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Connecticut River Conservancy

1/30/26

To: comments@lowimpacthydro.org

Subject: LI-PSH Definition Comments

To Whom It May Concern:

The Connecticut River Conservancy (CRC) restores and advocates for clean water, healthy habitats, and resilient communities to support a diverse and thriving watershed. Through collaborative partnerships in New Hampshire, Vermont, Massachusetts, and Connecticut, CRC leads and supports science-based efforts for natural and life-filled rivers from source to sea. We have participated in multiple hydro relicensing processes over the years for projects on the main stem of the Connecticut River and its tributaries. We have commented several times on Low Impact Hydro Institute (LIHI) initiatives and have participated in LIHI stakeholder convenings. CRC is grateful for the opportunity to provide comments as LIHI considers the inclusion of pumped storage hydropower in its Certification Program.

CRC is opposed to any Low Impact Hydropower Institute certification for Pumped Storage Hydroelectric (PSH) projects that are not explicitly and completely closed loop systems, using waters fully disconnected from any aquatic or groundwater aquifers, and that use only renewable energy (such as from wind and solar) for pumping. This is the only definition that could be considered "low impact."

The introduction states that "the current wave of proposed new PSH projects in the development pipeline presents a unique, limited-time opportunity to positively influence pumped storage design and operation." The most appropriate way to influence would not be through a certification that would "apply to different PSH facility types - open-loop, closed-loop, underground, add-ons to existing hydro, etc." but would instead start by identifying which type of PSH facility could possibly be low impact – eg. closed-loop where the water used is completely disconnected from any water bodies naturally containing aquatic life or uncontaminated groundwater drinking sources, using only non-hydro renewable energy – and certifying only those. The definition goes on to state that "[g]oals and standards are . . . designed to encourage PSH developers to site, design, construct and operate projects in an environmentally and socially responsible way." If LIHI certification provides any incentivization and value to development of PSHs the consideration of that value would need to begin with the "site" and "design" decisions. CRC believes that first evaluating site and design, and incentivizing that process, would be the most effective way to "positively influence pumped storage design and operation."

By drafting a definition, as indicated, with "language [that] is purposely broad" the organization initiates this effort by failing to meet the standard of "low impact" inherent in your name.

CRC has commented repeatedly as LIHI has updated standards over the years and has taken part in stakeholder discussions. The response to comments made on the first draft clearly indicates LIHI's intent to rely on the Federal Energy Regulatory Commission (FERC) process and subsequent regulatory requirements as standards. There should be no explicit or implied relationship between LIHI standards and what is required by state, tribal and federal agencies. FERC is a regulatory agency and does not provide an avenue for standards that go above and beyond the regulatory requirements. That should be the role of LIHI, and on the most basic level, LIHI should be only certifying improvements *that go well beyond what is required by FERC or any other regulatory agency*.

CRC provides below specific comments on each Impact Area:

Community and Tribal Engagement

CRC appreciates that the goal for under this section explicitly includes those tribes "without federal or state recognition." We note that "meaningful coordination throughout each facility development stage with all parties affected by the facility and its operations" would imply that the siting and design of the facility would require proactive community engagement. This would require the facility owner to document their siting and design engagement in the earliest stages of project development. CRC hopes that LIHI is prepared to fully apply this standard.

Cultural and Historic Impacts

Both Standard 1 and Standard 2 simply outline what is already required through the FERC process. Meeting these standards is a regulatory requirement under the National Historic Preservation Act and are not deserving of any special treatment that would allow for low impact certification. The standard should be, at a minimum, what is outlined in Standard 3 and the Plus Standard with a clear requirement of an adaptive management plan that is filed with FERC as a voluntary part of the licensing conditions.

Aquatic Ecology

No impacts to aquatic ecology should be allowed for any pumped storage projects in order to garner certification. This entire standard could possibly be eliminated by limiting certification consideration to only closed loop PSH projects. Any PSH that is "sited, designed, constructed, and operated *to address all impacts on aquatic ecosystems*" (emphasis added) would not be using an aquatic ecosystem in the design. Having said that, if LIHI were to include an Aquatic Ecology standard, the only appropriate standard to apply – at a minimum - is what has been included as the "Plus Standard." CRC would suggest the following edits:

> "In addition to satisfying **any state, tribal, or federal regulatory requirements**, the owner has **developed a detailed multi-decade plan** approved by resource

agencies, affected Tribes, and affected communities **and filed with FERC as a voluntary license condition**, to **restore multiple** aspects of aquatic ecology such as, but not limited to, creation of new aquatic habitats, reintroduction of previously extirpated native species, **support of agency restoration programs, and financial support defined as a percentage of facility profits** in the facility-affected area. The success of these measures must be monitored **annually**, and an adaptive management **plan developed with reports filed annually**, to regularly evaluate and adjust actions to ensure ongoing effectiveness **of the restoration effort** over the course of the facility's life."

Water Quality

Both Standard 1 and Standard 2 simply outline what is already required through the FERC process. Meeting these standards is a regulatory requirement under the Clean Water Act and is not deserving of low impact certification. The standard should be, at a minimum, what is outlined as the "Plus Standard" with a clear requirement of an adaptive management plan that is filed with FERC as a voluntary part of the licensing conditions.

Moreover, the language as presented in Standard 2 is legally incorrect. The proper standard mandated under the Clean Water Act and Rules is that the project "will comply" with water quality standards, not "provide reasonable assurance." Section 401's plain language requires that a certification with conditions "**shall** set forth any effluent limitations and other limitations, and monitoring requirements necessary to assure that any applicant for a Federal license or permit **will comply** with . . . [water quality standards] and with any other appropriate requirement of State law set forth in such certification.'" CWA § 401(d), 33 U.S.C. § 1341(d) (emphasis added).

The "will comply" mandate in § 401(a)(1) and (d) is also set forth in EPA's rules implementing § 401. Those rules first require the certifying authority to "evaluate whether the activity **will comply** with water quality requirements." 40 C.F.R. § 121.3(a) (emphasis added). Next, the rules mandate that "a certifying authority **shall** include any conditions in a grant of certification necessary to assure that the activity **will comply** with applicable water quality requirements." 40 C.F.R. § 121.3(b) (emphasis added). The rules further recommend that the certifying authority include in the certification "[a] statement that the activity **will comply** with water quality requirements" and "[a] statement explaining why each of the included conditions is necessary to assure that the activity **will comply** with water quality requirements." 40 C.F.R. § 121.7(c)(3) and (d)(3) (emphasis added).[1]

[1] This "will comply" standard has now been affirmed through three separate rule-making processes. For many years the original 1971 rule failed to reflect the 1972 CWA amendments which repealed and replaced § 21(b) with § 401(a)(1) and (d) and established the "will comply" standard.
"EPA promulgated implementing regulations for water quality certification in 1971 (1971 Rule) prior to enactment of the 1972 amendments to the CWA. In 1979, the Agency recognized the need to update its water quality certification regulations, in part to be consistent with the 1972 amendments. . . . As a result, for a number of years, the 1971 Rule did not fully reflect the amended statutory language. . . . the 1971 Rule did not reflect or account for water quality certification practices or judicial interpretations of section 401 that evolved over the 50 years since 1971." 2023 Rule, 88 FR at 66559. See also Clean Water Act Section 401

Water Quantity

CRC agrees with and reiterates the concerns made by the Hydropower Sustainability Alliance on the first draft definition regarding the lack of reference to future climate risks or recommendations for climate risk assessment and adaptation planning. CRC notes that LIHI indicated in their response to comments that "while the LI-PSH draft definition does not explicitly state climate change considerations in the goal statements, they are implied in the long-term view of the goal statements—from project design to ongoing operations." This is painfully and dangerously inadequate. Expressly because "[i]n the current U.S. regulatory framework, climate risk assessments and adaptation planning are not explicitly required as part of the FERC licensing process." That LIHI indicates a desire to "encourage project owners and developers to consider climate risks in their project design and operations," goals and standards designed to assess impacts of these projects that will exacerbate drought, floods, fire, and other climate catastrophes should be explicitly included. Especially given that there are numerous proposed PSHs in the southeast that will undoubtedly be considering groundwater as integral to those projects, it is unacceptable that this is not clearly and thoroughly addressed in the standards.

In addition to addressing the glaring omission above, at a minimum, the language drafted for the "Plus Standard" should be included as a required standard for the Water Quantity section.

Terrestrial Ecology

Both Standard 1 and Standard 2 simply outline what is already required through the FERC process. Meeting these standards is a regulatory requirement and does not deserve any special treatment that would allow for low impact certification. The standard should be, at a minimum, what is outlined as the "Plus Standard." CRC would suggest the following edits:

> "In addition to satisfying **any state, tribal, or federal regulatory requirements**, the owner **has developed a detailed multi-decade plan** approved by resource agencies, affected Tribes, and affected communities **and filed with FERC as a voluntary license condition**, to **restore multiple** aspects of terrestrial ecology such as, but not limited to, creation of new habitats, reintroduction of previously extirpated native species, **support of agency restoration programs, and financial support defined as a percentage of facility profits** in the facility-affected area. The success of these measures must be monitored **annually**, and an adaptive management **plan developed with reports filed annually** to regularly evaluate and

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Certification Rule (2020 Rule), 85 FR 42210, 42219-20, 42277-78 (July 13, 2020). In 2020, the first Trump administration substantially revised EPA's § 401 rules. 2020 Rule, 85 FR 42210.2 replacing the "reasonable assurance" standard with the "will comply" standard in an acknowledgement that "reasonable assurance" was inconsistent with § 401's plain language. In 2023 EPA substantially revised the 2020 Rule. The 2023 Rule explicitly preserved the 2020 Rule's rejection of the "reasonable assurance" standard and adhered to the statutorily required "will comply" standard. 2023 Rule, 88 FR at 66605-06.

adjust actions to ensure ongoing effectiveness **of the restoration effort** over the course of the facility's life."

Geology and Soils

In our thirteen-year involvement in the relicensing of a PSH, we note that because of the volume and velocity of water involved, these facilities can profoundly impact erosion cycles and rates in natural water bodies. As stated previously, both Standard 1 and Standard 2 simply outline what is already required through the FERC process, which frankly has not been very effective in addressing erosion caused by open-loop PSH facilities. Given this, for these standards to uphold "low impacts" at a minimum, the language in the "Plus Standard" should be required for certification.

Air Quality and Noise, Land Use and Aesthetics, and Recreational, Public, and Traditional Cultural Access

For all three of these categories, like the previous ones already commented on, both Standard 1 and Standard 2 simply outline what is already required through the FERC process. Meeting these standards is a regulatory requirement and is not deserving of low impact certification. The standard should be, at a minimum, what is outlined in the "Plus Standard" for each of these categories with a clear requirement of adaptive management plans to be filed with FERC as a voluntary part of the licensing conditions.

APPENDIX A – Terms and Definitions

The definition of "aesthetics" should be expanded beyond just visual sensory experience. Aesthetic conditions can be experienced through sound, touch, taste, and smell as well.

The definition of "listed species" should include Species of Greatest Conservation Need (SGCN). The threatened and endangered listing process is a regulatory and occasionally political process that may not address all impacted species. A more protective definition would also include consideration of Species of Greatest Conservation Need as identified by Wildlife Action Plans. Alternately, SGCN could have its own definition and be integrated into the standards.

In the "Traditional Cultural Properties" definition, the following sentence could be mis-construed to downplay the importance of oral histories: "While certain properties may be documented in the historic literature or through previous ethnographic or archeological studies, certain information regarding these and other properties has **only** been passed down through generations by oral history or practice." Consider rewording or adding language to highlight the importance of these oral histories and the need for them to be fully considered.

In summary, CRC's opinion is that the standards as defined will allow LIHI certification of any PSH that is able to satisfy regulatory requirements in most cases. There would be nothing "low impact"

about a project that merely meets the most basic baseline requirements. We encourage LIHI to create a meaningful certification for PSHs.

Thank you again for your consideration of our comments.

Sincerely,

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