

# **REVIEW OF APPLICATION FOR RE-CERTIFICATION BY THE LOW IMPACT HYDROPOWER INSTITUTE OF THE WORNOCO HYDROELECTRIC FACILITY, LIHI #68**

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May 18, 2020

## **I. INTRODUCTION**

This report summarizes the review findings of the application submitted by Woronoco Hydro LLC, (Woronoco LLC or Applicant) to the Low Impact Hydropower Institute (LIHI) for re-certification of the Woronoco Hydroelectric Project (Woronoco Project) (FERC P-2631) LIHI #68. Woronoco LLC is a wholly-owned subsidiary of Eagle Creek Renewable Energy (Eagle Creek). Eagle Creek acquired Woronoco Hydro LLC in May 2015. The Woronoco Project was first certified by LIHI in 2011, effective January 28, 2010, and was recertified on November 8, 2015, effective, January 28, 2015, for a five-year term (to January 28, 2020). This term was extended until May 31, 2020.

The Project's original 2011 certification had three conditions, all associated with downstream passage for American eel and Atlantic salmon. The 2015 review found that the eel passage conditions were met and that since salmon restoration to the Connecticut River had been abandoned by the US Fish and Wildlife Service (USFWS), that re-certification was appropriate with no conditions.

## **II. RECERTIFICATION PROCESS AND MATERIAL CHANGE REVIEW**

Under the 2016 LIHI Handbook (rev 2.03, December 20, 2018), reviews are a two-phase process starting with a limited review of a completed LIHI application, focused on three questions:

- (1) Is there any missing information from the application?
- (2) Has there been a material change in the operation of the certified facility since the previous certificate term?
- (3) Has there been a change in LIHI criteria since the Certificate was issued?

In accordance with the Recertification Standards, all Projects currently applying for renewal must go through a full review unless their most recent certification was completed using the 2016 Handbook. Thus, this Stage II report was required for the Woronoco Project.

A review of the initial application, dated December 2019, resulted in a Stage I or Intake Report, dated December 19, 2019. This Stage I assessment indicated that the replacement of the failed Unit #3 turbine with a new Norcan camelback Francis turbine may possibly be a "material change" at the Project. The response to the Stage I Report was provided in the form of an updated application dated, February 19, 2020. Although the hydraulic capacity has slightly increased, as the Project continues to operate as a run-of-river facility and no operational changes have been implemented, it does not appear that this unit change affects any criterion resources, and therefore is not a "material change" as defined by LIHI.

This Stage II assessment included review of the application package, public records in FERC’s eLibrary since the last LIHI certification in 2015, communication with the Applicant, and review of the annual compliance statements received by LIHI during the past term of Certification.

### III. PROJECT’S GEOGRAPHIC LOCATION

The Woronoco Hydroelectric Project is located in the town of Russell, in Hampden County in southwestern Massachusetts. The Project is located on the Westfield River, 18.5 miles upstream from its confluence with the Connecticut River in West Springfield (Figure 1). The Westfield River is approximately 78.1 miles long, from its headwaters in the Berkshires (i.e., the Green Mountains) in northwestern Massachusetts, to its confluence with the Connecticut River. The Westfield River flows from a northwest to southeast direction, with a total contributing drainage area of 346 square miles

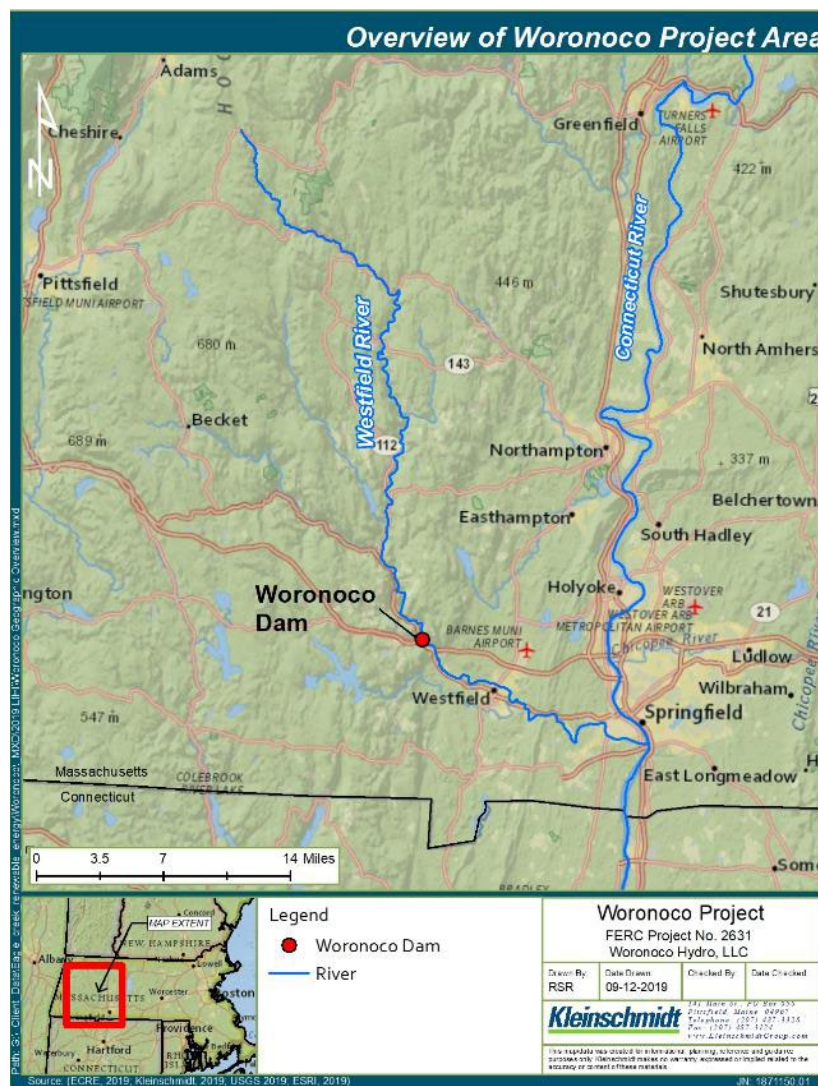


Figure 1 – Location Map of the Woronoco Project

There is one dam downstream and three dams upstream of the Project as shown on Figure 2.

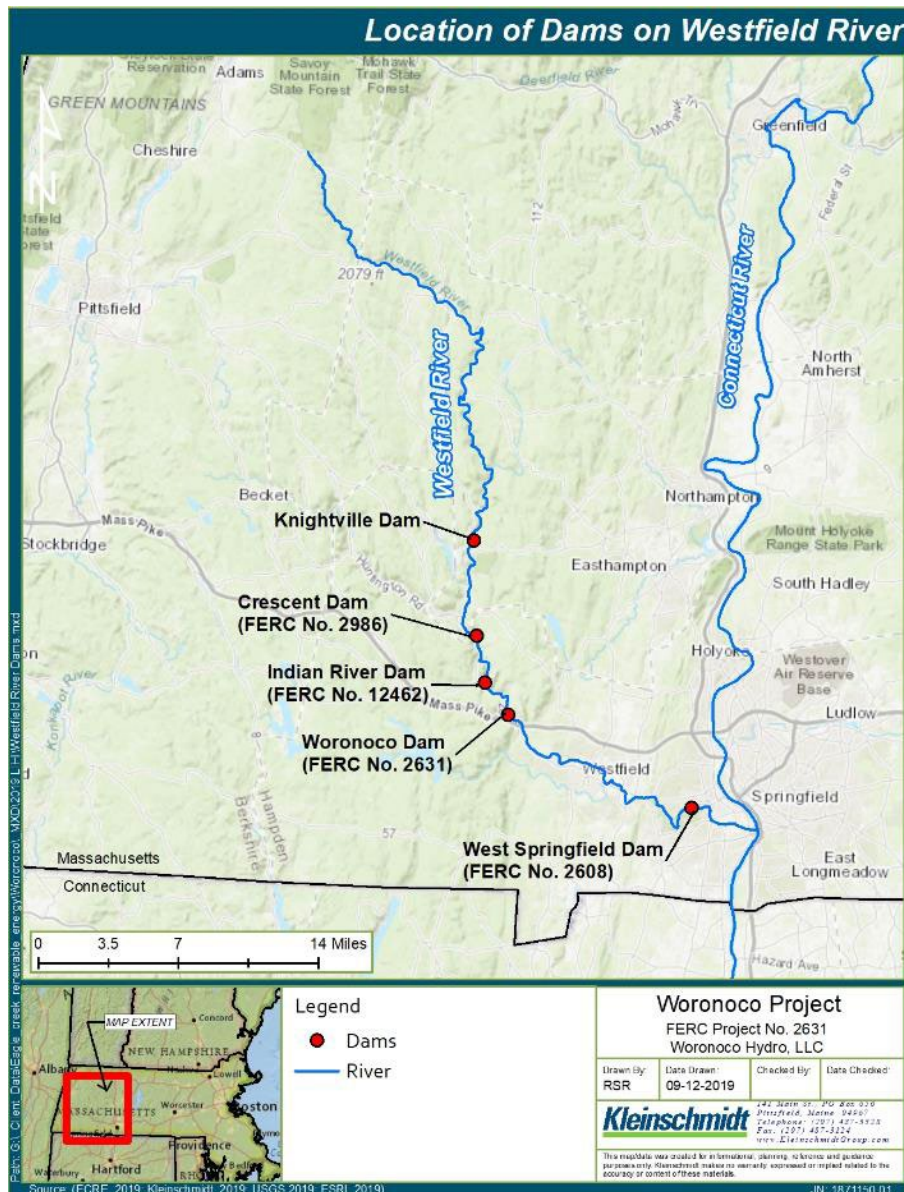


Figure 2 – Upstream and downstream dams.

The upstream Knightville Dam, owned and operated by the U.S. Army Corps of Engineers, is located approximately 11.5 miles upstream of the Project (at approximately river mile 30 of the Westfield River) and operates as a flood control structure. Also upstream are the Crescent Dam (also known as Texon Hydro Dam) (FERC No. 2986), 5.5 miles upstream, owned and operated by the Littleville Power Co, Inc., and the Indian River Dam (also known as the Russell Dam, FERC No. 12462), owned by Indian River Power Supply, LLC, a wholly owned indirect subsidiary of Eagle Creek), approximately 3 miles upstream from the Project. There is only one hydropower facility downstream of the Woronoco Project, on the Westfield River, the West Springfield Dam. This project is owned by A & D Hydro, Inc. and is located approximately 4.1 miles upstream from

its confluence with the Connecticut River. The Crescent Dam and West Springfield Dam are both LIHI certified (#119 and #19, respectively).

#### **IV. PROJECT AND IMMEDIATE SITE CHARACTERISTICS**

The original dam built at the site of the existing Woronoco Project was a timber-crib structure constructed in 1879. The existing hydro station was completed in 1913 to supply power to two paper mills, located along the banks of the Westfield River. The original timber crib dam was later replaced by the Project's two existing dams which were constructed in 1938 (North Dam) and 1950 (South Dam).

The Project's principal features consist of: (1) two non-contiguous 25-foot-tall concrete-gravity dam sections (a North Dam, 307 feet long; and a South Dam, 315 feet long) and a 655-foot-long earthen dike; (2) an intake area leading to a powerhouse, which contains three turbine/generator units with an installed capacity of 2.7 MW; (3) a downstream fish passage facility (with its discharge at the base of the south dam) and upstream eel passage facilities; (4) a 1.2-mile-long impoundment, with a normal pool elevation of 229.0 feet National Geodetic Vertical Datum (NGVD), and a surface area of 43 acres; (5) a bypassed reach with three channels, varying in length from 200 to 1,000 feet; and (6) appurtenant facilities. There are no flashboards, spillway or crest control gates at the Project. Downstream fish protection on the trashracks includes  $\frac{3}{4}$ -inch clear spaced panels installed during fish passage season and removed in the winter. The underlying trashracks have clear spacing of  $1\frac{1}{4}$  inch.

On June 17, 2014, Woronoco Hydro's largest turbine (Unit 3, rated capacity of 1.9 MW) was replaced in 2015 with a new Norcan camelback Francis turbine that was placed in service on November 25, 2015. The new Unit 3 turbine has a rated capacity of 1.956 MW. No structural changes were required to replace the equipment in-kind. The new unit resulted in an increase in the station's total hydraulic capacity of 99 cfs (the previous total capacity was 710 cfs, and is now 809 cfs). Project run-of-river operations have not changed. The licensed authorized capacity has not changed as a "non-capacity amendment" to the license was not sought, and the capacity increase was below the 15 % threshold for requiring a "capacity amendment".

The application noted generation values of 7,289.7 MWh in 2017 and 4,930.1 MWh in 2018.

Figure 3 shows the key features of the Project. Figures 4 and 5 show the two dams. Other photographs of the Project can be found in Appendix A to the application.



**Figure 3 - Key Features of the Woronoco Project**

The normal reservoir elevation is 229 feet NGVD, with a surface area of about 43 acres, and impounding about one mile of river. The Project is operated to minimize fluctuations to within one inch of its licensed elevation of 229.0 feet. The drainage area at the Woronoco dam is approximately 346 square miles. The reservoir has a volume of 1,830 acre-feet. The area occupied by non-reservoir facilities at Woronoco totals about 12 acres.



**Figure 4 – North Dam Looking West**



**Figure 5 – South Dam Looking East and Upstream**

**V. ZONES OF EFFECT AND STANDARDS SELECTED**

Three Zones of Effect (ZOE) were appropriately designated by the Applicant. They are illustrated on Figure 6.

- ZOE #1 – Impoundment (blue) RM 19.7 to RM 18.7
- ZOE #2 – Bypass Reach (yellow) RM 18.7 to RM 18.5
- ZOE #3 – Tailrace / Downstream Reach (red) RM 18.5 to RM 18.3

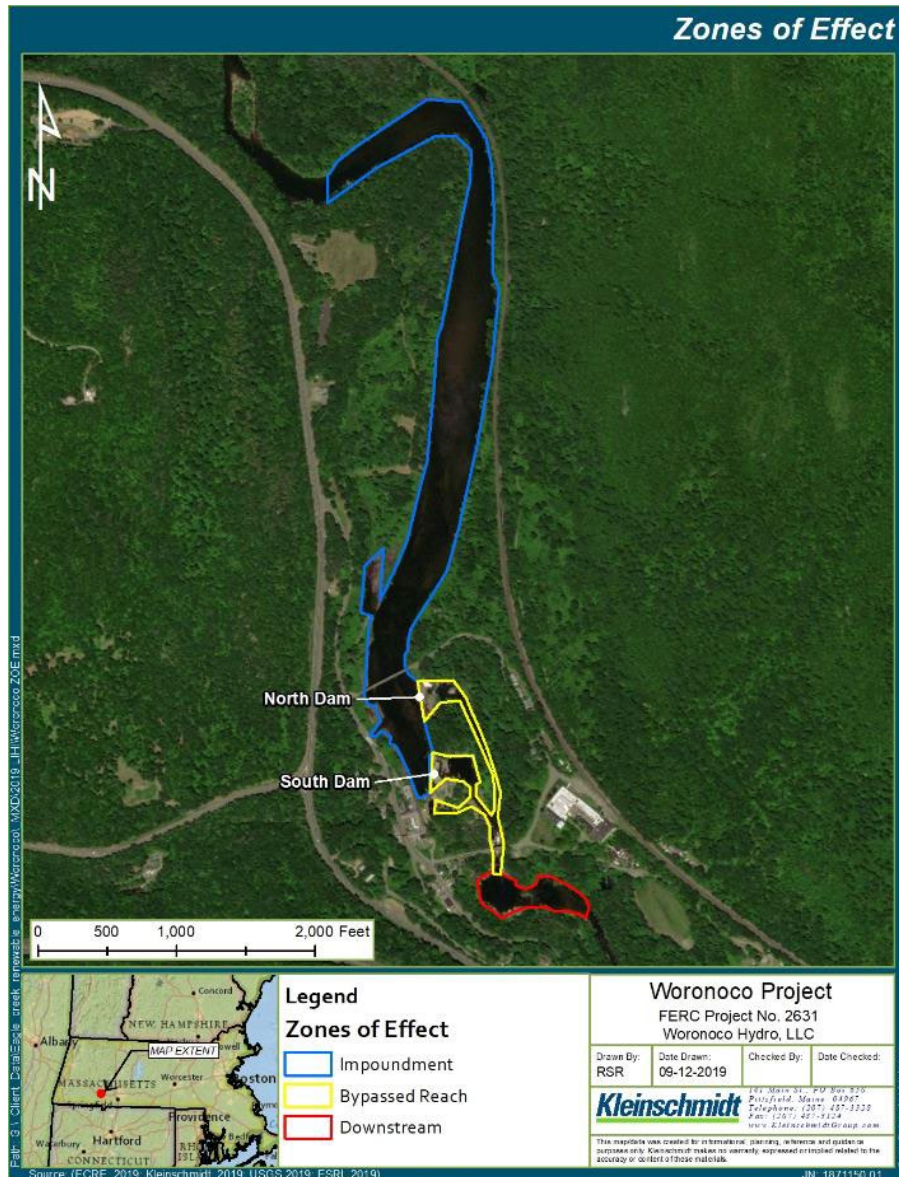


Figure 6 – Project Zones of Effect

The Applicant selected the Standards for each ZOE are shown on the tables below. I believe these are appropriate except that Standard C-1 is more appropriate for the Impoundment under Upstream Fish Passage as there are no Project-related barriers to upstream movement in this ZOE.

Details of compliance with the criteria are presented in Section IX.

**Standards for the Impoundment (ZOE #1)**

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

**Standards are identical for the Bypass Reach (ZOE #2) and Tailrace/Regulated Reach (ZOE #3)**

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

**VI. REGULATORY AND COMPLIANCE STATUS**

The Woronoco Project was relicensed by the Federal Energy Regulatory Commission (FERC) (FERC No. 2631) on April 30, 2002 for a 40-year license expiring March 31, 2042. The original license for the Project was issued on June 2, 1981. The Project received a Clean Water Act Section 401 Water Quality Certificate (WQC) from the Massachusetts Department of Environmental Protection (MDEP) on August 30, 2000, which was amended on September 29, 2000. All requirements of the August 2000 WQC were incorporated into the FERC license.

Initial LIHI review of the Project in 2010 found that a number of extensions were granted to Woronoco between 2002 and 2010 to complete the downstream fish passage license requirements, resulting in significant delays in their implementation which caused concern by the regulatory agencies. As a result, the original LIHI certification included three conditions addressing their completion. The 2015 LIHI review found that Applicant-generated reports filed with LIHI (1) document the progress and then the completion of its downstream effectiveness testing, (2) provide the results therefrom, and (3) demonstrate that the downstream fish passage measures at the



Woronoco facility are appropriately protective of Atlantic salmon and American eel passing downstream.

No deviations of non-adherence to FERC license notifications was found during the review of the FERC eLibrary from January 1, 2014 through May 20, 2020.

## **VII. PUBLIC COMMENT RECEIVED OR SOLICITED BY LIHI**

The deadline for submission of comments on the LIHI certification application was April 24, 2020. One comment letter dated April 24, 2020, from the Connecticut River Conservancy (CRC) was received directly by LIHI. The CRC did not explicitly state whether or not they support re-certification of the Woronoco Project, although they did identify several items they believe should be addressed. Eagle Creek provided their response to questions raised by CRC in an email to LIHI dated May 15, 2020. Comments and responses are addressed under Upstream Fish Passage, Cultural and Historical Resource Protection, and Recreational Resources

Additionally, a letter dated December 30, 2019, from Caleb Slater, PhD. of MDFW, was provided to the applicant's consultant preparing the LIHI application. Both this letter, and the most recent Massachusetts Endangered Species Act (MESA) review from MDFW, dated April 23, 2020, stated no objection to the recertification of the Woronoco Project. See Appendix A for these letters.

No outreach to agencies was found to be required due to the completeness of the application and lack of changes at the Project.

## **VIII. DETAILED CRITERIA REVIEW**

### **A. ECOLOGICAL FLOW REGIMES**

**Goal:** The flow regimes in riverine reaches that are affected by the facility support habitat and other conditions suitable for healthy fish and wildlife resources.

#### **Assessment of Criterion Passage**

The Applicant selected **Standard A-1, Not Applicable/De Minimis Effect** for the Impoundment and **Standard A-2, Agency Recommendation** for the Bypass and Tailrace / Regulated Reach ZOE. There have been no changes in requirements or in the mode of operation of the Facility since it was last re-certified by LIHI.

Article 401 of the FERC License, which is identical to those set forth in the WQC, requires the Licensee to operate the Project as a run-of-river facility, such that outflows from the Project are approximately equal to the sum of the inflows to the impoundment on an instantaneous basis. In addition, Article 401 requires that the Project is operated to minimize fluctuations in the impoundment water surface elevation, by maintaining impoundment elevations at 229.0 feet NGVD.

Run-of-river operations are maintained from a combination of generation and bypass flow. Impoundment levels are measured through the use of an electronic pressure transducer located

upstream of the forebay stoplog structure in a sheltered area on the dam side unaffected by flows. A second transducer is located behind the Project's intake trash racks. The Programmable Logic Control (PLC) automatically adjusts the unit settings based on the transducer input to maintain the impoundment level within one inch of the target elevation. In the event of loss of power or the impoundment level dropping below the target elevation, the system shuts down the turbine unit (and alarms station operating personnel) causing all flows to pass over the dam into the bypassed reach.

Article 402 of the License requires the Licensee to release from the Project (north and south dams) a minimum flow of 57 cubic feet per second (cfs), or inflow, whichever is less, as measured in the separate channels of the bypassed reach, for the protection and enhancement of water quality, fisheries, and aquatic resources in the bypassed section of the Westfield River. The 57-cfs minimum flow must be released to the bypassed reach as follows: 22 cfs in the north channel, as measured immediately downstream from the north dam, and 35 cfs from the South Dam into the middle and south bypass channel (15 cfs from the northern end of the South Dam into the middle channel and 20 cfs from the southern end of the South dam (during the downstream fish passage season, from the downstream fish passage facility and for the remainder of the year, from a surface gate near the powerhouse). The upstream eel passage facility releases are considered negligible.

During re-licensing, the consultant for the Applicant assessed aquatic habitat and flow in the relatively short bypassed reach using a modified Instream Flow Incremental Methodology (IFIM) approach (Bovee, 1982), in which micro-habitat data were gathered in the area of interest at incremental flow releases. The flow study employed standardized field methods, habitat data inputs, and habitat suitability criteria to calculate and interpolate habitat availability. These study results formed the basis of the Applicant's proposed minimum flow regime. Recommendations from agencies during re-licensing supported these proposed minimum flows. Recommendations were issued by both Massachusetts Division of Fish and Wildlife (MDFW) and USFWS in letters dated January 31, 2001<sup>1</sup> and February 8, 2001<sup>2</sup>, respectively. In their letter, MDFW stated that their recommended flows, which were adopted in the license, "will protect the mussel habitat in the bypass reach and contribute 89% of the total available wetted area, 98% of the total available macroinvertebrate habitat, 100% of the total available salmon parr habitat, 95% of the total available brown trout habitat, and 86% of the total available rainbow trout habitat." USFWS supported this recommendation.

Based on the application and review of FERC's eLibrary, there have been no deviations from the required run-of-river requirements nor the minimum flows to the bypass. Based on this review, I believe the Project continues to satisfy this criterion.

### *This Project Passes Criterion A – Ecological Flow Regimes*

## **B. WATER QUALITY**

**Goal:** Water Quality is protected in waterbodies directly affected by the facility, including downstream reaches, bypassed reaches, and impoundments above dams and diversions.

<sup>1</sup> <https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=1070545>

<sup>2</sup> <https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=9032135>

### Assessment of Criterion Passage

The Applicant appropriately selected Standard **B-2, Agency Recommendations** to pass this criterion for all ZOE's.

The Westfield River in the vicinity of the Project was classified by the Massachusetts Surface Water Quality Standards (314 CMR 4.00) as Class B Warmwater Fishery and Recreation waters at the time of relicensing in 2002 and it remains Class B today. The run-of-river and minimum flow requirements in the FERC License, which are identical to those set forth in the WQC, were established for the protection and enhancement of water quality, fisheries, and aquatic resources in the Woronoco impoundment and the Westfield River downstream from the Project. As already noted, the Project has not reported any deviations from these operating requirements.

The current Massachusetts Department of Environmental Protection (MDEP), Division of Watershed Management, Massachusetts Year 2016 Integrated List of Waters, dated June 2017 lists Potash Brook, a tributary to the Westfield River entering the impoundment approximately 600 feet above the South Dam, as Category 5, "Waters requiring a TMDL," for *Escherichia coli* (*E. coli*). The Westfield River is not listed as impaired for this pollutant.

The application also discussed the results of the Westfield River Water Quality Monitoring Project dated June 21, 2010, prepared by the Pioneer Valley Planning Commission. That sampling program included two sites near the Woronoco Project:

- Site WR20.1, located above the Project boundary at the Westfield River rest area opposite of the former Whipperton Golf Course, and
- Site WR8.3, located downstream of the Project boundary at the Westfield River gage station near West Springfield.

Results from these sites met the water quality standards for temperature for a Class B Warm Water Fishery (BWVF), but were lower than the desired alkalinity value of 100-200 mg/L (the desired alkalinity value that will sufficiently stabilize the pH in a stream). The study noted that the Project is not the cause of such alkalinity value as the Westfield River Basin is largely comprised of crystalline, sedimentary, and some carbonate rocks, which all result in the low alkalinity observed. Additionally, 11 of the 12 sites monitored for *E. coli* had *E. coli* values one or more times in excess of the primary contact standard, however, none of these sites were within the Project boundary.

Based on this information, I believe the Project continues to satisfy this criterion.

### *This Project Passes Criterion B – Water Quality*

## C. UPSTREAM FISH PASSAGE

**Goal:** The facility allows for the safe, timely, and effective upstream passage of migratory fish. This criterion is intended to ensure that migratory species can successfully complete their life cycles and maintain healthy, sustainable fish and wildlife resources in areas affected by the facility.

## Assessment of Criterion Passage

The Applicant selected **Standard C-2, Agency Recommendation** for all ZOE's, although I believe that **Standard C-1, Not Applicable/De Minimis Effect** can be selected for the Impoundment as once there, migrating fish no longer have upstream passage barriers due to the Project.

The Secretary of the Interior, by letter dated February 8, 2001, requested reservation of its authority to prescribe, through the USFWS, the construction, operation, and maintenance of appropriate fishways at the Woronoco Project, which was adopted in Article 405 of the FERC license.

FERC license Article 404 and the WQC do not contain upstream passage requirements for anadromous species but do require upstream passage and testing for American eel. Although they were completed late, eel ladders were installed, tested, and found to be effective. Three eel ladders were initially installed, although the ladder at the North Dam was removed with approval from MDFW as it was regularly being damaged by high flows and was least effective in passing eels. This Article also required an annual payment to be made towards implementing the MDFW upstream trap-and-truck program (at the West Springfield Project) for Atlantic salmon on the Westfield River. The application stated that this funding was stopped when MDFW dropped their Atlantic Salmon restoration plan. Submission of annual reports are no longer required. In the MDFW letter dated December 30, 2019, Dr. Caleb Slater of MDFW stated his support for recertification of the Project.

The following summarizes CRC's comments (**bold**) and Eagle Creek's responses (*in italics*):

**1) Eagle Creek should file plans to discontinue the North Dam eel ladder with FERC and MDEP.**

*Eagle Creek contacted USFWS to discuss the eel ladder and is still waiting for a response from them. Eagle Creek plans to follow up on agency consultation conducted during the LIHI certification process, and will file updated information with FERC once agency consultation has been completed.*

**2) Eagle should identify how often the eel holding tanks are inspected, where the eels are returned to the river and report mortalities.**

*The eel capture tanks are inspected daily during the upstream eel migration season. Any eels found in the tanks are counted and released upstream of the stop log structure, which is located away from the intake.*

**3) CRC requested to be copied on the annual eel passage reports and recommended they be posted on the Eagle Creek website.**

*Woronoco continued reporting on the capture, release and count of eels traversing the ladders for two years after that requirement ended. There have been no documented mortalities. Woronoco has committed to continuing the eel counts, capture, release and reporting this information annually to MDFW based on a conversation with Caleb Slater during LIHI consultation. This information will also be shared with USFWS, if requested by them. This reporting will not be copied to CRC nor posted on the website.*

I believe the Project will continue to satisfy this criterion assuming compliance with the recommended condition (see Section VIII).

*This Project Conditionally Passes Criterion C – Upstream Fish Passage*

**D. DOWNSTREAM FISH PASSAGE AND PROTECTION**

**Goal:** The facility allows for the safe, timely, and effective downstream passage of migratory fish. For riverine (resident) fish, the facility minimizes loss of fish from reservoirs and upstream river reaches affected by Facility operations. All migratory species are able to successfully complete their life cycles and to maintain healthy, sustainable fish and wildlife resources in the areas affected by the Facility.

**Assessment of Criterion Passage**

The Applicant has selected with **Standard D-2, Agency Recommendation** for all ZOE's although **Standard D-1, Not Applicable/De Minimis Effect** can be selected for the Tailrace / Regulated Reach as once there, migrating fish no longer have downstream passage barriers due to the Project.

Article 404 of the FERC license and the WQC required development of a comprehensive fish passage plan including effectiveness testing of the existing downstream measures for passing salmon smolts, post-spawn adult salmon, resident fish, and American eel, as well as alternative downstream passage measures for eels.

Downstream salmon smolt passage effectiveness studies were performed at the Project from 2005 through 2011. The passage efficiencies were 55 percent in 2005, 87.5 percent in 2008, 87 percent in 2010, and 77 percent in 2011 (83 percent for 2010 and 2011 data combined). The Project owner at the time improved the Project's downstream passage facilities based on the results of the studies and consultation with the resource agencies. In the summer of 2012, the USFWS announced cessation of its efforts to restore Atlantic salmon to the Connecticut River and its tributaries, similar actions followed by the MDFW. Therefore, continuing studies on passage of salmon smolts were stopped with agency and FERC approval.

In January 2015, FERC allowed discontinuation of the downstream fish passage facility operation for salmon smolts after 2015. To accommodate outmigration of previously stocked salmon, the Project owner agreed to operate downstream passage through 2015 (FERC letter, January 30, 2013), which was done. Additionally, the downstream fish passage facility continues to operate to pass resident fish and eel during the downstream migration season.

To address downstream passage at the Project for American eel and resident fish, a full-depth exclusionary trashrack, and integrated bypass at the forebay to accommodate safe outmigration past the dam were installed. Downstream passage of adult eels is accommodated September 1 through November 15 through installation of the full-depth trashrack overlay panels and flow releases through the downstream passage facility and through the Project's deep gates located at the north and south dams, based on releases necessary to meet minimum flow requirements. Qualitative studies of downstream eel passage were conducted based on a plan reviewed by

USFWS and MDFW. While details of these studies were not provided in the application, the fact that the MDFW letter supporting recertification of the Woronoco Project only discussed upstream eel passage, it can be assumed downstream eel passage is not a concern.

Based on my review, I believe that the Woronoco Project continues to satisfy this criterion.

### *The Project Passes Criterion D – Downstream Fish Passage and Protection*

## **E. SHORELINE AND WATERSHED PROTECTION**

**Goal:** The Facility has demonstrated that sufficient action has been taken to protect, mitigate and enhance the condition of soils, vegetation and ecosystem functions on shoreline and watershed lands associated with the facility.

### **Assessment of Criterion Passage**

The Applicant has appropriately selected **Standard E-1, Not Applicable/De Minimis Effect** to pass the Shoreline and Watershed Protection criterion for all Project ZOE's.

There has been no change in the shoreline and watershed protection requirements for the Facility since it was last certified by LIHI. No conservation buffer zone, watershed enhancement fund, or Shoreland Management Plan is required by the FERC License.

As noted in the application, while there is no designated buffer zone around the impoundment, there are no residences within 200 feet. Use of this area is limited to a public road, bridge and railroad track. The Town of Russell has a park and recreation area (Strathmore Park) that uses the impoundment for fishing, boating and swimming. All of the activities around the shore of the impoundment are low impact and managed by the town or by the Project. Adherence to headpond level limits also helps ensure that emergent wetland areas are not stressed.

The Applicant estimated the lands within the Project boundary to be about 12 acres, with the reservoir covering an additional 43 acres. The shoreland immediately surrounding the Project appears to primarily be mixed hardwoods and softwoods. Emergent, scrub-shrub, and forest wetlands are also found along the impoundment. Based on the Applicant's review of the MassGIS Online Mapping Tool (Oliver), the area adjacent to the Tekoa Mountain Wildlife Management Area (WMA) is mapped as priority habitat for the New England cottontail (*Sylvilagus transitionalis*), a species of rabbit considered to be in decline in Massachusetts. No critical or priority habitat for federally protected species were confirmed to be onsite based on the current application materials. The March 11, 2020 Massachusetts Endangered Species Act (MESA) review from MDFW identified that the Project area is mapped for Priority Habitat (PH 1107) and Estimated Habitat (EH 840) for three species of special concern (Eastern Whip-poor-will, Creeper mussel, and Orange Sallow Moth), and bald eagle, a state threatened species.

While the Project lands may contain sensitive habitat for bald eagle, there are no plans for any development or regular corridor maintenance activities at the Project. Should such activities occur in the future, the Project would be required to file for a specific review under MESA. Therefore,

based on the assumption that the Applicant would adhere to such review requirements, I believe the Project continues to satisfy this criterion.

*The Project Passes Criterion E – Shoreline and Watershed Protection*

**F. THREATENED AND ENDANGERED SPECIES PROTECTION**

**Goal:** The Facility does not negatively impact federal or state-listed species.

**Assessment of Criterion Passage**

**Standard F-2, Finding of No Negative Effects** was selected for all ZOE's.

The USFWS IPaC report identified the range of the Northern long eared bat, a federally threatened species, is possibly within the Project area, but that no critical habitat has been identified for this species. It is unlikely that the Northern long eared bat would be impacted, if present, as there are no routine tree-clearing activities or corridor maintenance activities planned, nor are there any projects currently planned which would involve tree clearing. The IPaC report also noted the possible presence of the bald eagle, which was listed as threatened in Massachusetts in the MESA report submitted.

The most recent Massachusetts Endangered Species Act (MESA) review from MDFW, letter dated April 23, 2020, identified that the Project area is mapped for Priority Habitat (PH 1107) and Estimated Habitat (EH 840) for two species of special concern (Eastern Whip-poor-will and Creeper mussel), and bald eagle, a state threatened species. A copy of this letter is contained in Appendix A. The creeper was confirmed onsite during re-licensing activities, resulting in a license requirement under Article 406, requiring the Project owner to coordinate with the MDFW, MDEP and USFWS relative to drawdowns and avoidance of impacts on freshwater mussels associated with any drawdowns. The Applicant has stated that the last record of drawdown was in 2010 at which time the coordination was completed and that no drawdowns are planned in the near future.

Therefore, based on the assumption that the Applicant would continue to adhere to such MESA review requirements, as well as agency coordination for impoundment drawdowns, I believe the Project will not likely have any impact to protected species and therefore continues to satisfy this criterion.

*The Project Passes Criterion F – Threatened and Endangered Species Protection*

**G. CULTURAL AND HISTORIC RESOURCE PROTECTION**

**Goal:** The Facility does not inappropriately impact cultural or historic resources that are associated with the Facility's lands and waters, including resources important to local indigenous populations, such as Native Americans.

**Assessment of Criterion Passage**

The Applicant has selected **Standard G-2, Approved Plan** to pass this criterion for all ZOE's.

The first dam at the site was a timber-crib structure constructed in 1879. The existing hydro station was completed in 1913 to supply two paper mills. The two existing dams were constructed in 1938 and 1950 to replace the former structures. The Project powerhouse and the Strathmore Mill complex are eligible for inclusion in the National Register of Historic Places. In letters dated May 2, 1997 and May 18, 1999, the Massachusetts State Historic Preservation Office (SHPO) stated that the Project and planned operations will have no adverse effect on the powerhouse or Strathmore Mill complex. Nonetheless, per recommendation of the SHPO, the FERC license requires consultation with the SHPO prior to conducting any ground disturbance and before engaging in any activity that may result in alteration of listed facilities. Neither a Cultural Resources Management Plan nor Historic Properties Management Plan are required by the license.

As previously noted, a new Unit 3 turbine was installed to replace the failed Unit #3, and went into operation on November 25, 2015. The Applicant stated that no changes were made to the powerhouse structure and there were no impacts to contributing elements of the powerhouse historical feature from this work. Therefore, they did not consult with the SHPO. No other construction activities have occurred in the past five years.

The CRC raised a question regarding possible need to coordinate with state or federally-recognized Native American tribal groups and with recognized tribal plans as required by LIHI's Standard G-2 and suggested that the Pocumtuc tribe may be one such entity. As part of my review, I researched known native tribe use of the area. A summary of the history of this tribe follows:

“Perhaps as many as 5,000 in 1600, the Pocumtuc population declined rapidly from epidemic and wars with the Iroquois and English. For the most part, the Pocumtuc were destroyed during the King Philip’s War (1675-76). A mixed group of 600 Pocumtuc and Nipmuc refugees relocated to the Mahican village at Schaghticook on the Hudson River (New York). Others went north to the western Abenaki (Sokoki) at either Missisquoi or Odanak (St. Francois du Lac) in Quebec. By 1758 the last groups of Pocumtuc and Nipmuc at Schaghticook had left and joined their relatives living with the Sokoki. It can safely be assumed that the current populations of the Vermont Abenaki in the United States and the St. Francois and Bcancour Abenaki in Canada contain descendants of the Pocumtuc.”<sup>3</sup>

This review found that the members of the Pocumtuc tribe are not a state or federally recognized tribe and there is no recognized tribal plan. Eagle Creek also noted that during licensing, tribes were invited to the scoping phase of relicensing, but none responded or participated in the process.

I believe the Applicant’s assessment that SHPO consultation was not needed for the turbine replacement was reasonable. Therefore, the Project continues to satisfy this criterion.

### ***The Project Passes Criterion G – Cultural and Historic Resource Protection***

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<sup>3</sup> <http://www.dickshovel.com/pocu.html>



## H. RECREATIONAL RESOURCES

**Goal:** The facility accommodates recreation activities on lands and waters controlled by the facility and provides recreational access to its associated lands and waters without fee or charge.

### Assessment of Criterion Passage

The Applicant has appropriately selected with **Standard H-2, Agency Recommendation** for all Project ZOE's.

Article 408 of the FERC license required development of a recreational enhancement plan and installation of specified facilities, all of which were installed in 2003 and 2004. Those facilities include a carry-in boat launch with a parking area, and a canoe take-out in the impoundment, a canoe portage around the dam with rest stops, racks and signs with directions to the put-in downstream of the dam including a parking area and trail to the access site. These are highlighted in Figure 7. Also, the application notes that the Applicant allows access to the reservoir and downstream reaches without fees or charges and that users of the Strathmore Park and recreation area, owned by the Town of Russell, use the impoundment for fishing, boating and swimming. The Project also maintains a fishing access site downstream of the powerhouse which is not included in the recreation plan.

The most recent FERC Environmental Inspection report dated June 18, 2013<sup>4</sup>, regarding these facilities, stated that the "The facilities were intact and built according to the approved plans. Signs in compliance with Part 8 section 8.2(a) were installed." However, in their comment letter, CRC reported an April 2020 site visit conducted by Westfield River Watershed Association found needed repairs of several structures and signage that could be improved to advise public users of where the facilities are, how to access them and where to park. CRC also recommended these facilities be identified on the Eagle Creek website<sup>5</sup> along with other facility information recommendations. Details of their findings and photographs are included in the CRC comment letter in Appendix A.

Eagle Creek's response to LIHI about the CRC comments (see Appendix A) included an update of their website to include a map and listing of the recreational facilities at the Project. They noted they are currently conducting annual recreation area spring clean-up including replacing signs and controlling vegetation as needed. Eagle Creek made several commitments to make improvements to facilities, although they did identify a concern with vandalism, and their past approach of restricting access to one recreational facility to keyed entry only. There was no discussion as to whether such restrictions were identified to FERC for their approval; however, the Applicant noted that the local canoe club has a gate key and that the gate would remain unlocked for the upcoming recreation season, unless vandalism again becomes a problem.

Based on my review, I believe the Project needs a number of improvements to be made immediately to promote this season's use of the recreational facilities, as well as a commitment to

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<sup>4</sup> <https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=13310048>

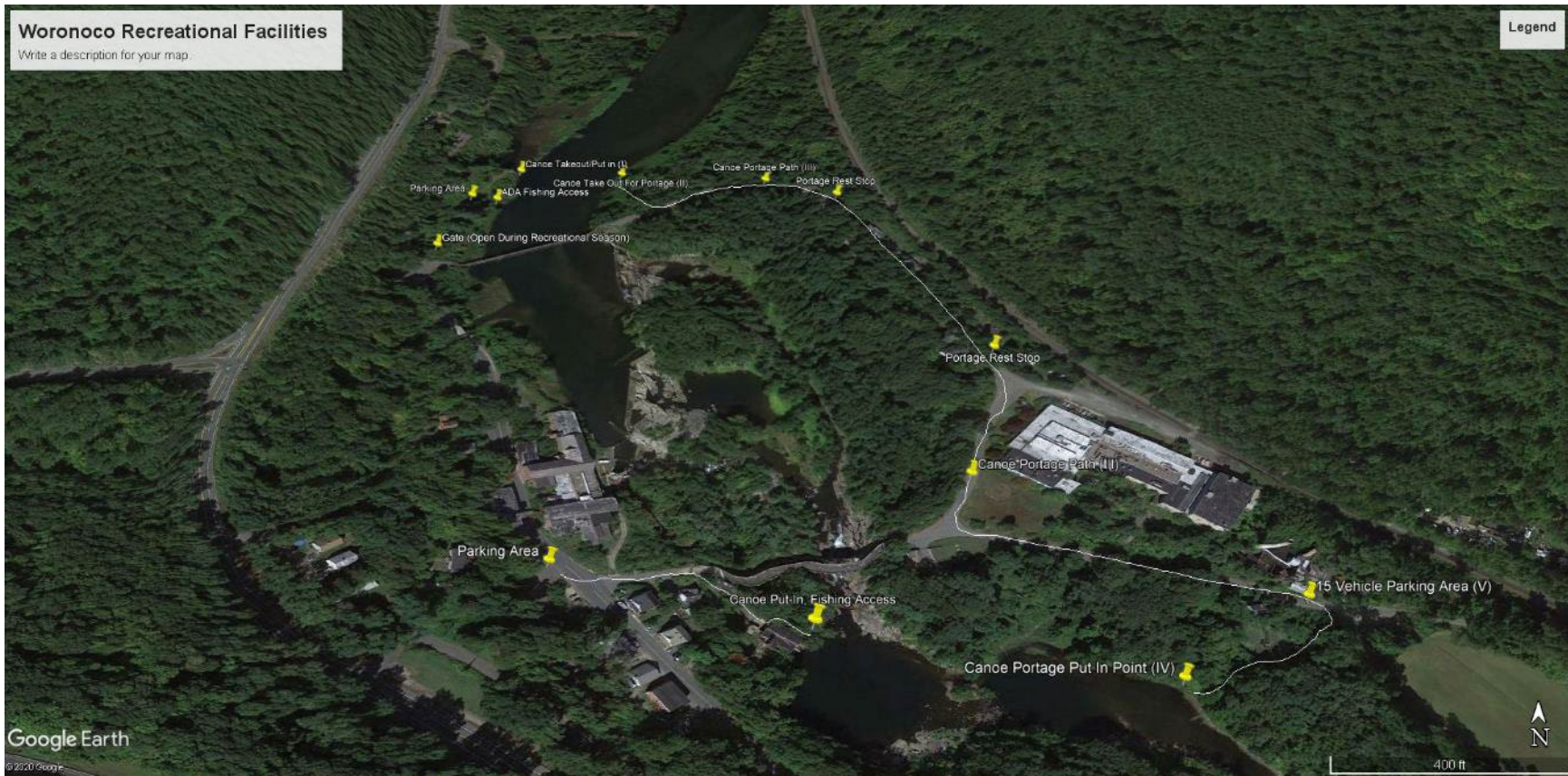
<sup>5</sup> <https://www.eaglecreekre.com/community/recreation>

do routine review and clean-up of these facilities more frequently than once a year. Adherence to FERC required public safety measures must also be ensured as water access is provided.<sup>6</sup> Such adherence is critical as closing the facilities except for use by a local canoe club is not appropriate under FERC requirements. I believe that provided the condition recommendations are met by the recommended timeline, then the Project will continue to meet the requirements of this criterion.

*The Project Passes Criterion H – Recreational Resources*

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<sup>6</sup> <https://www.ferc.gov/industries/hydropower/safety/guidelines/public-safety.pdf>



**Woronoco Project Recreation Facilities**

## **IX. GENERAL CONCLUSIONS AND REVIEWER RECOMMENDATION**

Based on my review, I believe that this Project continues to meet the requirements of a Low Impact facility and recommend it be re-certified for a five-year period with the following conditions addressing Upstream Fish Passage and Recreational Resources.

**Condition 1** – Assuming USFWS approval of permanent removal of the North Dam eel passage ladder is received, Eagle Creek shall also notify MDEP of this change as the WQC includes the requirement for eel passage. In the Annual Compliance Report to LIHI, the Owner shall confirm that the annual eel passage data has been provided to MDFW, and USFWS if that agency requests it, along with copies of any FERC or MDEP responses to notification regarding removal of the Northern Dam eel passage ladder.

**Condition 2** – The facility Owner shall make the following improvements to the Project recreational facilities<sup>7</sup>:

- Conduct seasonal facility cleanup and necessary structural repairs and install improved signage to all facilities by June 30, 2020 to promote 2020 seasonal use. Signage should satisfy FERC requirements.<sup>8</sup> Access and parking information must be clearly posted.
- A regular inspection and maintenance program shall be established to ensure these facilities are maintained especially given the concern of vandalism. At a minimum, a monthly frequency is recommended. A description of this program shall be provided to LIHI by June 30, 2020 and a status summary of these activities shall be reported to LIHI in annual compliance submittals.
- The ADA fishing platform shall be inspected for safety and usability prior to June 30, 2020. If determined not to be suitable for ADA fishing access, needed improvements or relocation if necessary, shall be made as soon as practicable in accordance with applicable permitting requirements and any necessary agency consultation. The Owner shall inform LIHI of a plan to ensure platform usability by July 31, 2020 along with a schedule for additional planned work. The Owner shall notify LIHI of project status and final completion in annual compliance submittals.

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<sup>7</sup> Although the COVID 19 pandemic has impacted the State of Massachusetts' rules and guidelines regarding recreational facility access, the Project recreational facilities are not known to be affected and should be made ready for use at the start of the season.

<sup>8</sup> [https://www.ferc.gov/industries/hydropower/safety/guidelines/signage/report/Safety\\_signage.htm#fourth](https://www.ferc.gov/industries/hydropower/safety/guidelines/signage/report/Safety_signage.htm#fourth)

## **Appendix A**

### **Agency and Stakeholder Letters and Eagle Creek Stakeholder Response**



MASSWILDLIFE

## DIVISION OF FISHERIES & WILDLIFE

1 Rabbit Hill Road, Westborough, MA 01581

p: (508) 389-6300 | f: (508) 389-7890

[MASS.GOV/MASSWILDLIFE](http://MASS.GOV/MASSWILDLIFE)

December 30, 2019

Nuria Holmes  
Kleinschmidt Associates  
[Nuria.Holmes@KleinschmidtGroup.com](mailto:Nuria.Holmes@KleinschmidtGroup.com)

RE: LIHI Recertification of Woronoco Project FERC #2631

Dear Nuria,

The Department of Fish and Game ("DFG") hereby submits the following comments on the Low Impact Hydropower Institute's ("LIHI") pending application for the proposed LIHI recertification of the Woronoco Project (FERC #2631) located on the Westfield River in the Town of Russell, Massachusetts.

DFG is submitting these comments on the LIHI recertification in order to fulfill the requirements of the Massachusetts Department of Energy Resources ("DOER") Renewable Energy Portfolio Standard Regulations (225 CMR 14.00; "RPS I" and 225 CMR 15.00; "RPS II"). The RPS I and RPS II regulations were promulgated by DOER on January 1, 2009 and require that any hydroelectric project wishing to qualify as either a RPS I or RPS II generator first obtain LIHI certification. These regulations also require all relevant regulatory agencies to comment on the pending LIHI application.

In response to your inquiries about LIHI recertification:

To my knowledge, the Woronoco Project is being operated consistent with its current FERC license.

Further, I have been contacted by Wayne Roberts (the operator at the project) and we discussed the upstream eel passage requirements for the project.

In 2008, Woronoco constructed two upstream eel ladders at the south dam and in 2011 another ladder was constructed at the north dam. The two ladders on the south dam typically pass a total of about 2000 eels annually. The north dam ladder has been difficult to maintain due to damage from vandalism and high water events. The north dam ladder has also passed the fewest eels of the three ladders, passing only 3 during the last years that it was monitored (2012, 2013 and a portion of 2014-prior to a high flow event which took it out of service).

In light of these facts, I have agreed to support the LIHI recertification of the Woronoco project with the continued operation the existing south dam eel ladders, and no longer require the third ladder at the north dam.

Please let me know if you need anything further.

Caleb Slater, PhD

MASSWILDLIFE



MASSWILDLIFE

# DIVISION OF FISHERIES & WILDLIFE

1 Rabbit Hill Road, Westborough, MA 01581

p: (508) 389-6300 | f: (508) 389-7890

MASS.GOV/MASSWILDLIFE

April 23, 2020

Robert Gates,  
Woronoco Hydro, LLC.  
65 Madison Avenue, Suite 500  
Morristown NJ 07960

**Project Location:** Woronoco Hydroelectric Project (Russel, Westfield River, river mile 18.5)  
**Project Description:** Operation of the Woronoco Hydroelectric Project  
**NHESP Tracking No.:** 97-1771

Dear Applicant:

On February 12, 2020 the Natural Heritage and Endangered Species Program of the Division of Fisheries and Wildlife (Division) received a MESA Checklist for the above referenced proposed project from the Applicant pursuant to the the Massachusetts Endangered Species Act (MESA) (M.G.L. c. 131A) and its implementing regulations (321 CMR 10.18). Thank you for submitting the additional information about the drawdown requested by the Division.

Based on a review of the information provided and the information currently contained in our database, the project is located within mapped *Priority Habitat* (PH 1107) and *Estimated Habitat* (EH 840) for the following state-listed species:

Scientific name	Common Name	Taxonomic Group	State Status
<i>Antrostomus vociferous</i>	Eastern Whip-poor-will	Bird	Special Concern
<i>Haliaeetus leucocephalus</i>	Bald Eagle	Bird	Threatened
<i>Strophitus undulates</i>	Creeper	Mussel	Special Concern

These species and their habitats are protected pursuant to the MESA and, as applicable, the rare species provisions of the WPA. Fact sheets for these species can be found on our website, [www.mass.gov/nhESP](http://www.mass.gov/nhESP).

The purpose of the Division’s review under the MESA regulations is to determine whether a Take of state-listed species will result from the proposed project.

According to Article 406 of Woronoco Hydro LLC’s (Woronoco) FERC License (issued on April 30, 2002), Woronoco is required to have a drawdown management plan approved by the Division, the Massachusetts Department to Environmental Protection (MA DEP), and the United States Fish and Wildlife Service (USFWS). On December 4, 2003 FERC modified the implementation of Article 406 due to the installation of the new stoplogs at the head of the forebay, which removed the necessity of annual head pond drawdown. The modification stated that the Licensee (Applicant) was required to continue to coordinate with the Division, MA DEP and USFWS relative to drawdowns and avoidance of impacts on freshwater mussels associated with any drawdowns. The Division’s last record of coordination on drawdowns was in 2010.

MASSWILDLIFE

**LOW IMPACT HYDROPOWER INSTITUTE (LIHI) RECERTIFICATION**

The Division received your March 24, 2020 letter describing the history of drawdowns since 2010. The letter stated that no drawdowns of the impoundment or forebay have occurred since spring 2010 other than those associated with the installation of the downstream fish passage. Therefore, the Division does not object to recertification of the Woronoco Hydroelectric Project (FERC No. 2631) by the Low Impact Hydropower Institute (LIHI) pursuant to the MESA.

**MA ENDANGERED SPECIES ACT**

Based on a review of the information that was provided and the information contained in our database, the Division has determined that this project, as currently proposed, **must be conditioned in order to avoid a prohibited take of state-listed species** (321 CMR 10.18(2)(a):

- 1) **Mussel Protection:** Prior to any drawdown of the impoundment or forebay, Woronoco shall coordinate with the Division to review and, as necessary, update measures to avoid impacts to freshwater mussels.
- 2) **Authorization Duration:** This authorization pursuant to the MESA is valid for 5 years from the date of issuance. Work shall be completed by the expiration of this authorization.

The project will not result in a prohibited Take pursuant to the MESA provided the project remains in compliance with the conditions. All work is subject to the anti-segmentation provisions (321 CMR 10.16) of the MESA.

This determination is a final decision of the Division of Fisheries and Wildlife pursuant to 321 CMR 10.18. Any changes to the proposed project or any additional work beyond that shown on the site plans may require an additional filing with the Division pursuant to the MESA. This project may be subject to further review if no physical work is commenced within five years from the date of issuance of this determination, or if there is a change to the project.

This determination addresses only the matter of state-listed species and their habitats. If you have any questions regarding this letter please contact, Misty-Anne R. Marold, Senior Endangered Species Review Biologist, at (508)-389-6356.

Sincerely,



Everose Schlüter, Ph.D.  
Assistant Director

cc: Maryalice Fishcher, LIHI  
Nuria V. Holmes, Kleinschmidt  
Russell Conservation Commission





April 24, 2020

Shannon Ames, Executive Director  
Low Impact Hydropower Institute  
329 Massachusetts Avenue, Suite 6  
Lexington, MA 02420

Re: LIHI Project #68 – Woronoco Hydroelectric Project FERC P-2631

Dear Ms. Ames,

The Connecticut River Conservancy (CRC) submits the following comments on the evaluation of the Woronoco Hydroelectric Project's (Woronoco or Project) adherence to LIHI's certification criteria. CRC is the principal nonprofit environmental advocate for protection, restoration, and sustainable use of the Connecticut River watershed. The Westfield River is a major tributary of the Connecticut River, and is designated "Wild and Scenic" upstream of the hydroelectric project, and we therefore take interest in this re-certification. The facility is currently owned by Woronoco Hydro LLC, which is now owned by Eagle Creek Renewable Energy. Under previous certifications, the project was owned by Swift River Hydro.

Despite the Wild and Scenic status, the Westfield River has multiple hydroelectric and Army Corps flood storage dams that cumulatively have a high impact on this special river system. The Woronoco Dam is the second most downstream dam on the Westfield River. We have reviewed the entire application, and have comments on just a few of the criteria, but we do think there are issues that need to be addressed.

#### Criterion C - Upstream Fish Passage

CRC's understanding is that the falls where the dams are located is the natural upstream limit of the shad migration and possibly sea lamprey on the Westfield River. Therefore, upstream passage for those species is not required. As stated in the LIHI certification, the Federal Energy Regulatory Commission (FERC) License and the 401 Water Quality Certificate required the Project to install upstream eel passage. Woronoco installed two upstream passage facilities for American eels at the South Dam in 2008, and one at the North Dam in 2011. The two ladders on the South Dam typically pass an average total of about 2,000 eel annually, during the upstream passage season from May to November. The third ladder, on the North Dam, has fallen into disrepair and has not been maintained. Page 3-13 indicates that the ladder on the North Dam will not be repaired, and references a letter from Caleb Slater of MA DFW that approves of this plan. CRC could not find the letter from Caleb Slater attached to the application, but we did obtain a copy of the letter from Dr. Slater himself. The Project owners capture, count, and release eels upstream, but the procedures for checking the eels in the holding tank and transporting them at a safe location upstream are not described.

*CRC's recommendations:*

- Eagle Creek should file plans to discontinue the North Dam eel ladder with FERC and MassDEP to make it official that this eel passage no longer be required under the FERC license and 401 Water Quality Certificate.
- Eagle Creek should document how often the holding tanks are inspected during eel passage season, the location that eels are returned to the river upstream (ensuring fallback into the turbines is not an issue), and reports of any eel mortality events in the holding tank.
- CRC would very much like to be on the distribution list for the annual eel passage reports. Ideally, the report could be posted on a project website for members of the public to have access to this information.

#### Criterion G - Cultural and Historic Resource Protection

The LIHI application indicates that the Project believes it meets standard G-2. The 2<sup>nd</sup> edition handbook states, “STANDARD G-2. Approved Plan: The facility is in compliance with approved state, provincial, federal, and **recognized tribal plans** for protection, enhancement, or mitigation of impacts to cultural or historic resources affected by the facility.” (emphasis ours) The application does not indicate any attempt to contact state or federally-recognized Native American tribal groups. Please see <https://www.mass.gov/service-details/indian-affairs> for state-recognized tribal contacts. Woronoco was historically the location of a Pocumtuck village.

#### Criterion H - Recreational Resources

The Project has a Recreation Plan that was approved by FERC on March 3, 2005. The application does not document that the facility is currently in compliance with its 2005 Recreation Plan. The application asserts compliance with the Recreation Plan by citing inspections that were done 5-10 years ago. No documentation other than two photos were provided in the application.

The five recreational facilities listed as required in the Project Recreation Plan are as follows:

1. a put-in/take out for canoes and small boats on the southwest portion of the impoundment, including a 15-vehicle parking area;
2. a take-out area for canoes upstream of the project’s two dams, on the southeast shoreline;
3. a canoe portage path, including rest stops, racks, and directional signs directing persons to the downstream put-in (Photo 5-7);
4. a put-in area along the east shoreline of the Westfield River, a short distance downstream from the project powerhouse, for canoeists and persons with hand-carried boats; and
5. a parking area located near Bridge Street for approximately 15 vehicles with an associated trail for persons with canoes and hand-carried boats who desire to access the Westfield River downstream of the project powerhouse.

Eagle Creek has a web page that lists their projects by state, and boxes are checked off for recreation facilities that are available at each location. **According to this website, no recreation facilities are offered at the Woronoco site.** See <https://www.eaglecreekre.com/community/recreation> . The page specific to the hydro facilities on the Westfield River (<https://www.eaglecreekre.com/facilities/operating-facilities/westfield-river-facilities>) contains no information on recreation at this location. The link to flows at the nearest upstream gages is helpful. The photos do not have information on recreation or upstream fish passage. Compare this to the helpful information on the portage route available online at <https://massachusettspaddler.com/wf6-woronoco-dam-to-greatriver-bridges-westfield> and <https://massachusettspaddler.com/wf5-crescent-dam-russell-to-woronoco-dam-russel>.

Thanks to one of the board members from the Westfield River Watershed Association who went to check out the recreation facilities today, it appears that some of the recreation facilities need some attention. Overall, she reported that it is very confusing trying to figure out where the recreational sites are. The put-in and takeout on the west side of the river in the impoundment (requirement #1 above) has a dilapidated platform that does not sound like the ADA fishing spot described in the plan. There are many no parking signs and it's not clear where the 15-vehicle parking area is. On the river left side (#2), the take-out has no parking signs all over the road. The portage route (#3) is not clear, one of the rest stops needs to be repaired, and at least one sign needs to be cleared of vines. The put-in downstream of the dam (#4 or 5) has a private property/no trespassing sign on the trail, and it's not clear if this is where the portage route is. If this is still a viable put-in location, signage indicating public access should be posted. Please see photos attached at the end of this letter.

#### CRC recommendations

- Eagle Creek should submit a map indicating the location of the portage route and all other facilities, with an up-to-date photo of each recreation facility and the signage associated with it.
- Eagle Creek should maintain and improve any recreation facility/sign shown to be in disrepair.
- Signage should be clear as to where public parking and access is allowed. Signage should be updated to comply with FERC's recent revisions to 18 CFR §8.1.
- Eagle Creek should post recreation information on their website, and users that conduct an internet search of search terms like "Portage around Woronoco Dam" or "Recreation Woronoco Dam" should be able to find up-to-date project information about how to access the river and what recreational facilities exist.

CRC appreciates the opportunity to provide comments. I can be reached at [adonlon@ctriver.org](mailto:adonlon@ctriver.org). For the time being while we are all working from home, the best number to reach me is my cell phone: (413-325-4426. Ordinarily, my office number is (413) 772-2020 x.205.

Sincerely,



Andrea F. Donlon  
River Steward

Cc: Brian Conz, President, Westfield River Watershed Association  
Kristen Sykes, AMC  
Kevin Mendik, NPS  
Bob Kubit, MassDEP  
Caleb Slater, MA DFW  
Melissa Grader, USFWS

**PHOTOS OF PROJECT RECREATION SITES THAT NEED ATTENTION**



Portage rest stop in need of repair (photo taken on April 24, 2020)



Woronoco portage route sign in need of maintenance (photo taken on April 24, 2020)



Likely put-in trail downstream of the Woronoco Dam, with "Private Property/No Trespassing" sign

**From:** [Susan Giansante](#)  
**To:** [Maryalice Fischer](#)  
**Cc:** [Wayne Roberts](#); [Bob Gates](#); [Mark Sherbino](#)  
**Subject:** CRC comment letter - Woronoco  
**Date:** Friday, May 15, 2020 9:27:42 AM  
**Attachments:** [Woronoco Eel Capture Tanks.jpg](#)  
[Woronoco Recreational Facilities.jpg](#)  
[CRC comments Woronoco LIHI 04-24-20.doc](#)

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Hi Maryalice-

Thanks for the opportunity to provide comments to LIHI on the CRC's letter. We don't plan to submit a formal response to the CRC, however, please see our input below on the issues noted in the CRC letter. If you have some time on Monday, maybe we can catch up to discuss further if your schedule allows. I'm available in the late afternoon.

Have a great weekend-

Sue

### Criterion C Upstream Fish Passage-

*Eagle Creek should file plans to discontinue the North Dam eel ladder with FERC and MassDEP to make it official that this eel passage no longer be required under the FERC license and 401 Water Quality Certificate.*

- Eagle Creek plans to follow up on agency consultation conducted during the LIHI certification process, and will file updated information with FERC once agency consultation has been completed. As background, Bob Gates had reached out to Melissa Grader at USFWS to discuss the eel ladder on the north dam after Wayne, the Regional Manager at Woronoco, had received confirmation from Caleb Slater, MDFW, that discontinuation of the north eel ladder was acceptable. Melissa was tied up at the time, and responded that she would follow up once her schedule cleared up. Melissa has not been in contact with us yet, we will circle back with her to discuss the eel ladder.

*Eagle Creek should document how often the holding tanks are inspected during eel passage season, the location that eels are returned to the river upstream (ensuring fallback into the turbines is not an issue), and reports of any eel mortality events in the holding tank.*

- The eel capture tanks are inspected daily during the upstream eel migration season. Any eels

found in the tanks are counted and released upstream of the stop log structure, which is located away from the intake, please see attached for general arrangement of the area. As noted in the LIHI application, although Woronoco is no longer required to capture, count and report the eels traversing the ladders, Woronoco continued the practice after the initial two year requirement had ended. There have been no documented mortalities.

*CRC would very much like to be on the distribution list for the annual eel passage reports. Ideally, the report could be posted on a project website for members of the public to have access to this information.*

- Woronoco committed to continuing the eel counts, capture and release based on a conversation with Caleb Slater during LIHI consultation. As agreed to with Caleb Slater, Woronoco will forward the requested information on an annual basis. This information will also be shared with USFWS, if requested during the follow up consultation. Woronoco does not intend to include the CRC on distribution with resource agencies, nor will the information be posted on the project website.

-

#### Criterion G Cultural and Historic Resource Protection-

- Woronoco does not believe that the Pocumtuck tribe is federally recognized, and it does not appear that they have a recognized tribal plan. Based on CRC's comments, we searched FERC e-library for tribe involvement during the relicensing period. It appears that tribes were invited to the scoping phase of relicensing, but none seemingly responded or participated. We did not consult with any tribes as part of LIHI consultation.

-

#### Criterion H Recreational Resources-

Woronoco appreciates the CRC's review of the FERC required recreation sites, field visit and notes from the field review. Woronoco typically does not have many visitors except for scheduled boating events on the river. Due to issues with vandalism over the years, the gate to the recreation area (Site I, see attached map) is typically locked, unless there was an event occurring on the river. Woronoco has worked cooperatively with the local canoe club over the years, and the canoe club has a key to the lock. However, based on the CRC's comments, the gate to this put in/take out will remain open during the recreation season. We will have to revisit this arrangement if vandalism becomes an issue. Woronoco wants to make the recreation areas available to the public, but is also concerned with maintaining public safety. Woronoco typically cleans up the recreation sites, including replacing damaged signs and vegetation removal, prior to the recreation season. Clean up is ongoing and is planned for completion in the upcoming weeks.

-

*Eagle Creek should submit a map indicating the location of the portage route and all other facilities, with an up-to-date photo of each recreation facility and the signage associated with*



*it.*

- Eagle Creek's website was updated with the recreation opportunities available at the site and the location map included in the Recreation Plan filed with FERC was also uploaded to the website. No photos are included. Attached is a marked up aerial, for internal reference, that shows the locations of the recreation facilities. The numbering correlates to FERC's approval of the Recreation Plan. Woronoco also maintains an additional recreation area downstream of the powerhouse on river right for fishing access, that was not included in the recreation plan filed or approved by FERC.

For reference:

5-2-2003 Swift River files Rec Plan:

<https://elibrary.ferc.gov/IDMWS/common/OpenNat.asp?fileID=10460280>

3-3-2005 FERC approves Rec Plan

<https://elibrary.ferc.gov/IDMWS/common/OpenNat.asp?fileID=10432609>

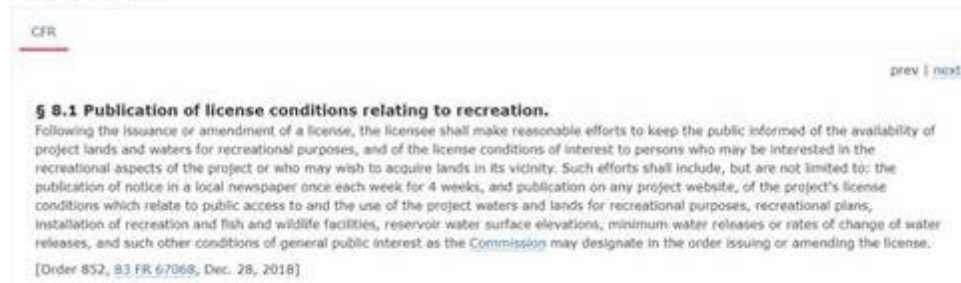
*Eagle Creek should maintain and improve any recreation facility/sign shown to be in disrepair.*

- As part of the seasonal clean-up that Woronoco starts at the beginning of the recreation season, Woronoco will remove vegetation, open the gate, replace any missing or damaged signs and improve trails / parking areas. The ADA fishing structure remains in the location that it has been since it was first installed, however, the site has proven to be difficult for fishing due to the presence of silt and soft soils that have accumulated between the fishing structure and the river's edge. Woronoco will further evaluate the current site's condition and determine its suitability for continued use as an ADA fishing location. If unsuitable, Woronoco will evaluate various alternative areas near the Valley View Rd. bridge for ADA fishing access suitability.

*Signage should be clear as to where public parking and access is allowed. Signage should be updated to comply with FERC's recent revisions to 18 CFR §8.1.*

- Signs for parking are being replaced as part of the clean-up for the start of the season. The CRC references 18 CFR 8.1, see excerpt below, which does not seem to apply to signage.

## 18 CFR § 8.1 - Publication of license conditions relating to recreation.



*Eagle Creek should post recreation information on their website, and users that conduct an internet search of search terms like “Portage around Woronoco Dam” or “Recreation Woronoco Dam” should be able to find up-to-date project information about how to access the river and what recreational facilities exist.*

- The link to the Project from the Eagle Creek website has been updated with the recreational opportunities available at Woronoco and the location map that was included with the 2003 Recreation Plan filed with FERC.

<https://www.eaglecreekre.com/community/recreation>

<https://www.eaglecreekre.com/facilities/operating-facilities/westfield-river-facilities/westfield-river-recreation>

**From:** [mfischer@lowimpacthydro.org](mailto:mfischer@lowimpacthydro.org) <[mfischer@lowimpacthydro.org](mailto:mfischer@lowimpacthydro.org)>

**Sent:** Monday, April 27, 2020 8:21 AM

**To:** Bob Gates <[bob.gates@eaglecreekre.com](mailto:bob.gates@eaglecreekre.com)>; Susan Giansante <[susan.giansante@eaglecreekre.com](mailto:susan.giansante@eaglecreekre.com)>

**Subject:** CRC comment letter - Woronoco

Good morning, the comment period for Woronoco closed and we received the attached comment letter from CRC. We have posted it on our website. If you would like to submit a response letter we would post that as well. It is totally optional. If you don't want to submit a formal letter, it would still be good to have your input on the comments as we finalize the review report. Let me know what you decide as we can hold the report for any response to us or to CRC that you'd like to make.

Thanks!

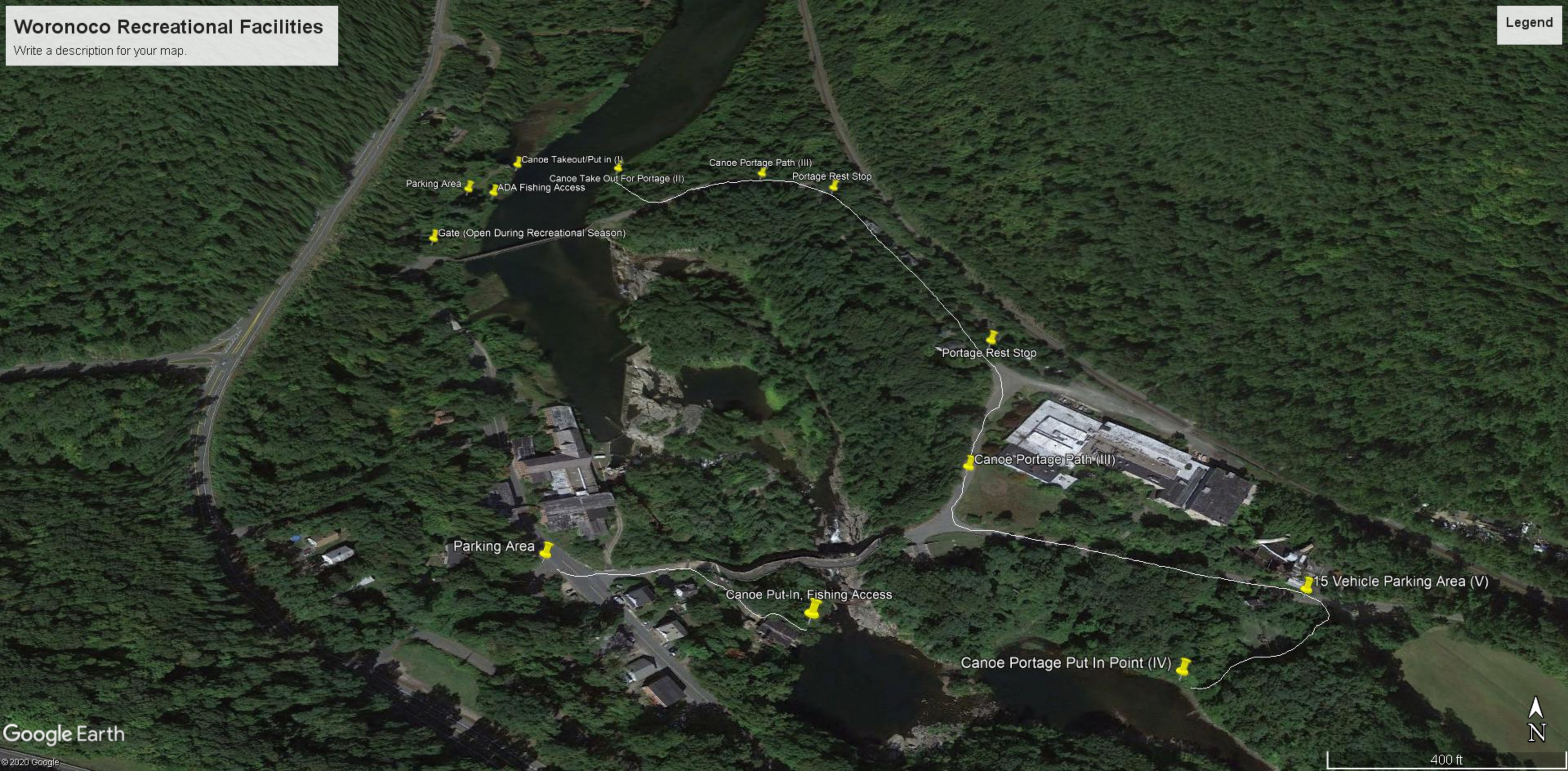
Marylalice Fischer  
Certification Program Director



# Woronoco Recreational Facilities

Write a description for your map.

Legend



Canoe Takeout/Put in (I)  
Parking Area  
ADA Fishing Access  
Canoe Take Out For Portage (II)  
Gate (Open During Recreational Season)  
Canoe Portage Path (III)  
Portage Rest Stop

Portage Rest Stop

Canoe Portage Path (III)

Parking Area

Canoe Put-In, Fishing Access

15 Vehicle Parking Area (V)

Canoe Portage Put In Point (IV)

