



August 18, 2022

Secretary Bethany Card  
Executive Office of Energy and Environmental Affairs  
100 Cambridge St, Suite 900  
Commonwealth of Massachusetts  
Boston, MA 02114

via electronic mail

**Re: Turners Falls Hydroelectric Project (FERC No. 1889) and Northfield Mountain Pumped Storage Project (FERC No. 2485) FERC Relicensing and Massachusetts Clean Water Act § 401 Certification**

Dear Secretary Card,

Connecticut River Conservancy (CRC) writes to clarify a few points raised in FirstLight's June 29, 2022 letter regarding water quality standards and protecting designated aquatic life uses (ALUs) in Reach 1 of Segment 34-03 of the Connecticut River. FirstLight's letter was in response to CRC's June 13, 2022 letter, in which we raised several concerns with the FERC relicensing process for the Turners Falls Dam and Northfield Mountain Pumped Storage Project. While CRC disagrees with many of the points raised in FirstLight's letter, we are particularly troubled by FirstLight's mischaracterization of CRC's position regarding water quality standards for attainment of aquatic life uses ("ALUs") below Turners Falls Dam and its fundamental legal and scientific misunderstanding of how those ALUs must be protected and ongoing impairments to the Connecticut River must be addressed. Thus, this letter focuses on those issues only.

In its response letter, FirstLight claims that "the flow regimes contemplated in the AIP [agreement in principle] are designed to address [the impairments of dewatering and flow modification] and meet the designated uses [of habitat for fish, other aquatic life, and wildlife including their reproduction, migration, growth, and other critical functions] over the entire Segment 34-03." FirstLight June 29, 2022 Letter, at 3. However, the proposed flows in the current AIP neither address the impairments nor meet the designated ALUs, and FirstLight's insistence that they do demonstrates FirstLight's fundamental misunderstanding of the applicable legal and scientific standards. FirstLight's response only heightens CRC's concern with the direction the FERC relicensing settlement is headed, and we again request the Massachusetts Department of Environmental Protection (DEP) engage with the FERC relicensing process as soon as possible, including requesting FERC issue the Ready for Environmental Assessment ("REA"), to make a course correction before significant resources are expended by all parties.

## Impairment in Reach 1 Means that ALU Is Not Met

As a threshold matter, it is improper for FirstLight to ignore impairment in Reach 1<sup>1</sup> while claiming that the proposed flows meet designated ALUs for the entire segment. The Clean Water Act's (CWA) implementing regulations provide: "States must adopt those water quality criteria that protect the designated use... based on sound scientific rationale... For waters with multiple use designations, *the criteria shall support the most sensitive use.*" 40 C.F.R. § 131.11(a)(1) (emphasis added). The CWA thus requires states to scientifically determine and protect the "most sensitive use," regardless of where that use occurs in a particular river segment.

Likewise, the Massachusetts Surface Water Quality Standards (SWQS) require DEP to "designate the *most sensitive uses* for which the various waters of the Commonwealth shall be enhanced, maintained and protected," "prescribe the minimum water quality criteria required to sustain the Designated Uses," and to regulate as necessary to "achieve the Designated Uses and maintain existing water quality." 314 CMR 4.01 (emphasis added). SWQS further provides: "The surface waters of the Commonwealth shall be segmented, and each segment assigned to one of the Classes... Each class is identified by *the most sensitive, and therefore governing, water uses* to be achieved and protected." 314 CMR 4.05 (emphasis added). DEP thus has a duty to designate and protect the most sensitive use for each segment of each water body in the Commonwealth, and therefore, if a portion of a river segment is impaired, then that entire segment is considered impaired. The fact that the AIP's proposed flows purportedly increase and protect ALUs downstream in other reaches is immaterial to the failure of those proposed flows in protecting designated ALUs in Reach 1.

## Fluvial Specialist Species Are Not the Only, or Even the Best, Indicator of ALU

FirstLight lists several target species it analyzed,<sup>2</sup> yet its letter focuses almost exclusively on how the AIP's proposed flows provide habitat for Fallfish without offering any reason as to why Fallfish should be considered the most sensitive use or most limiting species. To the contrary, Fallfish are very broad in their tolerance to all forms of stress.<sup>3</sup> FirstLight also mischaracterizes CRC's reliance on the statement from the Massachusetts Consolidated Assessment and Listing Methodology (CALM), that ALU "is supported when the fish community includes fluvial specialist/dependent species or at least one fluvial species in moderate abundance." CALM at 20. CRC never stated that fluvial fish data is the only indicator of ALU under CALM, nor that if a fluvial specialist species was in moderate abundance as measured in the entire segment, then that would necessarily mean that ALU is met.

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<sup>1</sup> Reach 1 is the section of the Connecticut River between Turner Falls Dam and Station No. 1.

<sup>2</sup> The target species FirstLight studied were: Juvenile American Shad; Juvenile/Adult Fallfish; Juvenile/Adult Longnose Dace; Juvenile/Adult White Sucker; Juvenile/Adult Walleye; Juvenile/Adult Tessellated Darter; Macroinvertebrates, and the habitat guilds of Shallow Slow, Shallow Fast, Deep Slow, and Deep Fast.

<sup>3</sup> See *infra* Table 1.0, showing Fallfish as having over 60% weighted usable area (WUA) for over 90% of flows between 120 and 5,000 cfs and never having WUA under 40%.

Table 1.o:

**IFIM Study Showing Percentage of WUA for Flows of 120–5000 cfs in Transects 10 and 11**

Target Species	120	150	200	250	400	500	600	700	800	1000	1200	1400	1600	1800	2000	3000	4000	5000
Juvenile American Shad	43.90%	47.70%	53.50%	58.60%	52.90%	55.30%	57.50%	59.20%	61.20%	64.60%	74.40%	83.00%	88.70%	94.40%	100.00%	95.50%	88.10%	80.60%
Juvenile Fallfish	57.80%	63.60%	71.20%	77.00%	73.30%	74.30%	76.20%	77.60%	79.50%	82.80%	89.50%	93.40%	98.00%	100.00%	99.50%	80.40%	61.60%	44.00%
Adult Fallfish	67.50%	70.90%	76.20%	80.60%	75.70%	75.70%	71.20%	67.10%	63.50%	59.80%	70.40%	80.60%	86.70%	93.40%	100.00%	89.60%	74.30%	60.50%
Juvenile Longnose Dace	13.00%	16.40%	22.00%	27.60%	23.10%	27.70%	31.30%	34.20%	37.40%	44.00%	64.00%	81.70%	95.70%	100.00%	94.90%	39.80%	12.70%	3.60%
Adult Longnose Dace	9.30%	11.70%	15.80%	19.80%	16.10%	18.50%	20.40%	22.80%	25.40%	31.50%	51.40%	69.40%	84.20%	94.00%	100.00%	54.40%	17.00%	4.20%
Juvenile/Adult White Sucker	75.00%	85.50%	95.40%	100.00%	82.00%	71.10%	60.50%	50.90%	43.70%	45.50%	63.60%	77.00%	78.10%	73.40%	63.40%	29.90%	8.20%	2.60%
Juvenile Walleye	100.00%	82.40%	52.90%	32.40%	26.50%	23.50%	17.60%	14.70%	11.80%	8.80%	4.70%	3.50%	3.50%	2.40%	2.90%	0.00%	0.00%	0.00%
Adult Walleye	100.00%	80.40%	48.80%	24.50%	19.40%	15.80%	13.00%	12.90%	12.90%	13.10%	13.50%	14.10%	14.60%	14.90%	15.60%	20.00%	14.30%	4.40%
Juvenile/Adult Tessellated Darter	12.20%	15.40%	20.90%	26.50%	18.00%	22.00%	26.70%	31.90%	36.70%	45.30%	66.10%	84.50%	98.20%	100.00%	96.70%	28.70%	0.90%	0.00%
Macroinvertebrates	0.00%	0.10%	0.40%	0.90%	6.00%	10.00%	14.00%	17.70%	21.30%	26.90%	30.40%	36.10%	44.70%	55.20%	67.10%	91.60%	100.00%	97.60%
Shallow Slow	93.60%	94.10%	95.40%	97.10%	96.60%	97.50%	98.30%	100.00%	100.00%	93.00%	80.80%	78.20%	75.50%	71.70%	68.00%	21.50%	0.00%	0.00%
Shallow Fast	24.80%	30.70%	40.40%	49.70%	26.10%	31.10%	36.20%	41.70%	49.00%	63.30%	83.50%	96.40%	100.00%	97.10%	88.90%	32.30%	9.10%	2.90%
Deep Slow	90.70%	91.40%	93.30%	95.70%	96.10%	100.00%	88.50%	65.60%	59.00%	67.00%	73.30%	78.90%	80.30%	64.20%	54.80%	22.20%	3.60%	1.20%
Deep Fast	2.40%	6.70%	15.00%	23.10%	37.80%	53.40%	69.10%	79.40%	82.80%	89.50%	88.30%	89.10%	91.60%	94.40%	99.60%	100.00%	89.80%	52.90%

<b>Key:</b>
0% WUA
4.0% WUA
50% WUA
80% WUA
100% WUA

In fact, CRC clearly stated that the AIP’s current proposed flows *would not support additional habitat for macroinvertebrates*. CRC focused on macroinvertebrates in its June 13<sup>th</sup> letter, noting that “[a] particularly startling implication is that proposed summertime flows will protect less than 6% of the weighted [*sic*] usable area for benthic macroinvertebrates in the area below the Turners Falls dam” and that “summer minimum flow of 250 cfs with an opportunity to increase to 400 cfs... represents only 0.9% to 6% WUA [weighted usable area] for macroinvertebrates [which is] far less than necessary to ‘maintain or restore’ the designated Aquatic Life Use.” CRC June 13, 2022 Letter, at 2; Exhibit 2 at 6–7 (quoting 314 CMR 4.03(3)(b)).<sup>4</sup>

CALM gives DEP guidance on how to determine the most sensitive use and recommends a “weight-of-the-evidence” approach. CALM at 17. According to CALM, when equally good data are available from multiple indicators, the “biological community data,” generated by a Rapid Bioassessment Protocol (RBP) III multi-metric analysis (which are used to monitor benthic macroinvertebrates), *carry the most*

<sup>4</sup> In an analogous situation, the percentage of WUA available for the most limiting species in a particular river segment was the standard used by Vermont Agency of Natural Resources and upheld when challenged in *In re Morrisville Hydroelectric Project*. 224 A.3d. 473, 488 (Vt. 2019).

*weight. Id.* (emphasis added). Under CALM, such data are the “best and most direct measure of [ALU].” *Id.* Contrary to FirstLight’s contention, fluvial specialist fish are not the only, or necessarily the best, indicator of the overall health of aquatic life.

## Conclusion

The AIP’s proposed flows below the Turners Falls Dam will not protect the most sensitive designated use as required by Massachusetts SWQS and the Clean Water Act. FirstLight’s June 29<sup>th</sup> letter confirms that the AIP’s proposed flows fail to account for WUA needed to support macroinvertebrates and rely too heavily on WUA for a fluvial fish species that cannot be considered the most limiting species for Reach 1. This approach should raise significant concerns for DEP and its forthcoming CWA Section 401 certification process. Accordingly, before the settlement process proceeds further down this flawed path, DEP should request FERC to issue the REA so DEP can formally begin the CWA Section 401 certification process<sup>5</sup> and address these issues in a timely and efficient manner.

Sincerely,



Kelsey Wentling  
(she/her/hers)  
River Steward, MA

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<sup>5</sup> CRC was pleased to see that DEP has created a public website dedicated to the CWA Section 401 process for these hydro facilities, and that the process outlined includes multiple public hearings. See <https://www.mass.gov/info-details/401-wqc-for-the-firstlight-hydroelectric-re-licensing-project>.