

June 11, 2015

Dr. Michael J. Sale
Executive Director
Low Impact Hydropower Institute

Subject: Phase 1 Re-certification Review for the Riley-Jay-Livermore (FERC Project No. P-2375) and Otis (P-8277) Hydroelectric Projects

Dear Dr. Sale:

This letter presents Alden’s Phase 1 review of the Low Impact Hydro Institute (LIHI) Re-certification Application submitted by Verso Paper Corporation (Verso) on July 7, 2014 for four hydropower developments located on the Androscoggin River in Maine. The original LIHI certification for these projects was issued on April 8, 2010. New FERC licenses (50-year terms) and Section 401 Water Quality certifications were issued by FERC and the Maine Department of Environmental Protection, respectively, in 1998 after a collaborative settlement process was completed between International Paper (Verso’s predecessor) and intervening state and federal agencies and NGOs.

1 Re-certification Standards

Part V of the Low Impact Hydropower Institute’s (LIHI) Certification Handbook regarding Applications for Re-certification provides that a “request for renewal of a previously-issued LIHI certification (re-certification) will be granted at the conclusion of the term of the existing certification if re-certification is desired by the certificate holder, and so long as 1) there have been no “material changes” at the facility that would affect the certification and 2) LIHI’s certification criteria have not been revised since the previous certification was issued by LIHI.”

The re-certification review criteria also provide that “if the Application Reviewer can definitively determine from the submitted application materials, a review of the LIHI file containing the past certification decisions(s), any public comment received during the application process, and any limited reviewer-initiated questioning by reviewer will recommend re-certification approval to LIHI’s Executive Director, and there will be no further application review.

2 Project Description

The re-certification application submitted by Verso covers four adjacent hydro developments as described below. There are five hydroelectric projects downstream between the Verso projects and the confluence of the Androscoggin River with Merrymeeting Bay.

Riley-Jay-Livermore Hydroelectric Project (P-2375)

Riley Development - Riley is the most upstream of the four projects operated by Verso on the Androscoggin River and is located at RM 58. Riley dam is a 19.2 ft high by 757 ft long, L-

shaped and rock-filled timber crib structure. The dam is topped with 48-inch high flashboards. A triangular forebay discharges to six identical turbines contained in the 100-ft by 236-ft powerhouse. The turbines are 1.3 MW horizontal shaft units with a hydraulic capacity of 926 cfs (per turbine). The maximum available head for the turbines is 20.9 ft. In addition to power generation, the Riley forebay is also a source of process water supply for the co-located pulp and paper mill.

Jay Development - The Jay development is located at RM 56.5. The Jay dam is 893 ft in length and comprises three non-contiguous sections separated by two island areas. The two outer sections of dam are topped with 32-inch high flashboards. Jay has a 320-ft forebay leading to the 32-ft by 147-ft powerhouse. The 6 turbine-generators are rated for a total flow of 3,300 cfs and provide a total electrical output of 3.1 MW. Maximum available head at for the turbines is 14.4 ft.

Livermore Development - Livermore is located at RM 53.2 and is the furthest downstream dam of the four projects operated by Verso Paper. The development has two contiguous spillway sections totaling 599 ft in length and topped with 28-inch high flashboards. A 185-ft wide by 594-ft long forebay leads to two separate powerhouses. The original powerhouse is 88-ft by 157-ft and has eight identical horizontal turbines with a total hydraulic capacity of 3,456 cfs and a total generation capacity of 7.8 MW. A second powerhouse was completed in 2004 and has a single vertical turbine that discharges into a rocky area at the side of the forebay. The turbine in the new powerhouse has a hydraulic capacity of 450 cfs and generating capacity of 1 MW. Gross head available at Livermore is 33.3 ft.

Otis Hydroelectric Project (P-8277)

The Otis development is at RM 54.0 and comprises two contiguous spillway sections totaling 577 ft in length and topped with 24-inch high flashboards. A 95-ft long forebay leads to the 70-ft by 86-ft powerhouse. The powerhouse contains two turbines, each rated for 3,000 cfs at 26 ft of head. The generating capacity is of 5.2 MW per turbine. Although the Otis dam is more than 100 years old, the Otis powerhouse and turbines were constructed in 1984.

3 Review Findings

Alden has completed a preliminary review of the materials provided by LIHI for the Verso Paper projects, including the re-certification application documents. Issues relevant to the re-certification that are addressed in the FERC licenses and water quality certifications for the four projects, and which were considered in the original LIHI certification review, include instream flows, water quality, fish passage and protection, cultural resource protection, and recreation. After contacting several state and federal agencies that are responsible for the management of aquatic resources and water quality in the project area, Alden did not identify any issues that are currently of concern to the agencies. However, the Maine Department of Environmental Protection (MDEP) requested data on dissolved oxygen (DO) levels to determine if the projects are in compliance with their 401 Water Quality certification or whether additional data need to be collected to make this determination. Agency communications associated with this review are provided in Attachments A (telephone notes) and B (email correspondence).

In addition to contacting the relevant state and federal agencies, Alden completed a review of public information available on the FERC eLibrary, dating back to April 2010, when the original LIHI Certification Application was submitted. No violations or compliance issues were noted.

4 Conclusions

Based on the above findings, I recommend re-certification of Verso's Riley-Jay-Livermoore and Otis projects for a 5-year term. As a condition of re-certification, Verso should provide MDEP with the most recently collected DO monitoring data. If such data are unavailable or are determined to be outdated or not representative of current conditions at each project, then Verso should consult with MDEP regarding the development and performance of a monitoring program to collect DO data in the future.

Please contact me if you have any questions regarding this review or if you need any additional information.

Best Regards,



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Attachment A
Telephone Conversation Notes for Contacts with State Resource Agencies

- **Gail Wipplehauser, Maine Department of Marine Resources, (6/1/2015):** Ms. Wipplehauser indicated that there are currently no fisheries resource issues related to the operation of the four Verso projects on the Androscoggin River that are of concern to the MDNR. Upstream and downstream passage for American eels may be an issue that needs to be addressed in the future, but there are several projects downstream that will need to install eel passage facilities before such facilities are considered for the Verso projects.

- **John Perry, Maine Department of Inland Fisheries & Wildlife (6/10/2015):** Mr. Perry indicated that, to his knowledge, there currently are no fisheries resource issues related to the operation of the four Verso projects on the Androscoggin River that are of concern to the MDIFW. However, Mr. Perry was waiting to hear from a MDIFW regional biologist confirming that there were no issues that should be considered in the re-certification review.