

# *Wantastiquet River Subcommittee*

New Hampshire — Walpole, Westmoreland, Chesterfield, Hinsdale  
Vermont — Westminster, Putney, Dummerston, Brattleboro, Vernon

---

## *VIA ELECTRONIC FILING*

### **Debbie-Anne Reese, Secretary**

Federal Energy Regulatory Commission  
888 First Street, N.E. Room 1-A  
Washington, D.C. 20426

**Re:** Great River Hydro, LLC; FERC Project Nos. 1892, 1855 and 1904  
Applications Accepted for Filing; February 22, 2024  
Response to Notice for Solicitation of Comments and Preliminary Conditions

May 15, 2024

Dear Secretary Reese,

The Connecticut River Joint Commissions (CRJC) has a statutory duty, as a public entity, to comment on licenses that affect the River, and advise public agencies in their decisions regarding the River. While River waters are significantly cleaner than 50 years ago, and fish habitats are improved, much more is needed. Use of the Connecticut River has evolved over the past 50 years and more change is expected in the next 50. Recreation on the river and adjacent lands has significantly expanded. The Connecticut River has become a valued asset for attracting business and tourism to adjacent communities. Clean energy production from the three dams will be the dominant use of this section of the Connecticut River for the next 30 to 50 years. But other users have important rights and objectives too. Their uses should be supported, not precluded.

As the Wantastiquet Local River Subcommittee (LRS) of CRJC, we are designated by the State of New Hampshire to advise on this State Protected River, have been involved in this relicensing effort since its onset, in 2012, and are sensitive to the fact that one hundred and twenty miles of our lower Connecticut River between New Hampshire and Vermont will be affected by the proposed licenses. Of this 120-mile reach, 100 miles have been converted to impoundments, essentially lakes, to facilitate power generation by the three hydroelectric dams requesting new licenses.

Wantastiquet LRS herein provides comments and proposed conditions on the “applications accepted for filing” for the above-mentioned projects. Our principal condition is that Great River Hydro, LLC (GRH) fund a Mitigation Enhancement Fund (MEF). Our comments are as follows:

**1. Public Participation in Developing License Conditions.** We were pleased to see proposed modifications to project operations to minimize water level fluctuations. This has been a priority for CRJC. However, we request that CRJC, the only public body specifically representing the interests of New Hampshire and Vermont regarding the Connecticut River, be included in any future negotiations

with stakeholders regarding mitigation and enhancement, and that CRJC, as the representative for the communities along the river, be involved in the administration of Mitigation Enhancement Fund as outlined in **Section 4**.

In the past, we questioned the propriety of confidential discussions with a limited group of stakeholders, which excluded the CRJC, that led to the proposed operational changes. The process should be transparent and collaborative, consistent with Integrated Licensing Process (ILP) objectives. We request that CRJC be assured an adequate opportunity to review and comment on the draft environmental impact statement.

*Comments.* Precedent dictates the CRJC is an essential stakeholder. For example, the Settlement Agreement of August 11, 1997 setting forth proposed changes to operational modes and minimum flow releases for the Fifteen Mile Falls (FMF) hydroelectric facilities on the northern reach of the Connecticut River, including the Moore, Comerford, and McIndoes Falls dams was reached between USGenNE, the State of New Hampshire, the State of Vermont, the U.S. Fish and Wildlife Service (FWS), the U.S. Environmental Protection Agency (EPA), the National Park Service, Appalachian Mountain Club, the Connecticut River Joint Commissions, Connecticut River Watershed Council, Conservation Law Foundation, New Hampshire Rivers Council, New Hampshire Council of Trout Unlimited, and the Northeast Chapter of Vermont Trout Unlimited.

**2. Documentation of Environmental Impacts.** The proposed operational changes will likely benefit the river's biological community as these changes will provide a hydrological regime that more closely resembles natural pre-impoundment conditions. However, we are not clear what impact these changes will have on water quality, sediment transport and riverbank erosion<sup>1</sup> as no scientific evidence on these issues has been provided. Since intense storms and river flows are projected to increase due to climate change (see **Section 3**) we anticipate erosion and bank failures will not only be an ongoing problem but will increase.<sup>2</sup> Moreover, the Projects will still have adverse effects in both impoundment and riverine reaches (e.g., see Final License Application (FLA) dated December 2020, p. 955, 1144; revised in June 2023). Therefore, monitoring of water quality, sediment transport and erosion should be conducted throughout the life of the licenses. Funding for this work should be provided by the MEF or a condition in the license.

*Comments.* Will the proposed operational changes affect the temperature, dissolved oxygen (DO), pH, nutrients, bacteria and invasive aquatic plants of impoundment and riverine reaches? On this, GRH

---

<sup>1</sup> Dr. John Field conducted extensive studies on bank erosion along the River reaches affected by the three dams. The Final Study Report for Studies 2 and 3, Riverbank Transect and Riverbank Erosion (February 4, 2017, p. ES-3) concludes that "... notching at the base of the banks that initiates the cycle of erosion can result from a variety of potential factors"; states (in Study Report 2, 3, page 60) that "waves, water level fluctuations, overland flow, groundwater seeps, and tractive forces (e.g., shear stress) generated by river flow" are potential erosive mechanisms (ibid, p.60); and, that "... project operations, while perhaps causing sediment entrainment in isolated incidents, cannot be responsible for wide spread bank sediment entrainment or bank erosion."

<sup>2</sup> "Flow velocities within the impoundments are controlled both by discharge and WSE at the dams as well as upstream inflow. ... **When the WSE at the dams is held constant, flow velocity will generally increase with increased discharge or upstream inflow** [emphasis mine]" (Revised "Amended Final License Application, Exhibit E, January 2024, Section 3.4.2.1, p. 78).

previously provided conflicting responses in the Final License Application. Now GRH proposes operational changes that “will maintain water surface elevations (WSE) at the dams at higher elevations within a narrower bandwidth more often than current operations” (Revised Amended Final License Application, Exhibit E, January 2024, Section 3.3.1.1, p. 21)<sup>3</sup>. We continue to believe impacts by the preferred alternative need to be accurately determined and closely monitored during the life of the licenses.

**3. Address Potential Climate Impacts.** The FLA does not incorporate scenarios and potential responses to more intense storm events and prolonged periods of drought that are based on recent historical data and predicted by the preponderance of climate models. These might include, for example, specific provisions for reopening the permit if there are significant persistent changes in river flows (e.g., greater flows due to more frequent flood events, or lower flows due to drought). At a minimum, the MEF should be available to identify and restore instream and riparian communities that may be adversely affected by gradual and/or catastrophic events triggered by climate change.

*Comments.* GRH needs to consider, and use, the best available science. Intense storms have become more frequent and are projected to become even more common due to climate change. Precipitation in the Northeast has increased in all seasons, and extreme precipitation events (defined as events with the top 1% of daily precipitation accumulations) have increased by about 60% in the region—the largest increase in the US.<sup>4</sup>

**4. Establish a Mitigation Enhancement Fund.** As “use” of the River for power generation will continue along with adverse impacts, we respectfully request that a Mitigation Enhancement Fund (MEF) be established that, at a minimum, compensates for foreseeable (e.g., bank erosion) and unforeseen future impacts (e.g., methylmercury accumulation). GRH offers operational changes as “the major enhancement and mitigation element” (FLA, p. 2; Revised Amended Final License Application, Exhibit E, January 2024, Section 2, p. 24), but this appears to us to be avoidance and minimization, not enhancement nor compensatory mitigation. To mitigate unavoidable adverse effects, GRH needs to offer significant compensatory mitigation.

*Comments.* Previously, the CRJC was involved with relicensing the Fifteen Mile Falls (FMF) hydroelectric facilities on the northern reach of the Connecticut River, including the Moore, Comerford, and McIndoes Falls dams. That effort began in 1996 and Governor Shaheen was an important participant in setting the terms of the license that was issued in 2002. A very important outcome of that coordinated effort was the establishment of a \$15 million Connecticut River Mitigation and Enhancement Fund (with those funds provided by the licensee), which supports restoration and enhancement projects. This fund has been a tremendous asset for the northern reach of

---

<sup>3</sup> “Changes include increased stability of WSEs (decreases in frequency, duration, and range of impoundment WSE fluctuation), and changes in flow and velocity through the impoundments.” (Revised Amended Final License Application, Exhibit E, January 2024, Section 3.3.1, p. 20).

<sup>4</sup> USGCRP, 2023: Fifth National Climate Assessment. Crimmins, A.R., C.W. Avery, D.R. Easterling, K.E. Kunkel, B.C. Stewart, and T.K. Maycock, Eds. U.S. Global Change Research Program, Washington, DC, USA. <https://doi.org/10.7930/NCA5.2023>. November 2023. Figure 2.8.

the Connecticut River and adjacent New Hampshire communities and should serve as a precedent for this Project.

Great River Hydro filed its a Final License Application in December 2020. In that application, GRH proposed specific recreation enhancements but did not propose a mitigation fund. Afterwards, ArcLight-backed Great River Hydro conveyed their operating portfolio to Hydro Quebec in 2022, after owning them for only six years<sup>5</sup>. Consequently, Hydro Quebec had no input into the applications. So, at this time, we now call upon Hydro Quebec to concur with the establishment of a Mitigation and Enhancement Fund for use and unavoidable impacts on public interests (e.g., erosion, mercury, in-stream uses, economic impacts), which was a component of the licensing agreement for hydroelectric facilities on the upper portion of the Connecticut River.

The CRJC management plans, referenced herein, need to be updated as the first task to be performed with funds from the MEF as these plans will inform how subsequent MEF funds are distributed. It is anticipated to be used to: a) protect and improve habitats for fish and wildlife in the contributing watershed of the three dams; b) monitor fish populations; c) monitor and document invasive species, conduct public education, and eradicate where feasible; d) monitor bank erosion; e) establish and protect riparian buffers on suitable sections of riverbanks; f) conduct a comprehensive economic assessment of the impacts due to dam operations; g) establish recreation facilities such as docks, picnic sites, boat launches, trails for marine patrol, hikers, bikers, and walkers that improve access and enjoyment of the river; h) protect and interpret early American and Native American assets in the vicinity of the river; i) provide public education about natural resources and wise use of the river and nearby lands; and, j) provide emergency patrol services.

The establishment of this fund is supported by New Hampshire Fish and Game, and other stakeholders.

**5. Support Riverside Recreation.** As an example of project mitigation, GRH should not only maintain and enhance existing recreational access to the river, but they should fund additional initiatives to increase public engagement with the river (e.g., walking trails, boat launch, and river access opportunities). A significant existing body of work exists documenting these needs and opportunities.

The Connecticut River Recreation Management Plan as published in May 2008 and updated in May 2013 extensively explored land-based-recreation in an attempt to portray and address the full range of recreation issues in the region. Both FERC and the Army Corps of Engineers adopted these plans to establish the long-term recreational goals and propose implementation strategies to adopt them. Those recommendations are not only ignored in the 2020-FLA, but they disregard the years of work and investment by other stakeholders in the mutually agreed upon management plan. The National Blueway designation and the Connecticut River Paddlers' Trail are two under-funded and unincluded opportunities. Meanwhile, the riverfront communities continue to pay their share and do their part by making significant investments according to agreed-upon wastewater management and water-quality goals. The demand for recreational uses has only continued to grow, and more opportunities to

---

<sup>5</sup> <https://enerdatix.com/blog/renewable-energy-m-and-a-arclight-backed-great-river-hydro-sells-589-mw-operating-portfolio-in-new-england-to-hydro-quebec-for-2-billion/>

accomplish those on-river and river-side have been thoughtfully identified, proposed, and developed by local municipalities, stakeholder groups, and non-profit organizations.

Great River Hydro seemingly omits these significant interests among the communities along the river as it is “not proposing any changes to existing recreation access areas, portage trails or access into the Bellows Falls bypassed reach (portage or whitewater boating)...” (Revised Amended Final License Application, Exhibit E, January 2024, Section 3.9.2.2, p. 590). Many of these priorities are identified in the three applicable CRJC Subcommittee Recreation Plans, and the CRJC and other stakeholders have identified specific “shovel-ready” recreational projects that are applicable for funding under the anticipated Mitigation fund as outlined in **Section 4** and funded by the revenue-sharing agreement outlined in **Section 8** based upon the established precedent.

*Comments.* Use of the Connecticut River has evolved over the past 50 years and more change can be expected in the next 50. Recreation on the river and adjacent lands has significantly expanded

The New Hampshire Marine patrol is understaffed and facilities along the river are inadequate. This is a major barrier in the protection of this resource for recreational use and a necessary component to amplify those endeavors. Consideration should be given to how the MEF can be utilized to support the Marine patrol.

**6. Include a Toxins Management Plan.** With respect to toxins, FERC needs to compel GRH to provide a *Toxin Management Plan*, acceptable to stakeholders, which provides for the funding of studies, plans, and mitigation measures for mercury and other toxin reduction efforts designed to address bio-accumulation in the project area. This should be a condition in the licenses rather than funded by the MEF.

*Comments.* CRJC recommends in its Connecticut River Corridor Management Plan, Volume I, Riverwide Overview (p. 12) ([http://www.crjc.org/wp-content/uploads/2017/12/VolumeI\\_RiverwideOverview.pdf](http://www.crjc.org/wp-content/uploads/2017/12/VolumeI_RiverwideOverview.pdf)) the need to “fund the monitoring for toxic substances in the water, fish, and sediments, and inform the public about the results.” This Management Plan and the CRJC 2009 Connecticut River Water Resources Management Plan, due to an unfortunate omission error, were not included in the list of “comprehensive plans” evaluated for consistency review in Exhibit E, Section 5.2 of the FLA. Nevertheless, based on the science, mercury, per- and polyfluoroalkyl substances, polychlorinated biphenyls, organochlorine pesticides (e.g., dichlorodiphenyltrichloroethane), dioxins and other toxic substances should be assessed to identify occurrence levels in order to inform possible mitigation measures. Recent research indicates reservoir water level fluctuations enhance methylmercury production, a process that can result in elevation of methylmercury concentrations in biota, even in older reservoirs (e.g., see [https://www.researchgate.net/publication/279634886\\_Influence\\_of\\_reservoir\\_water\\_level](https://www.researchgate.net/publication/279634886_Influence_of_reservoir_water_level)).

**7. Include Revenue-Sharing for Adjacent Communities.** Under the public trust doctrine, the State holds title to submerged land under navigable waters in trust for the benefit of the public. The public

CRJC Wantastiquet Comments on Great River Hydro's Hydroelectric Project Nos. 1892-026, 1855-045 and 1904-073

should benefit by sharing in the profits generated for use of our public trust resource by GRH, a for-profit private investment company. We ask that the anticipated Mitigation fund created by GRH as outlined in **Section 4** include revenue-sharing with impacted riverfront communities. The FLA does not address many of the real costs borne by local communities and landowners in unwilling service to a private enterprise whose profits derive from its use of our public resource. Investors in GRH benefit from recent sweeping changes to the tax code which increases their profits, while citizens of New Hampshire riverfront communities struggle to pay some of the highest electrical rates in the country, which likely will increase even further. These high electrical rates are a major impediment to local economic development. The public is the largest shareholder in this project, but currently stands to receive the least economic benefit. In fact, the FLA as proposed does not even cover the public costs of this facility.

*Comments.* Farmlands adjacent to the Connecticut River are considered to have the finest agricultural soils in New England, yet previous dam operations jeopardized farms with erosion and soil loss. The costs not addressed include loss of these agricultural soils, flooding of developed areas, costs associated with maintaining and monitoring recreational use of the impoundments and associated access facilities, and threats to infrastructure (e.g., NH Route 12A between Charlestown and Walpole, and River Road in Lyme, New Hampshire, which have cost tax payers tens of millions of dollars) caused by shoreland erosion. The reluctance of TransCanada, GRH's predecessor-in-title, to compensate municipalities for assessed values of dam properties or expenses related to their operations was highlighted by TransCanada's challenges of local property tax assessments, which required expenditures by the municipalities to defend. No private business should reasonably expect to operate rent-free on a publicly-owned property. These licenses grant GRH monopolistic revenue-generating use of the river, a public trust resource, over the next 30-50 years (the exact term of the license is unclear) to generate electricity. As currently proposed in the FLA the riverfront communities do not adequately benefit from the generation of that electricity in their communities, on their river. The lease of the State-owned Sunapee Ski Area to a private enterprise establishes further precedent for revenue-sharing agreements between the State and a private company for the use of a publicly-owned resource. The Fifteen Mile Falls Settlement Agreement in 1997 set an appropriate and specifically relevant precedent for a percentage of revenue generated by hydroelectric facilities on the Connecticut River to be designated.

We recommend the license permit applications include a condition to establish a MEF and designate a group of stakeholders to negotiate the details. As a preliminary recommendation, we suggest GRH make an annual contribution of one million dollars and 2% to 5%, of its annual profits to the MEF.

**8. Establish a Capital Reserves & Investment Fund.** CRJC believes it is imperative that GRH establish a long-term escrow fund to ensure the facilities have adequate capital on-hand to reinvest into the facility to address the known and future improvement needs of these man-made facilities which have real, known anticipated lifespans. This Fund would serve towards the renovation and/or replacement of these facilities as expected over the course of this license, or allow for the dams to be decommissioned and dismantled if they become obsolete. Neither New Hampshire, Vermont, nor riverfront towns should be liable for the cost of impoundment mitigation/removal and river restoration efforts should the dams outlive their usefulness. GRH acknowledges that “[t]here would be significant costs involved with decommissioning the projects and/or removing project facilities” (FLA, p. 691). As many dams built in the early/mid-20<sup>th</sup> century come up for their 2<sup>nd</sup> or 3<sup>rd</sup> FERC relicensing, it is

CRJC Wantastiquet Comments on Great River Hydro's Hydroelectric Project Nos. 1892-026, 1855-045 and 1904-073



imperative that the financial and operational structure of these new licenses be informed by regional and national case studies that address and inform the true long-term costs of these facilities. If these costs are allowed to continue being externalized by the facility owner and operator, the impacts will continue to be unduly borne by the general public. The inevitable reality of significant future costs was ignored by the original project licensing. It would be irresponsible for FERC to grant another 30-50 license that does not adequately allocate funds for the now-known future costs.

*Comments.* Provide a financial assurance plan, including a draft of the financial assurance mechanism (e.g., bond, standby trust). This should be a condition in the licenses.

**9. Complete Management, Mitigation and Enhancement Plans Before Application for Water Quality Certification is Considered.** FERC should clarify that the FLA was not complete as of December 7, 2020 and the proposed operations and mitigation measures should not necessarily be used in water quality certification applications nor trigger the beginning of the one-year period for New Hampshire Department of Environmental Services to review and issue water quality certification under Section 401 of the Clean Water Act. Various management, mitigation, and enhancement plans to benefit environmental and cultural resources need to be completed first. And these need to be incorporated as conditions upon federal permits or licenses as a prerequisite to granting the permit or license.

*Comments.* Explicit methods need to be developed for protecting, at a minimum, water quality (e.g., mercury), listed species (e.g., dwarf wedge mussel, rare plants), historic properties and archaeological sites, all of which will be affected by project operations. GRH does not appear to be dedicated to protecting these resources but instead relies on protective measures currently available under federal statutory authorities (e.g., Endangered Species Act, Clean Water Act, and National Historic Preservation Act). However, these authorities have been weakened by recent federal actions, so it is incumbent upon the project proponent to specifically explain how these resources will be protected from the applicant's proposed use and management of the River.

### **Recommendation**

We understand operational changes in conjunction with climate change and many other known and unknown factors will affect communities along the Connecticut River for many decades. Therefore, the Wantastiquet Local River Subcommittee and other stakeholders recommend that the forthcoming renewal licenses for the dams at Wilder, Bellows Falls, and Vernon include a condition that Great River Hydro (or successors) establish a Mitigation and Enhancement Fund that would extend for the duration of the licenses and be funded by an annual fixed fee and a percentage of annual company profits.

We appreciate your consideration of these comments and strongly encourage you to contact the Wantastiquet LRS at [mterhune@uvlsrc.org](mailto:mterhune@uvlsrc.org).

Sincerely,

A handwritten signature in black ink, appearing to read "Majestic Terhune". The signature is written in a cursive, flowing style.

Majestic Terhune  
CRJC Staff Consultant for Wantastiquet Local River Subcommittee



Document Content(s)

Wantastiquet FERC Relicensing Comments.pdf.....1