the Gulf Island Dam (which discharges into the Deer Rips/A-3 Impoundment), Deer Rips/A-3 Dam and the Lewiston Falls Dam (several miles downstream of the Deer Rips/A-3 Development). The studies included (1) the use of the Instream Flow Incremental Methodology (IFIM) to quantify habitat conditions under various flows, (2) a time series analysis of habitat duration, and (3) a ramping study to examine the impacts of sudden decreases in flows on fish stranding. Because of the extremely limited reach of the bypass, these study efforts focused on the 1,500-foot-long river segment immediately below Deer Rips/A-3 Dam, which is discussed further in Zone 3 – Regulated Downstream River Reach.

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

### 3.1.3 ZONE 3 – REGULATED RIVER REACH DOWNSTREAM

This reach receives run of river flows from the dam and both powerhouses. A seasonal minimum flow of minimum flow of 1,700 cfs from May 1 through November 30 and 1,400 cfs from December 1 through April 30 is provided. Brookfield's NSCC monitors operations including impoundment elevations and flows through both the Deer Rips and A-3 Powerhouses and as discharged through dam structures continuously to maintain compliance with requirements for run-of-river operations and minimum flows. As discussed in Section 3.1.1, maintenance of stable headpond elevations assures compliance with run-of-river obligations.

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

As discussed above, an IFIM study was conducted for three separate river segments that were either representative of available riverine habitat or were considered unique habitat areas. The studied river segments included the 1,500-foot-long river segment immediately below the Deer Rips Dam (Deer Rips Reach) and two additional reaches downstream of the Lewiston Falls Dam. While the evaluation species and life stages included American shad (adult immigration, spawning, incubation, juvenile and juvenile emigration); Atlantic salmon (adult and juvenile); brown trout (adult and juvenile); and smallmouth bass (all life stages); it was determined that smallmouth bass were not a management priority in the river below Gulf Island Dam and that habitat values for Atlantic salmon need not be considered further in establishing minimum flows as there are currently no definite plans for salmon restoration in the river below Gulf Island Dam.

Based on the results of the IFIM study, habitat in reaches several miles below the Lewiston Falls Project, downstream of the Deer Rips/A-3 Development, are generally limited to spawning and nursery habitat for shad. While it was determined that this habitat generally increases with flow, the availability of more and better habitat for shad in downstream areas of the river argued against maximizing shad habitat value in the reaches below Lewiston Falls Dam. FERC's recommended 1,700 cfs minimum flow from May 1 to November 30 was established because it would provide a moderately improved zone-of-passage for downstream migrating alewife, while also providing flows to enhance shad and alewife spawning and incubation for reaches located well downstream of the Deer Rips/A-3 Development (i.e. downstream of the Lewiston Falls Project). The 1,700-cfs flow during the summer and fall periods was also determined to result in significantly improved habitat conditions in the lower Androscoggin River for adult brown trout. FERC determined, however, that from December through April, habitat availability in the lower Androscoggin River with a 1,400-cfs minimum flow would not be significantly

different from that with a 1,700-cfs minimum flow. In addition, staff found that the biological needs of fish are reduced in the winter and early spring.

The ramping study conducted an analysis of the effects on resident fish species of decreasing flows from full operating flows to various minimum flows over a specified period of time. The flow ramping schedule analyzed was a linear reduction from the maximum generating flow of 5,510 cfs to minimum flows of 1,100 cfs and 1,800 cfs over a 20-minute period. Generally, the ramping analysis did not indicate a problem with the rate of down ramping at the Deer Rips/A-3 Development and transect analysis for the reach below the Deer Rips/A-3 dam indicates a reduction in flows to 1,100 cfs or to 1,800 cfs does not appear to have any effect on stranding fish in the large pool at the upstream end of the study reach (below the dam) but could strand fish in pools created by cobbles and boulders on the western side of the most downstream island in the study reach (which extends approximately 1,500 feet below the dam). Based on the results of the ramping study, it was concluded that the ramping rate analyzed would limit the risk of fish becoming stranded and would not result in any significant fisheries impacts.

### 3.2 WATER QUALITY

The stated Low Impact Hydropower Institute goal for Criterion B – Water Quality is "Water quality is protected in waterbodies directly affected by the facility, including downstream reaches, bypassed reaches, and impoundments above dams and diversions." The applicable standard applies to all Zones of Effect and is discussed collectively for all reaches.

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

The Water Quality Certification was modified June 7, 2010. The Maine Department of Environmental Protection modified the oxygen injection requirements for the Gulf Island-Deer Rips Hydro Project based on the re-calibration of the water quality model for Gulf Island Pond following correction of an error relating to dispersive mixing. The Department also modified the oxygen injection requirements for the project to reflect new oxygen injection rates proposed by the Gulf Island Pond Oxygenation Project (GIPOP) Partnership.

Water quality monitoring is conducted annually on the Gulf Island headpond located 1.3 miles upstream of the Deer Rips/A3 Development. Monitoring efforts consist of temperature and Dissolved Oxygen (DO) monitoring at the Turner Bridge and are utilized in the calculations for oxygen injection rates of the Gulf Island Pond Oxygenation Project (GIPOP). In addition to this, there is a Deep Hole monitor located on the headpond approximately ¼ mile upstream of the Gulf Island Dam. The Deep Hole Monitor conducts a complete profile of the water column every 2 hours recording temperature and DO levels. Data is compiled, analyzed and reported to the regulatory agencies on an annual basis.

The reach of the Androscoggin River upstream of the Gulf Island Dam is identified as impaired as a result of Polychlorinated biphenyls (PCBs), which are a legacy pollutant of industrial processes such as paper making.

### 3.3 UPSTREAM FISH PASSAGE

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

The Development does not have, and is not required to have, fish passage facilities, as anadromous fish are not present in the reaches occupied by the Development. As such, all Zones of Effect meet Standard C-1 and are discussed collectively below.

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

There is no upstream fish passage in this reach as migratory species such as Alewife, blueback herring, striped bass, sea lamprey, and American shad are diadromous fish species which are known not to be present in this river reach given the downstream Lewiston Falls. This is in accordance with the 2013 opinion of the National Marine Fisheries Service which states "The current GOM DPS includes all anadromous Atlantic salmon whose freshwater range occurs in the watersheds from the Androscoggin River northward along the Maine coast to the Dennys River, and wherever these fish occur in the estuarine and marine environment. The following impassable falls delimit the upstream extent of the freshwater range: Rumford Falls in the town of Rumford on the Androscoggin River. In the Androscoggin watershed, Rumford Falls was the upper extent of Atlantic salmon migration, while Lewiston Falls was believed to be the upper extent of alewife and shad migrations" (Foster and Atkins 1867).

Movement of fish through Zone 1 – Impoundment and Zone 3 – Regulated Downstream River Reach is unimpeded.

Both warm water and cold-water resident fish species utilize the reach of the Androscoggin River at the Gulf Island impoundment and would be anticipated to exist in likely significantly smaller numbers in the Deer Rips/A-3 impoundment. Typical species documented in the Gulf Island impoundment include large and small mouth bass, white and yellow perch, pickerel, northern pike, brown bullhead and various shiners. There are no anadromous or catadromous fish species in this section of the Androscoggin River, as there are no upstream nor downstream fish passage facilities for migratory species upstream of the Lewiston Dam.

### 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." None of the facilities of the Development have fish passage facilities, and anadromous fish are not present in the

reaches occupied by the Development. As such, all Zones of Effect meet Standard D-1 and are discussed collectively.

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

There is no downstream fish passage in this reach; diadromous fish species are not known to be present. This is in accordance with the 2013 opinion of the National Marine Fisheries Service statement above in criterion C. Movement of fish through Zone 1 – Impoundment and Zone 3 – Regulated Downstream River Reach is unimpeded.

There are no anadromous or catadromous fish species in this section of the Androscoggin River, as there are no upstream nor downstream fish passage facilities for migratory species upstream of the, Lewiston Dam. Resident species discussed above may make their way into the Deer Rips/A-3 impoundment in times of spill. A limited drawdown, ramping and minimum flows are in place to safeguard resident fish species. Maintenance work on the dam is planned in consultation with the local resource agencies. The Deer Rips/A3 Development does not adversely impact the successful completion of resident fish lifecycles.

### 3.5 SHORELINE AND WATERSHED PROTECTION

The stated Low Impact Hydropower Institute goal for Criterion E – Shoreline and Watershed Protection is "The facility has demonstrated that sufficient action has been taken to protect, mitigate or enhance the condition of soils, vegetation and ecosystem functions on shoreline and watershed lands associated with the facility." The Project Recreation and Land Management Plan was filed on November 7, 2008.

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

### 3.5.1 ZONE 1 - PROJECT IMPOUNDMENT

Lands within the Project boundary are limited to those required for Project operations and Project recreation facilities. The Project's run-of- river operation and license requirements for minimal impoundment fluctuation provide protection for the Project's shoreline areas. (see Exhibit G and the order modifying and approving land assessment report in FERC and Regulatory Information)

Currently the land surrounding the Project is largely undeveloped with scattered farms, isolated homes and, in some instances, small residential communities. As discussed above, the 2011 Wildlife and Habitat Assessment Report indicated that riparian wildlife habitat found along the Project's shorelines is generally in good condition and much of the area is forested and has not been widely impacted by residential or commercial development, even near major road crossings. While some forest management activity is evident in a number of locations adjacent to the Project, tree harvesting has not adversely impacted the riparian zone and does not detract from the wildlife habitat present. Several land areas adjacent to the Project's shorelines are managed for agricultural uses such as corn and hay production which provide some diversity for the wildlife habitat in the area and are used by and benefit wildlife species such as red-tailed hawk, wild turkey, and white-tailed deer.

Wildlife observed within and adjacent to the Project boundary are discussed above.

With the exception of bald eagle nest data, the most recent significant wildlife habitat mapping from the Maine Department of Inland Fisheries and Wildlife, updated as of September 11, 2008, indicates there are several known habitat areas in the Project vicinity (MDIFW's recent significant wildlife habitat data reflects fewer habitats than the data set used in previous filings.) MDIFW's bald eagle nest data is current as of May 2010 and is provided in Section 7.0.

### 3.5.2 ZONE 2 – PROJECT BYPASS REACH

Criterion	Standard	Supporting Information
E	1	Agency Recommendation:
	There are no lands associated with the	<ul> <li>Provide copies or links to any agency</li> </ul>
	facility where the facility owner has	recommendations or management plans that
	direct or indirect ownership or control	are in effect related to protection, mitigation,
	over lands surrounding the facility and its	or enhancement of shoreline surrounding the
	riverine zones that have significant	facility (e.g., Shoreline Management Plans).
	ecological value for protecting water	<ul> <li>Provide documentation that indicates the</li> </ul>
	quality, aesthetics, or low-impact	facility is in full compliance with any agency
	recreation, and the facility is not subject	recommendations or management plans that
	to any Shoreline Management Plan (SMP)	are in effect.
	or similar protection plan.	

There are no lands within the bypass reach; lands immediately adjacent to the Deer Rips/A-3 Dam are comprised of the dam and canal abutments.

### 3.5.3 ZONE 3 – REGULATED RIVER REACH DOWNSTREAM

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

Lands within the Project boundary along the tailrace of the Deer Rips and A-3 Development is limited to those required for Project operations. The Project's run-of- river operation protection for the Project's shoreline areas. (See Exhibit G and the order modifying and approving land assessment report in FERC and Regulatory Information).

### 3.6 THREATENED AND ENDANGERED SPECIES

The stated Low Impact Hydropower Institute goal for Criterion F – Threatened and Endangered Species Protection is "The facility does not negatively impact federal or state listed species". USFWS IPaC report information and MDIFW MESA information is applicable to all Zones of Effect for the Deer Rips and A-3 Development. These are discussed collectively below.

The Licensee submitted a Threatened and Endangered Species Management Plan to FERC pursuant to Article 409 of the license, which was approved by FERC on October 11, 2007.

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

An Information for Planning and Consultation (IPaC) report and USFWS Official Species List was developed for the Project and is provided in Section 7.0. There are no federally documented endangered or threatened aquatic species in this reach of the Androscoggin River. While Atlantic salmon has had a historic presence in the River, including project waters, there is no fish passage at the downstream Lewiston Falls Project, returns to the Androscoggin River have been low in recent decades, and there is no requirement for anadromous fish passage at the Deer Rips and A-3 Development. As such, there is no expectation that Atlantic salmon would be in the project area.

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 generally no tree-clearing activities or corridor maintenance activities (see FERC order amending Threatened and Endangered Species Management Plan and IPAC report). Minor mowing and brush removal on the canal and dam abutments may occur but typically trees of a basal diameter of less than 4 inches would be expected to be removed.

The following state-listed endangered, threatened, and special concern species have been documented in the general vicinity of the Androscoggin River Project Area:

- Creeper (Special Concern)
- American Eel (Special Concern)
- 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)

With respect to the aquatic species, the Deer Rips and A-3 Development are operated in run of river mode with stable headpond. Periodic dam repairs may require some drawdown for which the resource

agencies are notified. Normal routine operations, however, are not anticipated to have a negative effect on mussel species. American eel have had historic presence in the Androscoggin River, including project waters. However, there is no eel passage at the downstream Lewiston Falls Project and no requirement for eel passage at either Lewiston Falls nor the Gulf Island/Deer Rips/A-3 Project. The downstream Pejepscot and Brunswick Projects also do not have eel passage. As such, eel are not expected in project waters.

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

Bald eagles have also been documented in the Project area. Until recently, bald eagles were listed as a Species of special concern in Maine. However, eagles continue to be protected under the federal Bald Eagle and Golden Eagle Protection Act ("Eagle Act") as well as other federal laws. Article 409 of the project license required the licensee to file a Threatened and Endangered Species Management Plan to protect the federally listed threatened bald eagle and its habitat in the project area in consultation with the USFWS and the MDIFW, which was filed on April 23, 2007. An Order Approving the Threatened and Endangered Species Management Plan Pursuant to Article 409 was issued by the FERC on October 11, 2007.

Under the approved plan, field surveys to identify bald eagle nest sites, perch and roost trees, and other important bald eagle habitat in the project area were conducted annually. A summary report of the annual bald eagle surveys dating back to 2007 was sent to the MDIFW and the USFWS and filed with the FERC on May 7, 2015 (see Section 7.0). In 2018, BWPH consulted with the MDIFW and USFWS on the continuance of the annual surveys in favor of a conservation easement for the protection of eagle at the Project. Consultation with the MDIFW and the USFWS resulted in the determination that ongoing financial support to local raptor rehabilitation efforts would be a better use of resources than a conservation easement at the Project given the delisting of bald eagle, increases in bald eagle populations in the area and existing habitat protections inherent to the Project's Recreation Plan. The Threatened and Endangered Species Management Plan was amended, by FERC Order issued May 22, 2018, to implement an annual contribution of \$15,000 for 10 years (2018 – 2028) for raptor rehabilitation in place of continued monitoring, study, reporting or the establishment of a conservation easement (see Section 6.5.4).

Migratory birds are likely found in the area during spring and fall migrations. However, there are no known adverse effects as a result of project operations.

Pursuant to FERC's March 25, 2010 Order Modifying and Approving the Recreation Plan and Land/Trail Management Plan, the licensee conducted a survey of lands 200 feet of the project reservoirs to assess the available wildlife habitat. Wildlife habitat along the Project's shorelines was observed to be in good condition, mostly forested, and not widely-impacted by development. No high-value deer wintering areas, wetlands, or new bald eagle nests were identified that warranted inclusion into the project boundary, nor did it find evidence for risk of damage to such habitats through excessive or inappropriate development.

### 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."

Pursuant to Article 410 of the Project FERC license, a Programmatic Agreement for the Project was developed and submitted to FERC (see FERC and Regulatory Information).

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

### 3.7.1 ZONE 1 – PROJECT IMPOUNDMENT

The licensee's cultural resource management obligations at Gulf Island-Deer Rips Project were completed in 2018. Thirty-eight boxes of artifacts from the Gulf Island/Deer Rips, Bonny Eagle, and Weston Projects were deposited with the Abbe Museum in Bar Harbor, Maine for permanent curation.

Analyses and reporting continued for previously collected materials from the Irish site (24.32), which show that the site is no longer eligible for NRHP listing. Review and approval of the report by MHPC will complete the licensee's cultural resource management obligations at the Gulf Island – Deer Rips Project. Annual summary reports with the Commission and the State Historic Preservation Officer of activities conducted during the previous year and planned for the ensuing year are linked in Section 6.0.

### **3.7.2 ZONE 2 – BYPASS REACH**

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

The bypass reach consists of a short stretch of river immediately below the dam and abutting lands are developed, comprised of the canal and dam abutments. There are not cultural or historic resources within this Zone of Effect.

### 3.7.3 ZONE 3 – REGULATED DOWNSTREAM RIVER REACH

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

See Section 6.0 for links to annual cultural resource reports.

### **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."

Pursuant to Article 411 and 412 of the Project FERC license, a Recreation Plan and Land and Trails Management Plan was developed and submitted to FERC on November 7, 2008. (see FERC and Regulatory Information for Recreation Plan and Land and Trails Management Plan and Order modifying and approving recreation plan and land/trail management plan).

### 3.8.1 ZONE 1 – PROJECT IMPOUNDMENT

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

Recreation on the Deer Rips impoundment is limited to boating and fishing served by an informal carryin access site on Switzerland Road as well as the egress from the Deer Rips/A-3 canoe portage trail and the ingress from the Gulf Island canoe portage trail. Recreation reports and monitoring is provided in Section 6.0.

### 3.8.2 ZONE 2 – BYPASS REACH

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

There is no recreational or public access to the bypass reach. Lands surrounding the bypass reach are entirely for project purposes, being comprised of the dam and canal abutments.

### **3.8.3** ZONE **3** – REGULATED DOWNSTREAM RIVER REACH

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

Access within this Zone of Effect is limited to the ingress of the Deer Rips/A-3 canoe portage trail. It is possible, however, to access the Project waters from the downstream Lewiston Falls impoundment.

#### 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 B (see Field White Bre, the Undersigned attests that the material presented in the application is true and complete. Mydro  $\mathcal{U}$ 

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<sup>®</sup>.

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: Brookfield White Pine Hydro LLC\_

Authorized Representative:

Name: Thomas Uncher

Title: Vice President, Operations

Authorized Signature: TTM Date: \_\_\_\_\_\_

### 5.0 CONTACTS FORM

### 5.1 APPLICANT RELATED CONTACTS

Project Owner:		
Name and Title	Tom Uncher, Vice President	
Company	Brookfield White Pine Hydro LLC	
Phone	518-743-2018	
Email Address	Thomas.Uncher@brookfieldrenewable.com	
Mailing Address	150 Main St. Lewiston Maine 04240	
Project Operator	(if different from Owner):	
Name and Title	Pat McDonough, Senior Operations Manager	
Company	Brookfield White Pine Hydro, LLC	
Phone	207-376-7063	
Email Address	Patrick.McDonough@brookfieldrenewable.com	
Mailing Address	259 Switzerland Rd, Lewiston, ME 04240	
Consulting Firm	Agent for LIHI Program (if different from above):	
Name and Title		
Company		
Phone		
Email Address		
Mailing Address		
Compliance Cont	act (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 St. Lewiston, Maine 04240	
Party responsible for accounts payable:		
Name and Title	Judith Charette Manager, 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 area of responsibility: Flows, Water Quality, Fish/Wildlife Resources,		
Watersheds, T/E Spp, Cultural/Historic Resources _X_, Recreation):		
Agency Name	Advisory Council on Historic Preservation	
Name and Title	John M Fowler, Executive Director	
Phone	202-517-0200	
Email address	jfowler@achp.gov	
Mailing Address	401 F Street N.W. Suite 308 Washington, DISTRICT OF COLUMBIA 20001-2637	

Agency Contact (Check area of responsibility: Flows, Water Quality _X_, Fish/Wildlife Resources,			
Watersheds _X_, T	Watersheds _X_, T/E Spp, Cultural/Historic Resources, Recreation):		
Agency Name	Maine Department of Environmental Protection		
Name and Title	LAND = Mark Bergeron, Director		
Phone	207-215-4397		
Email address	Mark.Bergeron@maine.gov		
Mailing Address	Central Maine Regional Office, 17 State House Station, Augusta, Maine 04333		

Agency Contact (Check area of responsibility: Flows, Water Quality _X_, Fish/Wildlife Resources,			
Watersheds _X_, T	Watersheds _X_, T/E Spp, Cultural/Historic Resources, Recreation):		
Agency Name	Maine Department of Environmental Protection		
Name and Title	WATER = Brian Kavanah, Director		
Phone	207-287-7700		
Email address	brian.w.kavanah@maine.gov		
Mailing Address	Central Maine Regional Office, 17 State House Station, Augusta, Maine 04333		

Agency Contact (Check area of responsibility: Flows, Water Quality _X_, Fish/Wildlife Resources,			
Watersheds _X_, T	Watersheds _X_, T/E Spp, Cultural/Historic Resources, Recreation):		
Agency Name	Maine Department of Environmental Protection		
Name and Title	Don Witherill, Director		
Phone	Witherill 207-215-9751		
Email address	donald.t.witherill@maine.gov		
Mailing Address	Central Maine Regional Office, 17 State House Station, Augusta, Maine 04333		

Agency Contact (Check area of responsibility: Flows, Water Quality _X_, Fish/Wildlife Resources,		
Watersheds _X_, 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 area of responsibility: Flows, Water Quality, Fish/Wildlife Resources _X_,		
Watersheds, T/E Spp, Cultural/Historic Resources, Recreation):		
Agency Name	Maine Department of Inland Fisheries and Wildlife	
Name and Title	James Pellerin, Regional Fisheries Biologist	
Phone	207-657-5765	
Email address	James.Pellerin@maine.gov	
Mailing Address	Sebago Lake Regional Headquarters, 15 Game Farm Road, Gray, Maine 04039	

Agency Contact (Check area of responsibility: Flows, Water Quality, Fish/Wildlife Resources,		
Watersheds, T/E Spp, Cultural/Historic Resources, Recreation _X_):		
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 area of responsibility: Flows, Water Quality, Fish/Wildlife Resources _X_,		
Watersheds, T/E Spp, Cultural/Historic Resources, Recreation):		
Agency Name	Maine Department of Marine Resources	
Name and Title	Gail Wippelhauser, Marine Resources Scientist	
Phone	207-624-6349	
Email address	gail.wippelhauser@maine.gov	
Mailing Address	21 State House Station, Augusta, Maine 04333	

Agency Contact (Check area of responsibility: Flows, Water Quality, Fish/Wildlife Resources _X_,		
Watersheds, T/I	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 area 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 Mohney, Director	
Phone	(207) 287-3811	
Email address	Kirk.Mahoney@maine.gov	
Mailing Address	55 Capitol Street, 65 State House Station, Augusta, Maine 04333	

Agency Contact (Check area of responsibility: Flows, Water Quality, Fish/Wildlife Resources,		
Watersheds, 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

NGO Contact (Check area of responsibility: Flows, Water Quality, Fish/Wildlife Resources,		
Watersheds, T/E Spp, Cultural/Historic Resources, Recreation):		
Agency Name	Trout Unlimited	
Name and Title	Jeff Reardon	
Phone	207-430-8441	
Email address	Jreardon@tu.org	
Mailing Address	PO Box 53 Hallowell, Maine 04347-0053	

Agency Contact (Check area of responsibility: Flows, Water Quality, Fish/Wildlife Resources,		
Watersheds, T/E Spp, Cultural/Historic Resources, Recreation):		
Agency Name	Androscoggin Land Trust	
Name and Title		
Phone		
Email address		
Mailing Address	PO Box 3145 Auburn, Maine 04212	

Agency Contact (Check area of responsibility: Flows, Water Quality, Fish/Wildlife Resources,		
Watersheds, T/E Spp, Cultural/Historic Resources, Recreation):		
Agency Name	City of Lewiston	
Name and Title	City Administrator	
Phone		
Email address		
Mailing Address	27 Pine Street, Lewiston, Maine 04240-7201	

Agency Contact (Check area of responsibility: Flows, Water Quality, Fish/Wildlife Resources,		
Watersheds, T/E Spp, Cultural/Historic Resources, Recreation):		
Agency Name	City of Auburn	
Name and Title	City Manager	
Phone		
Email address		
Mailing Address	60 Court Street, Auburn, Maine 04210	

Agency Contact (Check area of responsibility: Flows, Water Quality, Fish/Wildlife Resources,		
Watersheds, T/E Spp, Cultural/Historic Resources, Recreation):		
Agency Name	American Rivers	
Name and Title	Laura Wildman, Northeast Field Office	
Phone		
Email address		
Mailing Address	20 Bayberry Road, Glastonberry, Connecticut 06033	

Agency Contact (Check area of responsibility: Flows, Water Quality, Fish/Wildlife Resources,		
Watersheds, T/E Spp, Cultural/Historic Resources, Recreation):		
Agency Name	Maine Audubon Society	
Name and Title	Kevin Carley	
Phone		
Email address		
Mailing Address	20 Gilsland Farm Road, Falmouth, Maine 04105	

Agency Contact (Check area of responsibility: Flows, Water Quality, Fish/Wildlife Resources,		
Watersheds, T/E Spp, Cultural/Historic Resources, Recreation):		
Agency Name	Appalachian Mountain Club	
Name and Title		
Phone		
Email address		
Mailing Address	PO Box 298, Gorham, New Hampshire 03581	

Agency Contact (Check area of responsibility: Flows, Water Quality, Fish/Wildlife Resources,				
Watersheds, T/E Spp, Cultural/Historic Resources, Recreation):				
Agency Name	AVCOG			
Name and Title	Robert Thompson			
Phone				
Email address				
Mailing Address	125 Manley Road, Auburn, Maine 04210			

Agency Contact (Check area of responsibility: Flows, Water Quality, Fish/Wildlife Resources,				
Watersheds, T/E Spp, Cultural/Historic Resources, Recreation):				
Agency Name	Conservation Law Foundation			
Name and Title				
Phone				
Email address				
Mailing Address	14 Main Street, Brunswick, Maine 04011-2026			

Agency Contact (Check area of responsibility: Flows, Water Quality, Fish/Wildlife Resources,				
Watersheds, T/E Spp, Cultural/Historic Resources, Recreation):				
Agency Name	Androscoggin River Alliance			
Name and Title	Neil Ward			
Phone				
Email address				
Mailing Address	PO Box 177, Lewiston, Maine 04240			

Agency Contact (Check area of responsibility: Flows, Water Quality, Fish/Wildlife Resources,				
Watersheds, T/E Spp, Cultural/Historic Resources, Recreation):				
Agency Name	Maine Rivers			
Name and Title	Landis Hudson, Administrator			
Phone				
Email address				
Mailing Address	9 Union Street, Hallowell, Maine 04347			

Agency Contact (Check area of responsibility: Flows, Water Quality, Fish/Wildlife Resources,				
Watersheds, T/E Spp, Cultural/Historic Resources, Recreation):				
Agency Name	Maine Historic Preservation Commission			
Name and Title	Earle Shettleworth Jr.			
Phone				
Email address				
Mailing Address	65 State House Station, Augusta, Maine 04333-0065			

### 6.0 FERC AND REGULATORY INFORMATION

### 6.1 FERC LICENSE AND AMENDMENT ORDERS

- <u>https://elibrary-backup.ferc.gov/idmws/common/opennat.asp?fileID=12554701 FERC Final</u> Environmental Impact Statement Volume 1
- <u>https://elibrary-backup.ferc.gov/idmws/common/opennat.asp?fileID=12555497 FERC Final</u> Environmental Impact Statement Volume 2
- <u>https://elibrary-backup.ferc.gov/idmws/common/opennat.asp?fileID=12554702 FERC Final</u>
   <u>Environmental Impact Statement Volume 3</u>
- <u>https://elibrary-backup.ferc.gov/idmws/common/opennat.asp?fileID=12554703 FERC Final</u>
   <u>Environmental Impact Statement Volume 4</u>
- <u>https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=11118377</u> FERC Order Issuing License August 23, 2006
- <u>https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=11750503</u> Order amending license July 15, 2008
- <u>https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=14585587</u> May 9, 2017 Application for non-capacity amendment of license for Gulf Island-Deer Rips Project
- <u>https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=14635893</u> July 13, 2017 FERC Order Approving Non-Capacity Amendment of License for the Gulf Island Deer Rips Project.

### 6.2 WATER QUALITY CERTIFICATION, AMENDMENTS, AND REPORTS

- <u>https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=10816685</u> Sept. 21, 2005 Water Quality Certificate.
- <u>https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=12362373</u> June 8, 2010 Letter and order modifying water quality certification for Gulf Island-Deer Rips Hydro Project under P-2283.
- MDEP Amendment to Section 401 Water Quality Certification issued August 7, 2017 (attached in Section 7.0)

### 6.3 SETTLEMENT AND OTHER AGREEMENTS

• 1983 Androscoggin River Headwaters Agreement (attached in Section 7.0)

### 6.4 PERMITS

N/A

### 6.5 COMPLIANCE PLANS AND MONITORING REPORTS

• <u>https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=14383999</u> - FERC letter dated October 26, 2016 on July 26, 2016 environmental inspection -

### 6.5.1 ECOLOGICAL FLOWS AND WATER QUALITY

- <u>https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=11345135</u> March 30, 2007 Project Operations and Flow Monitoring Plan in accordance with Article 407 for the Gulf Island/Deer Rips Hydro Project
- <u>https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=11392486</u> July 10, 2007 FERC Order Approving Project Operations and Flow Monitoring Plans
- <u>https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=12757646</u> September 7, 2011 Revised Project Operations and Flow Monitoring Plan
- <u>https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=12918262</u> March 19, 2012 FERC Order Approving Revised Project Operations and Flow Monitoring Plan
- <u>https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=11503009</u> Nov. 05. 2007 Water Quality Monitoring Plan
- <u>https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=13794259</u> 2014 Gulf Island Water Quality Monitoring Report
- <u>https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=14125839</u> 2015 Gulf Island Water Quality Monitoring Report
- <u>https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=14459788</u> 2016 Gulf Island Water Quality Monitoring Report
- <u>https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=14819929</u> 2017 Gulf Island Water Quality Monitoring Report
- <u>https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=15138115</u> 2018 Gulf Island Water Quality Monitoring Report
- <u>https://www.maine.gov/dep/water/monitoring/305b/2016/28-Feb-2018\_2016-ME-</u> <u>IntegratedREPORT.pdf</u> - 2016 Integrated Water Quality Report

### 6.5.2 Upstream and Downstream Fish passage

N/A

### 6.5.3 SHORELINE AND WATERSHED PROTECTION

N/A

### 6.5.4 THREATENED AND ENDANGERED SPECIES

- <u>https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=12597930</u> March 25, 2011 Wildlife and Habitat and Scenic and Aesthetic Resources Assessments under Article 412 of the Gulf Island/Deer Rips Project
- <u>https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=14924903</u> May 22, 2018 Order Amending Endangered Species Management Plan Pursuant to Article 409

### 6.5.5 CULTURAL AND HISTORIC RESOURCES

Documents provided for this application regarding cultural and historic resources are confidential and are filed under separate cover.

- <u>https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=11317831</u> April 18, 2007 Programmatic Agreement
- <u>https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=13181315</u> February 13, 2013 Compliance Update for Programmatic Agreement Requirements
- <u>https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=14146108</u> February 15, 2016 Annual Cultural Resource Programmatic Agreement Report
- https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=13771771 February 12, 2015 Annual Cultural Resource Programmatic Agreement Report
- <u>https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=14146108</u> February 15, 2014 Annual Cultural Resource Programmatic Agreement Report
- <u>https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=13181315</u> February 12, 2013 Annual Cultural Resource Programmatic Agreement Report
- <u>https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=14492841</u> February 14, 2017 Final Annual Archaeological Report of BROOKFIELD HYDRO under P-2283
- <u>https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=14945550</u> June 13, 2018 Annual Cultural Resource Programmatic Agreement Report
- <u>https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=15162334</u> Feb 14, 2019 Annual Cultural Resource Programmatic Agreement Report

### 6.5.6 RECREATIONAL RESOURCES

- <u>https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=11849391</u> November 7, 2008 Recreation Plan and Land and Trails Management Plan under Article 411 and 412
- <u>https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=12302980</u> March 25, 2010 Order modifying and approving recreation plan and land/trail management plan
- <u>https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=13840134</u> 2015 Gulf Island-Deer Rips Recreation Monitoring Report <u>https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=13815872</u> – 2015 Gulf Island Deer Rips Form 80 Recreation Monitoring Report
- <u>https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=11980777</u> 2009 Gulf Island Deer Rips Form 80 Recreation Monitoring Report
- <u>https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=12598187</u> March 25, 2011 Wildlife and Habitat and Scenic and Aesthetic Resource Assessments
- <u>https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=12903103</u> February 27, 2012 Order modifying and approving land assessment report
- <u>https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=14764847</u> November 28, 2017 Letter order accepting Brookfield White Pine Hydro, LLC's 2/27/17 filing of the report on the results of the land use assessment for the Gulf Island- Deer Rips Hydroelectric Project
- <u>https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=14502596</u> February 27, 2017 Land Assessment Status Update Gulf Island-Deer Rips Project, FERC No. 2283

### 6.6 LICENSE AND CERTIFICATION COMPLIANCE

• <u>https://elibrary.ferc.gov/idmws/search/intermediate.asp?link\_file=yes&doclist=14647824</u> - FERC determined headpond excursion on January 8, 2018 not a violation on March 7, 2018.

- <u>https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=14701588</u> FERC determined run-ofriver disruption on July 23, 2017not a violation on October 4, 2017.
- <u>https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=13804508</u> FERC determined run-of river disruption on September 25, 2014not a violation on March 18, 2015.
- <u>https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=13541188</u> FERC determined run-of river disruption on February 5, 2014not a violation on May 9, 2014.

#### Androscoggin River Headwater Benefits Agreement

#### ANDROSCOGGIN RIVER HEADWATER BENEFITS AGREEMENT

This Agreement made as of the 1st day of June, 1983 by and emong Androscoggin Reservoir Company ("ARCO") with a business address at 150 Main Street, Lewiston, Maine 04240, Union Water Fower Company ("Union") with a business address at 150 Main Street, Lewiston, Maine 04240, International Paper Company ("IP") with a business address at International Paper Plaza, 77 West 45th Street, New York, New York 10036, Rumford Falls Power Company ("Rumford") with a business address at c/o Boise Cascade Corporation, Paper Group, Rumford M511, Rumford, Maine 04276, James River Corporation. ("Jemes River") with a business address at 650 Main Street, Berlin, New Hampshire 03570, end Public Service Company of New Hampshire ("Public Service") with a business address at 1000 Elm Street, Manchester, New Hempshire 03105:

#### WITNESSETH THAT

WHEREAS, Union owns daws, reservoits, works and other structures to wit: On Rapid River at the outlet of Lower Richardson Lake in Township "C", Oxford County, Maine and known as Middle Dam; at the outlet of Mooselookmeguntic Lake in Richardsontown, T-4, R-1. Oxford County, Maine and known as Upper Dam; on Rangeley River at the outlet of Rangeley Lake, Rangeley, Franklin County, Maine and known as Rangeley Dam; and on the Androscoggin River, three (3) miles south of the outlet of Umbagog Lake, Errol, Coos County, New Hampshire and known as

### MDEP SECTION 401 WATER QUALITY CERTIFICATION AMENDMENT AUGUST 7, 2017



#### STATE OF MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION



August 2017

Brookfield White Pine Hydro, LLC Attn: Kelly Maloney 150 Main Street Lewiston, ME 04240

RE: Water Quality Certification Application, Lewiston, #L-17100-35-W-A

Dear Ms. Maloney:

Please find enclosed a signed copy of your Department of Environmental Protection amended Water Quality Certification. You will note that the permit includes a description of your project, findings of fact that relate to the approval criteria the Department used in evaluating your project related to the particulars of your project. Please take several moments to read your permit carefully, paying particular attention to the conditions of the approval. The Department reviews every application thoroughly and strives to formulate reasonable conditions of approval within the context of the Department's environmental laws. You will also find attached some materials that describe the Department's appeal procedures for your information.

If you have any questions about the permit or thoughts on how the Department processed this application please get in touch with me directly. I can be reached at (207) 446-9026 or at jim.r.beyer@maine.gov. Sincerely,

JAMES R. BEYER Regional Licensing and Compliance Manager Bureau of Land Resources Eastern Maine Regional Office - Bangor

pc: File

AUGUSTA 17 STATE HOUSE STATION AUGUSTA, MAINE 04333-0017 (207) 287-7688 FAX: (207) 287-7826 RAY BLDG., HOSPITAL ST

BANGOR 106 HOGAN ROAD BANGOR ME 04401 (207) 941-4570 FAX:(207) 941-4584 PORTLAND 312 CANCO ROAD PORTLAND, MAINE 04103 (207) 822-6300 FAX: (207) 822-6303 PRESQUE ISLE 1235 CENTRAL DRIVE, SKYWAY PARK PRESQUE ISLE, MAINE 04769-2094 (207) 764-0477 FAX: (207) 764-3143

WEB SITE: WWW.MAINE.GOV/DEP



STATE OF MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION 17 STATE HOUSE STATION AUGUSTA, MAINE 04333-0017

DEPARTMENT ORDER

### IN THE MATTER OF

BROOKFIELD WHITE PINE) MAINE WATERWAY DEVELOPMENTHYDRO, LLC) AND CONSERVATION ACTLewiston, Androscoggin County) WATER QUALITY CERTIFICATIONGULF ISLAND-DEER RIPS)EXPANSION OF GENERATING CAPACITY)L- 17100-35-W-A (approval)) AMENDMENT

Pursuant to the provisions of 38 M.R.S. §§ 464 <u>et. seq</u> and 630, Section 401 of the Federal Water Pollution Control Act and Chapter 450 of Department Rules, the Department of Environmental Protection has considered the application of BROOKFIELD WHITE PINE HYDRO, LLC with the supportive data, agency review comments, and other related materials on file and finds the following facts:

### 1. <u>APPLICATION SUMMARY:</u>

The applicant proposes to replace the single generating unit at its Androscoggin No. 3 powerhouse. The project involves replacing the existing turbine and refurbishing the existing generator. The upgrades and refurbishment will increase the generating capacity by 900 kilowatts (kW). No additional storage is proposed as part of this project. The project is not expected to affect safety, public benefits, traffic movement, or environmental mitigation standards.

### 2. EXISTING PROJECT:

The Gulf Island-Deer Rips project consists of two dams with impoundments and three power houses. The Gulf Island dam is located at river mile 35.0 and creates a 2,862 acre impoundment which extends 14.7 miles upstream. The concrete and earth dam is 2,488 feet long with a spillway crest elevation of 255.0 feet. The powerhouse is equipped with three turbine/generator units that have a total authorized capacity of 20,900 kW.

The Deer Rips dam is located at river mile 33.7 and creates a 130 acre impoundment which extends 1.3 miles upstream. The Deer Rips dam is a concrete gravity dam that is 932.7 feet long with a normal impoundment elevation of 205.7 feet and two powerhouses. The Deer Rips powerhouse is located on the west side of the river and has seven turbine/generator units with an authorized capacity of 7,038 kW. The Androscoggin No. 3 powerhouse is located on the east side of the river and has a single turbine/generator unit with an authorized capacity of 3,600 kW. The total project has an authorized installed capacity of 31.54 megawatts (MW) and produces an average of 185.8 gigawatt hours of electricity annually. The project is operated in a run-of-river mode.

### 3. <u>REGULATORY HISTORY</u>

In Department Order L-17100-33-O-N, dated September 21, 2005, the Department approved a Water Quality Certification (WQC) for a 32.6 MW hydroelectric project on the Androscoggin River. Since the original WQC, the Department has approved six condition compliance applications and one modification application.

### 4. JURISDICTION

- a. <u>Hydropower Project Permit</u>. The proposed turbine installation and generator refurbishment qualifies as the reconstruction of a hydropower project; therefore it is subject to the permitting jurisdiction of the Department. 06-096 Rule Ch. 450 § (4)(B).
- b. <u>Water Quality Certification</u>. The proposed project qualifies as an "activity...which may result in (a) discharge into the navigable waters (of the United States)" under the Clean Water Act (CWA), 33 U.S.C. 1251 et seq. Section 401 of the CWA requires that any applicant for a federal license or permit to conduct such an activity comply with applicable state water quality standards. Issuance of a WQC required under Section 401 of the CWA is coordinated by the Department. The issuance of a WQC is mandatory in every case where the Department approves an application for a permit under the Maine Waterway Development and Conservation Act (MWDCA). 38 M.R.S. § 635-B.
- c. <u>Terms and Conditions</u>. Section 401(d) of the CWA provides that a WQC shall set forth any limitations necessary to assure that an applicant for a federal license or permit will comply with any appropriate requirement of state law, and that such limitations shall become a condition on the federal license or permit issued for the activity. As discussed above, a permit is required under Maine law for the construction work associated with the proposed maintenance and repairs at the Brookfield White Pine Hydro, LLC facility. The MWDCA is a state water quality-related law. Consequently, the terms and conditions of any MWDCA permit issued for the proposed restoration constitutes appropriate and necessary limitations to be set forth in any certification issued for the project.

### 5. <u>APPLICABLE WATER QUALITY STANDARDS</u>

A. Class C waters must be of such quality that they are suitable for the designated uses of drinking water supply after treatment; fishing; agriculture; recreation in and on the water; industrial process and cooling water supply; hydroelectric power generation, except as prohibited under Title 12, section 403; navigation; and as a habitat for fish and other aquatic life.

B. The dissolved oxygen content of Class C water may be not less than 5 parts per million or 60% of saturation, whichever is higher, except that in identified salmonid spawning areas where water quality is sufficient to ensure spawning, egg incubation and survival of early life stages, that water quality sufficient for these purposes must be maintained. In order to provide additional protection for the growth of indigenous fish, the following standards apply:

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

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

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

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

(2) In Class C waters not governed by subparagraph (1), dissolved oxygen may not be less than 6.5 parts per million as a 30-day average based upon a temperature of 24 degrees centigrade or the ambient temperature of the water body, whichever is less. This criterion for the water body applies to licenses and water quality certificates issued on or after March 16, 2004. The department may negotiate and enter into agreements with licensees and water quality certificate holders in order to provide further protection for the growth of indigenous fish. Agreements entered into under this paragraph are enforceable as Department orders according to the provisions of sections 347-A to 349.

Between May 15th and September 30th, the number of Escherichia coli bacteria of human and domestic animal origin in Class C waters may not exceed a geometric mean of 126 per 100 milliliters or an instantaneous level of 236 per 100 milliliters. In determining human and domestic animal origin, the Department shall assess licensed and unlicensed sources using available diagnostic procedures. The board shall adopt rules governing the procedure for designation of spawning areas. Those rules must include provision for periodic review of assertech of water as a spawning area.

C. Discharges to Class C waters may cause some changes to aquatic life, except that the receiving waters must be of sufficient quality to support all species of fish indigenous to the receiving waters and maintain the structure and function of the resident biological community. This paragraph does not apply to aquatic pesticide or chemical discharges approved by the Department and conducted by the Department, the Department of Inland Fisheries and Wildlife or an agent of either agency for the purpose of restoring biological communities affected by an invasive species.

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

Based on the materials submitted by the applicant, the Department finds that the proposed project will not violate any state water quality law, including those governing the classification of the State's waters.

### 6. FINANCIAL CAPACITY

The proposed project is estimated to cost \$4 million. The applicant stated that they have an annual budget of \$8.8 million for capital expenditures and that the funds for this project have been included in the 2016 and 2017 annual budgets.

The Department finds that the applicant has demonstrated adequate financial capacity to comply with Department standards.

### 7. ENVIRONMENTAL AND ENERGY CONSIDERATIONS

The applicant is proposing to replace an existing turbine and refurbish the existing generator unit. Since the initial installation of the turbine and generator, technological improvements have resulted in increases in efficiency. The newly installed turbine and refurbished generator will produce an additional 900 kW of electricity. The proposed project does not require any work in the resource and there will be no changes in water levels or flow.

The Department finds the advantages of the proposed project are greater than the direct and cumulative adverse impacts over the life of the project.

THEREFORE, the Department APPROVES the application of BROOKFIELD WHITE PINE HYDRO, LLC to install a new turbine and refurbish the existing generator, which will result in an additional 900 kW of generation capacity. All other Findings of Fact, Conclusions and Conditions remain as approved in Department Order #L-17100-33-O-N, and subsequent orders, and are incorporated herein.

DONE AND DATED IN AUGUSTA, MAINE, THI	3 7TH	DAY OF	AUGUST	, 2017.
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DEPARTMENT OF ENVIRONMENTAL PROTECTION

For: Paul Mercer, Commissioner

Filed
AUG 0 7 2017
State of Maine Board of Environmental Protection

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES... JB/L#17100WA/ATS#81941



## **DEP INFORMATION SHEET** Appealing a Department Licensing Decision

## Dated: March 2012

Contact: (207) 287-2811

### **SUMMARY**

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

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

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

### I. <u>ADMINISTRATIVE APPEALS TO THE BOARD</u>

### LEGAL REFERENCES

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

### HOW LONG YOU HAVE TO SUBMIT AN APPEAL TO THE BOARD

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

### HOW TO SUBMIT AN APPEAL TO THE BOARD

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

### WHAT YOUR APPEAL PAPERWORK MUST CONTAIN

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

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

#### OTHER CONSIDERATIONS IN APPEALING A DECISION TO THE BOARD

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

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

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

### II. JUDICIAL APPEALS

OCF/90-1/r/95/r98/r99/r00/r04/r12

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

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

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

### **ADDITIONAL INFORMATION**

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

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

### MDIFW THREATENED AND ENDANGERED SPECIES MAPS

Provided under separate cover as "Confidential".

### USFWS THREATENED AND ENDANGERED SPECIES LIST AND IPAC REPORT

Provided under separate cover as "Confidential".