LOW-IMPACT HYDROPOWER POWER INSTITUTE CERTIFICATION APPLICATION

WEST BRANCH ST. REGIS HYDROELECTRIC PROJECT (FERC NO. 10461)

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1.0 FACILITY DESCRIPTION

The West Branch St. Regis Hydroelectric Project (Project), Federal Energy Regulatory Commission (FERC) No. 10461, is owned and operated by Brookfield Renewable Energy Group (Brookfield) and is located between river mile (RM) 19 and 21 on the West Branch of the St. Regis River in the city of Parishville, New York. The West Branch of the St. Regis River originates in ponds near Saranac Lake, New York, flowing approximately 35 miles to the Parishville impoundment, then an additional 20 miles to its junction with the St. Regis River, which in turn enters the St. Lawrence River 20 miles further downriver. The West Branch St. Regis River is approximately 70 miles long and has a drainage area of approximately 271 square miles in size.

1.1 PROJECT DESCRIPTION

The Project consist of two developments; the upstream Parishville Development and the downstream Allens Falls Development. The Parishville Development consists of a dam, a 70-acre reservoir, a 2,561-foot-long penstock, a powerhouse housing a 2.4-MW turbine/generator unit, a 4,175 foot bypass reach, a 4.8-kV transmission line, and associated facilities. The Allens Falls Development consists of a concrete gravity-type dam, a 108-acre reservoir, a 9,344-foot-long pipeline, a surge tank, an 886-foot-long penstock, a powerhouse housing a 4.4-MW turbine/generator unit, a 13,700 foot bypass reach, a 2.4-mile-long 115-kV transmission line, and associated facilities.

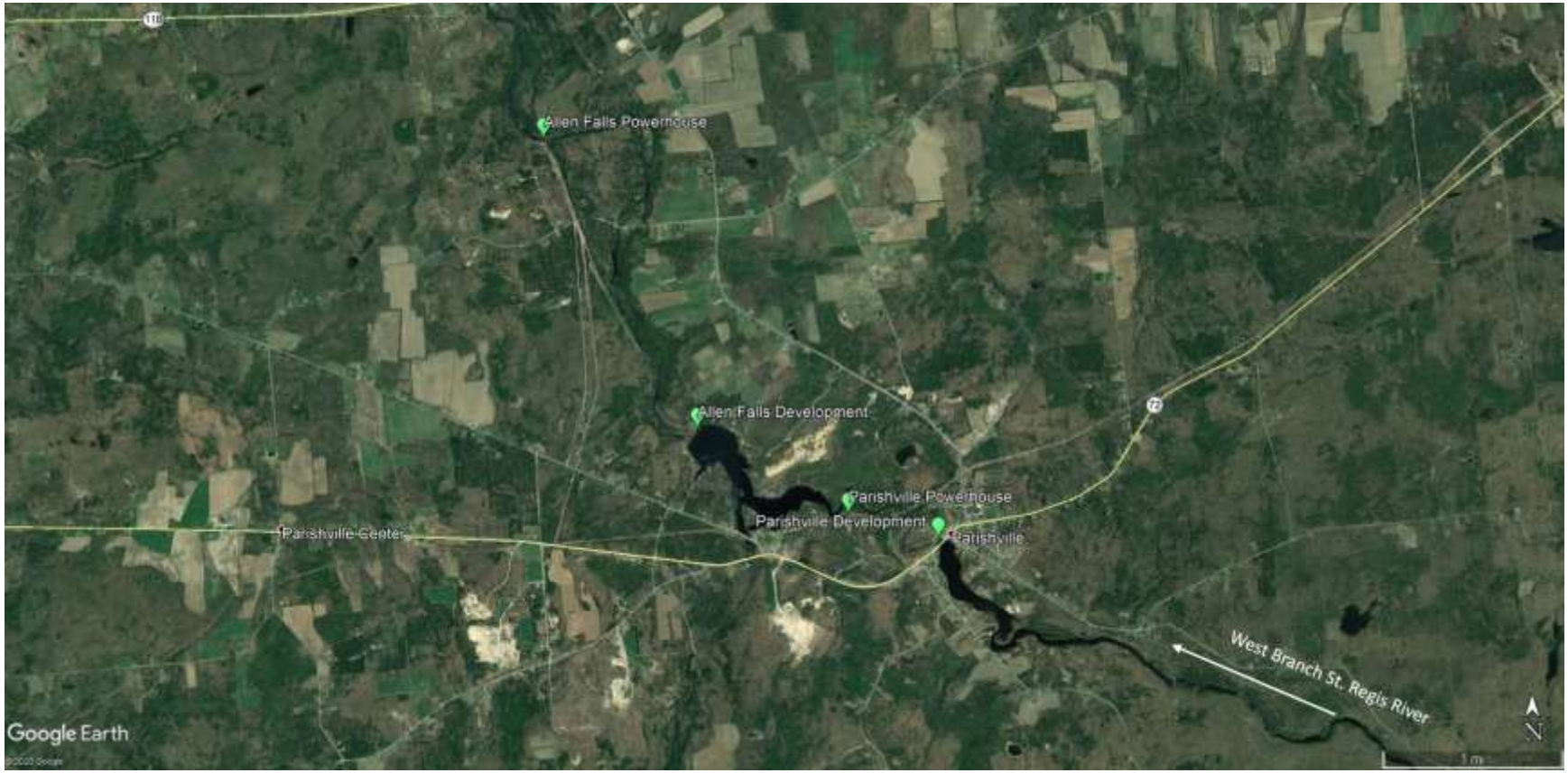

FIGURE 1 OVERVIEW OF WEST BRANCH ST. REGIS HYDROELECTRIC PROJECT LOCATION

1.2 PROJECT OPERATIONS

The Project is operated in a storage and release pulsing mode where the upstream Parishville Development discharges into the Allens Falls Development impoundment. The FERC License Order incorporated the terms and conditions of the Settlement Agreement reached between the licensee and stakeholders, including minimum flow releases into the bypassed reaches and maximum impoundment fluctuations. Impoundment drawdowns and refills rates are limited to no more than one foot per hour. An instantaneous year-round minimum flow of 20 +/- 0.2 cubic feet per second (cfs) is released from a gate in the Parishville dam to the bypassed reach. Seasonal instantaneous minimum flows are released from the Allens Falls dam into the bypassed reach as follows: 30 +/- 0.2 cfs from October 1 through March 31; 50 +/- 0.3 cfs from April 1 through August 31; and 40 +/- 0.3 cfs from September 1 through September 30. Minimum flow releases and maximum impoundment fluctuations are monitored by the licensee's Stream Flow and Water Level Monitoring Plan.

1.3 REGULATORY AND COMPLIANCE HISTORY

Since issuance of the 2015 LIHI Certification for the West Branch St. Regis Project, Brookfield was required to meet the following condition: *Should the maintenance activities along the powerhouse roadway and pipeline right-of-way be significantly altered, such as widespread herbicide application, widening of the roadway or placement of fill adjacent to the roadway where the plant has been observed, the facility owner shall consult with the New York Department of Environmental Conservation (NYSDEC) regarding potential impacts to the Fernald's Sedge. If such change occurs during this LIHI certification term, the facility owner shall provide LIHI the results of these consultations along with evidence of implementation of any requirements mandated by the NYSDEC to protect this species if it is onsite. The owner shall report on any such changes with the LIHI Annual Compliance Statement for the subject annual statement period*. As indicated it its most recent annual compliance letter to LIHI (August 23, 2019), there have been no changes to the maintenance activities or vegetation management in the area of interest.

1.4 WEST BRANCH ST. REGIS FACILITY DESCRIPTION INFORMATION (LIHI CERTIFICATE #27)

TABLE 1. FACILITY DESCRIPTION INFORMATION FOR WEST BRANCH ST. REGIS HYDROELECTRIC PROJECT (LIHI #27)

Item	*Information Requested*	*Response (include references to further details)*
Name of the Facility	Facility name (use FERC project name or other legal name)	West Branch St. Regis Hydroelectric Project (FERC No. 10461)
Reason for applying for LIHI Certification	1. To participate in state RPS program (specify the state and the total MW/MWh associated with that participation (value and % of facility total Mw/MWh). 2. To participate in voluntary REC market (e.g., Green-e) 3. To satisfy a direct energy buyer's purchasing requirement 4. To satisfy the facility's own corporate sustainability goals 5. For the facility's corporate marketing purposes 6. Other (describe)	To participate in the MA RPS program (100% of facility total) and to participate in voluntary REC market
	If applicable, amount of annual generation (MWh and % of total generation) for which RECs are currently received or are expected to be received upon LIHI Certification	Parishville: 15,890 MW (Long Term Average) Allens Falls: 25,791 MW Long Term Average)
Location	River name (USGS proper name)	West Branch St. Regis River
	Watershed name	St. Regis River Watershed – HUC 04150306
	Nearest town(s), county(ies), and state(s) to dam	Parishville, St. Lawrence County, New York
	River mile of dam above mouth	19 – 21 river miles above confluence with St. Regis River
	Geographic latitude of dam	Parishville: 44.6365 N Allen Falls: 44.6278 N
	Geographic longitude of dam	Parishville: -74.843 W Allen Falls: -74.8156 W

Item	*Information Requested*	*Response (include references to further details)*
Facility Owner	Application contact names	Bob Garrett, Compliance Specialist; New York Operations Brookfield Renewable 399 Big Bay Rd, Queensbury, NY 12804
	Facility owner company and authorized owner representative name. **For recertifications: If ownership has changed since last certification, provide the effective date of the change.**	Erie Boulevard Hydropower, LP (Brookfield Renewable)
	FERC licensee company name (if different from owner)	Same as above
Regulatory Status	FERC Project Number (e.g., P-xxxxx), issuance and expiration dates, or date of exemption	P-10461, issued 2002, expires 2042
	FERC license type (major, minor, exemption) or special classification (e.g., "qualified conduit", "non-jurisdictional")	Major Project
	Water Quality Certificate identifier, issuance date, and issuing agency name. Include information on amendments.	6-4066-00018/00002, November 2, 2001, New York State Department of Environmental Conservation
	Hyperlinks to key electronic records on FERC e-library website or other publicly accessible data repositories	Settlement Agreement Water Quality Certification FERC License Order
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 certification**	Allens Falls – Initial Operation date of 1927. 4.8 MW installed capacity. No change to capacity. Parishville – Initial Operation date of 1925. 2.25 MW installed capacity. No change to capacity.
	Average annual generation (MWh) and period of record used **For recertifications: Indicate if average annual generation has changed since last certification**	34,730 MWh

Item	*Information Requested*	*Response (include references to further details)*
	Mode of operation (run-of-river, peaking, pulsing, seasonal storage, diversion, etc.) **For recertifications: Indicate if mode of operation has changed since last certification**	Pulsing
	Number, type, and size of turbine/generators, including maximum and minimum hydraulic capacity and maximum and minimum output of each turbine and generator unit	Parishville: one horizontal Francis turbine and a 2,400-kW generator, Efficient flow through the unit is 220 cfs; maximum is 230 cfs. Allen Falls: one vertical Francis turbine and a 4,400-kW generator, Efficient flow through the unit is 240 cfs and maximum is 330 cfs
	Trashrack clear spacing (inches) for each trashrack	Parishville: 1 5/16-inch Allen Falls: 1 3/4-inch
	Approach water velocity (ft/s) at each intake if known	Parishville: 1.25 ft/s Allen Falls: 1.5 ft/s
	Dates and types of major equipment upgrades **For recertifications: Indicate only those since last certification**	None
	Dates, purpose, and type of any recent operational changes **For recertifications: Indicate only those since last certification**	None
	Plans, authorization, and regulatory activities for any facility upgrades or license or exemption amendments	None
Dam or Diversion	Date of original dam or diversion construction and description and dates of subsequent dam or diversion structure modifications	1920's
	Dam or diversion structure length, height including separately the height of any flashboards, inflatable dams, etc. and describe seasonal operation of flashboards and the like	Parishville: Roughly 68.5 ft. Several different structures which may need to be listed separately here for more accuracy. Allen Falls: Roughly 770.5 ft (again several independent structures)
	Spillway maximum hydraulic capacity	Parishville: 48,311 cfs Allen Falls: 50,600 cfs

Item	*Information Requested*	*Response (include references to further details)*
	Length and type of each penstock and water conveyance structure between the impoundment and powerhouse	Parishville: 2,561-foot-long penstock Allen Falls: 9,344-foot-long pipeline, 886-foot-long penstock
	Designated facility purposes (e.g., power, navigation, flood control, water supply, etc.)	Power generation
Conduit Facilities Only	Date of conduit construction and primary purpose of conduit	NA
	Source water	NA
	Receiving water and location of discharge	NA
Impoundment and Watershed	Authorized maximum and minimum impoundment water surface elevations **For recertifications: Indicate if these values have changed since last certification**	Parishville: 884.5 to 884.0 NGVD Allen Falls: 742.0 to 741.5 NGVD (May 16 through October 31), 741.0 to 740.5 NGVD (November 1 through May 15, optional)
	Normal operating elevations and normal fluctuation range **For recertifications: Indicate if these values have changed since last certification**	Parishville: See above Allen Falls: See above
	Gross storage volume and surface area at full pool **For recertifications: Indicate if these values have changed since last certification**	Parishville: 289 acre-feet, 70 acres Allen Falls: 1,780 acre-feet, 130 acres
	Usable storage volume and surface area **For recertifications: Indicate if these values have changed since last certification**	Parishville: 35 acre-feet Allen Falls: 661 acre-feet
	Describe requirements related to impoundment inflow and outflow, elevation restrictions (e.g., fluctuation limits, seasonality) up/down ramping and refill rate restrictions.	See *Authorized maximum and minimum impoundment water surface elevations* above and Section 1.2 above
	Upstream dams by name, ownership and river mile. If FERC licensed or exempt, please provide FERC Project number of these dams. Indicate which upstream dams have downstream fish passage.	None

Item	*Information Requested*	*Response (include references to further details)*
	Downstream dams by name, ownership, river mile and FERC number if FERC licensed or exempt. Indicate which downstream dams have upstream fish passage	Hogansburg Hydroelectric Project, Erie Boulevard Hydropower, LP River Mile 3.9 P-7518 No upstream or downstream fish passage facilities
	Operating agreements with upstream or downstream facilities that affect water availability and facility operation	None
	Area of land (acres) and area of water (acres) inside FERC project boundary or under facility control. Indicate locations and acres of flowage rights versus fee-owned property.	Parishville: 45.19 acres (Fee); 15.78 acres (Flowage Rights) Allens Falls: 214.3 acres (Fee); 83.18 acres (Flowage Rights)
Hydrologic Setting	Average annual flow at the dam, and period of record used	Parishville: 379.25 cfs, 1958-2018 Allen Falls: 416.97 cfs, 1958-2018

Item	*Information Requested*	*Response (include references to further details)*
	Average monthly flows and period of record used	Parishville: 1958 - 2018 Jan 312 cfs Feb 264 cfs Mar 437 cfs Apr 998 cfs May 494 cfs Jun 328 cfs July 230 cfs Aug 185 cfs Sept 187 cfs Oct 306 cfs Nov 363 cfs Dec 322 cfs Allen Falls: 1958 – 2018 Jan 343 cfs Feb 290 cfs Mar 481 cfs Apr 1097 cfs May 543 cfs Jun 361 cfs July 253 cfs Aug 204 cfs Sept 206 cfs Oct 336 cfs Nov 399 cfs Dec 354 cfs
	Location and name of closest stream gaging stations above and below the facility	Approximately 4.75 miles upstream of Parishville Dam: USGS 04268800 West Branch St. Regis River Near Parishville NY. Approximately 26.2 miles downstream of Allen Falls Dam: USGS 04269000 St. Regis River at Brasher Center NY.
	Watershed area at the dam (in square miles). Identify if this value is prorated from gage locations and provide the basis for proration calculation.	Parishville: 181 square miles Allen Falls: 199 square miles

Item	*Information Requested*	*Response (include references to further details)*
	Other facility specific hydrologic information	Parishville Record flow at dam: 6,100 cfs Allen Falls Record flow at dam: 6,700 cfs
Designated Zones of Effect	Number and names of each zone of effect	<u>Parishville Development</u> Zone 1: Impoundment Zone 2: Bypassed Reach Zone 3: Downstream <u>Allen Falls Development</u> Zone 1: Impoundment Zone 2: Bypassed Reach Zone 3: Downstream
	River mile of upstream and downstream limits of each zone of effect	<u>Parishville Development</u> Zone 1: RM 28 to RM 21 Zone 2: RM 21 to RM 20 Zone 3: RM 20 to RM 19.9 <u>Allen Falls Development</u> Zone 1: RM 19.9 to RM 19 Zone 2: RM 19 to RM 16.25 Zone 3: RM 16.25 to RM 15.95

2.0 STANDARDS MATRICES

TABLE 2. STANDARDS MATRIX FOR THE WEST BRANCH ST. REGIS HYDROELECTRIC PROJECT.

		CRITERION and STANDARD SELECTED							
Zone No., Zone Name, and Standard Selected (including PLUS if selected)	**River Mile at upper and lower extent of Zone**	***A*** **Ecological Flows**	***B*** **Water Quality**	***C*** **Upstream Fish Passage**	***D*** **Downstream Fish Passage**	***E*** **Shoreline and Watershed Protection**	***F*** **Threatened and Endangered Species**	***G*** **Cultural and Historic Resources**	***H*** **Recreational Resources**
Parishville Development									
1: Impoundment	28 – 21	1	2	1	2	2, plus	2	2	2
2: Bypassed Reach	21 – 20	2	2	1	2	2, plus	2	2	2
3: Downstream	20 – 19.9	2	2	1	1	1, plus	2	2	2
Allens Falls Development									
1: Impoundment	19.9 – 19	1	2	1	2	2, plus	2	2	2
2: Bypassed Reach	19 – 16.25	2	2	2	2	2, plus	2	2	2
3: Downstream	16.25 – 15.95	2	2	2	2	2, plus	2	2	2

3.0 SUPPORTING INFORMATION

3.1 – Ecological Flow

Impoundment ZoEs

Criterion	Standard	
A	1	Not Applicable / De Minimis Effect: • Confirm the location of the powerhouse relative to other dam/diversion structures to establish that there are no bypassed reaches at the facility. • If Run-of-River operation, provide details on how flows, water levels, and operation are monitored to ensure such an operational mode is maintained. • In a conduit project, identify the water source and discharge points for the conduit system within which the hydropower plant is located. • For impoundment zones only, explain how fish and wildlife habitat within the zone is evaluated and managed – NOTE: this is required information, but it will not be used to determine whether the Ecological Flows criterion has been satisfied. All impoundment zones can apply Criterion A-1 to pass this criterion.

- In accordance with Articles 401 and 402 of the FERC License Order and section 3.1 of the 2001 Settlement Agreement[1], Brookfield Renewable (Brookfield) is required to limit fluctuations within the Parishville and Allens Falls Impoundments as defined in Table 3.

TABLE 3. WEST BRANCH ST. REGIS RIVER IMPOUNDMENT FLUCTUATIONS.

Development	Permanent Crest of Dam (ft.NGVD)	Normal Impoundment Fluctuation
Parishville	884.5	0.5 feet measured in downward diction from permanent crest of dam

[1] 20010918-0155

Development	Permanent Crest of Dam (ft.NGVD)	Normal Impoundment Fluctuation
Allens Falls	742.0	0.5 to 0.8 feet[a] measured in downward direction from permanent crest of dam when winder drawdown not in effect. 0.5 to 0.8 feet[a] measured in downward direction from 1.0 foot below permanent crest of dam when winter drawdown in effect.[b]

a Under normal operation, the licensee shall limit daily impoundment fluctuations within the Allens Falls impoundment to 0.5 feet. In the event outflow from the Parishville Development is less than the required Allens Falls Development instream flow, discontinuity of flow will exist and use of an additional 0.3 feet of fluctuation is allowed to ensure the instream flow at the Allens Falls Development. For FERC compliance purposes, only exceedance of the 0.8 foot limit will be reported to the Commission by the licensee. The NYSDEC will be notified whenever the 0.5 foot limit is exceeded.

b The winter drawdown is defined as the lowering of the impoundment to a normal elevation of 1.0 foot below permanent crest of dam, or 741.0 feet NGVD. The winter drawdown shall occur no sooner than November 1 and shall not extend beyond May 15

- In accordance with Article 403 of the FERC License Order, Brookfield must limit impoundment maintenance drawdown and refill rates to no more than 1 foot per hour.
- Whenever an excursion occurs, Brookfield notifies FERC as soon as possible, but no later than 10 days after each such incident.
- Brookfield submitted its final streamflow and water level monitoring plan, pursuant to License Article 405 and section 3.3 of the Settlement Agreement, to FERC on April 1, 2003[2]. FERC approved the streamflow and water level monitoring plan, with modification to require a report to the Commission following deviations from the Project minimum flows or impoundment elevations, on December 4, 2003[3].
- During the past 5 years, there was one potential excursion event at the Allens Falls impoundment (January 12, 2018)[4] and one excursion event at the Parishville impoundment (January 17, 2020)[5]. Upon further investigation of the potential Allens Falls excursion event by Brookfield, it was determined that the lowest observed impoundment elevation was above the FERC low limit of -1.8 feet for the winter drawdown period, and therefore likely not a reportable event. Upon review, FERC agreed with Brookfield's assessment of the potential Allens Falls excursion and determined that neither excursion event would be considered a violation of the Project's license requirements[6].
- An investigation of the 2020 Parishville impoundment excursion event revealed that the cause was a decrease in inflow, which was most likely a result of cold weather in the region. Since the Tainter gate was in local control due to the icing concerns, a Travelling

[2] 20030402-0061
[3] 20031204-3021
[4] 20180122-5157
[5] 20200124-5035
[6] 20180423-3012, 20200305-3008

Operator had to be dispatched to make the gate adjustments. To mitigate the future reoccurrence, Brookfield proposed to review cold weather procedures with the System Operator to recognize when cold temperatures in the region may result in rapid decreases in inflow.

Bypass Reaches and Downstream ZoEs

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

- In accordance with Article 404 of the FERC License Order and section 3.2 of the 2001 Settlement Agreement, Brookfield Renewable (Brookfield) is required to release the minimum flows from the Parishville and Allens Falls Dams as show in Table 4. The Parishville minimum flow is released via orifice flow beneath the existing 11-foot-wide by 4-foot-high sluice gate. A calibrated gage is set on the lifting mechanism which denotes the gate opening height. Minimum flows at the Allens Falls Development are released through the existing low level gate located adjacent to the intake to the pipeline.

TABLE 4. WEST BRANCH ST. REGIS RIVER MINIMUM FLOW REQUIREMENTS.

Development	Flow Magnitude (cfs)	Annual Periods
Parishville	20 cfs (19.8 – 20.2)	January 1 through December 31
Allens Falls	30 cfs (29.8 – 30.2)	October 1 through March 31

Development	Flow Magnitude (cfs)	Annual Periods
	50 cfs (49.7 – 50.3)	April 1 through August 31
	40 cfs (39.7 – 40.3)	September 1 through September 30

- In the Fall of 2000, signatories to the Settlement Agreement participated in an instream flow demonstration at each development to assess existing instream flow data as well as to develop, prioritize, and ascertain attainment of management goals. Management objectives specific to the Parishville bypass reach included habitat gains for the fish community, benthic invertebrate and forage fish production, fish movement, fishing opportunities, riparian vegetation, wetland and wildlife resources, and the reduction of the vulnerability of fish to illegal poaching.
- The agreed-upon instream flows were designed to restore the periodically dewatered bypass reaches downstream of each dam to functional year-round river reaches, to provide continuity between the two developments, and to provide a baseflow downstream of the Allens Falls powerhouse to supplement flows during periods of non-generation.
- In combination with spillage periods, the agreed-upon instream flow provides relatively high attainment of management objectives related to all life stages of brook trout (during periods of suitable water temperature), all life stages of longnose dace (representative of riffle dwelling species), and benthic macroinvertebrate production, which will increase the forage base. In the Allens Falls bypass reach, the minimum flows also provide high attainment of management objectives related to Atlantic salmon spawning, incubation, and juvenile habitat, for all life stages of fallfish, and white sucker, which will increase the forage base, along with improvement in rainbow trout and brown trout habitat during periods of suitable water temperature.
- The Parishville downstream Zone of Effect is very short and within approximately 500 feet from the Parishville powerhouse, water released from the powerhouse is mixed with flows from the bypassed reach and the Allens Falls impoundment
- During the past 5 years, there have been no unplanned deviations from the required minimum flow releases. On September 9th, 2015 there was a mutually agreed-upon (between the Applicant and NYSDEC) deviation in the required minimum flow releases at the Allens Falls Development[7]. Minimum flows were reduced to 0 cfs for a duration of less than one hour in order to an inspection of the spillway toe. FERC informed the Applicant that minimum flow deviation will not be considered a violation of Article 404[8].

[7] 20150910-5134
[8] 20151014-3000

3.2 – Water Quality

All ZoEs

Criterion	Standard	
B	2	Agency Recommendation: • If facility is located on a Water Quality Limited river reach, provide a link to the state's most recent impaired waters list and indicate the page(s) therein that apply to facility waters. If possible, provide an agency letter stating that the facility is not a cause of such limitation. • Provide a copy of the most recent Water Quality Certificate and any subsequent amendments, including the date(s) of issuance. If more than 10 years old, provide documentation that the certification terms and conditions remain valid and in effect for the facility (e.g., a letter from the agency). • Identify any other agency recommendations related to water quality and explain their scientific or technical basis. • Describe all compliance activities related to water quality and any agency recommendations for the facility, including on-going monitoring, and how those are integrated into facility operations

- Table 5 shows NYSDEC's most current waterbody classification and assessment information for the Project's Zones of Effects[9]. Waters in all Zones of Effect are not included on the current (2016) or draft (2018) NYS Section 303(d) List of Impaired/TMDL Waters[10][11].

TABLE 5. WEST BRANCH ST. REGIS RIVER WATERBODY CLASSIFICATIONS.

Development and Reach	Waterbody Class	Assessment Details

[9] http://www.dec.ny.gov/docs/water_pdf/wistlawwbrstregis.pdf
[10] https://www.dec.ny.gov/docs/water_pdf/303dListfinal2016.pdf
[11] https://www.dec.ny.gov/docs/water_pdf/303dlistdraft18.pdf

Parishville Impoundment ZOE	**Class B** - Suitable for public bathing, general recreation use and support of aquatic life, but not as a water supply.	Currently there is inadequate data/information to evaluate uses and determine a water quality assessment for this waterbody.
Parishville Downstream and Bypassed Reach ZOE	**Class C** - Suitable for general recreation use and support of aquatic life, but not as a water supply or for public bathing.	Currently there is inadequate data/information to evaluate uses and determine a water quality assessment for this waterbody.
Allens Falls Impoundment ZOE	**Class C** - Suitable for general recreation use and support of aquatic life, but not as a water supply or for public bathing.	Allen Falls Reservoir is assessed as having minor impacts due to recreational uses that are known to be stressed by nutrients (phosphorus) from unknown sources.
Allens Falls Downstream and Bypassed Reach ZOE	**Class C** - Suitable for general recreation use and support of aquatic life, but not as a water supply or for public bathing.	The lower portion of the West Branch St. Regis River is assessed as threatened due to aquatic life uses that may be threatened by unspecified pollutants. Although uses are currently fully supported, potential pollutants and the health of the biological community should continue to be monitored.

- The Section 401 Water Quality Certificate (WQC) was issued by NYSDEC on November 2, 2001, adopted into the FERC License Order, and on April 9, 2020 NYSDEC confirmed that the terms and conditions of the WQC remain valid and in effect for the Project (Appendix C).
- The WQC incorporated the operating conditions for instream flows and impoundment fluctuations that were developed in the Settlement Agreement and discussed above in section 3.1. Additionally, the WQC contains provisions to monitor water quality (turbidity) during any construction activity to ensure that water quality is not affected by project activities.
- The scientific basis for the required instream flows and impoundment fluctuations is discussed in detail in section 3.1 above and allow for attainment of the recreation use and aquatic life aspects of NYSDEC's waterbody classifications of each Zone of Effect.
- As discussed above in section 3.1 FERC determined that neither of the two impoundment excursion events, or the planned deviation from the minimum flow requirements at the Allens Falls development, that took place during the past 5 years would be considered a violations of the Projects license requirements.

3.3 – Upstream Fish Passage

Impoundment ZoEs, Parishville Bypassed Reach and Downstream ZoEs

Criterion	Standard	
C	1	Not Applicable / De Minimis Effect: • Explain why the facility does not impose a barrier to upstream fish passage in the designated zone. Typically, impoundment zones will qualify for this standard since once above a dam and in an impoundment, there is no facility barrier to further upstream movement. • Document available fish distribution data and the lack of migratory fish species in the vicinity. • If migratory fish species have been extirpated from the area, explain why the facility is or was not the cause of this

- The only migratory fish species in the Project Area is the catadromous American eel. There are no anadromous fish or requirements for upstream passage at the Project. Upstream passage is blocked by multiple natural falls downstream of the Project, and until 2016, by the downstream Hogansburg Hydroelectric dam.
- There are no barriers to upstream passage in the Parishville or Allens Falls Impoundment Zones of Effect.
- Historically, fish from the St. Lawrence River could swim approximately 21 miles upstream of the St. Regis river confluence to first natural upstream barrier, Brasher Falls. However, since the construction of the Hogansburg Hydroelectric Project (FERC Project No. 7518) and its associated dam the early 1930's until it's removal in 2016, upstream passage was blocked at approximately 3 miles upstream of the confluence.
- In its applicant-prepared environmental assessment of the proposed Hogansburg license surrender and decommission and dam removal, the then-licensees noted that under the decommissioning with complete removal of the spillway and stoplog gate section alternative, the St. Regis River would be returned to a free-flowing river upstream and downstream of the Hogansburg Project. Additionally, this alternative would allow for some fish species to locate new spawning and resident habitats previously inaccessible and allow strong swimming species such as Atlantic salmon and lake surgeon access to main stem habitat and connecting tributaries up to Brasher Falls[12]. Following an independent review of the Environmental Assessment, FERC subsequently adopted the document and issued it as staff's Environmental Assessment.

[12] 20160428-5335

- Project facilities in the ZoEs upstream of Allens Falls Dam have a de minimis effect on upstream fish passage because any migratory species in the St. Regis River and West Branch St. Regis River are at least partial blocked by the natural barriers at Brasher Falls and in the Allens Falls bypassed reach, and completely blocked by the Allens Falls Dam.

Allens Falls Bypassed Reach and Downstream ZoE

Criterion	**Standard**	
C	2	Agency Recommandation: • Identify the proceeding and source, date, and specifics of the agency recommendation applied (Note: there may be more than one; identify and explain which is most environmentally protective). • Explain the scientific or technical basis for the agency recommendation, including methods and data used. This is required regardless of whether the recommendation is or is not part of a Settlement Agreement. • Describe any provisions for fish passage monitoring or effectiveness determinations that are part of the agency recommendation, and how these are being implemented.

- As noted in section 3.1, Article 404 of the FERC License Order and section 3.2 of the 2001 Settlement Agreement require Brookfield to release the minimum flows shows in table 4 from downstream of the Allens Falls Dam.
- The agreed-upon instream flows were designed to, in part, restore the periodically dewatered bypass reach downstream of Allens Falls dam to functional year-round river reaches and to provide a baseflow downstream of the Allens Falls powerhouse to supplement flows during periods of non-generation. Management objective for the flow releases in these reaches include fish movement and Atlantic salmon spawning, incubation and juvenile habitat.
- There are no requirements to monitor fish passage at the Project. The Settlement Agreement notes that for the term of the FERC License Order the licensee shall not be required to test the effectiveness of any, or all, components of existing or future passage measures and shall not be required to increase the level of passage as agreed to by the Settlement Offer for the term of the FERC License Order unless prescribed by Interior under Section 18 of the Federal Power Act.

3.4 Downstream Fish Passage and Protection

Impoundments, Bypassed Reaches, and Allens Falls Downstream ZoEs

Criterion	Standard	
D	2	Agency Recommendation: • Identify the proceeding and source, date, and specifics of the agency recommendation applied (NOTE: there may be more than one; identify and explain which is most environmentally protective). • Explain the scientific or technical basis for the agency recommendation, including methods and data used. This is required regardless of whether the recommendation is or is not part of a Settlement Agreement. • Describe any provisions for fish passage monitoring or effectiveness determinations that are part of the agency recommendation, and how these are being implemented.

- The West Branch of the St. Regis River supports a mixed cool water-warm water fishery, with the more abundant game species being brook trout, brown trout, smallmouth bass, and rock bass. Additional species reported from the impoundments and bypassed reaches include fallfish, bluntnose minnow, culips minnow, common shiner, golden shiner, creek chub, lake chub, longnose dace, blacknose dace, longnose sucker, white sucker, brown bullhead, pumpkinseed, yellow perch, and fantail darter.
- The Settlement Agreement describes the project area as being located "in an area of transition between cold water fisheries in the headwaters (Adirondack Mountain Region) and the cool/warm water fisheries downstream (St. Lawrence River Lowlands)"
- In accordance with Articles 406 of the FERC License Order and section 3.4 of the 2001 Settlement Agreement, Brookfield Renewable (Brookfield) is required, at such time that the licensee determines that an existing trashrack needs to be replaced, replace the existing trashrack with a 1-inch clear spacing trashrack. To date, the trashracks at neither development had needed replacement. Currently the Parishville trashrack has 1 5/16-inch clear spacing while the Allens Falls trashrack has 1 3/4-inich clear spacing. Downstream movement from the Parishville and Allens Falls impoundments is afforded via the spillways and gates.
- As noted in the Settlement Agreement, the location and current bar spacing of both trashracks do not create areas of high velocity in front of the intakes (maximum approach velocities are estimated to be 1.25 and 1.5 feet per second).
- The minimum flow releases from the dams into the bypassed reaches at each development are intended to, in part, restore the periodically dewatered reaches to functional year-round reaches and also enhance fish movement. The Allen Falls Downstream Reach was periodically dewatered during periods of non-generation. The

minimum flow requirements from the Allens Falls Dam are also intended to provide a base flow downstream of the powerhouse.

- In accordance with section 3.4 of the Settlement Agreement, for the term of the FERC License Order, the licensee shall not be required to: (1) test the effectiveness of any, or all, components of existing and future protection or passage measures and/or structures, (2) make qualitative or quantitative determinations of fish entrainment and/or mortality, or (3) provide compensation for any fish entrainment and/or mortality. Additionally, The licensee shall not be required to increase the level of protection and passage as agreed to by the Settlement Offer for the term of the license, unless prescribed by the U.S. Department of the Interior under Section 18 of the Federal Power Act.

Parishvilled Downstream ZoE

Criterion	**Standard**	
D	1	<u>Not Applicable/ De Minimis Effect</u>: • Explain why the facility does not impose a barrier to upstream fish passage in the designated zone. Typically, impoundment zones will qualify for this standard since once above a dam and in an impoundment, there is no facility barrier to further upstream movement. • 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 cycle. • Document available fish distribution data and the lack of migratory fish species in the vicinity. • If migratory fish species have been extirpated from the area, explain why the facility is or was not the cause of this.

- There are no barriers to downstream movement in the Parishville Downstream Reach and as noted in section 3.1 – Ecological Flow, this Zone of Effect is very short and within approximately 500 feet from the Parishville powerhouse, water released from the powerhouse is mixed with flows from the bypassed reach and the Allens Falls impoundment.

3.5 – Shoreline and Watershed Protection

Impoundments, Bypassed Reaches, and Allens Falls Downstream ZoEs

Criterion	Standard	
E	2	Agency Recommendation: • Provide copies or links to any agency recommendations or management plans that are in effect related to protection, mitigation, or enhancement of shorelines surrounding the facility (e.g., Shoreline Management Plan). • Provide documentation that indicates the facility is in full compliance with any agency recommendations or management plans that are in effect.

- The area around the Parishville impoundment is undeveloped or developed as public recreational facilities. The shoreline is mostly forested and devoid of emergent aquatic vegetation. The entire length of the Parishville bypassed reach is forested with a few small seasonal homes set back from the river. The Allens Falls impoundment is surrounded by seasonal and year-round houses and has some emergent vegetation forming small pockets of restricted wetlands in the backs of small coves. The emergent wetland vegetation found in the project area include cattail, burred, horsetail, arrowhead, yellow pond lily, iris, and bulrush. Some submergent vegetation can also be found in the project ponds, typically bladderwort and stonewort. The bypassed reach is also forested with several small seasonal and possibly year-round homes set back from the river.
- There is no shoreline management plan or similar plan required for either development.
- As noted in section 3.1 – Ecological Flow, FERC License Articles 401 and 402 and section 3.1 of the Settlement Agreement require Brookfield to limit impoundment fluctuations as show in table 3. The allowable impoundment fluctuations are intended to maintain the status quo such that the existing shallow water littoral and wetland habitat of each impoundment is preserved.
- Additionally, management objectives for the minimum flow requirements downstream of each dam and downstream of the Allens Falls powerhouse discussed in section 3.1 include enhanced riparian vegetation and wetland and wildlife resources.

Parishville Downstream ZoE

Criterion	Standard	
E	1	Not Applicable/ De Minimis Effect: • If there are no lands with significant ecological value associated with the facility, document and justify this (e.g., describe the land use and land cover within the FERC project or facility boundary). • Document that there have been no Shoreline Management Plans or similar protection requirements for the facility.

- The Parishville downstream Zone of Effect is very short and within approximately 500 feet from the Parishville powerhouse, water released from the powerhouse is mixed with flows from the bypassed reach and the Allens Falls impoundment. There are no lands with significant ecological value in this Zone and with the exception of the powerhouse, substation, and transmission lines, the land is undeveloped.
- There is no shoreline management plans or similar protection requirements for the facility.

All ZoEs

Criterion	Standard	
E	Plus	Bonus Activities: • Provide documentation that the facility has a formal site-specific conservation plan protecting a buffer zone of 50% or more of the undeveloped shoreline that the facility owns around its reservoirs and river corridors. • In lieu of a formal conservation plan, provide documentation that the facility has established a watershed enhancement fund for ecological land management that will achieve the equivalent land protection value of an ecologically effective buffer zone of 50% or more around undeveloped shoreline.

- In accordance with section 5.0 of the 2001 Settlement Agreement, the Applicant established a watershed enhancement fund for the purpose of ecosystem enhancement, fish stocking, new recreation measures, and any other matters pertinent to ecosystem and environmental improvements. An initial contribution of $5000 was made to the fund in

2005 followed by annual contributions of $750, which will continue for the remainder of the License Order term (Appendix D).

3.6 – Threatened and Endangered Species Protection

All ZoEs

Criterion	Standard	
F	2	Finding of No Negative Effects: • Identify all listed species in the facility area based on current data from the appropriate state and federal natural resource management agencies. • Provide documentation that there is no demonstrable negative effect of the facility on any listed species in the area from an appropriate natural resource management agency or provide documentation that habitat for the species does not exist within the ZoE or is not impacted by facility operations.

- Based on a NYSDEC Nature Explorer report (Appendix E) generated on July 1, 2020, the New York State-Threatened Fernald's sedge and the State-Rare Schweinitz's flat sedge have been recently (2004 – 2005) documented in the designated Zones of Effect. According to NYSDEC's letter dated November 17, 2015, Fernald's Sedge, *Carex merritt-fernaldii*, was known to occur at the Parishville Development. The plants were growing in an open vegetated area on sand by the aqueduct and powerhouse. The species guide on the New York Natural heritage Program website[13] notes that Fernald's sedge is a disturbance-loving plan that may appear at a site for a short period and then return to the seed bank and that there are currently no threats known to the species in New York. In light of NYSDEC's 2015 letter, the Project was previously recertified Low Impact with the following condition: "*Should the maintenance activities along the powerhouse roadway and pipeline right-of-way be significantly altered, such as widespread herbicide application, widening of the roadway or placement of fill adjacent to the roadway where the plant has been observed, the facility owner shall consult with the NYDEC regarding potential impacts to the Fernald's Sedge. If such change occurs during this LIHI certification term, the facility owner shall provide LIHI the results of these consultations along with evidence of implementation of any requirements mandated by the NYDEC to protect this species if it is onsite. The owner shall report on any such changes with the LIHI Annual Compliance Statement for the subject annual statement period.*" Brookfield informed LIHI on August 23, 2019 that there have been no changes to the maintenance activities or vegetation management in the area of interest (Appendix E).
- Lake Sturgeon are a New York State-Threatened species that is known to inhabit the lower St. Regis River downstream of Brasher Falls. Prior to 2016, the Hogansburg Dam

[13] https://guides.nynhp.org/fernalds-sedge/

was a complete barrier to fish species downstream of the dam. With the dam's removal in 2016, species such as lake sturgeon could regain access to over 500 miles of habitat on the St. Regis River and its tributaries[14].

- In 1999 NYSDEC, USGS, and stakeholders stocked 4,977 lake sturgeon into the St. Regis River immediately downstream of Brasher Falls. Evaluations from 2004 through 2005 of this stocking effort showed that 85 percent of the stocked lake sturgeon remained within 6 miles of the stocking location. A 2015 assessment of lake surgeon found that the majority of lake surgeon were caught between Helena, NY and Brasher Falls, NY. Because lake sturgeon are a benthic dwelling species, it is unlikely that they can easily pass the natural waterfall barrier at Brasher Falls.
- During the FERC licensing process, FWS commented in a letter dated May 15, 2001 that except for occasional transient individuals, no federally-listed or proposed endangered or threatened species are known to exist in the West Branch St. Regis River Hydroelectric Project impact area. In addition, no habitat in the project's impact area is currently designated or proposed "critical habitat."
- Based on a US. Fish and Wildlife IPaC report (Appendix E) generated on July 1, 2020, there are currently no federally-listed species that occur in the Project area and protected under the Endangered Species Act. Several bird species protected under the Migratory Birds Treaty Act and the Bald and Golden Eagle Protection Act may also be observed in the Project area and include: bald eagle, black-billed cuckoo, bobolink, Canada warbler, cape may warbler, eastern whip-poop-will, evening grosbeak and wood thrush.
- Atlantic Salmon are a federally-listed endangered species and are the target of restoration efforts in the St. Regis watershed. As of 2016, approximately 12,000-14,000 Atlantic salmon parr have been released at select locations in tributaries and in sections of the St Regis River. In the spring of 2016, the St. Regis Mohawk Tribe and the US Geological Survey stocked 2,000 smolts into the headwaters of the St. Regis River in the spring of 2016. However, it is unlikely that Atlantic salmon would gain access to the Project area as the natural barrier in the lower portion of the Allens Falls bypassed reach, called the Allens Falls waterfalls, has an approximately 60-foot inclined, vertical elevation drop and considered a barrier to upstream fish movement for most fish species inhabiting the West Branch St. Regis River downstream of the Project.

[14] https://usfwsnortheast.wordpress.com/tag/st-regis-river/

3.7 – Cultural and Historic Resource Protection

All ZoEs

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

- In accordance with Article 409 of the FERC License Order and section 2.9 of the 2001 Settlement Agreement, Brookfield was required to file with FERC, a Historic Properties Management Plan (HPMP) in order to avoid, or minimize and appropriately mitigate any adverse effects on historic properties due to project operation and other project-related actions. The HPMP was submitted to FERC on January 16, 2004[15] and approved with modification by FERC on April 16, 2004[16]. The modification required consulting with the New York State Historic Preservation Officer to determine if consultation with tribes with a historical presence is needed after an unanticipated discovery is made.
- The HPMP includes provisions applicable to historic mill ruins near the Parishville Dam and provisions applicable to the whole project area should previously unidentified historic properties be discovered. There are no known pre-historic resources at either development.
- A review of Project record on FERC's eLibrary database shows that there are no cultural or historic resources-related compliance issues.

3.8 – Recreational Resources

All ZoEs

Criterion	Standard	
H	2	Agency Recommandation: • Document any comprehensive resource agency recommendations and enforceable recreation plan that is in place for recreational access or accommodations. • Document that the facility is in compliance with all such recommendations and plans.

[15] 20040120-0113
[16] 20040416-3003

- In accordance with Article 408 of the FERC License Order and section 3.5 of the 2001 Settlement Agreement, Brookfield was required to file with FERC, a Recreation Plan to enhance recreational use at the Project. The Recreation Plan was filed with FERC on February 2, 2004[17] and approved with modification by FERC on April 8, 2004[18]. The modification required the Applicant to file as-built drawings of completed recreation enhancements and to file an updated public safety plan.
- Recreational enhancements included: (1) allowing public access to all lands within the project boundary of the two developments, with the exception of those lands and facilities specifically related to hydroelectric generation where public safety and security issues are a concern, (2) informal access to project waters over lands near the Parishville powerhouse, to the bypass reach at the Allens Falls Road Bridge, and at a designated point near the Allens Falls powerhouse, (3) signage that designates the extent of parking available at an informal parking area and boat launch at the end of Coon Road and designate informal parking near the surge tank on Covey Road, (4) an unimproved trail in the vicinity of Allens Falls powerhouse and boat barriers in the tailrace of the powerhouse, (5) a flow-notification system that provides the public with information about known spillage events, (6) consult with NYSDEC in designing and implementing appropriate erosion and sediment control measures for the unimproved trail and access point near the Allens Falls powerhouse, and (7) additional consultation to examine further development of public access to project lands and waters.
- The Applicant does not charge any fees for access to the reservoirs or downstream areas and allows public access to all lands within the Project boundary.
- All of the required recreational enhancements have been completed.

[17] 20040203-0308
[18] 20040408-3021

4.0 CONTACTS FORMS

Project Owner:	
Name and Title	Erie Boulevard Hydropower, L.P.
Company	Brookfield Renewable
Phone	315-267-1036
Email Address	Danny.Maguire@brookfieldrenewable.com
Mailing Address	184 Elm Street, Potsdam, NY 13676
Consulting Firm / Agent for LIHI Program (if different from above):	
Name and Title	Jot Splenda
Company	WSP
Phone	(919) 866-4417
Email Address	Jot.splenda@wsp.com
Mailing Address	1001 Wade Ave; Suite 400; Raleigh, NC 27615
Compliance Contact (responsible for LIHI Program requirements):	
Name and Title	Bob Garrett, Compliance Specialist
Company	Brookfield Renewable
Phone	513-743-2095
Email Address	Robert.Garrett@brookfieldrenewable.com
Mailing Address	Brookfield Renewable 399 Big Bay Rd, Queensbury, NY 12804
Party responsible for accounts payable:	
Name and Title	Judith Charette
Company	Brookfield Renewable
Phone	819-561-8099
Email Address	Judith.Charette@brookfieldrenewable.com
Mailing Address	41 Rue Victoria, Gatineau, QC J8X 2A1

Agency Contact (Check area of responsibility: Flows_X_, Water Quality _X_, Fish/Wildlife Resources __, Watersheds __, T/E Spp. __, Cultural/Historic Resources __, Recreation _X_):	
Agency Name	New York State Department of Environmental Conservation
Name and Title	Chris Balk, Region 6 Habitat Manager
Phone	315-785-2252
Email address	Christopher.Balk@dec.ny.gov
Mailing Address	317 Washington Street, 5th floor, Watertown, NY 13601

Agency Contact (Check area of responsibility: Flows__, Water Quality __, Fish/Wildlife Resources _X_, Watersheds __, T/E Spp. _X_, Cultural/Historic Resources __, Recreation __):	
Agency Name	New York State Department of Environmental Conservation
Name and Title	Nicholas Conrad, Information Resources Coordinator
Phone	518-402-8935
Email address	Nick.Conrad@dec.ny.gov
Mailing Address	625 Broadway, Albany, NY 12233-4757

Agency Contact (Check area of responsibility: Flows__, Water Quality _X_, Fish/Wildlife Resources _X_, Watersheds __, T/E Spp. _X_, Cultural/Historic Resources __, Recreation __):	
Agency Name	U.S. Fish and Wildlife Service
Name and Title	Steve Patch, Lake Sturgeon Hydro Project Coordinator
Phone	607-753-9334
Email address	Stephen_Patch@fws.gov
Mailing Address	3817 Luker Road, Cortland, NY 13045

Agency Contact (Check area of responsibility: Flows__, Water Quality __, Fish/Wildlife Resources __, Watersheds __, T/E Spp. __, Cultural/Historic Resources _X_, Recreation __):	
Agency Name	New York State Division for Historic Preservation
Name and Title	Michael Lynch, Division Director
Phone	518-237-8643
Email address	Michael.Lynch@parks.ny.gov
Mailing Address	Peebles Island State Park, P.O. Box 189, Waterford, NY 12188-0189

5.0 SWORN STATEMENT

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 ___Erie Boulevard Hydropower, L.P._____, the Undersigned attests that the material presented in the application is true and complete.

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

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

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

FOR PRE-OPERATIONAL CERTIFICATIONS:

The Undersigned acknowledges that LIHI may suspend or revoke the LIHI Certification should the impacts of the facility, once operational, fail to comply with the LIHI program requirements.

Company Name: _____Erie Boulevard Hydropower, L.P._____

Authorized Representative:

Name: _____Daniel Maguire_____

Title: _____Compliance Manager_____

Authorized Signature: _____ Digitally signed by Daniel J. Maguire Date: 2020.07.10 09:45:40 -04'00'

Date: ___July 10, 2020_____

APPENDIX A

PROJECT ZOES, PHOTOS, & DRAWINGS

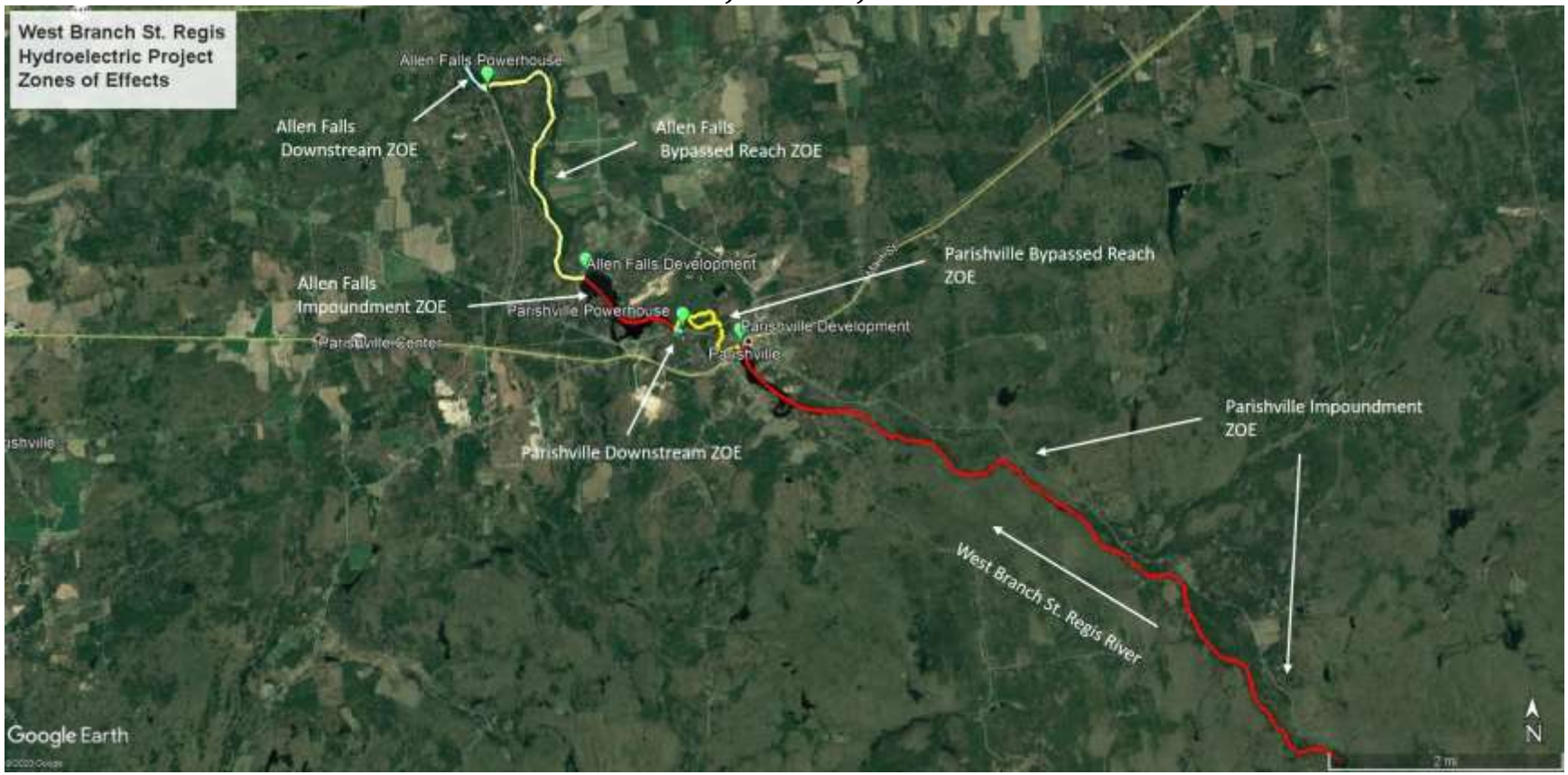

Figure 2. Overview Map of the West Branch St. Regis Hydroelectric Project Zones of Effects.

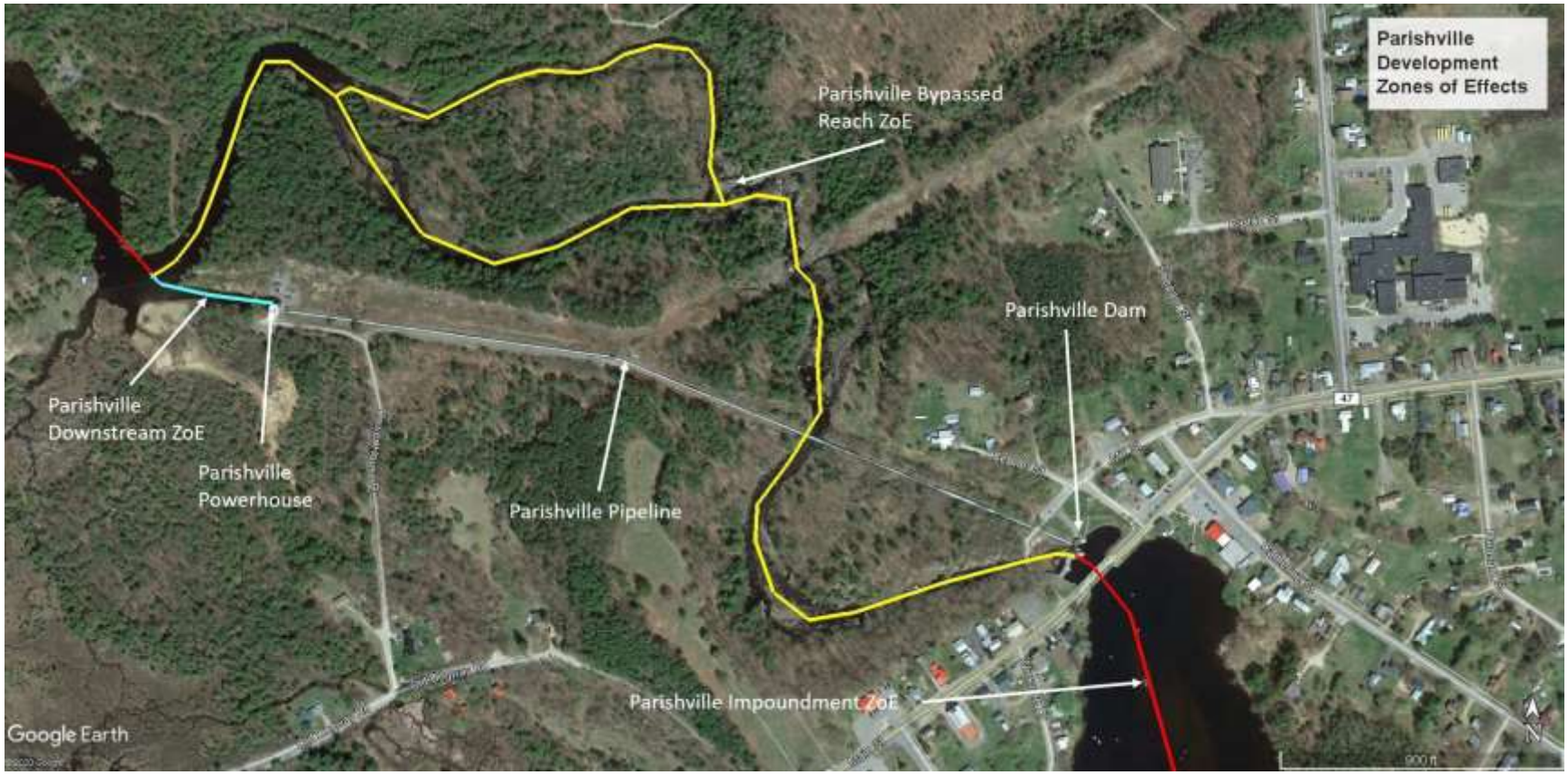

Figure 3. Overview Map of the Parishville Development Zones of Effects.

Figure 4. Overview Map of the Allens Falls Development Zones of Effects

APPENDIX B
AERIAL PHOTOS OF FACILITY AREA AND RIVER BASIN

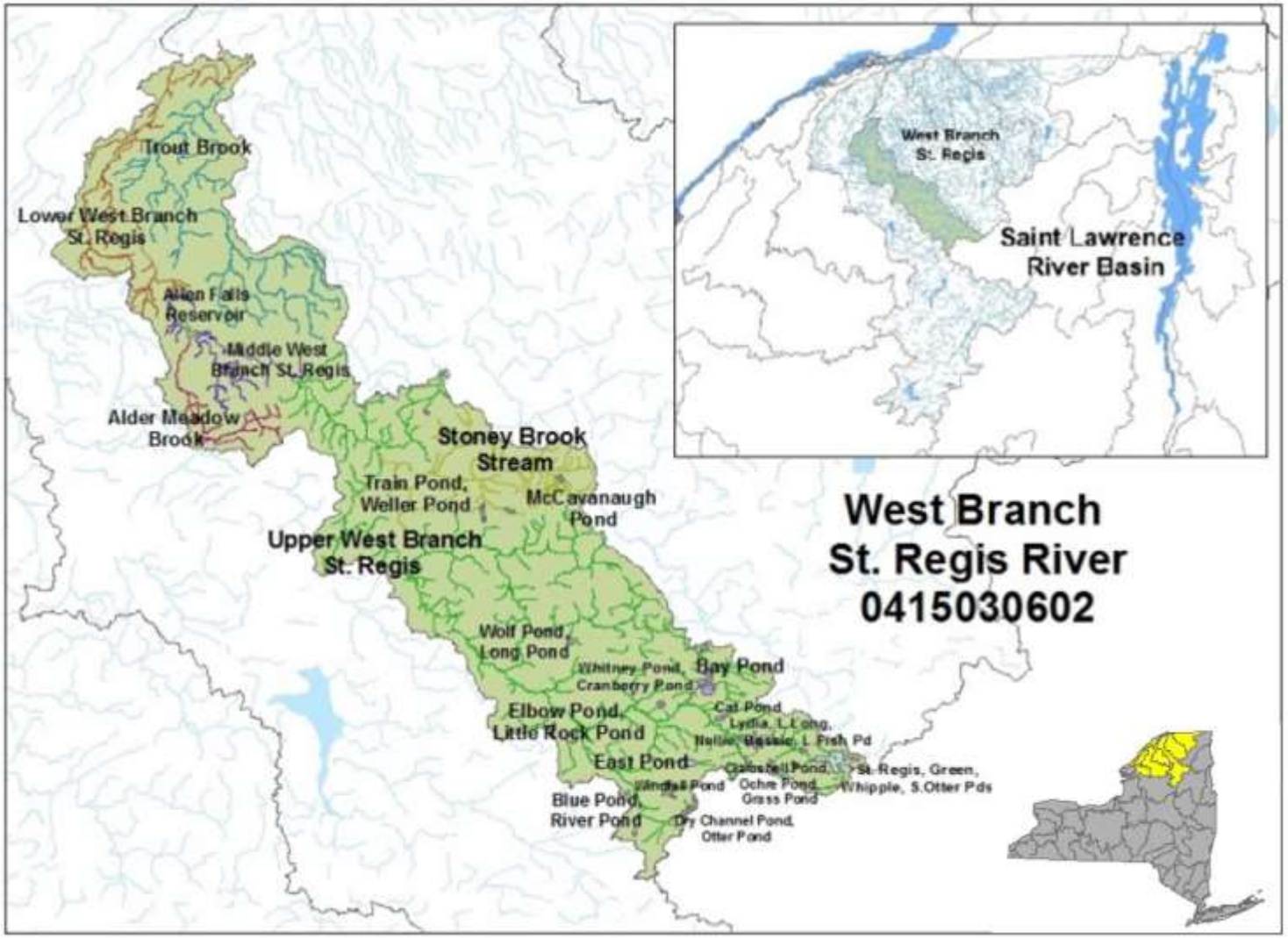

FIGURE 5: West Branch St. Regis River Drainage Basin.

APPENDIX C
WATER QUALITY CERTIFICATE AND AGNECY CORRESPONDANCE

New York State Department of Environmental Conservation
Division of Environmental Permits, Region 6
Dulles State Office Building, 317 Washington Street, Watertown, New York 13601-3787
Phone: (315) 785-2245 • **FAX:** (315) 785-2242
Website: www.dec.state.ny.us

Erin M. Crotty
Commissioner

November 2, 2001

Samuel S. Hirschey, Manager
Hydro Licensing & Regulatory Compliance
Erie Boulevard Hydropower, L.P.
225 Greenfield Parkway, Suite 201
Liverpool, NY 13088

RE: West Branch St. Regis River Project
6-4066-00019/00002
FERC Project #10461 and 10462
Parishville (T), St. Lawrence County

Dear Mr. Hirschey:

Enclosed is the Water Quality Certificate for the West Branch St. Regis River Hydroelectric Project. The Certificate is being issued pursuant to Section 401 of the Federal Water Pollution Control Act (33 USC 1341) and section 608.9 of the New York Department of Environmental Conservation's regulations pertaining to the Use and Protection of Waters (6 NYCRR Part 608).

Should you have any questions regarding the Water Quality Certificate, please contact me.

Sincerely,

Brian D. Fenlon

Brian D. Fenlon
Supervisor of Environmental Permits
Region 6

BDF:dli

cc: Service List
Signatories List
David Boergers, FERC
Thomas DeWitt, FERC
J. Sabattis, Orion
William Little, NYS DEC
L. Kuwik, NYS DEC
Wm. Sarbello, NYS DEC
L. Ollivett, NYS DEC
File

020107-0130-3

98-20-6 (1/96)--25c R6 NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

DEC PERMIT NUMBER	EFFECTIVE DATE
6-4066-00019/00002	November 2, 2001
FACILITY/PROGRAM NUMBER(s)	EXPIRATION DATE
	Coincident with expiration date of the license issued by the Federal Energy Regulatory Commission (FERC) for FERC Project 10461 and 10462

PERMIT

Under the Environmental Conservation Law (ECL)

TYPE OF PERMIT (Check All Applicable Boxes)

☒ New ☐ Renewal ☐ Modification ☐ Permit to Construct ☐ Permit to Operate

☐ Article 15, Title 5: Protection of Water	☐ Article 17, Titles 7, 8: SPDES	☐ Article 27, Title 9; 6NYCRR 373: Hazardous Waste Management
☐ Article 15, Title 15: Water Supply	☐ Article 19: Air Pollution Control	☐ Article 34: Coastal Erosion Management
☐ Article 15, Title 15: Water Transport	☐ Article 23, Title 27: Mined Land Reclamation	☐ Articles 1, 3, 17, 19, 27, 37; 6NYCRR 380: Radiation Control
☐ Article 15, Title 15: Long Island Wells	☐ Article 24: Freshwater Wetlands	☐ Other: _____
☐ Article 15, Title 27: Wild, Scenic and Recreational Rivers	☐ Article 25: Tidal Wetlands	
☒ 6NYCRR 608: Water Quality Certification	☐ Article 27, Title 7; 6NYCRR 360: Solid Waste Management	

PERMIT ISSUED TO: Erie Boulevard Hydropower, L.P.	TELEPHONE NUMBER: (315) 413-2790
ADDRESS OF PERMITTEE: 225 Greenfield Parkway, Suite 201, Liverpool, New York 13088	
CONTACT PERSON FOR PERMITTED WORK: Samuel S. Hirschey, Manager - Hydro Licensing & Regulatory Compliance	TELEPHONE NUMBER: (315) 413-2790
NAME AND ADDRESS OF PROJECT/FACILITY: West Branch St. Regis River Hydroelectric Project	
LOCATION OF PROJECT/FACILITY: West Branch St. Regis River, approximately 18 miles upstream of its confluence with the St. Regis River at Winthrop, New York	

COUNTY	TOWN/CITY/VILLAGE	WATERCOURSE/WETLAND NO.	NYTM COORDINATES
St. Lawrence	Parishville (T)	Allens Falls Reservoir/Parishville Reservoir/W. Branch St. Regis River	E:510,974 N:4,945,294

DESCRIPTION OF AUTHORIZED ACTIVITY:

Operation and maintenance of a 6.8 MW hydroelectric facility in accordance with the applicable provisions of the West Branch St. Regis River Offer of Settlement dated August 2001 and the attached conditions.

By acceptance of this certificate, the certificate holder agrees that it will act in strict compliance with the applicable water quality sections of the Environmental Conservation Law (ECL), all applicable water quality regulations, the conditions included as part of this certificate and the applicable provisions of the West Branch St. Regis River "Offer of Settlement" dated August 9, 2001 and filed with the Federal Energy Regulatory Commission (FERC).

PERMIT ADMINISTRATOR	ADDRESS	
Brian D. Fenlon	317 Washington Street, Watertown, New York 13601	
AUTHORIZED SIGNATURE: Brian D. Fenlon	DATE: November 2, 2001	Page 1 of 7

DCS1:PERMITP1 4/97

NOTIFICATION OF OTHER PERMITTEE OBLIGATIONS

Item A: Permittee Accepts Legal Responsibility and Agrees to Indemnification

The permittee expressly agrees to indemnify and hold harmless the Department of Environmental Conservation of the State of New York, its representatives, employees, agents, and assigns for all claims, suits, actions, damages, and costs of every name and description, arising out of or resulting from the permittee's undertaking of activities or operation and maintenance of the facility or facilities authorized by the permit in compliance or non-compliance with the terms and conditions of the permit.

Item B: Permittee's Contractors to Comply with Permit

The permittee is responsible for informing its independent contractors, employees, agents and assigns of their responsibility to comply with this permit, including all special conditions while acting as the permittee's agent with respect to the permitted activities, and such persons shall be subject to the same sanctions for violations of the Environmental Conservation Law as those prescribed for the permittee.

Item C: Permittee Responsible for Obtaining Other Required Permits

The permittee is responsible for obtaining any other permits, approvals, lands, easements and rights-of-ways that may be required to carry out the activities that are authorized by this permit.

Item D: No Right to Trespass or Interfere with Riparian Rights

This permit does not convey to the permittee any right to trespass upon the lands or interfere with the riparian rights of others in order to perform the permitted work nor does it authorize the impairment of any rights, title, or interest in real or personal property held or vested in a person not a party to the permit.

GENERAL CONDITIONS

General Condition 1: Facility Inspection by the Department

The permitted site or facility, including relevant records, is subject to inspection at reasonable hours and intervals by an authorized representative of the Department of Environmental Conservation (the Department) to determine whether the permittee is complying with this permit and the ECL. Such representative may order the work suspended pursuant to ECL 71-0301 and SAPA 401(3).

The permittee shall provide a person to accompany the Department's representative during an inspection to the permit area when requested by the Department.

A copy of this permit, including all referenced maps, drawings and special conditions, must be available for inspection by the Department at all times at the project site or facility. Failure to produce a copy of the permit upon request by a Department representative is a violation of this permit.

General Condition 2: Relationship of this Permit to Other Department Orders and Determinations

Unless expressly provided for by the Department, issuance of this permit does not modify, supersede or rescind any order or determination previously issued by the Department or any of the terms, conditions or requirements contained in such order or determination.

General Condition 3: Applications for Permit Renewals or Modifications

The permittee must submit a separate written application to the Department for renewal, modification or transfer of this permit. Such application must include any forms or supplemental information the Department requires. Any renewal, modification or transfer granted by the Department must be in writing.

The permittee must submit a renewal application at least:

a) 180 days before expiration of permits for State Pollutant Discharge Elimination System (SPDES), Hazardous Waste Management Facilities (HWMF), major Air Pollution Control (APC) and Solid Waste Management Facilities (SWMF); and

b) 30 days before expiration date of all other permit types.

Submission of applications for permit renewal or modification are to be submitted to:

NYS DEC Regional Permit Administrator, Region 6

317 Washington Street, Watertown, New York 13601, telephone: 315-785-2245

General Condition 4: Permit Modifications, Suspensions and Revocations by the Department.

The Department reserves the right to modify, suspend or revoke this permit. The grounds for modification, suspension or revocation include:

a) the scope of the permitted activity is exceeded or a violation of any condition of the permit or provisions of the ECL and pertinent regulations if found;

b) the permit was obtained by misrepresentation or failure to disclose relevant facts;

c) new material information is discovered; or

d) environmental conditions, relevant technology, or applicable law or regulation have materially changed since the permit was issued.

ADDITIONAL GENERAL CONDITIONS FOR ARTICLES 15 (Title 5), 24, 25, 34 and 6 NYCRR Part 608 (Protection of Water / Water Quality Certification)

9. That if future operations by the State of New York require an alteration in the position of the structure or work herein authorized, or if, in the opinion of the Department of Environmental Conservation it shall cause unreasonable obstruction to the free navigation of said waters or flood flows or endanger the health, safety or welfare of the people of the State, or cause loss or destruction of the natural resources of the State, the owner may be ordered by the Department to remove or alter the structural work, obstructions, or hazards caused thereby without expense to the State, and if, upon the expiration or revocation of this permit, the structure, fill, excavation, or other modification of the watercourse hereby authorized shall not be completed, the owners, shall, without expense to the State, and to such extent and in such time and manner as the Department of Environmental Conservation may require, remove all or any portion of the uncompleted structure or fill and restore to its former condition the navigable and flood capacity of the watercourse. No claim shall be made against the State of New York on account of any such removal or alteration.

10. That the State of New York shall in no case be liable for any damage or injury to the structure or work herein authorized which may be caused by or result from future operations undertaken by the State for the conservation or improvement of navigation, or for other purposes, and no claim or right to compensation shall accrue from any such damage.

11. Granting of this permit does not relieve the applicant of the responsibility of obtaining any other permission, consent or approval from the U.S. Army Corps of Engineers, U.S. Coast Guard, New York State Office of General Services or local government which may be required.

12. All necessary precautions shall be taken to preclude contamination of any wetland or waterway by suspended solids, sediments, fuels, solvents, lubricants, epoxy coatings, paints, concrete, leachate or any other environmentally deleterious materials associated with the project.

13. Any material dredged in the prosecution of the work herein permitted shall be removed evenly, without leaving large refuse piles, ridges across the bed of a waterway or floodplain or deep holes that may have a tendency to cause damage to navigable channels or to the banks of a waterway.

14. There shall be no unreasonable interference with navigation by the work herein authorized.

15. If upon the expiration or revocation of this permit, the project hereby authorized has not been completed, the applicant shall, without expense to the State, and to such extent and in such time and manner as the Department of Environmental Conservation may require, remove all or any portion of the uncompleted structure or fill and restore the site to its former condition. No claim shall be made against the State of New York on account of any such removal or alteration.

16. If granted under 6 NYCRR Part 608, the NYS Department of Environmental Conservation hereby certifies that the subject project will not contravene effluent limitations or other limitations or standards under Sections 301, 302, 303, 306 and 307 of the Clean Water Act of 1977 (PL 95-217) provided that all of the conditions listed herein are met.

17. All activities authorized by this permit must be in strict conformance with the approved plans submitted by the applicant or his agent as part of the permit application.

Such approved plans were prepared by _____

_____ on _____

SPECIAL CONDITIONS

WATER QUALITY CERTIFICATION

CERTIFICATION

The New York State Department of Environmental Conservation (Department) hereby certifies:

- the Department has reviewed the certificate holder's Application for Federal Hydroelectric License (hereafter referred to as "the Application") and all other available pertinent information, including studies submitted in support of the application and the Offer of Settlement filed with the Federal Energy Regulatory Commission (FERC) in August, 2001.
- the project will comply with Sections 301, 302, 303, 306 and 307 of the Federal Water Pollution Control Act as amended and as implemented by the limitations, standards and criteria of the state statutory and regulatory requirements set forth in 6NYCRR Section 608.9(a); and
- the project will comply with applicable New York State effluent limitations, water quality standards and thermal discharge criteria set forth in 6NYCRR Parts 700-706.

DEC PERMIT NUMBER		
6-4066-00019/00002		
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SPECIAL CONDITIONS

For Article 15, Title 5 (Protection of Water)
6NYCRR 608 (Water Quality Certification)

This Water Quality Certification is issued solely for the purposes of Section 401 of the Federal Water Pollution Control Act (33 USC 1341).

CONTACTS: Except as otherwise specified, all contact with the Department concerning this certificate shall be addressed to:

New York State Department of Environmental Conservation
Regional Permit Administrator
317 Washington Street
Watertown, NY 13601

Written submissions to the Department must include five (5) complete copies of the submission.

SPECIAL CONDITIONS

A. ADMINISTRATION

1. This certificate includes and incorporates the West Branch St. Regis River "Offer of Settlement" (Settlement) dated August 9, 2001.

2. Inspections: The project, including relevant records, is subject to inspection at reasonable hours and intervals, upon reasonable notice to the certificate holder, by an authorized representative of the Department to determine whether the applicant is complying with this certification. A copy of this certification, including the West Branch St. Regis River **Offer of Settlement** dated August 9, 2001 and the FERC license, including all maps, drawings, and special conditions, must be available for inspection by the Department during such inspections at the project.

3. Emergencies: With the exception of emergency provisions described in the Settlement (see subsection 2.8), the following procedures shall apply to activities conducted at the Project in response to an emergency.

   Prior to commencement of emergency activities, the NYS DEC must be notified and must determine whether to grant approval. If circumstances require that emergency activities be taken immediately such that prior notice to the DEC is not possible, then the DEC must be notified by the certificate holder within 24 hours of commencement of the emergency activities. In either case, notification must be by certified mail, telegram, or other written form of communication, including fax and electronic mail. This notification must be followed within 3 weeks by submission of the following information:

   1) a description of the action;
   2) location map and plan of the proposed action;
   3) reasons why the situation is an emergency

   All notifications, requests for emergency authorizations and information submitted to support such requests shall be sent to the Regional Permit Administrator at the address listed above.

SPECIAL CONDITIONS

6NYCRR 608 (Water Quality Certification)

4. Modifications and Revocations: The DEC reserves the right to modify or revoke this certificate when:

   1) the scope of the certified activity is exceeded or a violation of any condition of this certificate or provisions of the ECL and pertinent regulation is found;
   2) the certificate was obtained by misrepresentation or failure to disclose relevant facts;
   3) new material information is discovered;
   4) environmental conditions, relevant technology, or applicable law or regulation have materially changed since the certificate was issued.

B. OPERATING CONDITIONS

5. Instream Flows: The certificate holder shall maintain instream flows in accordance with the Settlement, in particular, Section 3.2.

6. Flow Monitoring: The certificate holder shall develop a stream flow and water level monitoring plan consistent with the Settlement in particular Section 3.3.

7. Impoundment Fluctuations: The Allens Falls and Parishville Reservoirs (project reservoirs) shall be operated in accordance with the Settlement (see subsection 3.1). Alternate impoundment operating plans must be reviewed and approved by NYS DEC prior to being implemented. Emergencies shall be dealt with in accordance with special conditions #3 of this certificate.

8. Fish Protection and Downstream Fish Movement: Fish protection provisions and downstream fish movement provisions shall be provided in accordance with the Settlement (see section 3.4).

C. PROJECT MAINTENANCE AND CONSTRUCTION

note: All matters pertaining to "Project Maintenance and Construction" shall be addressed to:

Regional Permit Administrator
New York State Department of Environmental Conservation
317 Washington Street
Watertown, NY 13601

9. Maintenance Dredging: The certificate holder shall install and maintain appropriate turbidity control structures while conducting any maintenance dredging activities in the intake/forebay area of the Project.

SPECIAL CONDITIONS

6NYCRR 608 (Water Quality Certification)

10. Sediment Analysis and Disposal: The certificate holder must sample any sediments to be disturbed or removed from the project waters and test them for contaminants. Sampling and testing shall be accomplished according to a protocol submitted to and approved by the Department prior to sampling.

Prior to dredging or other excavation, the certificate holder must secure Department approval for all disposal or interim holding locations for any sediments to be removed from the project waters.

11. Erosion and Sediment Control: The certificate holder shall ensure that the following erosion and sediment/contaminant control measures, at a minimum, are adhered to during routine maintenance and construction (including maintenance dredging) that may result in sediments/contaminants entering Allens Falls Reservoir, Parishville Reservoir or the West Branch St. Regis River.

1. Isolate in-stream work from the flow of water and prevent discolored (turbid) discharges and sediments caused by excavation, dewatering and construction activities from entering the waters of the West Branch St. Regis River.

2. Prohibit heavy construction equipment from operating below the mean high water level of project reservoirs and the West Branch St. Regis River until the work area is protected by a watertight structure and dewatered.

3. Minimize soil disturbance, grade so as to prevent or minimize erosion and provide temporary and/or permanent stabilization of all disturbed areas and stockpiles to minimize the potential for erosion and subsequent sedimentation within project reservoirs or the West Branch St. Regis River.

4. Protect all waters from contamination by deleterious materials such as wet concrete, gasoline, solvents, epoxy resins or other materials used in construction, maintenance and operation of the project.

5. Install and maintain erosion control structures on the down slope of all disturbed areas to prevent eroded material from entering project reservoirs or the West Branch St. Regis River. Erosion control structures must be installed before commencing any activities involving soil disturbance and all erosion control structures must be maintained in a fully functional condition.

6. Ensure complete removal of all dredged/excavated material and construction debris from the bed and banks of project reservoirs/West Branch St. Regis River in the vicinity of the Project.

7. Ensure that all temporary fill and other materials placed in the waters of the river are completely removed, immediately upon completion of construction, unless otherwise directed by the Department.

SPECIAL CONDITIONS

6NYCRR 608 (Water Quality Certification)

12. Placement of cofferdams, construction of temporary access roads or ramps, or other temporary structures which encroach upon the bed or banks of the West Branch St. Regis River or Project Reservoirs: The design of all such structures must be approved by the Department prior to installation.

13. River Flow: During any period of maintenance and/or construction activity, the certificate holder shall continuously maintain adequate flows immediately downstream of work sites consistent with the provisions of this certificate.

14. Construction Drawdowns: Whenever construction and/or maintenance activities require that the water level of project reservoirs be lowered, it shall not be drawn down more than 1 foot per hour. During refill, the water level of the impoundment shall not be allowed to rise more than 1 foot per hour.

15. Turbidity Monitoring: During maintenance or construction-related activities in or near the West Branch St. Regis River or project reservoirs, the certificate holder will monitor the turbidity or project waters at a point immediately upstream of the work area and at a point no more than 100 feet downstream from the work area. The certificate holder specifically agrees that if, at any time, turbidity measurements from the downstream locations exceed the measurements from the upstream locations, all related construction on the project will cease until the source of the turbidity is discovered and the situation is corrected.

16. Notifications: The Regional Permit Administrator must be notified in writing at least two weeks prior to commencing any project maintenance or construction work performed under the authority of this certificate.

D. PUBLIC ACCESS AND RECREATION

17. Public access and recreational opportunities shall be provided in conformance with the Settlement.

cc: Settlement Participants
D. Boergers, FERC
T. DeWitt, FERC
Service List, FERC Project #10461 & 10462

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6-4066-00019/00002		
FACILITY ID NUMBER	PROGRAM NUMBER	Page 7 of 7

DCS1:PERMITSC 4/97

From: Balk, Christopher J (DEC) <christopher.balk@dec.ny.gov>
Sent: Thursday, April 9, 2020 1:24 PM
To: McDonald, Richard P (DEC) <richard.mcdonald@dec.ny.gov>; Garrett, Robert <Robert.Garrett@brookfieldrenewable.com>
Subject: RE: WQC Request - West Branch St. Regis River Hydroelectric Project [FERC # 10461]

Hi Bob,
Your request has been confirmed.

Christopher J. Balk
Region 6 Habitat Manager
New York State Department of Environmental Conservation
Watertown Headquarters
317 Washington Street
5th Floor
Watertown, NY 13601
P: 315-785-2252 | Christopher.Balk@dec.ny.gov
www.dec.ny.gov | |

From: McDonald, Richard P (DEC) <richard.mcdonald@dec.ny.gov>
Sent: Tuesday, April 07, 2020 7:43 AM
To: Garrett, Robert <Robert.Garrett@brookfieldrenewable.com>; Balk, Christopher J (DEC) <christopher.balk@dec.ny.gov>
Subject: RE: WQC Request - West Branch St. Regis River Hydroelectric Project [FERC # 10461]

Bob,

I will have to defer that to Chris as I currently do not have access to any of the files in the State Office Building
due to the current COVID-19 situation under the Governor's PAUSE order.

Sincerely,
Dick McDonald

Richard P. (Dick) McDonald
Biologist 1, Aquatic

New York State Department of Environmental Conservation
317 Washington Street, Watertown, NY 13601
P: (315) 785-2264 | F: (315) 785-2242 | richard.mcdonald@dec.ny.gov

www.dec.ny.gov | | |

From: Garrett, Robert <Robert.Garrett@brookfieldrenewable.com>
Sent: Friday, April 03, 2020 11:17 AM
To: Balk, Christopher J (DEC) <christopher.balk@dec.ny.gov>
Cc: McDonald, Richard P (DEC) <richard.mcdonald@dec.ny.gov>
Subject: WQC Request

Good Morning Chris,

Similar to our request from last year, Brookfield is currently pursuing Low Impact Hydro Institute (LIHI) recertification for the West Branch St. Regis Project (P-10461). As part of this recertification process, our initial application requires that Brookfield reach out to the NYSDEC to confirm that the existing 401 Water Quality Certificates (WQC) is still valid and in effect. This would be as simple as verifying, via e-mail response, that this is the case.

Please let me know if you have any questions or if I can provide any additional information.

Thank you,

Bob Garrett
Compliance Specialist
North America

Brookfield Renewable
399 Big Bay Rd, Queensbury, NY 12804
T 518.743.2095 **C** 518.232.8987
Robert.Garrett@brookfieldrenewable.com
www.brookfieldrenewable.com

Brookfield

APPENDIX D
St. Regis River Enhancement Fund Contributions

Brookfield Renewable Power
DETAIL INQUIRY REPORT
For previous 5 years

Balance:

Account: River Enhancement Funds [redacted]

Sorted By:
Trx Date Currency ID

Trx Date	Currency ID	Checks	Deposits	Baquette Fund	St Regis Fund	Pierrefield	Oswegatchie	Balance
[redacted]								
10/7/2016	To record Annual Deposit for St. Regis Fund 2016		(750.00)		(750.00)			
[redacted]								
10/16/2017	To record Annual Deposit for St. Regis Fund 2016		(750.00)		(750.00)			
[redacted]								
10/4/2018	To record Annual Deposit for St. Regis Fund 2018		(750.00)		(750.00)			
[redacted]								
9/13/2019	To record Annual Deposit for St. Regis Fund 2019		(750.00)		(750.00)			
[redacted]								

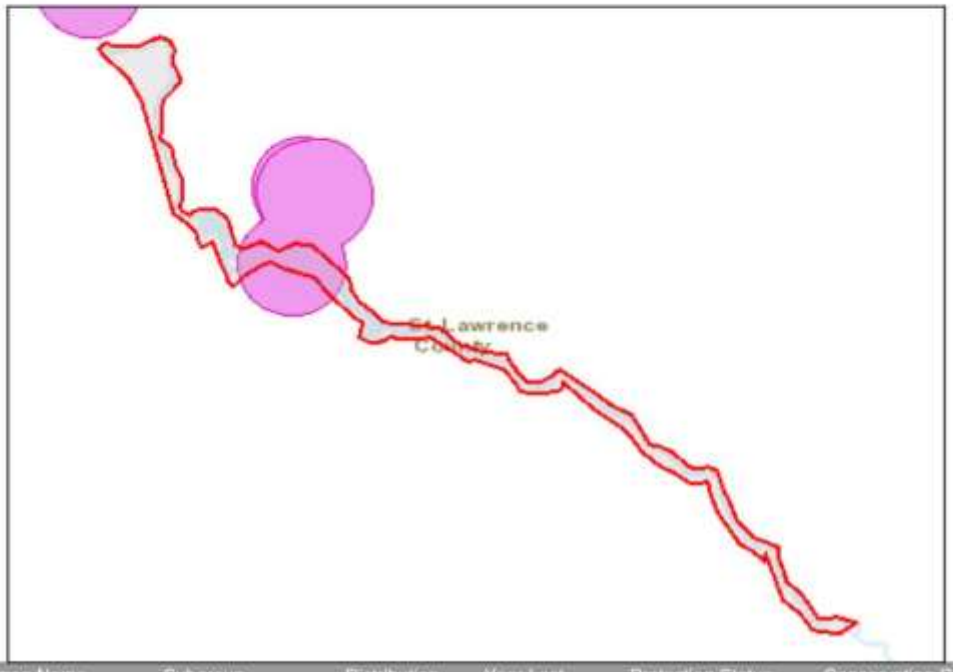
U:\Collaboration\ATLANTIC\HSSE MANAGED SYSTEM\15 HABITAT PROTECTION\07 - Advisory Councils & Enhancement Funds\RRAC_SRAC_ORAC_Pierrefield\River Funds Raquette St Reg Pierrefield Oswegatchie

APPENDIX E
THREATENED AND ENDANGERED SPECIES DOCUMENTATION

http://www.dec.ny.gov/natureexplorer/

New York Nature Explorer
User Defined Results Report

Criteria: Selected Map Area



Common Name	Subgroup	Distribution Status	Year Last Documente	Protection Status		Conservation Rank	
				State	Federal	State	Global
Plant: Flowering Plants							
Fernald's Sedge *Carex merritt-fernaldii*	Sedges	Recently Confirmed	2004	Threatened		S2S3	G5
Schweinitz's Flat Sedge *Cyperus schweinitzii*	Sedges	Recently Confirmed	2005	Rare		S3	G5

New York Nature Explorer

Common Name	Subgroup	Distribution Status	Year Last Documente	Protection Status		Conservation Rank	
				State	Federal	State	Global

Note: Restricted plants and animals may also have also been documented in one or more of the Towns or Cities in which your user-defined area is located, but are not listed in these results. This application does not provide information at the level of Town or City on state-listed animals and on other sensitive animals and plants. A list of the restricted animals and plants documented at the corresponding county level can be obtained via the County link(s) on the original User Defined Search Results page. Any individual plant or animal on this county's restricted list may or may not occur in this particular user-defined area.

This list only includes records of rare species and significant natural communities from the databases of the NY Natural Heritage Program. This list is not a definitive statement about the presence or absence of all plants and animals, including rare or state-listed species, or of all significant natural communities. For most areas, comprehensive field surveys have not been conducted, and this list should not be considered a substitute for on-site surveys.

Brookfield

Brookfield Renewable
399 Big Bay Road
Queensbury, NY 12804

Tel 518.743.2091
Fax 518.745.4292
www.brookfieldrenewable.com

August 23, 2019

P-10461-NY, W. Br. St Regis River Project
LIHI Conditions 2019 Annual Status Report
Erie Boulevard Hydropower, LP

Shannon Ames – Executive Director
Low Impact Hydropower Institute
329 Massachusetts Ave, Suite 2
Lexington, MA 02420

Subject: West Branch St. Regis River Project (27) Annual Compliance Statement

Dear Ms. Ames,

The West Branch St. Regis River hydroelectric project was recertified in 2015 with the following condition:

"Should the maintenance activities along the powerhouse roadway and pipeline right-of- way be significantly altered, such as widespread herbicide application, widening of the roadway, or placement of fill adjacent to the roadway where the plant has been observed, the facility owner shall consult with the NYSDEC regarding potential impacts to the Fernald's Sedge. If such change occurs during this LIHI certification term, the facility owner shall provide LIHI the results of these consultations along with evidence of implementation of any requirements mandated by the NYSDEC to protect this species if it is onsite. The owner shall report on any such changes within the Annual Compliance Statement for the subject annual statement period."

Per the NYSDEC report generated from the New York Natural Heritage Program database and submitted to the LIHI for the purpose of recertifying the West Branch St. Regis River Hydroelectric project "*Fernald's Sedge was observed along the Parishville Aqueduct [pipeline] at the end of "Powerhouse Road", the dirt road branching off from Old Dugway Road. The plants were growing in an open vegetated area on sand by the aqueduct [pipeline] and powerhouse...*" To date, there have been no changes to the maintenance activities or vegetation management in the area of interest.

As always, please feel free to contact me at Robert.Garrett@brookfieldrenewable.com or (518) 743-2095 with any questions or concerns.

Respectfully submitted,

Bob Garrett
Compliance Specialist
New York Operations

Enclosure: 2019 Annual Compliance Statement

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information.
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

THERE ARE NO ENDANGERED SPECIES EXPECTED TO OCCUR AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have

sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Dec 1 to Aug 31
Black-billed Cuckoo *Coccyzus erythropthalmus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9399	Breeds May 15 to Oct 10
Bobolink *Dolichonyx oryzivorus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 20 to Jul 31
Canada Warbler *Cardellina canadensis* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 20 to Aug 10
Cape May Warbler *Setophaga tigrina* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jun 1 to Jul 31
Eastern Whip-poor-will *Antrostomus vociferus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Aug 20
Evening Grosbeak *Coccothraustes vespertinus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 15 to Aug 10
Wood Thrush *Hylocichla mustelina* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Aug 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (ⓘ)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

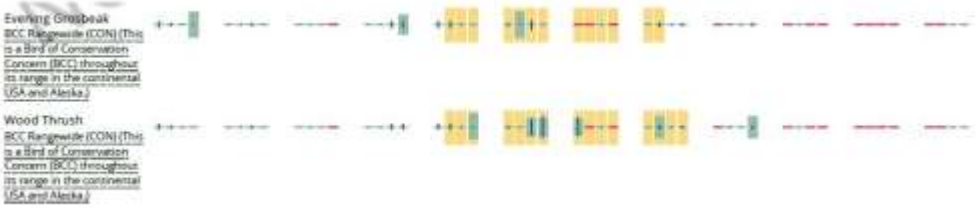
Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures and/or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER FORESTED/SHRUB WETLAND
- PSS1/EM5E
- PFO1C
- PSS1E
- PSS1F

FRESHWATER POND
- PUBHh
- PUBH

LAKE
- L1UBHh

RIVERINE
- R3UBH
- R4SBC
- R5UBH

A full description for each wetland code can be found at the National Wetlands Inventory website

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.