

# NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

## Division of Environmental Permits

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April 16, 2021

New York Power Authority  
Attn: Robert Daly, Licensing Director  
123 Main Street  
White Plains, NY 10601

RE: Initial Study Report  
Crescent Hydroelectric Project (FERC No. 4678)  
Vischer Ferry Hydroelectric Project (FERC No. 4679)  
Town of Colonie, Albany County  
Towns of Clifton Park/Halfmoon, Saratoga County  
Town of Niskayuna, Schenectady County

Dear Mr. Slade:

The New York State Department of Environmental Conservation (“NYSDEC” or “Department”) is submitting comments on the February 19, 2021 Initial Study Report (ISR) submitted by the New York Power Authority (“NYPA” or “Applicant”) for relicensing the existing Crescent Hydroelectric Project (FERC No. 4678) and Vischer Ferry Hydroelectric Project (FERC No. 4679). The two projects, collectively referred to as the “NYPA Projects” or “Projects”, are located on the Mohawk River with the Crescent Project located in Albany, Schenectady, and Saratoga Counties, New York and the Vischer Ferry Project located in Albany and Schenectady Counties, New York.

NYSDEC staff attended the March 3, 2021 ISR virtual meeting for these NYPA Projects.

### **Comments on the Initial Study Report**

The ISR was found to be a well-written and comprehensive document for the field efforts of the 2020 field season.

### **Water Quality Study**

NYSDEC would like to request that along with the total flow through the units at the Projects, that NYPA also graph the total prorated flow that passes the Projects with generation flow included. This will provide a more complete understanding of flows at the Projects, how they are being utilized, and confirm that the minimum flows are also being provided.

With the consideration that the “2020 water year” could be considered a low-flow, dry year, and is likely a good representative of the poor conditions that could be present at the Projects, there appeared to be localized dissolved oxygen (DO) stratification in the forebays. There was however, also some evidence of erratic DO changes, therefore it is unclear if this is a characteristic of the Mohawk River or a function of Project operations. This warrants a further investigation to ensure that the Projects do not have a negative impact on the local water quality of the Mohawk River.

### Blueback Herring Downstream Migration Study

NYSDEC also notes that there was no mention or account for delays or outages of the acoustic guidance system and how such events may impact safe and effective downstream passage. Although this may be a rare occurrence, in recent years, there has been some problematic occurrences in the operation of the acoustic guidance system including complications with vendor contracts, timing of deployment, and damage to the submerged cable compromising strength of the acoustics. NYSDEC does appreciate NYPA's efforts to remedy these items, however, they should also be accounted for in the evaluation of Blueback Herring downstream migration of the Projects.

### **Study Requests and Modifications**

The NYSDEC requests that the Applicant also conduct the following studies:

#### Water Quality Monitoring Study

The Water Quality Monitoring Study should include continuous water temperature and dissolved oxygen (DO) data collection and discrete measurements (i.e. temperature, DO, pH, and conductivity) monthly from June 1 to October 31. Baseline water quality studies are needed to ensure compliance with NYS water quality standards, (the Clean Water Act § 401 Water Quality Certification) and identify the potential Projects impacts to the fish community, particularly impacts to blueback herring (*Alosa aestivalis*) during upstream and downstream migrations (e.g., juvenile outmigration, adult immigration). An additional year of monitoring is needed based on a review of the first year's study result, as noted above, that there was some evidence of local DO stratification and erratic values. Data should be collected from a location in the impoundments, the forebay, and the tailrace. Water quality information collected should be summarized in a manner that will allow appropriate analysis of the current flow regime. Methods for mitigating water quality problems (i.e. modifications to infrastructure, or changes to existing operations) should be fully explored and modeled as to their potential effectiveness.

#### 1. *Goals and Objectives*

The goals and objectives of this study are to provide baseline water quality information.

#### 2. *Resource Management Goals*

NYSDEC's mission is "to conserve, improve and protect New York's natural resources and environment and to prevent, abate and control water, land and air pollution, in order to enhance the health, safety and welfare of the people of the state and their overall economic and social well-being." The natural resource management goals within the Mohawk River Watershed will be consistent with the Department's mission while focusing on protecting and enhancing fish and wildlife habitat and improving public access.

#### 3. *Public Interest*

The requestor is a state resource agency.

#### 4. *Existing Information*

The NYSDEC conducts statewide monitoring programs for determining the overall quality of waters, trends in water quality, and the identification of water quality issues achieved through the Rotating Integrated Basin Studies (RIBS) program, which occur on

5-year cycles. Data from the RIBS program cannot be used to quantify the direct impacts of either hydro facility, but rather can be used to expand the assessment.

Results from the 2020 field season have shown that there may be localized impacts to the DO based on data collected in the Projects forebays. It is not clear if this is representative only of the forebay area, and impact from Project operation, or may be representative of the impoundments. There is value in collecting data from a location in the impoundments to clarify the relationship of the Projects to the water quality of the Mohawk River.

5. *Nexus to Projects Operations and Effects*

The existing NYPA Projects impound water from the Mohawk River. These impoundments and releases have the potential to impact such water quality factors as temperature and dissolved oxygen (DO), which are critical to the quality of the aquatic habitat, especially during low flow summer periods.

6. *Methodology Consistent with Accepted Practice*

The recommended study uses standard water quality sampling techniques commonly used in most hydropower licensing activities.

7. *Level of Effort, Cost, and Why Alternative Studies Will Not Suffice*

The level of effort would be low and would involve monitoring with continuous measurement devices and collecting monthly samples while undertaking other work such as the American Eel and Bald Eagle studies. In addition, temperature and DO instruments would need to be installed, with data being periodically downloaded. The actual cost is expected to be relatively low.

We appreciate the opportunity to comment. If you have any questions or would like to discuss further, please feel free to contact me at 518-402-9179 or [michael.higgins@dec.ny.gov](mailto:michael.higgins@dec.ny.gov).

Sincerely,



Michael T. Higgins  
Project Manager  
Major Projects Management

CC: Nicole Cain, NYSDEC, Bureau of Ecosystem Health  
Chris Van Maaren, NYSDEC, Region 4  
Mary Anne Bonilla, Office of General Counsel



April 19, 2021

*Via Electronic Filing*

Kimberly D. Bose, Secretary  
Federal Energy Regulatory Commission  
888 First St. NE  
Washington, DC 20426

**Re: Comments of Riverkeeper, Inc. on the Initial Study Reports for the Crescent Hydroelectric Project (P-4678-052) and/or Vischer Ferry Hydroelectric Project (P-4679-049)**

Dear Secretary Bose,

Riverkeeper appreciates this opportunity to comment on the Initial Study Reports as part of the relicensing applications for the Crescent and Vischer Ferry Dams (FERC Nos. 4678 & 4679, respectively), located on the Mohawk River in Saratoga, Albany, and Schenectady Counties, New York.

***Water Quality Study***

In the Initial Study Report (“ISR”), NYPA states that no further water quality study is needed. However, the dissolved oxygen (“DO”) data collected at both projects, and the positioning of the upstream sampling stations, leave open questions about the representativeness of the sampling locations upstream of the projects.

DO fell below the NYS daily average standard of 5.0 mg/L 9% of the time in the Vischer Ferry forebay and 8% of the time in the Crescent forebay.<sup>1</sup> The ISR noted that DO was “irregular and erratic at all four samples sites, in particular at the forebay sites.”<sup>2</sup> The number of days on which DO fell below the NYS standard, along with the uncertainty around causes of DO fluctuations, show that more information is needed about water quality.

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<sup>1</sup> New York Power Authority. 2021. Water Quality Study: Crescent and Vischer Ferry Projects Relicensing.

<sup>2</sup> *Ibid.*



During the second year of study, a sampling location should be installed further upstream at each project, to obtain information that is more representative of conditions in the impoundments. In 2020, the water quality sensors were positioned very close to the shoreline bulkheads, within the project forebays. Locations that are further upstream and further from shore can provide information that is more broadly representative of the impoundments. This can be compared with the forebay station data to improve understanding of DO depletion and fluctuations.

This additional information is important to develop license conditions that prevent DO depletion from occurring.

If you have any questions about these comments, please contact Jennifer Epstein at [jepstein@riverkeeper.org](mailto:jepstein@riverkeeper.org) or (914) 478-4501 x248.

Sincerely,

A handwritten signature in black ink, appearing to read 'Jepstein'.

Jennifer Epstein

Water Quality Program Scientist