



March 24, 2021

Kimberly D. Bose, Secretary Federal Energy Regulatory Commission 888 First Street NE Washington, DC 20426

RE: American Whitewater and Appalachian Mountain Club Comments in Reply to Great River Hydro's Response to AIR for the Wilder (P-1892), Bellows Falls (P-1855), and Vernon (P-1904) Hydroelectric Projects

Dear Secretary Bose:

American Whitewater (AW) and Appalachian Mountain Club (AMC) submit the following comments based on our analysis of data provided by Great River Hydro (licensee) in response to the commission staff's February 12, 2021 Additional Information Request for the Wilder, Bellows Falls, and Vernon Hydroelectric Projects (FERC Nos. P-1855-045, P-1892-026, P-1904-073). Our organizations previously submitted additional information requests and comments of deficiency in response to the licensee's Amended Final License Application (Accession No. 20210113-5145) in which we analyzed the impact of the licensee's newly proposed change from full peaking to partial peaking mode of operation at each of its projects being relicensed on the Connecticut River.

In our response to the AFLA (Accession No. 20210113-5145), lacking any impoundment, generation, or flow data from the licensee, we conducted an analysis of upstream USGS flow data to estimate inflow under the flow regime proposed in the AFLA in comparison to current project outflow in an average water year during boating hours in the recreational boating season. Based on this analysis, we concluded that: 1) the proposed flow regime would have a substantially negative impact on whitewater boating opportunity at Sumner Falls below the Wilder Project by reducing the frequency of optimal whitewater boating flows, 2) the proposed flow regime would negatively impact through paddlers on the Connecticut River Paddlers Trail during low-flow periods, and, 3) the proposed flow regime would continue to have a negative impact on whitewater boating in the Bellows Falls bypassed reach due to the dewatering of the natural river channel as a result of the flow diversion for power generation, as well as the lack of suitable access, and the continued presence of the deadbeat low-head dam in the bypassed reach.

In response to the Commission staff's February 12, 2021 Additional Information Request, the licensee provided project outflow and impoundment data for 2009, 2015, 2016, and 2017. The newly supplied data confirms our prior analysis concluding that the licensee's proposed flow regime will have a substantial negative impact whitewater boating opportunity at Sumner Falls

below the Wilder project and have a negative impact on through paddlers on the Connecticut River between Wilder and Bellows Falls during low-flow periods in comparison to historic operations. In addition, the proposed flow regime will continue to have a negative impact on whitewater boating opportunity in the Bellows Falls bypassed reach. The licensee has proposed no PM&E measures to mitigate for these project impacts.

Whitewater Boating at Sumner Falls

Data compiled by the licensee for each of the requested water years confirms our previous assertion regarding the negative impact that the proposed flow regime will have on whitewater boating opportunity at Sumner Falls located 10 miles below the Wilder project. The requested water years, 2009 (above average), 2015 (average), 2016 (low), and 2017 (above average) show that the frequency of optimal whitewater boating flows above 5,000 cubic feet per second (cfs) and above 10,000 cfs was consistently reduced across all water year types in comparison to historic operation.

Our analysis compared historic generation outflows from Wilder based on current peaking operations in comparison to IEO and IEO/Flex models from 8 a.m. to 4 p.m. (accounting for two hours water travel time from Wilder to Sumner Falls) during the peak boating months of April through October. During a low water year (2016), the AFLA proposed flow regime, if implemented, would have reduced optimal flows above 5,000 cfs in every month between April and October, eliminating optimal flows above 5,000 cfs entirely in July and September and nearly all similar opportunities in other months. While the overall reduction in whitewater boating opportunities above 5,000 cfs was reduced 42 percent under the proposed flow regime, whitewater boating opportunities above 5,000 cfs were reduced by more than 80 percent after May. Although optimal flows above 10,000 cfs were less frequent in 2016, 100 percent of those opportunities were eliminated after the spring freshet under the proposed flow regime. Flows above 2,500 cfs remained mostly unchanged in 2016 except during the low-flow period in September. Flows of 2,500 cfs do not provide an optimal or acceptable whitewater boating flow and were not evaluated during controlled-flow whitewater boating study.

During 2015, an average water year, boating flows above 5,000 cfs were reduced by 18 percent overall under the proposed flow regime. During the warmer summer months, however, optimal boating flows were reduced by about 50 percent, a reduction that continued through the end of the boating season in October. Boatable flows above 10,000 cfs saw a 35 percent reduction in this average water year.

Above average water years (2009 & 2017) likewise saw significant reductions in whitewater boating opportunities with 28 and 16 percent reductions, respectively, in boatable flows above 5,000 cfs. Following the spring runoff, flows above 5,000 cfs decreased by 45 and 28 percent, respectively. At flows above 10,000 cfs, optimal whitewater boating opportunity decreased by 12 and 28 percent, respectively, with flows at this level being almost eliminated entirely during the summer months.

Connecticut River Paddlers Trail

Through paddling on the Connecticut River Paddlers Trail was also affected by changes to the existing flow regime. At flows above 2,500 cfs, most water year types saw an increase in recreational boating opportunity when natural flows were higher and a corresponding decrease in through paddling opportunities during the low-flow period most notably at the end of August through September in most water year types.

The substantial loss of through paddling opportunities during low-flow periods is the expected result of the proposed flow regime as typical inflows during these periods are too low to float and through paddling depends on enhanced flow from generation under the current mode of operation. Thus, while there is evidence of a modest increase in flows above 2,500 cfs during higher flow periods, there was a substantially greater decrease during the lowest flow period during 2009 (72%), 2015 (83%), and 2016 (71%). While the proposed flows regime did not substantially affect the annual number of through paddling days, the change will substantially eliminate these opportunities during low flow periods.

Bellows Falls Bypassed Reach

Under both current and proposed flow regimens, whitewater boating opportunities in the Bellows Falls natural river channel bypassed reach have been nearly eliminated by the licensee's flow diversion for power generation resulting in the dewatering of the bypassed reach except when inflows exceed the hydraulic and storage capacities of the project. The whitewater boating study and anecdotal accounts of whitewater boaters at other times demonstrates the value of the whitewater boating resource if sufficient flow and access is provided. The obsolete and dangerous low-head dam in the lower portion of the bypassed reach is an impediment to recreational use of the bypassed reach and must be removed by the licensee.

The newly proposed flow regime will have little impact on the availability of the Bellows Falls bypassed reach for whitewater boating recreation as flows will continue to be diverted, the reach will continue to be dewatered most of the time and no minimum flow provided, and obstacles due to the lack of access and low-head dam will remain.

Conclusion

Data provided by the licensee appears to confirm the rationale for the AIR offered by AW and AMC, such that the proposed flow regime in the AFLA will have noteworthy impacts on whitewater and through paddling opportunities. We anticipate that a National Environmental Policy Act document will accurately capture the impacts that have been identified herein, and will seek to avoid, minimize and mitigate for these impacts.

AW and AMC reiterate the following unfilled requests that were included in our response to the AFLA in Accession No. 20210113-5145 and urge FERC to require the licensee to conduct:

• An analysis of the flow regime proposed in the AFLA in relation to findings and recommendations of the Whitewater Boating Flow Assessment at Sumner Falls and

- Bellows Falls (Study 31), identifying impacts to the flows utilized by and preferred for whitewater recreation.
- Project protection, mitigation, and enhancement (PM&E) elements that would appropriately mitigate project related impacts on river, riparian and upland recreational uses. PM&E elements not included in the AFLA but recommended by the stakeholders on the DLA (Accession No. 20170301-5205) included developing new primitive campsites for through paddlers; developing and enhancing public access points; improving portage trails; developing public education; providing scheduled whitewater flows in the Bellows Falls bypass and below the Wilder Dam; and, to remove the lowhead dam in the Bellows Falls bypassed reach.

Respectfully submitted this 24th day of March, 2021.

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Appendix

2009 Water Year Rank: 15 (1-low, 20-high)

Zuug Wale	i rear Kan	K. 13 (1-10	ow, 20-high)	
2500 Apr May Jun Jul Aug Sep Oct	Historic 269 254 227 269 245 119 236 1619 100%	270 279 263 279 259 33 267 1650 102%	IEO/Flex 270 279 261 279 256 33 267 1645 102%	Boatable Hours >2500 2009 300 250 200 150 100 50 Apr May Jun Jul Aug Sep Oct Historic IEO IEO/Flex
5000 Apr May Jun Jul Aug Sep Oct	Historic 266 247 187 256 223 22 198 1399 100%	IEO 270 230 69 218 126 0 74 987 71%	IEO/Flex 270 230 81 218 141 0 74 1014 72%	Boatable Hours >5000 2009 300 250 200 150 100 50 Apr May Jun Jul Aug Sep Oct Historic IEO IEO/Flex
10000 Apr May Jun Jul Aug Sep Oct	13 7 1 8 5	9 8 6 9 5 7 4 1 0 9 8 2 6 35	8 88 6 6 7 77 8 18 0 0 3 23 7 357	Boatable Hours >10000 (2009) 200 150 100 50 Apr May Jun Jul Aug Sep Oct Historic IEO IEO/Flex

2015 Water Year Rank: 10 (1-low, 20-high)

2500 Apr May Jun Jul Aug Sep Oct	Historic 245 250 257 188 111 133 141 1325 100%	IEO 261 279 270 262 132 22 214 1440 109%	IEO/Flex 261 279 270 262 142 22 214 1450 109%	Boatable Hours >2500 (2015) 300 250 200 150 100 50 Apr May Jun Jul Aug Sep Oct Historic IEO IEO/Flex
5000 Apr May Jun Jul Aug Sep Oct	Historic 244 169 248 162 97 27 111 1058 100%	IEO 224 185 270 116 14 5 44 858 81%	IEO/Flex 224 185 270 116 21 5 44 865 82%	Boatable Hours >5000 (2015) 300 250 200 150 100 50 Apr May Jun Jul Aug Sep Oct Historic IEO IEO/Flex
10000 Apr May Jun Jul Aug Sep Oct	Historic 171 111 166 73 1 19 542 100%	14 0 0 20 360	40 132 14 0 0 20 353	Boatable Hours >10000 (2015) 200 150 100 50 Apr May Jun Jul Aug Sep Oct Historic IEO IEO/Flex

2016 Water Year Rank: 1 (1-low, 20-high)

2500 Apr May Jun Jul Aug Sep Oct	Historic 268 268 114 123 128 51 65 1017 100%	IEO 270 279 95 126 95 15 64 944 93%	IEO/Flex 270 279 95 126 106 15 64 955 94%	300 - 250 - 200 - 150 - 100 - 50 -	Apr May Jun Jul Aug Sep Oct Historic IEO IEO/Flex
5000 Apr May Jun Jul Aug Sep Oct	Historic 261 243 79 104 110 37 57 891 100%	IEO 256 194 22 0 27 0 9 508 57%	IEO/Flex 256 194 28 0 32 0 9 519 58%	300 250 200 150 50 0	Apr May Jun Jul Aug Sep Oct Historic IEO IEO/Flex
10000 Apr May Jun Jul Aug Sep Oct	Historic 102 47 7 4 14 0 2 176 100%	IEO 74 18 0 0 0 0 92 52%	0 0 0	120 100 80 60 40 20	Apr May Jun Jul Aug Sep Oct Historic IEO IEO/Flex

2017 Water Year Rank: 14 (1-low, 20-high)

2500 Apr May Jun Jul Aug Sep Oct	Historic 270 276 216 180 56 57 93 1148 100%	IEO 270 279 261 221 118 67 75 1291 112%	IEO/Flex 270 279 260 221 126 67 75 1298 113%	Boating Hours >2500 (2017) 300 250 200 150 100 50 Apr May Jun Jul Aug Sep Oct Historic IEO IEO/Flex
5000 Apr May Jun Jul Aug Sep Oct	Historic 270 276 211 174 50 41 64 1086 100%	1EO 270 279 183 127 1 3 45 908 84%	IEO/Flex 270 279 185 127 3 3 45 912 84%	Boating Hours >5000 (2017) 300 250 200 150 100 50 0 Apr May Jun Jul Aug Sep Oct Historic IEO IEO/Flex
10000 Apr May Jun Jul Aug Sep Oct	Historic 254 218 54 56 10 48 650 100%	IEO 225 155 13 45 0 30 468 72%	IEO/Flex 225 155 13 45 0 30 468 72%	Boating Hours >10000 (2017) 300 250 200 150 100 50 Apr May Jun Jul Aug Sep Oct Historic IEO IEO/Flex