

June 2019

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



Yaleville Project P-9222 - View Looking Across Forebay at Forebay Retaining, Spillway and Stoplog Gates



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1. BACKGROUND

The Yaleville Hydroelectric Project (Project) is located on the Raquette River in St. Lawrence County, New York (latitude 44.766°, longitude -74.998°) and licensed with the Federal Energy Regulatory Commission (FERC) as Project No. 9222.

The Project is owned and operated by Erie Boulevard Hydropower, L.P. (EBH)¹, a wholly owned subsidiary of Brookfield Renewable Energy Group (BREG). FERC's Final Environmental Assessment (FEA)² was issued on August 20, 1991. A Water Quality Certificate (WQC) was not issued by the New York State Department of Environmental (NYSDEC), since on February 4, 1992, the agency was denied late intervention in the process by FERC.

On February 10, 1992, the FERC issued a minor 50-year license³, back dated effective on February 1, 1982 to Niagara Mohawk Power Corporation (NMPC). The license expires on January 31, 2032. On June 3, 1994, based on review and comments from the public and resource agencies, FERC amended the license to a 30-year license effective February 1, 1992, expiring on January 31, 2022.

On December 6, 1996, FERC amended license Article 404⁴ to operate and maintain the Project's existing fishway. On July 26, 1999, FERC approved Niagara Mohawk Power Corp (NMPC) transfer of ownership of the Project to EBH. Lastly, on October 11, 2017, based on a request by EBH, the license term for the Project was amended by FERC to expire on December 31, 2033, in order to best align the license expiration date of the Project with those of the EBH's other hydro assets on the Raquette River (the Upper, Middle, and Lower Raquette River Projects, Piercefield Project, and the Carry Falls Project)⁵. This decision additionally terminated the relicensing requirements for the Project that began with the notice to file for relicensing on March 30, 2017.⁶

The Project was originally constructed in 1903 for the sole purpose of energy production. Over the years major improvements were made, culminating in 1987 with installation of new head gates and a head gate lifting frame at the intake. The Project's total installed capacity of 0.70 MW is estimated to produce an average annual generation (AAG) of 3,800 MWh which corresponds to an annual plant factor of 62.0%.

EBH submitted an application for LIHI certification of the Project on March 12, 2019. On March 27, 2019, LIHI notified EBH that the intake review for the Project was complete. That review determined that some information was missing, and the application needed modifications. EBH supplied a revised application on April 26, 2019. On June 6, 2019, I committed to perform the certification review for the Project.

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² FEA is contained in license- <u>https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=3457813</u> 3 FERC License - <u>https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=3457813</u>

⁴ https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=10764314

⁵ https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=14708633

⁶ Notice of intent - https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=14539369



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2. RAQUETTE RIVER BASIN

The Raquette River, with a total drainage basin of 1,269 square miles at its mouth, originates in the Adirondack highlands at Blue Mountain Lake, Raquette Lake and Long Lake. The river flows generally north-northwest for more than 146 miles, through Potsdam, New York and empties into the St. Lawrence River, near Massena, New York into the St. Lawrence River/Seaway at the St. Regis Indian Reservation in Franklin County. The area experiences cold, snowy winters and short summers. Annual precipitation is about 40 inches. As the river flows north, it transitions from cold water habitat to a cool water aquatic fishery as the river reaches the lower gradients. Most of the basin is sparsely populated, with much of the land forested and brush land.

In the Raquette River headwaters, EBH's Piercefield development (FERC No. 7387) at RM 88.5 releases flow into the Carry Falls impoundment which impounds 877 square miles (SQMI) of drainage (see Figure 1). Carry Falls' seasonal storage pond is the largest on the Raquette River and is used to store and regulate the majority of this upstream flow through the remaining Upper Raquette River Project, LIHI #14A (URRP) developments and EBH's downstream Middle Raquette River Project, LIHI #14B (MRRP) developments.



Figure 1 - Location Map



EBH's URRP developments include:

- Carry Falls Project, located at RM 68 and licensed as FERC No. 2060.
- Stark Development, located at RM 66 and licensed as FERC No. 2084.
- Blake Development, located at RM 62 and licensed as FERC No. 2084.
- Rainbow Falls Development, located at RM 56 and licensed as FERC No. 2084.
- South Colton Development, located at RM 52 and licensed as FERC No. 2084.

EBH's MRRP developments include:

- Higley Development, located at RM 47 and licensed as FERC No. 2320.
- Colton Development, located at RM 45 and licensed as FERC No. 2320.
- Hannawa Development, located at RM 39 and licensed as FERC No. 2320.
- Sugar Island Development, located at RM 38 and licensed as FERC No. 2320.

Flows downstream of Sugar Island travel through:

- The Potsdam Project (FERC-2869) at RM 35, owned by the Village of Potsdam.
- The Sissonville Limited Partnership's (SLP) Sissonville Project (FERC-9260) at RM 33.
- EBH's Hewittville Project (FERC-2499) at RM 32.
- EBH's Unionville Project (FERC-2498) at RM 31.

All of these projects have individual dams and impoundments and operate in a run of river (ROR) mode.

Flow below Unionville enters EBH's Lower Raquette River Project, LIHI #14C (LRRP) developments. The LRRP developments include:

- Norwood Development, located at RM 28 and licensed as FERC No. 2330.
- East Norfolk Development, located at RM 23.5 and licensed as FERC No. 2330.
- Norfolk Development, located at RM 22.5 and licensed as FERC No. 2330.
- Raymondville Development, located at RM 20 and licensed as FERC No. 2330.

The Yaleville Project is located at RM 25 about 3 miles downstream of the Norwood development and 1.5 miles upstream of the East Norfolk development.

Downstream fish passage is provided at all the upstream facilities with the exception of Carry Falls, Hewittville, and Unionville. Downstream fish passage is scheduled for future construction at Hewittville and Unionville in 2020. Seasonal upstream eel passage is provided at all downstream dams.

3. PROJECT DESCRIPTION

The Project's total installed capacity of 0.70 MW is estimated to produce an AAG of 3,800 MWh which corresponds to an annual plant factor of 62.0%.

The Project dam is located at RM 25.5 on the Raquette River in the Town of Norfolk in St. Lawrence County, New York. An aerial view of the Project is shown in Figure 2.

The Project was originally constructed in 1903 for the sole purpose of energy production. Over the years major improvements were made as follows:

• In 1919, a new concrete flume was constructed to replace the original wooden flume.





- In 1921, the use of the old water wheels was discontinued and the construction of the present hydro plant was started. Additionally, a concrete dam was built to replace the log dam.
- In 1977, the forebay was constructed to replace the abandoned Martin Paper Company flume headworks and the turbine room floor was overlaid.
- In 1978, the spillway and canal walls were reconstructed.
- In 1982, the tailrace stop log structure and tailrace were repaired.
- In 1985-1986, concrete repairs and improvements to dewatering facilities were completed.
- In 1986-1987, new head gates and a head gate lifting frame were installed at the intake.

There are no other major construction upgrades planned at the Project.



Figure 2 - Aerial View of Project

The major Project features include:

- A concrete gravity overflow dam about 170 feet long and 13 feet high, engineered for 2-foot-high flashboards;
- A concrete gravity flood gate structure, 75 feet long, composed of three head gates 15 feet long and 10 feet high with intermediate piers about 3 feet wide and 15 feet high;
- One electrically-operated lift gate for water surface control, about 11 feet long by 10 feet high;
- A concrete and brick powerhouse on the southwest bank, 66 feet long, 37 feet wide and 43 feet high, equipped with two dissimilar open flume Francis units;
- A forebay intake canal about 60 feet wide and 275 feet long, connecting with the southwest end of the overflow dam;
- A tailrace about 25 feet wide and 140 feet long;
- A 23 kilovolt (kV) transformer with a 70 feet long line connecting the powerhouse to a transmission line.

The Project's impoundment extends about 1.8 miles upstream and creates a surface area of 95 acres and a gross storage volume of about 720 acre-feet (ACFT), at a normal water surface elevation of 305.2 feet mean sea level (FTMSL). The normal operating range is three feet, from 305.2 FTMSL with flashboards installed to 303.2 FTMSL at spillway crest. The maximum hydraulic discharge capacity of the spillway is about



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20,000 cubic feet per second (CFS), at a maximum operating headpond elevation of 310.0 FTMSL (top of the left abutment retaining wall).

Water is conveyed to the intake via a forebay flume that is 60 feet wide and 275 feet long. The intake structure is integral to the upstream side of the powerhouse and has 1-inch clear spaced trashracks (see Figure 3). EBH releases approximately 36 CFS from the rectangular weir fishway located in the forebay flume into a 3-foot-deep plunge pool which empties into the 425-foot-long bypassed reach (see Figure 4). The fishway begins operation after spring runoff and flashboard installation (typically May 15) until approximately November 1 of each year.



Figure 3 - Intake with Angled Trashracks





Figure 4 - Plunge Pool and Upper End of Bypassed Reach

The powerhouse contains two vertical open flume Francis turbines. Turbine 1 has a design output capacity of 0.55 MW at a design head of 14 feet and a speed of 120 revolutions per minute (RPM). Turbine 2 has a design output capacity of 0.25 MW at a design head of 14 feet and a speed of 180 RPM.

Turbine 1's maximum and minimum (efficient) hydraulic capacities are 705 CFS and 659 CFS. Turbine 2 operates at a constant hydraulic capacity of 359 CFS.

Direct-connected generators are attached to each turbine. Generator 1 has a maximum output of 0.55 MVA, operated at a power factor of 0.9, resulting in maximum power output of 0.5 MW. Generator 2 has a maximum output of 0.25 MVA, operated at a power factor of 0.9, resulting in maximum power output of 0.25 MVA. There are currently no plans for turbine or generator upgrades in the near future.

The drainage area at the Project dam is 1,046 SQMI. There are two USGS gages on the Raquette River in the vicinity of the Project:

- USGS Gage 04267500 Raquette River at South Colton, NY with a drainage area of 937 SQMI. This gage is located downstream of the South Colton Development and upstream of the Project.
- USGS Gage No. 04268000 Raquette River at Raymondville, NY with a drainage area of 1,125 SQMI. This gage is located downstream of the Project and the Raymondville Development.

I performed a streamflow regression analysis to select the exponent to apply to the drainage area ratio of the two gages that would best estimate flows at the Project based on flows from either gage. The resulting exponent was 0.9090. Since the Raymondville gage has a longer period of record (POR), from November 29, 1943 to June 10, 2019, I used this gage. The inflow at the Project was estimated using the following equation:



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 $Y = X (1,046/1,125) ^ 0.9090$ or Y = 0.936 X, where:

- Y is the estimates inflow at the Project.
- X is the recorded flow at the Raymondville gage.
- 1,046 is the drainage area at the Project.
- 1,125 is the drainage area at the Raymondville gage.

The Project's resulting POR average daily inflow is 2,044 CFS. Based on a flow duration analysis using these POR daily flows, the total hydraulic powerhouse flow plus fishway flow (705+359+36) or 1,100 CFS is exceeded 76 percent of the time, indicating that spillway flow occurs about ³/₄ of the time.

A frequency analysis using these POR daily flows indicates the 100-year daily flood flow is 12,190 CFS. The highest historical daily flow of 12,823 CFS occurred on May 4, 2011.

The Project is operated in a ROR mode. Due to the relatively constrained operating flow range of the turbines and the current installed hydraulic capacity of the turbines, an electrically operated lift gate is needed to maintain a stable impoundment level such that significant flow into the bypass reach occurs a majority of the time.



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4. REGULATORY SUMMARY

On May 21, 1985, NMPC filed a preliminary permit (PP) application for the Project based on a FERC ruling that the unlicensed Project was located on a navigable waterway and was therefore not exempt from FERC licensing. On November 7, 1985, FERC issued a 3-year PP to NMPC for the Project which would eventually lead to a filing of an application for license on October 26, 1988.

In the license application, NMPC proposed to operate the existing unlicensed powerhouse, with an installed capacity of 700 kilowatts (kW) and to additionally construct a new powerhouse with an installed capacity of 800 kW.

The U.S. Department of the Interior (USDOI) and the New York Department of Environmental Conservation (NYSDEC) filed late motions to intervene. USDOI stated that, because of recent changes in the FERC's administrative procedures, it should be granted party status to protect its interests. USDOI included a prescription for fishways and did not object to issuance of the license. The NYSDEC requested that it be granted party status. On February 4, 1992, the USDOI was granted late intervention and the NYSDEC was denied late intervention. Therefore, no water quality certification (WQC) was issued for the Project. On February 10, 1992, the FERC issued a new 50-year license to NMPC, back dated to be effective on February 1, 1982. The license expires on January 31, 2032.

On June 3, 1994, based on review and comments from the public and resource agencies, FERC amended the license to a 30-year license effective February 1, 1992 expiring on January 31, 2022 (see Appendix A, page A-1). The new license required NMPC to start operating the Project in a ROR mode prior to constructing the new powerhouse. FERC also stated that the USDOI's new fishway requirements at the proposed new powerhouse may require FERC to modify or add appropriate license articles to withdraw authorization of the proposed project expansion. Ultimately, the second powerhouse was never built. Instead the electronically controlled lift gate was installed to maintain a stable impoundment level under a ROR operation.

On December 6, 1996, FERC amended license Article 404 to operate and maintain the Project's existing fishway plunge pool. On July 26, 1999, FERC approved NMPC's transfer of ownership of the Project to EBH.

Lastly, on October 11, 2017, based on a request by EBH, the license term for the Project was amended by FERC to expire on December 31, 2033, in order to best align the license expiration date of the Project with those of the EBH's other hydro assets on the Raquette River.

5. ZONES OF EFFECT (ZOEs)

The Project has a total of three ZOEs defined from upstream to downstream. ZOEs 1 through 3 are shown in Figure 5.

The Project has three zones defined as:

- ZOE 1 From the head of the impoundment, downstream approximately 1.8 miles to the dam,
- ZOE 2 From the dam, downstream into the bypassed reach approximately 425 feet long, and,
- ZOE 3 From the powerhouse tailrace to the confluence of the tailrace and bypass reach, downstream approximately 0.1 miles.



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Figure 5 - ZOEs 1 to 3

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



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

Ta	Table 3 - Yaleville - ZOE 3 Alternative Standards						
Criterion		Alternative Standards					
		1	2	3	4	Plus	
A Ecological Flow Regimes		Х					
В	Water Quality	Х					
С	Upstream Fish Passage		Х				
D	Downstream Fish Passage	Х					
Е	Watershed and Shoreline Protection		Х				
F	Threatened and Endangered Species Protection			Х			
G	Cultural and Historic Resources Protection	Х					
Η	Recreational Resources		X				

6. LIHI CERTIFICATION PROCESS

EBH submitted an application for certification of the Project on March 12, 2019. On March 27, 2019, LIHI notified EBH that the intake review for the Project was complete. That review determined that some information was missing, and the application needed modifications. EBH supplied a revised application on April 26, 2019. On June 6, 2019, I committed to perform the certification review for the Project.

A. Comment Letters

On May 1, 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 this application. Comments that are directly tied to specific LIHI criteria (flows, water quality, fish passage, etc.) will be most helpful, but all comments Comments may be submitted to will be considered. the Institute bv e-mail at comments@lowimpacthydro.org with "Yaleville 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 30, 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 project description and complete application can be found HERE*⁷." No comments were received.

B. Agency Correspondence

On May 1, 2019, LIHI⁸ emailed contacts⁹ 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 (<u>www.lowimpacthydro.org</u>) 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 Yaleville Hydroelectric Projects located in St. Lawrence County, New York. The application reviewer, Peter Drown¹⁰, 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 <u>https://lowimpacthydro.org/join-our-list/</u>."

On June 13, 2019, I called Daniel Maguire at EBH concerning documents pertaining to FERC licensing. On June 18, 2019, Mr. Maguire emailed me a copy of the June 3, 1994 amended FERC license which is contained in Appendix A.

On June 14, 2019, I called Jessica Hunt at the NYSDEC to discuss the lack of a WQC for the Project. Ms. Hunt stated that since no WQC was ever issued, the NYSDEC cannot now issue a statement that water quality issues at the Project are being satisfied.

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 February 10, 1992, the date of FERC issuing the original license, through June of 2019, for FERC docket number P-9222.

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's operation and water release policy.

The application states that the Project satisfies the LIHI flows criterion in ZOE 1 and ZOE 3 by meeting alternative standard A-1¹¹ and in ZOE 2 by meeting alternative standard A-2.¹² ZOE 1 is the impoundment, ZOE 2 is the bypassed reach, and ZOE 3 is the reach downstream of the powerhouse.

⁷ Project Application on LIHI website - https://lowimpacthydro.org/wp-content/uploads/2019/04/Yaleville-LIHI-Application-Final.pdf

⁸ Maryalice Fischer – LIHI Certification Program Director - mfischer@lowimpacthydro.org - 603-664-5097 office - 603-931-9119 cell

⁹ Jessica Hart – <u>Jessica.Hart@dec.ny.gov</u>; Nicholas Conrad - <u>Nick.Conrad@dec.ny</u>; Robyn Niver - <u>Robyn_Niver@fws.gov</u>; Steve Patch - <u>Stephen_Patch@fws.gov</u> ; Michael Lynch - <u>Michael.Lynch@parks.ny.gov</u>.

¹⁰ The original reviewer assigned to the application. It was subsequently reassigned to Mr. Gary Franc.

¹¹ NA.

¹² Agency recommendation.



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The NYSDEC manages the Raquette River between Raymondville and South Colton developments, which includes the Project river reach, as a mixed warm-water/cool-water fisheries resource. The present fishery within the Raquette River comprises a diverse array of both game fish and pan fish.

The FERC license includes flow release requirements and water level controls recommended by the USFWS. The Final Environmental Assessment (FEA)¹³ was incorporated into the February 10, 1992 FERC license. The FEA states that ROR operations minimize impoundment fluctuations and reduce the potential for erosion of the impoundment shoreline.

License Article 402 requires the Project to operate in a ROR mode while minimizing the fluctuation of the impoundment elevations at all times for the protection of water quality and aquatic resources. However, Article 402 does not define an allowable fluctuation limit. EBH maintains a headpond level sensor in the forebay to monitor the impoundment elevation. License Article 403 required the installation of streamflow monitoring equipment in the Project's impoundment and Raquette River to monitor compliance with ROR operations. EBH installed a headpond level sensor and staff gage in the Project tailrace. BREG's North America System Control Center, located in Marlborough, MA, continuously monitors headwater levels, and upstream and downstream river flows. The monitoring includes measures that alert EBH when pond levels are decreasing or increasing. These alerts initiate response measures by EBH to make operational adjustments to control the pond level. While all impoundments can qualify for the A-1 Standard, A-2 can also be considered appropriate for the impoundment given these requirements. Similarly, for the downstream reach given that the Project is operated in ROR that reach also qualifies for Standard A-1.

The bypassed reach is approximately 425 feet in length and 225 feet wide. It is separated from the intake forebay by a forebay retaining wall, and from the tailrace by a tailrace retaining wall. To facilitate downstream fish passage, Article 404, amended December 10, 1996, requires the release of a downstream fishway flow of 36 CFS from the rectangular weir located in the forebay retaining wall immediately upstream of the powerhouse intake. The fishway operates and releases the minimum fishway flow after spring runoff occurs and flashboards have been reinstalled, about May 15, until approximately November 1. This release provides flow largely to the portion of the bypass near the tailrace retaining wall (south side of bypass reach).

Due to the relatively constrained operating flow range of the turbines and the installed hydraulic capacity of the turbines, an electrically operated lift gate is needed to maintain a stable impoundment level such that significant flow into the northern portion of the bypass reach occurs a majority of the time.

The Applicant states that 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. EBH maintains records of these conditions. In the event of a deviation from established minimum flows or impoundment levels, EBH files documentation with FERC detailing the reasons for the deviation.

A review of the FERC docket indicates that three ROR deviations and/or impoundment fluctuation deviations have occurred since issuance of the amended license on December 6, 1996. These include:

¹³ FEA is contained in license- <u>https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=13710137</u>

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- On August 11, 2003, FERC stated that the March 3, 2003 deviation from the ROR operation, caused by a malfunction of the impoundment's mechanical float control, would not be considered a violation of the license.¹⁴
- On October 5, 2011, FERC stated that high spring rainfall requiring EBH to remove head gate stoplogs in two bays at the Project would not be considered a violation of the license. Once high inflows receded EBH notified resource agencies of the need to reinstall the stoplogs which required temporarily lowering the Project's impoundment. The planned ROR deviation occurred over a period of 8 hours.¹⁵
- On February 1, 2017, FERC stated that the November 24, 2016 deviation from the ROR operation, caused by a drop in inflow, likely originating from one of two upstream projects (not owned by EBH), would not be considered a violation of the license.¹⁶

It is my view that since issuance of the original FERC license, the Project has adequately complied with resource agency conditions and recommendations issued regarding flow conditions and impoundment fluctuations. Based on the information provided, it is my recommendation that the Project 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 facility operations, 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-1.

A WQC was not issued by the NYSDEC, since on February 4, 1992, the agency was denied late intervention in the licensing process by FERC. On June 14, 2019, I called Jessica Hunt at the NYSDEC to discuss the lack of a WQC for the Project. Ms. Hunt stated that since no WQC was ever issued, the NYSDEC cannot now issue a statement that water quality at the Project is being satisfied.

The portion of the Lower Raquette River from its mouth, upstream to the Town of Potsdam, is listed as impaired in the November 2016 Section 303(d)¹⁷ List of Impaired Waters Requiring a Total Maximum Daily Load (TMDL) strategy for pathogens and other pollutants caused from failing and/or inadequate residential on-site septic systems, as well as discharges from a poorly operating municipal wastewater treatment plant.¹⁸ In particular, dye testing of homes in the Hamlet of Raymondville (population of about 500) has revealed that approximately 80% of the existing on-site septic systems have failed, are inadequate, or are discharging directly into the Raquette River. The Town of Norfolk's waste water treatment plant and sewer collection system experiences significant hydraulic overloading resulting in numerous discharges/bypasses of raw sewage into the Raquette River. No statements attributing water quality issues due to the Project's operation were found.

¹⁴https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=10360898

¹⁵ https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=12786995

¹⁶ https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=14480237 17 303(d) - https://www.dec.ny.gov/docs/water_pdf/303dListfinal2016.pdf

¹⁸ https://www.dec.ny.gov/docs/water_pdf/wistlawlraquette.pdf



The NYSDEC classifies this portion of the Raquette River as Class B¹⁹. Class B water's best usage is primary and secondary contact recreation and fishing. For class B non-trout waters, the minimum allowed dissolved oxygen (DO) concentration is a daily average of 5.0 milligrams per liter (mg/l), and at no time should DO concentrations fall below 4.0 mg/l.

The FEA states DO has improved since the 1940s. Due to the Project's hydraulic turbine capacity, spillway flow occurs frequently helping to aerate the downstream water. Additionally, the FEA states that ROR operations minimize impoundment fluctuations and reduce the potential for erosion of the impoundment shoreline and help protect water quality.

My review found no license deviations nor any issues pertaining to the Project's water quality compliance. Based on the information provided, it is apparent that Project operation does not alter water quality, and my recommendation is that the Project meets 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 Project's facilities.

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 ZOE 3 by meeting alternative standard C-2. Typically, impoundments qualify for C-1 since once above a dam there are no further Project-related barriers to continued upstream passage.

The NYSDEC manages the Lower Raquette River between Raymondville and South Colton, including the Project area, as a mixed warm-water/cool-water fisheries resource. The present fishery comprises a diverse array of both game fish and pan fish. The current species present include: walleye (*Sander vitreus*), smallmouth bass (*Micropterus dolomieui*), northern pike (*Esox lucius*), American eel (*Anguilla rostrata*), yellow perch (*Perca flavescens*), rock bass (*Ambloplites rupestris*), pumpkinseed (*Lepomis gibbosus*) and brown bullhead (*Ameiurus nebulosus*). No historical records were found of anadromous fish in the Project vicinity.

The FERC license includes recommendations by USFWS and NYSDEC for upstream passage for American eel. On December 17, 2007, EBH submitted its final Upstream Eel Passage Facilities Plan (UEPP)²⁰. The UEPP incorporated recommendations from the USFWS based on their on-site field inspections at the Project. The Project includes an upstream American eel passage ladder, as described in the FERC order approving the UEPP.²¹

The ladder is located on the right gate structure, looking downstream, and consists of an 18-inch-wide aluminum ladder, installed with a maximum slope of 45 degrees, having one-foot-wide aluminum troughs to convey attraction flows, pumps and siphons to provide attraction and ladder flows, removable cover plates, and substrate liners in the flume. The ladder is operational between June 15 and September 15. An

19 NYSDEC river classification codes

https://govt.westlaw.com/nycrr/Browse/Home/NewYork/NewYorkCodesRulesandRegulations?guid=I06849fe0b5a111dda0a4e17826ebc834&originationContext=documenttoc&transitionType=Default&contextData=(sc.Default)

²⁰ UEPP - https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=11566062

²¹ https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=11600045



attraction flow of 120 gallons per minute (GPM) and a ladder flow of 20 GPM is maintained. From September 16 through June 14, the ladder is lifted out of the water. There are no provisions for effectiveness testing or monitoring of the eel passage ladder; however, that is consistent with eel passages at other projects on the river.

My review found no license deviations nor any issues pertaining to upstream fish passage. Given that the Project has implemented upstream eel passage, as have other projects on the river, it is my recommendation that the Project 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 development satisfies the LIHI downstream fish passage criterion in ZOEs 1 and ZOE 2 by meeting alternative standard D-2 and in ZOE 3 by meeting alternative standard D-1. Typically, downstream reaches qualify for D-1 since once below a dam, bypassed reach, or powerhouse there are no further Project-related barriers to continued downstream passage.

License Article 404, amended by FERC on December 10, 1996²², required NMPC to operate and maintain a rectangular weir fishway. The fishway has trashracks with 1-inch clear spacing oriented at 90 degrees to the flow. The original license stipulated a 45-degree angle, which was modified to 90 degrees in the amendment. The fishway discharges approximately 36 CFS into a 3-foot-deep plunge pool. The fishway starts to operate after spring runoff and flashboards installation (typically May 15) until approximately November 1 of each year. This fishway was approved by FERC on May 8, 1997.²³

License Article 404 additionally requires 1-inch trashracks at the powerhouse intake, requiring an approach velocity of 2 feet per second (FPS) or less, as measured 1 foot in front of the trashrack, and a downstream fish bypass structure, with flows through the bypass structure of at least 20 CFS or 2 percent of the maximum hydraulic capacity of the powerhouse²⁴, whichever is greater, to reduce entrainment of fish into the Project's intake and to provide efficient downstream fish passage.

NMPC incorporated modifications to the facilities and plan for operation based on recommendations made by the USFWS²⁵ following a demonstration of the constructed facilities. The USFWS and NYSDEC approved these structures and the plan for operation as filed by NMPC with FERC on November 14, 1996.²⁶

My review found no license deviations nor any other issues pertaining to downstream fish passage. Given that the Project has successfully implemented downstream passage, it is my recommendation that the Project satisfies the downstream fish passage criterion.

²² https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=10764314

²³ https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=10780510

²⁴ Two percent of the maximum hydraulic capacity of the turbines is (705+359)*0.02 or 22 CFS

²⁵ https://elibrary.ferc.gov/IDMWS/common/opennat.asp?fileID=8235033

²⁶ https://elibrary.ferc.gov/IDMWS/common/opennat.asp?fileID=8232650

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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.

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The Applicant states the LIHI shoreline and watershed protection criterion in all ZOEs are satisfied by meeting alternative standard E-2.

There is no shoreline management plan required for the Project. License Article 401²⁷ required modifications to the July 26, 1990 Final Erosion and Sediment Control Plan, requiring the installation of silt fences during construction, revegetation of disturbed areas, and disposal of the then existing mill ruins.

There is no evidence that Project operation has contributed to existing shoreline erosion. ROR operations help to minimize fluctuations of the impoundment elevation and reduce the potential for erosion of the shoreline.

The FEA states that the area around the Project is rural, agricultural, and forested. The Project's impoundment shoreline is predominantly shrub land. Approximately 89 percent of the Raquette River Watershed is forested or brush land, 3 percent is agricultural, and 8 percent is listed as "other." The Project is located in the North Country Dairy Region, which is one of the most significant forms of agricultural use within the Project vicinity. The project boundary covers 111.2 acres, 14.1 acres of land and 97.1 acres of water, which does not appear to be lands of significant ecological value.

My review found no license deviations nor any issues pertaining to the Project's shoreline and watershed protection compliance. Based on my review, the lack of significant lands, and the Project footprint of 14 land acres, it is my recommendation that the Project 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 all ZOEs by meeting alternative standard F-3.

On February 6, 2019, the USFWS's New York Field Office, responded to a request for information on Rare, Threaten and Endangered (RTE) species, stating there are no critical habitats located within the Project area and that the Northern long-eared bat (*Myotis septentrionalis*) may potentially be within the Project area (see Appendix A, page A-15 – A-159). 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.²⁸ Operations at 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.

^{27 -} https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=3457813

²⁸ https://www.fws.gov/midwest/endangered/mammals/nleb/4drule.html



EBH also consulted with the NYSDEC's Natural Heritage Program for a list of RTE species that may be in the vicinity of the Project. On February 7, 2019, NYSDEC response indicated that Bridle Shiner (*Notropis bifrenatus*), a small minnow species has been documented upstream in the vicinity of the Project (see Appendix A, page A-20 – A-22). The Bridle Shiner is not state-listed as threatened or endangered but is considered a species of conservation concern.

My review found no license deviations nor any issues pertaining to the Project's threatened and endangered species compliance. Based on the information provided, and the Applicant's adherence to the northern long-eared bat recovery actions, 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 all ZOEs is satisfied by meeting alternative standard G-1. The Applicant states that the Project is in compliance with all requirements regarding cultural resource protection, mitigation, or enhancement included in the FERC license.

License Article 405 required NMPC to consult with the New York State Historic Preservation Officer (SHPO). The article states that before starting any land clearing or ground disturbing activities other than those specifically outlined in the license, the SHPO needs to be consulted. Additionally, if during the course of constructing or developing Project works or other facilities, previously unidentified archeological or historic properties are discovered, all land clearing and ground disturbing activities will stop and the SHPO will be consulted. In both of these cases a Cultural Resource Management Plan will need to be developed. Development of a CRMP has not been necessary to date.

There are no known archaeological or historic sites within the Project boundary with the exception of a pinconnected lenticular metal truss bridge constructed downstream of the Project in 1892, as the only National Register eligible property. The SHPO recommended a no-effect determination for this metal truss bridge and there are no specific requirements for its maintenance and/or protection. EBH does not own the metal truss bridge.

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 compliance. Based on the information provided, and the fact that there are no resources of significance in the Project area, except the bridge which is not impacted by the Project, 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 all ZOEs is satisfied by meeting alternative standard H-2. The Applicant states that the Project is in compliance with recreational access, accommodation, and facilities' conditions in the FERC license.

License Article 406 required a portage route with a picnic area, parking, signage, markings, and upstream and downstream put-ins and take-outs at the Project. According to the FEA, the provision of recreation facilities would improve public access to the Raquette River. On March 24, 2008, FERC filed the most recent Environmental Inspection Report results for the Project's environmental inspection that occurred on September 11, 2007.²⁹ The report concluded that the Project is in compliance with its license requirements and that EBH has provided all recreational facilities at the Project.

EBH permits free public access to the shoreline across Project lands where development facilities, hazardous areas and existing leases, easements, and private ownership do not preclude access.

My review found the Project is in compliance with the license recreational access, accommodation, and has satisfactory recreation facility conditions. It is my recommendation that the Project satisfies the recreational resources criterion.

8. RECOMMENDATION

A review of the certification application and supporting documentation, and a search of the FERC docket shows EBH has successfully complied with the Project's FERC license articles and other requirements and also satisfies the selected standards for all LIHI criteria.

Based on my review, I recommend issuing a five (5)-year LIHI Certificate to EBH for the Yaleville Hydroelectric Project with no conditions.

Harry France

Gary M. Franc FRANC LOGIC

Licensing & Compliance Hydropower Consulting & Modeling

²⁹ <u>https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=11628523</u>





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APPENDIX A DOCUMENTS



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UNITED STATES OF AMERICA FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Elizabeth Anne Moler, Chair; Vicky A. Beiley, James J. Hoecker, William L. Massey, and Donald F. Santa, Jr.

Niagara Mohawk Power Corporation) Project No. 9222-003

ORDER GRANTING REHEARING AND AMENDING LICENSE

(Issued June 3, 1994)

In an order issued February 10, 1992, the Director, Office of Hydropower Licensing (Director), issued an original license for a minor project to Nisgara Mohawk Powar Corporation (Nisgara Mohawk) for the Yaleville Project No. 9222, located on the Requete River, a navigable waterway of the United States, 1/ in St. Lawrence County, New York. 2/ On March 9, 1992, the United States Department of the Interior (Interior) filed a request for rehearing of the Director's order. Interior contends that the Director erred in failing to include its prescription of fishways in the license. For the resons indicated below, we are granting the request for rehearing and amending the license, as noted.

BACKGROUND

The Yaleville Project is an existing project, but Nisgara Mohawk plans to construct additional facilities. As pertinent here, the existing project works include a dam, a powerhouse with two turbines having a combined installed capacity of 700 kilowatts (kW), an intake, and a transhrack with 2.5-inch clear bar spacing set perpendicular to the direction of flow. Nisgara Mohawk's proposed additions include a second powerhouse with one turbine having a capacity of 800 kW, en intake, and a trashrack with 3-inch clear bar spacing sat perpendicular to the direction of flow.

Initially, Interior and its Fish and Wildlife Service (FWS) participated in this proceeding through the submission of recommendations pursuant to the Fish and Wildlife Coordination Act. These included recommendations that the licensee install and operate, at both the existing and proposed poverhouses, 45degree angled trashrocks with a bar spacing of 1 inch or less and an intake velocity of 2 feet par second (fps) or less, and fish

1/ Central New York Power Corp., 6 FPC 547 at 569 (1949).

2/ 58 FERC 1 62,114 (1992).

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bypass chutes. In the Environmental Assessment (EA), issued August 20, 1991, Commission staff made a preliminary determination, pursuant to Section 10(j) of the Faderal Power Act (PPA), that these transfrack and bypass recommendations were inconsistent with the purposes and requirements of Part I of the FAC J. The EA hoted that the expense associated with these tracilities would make the proposed enlargement of the project more costly than the expense of elternative generation. It also concluded that the resident fish, primarily smallmouth bass and velleys, migrated or undertook esseonal movements between habitats in the Raguette River. The EA concluded by recommending that the licensee make no wolfications to the trashrack at the the new powerhouse and that it install, operate, and maintain at the new powerhouse a trashrack oriented perpendicular (90 degrees) to flows, with 2-inch spacings between the trashrack base of an end an approach velocity of 2.0 fpa or less. $\frac{1}{2}$

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By letter of August 27, 1991, the Director, Division of Project Raview, notified FWS that the EA had made a preliminary determination of inconsistency, noted the EA'm transhrack recommendations, and invited FWS to submit additional evidence supporting its previous recommendation or proposing other relevant options to protect and enhance fish and wildlife resources. FWS responded to the preliminary determination, and to the August 27 letter, by letter filed October 15, 1991, in which it defended its recommendations; however, it expressed a willingness to consider other options for the existing powerhouse that would include a downstream passegg device with a guidance system and a mechanism to keep fish out of the turbine.

2/ Section 10(j)(1) of the FPA requires each license to include, for the protection, mitigation, and enhancement of fish and wildlife, conditions based on recommendations received pursuant to the Fish and Wildlife Coordination Act from the National Marine Fish and Wildlife Coordination Act from the National Marine Fish and Wildlife Coordination Act from the National Marine Fish and Wildlife coordination Act from the National Marine Fisheries Service, the United States Fish and Wildlife Service, and state fish and wildlife agencies. Soction 10(j)(2) provides that, whenever the Commission believes that any such recommendation may be inconsistent with the purposes and requirements of Part I of the FPA or other applicable law, the Commission and the agencies shall attempt to resolve the inconsistency. If the Commission does not adopt in whole or in part a recommendation of any such agency, the Commission shell publish findings that adoption of the recommendation is inconsistent with those purposes and requirements and that the conditions selected by the Commission are consistent with those purposes and requirements.

/ 58 FERC \$ 62,114 at p. 63,317,



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Following a telephone conference with staff, FWS, by letter of November 8, 1991, indicated its willingness to accept an alternative trashrack design at the existing powerhouse. This design was to include racks with 1-inch clear spacing, angled perpendicular to the flow, with an approach velocity of 2 fps or less, and a fish bypass facility incorporating an existing ice sluice. However, FWS remained unwilling to modify its design recommendation for the new powerhouse.

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On December 6, 1991, Interior filed an untimely motion to Intervens, which was granted by notice issued Petrusry 4, 1992. 5/ Included in the motion was a prescription of fishways submitted under the authority of Section 18 of the FPA, under which the Commission must require a licensee to construct, maintain, and operate such fishways as the Secretary of the Interior prescribes. 6/ Interior's prescription was for "much fishways as are necessary to provide safe and efficient downstream passage of walleye and other fish through the project." project."

Specifically, Interior sought to require the licenses to develop functional design drawings of "downstream passage fishways for the existing powerhouse and any new powerhouse." The designs were particularly to include trashracks:

angled 45 degrees or less to the direction of inflow at the turbing intakes, with maximum clear space openings of 1 inch between bars; an approach velocity of two feet per second or less for each trashrack (as measured one foot in front of that trashrack); and a fish bypass sluiceway at the downstream end of each trashrack.

In essence, the fishway prescription is identical to FWS's earlier trashrack and bypass recommendation. 7/ Interior

- On March 3, 1992, Ningara Mohawk filed a request for rehearing of the notics. That request was denied by operation of law effective April 2, 1992. 5/
- 15 U.S.C. § 811. Section 18 states, as partinent, that the Commission shall require: 6/

the construction, maintenance, and operation by a licenses at its own expense of ... such fishways as may be prescribed by the Secretary of the Interior or the Secretary of Commerce, as appropriate.

21 Interior also listed several other requirements as part of its prescription: we will address these in our discussion. infro.

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-4indicated that it reserved authority to prescribe the construction, operation, and maintenance of flahways for upstream fish passage. It also stated that this prescription superseded "previous flahway recommendations." ${\rm B}/$

By latter dated December 10, 1991, Commission staff notified FWS that, in Order No. 533-A, issued Novamber 22, 1991, the Commission had revised its definition of the term "fichway." Staff requested FWS to provide avidence that the fish species in the project area would meat the requirements of the definition, which restricted fishways to situations in which "passage of a population is necessary for the life cycle of a fish species." 9/ FMS responded in a letter dated December 23, 1991, in which it cited publications documenting the migration of walleye within New York rivers and elsewhere.

In the order issuing license, the Director found that Interior's prescription for downstream fishways was not an appropriate fishway prescription under Section 18 of the FPA, because passage of a population was not necessary for the life cycle of any of the fish spacies occurring in the Raquette River in the vicinity of the project, as identified in Interior's December 23 letter. Citing the EA, the Director then added that downstream fish passage structures wars not needed, because a high-quality resident fishery had daveloped alongside extemsive hydroelectric development on the river, there was no substantial

- Since Interior had not previously submitted a Section 18 fishway prescription, this statement must be understood as referring to the recommendations for fish passage submitted pursuant to the Fish and Wildlife Coordination Act. 8/
- Regulations Governing Submittal of Proposed Hydropowar License Conditions and Other Matters, 56 Fed. Reg. 61,137 (December 2, 1991), III FERC Stats. & Regs. Preambles 1 30,932 (November 22, 1991). The definition of "fishway" promulgated in that rulemaking proceeding was codified at Section 4.30(b)(9)(iii) of the Commission's regulations, as 21 follows:

"Fishway" means any structure, facility, or device used for the passage of fish through, over, or around the project works of a hydropower project, such as fish ladders, fish locks, fish lifts and elevators, and Fish locks, Fish firts and elevators, and similar physical contrivances, where passage of a population is necessary for the life cycle of a fish spacies; and those screens, berriers, and similar devices that operate to guide fish to a fishway; and flows within the fishway necessary for its operation.



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evidence demonstrating the importance of measonal migration to walkeys and mmallmouth bass in the river, there would be potential for downstream fish passage at the project through apillage alone, and the turbine to be installed at the new powerhouse would be less damaging to entrained fish than the turbines of the existing powerhouse. 10/

The Director reserved authority to the Commission to prescribe fishways in the event that Interior could show, in the future, that fishways were needed, according to the Commission's fishway definition, for fish species that sight later occur in the Raquette River. He then considered Interior's proposed prescription as a fish protection recommendation subject to Section 10(3) procedures. Noting that there had already been a preliminary determination that Interior's proposal was inconsistent with Sections 10(a)(1) and 313 of the FPA, he discussed the subsequent efforts between Interior concluded that, on balance, the treabrack designs recommended in the EA should be required. 11/

10/ 58 FERC at pp. 63,292-3. The EA's conclusions were based on an evaluation of Interior's recommended facilities in the context of conditions for the protection and enhancement of fish, not in the context of a Section 18 fishway prescription, since Interior did not file its request as a Section 18 prescription until after issuance of the EA.

11/ In respect to the new powerhouse, the Director stated:

Although the trashrack design alternatives that include a sluiceway would provide safer downstream fish passage and protection, any small reduction in entrainment and impingement of fish with such designs [is] not warranted because the fish don't migrate downstream to complete their life cycle. Furthermore, the slight reduction would not justify losing the additional power benefits that would result from making the new powerhouse development uneconomical.

In respect to the existing powerhouse, the Director concluded, based on analysis in the EA, that the existing trashrack provided adequate protection against entrainment and implingement and that downstream fish passage structures were not needed. 58 FERC at p. 63,296. Project No. 9222-003

DISCUSSION

In its raquest for rehearing, Interior contends that its prescription of fishways was required to be included in the license. Interior argues that Congress reserved to it mandatory authority under Section 18 to prescribe fishways, and that the Commission must therefore include in a license even those fishway prescriptions with which it disagrees.

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The definition promulgated in Order No. 533-A, and applied by the Director, represented a Commission affort to interpret the term "fishway". However, since the issuance of the Director's order and the filing of Interior's request for rehearing, that definition has become inapplicable. In Section 1701(b) of the Energy Policy Act of 1992, 12/ Congress vacated the definition, 13/ and elso provided that:

the items which may constitute a "fishway" under Section 18 for the safe and timely upstream and downstream passage of fish shall be limited to physical structures, facilites, or devices necessary to maintain all life stages of such fish, and project operations and measures related to such structures, facilities, or devices which are necessary to ensure the affectiveness of such structures, facilities, or devices for such fish.

Becaume the Director rejected Interior's fishway prescription on the grounds that it was not an appropriate one under the now-vacated fishway definition, we must reconsider the prescription under much law as is now applicable. Prior to the rulemaking definition, the Commission considered fishway prescriptions on a case-by-case basis. The language of Section 1701(b) does not reflect an intent to invalidate pre-rule Commission case law regarding Section 18. 14/ Nevertheless,

- 11/ The vacation was without prejudice to the Commission's promulgation of a new definition by rule, with the concurrence of the Secretaries of the Interior and Commerce. However, the Commission was not obligated to promulgate such a rulemaking definition. By Final Rule issued March 1, 1994, in Docket No. RM94-11-000, the Commission implemented this Congressional mandate by removing Section 4.30(b)(9)(iii) of its regulations. 66 FERC § 61,260 (1994).
- 11/ Moreover, the report of the Committee of Conference states that Section 1701(b):

(continued...)

^{12/} Pub. L. No. 102-486.



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-7in addressing fishway prescriptions in individual cases, we are now bound to consider also the language of Section 1701(b) that specifies the items which may constitute a fishway.

As stated above, interior has prescribed an angled trashrack and a bypass sluiceway for each powerhouse. The sluiceways would serve the specific function of moving fish safely past the turbines and the dam. The proposed trashracks would be designed to guide fish to the sluiceways, which would be located at the downstream end of the trashracks. These sluiceways and trashracks are "physical structures; facilities, or devices" for the safe downstream passage of fish, as specified by Saction 1701(b), and therefore constitute a fishway. 15/ Interior also prescribes that flows through anch sluiceway squal at least 20 cubic fest par second or 2 percent of the maximum hydraulic capacity of the powerhouse, whichever is greater. The maintenance of appropriate flows within fish passage facilities is necessary for their effective passage of fish. Here, the flow functions proposed by Interior are appropriate for the effective functioning of the sluiceways and therefore constitute a project operation or measure related to, and macessary to ensure the

14/(...continued)

does not affect the authority of the Commission to continue to insue license orders that could include fishway prescriptions under section 18.

In essence, the provision returns the Commission and the Secretaries to the position they were in under section 18 of the Federal Power Act prior to the FERC adopting by regulation the fishway definition.

H.R. Rep. No. 102-1018, 102d Cong., 2d Sees. 393 (1992).

The Commission has stated, both before and after passage of the Energy Policy Act, that structures such as trashracks, when used to direct fish to a passage structure, and not merely to protect fish from project works, may be prescribed under Section 18. Lynchburg Hydro Associates, 39 FERC § 61,079 at p. 61,219 (1987); City of LeClaire, Towa, 66 FERC § 61,270 at p. 61,664 (1994). Niagare Mohawk, in its motion to reject the fishway prescription, argues that the primary purpose of the trashracks prescribed by Interior is to prevent mortality and injury caused by entrainment. However, even Niagara Mohawk concedes that the trashracks would provide "a small measure of guidance for downstream migrants." The Commission has stated, both before and after passage of 15/

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-8effectiveness of, the passage facilities, within the meaning of Section 1701(b).

Interior specifies that the fishways be constructed, Interior specifies that the fishways be constructed, operated, and maintained in accordance with designs, plans, and schedules approved by FMS, and that these materials must be developed in consultation with FMS and the New York Department of Environmental Conservation (Environmental Conservation) within six months of issuance of the license. Under Section 16, we must require a licensee to construct and operate such fishways as Interior prescribes. Accordingly, we will require the licensee to construct the fishways in conformance with designs and plans approved by FWS, since those approved designs and plans will produce the specifications of the prescribed fishways. Nevertheless, the Commission retains the right of final approval of the fishway, as of all project works, and, therefore, Article 404 reserves to the Commission the right to approve the plans, including the fishway esigns, that the licensee plans, including the fishway designs, that the licensee has developed.

Interior also specifies that the fishways must be operated in accordance with the approved plan whenever power is generated, unless FMS grants prior written permission not to operate them for a set period. The specification of times during which pessage facilities, once completed, must be operating is equivalent to prescribing when flows must be released into the facilities. Consequently, such specification prescribes a project measure related to and necessary for the effective operation of those facilities and is within Section 18 prescription authority, pursuant to Section 1701(b). 16/

We will require the licensee to consult with FWS and Environmental Conservation, as Interior requests. However, a condition requiring consultation in the development of drawings and plans is not the prescription of a fishway. It is, rather, the specification of procedures for a licensee to follow in designing a fishway that meets a prescribing agancy's approval. While the Secretaries of the Interior and of Commerce may prescribe a fishway, the Federal Power Act imposes on this Commission the obligation to enforce the terms of licenses and thus to ensure that a licenses construct and operate the fishway thus to ensure that a licenses construct and operate the fishway that has been prescribed. Therefore, the Secretaries may identify and provide specifications for the kind of fishway they

Interior also specifies that, when operating, fishways shall be maintained to operate efficiently at all times. This condition does not prescribe a fishway, but maintenance of the fishways to ensure their efficient operation is implicit in the Commission's requirement that the licenses construct, another and subtile moth fishways as Interior arguerithms 16/ operate, and maintain such fishways as Interior prescribes.



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want incorporated into a project, but it fails to the Commission to establish, administer, and enforce conditions and procedures necessary to ensure that the licensee constructs, operates, and maintains that fishway. As a practical matter, these conditions are likely to include requiring a licensee to consult with the prescribing agency and to submit design drawings and plane for the agency's approval. Accordingly, pursuant to our own obligations under Section 18, we will require such consultation and development of design drawings here to ensure that the appropriate fishways are constructed.

Interior specifies that the facilities at the existing powerhouse must be operable within one year of issuance of a license, and that those at the new powerhouse must be operable prior to commencement of energy production there. Section 18 obligates us only to require the construction and operation of prescribed fishways, not to impose on the licenses an agency's desired achedules for completion of construction or commencement of operation. We recognize that prescribed fishways should be operable at a project am soon as is reasonably possible to conform with the prescribing agency's intention. However, since fish passage structures are project works, the Commission retains final subority over their construction. The timing of a fishway's construction should not be permitted to govern the logical progression of overall project construction, as in the case of unconstructed projects; the Commission must be able to sanction reasonable delays. In the case of the facilities at the existing powerhouse, for example, compliance with Interior's completion of project construction in this proceeding has already been established, and we will not accelerate the desdiline for completion of the fishways to an earlier date. Nevertheless, we will require the licenses to make the fishways operable by the deadline for completion of project works.

Interior would require the licensee to provide permonnel of FWS and Environmental Conservation access to the project site and to pertinent project records for the purpose of inspecting the fishways in order to determine compliance with the prescription. These monitoring requirements do not prescribe a fishway, but we have, under our authority, imposed them as conditions in a license to enable the Commission and Interior to carry out their respective responsibilities. 17/ We will require access and inspection, consistent with our previous practice and rationale.

As noted above, Interior would reserve its authority to preacribe the construction, operation, and maintenance of fishways for upstream passage. Noting the Commission's policy to reserve authority when requested, the Director reserved authority

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to the Commission to require such fishways as Interior might prescribe. However, Interior requested a reservation only as to upstream passage, whereas Article 408, which implemented the Director's findings, is unspecific. Consequently, we will revise Article 408 to specify upstream passage, as Interior requested.

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In conjunction with its enswer to Interior's motion to Intervene, Niagara Mohawk moved to reject the fishway prescription on several grounds apart from non-conformance to the Order No. 533-A definition. Niagara Mohawk points out that the prescription was made by the Regional Solicitor from the Northeast Region of Interior's Office of the Solicitor, and that, because the Regional Solicitor had failed to show that he had been legally delegated the Secretary's authority to prescribe fishways, the prescription is invalid on its face. Subsequent to issuance of the license, Niagara Mohawk filed motions to reopen the record and to lodge an administrative order, for the limited purpose of recaiving evidentiary meterials relating to this issue.

Those materials consist of pleadings, letters, and orders relating to an administrative appeal of the prescription, filed by Niegara Mohawk with Interior's Office of Hearings and Appeals, in which Niegara Mohawk requested that the prescription be vocated, in part because the Regional Solicitor had not been delegated authority to prescribe fishways. 18/ Thet proceeding culsinated in an order in which the Office of Hearings and Appeals determined that it did not have jurisdiction to review the appeal. 19/ Niegara Mohawk contends that the underlying documents provided by the Office of the Solicitor in that proceeding establish that Interior has no procedures or regulations governing the implementation of Section 18 prescriptions, and that the Regional Solicitor had no authority under established procedures to submit the prescription.

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^{17/} Lynchburg Hydro Associates, 39 FERC at p. 61,219.

^{18/} Niagara Nohawk also argued that the Regional Solicitor issued the prescription without prior notice or opportunity to present evidence, that the prescription was arbitrary and capricious because it was unsupported by evidence, and that the facilities prescribed were not fishways under Section 18.

^{19/} The order cited an Interior regulation (43 CFR § 4.7000) that conditions the right of appeal to the Office of Hearing and Appeals on a showing that the proceeding is one in which Departmental regulations sllow a right of appeal to the head of the Department. The order stated that Wiagara Mohawk had failed to identify any regulation of Interior that permitted an appeal to the Secretary of a decision by the Regional Solicitor prescribing fishways.



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We will grant Niagara Mohawk's motions and receive the materials into the record, but we decline to reject the prescription on the grounds of improper delegation. Although Section 18 obligates the Commission to require only such fishways as are prescribed by the Secretary, we do not beliave the statute contemplates our requiring proof of the legitimacy of the authority underlying each prescription. We do not consider it a proper exercise of our discretion to judge whether authority has been properly delegated within another agency or department.

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Niagara Mohawk also disputes the need for the prescribed fishways. This argument warrants consideration in light of Congrees's vacation of our codified definition.

In deciding that Interior had not submitted a valid fishway prescription, the Director concluded that passage of fish populations in the Raquette River were not shown necessary for the life cycle of the species; relying on the EA, he also concluded that there was potential for downstream fish passage without specific fish passage structures and that, in any case, no substantial evidence had been presented to show that smallmouth base and walleys in the Raquette River required measonal migration. In essence, the Director concluded that there was no need for the facilities. To the extent that he was analyzing the species' "life cycle" requirements, the Director wes applying a need-based test that had been incorporated into the Commission's regulations by Order No. 503-A.

the Commission's regulations by Order No. 533-A. Rowever, Section 18, as now effectively modified by Section 1701(b), does not permit our consideration of the needs of particular finh, fish populations, or fish species in determining whether the fishway has been properly prescribed. Although the structures, facilities, and devices that may constitute a fishway are to be those "necessary to maintain all life stages of such fish," we do not interpret this provision as requiring us to determine that the prescribed physical items are necessary in each individual case for fish populations in the affacted stream to be maintained. Since Congress vacated a fishway definition that necessitated an axamination of the biological requirements of fish for passage, we cannot assume that it intended to supplant that test with a similar one. Moreover, Section 170(b) appears to ellow us to continue applying our pre-rule case law on Section 18, and that prior case law did not impose a requirement of biological necessity. We construct this phrase simply as clarifying what kinds of structures, facilities, and devices could be prescribed as fishways and as emphasizing that we must consider all life stages in examining whether a prescribed physical item qualifies as a fishway.

Our conclusion that the trashracks and sluiceways are fishways, and therefore must be required in the license, Project No. 9222-003

necessitates reavaluation of the project's accondic benefits. The EA determined that the proposed project expansion, even without any fish pessage facilities included, would be only marginally economics, because it would have an annual levelized cost of about \$622,000, compared to an annual levelized power value of about \$623,000. The levelized power value calculation was based on Energy Information Administration (EIA) projections of feesil fuel costs for the region. The EIA's projections of feesil fuel costs have fallen more than 20 percent since staff performed its analysis. 20/ This drop significantly reduces the levelized power value of the project with the proposed expansion. In fact, Niagars Nohavk itself has indicated, in a request for an extension of the construction desclines, filed December 7, 1993, that the value of power generation has decreased since the filing of the application, while the cost of the proposed project has increased. Relying on a detailed study conducted by its consultant in June 1992, and on energy analyses that it itself has conducted, Niegara Mohavk no longer considers the project expansion economically feasible as proposed, which is to asy, without fish passage facilities. 21/

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The annual levelized cost of the trashrack recommended by the EA for the new powerhouse was estimated to be \$3,900 or only \$440 more than Niegara Mohawk's proposed trashrack, and the EA concluded that it would not impose a significant additional cost on the expansion. Nowever, the EA estimated that the trashrack conforming to Interior's specifications would have an annual levelized cost of \$40,300 and would render the new facility uneconomical. The Director's order, relying on subsequent staff analysis of Interior's design, increased that estimate to \$43,200. 22/ It is apparent that, with the cost of

^{20/} Based on the projected cost of fossil fuels in the Northeast and New York-New Jersey regions of the country, as shown: (1) on table A3 of its April 1989 publication <u>Regional</u> <u>Projections of End-Use Energy Consumption and Prices Through 2000; (2) on table 116 of its February 1993 publication Supplement to the Annual Energy Outlook; and (3) by its base-case projections of the GNP implicit deflator indices in those seme publications.</u>

^{21/} Nowever, Niagara Nohawk hoped to explore ways of making the project feasible with different equipment and a different configuration.

^{22/} This increase resulted from staff's evaluation that Interior's design would not guide fish as intended without the construction of a flow training wall, extending from the western end of the new powerhouse into the reservoir, to channel flows to the powerhouse from the proper direction. (continued...)



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constructing and maintaining the prescribed fishway added to the other costs of developing the project axpansion, the expansion would not be economically beneficial under currently projected economic conditions. Therefore, we will amend the license to withdraw authorization of the new development.

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The existing project has an installed capacity of 700 kW and generates about 3.82 gigawatt-hours of energy annually, which would have a gross value of about \$1.5 million in 1994. In its November 8, 1991 letter, submitted during the Section 10(j) resolution process, FWS estimated that it would cost about \$170,000 to construct a 45-degree angled trashrack, with 1-inch bar spacing, and a fish bypass for the existing powerhouse. Staff estimates that, adjusted for 1994 price levels, the cost of construction would be approximately \$186,400. Assuming a capital recovery cost of 10 percent, the annual carrying cost on these facilities would be about \$16,840, only about one percent of the current value of the project power, under current ElA forecasts. Thus, we have no reason to conclude that this prescription would significantly affect the existing project's economic benefits.

Even though we are obligated to require properly prescribed fishways, regardless of whether the prescribing agency has demonstrated a need for them, we are not precluded from expressing our opinion as to whether the fishways are needed or beneficial. The EA svaluated the facilities recommended by Interior and concluded that their benefits were not significant when considered in the light of several factors, sepecially evidence that resident smallmouth bass and walleys have flourished even in the presence of attensive hydropower development in the Raquetts River, the lack of evidence regarding the importance of passage for these resident fish, and the opportunities for passage that would exist even after expansion of the project. Our review of the record does not cause us to disagree with the EA's evaluation.

FWS does not allege that fish present in the project area require passage, rather then mere protection, to survive. There is no evidence that these fish need to move past the project to reach suitable habitat. FWS's principal concern appears to be protecting downstream fisherles that may depend on recruitment from upstream. However, we have not been presented with evidence that any downstream communities are actually dependent on such recruitment or that existing passage conditions at the project interfere with such recruitment as is needed.

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Staff included the cost of the training wall in its revised cost estimate for the angled trashrack and fish bypass facilities. As a result, the capital cost of the trashrack increased from the EA's estimate of \$227,000 to \$253,000.

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As we have stated, FWS, in its November 8, 1991 letter, indicated that it would be willing to accept, at the existing powerhouse, a trashrack with 1-inch clear spacing, angled 90 degrees to the flow, with an approach velocity of 2 fps or lees, plus a fish bypass facility incorporating an existing ice sluice. Thus, immediately before Interior filed its fishway prescription, FWS was willing to concede that the 45-degree angled trashrack and new bypass sluiceway, though preferable, would not be essential at the existing powerhouse, even if a second powerhouse were constructed. As we are amending the license to withdraw authorization of the project expansion, the prescribed facilities would seem even less important, since spillage would continue to occur shout 93 percent of the time, and since a high-quality fishery has been maintained under existing project conditions.

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FWS estimated that its recommended alternative perpendicular trashrack would cost \$56,000 at 1991 price levels; adjusted for 1994 price levels, the cost would rise to \$62,000, considerably less than the cost of the 45-degree angled trashracks that have been prescribed pursuant to Section 18. At the time it submitted its fishway prescription, Interior was not presented with the possibility that the project might be licensed without the additional construction. Under these circumstances, Niegers Mohawk may wish to pursue with Interior and FWS the options of retaining the existing trashrack or of installing the less expensive facilities in place of those that have been prescribed. However, as fishways properly prescribed under Section 18 sremendatory, we are required to direct construction and operation of the 45-degree angled trashrack and bypass sluice at the existing powerhouse unless Interior modifies its prescription.

As a result of our reconsideration of Interior's prescription, we will modify or add appropriate license articles to withdraw authorization of the proposed project expansion, to require the construction, operation, and maintenance of the fishway interior has prescribed at the existing powerhouse, and to include such other conditions as we have discussed. Although we are only amending this license here, not issuing it, the description of project works and the license articles require substantial revision and, as revised, are set out here in their ontirety. 23/

21/ Nisgers Mohawk has already been granted a two-year extension of the deadline for commencement of construction, as permitted by Section 13 of the FPA. Our mendment of this license does not afford Nisgara Mohawk the right to an additional extension of this deadline.



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Revised findings:

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On reconsideration, based on our review of the agency and public comments filed for this project, Interior's fishway prescriptions, and staff's independent analyses for the proposed and existing project facilities, pursuant to Sections 4(e), 10(a)(1), and 10(a)(2) of the FRA, we conclude that the existing valeville Project as it would be modified by the license articles, and as the articles are amended herein, is best adapted to a comprehensive pinn for the proper use, conservation, and development of the Requette River and other project-related resources.

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The mitigative and enhancement measures that we are regulting include: (1) immediate run-of-river project operation to minimize upstreem and downstream weter-level fluctuations for the protection and enhancement of aquatic resources; (2) preparation of a flow monitoring plan to ensure compliance with run-of-river operation; (3) installation, at the existing powerhouse, in accordance with Interior's prescription, of a trashrack set at 45 degrees to the direction of flow with 1-inch bar spacing, and an average approach velocity of no more than 2.0 feet per second (fps), for the protection of realdent fishes; and (4) construction of recreation facilities to provide public access to the Request River at the project.

An EA was issued for this project, which included background information, analysis of impacts, and support for license articles. Based on the information contained therein, we conclude that the existing project, with Interior's fishway prescription, and as modified by the license articles included herein, would not cause a significant impact on the environment. Amendment of this license is not a major federal action significantly effecting the quality of the human environment.

The design of this project is consistent with the engineering standards governing dam safety. The project will be safe if constructed, operated and maintained in accordance with the requirements of this license. Analysis of related issues was provided in the Safety and Dam Assessment, issued previously.

Therefore, we conclude that the project would not conflict with any planned or authorized development, and would be beat adapted to comprehensive development of the waterway for Benaficial public uses.

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License Term

The Director issued a license for a term of 50 years, effective February 1, 1982. 24/ Subsequently, in <u>City of</u> <u>Danville, Virginia, 56 FREC 161,318 (1992), the Commission</u> established a new policy regarding license terms for existing projects that wers required to be licensed earlier. For post-1935 projects located on navigeble streams, and involving an existing dam and very little new construction, the license term was set at 30 years, and annual charges wers to be assessed from the date of project construction. 22/ The Valeville Project now falls within this category, since only the new fishway must be constructed. Therefore, consistent with the <u>Danville</u> policy, we will amend the license term to extend for 30 years, effective February 1, 1992, the first day of the month in which the license was issued. The record indicates that the project was constructed in 1940. 26/ Therefore, we will assess annual charges from January 1, 1941.

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Project Retirement

The Commission has issued a Notice of Inquiry (NOI), dated September 15, 1993, requesting comments that address the potential decommissioning of licensed hydropower projects at some future time, based on project-specific circumstences. 22/ The NOI states that the Commission is not proposing new regulations at this time, but is inviting comments on whether new regulations fiscanee hydropower projects, or take other measures. The Yaleville Project may be affected by future sctions that the Commission takes with respect to issues raised in the NOI. Therefore, the license includes Article 203, which reserves authority to the Commissions or otherwise make reasonable provisions for decommissioning of the project in appropriate circumstances.

- 24/ Under the Commission policy then applicable, the license should have been issued for a 50-year term, effective 10 years before the date of issuance, or February I, 1962, and annual charges should have been assessed from the date of project construction. <u>See</u> City of Danville, virginia, 58 FERC § 61,318 (1992) at p. 62,019.
- 25/ 58 FERC at pp. 62,020-21.
- 26/ 58 FERC at p. 63,302.
- 22/ Notice of Inquiry, Project Decommissioning at Relicensing, Docket No. RM93-23-000, September 15, 1993.



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By including Article 203, the Commission does not intend to projudge the outcome of the NOI. We are simply including the article so that we will be in a position to make any lawful and appropriate changes in the terms and conditions of this license, which is being issued during the pendency of the NOI, based on the final outcome of that proceeding.

The Commission orders:

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(A) The request for rehearing filed March 9, 1992, by the Department of the Interior, is granted, and the licence is amended as provided in the following ordering paragraphs.

(B) Nisgara Mchavk's motions to admit additional materials into the record are granted, and its motion to reject Interior's fishway prescription is denied.

(C) This license, as amended, is issued to Niagara Mohawk (C) This license, as amended, is issued to Miagara Mohawk Power Corporation (licensee), for a paried of 30 years, effective Pebruary 1, 1992, to modify, operate and maintain the Yaleville Project. This license is subject to the terms and conditions of the Act, which is incorporated by raference as part of this license, and subject to the regulations the Commission issues under the provisions of the Federal Power Act (FFA).

- (D) The project consists of:
- All lands, to the extent of the licensee's interests in those lands shown by exhibit G:

Exhibit G-	FERC No. 9222-	Showing

5 Project Site

1 5 Project Site (2) Project works consisting of: (a) an existing concrete gravity overflow dam about 170 feet long and 13 feet high, with proposed 2-foot-high flashboards at the crest; (b) an existing concrete gravity flood gate structure, 75 fest long, composed of two stop log gates 15 feet long and 10 feet high, one electrically operated lift gate for water surface control, about 11 feet vide and 15 feet high; and three intermediate piers about 3 feet wide and 15 feet high; (c) an existing 67-foot-long intake with 4 timber silds gates, each 10 feet long; (d) an existing concrete and brick powerhouse on the southwest bank, 66 feet long, 37 feet wide and 43 feet high, equipped with two dissimilar open flume Francis units with a total capacity of 700 kW; (e) an existing forsbey canal for the existing powerhouse, about 60 feet wide and 275 feet long, connecting with the southwest end of the overflow dam; (f) a reservoir with a surface ares of 95 acres and surface elevation of 305.2 feet NGVD; (g) an existing tailrace at the existing powerhouse, about 25 feet wide and 140 feet long;

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(h) a 2.3/23-kV transformer for the powerhouse, connecting to an existing transmission line 70 feet long; and (i) appurtenant facilities.

The project works generally described above are more specifically shown and described by these portions of exhibits A and F shown below:

Exhibit A:

Pages A.2-1 through A.2-1 of Exhibit A. filed with the application for license on October 26, 1988, but only to the extent they describe the existing electrical and transmission equipment.

Exhibit F Drawing	FERC No.	Description
Sheet 1	9222-1	General Plan of Project, Dam & Plood Gates
Sheet 2	9222-2	Retaining Walla
Sheet 3	9222-3	Existing Westside Powerhouse

(3) All of the structures, fixtures, equipment or facilities used to operate or maintain the project, all portable property that may be employed in connection with the project, and all riparian or other rights that are necessary or appropriate in the operation or maintenance of the project.

(E) The exhibits A, F, and G described above, to the extent they describe the existing project as modified by the license articles included herein, are approved and made part of this license.

(F) The following sections of the Act are waived and excluded from the license for this minor project:

4(b), except the second sentence; 4(e), insofar as it relates to approval of plans by the Chief of Engineers and the Secretary of the Army; 6, insofar as it relates to public notice and to the acceptance and expression in the licenee of terms and conditions of the Act that are waived here; 10(c), insofar as it relates to depreciation reserves; 10(d); 10(f); 14, except insofar as the power of condemnation is reserved; 15; 16; 19; 20; and 22.

(G) This license is subject to the stlicles set forth in Form L-9 (October 1975), entitled "Terms and Conditions of License for Constructed Minor Project Affecting Navigable Waters



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of the United States," except article 15, and the following additional articles:

Article 201. The Licensee shall pay the United States the following annual charges for the purpose of reimbursing the United States for the cost of administration of Part I of the FPA.

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 From January 1, 1941, through January 31, 1991, an amount determined for each year in accordance with the provisions of the Comminsion's regulations in effect during each year, and based on the installed capacity (expressed in horsepower) for each year.

2. From February 1, 1992, through the term of the license, an amount as determined in accordance with the provisions of the Commission's regulations in effect from time to time. The authorized installed capacity for that purpose is 940 horsepower.

Article 202. The Licenses shall clear and keep clear to an adequate width all lands along open conduits and shall dispose of all temporary structures, unused timber, brush, refuse, or other material unnecessary for the purposes of the project which result from maintenance, operation, or alteration of the project works. In addition, all trees along the periphery of project reservoirs which may die during operations of the project shall be removed. All clearing of lands and disposal of unnecessary material shall be done with due diligence to the satisfaction of the authorized representative of the Commission and in accordance with sppropriate federal, state, and local statutes and regulations.

Article 203. The Commission reserves authority, in the context of a rulemaking proceeding or a proceeding specific to this license, to require the licensee at any time to conduct studies, make financial provisions, or otherwise make reasonable provisions for decommissioning of the project. The terms of this article shall be effective unless the Commission, in Docket No. RM93-23, finds that the Commission lacks statutory authority to require such actions, or otherwise determines that the article should be rescinded.

Article 301. The Licensee shall commence construction of the project modifications no later than Pabruary 9, 1996, and ahall complete construction of the modifications no later than February 9, 1998.

Article 102. Before starting construction, the Licensee shall review and approve the design of contractor-designed cofferdams and deep excavations and shall make sure construction of cofferdams and deep excavations is consistent with the approved design. At least 30 days before starting construction of any cofferdam, the Licenses shall submit one copy to the

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Commission's Regional Director and two copies to the Commission (one of these copies shall be a courtemy copy to the Commission's Director, Division of Dam Safety and Inspections), of the approved cofferdam construction drawings and specifications and the letters of approval.

Article 10]. The Licensee shall, at least 60 days prior to the start of construction, submit one copy to the Commission's Regional Director and two copies to the Commission (one of these shall be a courtesy copy to the Director, Division of Dam Safety and Inspections), of the final contract drawings and specifications for the installation of new project features of the project, such as trashracks, any water retention structures, and water conveyance structures. The Commission may require changes in the plans and specifications to assure a safe and sdequate project. If the Licensee plans substantial changes to location, sizs, type, or purpose of the water retention structures, powerhouse, or water conveyance structures, the plans and specifications must be accompanied by revised Exhibit F and G drawings, as necessary.

Article 304. The Licensee, within 90 days of completion of construction, shall file for approval by the Commission, revised Exhibits A, F, and G, to describe and show the project as built, including all facilities determined, by the Commission, to be necessary and convenient for transmission of all of the project power to the interconnected transmission system.

Article 401. The Licensee shall prepare a final erosion and aediment control plan for any aream to be disturbed by the construction of new project facilities. At a minimum, it shall include the elements of the sediment control plan filed July 26, 1990, as it would relate to the modifications to the existing powerhouse and new recreation facilities, with the following additions and modifications.

- Silt fences shall be installed to control sediment runoff at the construction staging areas, disposal sits, and recreation facility construction sites.
- (2) All areas disturbed during construction shall be revegetated to provide final stabilization of all lands, and shrubbary indigenous to the area shall be planted around the project substation to improve the appearance of the facility.
- (3) The remnants of a paper mill located on the east side of the river shall be cleaned up and disposed of in conjunction with on-site disposed of spoil material.
- (4) Control messures shall be inspected daily during the construction period and shall be immediately maintained or repaired as necessary.

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-21-A schedule shall be included that shows when, in relation to (5) the various construction phases, the control measures would be implemented and maintained.

The Licensee shall file the final plan and the final drawings, specifications, and schedule for implementing the plan along with the final project drawings, specifications required by article 302. The final drawings, specifications, and schedule for the plan shall be prepared in consultation with the Soil Conservation Service and the New York State Department of Environmental Conservation. The filing shall also include documentation of agency consultation. The Licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations prior to filing the plan with the Commission.

The Commission reserves the authority to require changes to The Commission reserves the authority to require thanges to the final plan, drawings, specifications, and schedule to ensure proper control of erosion and discharge of sediment to wetlands and watercourses, and adequate protection of the environmental, scenic, and cultural values of the project area. The Licensee shall implement the controls, and restore and revegetate disturbed areas according to the final plan, drawings, specifications, and achedule, including any changes required by the Commission the Commission.

Article 402. The Licenses shall operate the project in a run-of-river mode for the protection of water quality and equatic resources in the Raquette River. The Licensee shall at all times act to minimize the fluctuation of the reservoir surface act to minimize the fluctuation of the reservoir surface elevation by maintaining a discharge from the project so that, at any point in time, flows, as measured immediately downstream from the project tailrace, approximate the sum of inflows to the project transvoir. Run-of-river operation may be temporarily modified if required by operating emergencies beyond the control of the Licensee or for short periods upon mutual agreement between the Licensee, the U.S. Fish and Wildlife Service (FWS), and the New York State Department of Environmental Conservation (DEC). If the flow is so modified, the Licensee shall notify the Commission as soon as possible, but no later than 10 days after each such incident.

Article 401. The Licensee, after consultation with the U.S. Geological Survey (USGS), the U.S. Fish and Wildlife Service (FWS), and the New York State Department of Environmental (FWS), and the New York state Department of Environmental Conservation (DEC), shall develop a plan to install streamflow monitoring equipment in the project's reservoir and Requette River to monitor compliance with the run-of-river mode of operation as stipulated by article 402. The plan shall include, but not be limited to, an implementation schedule, the proposed location, design, and calibration of the monitoring equipment, the method of flow dats collection, and a provision for providing Project No. 9222-003

-22flow data to the USGS, the FWS, and the DEC within 30 days from the date of the agency's request for the data.

The Licensee shall include documentation of consultation with the agencies before preparing the plan, copies of agency comments or recommendations on the completed plan after it has comments or recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how all the agency comments were accommodated by the plan. The Licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations prior to filing the plan with the Commission.

The Licenses shall file the plan with the Commission for approval at least 90 days prior to any land-disturbing activities and, upon approval, shall implement the streamflow monitoring plan. The Commission reserves the right to require changes to the plan.

Article 404. The licenses shall install, operate, and maintain at the Yalaville Project a trashrack angled 45 degrees maintain at the Ysleville Project a transmark angled 45 degrees to the direction flow with an approach velocity of 2 feet per second or less, as measured 1-foot in front of the transmark, and a downstream fish bypass structure, with flows through the bypass atructure of at least 20 cubic feet per second (ofs) or 2 percent of the maximum hydraulic capacity of the powerhouse, whichever is greater, to reduce entrainment of fish into the project's intake greater, to reduce entrainment of rian into passage. The licensee, within 180 days after the lesuance of a license, shall file for Commission approval a plan for downstream fish passage that includes functional design drawings of the angled trashrack and Includes functional design drawings of the angled trashrack and fish bypass structure at the project, quantification of the flows required to operate the bypass structure, a schedule to install the trashrack and fish bypass structure at the project, and a plan of operation, including specification of periods of the fishway's operation, as agreed to by the U.S. Fish and Wildlife Service (FWS). The plan shall also include a provision to allow personnel from the U.S. Fish and Wildlife Service (FWS) and the New York state Department of Environmental Conservation (DEC) to inspect the downstream fish passage facilities and the project's records pertaining to the construction, operation, and maintenance of the facilities. maintenance of the facilities.

The plan shall be prepared in consultation with the FWS and DEC. The licensee shall include documentation of the DEC. The licensee shall include documentation of consultation with those sgencies before preparing the plan, copies of agency comments or recommendations on the completed plan after it has been prepared and provided to the sgencies, and specific deacriptions of how the sgency's comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the sgencies to comment and to make recommendations prior to filing the plan with the Commission. Upon approval by the Commission, the licensee shall implement the downstream fish the DEC.

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passage plan. The Commission reserves the right to require changes to the plan. The licensee shall file as-built drawings of the angled trashracks and downstream fish passage facilities

Article 105. The Licensee, before starting any landclearing or ground-disturbing activities within the project boundaries, other than those specifically suthorized in this license, including recreation developments at the project, shall consult with the State Historic Preservation Officer (SHPO).

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If the Licensee discovers previously unidentified archeological or historic properties during the course of constructing or developing project works or other facilities at the project, the Licensee shall stop all land-clearing and ground-disturbing activities in the vicinity of the properties and consult with the SNPO.

In either instance, the Licensee shall file for Commission approval a cultural resource management plan (plan) prepared by a qualified cultural resource specialist after having consulted with the SHPO. The plan shall include the following items: (1) a description of each discovered property indicating whether it is listed on or eligible to be listed on the National Register of Historic Places; (2) a description of the potential effect on each discovered property; (3) proposed measures for avoiding or mitigating effects; (4) documentation of the nature and extent of consultation; and (5) a schedule for mitigating effects and conducting additional studies. The Commission may require changes to the plan.

The Licensee shall not begin land-clearing or landdisturbing activities, other than those specifically authorized in this license, or resume such activities in the vicinity of a property, discovered during construction or operation, until informed that the requirements of this article have been fulfilled.

Article 406. No later than February 9, 1998, the Licenses shall complete construction of and provide for the operation and maintenance of the recreation facilities shown on sheet 1-A. Conceptual Plan for Recreation Facilities, in Exhibit-E of the Licensee's application. Specifically, the Licensee shall provide the following: (1) a cance portage with put-in and take-out areas to accommodate car-top boats: (2) a parking area; and (3) a picnic area.

The Licensee shall construct the facilities after consultation with the New York Department of Environmental Conservation (DEC). The Licensee shall permit fishing access along the entire length of the project's east bank and shall install appropriate handrails or fencing to ensure public safety.

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The Licenses shall consider the needs of the disabled in the final designs for all recreation facilities at the project.

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The recreation facilities shall be shown on the as-built drawings filed pursuant to this license. The Licensee shall file a report with the as-built drawings which shall include the entity responsible for operation and maintenance of the facilities and documentation of commutation and copies of comments and recommendations on the report sftar it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the report. The Licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations prior to filing the report with the Commission. If the Licensee does not adopt a recommendation, the filing shall include the Licensee's reasons, based on project-specific information.

based on project-specific information. Article 407. (a) In accordance with the provisions of this article, the Licensee shall have the suthority to grant permission for cartain types of use and occupancy of project lands and waters and to convey certain interests in project lands and waters for cartain types of use and occupancy, without prior Commission approval. The Licensee may exercise the authority only if the proposed use and occupancy is consistent with the purposes of protecting and enhancing the scenic, recreational, and waters for over an even of the scenic state with the purposes, the Licensee shall also have continuing responsibility to supervise and control the use and occupancy of this article. If a permission, and to monitor the use of, and ensure compliance with the covenants of the instrument of conveyance for, any interests that it has conveyed, under this article. If a permitted use and occupancy violates any condition of this article or eny other condition imposed by the Licensee for protection and enhancement of the project's scenic, recreational, or other environmental values, or if a covenant of a conveyance made under the authority of this article is violated, the Licensee shall take any lawful action necessary to correct the violation. For a permitted use or occupancy, that action includes, if necesary, canceling the permission to use and occupy the project lands and waters and requiring the removal of any necessity of use and occupancy of project lands and

(b) The type of use and occupancy of project lands and waters for which the Licenses may grant permission without prior Commission approval are: (1) landscape plantings; (2) noncommercial plars, landings, boat docks, or similar structures and facilities that can accommodate no more than 10 watercraft at a time and where and facility is intended to serve single-family type dwallings; and (3) embankments, bulkheads, retaining walls, or similar structures for erosion control to protect the existing shoreline. To the extent families and demirable to protect and enhance the project's scenic, recreational, and other

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environmental values, the Licensee shall require multiple use and occupancy of facilities for access to project lands or waters. The Licensee shall also ensure, to the satisfaction of the Commission's authorized representative, that the use and occupancies for which it grants permission are maintained in good repair and comply with applicable state and local health and mafety requirements. Before granting permission for construction of bulkheads or retaining walls, the Licensee shall: (1) inspect the site of the proposed construction, (2) consider whether the planting of vegetation or the use of riprap would be adequate to control erosion at the site, and (3) determine that the proposed construction is needed and would not change the basic contour of the reservoir shoreline. To implement this pragram for issuing permits for the specified types of use and occupancy of project ands and waters, which may be subject to the payment of a reasonable fee to cover the Licensee's costs of administering the permit program. The Commission reserves the right to require the licenses to file a description of ibs standards, guidelines, and procedures for implementing this paragraph (b) and to require modification of these standards, guidelines, and

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(c) The Licensee may convey essements or rights-of-way across, or leases of, project lands for: (1) replacement, expansion, realignment, or maintenance of bridges and roads for expansion, realignment, or maintenance of bridges and roads for which all necessary state and federal approvals have been obtained; (2) storm drains and water mains; (3) mewers that do not discharge into project waters; (4) minor access roads; (5) telephone, gas, and electric utility distribution lines; (6) non-project overhead electric transmission lines that do not require ersciion of support structures within the project boundary; (7) submarine, overhead, or underground major telephone distribution cables or major electric distribution lines (64 × V or leas); and (8) water intake or pumping facilities that do not extract more than one million gallone per day from a project reservoir. No leter than Januery 31 of each year, the Licensee shell fils three copies of a report briefly describing for each conveyance made under this paragraph (c) during the prior celendar year, the type of interest conveyad, the location of the lands subject to the conveyance, and the nature of the use for which the interest was conveyed. conveyed.

(d) The Licensee may convey fee title to, easements or rights-of-way across, or leases of project lands for: (1) construction of new bridges or roads for which all necessary state and federal approvals have been obtained; (2) sever or effluent lines that discharge into project waters, for which sil necessary federal and state water quality certification or permits have been obtained; (3) other pipelines that cross project lands or waters but do not discharge into project waters; (4) non-project overhead electric transmission lines that require erection of support structures within the project boundary, for

Froject No. 9222-003

which all necessary federal and state approvals have been obtained; (5) private or public marines that can accommodate no more than 10 watercraft at a time and are located at least one-half mile from any other private or public marina; (6) recreational development consistent with an approved Exhibit R or approved report on recreational resources of an Exhibit R; and (7) other uses, if; (i) the amount of land conveyed for a particular use is flys acres or leas; (ii) all of the land conveyed is located at least 75 feet, measured horizontally, from the edge of the project reservoir at normal maximum surface elevation; and (iii) no more than 50 total acres of project lands for each project development see conveyed under this clause (d)(7) in any calendar year. At least 45 days before conveying any interest in project lands under this paragraph (d), the licenses must submit a latter to the Director, Office of Mydropower Licensing, stating its interest and location of the lands to be conveyed (as marked exhibit G or K map may be used), the nature of the proposed use, the identity of any federal or state agency official consultad, and sny federal or state approvals required for the proposed use. Unless the Director, within 45 days from the filing date, requires the Licenses to file an application for prior approval, the Licenses may convey the intered interest at the end of that period. which all necessary federal and state approvals have been

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(e) The following additional conditions apply to any intended conveyance under paragraph (c) or (d) of this article:

(1) Before conveying the interest, the Licensee shall consult with federal and state fish and wildlife or recreation agancies, as appropriate, and the State Historic Freservation officer.

(2) Before conveying the interest, the Licensee shall determine that the proposed use of the lands to be conveyed is not inconsistent with any approved exhibit R or approved report on recreational resources of an exhibit E; or, if the project does not have an approved exhibit R or approved report on recreational resources, that the lands to be conveyed do not have recreational value.

(3) The instrument of conveyance must include covenants running with the land adequate to ensure that: (1) the use of the lands conveyed shall not endanger health, create a nuisance, or otherwise be incompatible with overall project recreational use; and (11) the grantee shall take all reseanable precautions to insure that the construction, operation, and maintenance of structures or facilities on the conveyed lands will occur in a manner that will protect the scanic, recreational, and environmental values of the brotect. environmental values of the project.



Project No. 9222-003

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(4) The Commission reserves the right to require the Licensee to take reasonable remedial action to correct any violation of the terms and conditions of this article, for the protection and enhancement of the project's scenic, recreational, and other snvironmental values.

(f) The conveyance of an interest in project lands under this article does not in itself change the project boundaries. The project boundaries may be changed to exclude land conveyed under this article only upon approval of revised exhibit G or K drawings (project boundary maps) reflecting exclusion of that land. Lands conveyed under this article will be excluded from the project only upon a determination that the lands are not necessary for project purposes, such as operation and maintenance, flowage, recreation, public access, protection of environmental resources, and shoreline control, including shoreline aesthetic values. Absent extraordinary circumstances, proposals to exclude lands conveyed under this article from the project shall be consolidated for consideration when revised exhibit G or K drawings would be filed for approval for other purposes.

(g) The authority granted to the Licensee under this article shall not apply to any part of the public lands and reservations of the United States included within the project boundary.

Article 408. Authority is reserved to the Commission to require the Licensee to construct, operate and maintain, or to provide for the construction, operation, and maintenance of, such upstream fishways, as may be prescribed by the Secretary of the Interior, pursuant to Section 18 of the Federal Power Act.

(H) The Licensee shall serve copies of any Commission filing required by this order on any entity specified in this order to be consulted on matters related to that filing. Proof of service on these entities must accompany the filing with the Commission. Project No. 9222-003

(1) This order is final unless a request for rehearing is filed within 30 days from the date of its issuance, as provided in Section 313(a) of the FPA. The filing of a request for rehearing does not operate as a stay of the effective date of this order on or any other date epscified in this order, except as specifically ordered by the Commission. The licensee's failure to file a request for rehearing shall constitute acceptance of this order.

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By the Commission.

(SEAL)

inwood A. Watson, Jr., Acting Secretary.

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June 2019



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-0893 Event Code: 05E1NY00-2019-E-02798 Project Name: Yaleville LIHI Application February 06, 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: <u>http://www.fws.gov/northeast/nyfo/es/section7.htm</u>

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 (<u>http://www.fws.gov/windenergy/</u>



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02/06/2019

Event Code: 05E1NY00-2019-E-02798

<u>eagle_guidance.html</u>). Additionally, wind energy projects should follow the Services wind energy guidelines (<u>http://www.fws.gov/windenergy/</u>) 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: <u>http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/</u>

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



June 2019

02/06/2019

Event Code: 05E1NY00-2019-E-02795

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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



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02/06/2019

Event Code: 05E1NY00-2019-E-02798

Project Summary

Consultation Code:	05E1NY00-2019-SLI-0893
Event Code:	05E1NY00-2019-E-02798
Project Name:	Yaleville LIHI Application
Project Type:	** OTHER **

Project Description: The Project is for the application to the Yaleville LIHI Institute.

Project Location:

Approximate location of the project can be viewed in Google Maps: <u>https://www.google.com/maps/place/44.75973933887084N75.00047198709393W</u>



Counties: St. Lawrence, NY



June 2019

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Event Code: 05E1NY00-2019-E-02798

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 Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

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

 <u>NOAA Fisheries</u>, 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/eep/species/9045	Threatened	

Critical habitats

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



June 2019

Caley, Katherine

From:	naturalheritage@nynhp.org	
Sent:	Wednesday, January 09, 2019 12:22 PM	
To:	Caley, Katherine	
Subject:	Confirmation of your submitted request to New York Natural Heritage	

Submission ID: 2918

Submitted on Wednesday, January 9, 2019 - 12:21 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: <u>Katherine Caley@hdrinc.com</u> Project Type: hydroelectric facility/project Project Name: Yaleville LIHI Consultation Project Applicant: Erie Boulevard Hydropower, LLC Project County: St Lawrence Town (St Lawrence County): Norfolk Project Summary: Erie is presently working with the Low Impact Hydropower Institute (LIHI) to certify the Yaleville Hydroelectric Project (FERC No.9222) 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 LIH, Erie respectfully requests information on the presence of threatened or endangered species within the vicinity of the project.

Current Land Use: The site is currently developed for the primary purpose of hydroelectric energy production on the Raquette River.

Tax parcel number: Latitude: 44.766 Longitude: -74.998 Street Address of Project Project Notes:

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FRANC LOGIC June 2019





June 2019

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

February 7, 2019

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

Re: Yaleville LIHI Consultation County: St Lawrence Town/City: Norfolk

Dear Ms. Caley:

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

Enclosed is a report of rare or state-listed animals and plants, and significant natural communities that our database indicates occur in the vicinity of the project site.

For most sites, comprehensive field surveys have not been conducted; the enclosed report only includes records from our database. We cannot provide a definitive statement as to 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 sources may be required to fully assess impacts on biological resources.

Our database is continually growing as records are added and updated. If this proposed project is still under development one year from now, we recommend that you contact us again so that we may update this response with the most current information.

The presence of the plants and animals identified in the enclosed report may result in this project requiring additional review. For further guidance, and 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 6 Office, Division of Environmental Permits at dep.r6@dec.ny.gov, (315) 785-2245.

Sincerely,

Heidi Krahling Environmental Review Specialist New York Natural Heritage Program

NEW YORK

C Department of Environmental Conservation



June 2019

New York Natural Heritage Program



Report on Rare Animals, Rare Plants, and Significant Natural Communities

The following rare animal has been documented in the vicinity of the project site.

We recommend that potential impacts of the proposed project on this species be addressed as part of any environmental assessment or review conducted as part of the planning, permitting and approval process, such as reviews conducted under SEQR. Field surveys of the project site may be necessary to determine the status of a species at the site, particularly for sites that are currently undeveloped and may still contain suitable habitat. Final requirements of the project to avoid, minimize, or mitigate potential impacts are determined by the lead permitting agency or the government body approving the project.

The following animal, while not listed by New York State as Endangered or Threatened, is rare in New York and is of conservation concern.

COMMONNAME	SCIENTIFIC NAME	NY STATE LISTING	HERITAGE CONSERVATION STATUS
Fish			
Bridle Shiner	Notropis bifrenatus	Unlisted	Imperiled in NYS and Globally Uncommon
Documented within tw	vo miles upstream of the Yaleville Dan	n. 2017-06-21.	-

This report only includes records from the NY Natural Heritage database. For most sites, comprehensive field surveys have not been conducted, and we cannot provide a definitive statement as to the presence or absence of all rare or state-listed species. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other sources may be required to fully assess impacts on biological resources.

If any rare plants or animals are documented during site visits, we request that information on the observations be provided to the New York Natural Heritage Program so that we may update our database.

Information about many of the rare animals and plants in New York, including habitat, biology, identification, conservation, and management, are available online in Natural Heritage's Conservation Guides at www.guides.nynhp.org, from NatureServe Explorer at www.natureserve.org/explorer, and from USDA's Plants Database at http://plants.usda.gov/index.html (for plants).

2/7/2019