Low Impact Hydropower Institute's (LIHI) Certification Review for Macomb Hydroelectric Project

1. BACKGROUND

The Macomb Hydroelectric Project (Project) is located at river mile (RM) 17.3 on the Salmon River near the Town of Malone in Franklin County, New York and is licensed with the Federal Energy Regulatory Commission (FERC) as the Macomb Hydroelectric Project (FERC No. 7321).

The Project was originally constructed in 1899 for the sole purpose of energy production with subsequent improvements made over the years from 1940 through 1987. The Project's installed capacity is 1.08 MW comprised of one unit. The Project's estimated average annual generation (AAG) is 6,200 MWh which corresponds to an annual plant factor of 65.5%.

The Project is owned and operated by Erie Boulevard Hydropower, L.P. (EBH) [1], a wholly owned subsidiary of Brookfield Renewable Energy Group (BREG). An Offer of Settlement (OOS) [2] was executed on November 2, 2004 and filed with FERC on November 26, 2004. A Section 401 Water Quality Certificate (WQC) [3] was issued by the New York State Department of Environmental Conservation (NYSDEC) on March 22, 2006. FERC's Environmental Assessment (FEA)[4] was issued on December 19, 2005. On June 23, 2006, FERC issued a new 35-year license, effective on December 1, 2006, to EBH[5]. The license expires on November 30, 2041.

EBH submitted an application for LIHI Certification of the Project on February 6, 2019. On March 25, 2019, LIHI notified EBH that the intake review for the Project was complete. The intake review found that only a small amount of supplemental information was needed. EBH supplied a revised application dated April 23, 2019. On April 26, 2019, I committed to perform the certification review for the Project.

2. SALMON RIVER BASIN

The Salmon River originates in the foothills of the Adirondack Mountains in southern Franklin County, New York near the Loon Lake Mountains and Elbow Range at an elevation of approximately 2,000 FTMSL. The river flows northwest about 50 miles through Franklin County draining into the St. Lawrence River near Dundee, Quebec, Canada. All but about three miles of the river are located in New York. The river watershed drains 379 square miles, as measured at Ft. Covington, New York (at the US – Canadian Border).

[1] Daniel J. Maguire, P.E., EBH Compliance Manager, 184 Elm Street, Potsdam, NY 13676 - 315-267-1036 - Danny.Maguire@brookfieldrenewable.com
[2] OOS - https://elibrary.ferc.gov/IDMWS/common/opennat.asp?fileID=10344117
[3] WQC - https://elibrary.ferc.gov/IDMWS/common/opennat.asp?fileID=11004129
[4] FEA - https://elibrary.ferc.gov/IDMWS/common/opennat.asp?fileID=10909304
[5] FERC License - https://elibrary.ferc.gov/IDMWS/common/opennat.asp?fileID=11071386

The upper part of the watershed is a rugged mountainous area, and the river valley is characterized by many narrow valleys with steep elevation drops before it reaches the level plains near the U.S. northern border. Numerous lakes and ponds flow into the river in the upper mountainous region. As the river approaches the relatively flat area in the lower watershed below Malone, New York, many large tributaries flow into it, notably the Little Salmon River (Figure 1).

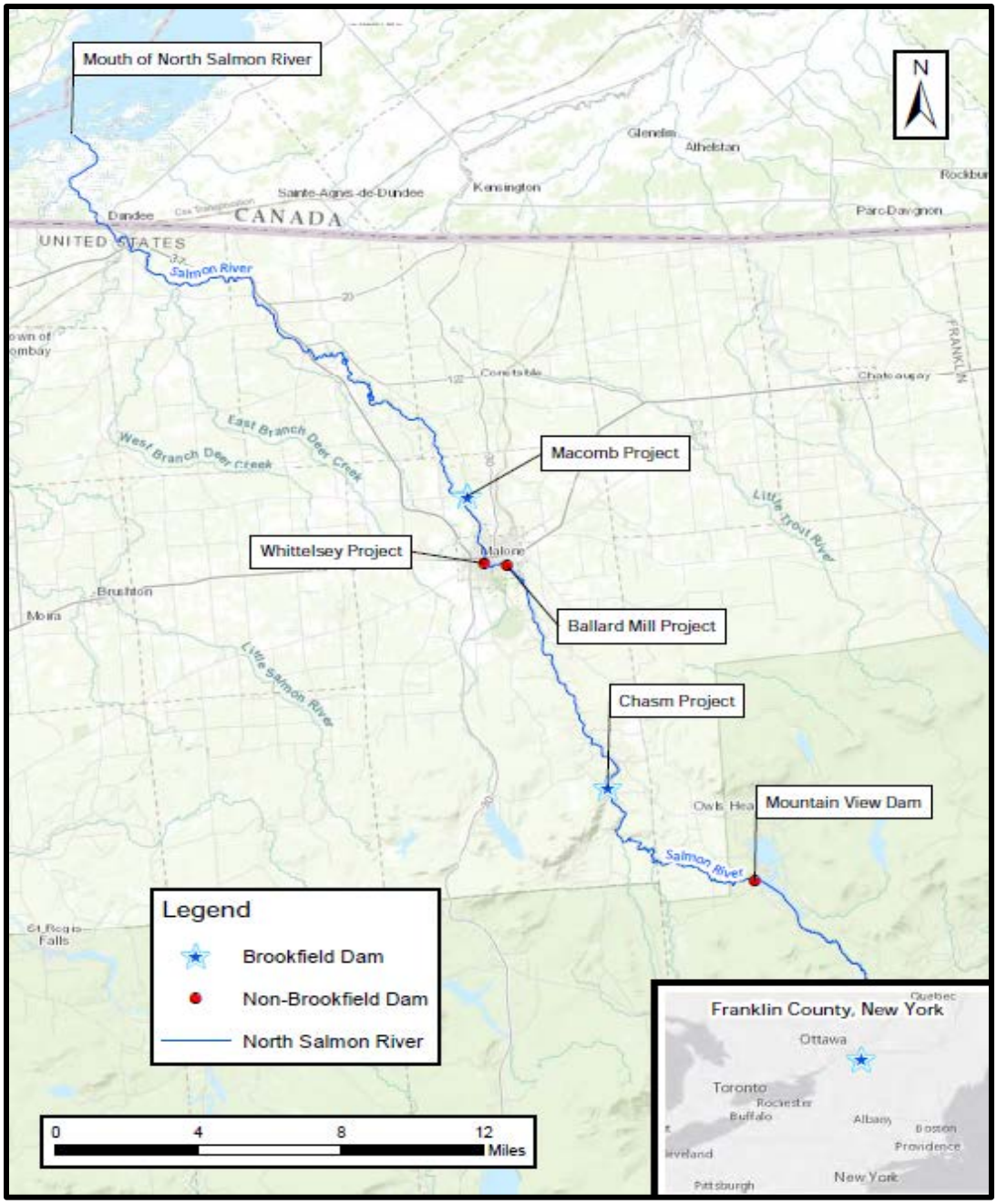


Figure 1 - Location Map

Since removal of the Ft. Covington dam in 2011, there are no downstream dams below the Project on the Salmon River. Dams located upstream of Project include:

- The non-FERC licensed Mountain View Project at RM 35.8, owned by Mountain View Associates.
- The Chasm Hydroelectric Project at RM 28.8, owned by EBH and licensed by FERC as Project 7320.
- The Ballard Mill Project at RM 20.5, owned by ECOsponsible LLC and licensed by FERC as Project 3267.
- The Whittelsey Project at RM 19.8, owned by Malone's Next Gen LLC and licensed by FERC as Project 10522.

No dams on the Salmon River provide upstream fish passage.

3. PROJECT DESCRIPTION

The Project dam is located at RM 17.3 on the Salmon River near the Town of Malone in Franklin County, New York (Latitude 44.878° N, Longitude 74.306° W). The Project was originally constructed in 1899 for the sole purpose of energy production and consists of a dam with an integrated spillway (Figure 2), penstock intake, penstock and powerhouse.

Figure 2 – Looking Upstream at Spillway (Powerhouse is on right side of this picture)

The Project's concrete gravity overflow-type dam is 32 feet high and 106 feet long and has an impoundment, known as Lamica Lake, extending about 0.7 miles upstream. At a spillway crest elevation of 570.7 feet mean sea level (FTMSL), the impoundment has a surface area of 14 acres, a gross storage capacity of 225 acre-feet (ACFT) and a usable volume of 14 ACFT. The spillway is not engineered for flashboard installation.

The hydraulic discharge capacity of the spillway is about 6,700 cubic feet per second (CFS) which corresponds to an impoundment elevation of 576.57 FTMSL (at the top of the non-overflow structure).

There are two stone intake structures capped with concrete, one located at each end of the dam, positioned 90 degrees to the spillway. The intake structure on the right bank of the river (looking downstream) consists

of a manually-operated steel slide gate at the upstream end of a 6-foot-diameter pipe that discharges immediately downstream of the dam.

The 38-foot-long, 25-foot-high intake structure along the left bank of the river has a manually-operated steel slide gate. When open, flow passes through the gate to a 6.5-foot-diameter, 60-foot-long gated riveted steel penstock that leads to the powerhouse (Figure 3). The water intake has trashracks with 1-inch clear spacing on a year-round basis.

Figure 3 - Looking at Powerhouse from Intake

The water is discharged from the turbine through a conical steel elbow draft tube into a concrete end rock tailrace that joins the Salmon River immediately downstream of the powerhouse.

Over subsequent years, non-generation related improvements included a new gate structure and the spillway concrete being overlaid in 1987. There are presently no plans for any other non-generation upgrades at the Project.

Over subsequent years, generation related improvements included:

- The current powerhouse, known as High Falls No. 2, was built in 1904.
- The original downstream powerhouse known as High Falls No. 1 was retired in 1940.
- New trashracks and supporting steel were installed at the intake in 1987.
- Generator stator rewind and No. 5 Transformer Bank installed in 1993.
- Installed a PLC for controlling headpond levels and wicket gate openings in 1995.

The powerhouse contains a single S. Morgan Smith horizontal Francis turbine. The turbine has a design output capacity of 1.08 MW at a design head of 54 feet and a speed of 225 revolutions per minute. There are currently no plans for turbine or generator upgrades in the near future.

The turbine's maximum, efficient and minimum hydraulic capacities are 310 CFS, 205 CFS and 125 CFS, respectively. The generator is a direct-connected, General Electric, 3-phase, 60-cycle, alternating current, synchronous generators. A view of the Francis turbine/generator is shown in Figure 4.

Figure 4 - View of Generator

The generator has a maximum output of 1.25 MVA, operated at a power factor of 0.8, resulting in maximum power output of 1.0 MW.

Historically, Project inflows were estimated using U.S. Geological Survey (USGS) gage 04270000, located on the Salmon River at Chasm Falls, NY. This upstream gage has a drainage area of 132 square miles (SQMI). The drainage area at the Project dam is 183 SQMI. Multiplying the USGS gage flow by (183/132) or 1.386 estimates inflows into the Project. Based on this approach, the Project's period of record (POR) average annual inflow from July 24, 1925 through September 29, 2013 is 331 CFS. This USGS gage terminated recording streamflow starting in water year 2014 (October 1, 2013).

On November 24, 2004, a Base Flow Evaluation Study Report (BFESR) was filed by EBH recommending 125 CFS as the Project's minimum base flow[6]. The current FERC license[7], OOS[8], and WQC[9] include these requirements for flow releases and water level control recommended by the NYSDEC and U.S. Fish and Wildlife Service (USFWS).

As required by license article 401, EBH filed a Streamflow and Water Level Monitoring Plan (SWLMP) on May 8, 2007. FERC issued an order[10] modifying and approving the SWLMP[11] on September 12, 2007. All of the license and settlement requirements pertaining to flow conditions and impoundment levels have been implemented at the Project.

Based on a flow duration analysis using USGS gage 04270000's POR daily flows adjusted to estimate Project inflows, 125 CFS is exceeded about 96% of the time. The Project operates with a maximum impoundment fluctuation of 0.25 feet, as measured from the spillway crest. When inflows are less than the minimum turbine capacity of the powerhouse 125 CFS, the powerhouse is taken offline and inflow is passed over the spillway.

The Salmon River in the Project boundary is managed by the NYSDEC essentially as a cold-water fishery. The FERC license does not contain any specific requirements for fish and/or wildlife management within the impoundment.

According to the FEA[12], reduced water level fluctuations reduce the chances of fish stranding and disruption of spawning habitat. The FEA also states limiting the fluctuations of the impoundment to 0.25 feet would reduce the time that downstream habitats could be dewatered if the powerhouse were to trip off-line.

4. REGULATORY SUMMARY

The FERC issued the original license for the Project to Niagara Mohawk Power Corporation (NMPC) on December 29, 1986, effective December 1, 1986. This license expired on November 30, 2006. The FERC license was transferred to EBH on July 29, 1999. EBH received a new 35-year FERC license issued on June 23, 2006[13], effective June 1, 2006 and expiring on May 31, 2036.

A. Summary of Project Licensing and Agency Consultation Process

The following important correspondence occurred leading up to the FERC relicensing for the Project:

- On November 26, 2004, EBH filed an application for a subsequent license to continue to operate the existing Project.[14]

[6] BFESR - https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=10344117
[7] License - https://elibrary.ferc.gov/IDMWS/common/opennat.asp?fileID=11071386
[8] OOS - https://elibrary.ferc.gov/IDMWS/common/opennat.asp?fileID=10344117
[9] WQC- https://elibrary.ferc.gov/IDMWS/common/opennat.asp?fileID=11004129
[10] https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=11450642
[11] SWLMP - https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=11341011
[12] FEA - https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=10909304
[13] New License - https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=11071386
[14] New License Application - https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=10344117

- On January 12, 2005[15], FERC issued a notice accepting EBH's license application and solicited motions to intervene and protests.[16]
- On February 1, 2005, FERC provided Scoping Document 1 of environmental issues for a subsequent license for the Project. [17]
- On February 2, 2005, U.S. Department of the Interior (USDOI) filed a timely motion to intervene.[18]
- On March 17, 2005, FERC notified that a second Scoping Document would not be issued for the Project.[19]
- On March 28, 2005, FERC issued notice indicating the license application was ready for environmental analysis, soliciting comments, recommendations, terms and conditions, and prescriptions.[20]
- On May 20, 2005, USDOI filed prescription comments of fish passage.[21]
- On December 19, 2005, FERC submitted notice of availability of Environmental Assessment (FEA).[22]
- On January 17, 2006, USFWS filed comments on FEA.[23]
- On January 17, 2006, USFWS filed its support for the Project Settlement Agreement (PSA).[24]
- On April 19, 2006, EBH filed the WQC issued by NYSDEC on March 22, 2006.[25]
- On June 23, 2006, FERC issued its order for OOS and issued the subsequent license for Project.[26]

B. Compliance Issues

My review of the FERC docket found the following compliance correspondence relating to the LIHI criteria:

- On June 29, 2006, FERC filed the Programmatic Agreement (PA) for the Project.[27]
- On October 31, 2006, Operation report was filed by NYSDEC for inspection of the Project on September 27, 2006 (CEII).
- On February 7, 2007, EBH advised FERC they had complied with minimum flow releases, head pond levels, special water releases and similar miscellaneous requirements for calendar year 2006.[28]
- On May 8, 2007, EBH filed a Streamflow and Water Level Monitoring Plan (SWLMP) for the Project.[29]
- On September 12, 2007, FERC filed an order modifying and approving the SWLMP.[30]
- On February 6, 2008, EBH advised FERC they had complied with minimum flow releases, head pond levels, special water releases and similar miscellaneous requirements for calendar year 2007.[31]

[15] https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=10365374
[16] https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=13367457
[17] https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=10392766
[18] https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=10393015
[19] https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=10447745
[20] https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=10468031
[21] USDOI - https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=10570687
[22] FEA - https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=10909304
[23] https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=10929525
[24] PSA - https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=10946225
[25] https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=11004129
[26] https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=11071386
[27] https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=11075688
[28] https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=11258225
[29] SWLMP - https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=11341011
[30] Approved SWLMP - https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=11450642
[31] https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=11586466

- On March 9, 2009, EBH advised FERC they had complied with minimum flow releases, head pond levels, special water releases and similar miscellaneous requirements for calendar year 2008.[32]
- On April 16, 2009, EBH filed an annual report as required by the SWLMP.[33]
- On August 12, 2009, EBH filed the Historic Properties Management Plan (HPMP) for the Project. (CEII).
- On November 19, 2009, Operation report was filed by NYSDEC for inspection of the Project on September 24, 2009 (CEII).
- On February 4, 2010, EBH advised FERC they had complied with minimum flow releases, head pond levels, special water releases and similar miscellaneous requirements for calendar year 2009.[34]
- On August 12, 2010, FERC issued an order modifying and approving the HPMP.[35]
- On February 1, 2011, EBH advised FERC they had complied with minimum flow releases, head pond levels, special water releases and similar miscellaneous requirements for calendar year 2010.[36]
- On January 31, 2012, EBH advised FERC they had complied with minimum flow releases, head pond levels, special water releases and similar miscellaneous requirements for calendar year 2011.[37]
- On September 11, 2012, FERC issued an order amending the HPMP.[38]
- On October 29, 2012, EBH submitted the Sediment Monitoring Plan (SMP).[39]
- On December 12, 2012, FERC issued approval of the SMP.[40]
- On January 24, 2013, EBH filed the Annual report of Water Level Monitoring Equipment Verification for 2012.[41]
- On February 11, 2013, EBH filed the HPMP annual report.[42]
- On January 21, 2014, EBH filed the Annual report of Water Level Monitoring Equipment Verification for 2013.[43]
- On January 24, 2014, EBH filed the HPMP annual report.[44]
- On February 24, 2014, EBH filed the 2013 sediment report.[45]
- On January 26, 2015, EBH filed the 2014 sediment report.[46]
- On January 29, 2015, EBH filed the Annual report of Water Level Monitoring Equipment Verification for 2014.[47]
- On March 31, 2015, EBH submitted FERC Form 80 for Project.[48]
- On April 1, 2015, EBH submitted the Recreation Monitoring Report (RMR) for the Project.[49]
- On July 15, 2015, EBH filed the HPMP annual report.[50]

[32] https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=11960890
[33] https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=12123668
[34] https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=12265478
[35] https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=12412730
[36] https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=12551898
[37] https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=12880623
[38] https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=13111253
[39] SMP - https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=13101035
[40] https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=13130688
[41] https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=13160328
[42] https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=13179544
[43] https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=13493651
[44] https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=13448359
[45] https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=13469077
[46] https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=13750603
[47] https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=13754386
[48] https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=13824172
[49] https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=13825161
[50] https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=13933167

- On December 19, 2016, EBH filed the 2015 Sediment Monitoring Report.[51]
- On January 11, 2017, EBH filed the 2016 Sediment Management Monitoring Report.[52]
- On March 15, 2017, EBH notified FERC of a potential impoundment level excursion.[53]
- On March 20, 2017, EBH filed a request to amend the HPMP.[54]
- On April 14, 2017, FERC issued and order accepting the amended HPMP.[55]
- On May 15, 2017, FERC informed EBH the impoundment deviation occurring on March 15, 2017 was not a violation of the Project License.[56]
- On July 26, 2017, EBH filed the annual HPMP update for the Project.[57]
- On February 5, 2018, EBH filed the annual report of Water Level Monitoring Equipment Verification for 2015 and 2016.[58]
- On February 5, 2018, EBH filed the annual report of Water Level Monitoring Equipment Verification for 2017.[59]
- On July 23, 2018, EBH filed the annual HPMP update for the Project.[60]

5. ZONES OF EFFECT (ZOEs)

The Project has three zones of effect (Figure 5). ZOE 1 is from the head of the impoundment, downstream approximately 0.7 miles to the dam (RM 18.0 to 17.3). ZOE 2 is from the dam's bypassed reach

Figure 5 - Zones of Effect

[51] https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=14442388
[52] https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=14464858
[53] https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=14519903
[54] https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=14526287
[55] https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=14560166
[56] https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=14596561
[57] https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=14643604
[58] https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=14816004
[59] https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=14815999
[60] https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=14978720

approximately 0.02 miles to the powerhouse (RM 17.3 to 17.28). ZOE 3 is downstream of the powerhouse approximately 0.5 miles (RM 17.29 to 16.79).

The ZOE 1 alternative standards selected are shown in Figure 6.

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

Figure 6 - ZOE 1 Alternative Standards

The ZOE 2 alternative standards selected are shown in Figure 7.

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

Figure 7 - ZOE 2 Alternative Standards

The ZOE 3 alternative standards selected are shown in Figure 8.

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

Figure 8 - ZOE 3 Alternative Standards

6. LIHI CERTIFICATION PROCESS

EBH submitted an application for LIHI Certification of the Project on February 28, 2019. On March 25, 2019, LIHI notified EBH that the intake review for the Project was complete. The intake review found that some information was missing, and the application needed modification. EBH supplied a revised application on April 26, 2019. On April 26, 2019, I committed to perform the certification review for the Project.

A. Comment Letters

On April 30, 2019, 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 these applications. 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 on either application to the Institute by e-mail at comments@lowimpacthydro.org with 'Chasm Project Comments' or 'Macomb 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 June 29, 2019 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 Chasm project description and complete application can be found HERE[61]."* No comments were received.

B. Agency Correspondence

On April 30, 2019, LIHI[62] emailed contacts[63] listed in the Project application as knowledgeable about the Project stating, *"You may have already received this notice if you are on the Low Impact Hydropower Institute (www.lowimpacthydro.org) email list. However, you were also identified as an agency contact on the LIHI certification application recently submitted by Erie Boulevard Hydropower LP (a subsidiary of Brookfield Renewable Energy Group) for the Chasm and Macomb Hydroelectric Projects located on the Salmon River. The application reviewer, Gary Franc (copied here), may be in contact with you if he has questions about these projects or wishes to clarify any aspects of the LIHI applications. You may also provide comments directly to LIHI as indicated below.*

More information about the projects and their application can be found in the link below. If you would like to receive additional notices about these projects or other hydroelectric projects in your region applying for LIHI certification, please sign up for our mailing list at https://lowimpacthydro.org/join-our-list/ ."

On May 13, 2019, I called Danny McGuire[64] with EBH to discuss differences in the operation of the hydropower plant as defined in the LIHI application and in the FERC license. The application states the hydropower plant operates between 310 CFS and 205 CFS. The FERC license states the hydropower plant

[61] Project Application on LIHI website - https://lowimpact hydro.org/Macomb-project-complete-application-received/
[62] Maryalice Fischer – LIHI Certification Program Director - mfischer@lowimpacthydro.org - 603-664-5097 office - 603-931-9119 cell
[63] Jessica Hart – Jessica.Hart@dec.ny.gov; Nicholas Conrad - Nick.Conrad@dec.ny ; Robyn Niver - Robyn_Niver@fws.gov ; Steve Patch - Stephen_Patch@fws.gov ; Michael Lynch - Michael.Lynch@parks.ny.gov .
[64] Daniel J. Maguire, P.E., EBH Compliance Manager, 184 Elm Street, Potsdam, NY 13676 - 315-267-1036 - Danny.Maguire@brookfieldrenewable.com

operates from 310 CFS down to 125 CFS. On May 17, 2019, Mr. Bob Garrett[65] called to confirm that the operation defined within the FERC license is correct, between 310 CFS and 125 CFS.

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 agencies comments were received.

7. CERTIFICATION REVIEW

This section contains my certification 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 certification application. My review concentrated on the period from November 26, 2004, the start of FERC relicensing, through May of 2019, for FERC docket number P-7321.

A. LIHI Criterion-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. The application states that the Project satisfies the LIHI flows criterion in ZOE 1 by meeting alternative standard A-1[66] and in ZOE 2 and ZOE 3 by meeting alternative standard A-2 [67]. ZOE 1 is the Project impoundment. ZOE 2 is the limited bypassed reach. ZOE 3 is the reach downstream of the powerhouse.

The Applicant states the Project is in compliance with resource agency conditions issued regarding flow conditions and impoundment fluctuations and that all of the license and settlement requirements pertaining to flow conditions and impoundment levels have been implemented at the Project. Impoundments are eligible for the A-1 Standard under the 2nd Edition LIHI Handbook, but in this case A-2 also applies given Project operations and impoundment restrictions.

The FERC license[68], PSA[69] and WQC[70] include the requirements for flow releases and water level control recommended by NYSDEC and USFWS. EBH must provide a baseflow of 125 CFS or inflow, whichever is less, from the Project's tailrace or over the spillway. The FEA[71] states the EBH's 2003 Baseflow Evaluation[72] study provides the support for the 125-CFS baseflow release that is protective of the existing, healthy fish and macroinvertebrate populations downstream.

The Project operates with a maximum impoundment fluctuation of 0.25 feet from the spillway crest. When inflows exceed the maximum turbine capacity of 310 CFS, excess flow is passed over the spillway. When inflows are less than the minimum (efficient) turbine capacity of the powerhouse 205 CFS, the powerhouse is taken offline and flow is passed over the spillway. Based on a flow duration analysis using USGS gage 04270000's POR daily flows adjusted to estimate Project inflows, 205 CFS is exceeded about 67% of the time while 125 CFS is exceeded about 96% of the time.

[65] Bob Garrett, EBH Compliance Engineer, 518-743-2095.
[66] NA.
[67] Agency recommendation.
[68] License - https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=11071386
[69] PSA (Contained within application for new license) - https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=10344117
[70] WQC - https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=11004129
[71] FEA - https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=10909304
[72] Baseflow Study (Contained within application for new license) - https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=10344117

According to the FEA, reduced water level fluctuations reduce the chances of fish stranding and disruption of spawning habitat. The FEA states that limiting the fluctuations of the impoundment to 0.25 feet reduces the time that downstream habitats could be dewatered if the powerhouse were to trip off-line.

EBH filed a SWLMP[73] on May 8, 2007. FERC issued an order modifying and approving the SWLMP on September 12, 2007.[74]

The Salmon River in the Project boundary is managed by the NYSDEC essentially as a cold-water fishery and the NYSDEC manages the river immediately downstream of the dam for trout.

A review of the FERC docket indicates that on March 15, 2017, EBH notified FERC of an impoundment level deviation.[75] EBH stated on March 5, 2017, the impoundment level dropped a maximum of 1.4 feet below the spillway crest level. Corrective measures resulted in a sharp rise in pond level. Further investigation found an upstream ice jam was contributing to unstable pond levels. A secondary cause was removal of the turbine from pond control in an effort to minimize the effects of ice against the trashracks. Normal operations were restored after approximately 2.5 hours. EBH implemented corrective measures to avoid similar recurrence by adjusting the SCADA alarm set points as well as reviewing operating procedures with operating staff to prevent removing the units from pond control. On May 15, 2017, FERC informed EBH the impoundment deviation occurring on March 5, 2017 was not a violation of the License for the Project.[76]

In my view, EBH's actions taken in response to the March 5, 2017 impoundment level deviation should reduce the chance of reoccurrence. It is my recommendation, except for the single deviation occurrence, the Project complies with resource agency conditions and recommendations issued regarding flow conditions and impoundment fluctuations, and therefore meets Standard A-2 and satisfies the flows criterion.

B. LIHI Criterion-Water Quality

The goal of this criterion is to ensure water quality is protected in water bodies directly affected by the facility, including downstream reaches, bypassed reaches, and impoundments above dams and diversions. The Applicant states that the Project satisfies the LIHI water quality criterion in ZOEs 1, 2 and 3 by meeting alternative standard B-2.[77]

The Project is in compliance with all conditions issued pursuant to the WQC[78] issued on March 22, 2006 and adopted into the FERC license. EBH contacted the NYSDEC on January 3, 2019, regarding the current WQC status for the Project (Appendix A, page A-2). On March 22, 2019, the NYSDEC response stated the current WQC issued on March 22, 2006, will remain valid throughout the Project's current FERC license that terminates on November 30, 2041 (Appendix A, page A-3). Water quality monitoring at the Project is not required.

[73] SWLMP - https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=11341011
[74] https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=11450642
[75] https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=14519903
[76] https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=14596561
[77] Agency recommendation.
[78] WQC - https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=11004129

As documented in the November 2016 Section 303(d) list for New York State, no impaired waters in the Project area or downstream reach are listed.[79]

The Salmon River in the vicinity of the Project impoundment and tailrace is classified by NYSDEC as Class C waters with an accompanying standard (T) pertaining to trout waters. The best usage of Class C waters is fishing, and they are also suitable for fish propagation and survival, as well as primary and secondary contact recreation, where such use is not limited by other factors.

The Project has a Sediment Management Plan[80] filed with FERC on October 29, 2012 and incorporated into the WQC as Condition 12. The purpose is to minimize the potential for significant sediment releases that could adversely impact downstream fish and aquatic habitat by degrading cobble and gravel habitat during routine and non-routine operations such as impoundment drawdowns.

The onset of flushing occurs approximately 8 hours after the inflow at the upstream Chasm Falls Project is determined, to account for the travel time through the river system. Continuous flows of 700 CFS must be anticipated for a period of 24 hours with flows at least 500 CFS continuing for another 24-hour period following the flush. As long as the river flow remains at 700 CFS or more, one or both low-level sluice gates are open and adjusted to pass 500 CFS for up to 24 hours, with prior approval by NYSDEC. This procedure removes accumulated fine particles from the downstream reach. Monitoring was required from 2012-2016 before and after flushing flows in order to detect significant changes in downstream streambed conditions related to sediment deposition or transport. On January 12, 2017, EBH submitted the 2016 SMR. On March 29, 2017, FERC acknowledged receipt of the SMR[81]. Monitoring results indicated little to no changes in substrate embeddedness over time, such that downstream sediment deposition does not appear to be problematic. In their letter FERC acknowledged that monitoring observed some subtle shifting of fine sediments, however, the overall substrate composition remained consistent with past observations.

My review found no license deviations nor any issues pertaining to the Project's water quality compliance. Based on the information provided, and ongoing sediment management and flushing procedures, it is my recommendation that the Project meets Standard B-2 and satisfies the water quality criterion.

C. LIHI Criterion-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, sustainable fish and wildlife resources in areas affected by the facility. The Applicant states that the Project satisfies the LIHI upstream fish passage criterion in ZOE 1 by meeting alternative standard C-1 and in ZOE 2 and 3 by meeting alternative standard C-2. Impoundments typically qualify for A-1 since once above a dam, there are no further Project-related barriers to passage.

During relicensing of the Project, EBH conducted an Upstream Fish Passage Barrier Evaluation (UFPBE)[82]. The study found the natural falls at the site historically created a hydraulic barrier that prevented anadromous fish from obtaining the height and length to clear the falls for upstream migration, even without hydropower development. The downstream Ft. Covington dam, which was removed in 2011, also created a barrier to upstream migration, although some American eel apparently passed that dam. An Upstream

[79] 303(d) - https://www.dec.ny.gov/docs/water_pdf/303dListfinal2016.pdf
[80] https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=13101035
[81] https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=14537791
[82] Studies included in license application https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=10344117

Eel Passage Feasibility Study was also conducted[83] in 2004. Three conceptual designs were developed and presented to resource agencies and stakeholders, who determined that upstream eel passage would not be needed since there is no historical evidence of the species upstream of the Project, there is no management plan for the species in the river, and since costs for such a passage would be too high.

Historically, the Salmon River supported freshwater runs of walleye, muskellunge, and northern pike. Based on fishery investigations, the present fish community in Lamica Lake consists of the expected warm-water fishes such as bass and bullhead and is known to have a healthy population of brown and rainbow trout by stocking.

The USDOI did not prescribe anadromous or catadromous fish passage facilities. By letter dated May 20, 2005[84], USDOI did request reservation of its authority to prescribe upstream fish passage devices in the future, as provided in license Article 403.

My review found no license deviations nor any issues pertaining to upstream fish passage. Given the lack of migratory species and lack of interest or need to provide eel passage, it is my recommendation that the Project meets the C-1 and C-2 standards in applicable ZOEs and satisfies the upstream fish passage criterion.

D. LIHI Criterion-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. The Applicant states that the Project satisfies the LIHI downstream fish passage criterion in ZOEs 1 and 2 by meeting alternative standard D-2, and in ZOE 3 by meeting alternative standard D-1. Downstream reaches typically qualify for D-1 since once downstream of a bypassed reach and powerhouse there are no further Project-related barriers to passage.

In the USDOI May 20, 2005 letter, the agency stated no fishways were required for downstream passage. However, USDOI did request reservation of its authority to prescribe downstream fish passage devices in the future.

EBH maintains trashracks with 1-inch clear spacing on a year-round basis to exclude most adult game fish and other fish from potential entrainment. No other fish passage related measures were requested by any resource agencies for downstream fish passage at the Project. The trashrack as-builts were submitted to FERC on December 12, 2014. FERC issued an order approving the as-builts on March 9, 2015[85].

There is no downstream fish passage monitoring associated with the operation of the Project. No downstream fish passage barriers or migratory fish management issues have been found below the dam and powerhouse.

The FEA states that downstream passage of warm-water species residing in Lamica Lake was not desirable by agencies, as the warm-water species might compete with the cold-water species downstream of the dam. However, to support state stocking of trout downstream of the Project, a feasibility study was conducted[86]

[83] Ibid.
[84] USDOI - https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=10570687
[85] https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=13796654
[86] Op. cit. footnote 81

to design and install a fish stocking tube that allows NYSDEC to directly stock trout into the tailrace. The fish stocking tube was included in USDOI's 10(j) recommendation, the OOS and as Condition 13 of the WQC and was subsequently installed.

My review found no license deviations nor any issues pertaining to downstream fish passage. Given the lack of migratory species and current resident fishery management priorities, it is my recommendation that the Project meets the D-1 and D-2 standards in applicable ZOEs and therefore, satisfies the downstream fish passage criterion.

E. LIHI Criterion-Shoreline and Watershed Protection

The shoreline and watershed protection criterion is designed to ensure that sufficient action has been taken to protect, mitigate and enhance environmental conditions on shoreline and watershed lands associated with the facility. The Applicant states the LIHI shoreline and watershed protection criterion in ZOE 1, 2 and 3 are satisfied by meeting alternative Standard E-2.

No shoreline management requirements were recommended by agencies for the Project. The FEA concluded that the river is not currently considered impaired or threatened and that the impoundment fluctuation limit of 0.25 feet will help to minimize erosion. Reduced water level fluctuations in the impoundment will also protect wetland, riparian, and littoral habitat in the Project vicinity.

The Town of Malone is located some 2½ miles upstream of the Project. Land use in the Project vicinity includes low density residential, commercial, recreation, agriculture, and forestry. Lands in the immediate vicinity of the Project are designated for low intensity and low-density development patterns. Development in the area occurs primarily along major roads with a predominance of residential and small commercial uses.

The FEA stated there is no evidence that Project operation has contributed to existing shoreline erosion. However, license article 401 required a Sediment Management Plan (SMP). EBH submitted the final SMP on October 29, 2012. FERC approved the plan on December 12, 2012[87]. As discussed in Section 7.B, the plan requires sediment flushing when inflows exceed 700 CFS at the upstream Chasm Project. The SMP required EBH to submit an annual Sediment Management Report (SMR) to NYSDEC from 2012-2016 detailing sediment flushing activities.

My review found no license deviations nor any issues pertaining to the Project's shoreline and watershed protection activities and agency recommendations for sediment management. Based on my review, it is my recommendation that the Project meets Standard E-2 and satisfies the shoreline and watershed protection criterion.

F. LIHI Criterion-Threatened and Endangered Species

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 Applicant states the LIHI threatened and endangered species criterion is satisfied in ZOE 1, 2 and 3 by meeting alternative standard F-3, recovery planning and action.

[87] https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=13130688

There are no specific requirements for threatened or endangered species protection in the FERC license or WQC for the Project. Based on information received from the USFWS's New York Field Office on January 30, 2019, regarding a request for information on RTE species (Appendix A, page A-4), it appears that the northern long-eared bat (*Myotis septentrionalis*) may potentially occur within the Project area. There are no critical habitats located within the Project area.

EBH also consulted with NYSDEC's Natural Heritage Program for a list of threatened and endangered species that may occur in the vicinity of the Project (Appendix A, page A-9). In a letter dated January 29, 2019, NYSDEC indicated that there are no records of state listed animals or plants, significant natural communities or other significant habitats, on or in the immediate vicinity of the Project (Appendix A, page A-11).

The USFWS has not adopted a formal recovery plan for the northern long-eared bat. On January 14, 2016, the USFWS published the final 4(d) rule identifying prohibitions for the protection of northern long-eared bats[88]. Operations of the Project, especially with regard to tree clearing from June 1 through July 31, adhere to the prohibitions outlined in the final 4(d) rule.

My review found no license deviations nor any issues pertaining to the Project's threatened and endangered species protection activities. Based on the information provided, and the Applicant's adherence to Northern long-eared bat recovery efforts, it is my recommendation that the Project satisfies the threatened and endangered species protection criterion.

G. LIHI Criterion-Cultural Resource Protection

The cultural and historic resource protection criterion is designed to ensure that the facility does not negatively impact approved state, provincial, federal, and recognized tribal plans designed for the protection, enhancement and mitigation to cultural and historic resources. The Applicant states the LIHI cultural and historic resources criterion in ZOEs 1, 2 and 3 is satisfied by meeting alternative standard G-2.

On May 5, 2006, FERC, the Advisory Council on Historic Preservation, and the New York State Historic Preservation Officer (SHPO) executed a PA[89] for managing historic properties potentially affected by issuing a subsequent license for the Project. The PA stipulates that EBH conduct surveys in the archaeologically sensitive areas (the dam, powerhouse, gatehouse, and intakes, and the former High Falls No. 1 powerhouse ruins) and prepare a HPMP to protect historical and cultural resources.

Per license article 405, EBH developed the HPMP in consultation with the SHPO and filed the HPMP on August 26, 2009. FERC issued an order modifying and approving the HPMP on August 12, 2010[90]. On December 6, 2011, EBH filed proposed amendments to the HPMP and on September 11, 2012, FERC issued an order approving EBH's amendments to the HPMP[91]. This amended HPMP required EBH to file a report with FERC every ten years regarding archaeological site monitoring performed by a qualified professional.

On March 20, 2017, in consultation with SHPO and based on results of a 2016 shoreline monitoring and geomorphological analysis, EBH submitted a request to remove the biennial shoreline archaeological

[88] https://www.fws.gov/midwest/endangered/mammals/nleb/4drule.html
[89] https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=11075688
[90] https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=12412730
[91] https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=13111253

monitoring requirement from the HPMP[92]. The analysis determined that the shoreline is stable and the only locations where any erosion was documented are on steep, wooded slopes at the upper end of Lamica Lake with very low archaeological potential. In addition, the 0.25-foot impoundment fluctuation and lack of any archaeological sites having been found along the shoreline, indicate that Project operations are unlikely to have any impacts even if sites were found in the future. FERC approved the amended HPMP on April 14, 2017[93]. The requirement to monitor the High Falls No. 1 powerhouse archaeological site every ten years, and the annual reporting requirement remain in effect.

The Project is in compliance with all license requirements regarding cultural resource protection. My review found no license deviations nor any issues pertaining to the Project's cultural and historical resources protection activities. Based on the information provided and the Project's adherence to the HPMP, it is my recommendation that the Project satisfies the cultural and historic resources protection criterion.

H. LIHI Criterion-Recreation

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 ZOEs 1, 2 and 3 is satisfied by meeting alternative standard H-2.

License article 404 requires EBH to monitor recreation use at the Project, including measures described in the PSA, to determine if recreation needs are being met. The Project has a car-top boat launch to access the impoundment, a downstream angler access trail and informal parking, a shoreline fishing area along the Project's driveway and a recreational trail.

EBH files a Recreation Monitoring Report (RMR) with the FERC every 6 years. The NYSDEC and USFWS are given 30 days to comment on and make recommendations to the report. The RMR includes:

- Annual recreation use figures;
- A discussion of whether recreation needs are being met at the project;
- A description of the methodology used to collect all data;
- A proposal to provide additional recreation facilities at the project if the monitoring results indicate such a need;
- Documentation of agency consultation, and
- Specific descriptions of how the agency comments are accommodated by the report.

The most recent RMR was filed on April 1, 2015[94]. The report states, *"… Current recreational use of the Project is light to moderate, and public access areas appear sufficient for the current usage by recreationists. There have been no indications that any overcrowding has occurred at any of the existing recreational facilities associated with the Project. Given prevailing population and demographic trends the existing recreational amenities associated with the Project appear to be adequate for the recreational demand in the area for the foreseeable future. Brookfield believes that the existing recreational areas at the Macomb Project are meeting public needs, and is not recommending or proposing any additional recreational amenities or upgrades to the existing areas at this time …"* On April 14, 2015, FERC approved the recreation report[95].

[92] https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=14526287
[93] https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=14560166
[94] https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=13825161
[95] https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=13839567

The Project is in compliance with the license recreational access, accommodation, and facility conditions. My review found no license deviations nor any issues pertaining to the Project's recreational resources activities. Therefore, it is my recommendation that the Project meets Standard H-2 and satisfies the recreational resources criterion.

8. RECOMMENDATION

A review of the certification application and supporting documentation, and a search of the FERC docket since the last relicensing shows EBH has successfully complied with the Project's FERC license articles. However, since issuance of the current license in June of 2006, EBH has requested numerous time extensions to satisfy license requirements, at times with objections by various agencies. Given that all construction-related requirements associated with the relicensing are completed, it is my expectation that going forward the need for time extensions will be dramatically reduced if not totally eliminated. Other than the one impoundment level deviation occurring on March 5, 2017, no other FERC compliance issues were found. As discussed in the sections above, the Project satisfies all of the LIHI criteria.

Based on my review, I recommend issuing a five-year LIHI Certificate to EBH for the Macomb Falls Project with no conditions.

Gary M. Franc

FRANC LOGIC

Licensing & Compliance
Hydropower Consulting & Modeling

APPENDIX A

DOCUMENTS

Brookfield

Brookfield Renewable
184 Elm Street
Potsdam, NY 13676

Tel 315.267.1020
www.brookfieldrenewable.com

Submitted Electronically only

January 3, 2019

Erin Burns
New York State Department of Environmental Conservation
P.O. Box 296
1115 NYS Route 86
Ray Brook, NY 12977-0296

Subject: **Macomb Hydroelectric Project (FERC No. 7321)**
Low Impact Hydropower Institute Certification
Water Quality Certificate Verification

Dear Ms. Burns:

Erie Boulevard Hydropower, L.P. (Erie) is applying for Low Impact Hydropower Institute (LIHI) certification for the Macomb Hydroelectric Project (FERC No. 7321). This Project is located on the Salmon River in the Town of Malone, Franklin County, New York.

Erie is requesting confirmation from the New York State Department of Environmental Conservation stating that the 401 Water Quality Certificate issued for the operation of the Macomb Hydroelectric Project on March 22, 2006 is still valid. Please provide this confirmation by reply to this letter via letter or email.

Erie respectfully requests a response within 30 days of the date of this letter. Thank you in advance for your assistance, and if you have any questions, please do not hesitate to contact me at (315) 267-1036 or by email at Danny.Maguire@brookfieldrenewable.com.

Sincerely,

Daniel Maguire, P.E.
Compliance Manager
North Atlantic Operations

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Permits, Region 5
1115 State Route 86, PO Box 296, Ray Brook, NY 12977-0296
P: (518) 897-1234 | F: (518) 897-1394
www.dec.ny.gov

April 22, 2019

Mr. Daniel Maguire, P.E.
Compliance Manager, North Atlantic Operations
Brookfield Renewable
184 Elm Street
Potsdam, NY 13676

RE: Macomb Hydroelectric Project (FERC No #7321)
Low Impact Hydropower Institute Certification
Water Quality Certificate Verification
DEC #5-1648-00200/00001
Malone (T), Franklin Co.

Dear Mr. Maguire:

We received your letter dated January 3, 2019 in which you requested confirmation that the New York State Department of Environmental Conservation (DEC) 401 Water Quality Certificate for the above referenced hydro facility is still valid.

The Water Quality Certification was issued pursuant to Section 401 of the Federal Water Pollution Control Act (33 USC 1341) for this project effective March 22, 2006. The expiration date is coincident with the expiration date of the license issued by the Federal Energy Regulatory Commission (FERC) for FERC Project #7320.

The Water Quality Certification validity remains subject to the project complying with the special conditions detailed in the Water Quality Certificate.

Thank you for contacting us regarding this matter. If you have any questions, please feel free to contact me at (518) 897-1234 or erin.burns@dec.ny.gov.

Sincerely,

Erin L. Burns

Erin L. Burns
Deputy Regional Permit Administrator

ec: Jim Pinheiro, Bureau of Ecosystem Health

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New York Ecological Services Field Office
3817 Luker Road
Cortland, NY 13045-9385
Phone: (607) 753-9334 Fax: (607) 753-9699
http://www.fws.gov/northeast/nyfo/es/section7.htm

In Reply Refer To:
Consultation Code: 05E1NY00-2019-SLI-0733
Event Code: 05E1NY00-2019-E-02227
Project Name: Macomb Project

January 30, 2019

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 et seq.). This list can also be used to determine whether listed species may be present for projects without federal agency involvement. New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list.

Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the ESA, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC site at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list. If listed, proposed, or candidate species were identified as potentially occurring in the project area, coordination with our office is encouraged. Information on the steps involved with assessing potential impacts from projects can be found at: http://www.fws.gov/northeast/nyfo/es/section7.htm

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/

eagle_guidance.html). Additionally, wind energy projects should follow the Services wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

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

Attachment(s):

- Official Species List

Official Species List

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

This species list is provided by:

New York Ecological Services Field Office
3817 Luker Road
Cortland, NY 13045-9385
(607) 753-9334

Project Summary

Consultation Code: 05E1NY00-2019-SLI-0733

Event Code: 05E1NY00-2019-E-02227

Project Name: Macomb Project

Project Type: DAM

Project Description: The Macomb Hydroelectric Project is applying to the Low Impact Hydropower Institute (LIHI) for a certification of their project, and is looking for information regarding rare, threatened or endangered species that may occur in the project area. LIHI requires documentation of a finding of no negative effects or documentation that the facility is in compliance with relevant conditions in the species recovery plans.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/44.875380996379135N74.30421338093026W

Counties: Franklin, NY

Endangered Species Act Species

There is a total of 1 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Critical habitats

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

Caley, Katherine

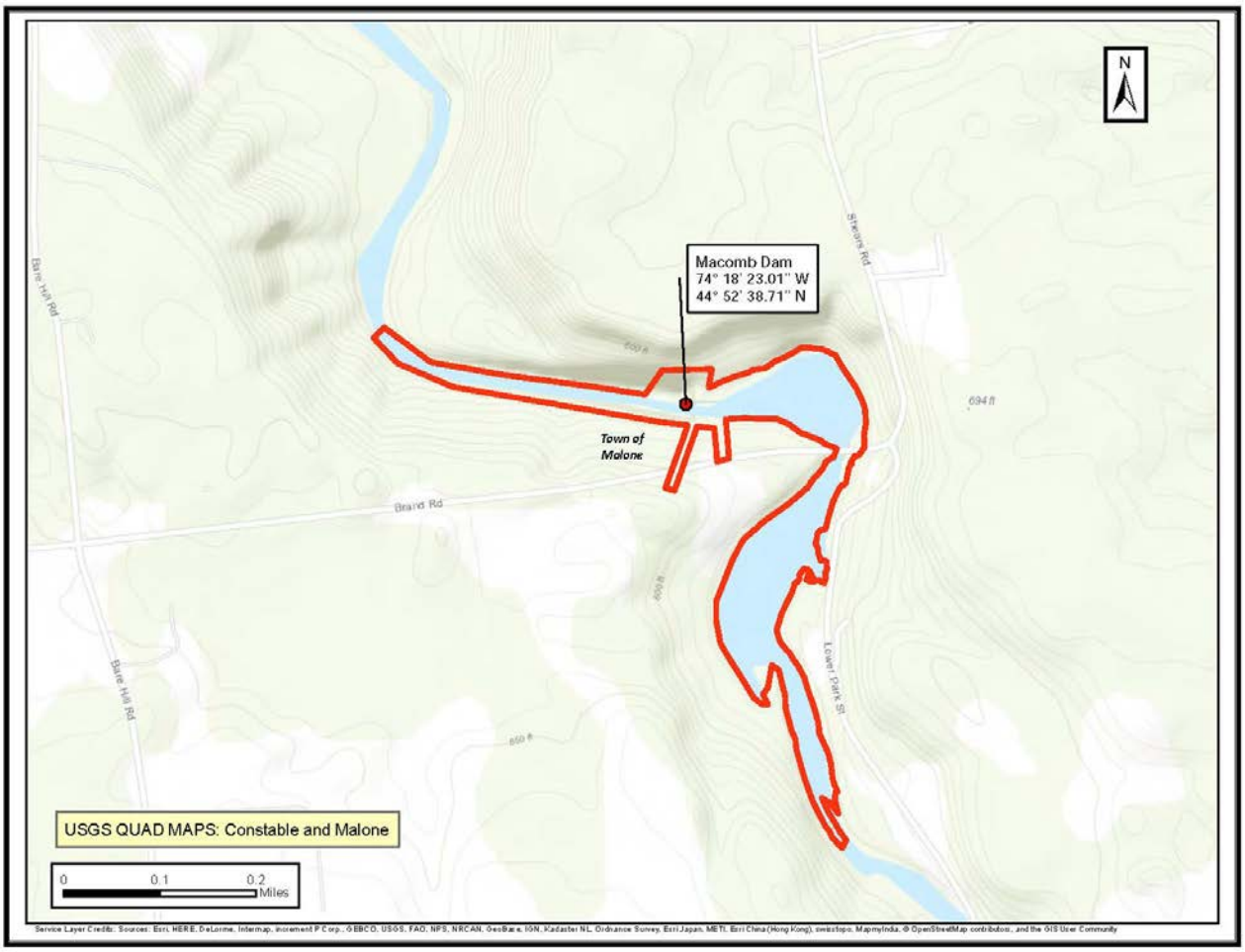
From: naturalheritage@nynhp.org
Sent: Thursday, January 03, 2019 6:33 PM
To: Caley, Katherine
Subject: Confirmation of your submitted request to New York Natural Heritage

Submission ID: 2903
Submitted on Thursday, January 3, 2019 - 18:33 Submitted values are:

Company, Organization, or Agency: HDR, Inc.
Requestor Name: Katherine Caley
Requestor Address (Street/PO Box): 1304 Buckley Road, Suite 202 Requestor City: Syracuse Requestor State: New York Requestor Zip Code: 13212 Requestor Telephone #: 315-414-2213 Requestor Email: Katherine.Caley@hdrinc.com Project Type: hydroelectric facility/project Project Name: Macomb LIHI Consultation Project Applicant: Erie Boulevard Hydropower Project County: Franklin Town (Franklin County): Malone Project Summary:
Erie is presently working with the Low Impact Hydropower Institute (LIHI) to certify the Macomb Hydroelectric Project (FERC No. 7321) as a low impact project. In preparing the application for LIHI certification, Erie must update or confirm consultation with resource agencies with respect to the presence of threatened or endangered species within the vicinity of the hydroelectric development. Per the request from LIHI, Erie respectfully requests information on the presence of threatened or endangered species within the vicinity of the above-listed projects.

As a matter of background, the license from the Federal Energy Regulatory Commission (FERC) was issued for this Project on June 23, 2006. Project operations and environmental protection measures at this Project have been largely determined by a comprehensive Offer of Settlement that Erie developed in conjunction with the New York State Department of Environmental Conservation and other entities in 2004. The licensing processes for this Project included consultation with resource agencies regarding threatened and endangered species.

Current Land Use: The site is currently developed for the primary purpose of hydroelectric energy production on the Salmon River Tax parcel number:
Latitude: 44.877
Longitude: -74..306
Street Address of Project:
Project Notes:


N
Macomb Dam
74° 18' 23.01" W
44° 52' 38.71" N
Town of Malone
Brand Rd
Barre Hill Rd
Stevens Rd
Lower Dam St
694 ft
USGS QUAD MAPS: Constable and Malone
0
0.1
0.2
Miles

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Fish and Wildlife, New York Natural Heritage Program
625 Broadway, Fifth Floor, Albany, NY 12233-4757
P: (518) 402-8935 | F: (518) 402-8925
www.dec.ny.gov

January 29, 2019

Katherine Caley
HDR, Inc.
1304 Buckley Road, Suite 202
Syracuse, NY 13212

Re: Macomb LIHI Consultation
County: Franklin Town/City: Malone

Dear Ms. Caley:

In response to your recent request, we have reviewed the New York Natural Heritage Program database with respect to the above project.

We have no records of rare or state-listed animals or plants, or significant natural communities at the project site or in its immediate vicinity.

The absence of data does not necessarily mean that rare or state-listed species, significant natural communities, or other significant habitats do not exist on or adjacent to the proposed site. Rather, our files currently do not contain information that indicates their presence. For most sites, comprehensive field surveys have not been conducted. We cannot provide a definitive statement on the presence or absence of all rare or state-listed species or significant natural communities. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other resources may be required to fully assess impacts on biological resources.

This response applies only to known occurrences of rare or state-listed animals and plants, significant natural communities, and other significant habitats maintained in the Natural Heritage database. Your project may require additional review or permits; for information regarding other permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the NYS DEC Region 5 Office, Division of Environmental Permits, as listed at www.dec.ny.gov/about/39381.html.

Sincerely,

Heidi Krahling
Environmental Review Specialist
New York Natural Heritage Program

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