



July 2, 2019

Low Impact Hydro Institute
329 Massachusetts Ave
Suite 6
Lexington, MA 02420

Re: Comments on the Canaan Hydroelectric Project LIHI Certification Application

To Whom it May Concern:

The Connecticut River Watershed Council, Inc., doing business as the Connecticut River Conservancy (CRC), is a nonprofit watershed organization that was established in 1952 as a citizen group to advocate for the protection, restoration, and sustainable use of the Connecticut River and its four-state watershed. The interests and goals represented by CRC include, but are not limited to, improving water quality; enhancing habitat for fish and other aquatic biota; safeguarding and improving wildlife habitat; protecting threatened and endangered species; protecting wetlands; preserving undeveloped shore lands; enhancing public recreation and promoting recreational safety; protecting aesthetic values; protecting archeological, cultural, and historical resources; fostering sustainable economic development; and maintaining the potential energy benefits of hydroelectric projects in the watershed. In that capacity, we routinely participate in the relicensing of the many hydro-electric facilities that exist in the Connecticut River watershed.

While we recognize that the federal relicensing of a facility can be a considerable process, the results and requirements of relicensing alone do not justify certification as a low-impact hydro facility. Low-impact facilities must go above and beyond what is required in a relicensing process to demonstrate continued innovation to decrease impacts to our natural and cultural resources.

CRC has reviewed the Low-Impact Hydro Certification Application for the Canaan Project (FERC No. 7528) revised April, 2019 and provide the comments below.

3.2.1 Criterion A - Ecological Flow Regimes

The applicant claims Standard A-2 for Ecological Flow Regimes. To meet that standard, the applicant must explain the scientific or technical basis for the agency recommendation, including methods and data used; explain how the recommendation relates to agency management goals and objectives for fish and wildlife; and explain how the recommendation provides fish and wildlife protection or mitigation and enhancement.¹ The applicant did not explain any of the above in their

¹Low Impact Hydropower Certification Handbook. 2nd Edition. Revision 2.03: December 20, 2018. Low Impact Hydropower Institute. Page 56.

application. There was no mention of management goals or the scientific process for flow regime. The applicant merely, "Identif[ied] the proceeding and source, date, and specifics of the agency recommendation applied."²

3.2.2 Criterion B - Water Quality

The applicant claims Standard B-2 for Water Quality. In order to meet this standard the applicant must be, "in compliance with all water quality conditions contained in a recent Water Quality Certification or science-based resource agency recommendation *providing reasonable assurance that water quality standards will be met* [emphasis added] for all waterbodies that are directly affected by the facility."³ While the applicant may be in compliance with the Water Quality Certification requirements, there is little evidence to provide reasonable assurance that water quality standards are being met because it seems that ongoing sampling has not been done.

Under the "Findings" section of the Vermont Water Quality Certification (not included in the Low-Impact Hydro Application) it seems that the applicant was "not able to collect dissolved oxygen data under critical low flow conditions prior to the filing of the license application. Nor was PSNH able to collect data during Summer 2008... However, the collection of data to define the river's dissolved oxygen regime and provide a full understanding of project impacts *is a continuing need* [emphasis added] for the purposes of the water quality certification review."⁴

The Water Quality Certification requires a, "Dissolved Oxygen Sampling Study. When technically feasible based on critical river flow and water temperature conditions, the licensee shall complete the dissolved oxygen study following the protocol agreed upon with the Department and the New Hampshire Department of Environmental Services. The study report shall be filed by the December following the season of sampling and shall include proposed remediation to address substandard conditions, if identified, and an implementation schedule, both subject to Department approval. The Department, after consultation with the N.H. Department of Environmental Services, may require additional sampling, if needed, or post-remediation sampling to determine effectiveness. The licensee shall notify the Department by October 1 of each year as to whether it was successful in completing the sampling effort."⁵

According to reports to the Agency of Natural Resources, no sampling took place between 2011 and 2018 since "river flow at the Pittsburg gage did not reach the trigger flow."⁶ While the company is technically in compliance with the requirements of the WQC, there has been no data collection to actually identify if water quality standards are being met. This lack of data does not provide "reasonable assurance that water quality standards will be met for all waterbodies that are directly affected by the facility."⁷ The application to become LIHI certified should not rely only the

² Low Impact Hydropower Certification Handbook. 2nd Edition. Revision 2.03: December 20, 2018. Low Impact Hydropower Institute. Page 56.

³ Low Impact Hydropower Certification Handbook. 2nd Edition. Revision 2.03: December 20, 2018. Low Impact Hydropower Institute. Page 8.

⁴ State of Vermont. Agency of Natural Resources. Department of Environmental Conservation. Water Quality Certification: Canaan :Hydroelectric Project. November 20, 2008. Page 6.

⁵ Low-Impact Hydropower Institute Certification Application Canaan Hydroelectric Project (FERC NO. 7528). Kleinschmidt. Pittsfield, Maine. February 2019 – Revised April 2019. (Page 78 [41]).

⁶ Ibid.

⁷ Low Impact Hydropower Certification Handbook. 2nd Edition. Revision 2.03: December 20, 2018. Low Impact Hydropower

requirements set forth for a facility to renew its FERC license. It is incumbent upon the applicant to prove that the project is not degrading water quality. This assurance is not expressed in the current application or any of the supporting documents. The applicant could at any time choose to test the waterbodies directly affected by the facility, and provide water quality data to show the temperature and Dissolved Oxygen levels in the project area, but they have not done that.

While CRC contends that the applicant has not met the water quality standards, if a certificate is issued, it should contain a condition to provide ongoing monitoring for temperature and dissolved oxygen in the impoundment, the bypass reach and below the tailrace.

3.2.3 Criterion C - Upstream Fish Passage

The applicant claims Standard C-1 for Upstream Fish Passage as it does not pose a barrier to upstream *anadromous* fish passage due to barriers further downstream. During the relicensing process for this facility there was disagreement about the need for upstream fish passage. The USFWS stated in a letter, "local knowledge, coupled with the information submitted by the state agencies regarding trout life history and specific studies of trout movements in rivers, provides ample evidence that the trout populations in the river would be enhanced by permitting access to better spawning habitat upstream from the project."⁸

During the scoping of the study plans the Northeast Kingdom Chapter of Trout Unlimited stated, "Although some of the fishery is supported with hatchery raised stocking there is still a wild population both above and below the dam. But a significant limiting factor in wild trout development is the fragmentation of the watershed with the Canaan dam. The river stretch above the Canaan Project for the eleven stream miles to the Lake Francis impoundment has a significantly higher value for trout reproduction and spawning than the downstream section. Below the Canaan Dam there few clean gravel beds the result of siltation from logging and agricultural usage. In other words the Canaan Hydroelectric Project marks a very clear change in the river substrate and separates a large part of the trout population from the best natural spawning habitat."⁹

Additionally, the applicant claims Standard D-1 for Downstream Fish Passage. In order to meet this standard the applicant must show that, "the facility does not contribute adversely to the sustainability of riverine fish populations or to their access to habitat necessary for the completion of their life cycles."¹⁰ The presence of the dam with no safe downstream or appropriate upstream fish passage contributes adversely to the sustainability of riverine fish populations by blocking resident fish that have moved downstream from accessing better habitat above the dam. VT Department of Conservation state in comments on the Preliminary Licensing Proposal that, "PSNH has analyzed the technical feasibility and cost of installing upstream and downstream passage facilities at Canaan Dam. The resource agencies had indicated a need for these facilities for

Institute. Page 8.

⁸ Warner, John P. "United States Fish and Wildlife Service Comment on Environmental Assessment." Received by FERC, 23 Apr. 2008.

⁹ Swaim, Stanley. "Comments on the scoping document for Canaan Hydroelectric Project No. 7528-004." Received by FERC, 12 Oct. 2004.

¹⁰ Low Impact Hydropower Certification Handbook. 2nd Edition. Revision 2.03: December 20, 2018. Low Impact Hydropower Institute. Page 9.

non-migratory fish. Unimpounded cold-water habitat is rare on the mainstem Connecticut River, and Canaan Dam disconnects the two of the longest reaches of that type of habitat on the Connecticut River.”¹¹

Implications of low-impact hydro would mean that the hydro-facility is making efforts to reduce damaging our collective resource. Through the last relicensing process, as indicated, there were numerous statements to indicate that the fishery above and below the Canaan dam is being damaged by the dam and that fish passage would enhance the reproductive health of this cold-water fishery. Given this, CRC feels that the applicant has not met the Standards for Criteria C or D.

While CRC contends that the applicant has not met the fish passage standards, if a certificate is issued, it should contain a condition to provide upstream and downstream fish passage to support this cold-water fishery and reduce the burden on the states to stock this heavily used resource. A true low-impact facility would help the recovery of this riverine species to natural levels.

3.2.5 Criterion E – Shoreline and Watershed Protection

CRC agrees that the applicant has satisfied Standard E-2 for the Shoreline and Watershed Protection criterion assuming that they are in compliance with an approved Riparian Zone Management Plan. But, the applicant additionally claims that they have met Standard E-PLUS because of the existence of this Riparian Zone Management Plan. This Plan is not a “legally enforceable shoreline buffer,”¹² as outlined in the Standards. A legally enforceable shoreline buffer would require some sort of conservation easement with standards for protection in perpetuity. Developing a management plan for treatment of vegetation along the river does not satisfy the requirement to have land “dedicated for conservation purposes.”¹³

3.2.6 Criterion F - Threatened and Endangered Species Protection

The applicant claims that they have met Standard F-2¹⁴ Finding of No Negative Effect. Several species are listed in the area, but the applicant has not actually presented a “finding of no negative effect” from a resource agency point of view. Based on the wording of the criteria requirements, LIHI certification is not based on the lack of pertinent knowledge it is based on a specific standard that indicates that the facility *does not in fact* impact the endangered species in question. There has been no finding that this is the case. Additionally, NH Heritage indicated that they “do not have current information about the natural community or rare plant species within the project area, nor a set of historic data to compare with existing conditions. Therefore, we can’t comment on any effects the dam might be having on these resources.”¹⁵

It is incumbent upon the applicant to make the case that there is in fact no negative effect. The title

¹¹ Cueto, Jeffrey R. “Canaan Hydroelectric Project -FERC No. 7528-004. Comments on Preliminary Licensing Proposal.” Received by FERC, 31 May, 2007.

¹² Low Impact Hydropower Certification Handbook. 2nd Edition. Revision 2.03: December 20, 2018. Low Impact Hydropower Institute. Page 11.

¹³ Ibid.


¹⁴ It looks like there is a mistake in the application. They cite F-1, but list the criterion for F-2. CRC assumes they are using the F-2 Standard for this criterion.

¹⁵ Low-Impact Hydropower Institute Certification Application Canaan Hydroelectric Project (FERC NO. 7528). Kleinschmidt. Pittsfield, Maine. February 2019 – Revised April 2019. Page 105.

of the certification is "low-impact," not "we don't know the impact." If studies were not conducted to understand the project effect on these species during the relicensing process, it is incumbent upon the applicant to develop that body of work in pursuit of this certificate in order to show no impact.

CRC is grateful for the opportunity to comment on the Canaan application and we appreciate your consideration.

Sincerely,

A handwritten signature in black ink that reads "Kathy Urffer". The signature is written in a cursive, flowing style.

Kathy Urffer
River Steward

Cc: Jeff Crocker, VT ANR
Eric Davis, VT ANR
Gregg Comstock, NH DES
Peter McHugh, VT Fish and Wildlife