



### Stage II Review for Certification Of the West Branch St. Regis Hydroelectric Project, LIHI #27 by the Low Impact Hydropower Institute

Prepared by Gary M. Franc December 22, 2020

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### I. INTRODUCTION

The West Branch St. Regis Hydroelectric Project (Project), (LIHI #27), consists of two developments licensed with the Federal Energy Regulatory Commission (FERC) as FERC Project No. 10461 and owned by Erie Boulevard Hydropower, LP (EBH), a subsidiary of Brookfield Renewable Energy Group (BREG).

The West Branch of the St. Regis River is approximately 70 miles long and has a drainage area of approximately 271 square miles (SQMI). The Parishville development is located at river mile (RM) 21.0 on the West Branch of the St. Regis River in St. Lawrence County near Parishville, NY. The Allens Falls development is located another 2 miles downstream at RM 19.0.

On July 26, 1999, FERC approved the transfer of Niagara Mohawk Power Corporation's (NMPC) entire hydro portfolio to EBH. EBH was solely created as a subsidiary of the newly formed Orion Power Corporation to deal with the operation of hydropower assets.<sup>1</sup> Orion Power was eventually acquired through a succession of sales and purchases by Brookfield Renewable Energy Group (BREG), the current owner of EBH. EBH's LIHI coordinator is Daniel J. Maguire.<sup>2</sup>

On September 13, 2001, EBH submitted to FERC an Offer of Settlement (OOS) with the New York State Department of Environmental Conservation (NYSDEC), US Fish and Wildlife Service (USFWS) and other stakeholders for the Project<sup>3</sup>. On November 2, 2001, the NYSDEC issued a Water Quality Certificate (WQC) for the Project<sup>4</sup>. On August 12, 2002, FERC issued the Final Environmental Assessment (FEA) for the Project.<sup>5</sup> Finally, on September 27, 2002, FERC issued a 40-year license to EBH for the Project<sup>6</sup>, starting on September 1, 2002 and terminating on August 31, 2042. FERC also combined the two developments under a single FERC license (FERC Project No. 10461).

The Project has an authorized installed capacity of 6.8 megawatts (MW) that has historically produced an average annual generation (AAG) of 41,680 megawatt-hours (MWh), which corresponds to an annual plant factor of 70.0%.

On March 5, 2020, LIHI sent a reminder letter to EBH stating that the Project's current LIHI certification was set to terminate on September 14, 2020. EBH submitted a LIHI application for Project recertification on August 27, 2020. On September 14, 2020, to allow sufficient time for the recertification process to be completed, LIHI extended the certification term of the Project to January 31, 2021.

The Stage I recertification review was completed September 28, 2020. Given the review was processed under the new, Second Edition LIHI Certification Handbook, the need for a Stage II review was necessary. The Stage I review deemed it unnecessary to submit a new revised application, but found supplemental information was needed. EBH submitted additional documentation on October 9, 2020.

<sup>&</sup>lt;sup>1</sup> Ownership Transfer- <u>https://elibrary.ferc.gov/eLibrary/filedownload?fileid=126466</u>

<sup>&</sup>lt;sup>2</sup> Daniel J. Maguire- 315-267-1036, 184 Elm Street, Potsdam, NY 13676, <u>Danny.Maguire@brookfieldrenewable.com</u>

<sup>&</sup>lt;sup>3</sup> OOS- <u>https://elibrary.ferc.gov/eLibrary/filedownload?fileid=8319268</u>

<sup>&</sup>lt;sup>4</sup> WQC- <u>https://elibrary.ferc.gov/eLibrary/filedownload?fileid=9042407</u>

<sup>&</sup>lt;sup>5</sup> FEA-<u>https://elibrary.ferc.gov/eLibrary/filedownload?fileid=9545518</u>

<sup>&</sup>lt;sup>6</sup> License- https://elibrary.ferc.gov/eLibrary/filedownload?fileid=9568319



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The application states EBH is applying for LIHI recertification to continue to participate in the Renewable Portfolio Standard (RPS) and Renewable Energy Credit (REC) markets.

### II. PROJECT GEOGRAPHIC LOCATION

The West Branch of the St. Regis River is approximately 70 miles long and has a drainage area of approximately 271 SQMI. The river originates in head ponds of 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 downstream. The Project's two developments, the upstream Parishville and the downstream Allens Falls developments are located within the orange-shaded portion of Figure 1. There are no dams upstream of the Parishville development.



Figure 1- Location Map

Historically, fish from the St. Lawrence River swam approximately 21 miles upstream of the confluence of the West Branch St. Regis River with the St. Regis River to the first natural upstream barrier at Brasher Falls. The construction of the Hogansburg Hydroelectric Project (FERC Project No. 7518), and its associated dam in the 1930's blocked upstream passage approximately 3 miles upstream of the



confluence. In 2016, the Hogansburg license was surrendered by EBH and co-licensee St. Regis Mohawk Tribe. The Tribe took responsibility for the complete removal of the project works, dam, spillway and stop log gate section, returning the mainstem St. Regis River to a free flowing river upstream to Brasher Falls when decommissioning and removal was completed in March 2017.

There is only one operating US Geological Survey (USGS) gage located in the vicinity of the Project's developments, the USGS gage 04268800 on the West Branch of the St. Regis River near Parishville, NY, that is appropriate for estimating development inflows. This gage is located upstream of the two developments. While the Parishville and Allens Falls developments have drainage areas of 181 and 199 SQMI, respectively, the gage has a contributing drainage area of 171 SQMI and contains sporadically recorded daily flows from October 1, 1958 through present day. Continuous daily flows are available from June 1, 1991 to present day, which can be used to define an adequate period of record (POR).

Inflows at Parishville can be estimated using a drainage area ratio (DAR) of (181/171) or 1.0585. Based on this approach using POR daily flows, the minimum daily flow of 47 CFS occurred on September 3, 2012. The maximum daily flow of 5,695 CFS occurred on April 15, 2014 and the average daily flow is 392 CFS (2.17 CFS per SQMI).

Flow duration analyses indicate a daily flow of 108 CFS is exceeded about 90% of the time annually, a daily flow of 261 CFS is exceeded about 50% of the time annually, a daily flow of 835 CFS is exceeded about 10% of the time annually and a daily flow of 2,031 CFS is exceeded about 1% of the time annually.

Flow frequency analyses indicate the 10-year daily flow is about 5,084 CFS, the 50-year daily flow is about 7,050 CFS, and the 100-year daily flow is 7,837 CFS, while the 7Q10<sup>7</sup> flow is 56 CFS.

Similarly, inflows at Allens Falls can be estimated using a DAR of (199/171) or 1.1637. Based on this approach using POR daily flows, the minimum daily flow of 51 CFS occurred on September 3, 2012. The maximum daily flow of 6,261 CFS occurred on April 15, 2014 and the average daily flow is 431 CFS (2.17 CFS per SQMI).

Flow duration analyses indicate a daily flow of 119 CFS is exceeded about 90% of the time annually, a daily flow of 287 CFS is exceeded about 50% of the time annually, a daily flow of 918 CFS is exceeded about 10% of the time annually and a daily flow of 2,233 CFS is exceeded about 1% of the time annually.

Flow frequency analyses indicate the 10-year daily flow is about 5,589 CFS, the 50-year daily flow is about 7,752 CFS, and the 100-year daily flow is 8,517 CFS, while the 7Q10 flow is 61 CFS.

<sup>&</sup>lt;sup>7</sup> 7Q10 flow is the daily seven day rolling average flow that is exceeded 90% of the time annually. There is only a 10% chance that a seven day rolling average flow less than this value will occur in a given year.



### **III. PROJECT SITE CHARACTERISTICS**

The Project is comprised of the Parishville and Allens Falls developments that were constructed in the 1920s. The Project is operated in a storage and release pulsing mode where the upstream Parishville Development discharges into the Allens Falls impoundment. The Project has an authorized installed capacity of 6.8 MW that has historically produced an AAG of 41,680 MWh, which corresponds to an annual plant factor of 70.0%.

The FERC License incorporated the terms and conditions of the OOS reached between EBH and stakeholders, including minimum flow releases into the bypassed reaches and maximum impoundment fluctuations. Minimum flow releases and maximum impoundment fluctuations are monitored by EBH as defined in the latest amended Stream Flow and Water Level Monitoring Plan (SFWLMP) approved by FERC on March 5, 2013<sup>8</sup>.

### A. Parishville Dam

The Parishville Dam (latitude 44.6365 N, longitude 74.843 W) consists of:

- A dam composed of an earthen dike non-overflow section 80 feet long;
- A reservoir with a surface area of 70 acres at a crest elevation of 884.5 feet mean sea level (FTMSL);
- A 13.5-foot-wide spillway with a crest elevation at 884.5 FTMSL (See Figure 3);
- Two 14-foot-wide tainter gates with a top of gate elevation of 886.5 FTMSL and a crest elevation of 870.5 FTMSL (See Figure 3);
- An 11-foot-wide sluice gate with a top of gate elevation of 885.5 FTMSL and a crest elevation of 873.0 FTMSL (See Figure 3);
- A 4,175-foot-long bypass reach;
- An intake structure with 1 and 5/16-inch clear spaced trashracks;
- A penstock, 2,561 feet long varying from six to ten feet in diameter (See Figure 4);
- A powerhouse (See Figure 5) with a horizontal Francis turbine and a 2,400 kilowatt (kW) generator (See Figure 6) that passes an efficient turbine flow of 220 CFS and a maximum turbine flow of 230 CFS;
- A 400-foot-long tailrace;
- A 4.8-kV transmission line, and;
- Appurtenant facilities.

Impoundment drawdowns and refills rates are limited to no more than one foot per hour. An instantaneous year-round minimum flow of 20 CFS  $\pm -0.2$  CFS is released from a gate in the Parishville dam into the bypassed reach.

<sup>&</sup>lt;sup>8</sup> SFWLMP - <u>https://elibrary.ferc.gov/eLibrary/filedownload?fileid=13197393</u>



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Figure 5 - Parishville Penstock



Figure 4 - Parishville Powerhouse



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Figure 6 - Parishville Turbine/Generator



### **B.** Allens Falls Dam

The Allens Falls Dam (latitude 44.6278 N, longitude -74.8156 W) consists of:

- A concrete gravity type dam non-overflow section 130 feet long;
- A 425-foot-long spillway with a crest elevation of 741.0 FTMSL accommodating 1.0 foot high flashboards;
- A reservoir with a surface area of 108 acres at a crest elevation of 741.0 FTMSL and a surface area of 132 acres at an elevation of 742.0 FTMSL;
- Two 60-foot-wide by 9-foot-high crest gates with a top elevation corresponding to the top of flashboard elevation of 742.0 FTMSL (See Figure 7);
- A 10-foot-wide by 10-foot-high low level outlet gate with a top elevation corresponding to the spillway crest elevation of 741.0 FTMSL(See Figure 7);
- A 13,700-foot-long bypass reach;
- An intake structure with 1<sup>3</sup>/<sub>4</sub>-inch clear spaced trashracks;
- A seven foot diameter, 9,344-foot-long pipeline (See Figure 8) directing water to a surge tank (See Figure 9) which passes flow into a seven-foot-diameter, 886-foot-long penstock,
- A powerhouse (See Figure 10) with a 4.4-MW turbine/generator that passes an efficient turbine flow of 240 CFS and a maximum turbine flow of 330 CFS (See Figure 11);
- A 450-foot-long tailrace;
- A 2.4-mile-long 115-kV transmission line, and;
- Appurtenant facilities.



Figure 7 - Allens Falls Headworks

Impoundment drawdowns and refills rates are limited to no more than one foot per hour. Seasonal instantaneous minimum flows are released from the Allens Falls dam into the bypassed reach as follows:

- 30 CFS +/- 0.2 CFS from October 1 through March 31;
- 50 CFS +/- 0.3 CFS from April 1 through August 31, and;
- 40 CFS +/- 0.3 CFS from September 1 through September 30.



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Figure 8 - Allens Falls Pipeline



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Figure 9 - Allens Falls Surge Tank



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Figure 10 - Allens Falls Powerhouse



Figure 11- Allens Falls Turbine/Generator



### IV. ZONES OF EFFECT (ZOEs)

The Project has a total of six ZOEs defined from upstream to downstream on the West Branch of the St. Regis River. An overview of all ZOEs is shown in Figure 12. ZOEs at the Parishville and Allens Falls developments are shown in Figure 13 and Figure 14, respectively. ZOEs 1 through 6 are:

- ZOE 1 is the Parishville Impoundment, RM 28.0 to 21.0;
- ZOE 2 is the Parishville Bypass Reach, RM 21.0 to 20.0;
- ZOE 3 is the Downstream Reach below the Parishville tailrace, RM 20.0 to RM 19.9;
- ZOE 4 is the Allens Falls Impoundment, RM 19.9 to 19.0;
- ZOE 5 is the Allens Falls Bypass Reach, RM 19 to 16.25;
- ZOE 6 is Allens Falls Downstream Reach, RM 16.25 to 15.95.



Figure 12 - Overview Map of ZOEs 1 through 6



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Figure 14 - Parishville ZOEs



Figure 13 - Allens Falls ZOEs

The alternative standards selected to satisfy the LIHI certification criteria in each of these ZOEs are identified in Table 1. As part of my review process, I checked and agreed with their selection except where shown in **RED** in Table 1.



Table	1:	Zones	of	Effect
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<b>CRITERION and STANDARD SELECTED</b>									
Zone	A	В	С	D	E	F	G	H	
Number and Zone Name	Ecological Flows	Water Quality	Upstream Fish Passage	Downstream Fish Passage	Shoreline and Watershed Protection	Threatened and Endangered Species	Cultural and Historic Resources	Recreational Resources	
1. Parishville Impoundment	+ 2	2	1	2	2, PLUS	2	2	2	
2. Parishville Bypassed Reach	2	2	1	2	2, PLUS	2	2	2	
3. Parishville Downstream	2	2	1	+ <b>2</b>	2, PLUS	2	2	2	
4. Allens Falls Impoundment	<mark>+ 2</mark>	2	1	2	2, PLUS	2	2	2	
5. Allens Falls Bypassed Reach	2	2	<del>2</del> 1	2	2, PLUS	2	2	2	
6. Allens Falls Downstream	2	2	<del>2</del> 1	2	2, PLUS	2	2	2	

### V. REGULATORY AND COMPLIANCE STATUS

On July 26, 1999, FERC approved the transfer of NMPC's entire hydro portfolio to EBH. EBH was solely created as a subsidiary of the newly formed Orion Power Corporation to deal with the operation of hydropower assets.<sup>9</sup> Orion Power was eventually acquired through a secession of sales and purchases by Brookfield Renewable Energy Group (BREG), the current owner of EBH.

On September 13, 2001, EBH submitted to FERC the OOS for the Project<sup>10</sup>. On November 2, 2001, the NYSDEC issued a WQC for the Project<sup>11</sup>. On August 12, 2002, FERC issued the FEA for the Project.<sup>12</sup> Finally, on September 27, 2002, FERC issued a 40-year license to EBH for the Parishville (FERC No. 10461) and Allens Falls (FERC No. 10462) Projects<sup>13</sup>, starting on September 1, 2002 and terminating on August 31, 2042. This order also combined the developments under a single FERC license No. 10461.

### A. Licensing Requirements

The FERC license includes a number of requirements intended to restore, protect, and enhance natural resources and improve public access and recreation. The FERC license contains ten articles:

<sup>&</sup>lt;sup>9</sup> Ownership Transfer- <u>https://elibrary.ferc.gov/eLibrary/filedownload?fileid=126466</u>

<sup>&</sup>lt;sup>10</sup> OOS- https://elibrary.ferc.gov/eLibrary/filedownload?fileid=8319268

<sup>&</sup>lt;sup>11</sup> WQC- <u>https://elibrary.ferc.gov/eLibrary/filedownload?fileid=9042407</u>

<sup>&</sup>lt;sup>12</sup> FEA-<u>https://elibrary.ferc.gov/eLibrary/filedownload?fileid=9545518</u>

<sup>&</sup>lt;sup>13</sup> License- <u>https://elibrary.ferc.gov/eLibrary/filedownload?fileid=9568319</u>



- <u>Article 401</u> The Parishville impoundment operates within a 0.5 foot operational range of 884.0 to 884.5 FTMSL, the crest elevation of the spillway, for the protection of water quality, aquatic and riparian habitats, and recreational resources on the West Branch of the St. Regis River. Impoundment levels above 884.5 FTMSL represent spillage events exempt from the operational range restriction. The 0.5 foot operational range may be temporarily altered if required by uncontrollable operating emergencies, and for short periods upon mutual agreement between EBH and the NYSDEC. EBH will notify the FERC as soon as possible, but no later than 10 days after each such incident.
- <u>Article 402</u> The Allens Falls impoundment operates within a 0.5 foot operational range between 741.5 and 742.0 FTMSL, the crest elevation of the dam, from May 16 through October 31. Impoundment levels above 742.0 FTMSL represent spillage events exempt from the operational range restrictions. From November 1 through May 15, EBH may employ a winter drawdown of one foot, for the protection of private docks from ice damage. During the winter drawdown, EBH operates the impoundment within a 0.5 foot operational range between 740.5 and 741.0 FTMSL. Should outflow from the Parishville development be disrupted such that inflow is below the Allens Falls required minimum flow, defined in article 404, then the fluctuation limit increases to 0.8 feet (i.e. 741.2 to 742.0 FTMSL or 740.2 to 741.0 FTMSL during the winter drawdown). This operation may be temporarily altered if required by uncontrollable operating emergencies, and for short periods upon mutual agreement between EBH and the NYSDEC. EBH will notify the FERC as soon as possible, but no later than 10 days after each such incident.
- <u>Article 403</u> Construction and/or maintenance activities requiring the water level of the Project impoundments to be lowered require that drawn down pond elevation changes will not exceed one foot per hour. Similarly, during refill, the impoundment level changes will not exceed one foot per hour. These requirements may be temporarily altered if required by uncontrollable operating emergencies, and for short periods upon mutual agreement between EBH and the NYSDEC. EBH will notify the FERC as soon as possible, but no later than 10 days after each such incident.
- <u>Article 404</u> Requires an instantaneous year-round minimum flow release of 20 +/- 0.2 CFS, from a gate in the Parishville dam, into the bypassed reach. A seasonal instantaneous minimum flow is released from a gate in the Allen's Falls dam into the bypassed reach, according to the following schedule:
  - October 1 through March 31: 30 +/- 0.2 CFS;
  - April 1 through August 31: 50 +/- 0.3 CFS;
  - $\circ$  September 1 through September 30: 40 +/- 0.3 CFS.

These flow requirements may be temporarily altered if required by uncontrollable operating emergencies, and for short periods upon mutual agreement between EBH and the NYSDEC. EBH will notify the FERC as soon as possible, but no later than 10 days after each such incident.

• <u>Article 405</u> - Minimum flow releases and maximum impoundment fluctuations are monitored by EBH as defined in the SFWLMP. The Plan provides a means of independent verification of water levels by the NYSDEC and the USFWS and ensures that the staff gauges are visible to the general public. The Plan includes provisions for collecting accurate and sufficient records of the



impoundment elevations, all Project flows, and any uncontrollable station outages that cause a reduction in the required minimum flow at or below the either dam. The Plan monitors:

- The required gate settings to release the minimum flows from the Parishville and Allens Falls developments; and
- The headpond and tailwater elevations as needed.
- <u>Article 406</u> Once EBH determines that existing trashracks need to be replaced, new trashracks with be of 1-inch clear spaced design. The new trashrack design will be based on consultation with the NYSDEC and USFWS. EBH will file for FERC approval prior to installation.
- <u>Article 407</u> The US Department of Interior (USDOI) has reserved authority to require EBH to construct, maintain, and operate, or to provide for the construction, maintenance, and operation of fishways.
- <u>Article 408</u> A recreational plan (RP) is required to protect and enhance recreational use at the Project. On April 8, 2004, FERC approved the RP<sup>14</sup>;
- <u>Article 409</u> A Historic Properties Management Plan (HPMP) is required. On April 16, 2004, FERC approved the HPMP<sup>15</sup>;
- <u>Article 410</u> Establishes land conveyance rules and rights of the Project owner. The owner may exercise authority only if the proposed use and occupancy is consistent with the purposes of protecting and enhancing the scenic, recreational, and other environmental values of the Project.

### **B.** Compliance Issues

EBH's Compliance Manager is responsible for overall compliance with the FERC license. Additionally, all personnel are responsible for understanding EBH's commitments, and for conducting all activities in compliance with the FERC license.

EBH uses the following tools to ensure compliance:

- Compliance database maintained and updated regularly which includes electronic copies of all relevant agency correspondence, compliance filings, and FERC notices/approvals;
- Compliance tracking table generated from the database and used to track compliance on an ongoing basis. This table identifies required action(s), person(s) accountable, and due dates;
- Monthly compliance calls the Compliance Manager and support staff meet on the first Thursday of each month via conference call to review the near and long term actions required to ensure ongoing compliance;
- Compliance manual developed to help staff understand and comply with the Project license, agreements and plans. The manual is available electronically and in hard copy and is updated every five years; and
- Annual compliance training the Compliance Manager organizes an annual training, which typically includes a presentation, a question/answer period, and follow-up.

<sup>&</sup>lt;sup>14</sup> RP - <u>https://elibrary.ferc.gov/eLibrary/filedownload?fileid=10110292</u>

<sup>&</sup>lt;sup>15</sup> HPMP - https://elibrary.ferc.gov/eLibrary/filedownload?fileid=10116372



The current LIHI Certification for the Project, issued in September of 2015, had one conditional requirement stated as follows:

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 in its most recent annual compliance letter to LIHI dated August 17, 2020, there have been no changes to the maintenance activities or vegetation management in the area of interest.

Throughout the current certification period, the following minimum flow or pond elevation deviations have occurred:

- On October 14, 2015, FERC issued letter to EBH stating that the September 9, 2015, temporary minimum flow deviation at the Allens Falls development in order to perform an inspection of the spillway toe would not be considered a violation of license Article 404<sup>16</sup>.
- On January 22, 2018, EBH submitted notice of a potential Allens Falls impoundment excursion on January 12, 2018<sup>17</sup>. On March 19, 2018, FERC issued a letter requesting additional information.<sup>18</sup> On March 27, 2018 EBH submitted information that the excursion did not meet the FERC requirement for reporting although NYSDEC was notified.<sup>19</sup> On April 23, 2018, FERC issued a letter to EBH agreeing that the event was not reportable<sup>20</sup>.
- On January 24, 2020, EBH submitted notice of a Parishville impoundment excursion occurring on January 17, 2020<sup>21</sup>. An investigation of the impoundment excursion revealed the cause was a decrease in inflow as a result of cold weather in the region. Since the Tainter gate was in local control due to icing concerns, a Travelling Operator was dispatched to make the gate adjustments. To mitigate a future reoccurrence, EBH 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. On March 5, 2020, FERC issued a letter to EBH stating that the January 17, 2020, Parishville impoundment elevation deviation would not be considered a violation of license Article 401<sup>22</sup>.

<sup>&</sup>lt;sup>16</sup> <u>https://elibrary.ferc.gov/eLibrary/filedownload?fileid=14012790</u>

<sup>&</sup>lt;sup>17</sup> https://elibrary.ferc.gov/eLibrary/filedownload?fileid=14802606

<sup>&</sup>lt;sup>18</sup> https://elibrary.ferc.gov/eLibrary/filedownload?fileid=14843963

<sup>&</sup>lt;sup>19</sup> https://elibrary.ferc.gov/eLibrary/filelist?document\_id=14653316&optimized=false

<sup>&</sup>lt;sup>20</sup> https://elibrary.ferc.gov/eLibrary/filedownload?fileid=14895352

https://elibrary.ferc.gov/eLibrary/filedownload?fileid=15449333
https://elibrary.ferc.gov/eLibrary/filedownload?fileid=15478152



### VI. LIHI PUBLIC COMMENTS

#### A. Comment Letters

On October 30, 2020, LIHI filed notice on their email list that the public comment period for the application has been opened. The notice states, "LIHI is seeking comment on this application. Comments that are directly tied to specific LIHI criteria (flows, water quality, fish passage, etc.) will be most helpful, but all comments will be considered. Comments may be submitted to the Institute by e-mail at comments@lowimpacthydro.org with "West Branch St. Regis Project Comments" in the subject line, or by mail addressed to the Low Impact Hydropower Institute, 329 Massachusetts Avenue, Suite 6, Lexington, MA 02420. Comments must be received at the Institute on or before 5 pm Eastern time on December 29, 2020 to be considered. All comments will be posted to the web site and the applicant will have an opportunity to respond. Any response will also be posted. The project description and complete application can be found HERE<sup>23</sup>."

No agencies or stakeholders responded. Given that the application provided all supporting documentation and no other apparent issues were uncovered in my review I did not have to reach out to any environmental agencies. No other public comments were received.

#### **B.** Agency Correspondence

On April 9, 2020, the NYSDEC responded to an April 3, 2020 request of EBH concerning the November 2, 2001 WQC for the Project. The NYSDEC indicted the current WQC is still valid (see application Appendix C).

### VII. DETAILED CRITERIA REVIEW

This section contains my recertification review of the Project with regard to the LIHI Certification criteria. As part of my review, I conducted a FERC e-library search to verify claims in the recertification application. My review concentrated on the period covering the current certification term through November of 2020, for FERC docket number P-10461.

### A. Ecological Flows

The goal of this criterion is to support habitat and other conditions that are suitable for healthy fish and wildlife resources in riverine reaches that are affected by the facility's operation.

On April 1, 2003, EBH submitted its SFWLMP in accordance to Article 405<sup>24</sup>. On December 4, 2003, FERC approved a modified SFWLMP<sup>25</sup>. On October 5, 2005, at a request by FERC, EBH submitted

<sup>&</sup>lt;sup>23</sup> <u>https://lowimpacthydro.org/lihi-certificate-27-west-branch-st-regis-hydroelectric-project-new-york/</u>

<sup>&</sup>lt;sup>24</sup> https://elibrary.ferc.gov/eLibrary/filedownload?fileid=9669891

<sup>&</sup>lt;sup>25</sup> <u>https://elibrary.ferc.gov/eLibrary/filedownload?fileid=10003576</u>



supplemental information on the SFWLMP<sup>26</sup>. On July 7, 2012, EBH submitted a revised SFWLMP<sup>27</sup> requesting changes to the minimum flow release facilities and flow verification markers at the Parishville development. On March 5, 2013, FERC issued an amended SFWLMP<sup>28</sup>.

Minimum flow releases and maximum impoundment fluctuations are monitored by EBH as defined in the latest SFWLMP. The SFWLMP provides means of independent verification of water levels by the NYSDEC and the USFWS and ensures that the staff gauges are visible to the general public. The SFWLMP includes provisions for collecting accurate and sufficient records of the impoundment elevations and all project flows and any uncontrollable station outages that cause a reduction in the required minimum flow at or below the dams. The SFWLMP monitors the required gate settings to release the minimum flows and the headpond and tailwater elevations as needed.

The minimum flows are designed to restore periodically dewatered bypass reaches downstream of each dam to functional year-round river reaches and to provide continuity between the two developments. In combination with spillage, the minimum flows provide 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 serves to increase the forage base.

### A.1 Parishville

The Project satisfies the LIHI flows criterion in ZOEs 1 - 3 by meeting alternative standard A-2. The Applicant selected standard A-1 in ZOE 1 but this review finds that standard A-2 is more appropriate as discussed below.

In accordance with the OOS and license article 401, the impoundment operates within a 0.5 foot operational range of 884.0 to 884.5 FTMSL, the crest elevation of the spillway. The 0.5 foot operational range for the impoundment and minimum flow releases may be temporarily altered if required by uncontrollable operating emergencies, and for short periods upon mutual agreement between EBH and the NYSDEC. When activities require the impoundment level to be lowered, pond elevation changes will not exceed one foot per hour. Similarly, during refill, the impoundment level changes will not exceed one foot per hour. EBH will notify the FERC as soon as possible, but no later than 10 days after each such incident.

In ZOE 2, the Parishville bypassed reach, under the OOS and license article 404, EBH passes an instantaneous year-round minimum flow release of 20 + 0.2 CFS, via an orifice beneath the existing sluice gate. A calibrated gage is set on the gate's lifting mechanism which denotes the gate opening height.

Bypass minimum flows were derived from demonstration flow studies conducted in 2000 with parties to the Settlement Agreement. The studies were used to assess and prioritize NYSDEC management goal objectives under a series of test releases. The Parishville study evaluated potential habitat gains for the

<sup>&</sup>lt;sup>26</sup> <u>https://elibrary.ferc.gov/eLibrary/filedownload?fileid=10831653</u>

 <sup>&</sup>lt;sup>27</sup> <u>https://elibrary.ferc.gov/eLibrary/filedownload?fileid=13042366</u>
<sup>28</sup> SFWLMP - https://elibrary.ferc.gov/eLibrary/filedownload?fileid=13197393

<sup>-</sup> https://elibrary.ferc.gov/eLibrary/filedownload?fileid=1319/3



fish community, benthic invertebrate and forage fish community production, fish movement, fishing opportunities, riparian vegetation, wetland and wildlife resources, and reduction of fish poaching. The resulting agreed upon minimum flows are designed to restore the reach to a functional year-round reach from previous leakage and spill-only flows. In combination with periodic spill flows, the minimum flows attain a higher level of NYSDEC management goals for all life stages of brook trout, longnose dace, and the benthic-macroinvertebrate community as well as enhancing fish movement, fishing, wildlife and vegetation.

ZOE 3, the Parishville downstream reach, is very short. Water released from the powerhouse mixes with flows from the bypassed reach at the start of this ZOE and enters the Allens Falls impoundment approximately 500 feet further downstream.

#### A.2 Allens Falls

The Project satisfies the LIHI flows criterion in ZOEs 4 - 6 by meeting alternative standard A-2. The Applicant selected standard A-1 in ZOE 4, but this review finds that standard A-2 is more appropriate as discussed below.

In accordance with the OOS and license article 402, the impoundment operates between 741.5 and 742.0 FTMSL, the crest elevation of the dam, from May 16 through October 31. From November 1 through May 15, EBH may employ a winter drawdown of one foot, for the protection of private docks from ice damage. During the winter drawdown, EBH operates the impoundment between 740.5 and 741.0 FTMSL. Should outflow from the Parishville development be disrupted such that inflow is below the Allens Falls required minimum flow, then the fluctuation limit increases to 0.8 feet (i.e. 741.2 to 742.0 FTMSL or 740.2 to 741.0 FTMSL during the winter drawdown).

The impoundment operation may be temporarily altered if required by uncontrollable operating emergencies, and for short periods upon mutual agreement between EBH and the NYSDEC. When activities require the impoundment level to be lowered, pond elevation changes will not exceed one foot per hour. Similarly, during refill, the impoundment level changes will not exceed one foot per hour. EBH will notify the FERC as soon as possible, but no later than 10 days after each such incident.

A seasonal instantaneous minimum flow is released into ZOE 5, the Allens Falls bypassed reach, from a low level outlet gate located adjacent to the intake to the pipeline at the dam, according to the following schedule:

- October 1 through March 31: 30 +/- 0.2 CFS;
- April 1 through August 31: 50 +/- 0.3 CFS;
- September 1 through September 30: 40 +/- 0.3 CFS.

In ZOE 5, minimum flows were part of the OOS and included in license article 404. Flows were derived from demonstration flow studies conducted in 2000 with parties to the Settlement Agreement. The studies were used to assess and prioritize NYSDEC management goal objectives under a series of test releases. The evaluation was similar to the Parishville study of potential habitat gains for the fish community, benthic invertebrate and forage fish community production, fish movement, fishing opportunities, riparian vegetation, wetland and wildlife resources, and reduction of fish poaching. At



Allens Falls, base flow needs below the tailrace were also evaluated along with the potential for introduction of Atlantic salmon to the river below the last waterfall in the bypassed reach, called Allens Falls waterfalls.

The resulting agreed upon minimum flows are designed to provide major enhancement of the aquatic habitat for all life stages of brook trout depending on ambient stream temperatures, and for the benthic macro-invertebrate community. These flows also provide some enhancement for Atlantic salmon spawning, incubation, and juvenile habitat, and habitat enhancement for longnose dace, 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. These flows also enhance fish movement, fishing opportunities, and riparian wildlife and vegetation. The natural falls in the lower bypassed reach have an overall 60-foot elevation drop creating a natural barrier into the reach for migrating fish such as salmon.

The bypass minimum flow releases also provide a baseflow downstream of the Allens Falls powerhouse in ZOE 6 to supplement flows during periods of non-generation.

### A.5 Summary

Throughout the current certification period, the Parishville and Allens Falls developments have experienced only rare, minor occurrences of deviation with regard to impoundment levels. All were of short duration and none were found to be a license violation by FERC. EBH's follow-up actions and implementation of measures has helped to prevent similar occurrences in the future.

My review indicates that throughout the current certification period EBH has proactively operated the Project impoundments and provided the required minimum flows in accordance with study-based scientific and management goals for the river. It is my recommendation the Project continues to satisfy the ecological flow criterion.

### **B.** Water Quality

The goal of this criterion is to ensure water quality is protected in water bodies directly affected by facility operations, including downstream reaches, bypassed reaches, and impoundments above dams and diversions.

On November 2, 2001, the NYSDEC issued a WQC for the Project<sup>29</sup>. The WQC indicated that operation of the Parishville and Allens Falls developments has little or no influence on water quality in the river. Based on limited sampling at the time of relicensing, the impoundments were found to not stratify for temperature or dissolved oxygen (DO) and maintain DO levels close to saturation. The bypassed reaches have rough bottom channels that maintain high DO levels and cool water temperatures.

<sup>&</sup>lt;sup>29</sup> WQC- <u>https://elibrary.ferc.gov/eLibrary/filedownload?fileid=9042407</u>



On April 9, 2020 the NYSDEC responded to an April 3, 2020 request of EBH concerning the November 2, 2001 WQC for the Project. The NYSDEC indicted the current WQC is still valid (see application Appendix C).

In the latest 2016 Section 303(d) list for New York no impaired waters in the Project area are listed<sup>30</sup>.

The Project satisfies the LIHI water quality criterion in all ZOEs by meeting alternative standard B-2.

### **B.1 Parishville**

ZOE 1, the impoundment, is designated as Class B water. Class B is suitable for public bathing, general recreation use and support of aquatic life, but not as a water supply. ZOE 2, the bypassed reach, and ZOE 3, the downstream reach, are designated as Class C water. Class C water is suitable for general recreation use and support of aquatic life, but not as a water supply or for public bathing. The state has not fully assessed these ZOEs to confirm that they support the designated uses.

### **B.2 Allens Falls**

ZOE 4, the impoundment, is designated as Class C water. ZOE 4 is assessed as having minor impacts due to recreational uses that are known to be stressed by nutrients (phosphorus) from unknown sources.

ZOE 5, the bypassed reach, and ZOE 6, and the downstream reach, are also designated as Class C water. The lower portion of the West branch of the St. Regis River is assessed as threatened. This assessment is due to aquatic life uses that are stressed by unspecified pollutants. The NYSDEC states that although uses are currently fully supported, potential pollutants and the health of the biological community should continue to be monitored.

### **B.3 Summary**

In my review, throughout the current LIHI certification period, no water quality issues were found, and the Project is in compliance with its WQC which remains valid. Since there are no listed impaired waters, it is unlikely that the Project adversely affects water quality. It is my recommendation that the Project continues to satisfy the water quality criterion.

### C. Upstream Fish Passage

The goal of this criterion is to ensure safe, timely and effective upstream passage of migratory fish so that the migratory species can successfully complete their life cycles and maintain healthy populations in areas affected by the Project's facilities.

The Project satisfies the LIHI upstream fish passage criterion in all ZOEs by meeting alternative standard C-1. As part of my review, I changed the Applicant-selected alternative standard in ZOE 5 and ZOE 6

<sup>&</sup>lt;sup>30</sup> NY 303(d) - <u>https://www.dec.ny.gov/docs/water\_pdf/303dListfinal2016.pdf</u>



from C-2 to C-1. Although license article 404 requires EBH to release minimum flows into the Allens Falls bypassed reach, these flows were specifically released to provide downstream passage. The waterfalls in the lower Allens Falls bypassed reach form a natural 60-foot-high barrier that precludes access to the Project by upstream migrating fish.

As stated in the OOS and FERC license, there are no requirements to monitor fish passage at the Project unless prescribed by the USDOI. The USDOI did not prescribe upstream fish passage facilities for this Project, however, in article 407, the agency requested reservation of its authority to prescribe upstream fish passage facilities in the future.<sup>31</sup>

The only migratory fish species that could potentially occur in the Project Area is the catadromous American eel. There are no anadromous fish or requirements for upstream passage at the Parishville and Allens Falls developments. Historically, fish from the St. Lawrence River could swim approximately 21 miles into the St. Regis River to the first natural upstream barrier at Brasher Falls, about 1.9 miles downstream of the confluence with the West Branch St. Regis River. However, the construction of the Hogansburg dam in the early 1930's until its removal in 2016, blocked upstream passage approximately 3 miles upstream of the confluence. Additionally, some fish species can now discover new spawning and resident habitats previously inaccessible in the mainstem and allow strong swimming species such as Atlantic salmon, American eel, and lake surgeon access to about 555 miles of St. Regis River habitat and tributaries up to Brasher Falls.

My review found that throughout the current LIHI certification, EBH has proactively consulted with resource agencies pertaining to fish passage. It is my recommendation that the Project continues to satisfy the upstream fish passage criterion.

### D. Downstream Fish Passage

The goal of this criterion is to ensure safe, timely and effective downstream passage of migratory fish and for riverine fish such that the facility minimizes loss of fish from reservoirs and upstream river reaches affected by facility operations. Migratory species can successfully complete their life cycles and maintain healthy populations in areas affected by the facility.

The Project satisfies the LIHI downstream fish passage criterion in all ZOEs by meeting alternative standard D-2. As part of my review, I changed the alternative standard of ZOE 3, Parishville downstream reach from C-1 to C-2. Although this reach is relatively short in length as stated in the application, this ZOE nevertheless requires fish species to pass through it to ensure proper transition to the Allens Falls impoundment.

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, blunt nose minnow, culips minnow, common shiner, golden shiner, creek chub, lake chub, longnose dace, black nose dace, longnose sucker, white sucker, brown bullhead, pumpkinseed, yellow perch, and fantail darter.

<sup>&</sup>lt;sup>31</sup> https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=9781039



The OOS 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).

Downstream fish movement from the Parishville and Allens Falls impoundments is afforded via the spillways and gates. Minimum flow releases have restored the periodically dewatered bypass reaches to functional year round river reaches and provide a base flow downstream of the Allens Falls powerhouse which supplements flows and continued downstream passage below the Project during periods of non-generation.

In accordance with license article 406, EBH is required, at such time that it is determined that an existing trashrack needs to be replaced, to install a new trashrack with 1-inch clear spacing. To date, the trashracks at neither development have needed replacement. Currently the Parishville trashrack has 1<sup>5/16</sup>-inch clear spacing with a maximum intake approach velocity of 1.25 feet per second (FPS) while the Allens Falls trashrack has 1<sup>3/4</sup>-inch clear spacing with a maximum intake approach velocity of 1.5 FPS.

As stated in the OOS and FERC license, there are no requirements to monitor or test the effectiveness of fish passage at the Project unless prescribed by the USDOI. The USDOI did not prescribe downstream fish passage facilities for this Project, however, in license article 407, the agency requested reservation of its authority to prescribe downstream fish passage facilities in the future<sup>32</sup>.

My review found that throughout the current LIHI certification, no issues pertaining to downstream fish passage were found. It is my recommendation that the Project continues to satisfy the downstream fish passage criterion.

### E. Shoreline and Watershed Protection

The shoreline and watershed protection criterion is designed to ensure that sufficient action has been taken to protect, mitigate or enhance environmental conditions of soils, vegetation, and ecosystem functions on shoreline and watershed lands associated with the facility.

The shoreline and watershed protection criterion in all ZOEs, except ZOE 3, is satisfied by meeting alternative standard E-2. ZOE 3, Parishville downstream reach is satisfied by meeting alternative standard E-1. An E-PLUS designation was also requested by EBH in the application.

There is no required shoreline management plan for the Project and no lands of ecological significance. However, as agreed to in Section 5 of the OOS, a St. Regis River Fund (SRRF) was created for the purpose of ecosystem enhancement, fish stocking, new recreation measures, and any other environmental improvements<sup>33</sup>. An initial contribution of \$5,000 was made to the SRRF in 2005, followed by annual contributions of \$750, which will continue for the remainder of the license term.

The limits on impoundment fluctuations help preserve the existing shallow water littoral and wetland habitat of each impoundment. Additionally, the downstream minimum flow requirements at each dam

<sup>&</sup>lt;sup>32</sup> <u>https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=9781039</u>

<sup>&</sup>lt;sup>33</sup> OOS- <u>https://elibrary.ferc.gov/eLibrary/filedownload?fileid=8319268</u>



and downstream of the Allens Falls powerhouse enhance riparian vegetation and wetland and wildlife resources.

### E.1 Parishville

The area around the 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 bypassed reach is forested with a few small seasonal homes set back from the river. ZOE 3, the Parishville downstream reach, is very short, approximately 500 feet from the powerhouse that has no lands with significant ecological value.

### E.2 Allens Falls

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 backwaters of small coves. The wetland vegetation includes cattail, bur-reed, horsetail, arrowhead, yellow pond lily, iris, and bulrush. Some submerged vegetation can also be found in the Project pond, typically bladderwort and stonewort. The bypassed reach is also forested with several small seasonal and possibly year-round homes set back from the river.

#### **E.3 Summary**

The LIHI recertification application suggested that the creation of the SRRF is sufficient to allow for an E-PLUS alternative standard designation. However, although additional documentation was requested in the Stage I review to determine that the SRRF achieves the equivalent land protection value of an ecologically effective buffer zone of 50% or more around undeveloped shoreline, no documentation was provided. EBH only stated, "... *Erie is not aware of any projects funded by the enhancement fund that specifically preserved the undeveloped shoreline ... Erie does not allow any development on property it owns around impoundments..."* 

My review found that throughout the current LIHI certification, no issues arose pertaining to shoreline and watershed protection. Although the SRRF provides for ecosystem enhancement, fish stocking and new recreation measures, it does not achieve land protection value in excess of 50% or more around the undeveloped shoreline. It is my recommendation that the Project continues to satisfy the shoreline and watershed protection criterion.





### F. Threatened and Endangered Species Protection

The threatened and endangered species protection criterion is designed to ensure that the facility does not negatively impact state or federally-listed threatened or endangered species.

The LIHI threatened and endangered species criterion is satisfied in all ZOEs by meeting alternative standard F-2.

Based on a USFWS IPaC report (see application Appendix D) generated on July 1, 2020, there are currently no federally listed species that occur in the Project area. Several bird species protected under the Migratory Birds Treaty Act and the Bald and Golden Eagle Protection Act may be observed in the Project area and include bald eagle, black-billed cuckoo, bobolink, Canada warbler, Cape May warbler, Eastern whippoorwill, evening grosbeak and wood thrush.

### F.1 Parishville

Based on a NYSDEC Nature Explorer report (see application Appendix D) generated on July 1, 2020, the state's threatened Fernald's sedge and the rare Schweinitz's flat sedge were documented in the Project area in 2004 and 2005. According to a NYSDEC letter dated November 17, 2015, Fernald's sedge was known to be present 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<sup>34</sup> notes that Fernald's sedge is a disturbance-loving plant that may appear at a site for a short period and then return to seed and that there are currently no threats known to the species in New York.

In light of NYSDEC's 2015 letter, the current LIHI Certification for the Project, issued in September of 2015, had one conditional requirement stated as follows: 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 in its most recent annual compliance letter to LIHI dated August 17, 2020, there have been no changes to the maintenance activities or vegetation management in the area of interest.

### F.2 Allens Falls

Lake sturgeon are a state threatened species that is known to inhabit the lower St. Regis River downstream of Brasher Falls. Prior to 2016, the Hogansburg Dam was a barrier to fish species

<sup>&</sup>lt;sup>34</sup> NY Natural heritage program - <u>https://guides.nynhp.org/fernalds-sedge/</u>



downstream of the dam. With the dam's removal in 2017, species such as lake sturgeon regained access to over 500 miles of habitat on the St. Regis River and its tributaries<sup>35</sup>.

In 1999, the NYSDEC 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. Because lake sturgeon are a benthic dwelling species, it is unlikely that they can easily pass the natural waterfall barrier at Brasher Falls.

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 to 14,000 Atlantic salmon parr<sup>36</sup> had been released at 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. Again, it is unlikely that Atlantic salmon will gain access to the Project area as the natural barrier at Brasher Falls is a barrier to upstream fish movement for most fish species inhabiting the West Branch of the St. Regis River downstream of the Project.

#### F.3 Summary

My review found that throughout the current LIHI certification, no license issues arose pertaining to the Project's threatened and endangered species management. EBH has proactively consulted with resource agencies pertaining to threatened and endangered species compliance and has filed the required annual reports with LIHI updating the condition 1 status for the current LIHI certification. Based on the information provided, it is my recommendation that the Project continues to satisfy the threatened and endangered species protection criterion, with continuation of the same condition.

### G. Cultural and Historical Resource Protection

The cultural and historic resource protection criterion is designed to ensure that the facility does not unnecessarily impact cultural and historic resources associated with the facility's lands and waters, including resources important to local indigenous populations.

The application states the LIHI cultural and historic resources criterion in all ZOEs is satisfied by meeting alternative standard G-2.

In accordance with license article 409, EBH filed a Historic Properties Management Plan (HPMP) with FERC on January 16, 2004<sup>37</sup>. The filing included:

- A description of the archeological surveys conducted within the Area of Potential Effect (APE) of the Project;
- The determinations of eligibility for inclusion in the National Register of Historic Places (NRHP);
- A description of how unanticipated discoveries will be handled, and;
- Documentation of agency consultation.

<sup>&</sup>lt;sup>35</sup> <u>https://usfwsnortheast.wordpress.com/tag/st-regis-river/</u>

<sup>&</sup>lt;sup>36</sup> Parr - a young salmon actively feeding in fresh water.

<sup>&</sup>lt;sup>37</sup> <u>https://elibrary.ferc.gov/eLibrary/filedownload?fileid=10046404</u>



The APE consists of the Project boundaries for each development. The main hydroelectric plants, including the powerhouses for the Parishville and Allens Falls dams, are considered eligible for the NRHP pursuant to criteria C. Criteria C property embodies the distinctive characteristics of a type, period, or method of construction. The New York State Historic Preservation Officer (SHPO) states the plants are representative of hydroelectric architecture and engineering that reflects the Post World War I standardization of hydro facilities.

On April 16, 2004, FERC approved a modified HPMP<sup>38</sup>. The approved HPMP:

- Requires discussions with the SHPO to determine if consultation with Tribes having a historical presence is needed after any unanticipated discovery is made; and
- Includes provisions applicable to historic mill ruins within the Project area if any unidentified historic properties are discovered. If an unanticipated discovery is made, EBH will stop work and if necessary, stabilize the area. The SHPO will be notified within 3 days of discovery. After consulting with the SHPO, further analysis and investigations will be conducted if appropriate, and any artifacts that are collected will be managed in accordance with the New York Archaeological Council standards.

To date, no new discovery of historical resources at either development has occurred and a review of the Project record on FERC's docket database shows that there are no cultural or historic resources related compliance issues.

EBH has proactively consulted with resource agencies pertaining to cultural and historical issues. Throughout the current LIHI certification, the Project has been in compliance with all requirements regarding cultural resource protection, mitigation and enhancement included in the FERC license and HPMP. It is my recommendation that the Project continues to satisfy the cultural and historic resources protection criterion.

### H. Recreational Resources

The goal of this criterion is to ensure that recreation activities on lands and waters controlled by the facility are accommodated and that the facility provides recreational access to its associated land and waters without fee or charge.

The Applicant states the LIHI recreation criterion in all ZOEs is satisfied by meeting alternative standard H-2.

In accordance with license article 408, EBH filed a Recreation Plan (RP) with FERC on February 2, 2004<sup>39</sup>.

A modified RP was approved by FERC on April 8, 2004<sup>40</sup>. The change required the filing of as-built drawings of completed recreation enhancements and an updated public safety plan.

<sup>&</sup>lt;sup>38</sup> HPMP- <u>https://elibrary.ferc.gov/eLibrary/filedownload?fileid=10116372</u>

<sup>&</sup>lt;sup>39</sup> https://elibrary.ferc.gov/eLibrary/filedownload?fileid=10057004

<sup>&</sup>lt;sup>40</sup> RP - <u>https://elibrary.ferc.gov/eLibrary/filedownload?fileid=10110292</u>



The RP recreational enhancements include:

- 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;
- Informal access to Project waters and 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;
- Signage that designates the extent of parking available at an informal parking area and boat launch at the end of Coon Road and informal parking near the surge tank on Covey Road;
- Providing for an unimproved trail in the vicinity of the Allens Falls powerhouse and boat barriers in the tailrace of the powerhouse;
- A flow notification system that provides the public with information about known spillage events;
- Consultation 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;
- Providing for additional consultation with the NYSDEC and members of the St. Regis River Advisory Committee (SRRAC) to examine further development of public access to Project lands and waters.

EBH 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.

Throughout the current LIHI certification, my review found no issues pertaining to recreational resources compliance. Therefore, it is my recommendation that the Project continues to satisfy the recreational resources criterion.



### VIII. RECOMMENDATION

A review of the recertification application and supporting documentation, and a search of the FERC docket shows that the Project continues to satisfy the LIHI criteria as discussed in the sections above.

I recommend that the Project be certified for a five (5) year term. The current condition for the Project, issued in September of 2015, should be maintained, slightly modified as follows:

• **Condition 1**: Should the maintenance activities along the Parishville 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 Fernald's sedge plant has been observed, the facility Owner shall consult with the NYSDEC regarding potential impacts to the species. The Owner shall report on any such alterations in the LIHI annual compliance submittals including the results of consultation and evidence of implementation of any requirements mandated by the NYSDEC to protect this species if it is found onsite.

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