

LOW IMPACT HYDROPOWER INSTITUTE

CERTIFICATION QUESTIONNAIRE

APRIL, 2014 REVISION

Background Information	
1) Name of the Facility as used in the FERC license/exemption.	ROB) Lower Robertson Hydroelectric Project ASH) Ashuelot Hydroelectric Project
2) Applicant's name, contact information and relationship to the Facility. Please use the Project Contact Form in Appendix D.	Owner & Operator of the projects is: Ashuelot River Hydro, Inc. (hereafter ARH) 42 Hurricane Road Keene, NH 03431 Phone) (603) 352-3444 Email) bking@gaw.com Contact) Robert E. King, P.E., Pres.
3) Location of Facility including (a) the state in which Facility is located; (b) the river on which Facility is located; (c) the river-mile location of the Facility dam; (d) the river's drainage area in square miles at the Facility intake; (e) the location of other dams on the same river upstream and downstream of the Facility; and (f) the exact latitude and longitude of the Facility dam.	a) New Hampshire; b) Ashuelot River; c) ASH at mile 2, ROB at mile 3; d) ASH 421 sq. mi, ROB 419 sq. mi.; e) Fiske Mill in Hinsdale at mile 1, Ashuelot Park Dam in Keene; two Army Corp flood control dams upstream of Keene, smaller dams on tribs; f) ASH: 42d47'09"/72d28'15" ROB: 42d47'09"/72d27'12"
4) Installed capacity.	ROB) 840 KW ASH) 870 KW
5) Average annual generation.	ROB) 3.2 GWH ASH) 3.3 GWH
6) Regulatory status.	FERC Exemptions, granted July 31, 1986: ROB) No. 8235; ASH) No. 7791
7) Reservoir volume and surface area measured at the normal maximum	ROB) 86 acre feet; area 8.6 acres

operating level.	ASH) 13 acre feet; area 1.6 acres
8) Area occupied by non-reservoir facilities (e.g., dam, penstocks, powerhouse).	Both projects less than 1/2 acre
9) Number of acres inundated by the Facility.	ROB) 3 acres; ASH) <1 acre
10) Number of acres contained in a 200-foot zone extending around entire reservoir.	ROB) 200 ft buffer around reservoir approx. 21 ac. ASH) 200 ft buffer around reservoir approx. 4.8 ac.
11) Contacts for Resource Agencies and non-governmental organizations	For a list of agency contacts, see Appendix J - file name xJ Contact List 2014.
12) Description of the Facility, its mode of operation (i.e., peaking/run of river) and photographs, maps and diagrams.	Both projects are small, low head, run-of-river hydro plants built in the mid 1980's at existing paper company dams. ARH purchased the projects in 2007 and has operated them ever since. Site maps were submitted with Certification Application in 2009 and are unchanged.
Questions for “New” Facilities Only: If the Facility you are applying for is “new” (i.e., an existing dam that added or increased power generation capacity after August of 1998) please answer the following questions to determine eligibility for the program.	
13) When was the dam associated with the Facility completed?	
14) When did the added or increased generation first generate electricity? If the added or increased generation is not yet operational, please answer question 18 as well.	
15) Did the added or increased power generation capacity require or include any new dam or other diversion structure?	
16) Did the added or increased capacity include or require a change in water	

<p>flow through the facility that worsened conditions for fish, wildlife, or water quality (for example, did operations change from run-of-river to peaking)?</p>		
<p>17 (a) Was the existing dam recommended for removal or decommissioning by resource agencies, or recommended for removal or decommissioning by a broad representation of interested persons and organizations in the local and/or regional community prior to the added or increased capacity?</p> <p>(b) If you answered “yes” to question 17(a), the Facility is not eligible for certification, unless you can show that the added or increased capacity resulted in specific measures to improve fish, wildlife, or water quality protection at the existing dam. If such measures were a result, please explain.</p>		
<p>18 (a) If the added or increased generation is not yet operational, has the increased or added generation received regulatory authorization (e.g., approval by the Federal Energy Regulatory Commission)? If not, the facility is not eligible for consideration; and</p> <p>(b) Are there any pending appeals or litigation regarding that authorization? If so, the facility is not eligible for consideration.</p>		
<p>A. Flows</p>	<p>PASS</p>	<p>F A I L</p>
<p>1) Is the Facility in Compliance with Resource Agency Recommendations issued after December 31, 1986 regarding flow conditions for fish and wildlife protection, mitigation and enhancement (including in-stream flows, ramping and peaking rate conditions, and seasonal and episodic instream flow variations) for both the reach below the tailrace and all bypassed reaches?</p>	<p>Yes. Article 2 of the Exemptions requires adherence to conditions originally issued by New Hampshire Fish & Game and U.S. Fish and Wildlife that instantaneous flows of 203 cfs (0.5 cfs/sm) be passed at all times. At the behest of</p>	<p>N O = F</p>

	the project owner of the time, FERC and those two agencies approved a stream flow gauging plan by orders dated November 1, 1994 (ASH) and May 16, 1995 (ROB). Under our ownership, the project is operated run-of-river and in conformance with those orders.	a il
2) If there is no flow condition recommended by any Resource Agency for the Facility, or if the recommendation was issued prior to January 1, 1987, is the Facility in Compliance with a flow release schedule, both below the tailrace and in all bypassed reaches, that at a minimum meets Aquatic Base Flow standards or “good” habitat flow standards calculated using the Montana-Tennant method?	N/A	
3) If the Facility is unable to meet the flow standards in A.2., has the Applicant demonstrated, and obtained a letter from the relevant Resource Agency confirming that demonstration, that the flow conditions at the Facility are appropriately protective of fish, wildlife, and water quality?	N/A	N O = F a il
B. Water Quality	PASS	F A I L
1) Is the Facility either: a) In Compliance with all conditions issued pursuant to a Clean Water Act Section 401 water quality certification issued for the Facility after December 31, 1986? Or	The projects were awarded 401 Water Quality Certificate in 1985. However, these documents were vaguely worded, and therefore ARH asked for a letter of compliance from the Water Quality division of the New Hampshire Dept. of	N O =

<p>b) In Compliance with the quantitative water quality standards established by the state that support designated uses pursuant to the federal Clean Water Act in the Facility area and in the downstream reach?</p>	<p>Environmental Services in 2008. In response, DES asked ARH to collect water quality data during the summer of 2009 to demonstrate compliance with state standards. ARH completed these tests which showed the river meets water quality standards in the reach occupied by our plants.</p>	<p>F a i l</p>
<p>2) Is the Facility area or the downstream reach currently identified by the state as not meeting water quality standards (including narrative and numeric criteria and designated uses) pursuant to Section 303(d) of the Clean Water Act?</p>	<p>NO = Pass</p>	
<p>3) If the answer to question B.2 is yes, has there been a determination that the Facility does not cause, or contribute to, the violation?</p>	<p>N/A</p>	<p>N O = F a i l</p>
<p>C. Fish Passage and Protection</p>	<p>PASS</p>	<p>F A I L</p>
<p>1) Are anadromous and/or catadromous fish present in the Facility area or are they know to have been present historically?</p>	<p>YES = Go to C2</p>	

<p>2) Is the Facility in Compliance with Mandatory Fish Passage Prescriptions for upstream and downstream passage of anadromous and catadromous fish issued by Resource Agencies after December 31, 1986?</p>	<p>YES = Go to C6. Yes. Article 2 of the Exemption requires adherence to conditions originally issued by New Hampshire Fish & Game and U.S. Fish and Wildlife that upstream and downstream fish passage be installed when those Agencies deem it necessary. Relevant documents were submitted with Certification Application in 2009 and are unchanged.</p> <p>Downstream: Using a design approved by FERC letter dated January 8, 1999, downstream fish passage was installed at Lower Robertson in the summer of 1999. It has been operating ever since. Using a design approved by FERC letter dated July 20, 2001, downstream fish passage was installed at Ashuelot in late 2001. It has been operating ever since.</p> <p>Upstream: The Ashuelot River has been targeted for anadromous fish restoration. A dam downstream of the two dams operated by ARH, known as the Fiske Mill, has installed upstream passage. ARH agrees to construct fishways at both Ashuelot and Lower Robertson projects within 2 years after 750 American shad are passed at Fiske Mill or within 4 years after 150 shad pass Fiske Mill, whichever comes first. The fishways would be designed based on the plans developed by our predecessors, Algonquin Power, dated March 14, 2006, with modifications described in a letter from the Fish and Wildlife Service to Algonquin Power dated July 12, 2006. If in the future, we and the</p>	<p>N O = F a il</p>
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	regulatory Agencies agree on alternative fishway designs, ARH agrees to construct these alternatives according to the trigger and construction schedule above.	
<p>3) Are there historic records of anadromous and/or catadromous fish movement through the Facility area, but anadromous and/or catadromous fish do not presently move through the Facility area (e.g., because passage is blocked at a downstream dam or the fish no longer have a migratory run)?</p> <p>a) If the fish are extinct or extirpated from the Facility area or downstream reach, has the Applicant demonstrated that the extinction or extirpation was not due in whole or part to the Facility?</p> <p>b) If a Resource Agency Recommended adoption of upstream and/or downstream fish passage measures at a specific future date, or when a triggering event occurs (such as completion of passage through a downstream obstruction or the completion of a specified process), has the Facility owner/operator made a legally enforceable commitment to provide such passage?</p>	<p>YES = Go to C2a</p> <p>N/A = Go to C2b</p> <p>YES = Go to C5 N/A = Go to C3</p>	<p>N O = F a i l N O = F a i l</p>

<p>4) If, since December 31, 1986:</p> <p>a) Resource Agencies have had the opportunity to issue, and considered issuing, a Mandatory Fish Passage Prescription for upstream and/or downstream passage of anadromous or catadromous fish (including delayed installation as described in C.3.a above), and</p> <p>b) The Resource Agencies declined to issue a Mandatory Fish Passage Prescription,</p> <p>c) Was a reason for the Resource Agencies' declining to issue a Mandatory Fish Passage Prescription one of the following: (1) the technological infeasibility of passage, (2) the absence of habitat upstream of the Facility due at least in part to inundation by the Facility impoundment, or (3) the anadromous or catadromous fish are no longer present in the Facility area and/or downstream reach due in whole or part to the presence of the Facility?</p>	<p>NO = Go to C6 N/A = Go to C4</p>	<p>Y E S = F a i l</p>
<p>5) If C4 was not applicable:</p> <p>a) Are upstream and downstream fish passage survival rates for anadromous and catadromous fish at the dam each documented at greater than 95% over 80% of the run using a generally accepted monitoring methodology? Or</p> <p>b) If the Facility is unable to meet the fish passage standards in 5.a, has the Applicant either i) demonstrated, and obtained a letter from the U.S. Fish and Wildlife Service or National Marine Fisheries Service confirming that demonstration, that the upstream and downstream fish passage measures (if any) at the Facility are appropriately protective of the fishery resource, or ii)</p>	<p>YES = Go to C6</p>	<p>N O = F a i l</p>

committed to the provision of fish passage measures in the future and obtained a letter from the U.S. Fish and Wildlife Service or the National Marine Fisheries Service indicating that passage measures are not currently warranted?		
6) Is the Facility in Compliance with Mandatory Fish Passage Prescriptions for upstream and/or downstream passage of Riverine fish?	YES. See answer to C2. There are no Agency requirements specifically for riverine species. The fish passage apparatus referred to in C2 passes does not exclude any species.	N O = F a i l
7) Is the Facility in Compliance with Resource Agency Recommendations for Riverine, anadromous and catadromous fish entrainment protection, such as tailrace barriers?	YES. See answer to C2. Downstream fishbars are installed seasonally as part of the referenced Agency requirements.	N O = F a i l
D. Watershed Protection	PASS	F A I L
1) Is there a buffer zone dedicated for conservation purposes (to protect fish and wildlife habitat, water quality, aesthetics and/or low-impact recreation) extending 200 feet from the average annual high water line for at least 50% of the shoreline, including all of the undeveloped shoreline?	ASH) No. In 2011, ARH acquired 10.6 acres of land around the project impoundment. This will not be developed and will serve as a conservation buffer zone for this project. This area is shown with purple border in Appendix K, file name xK Watershed Protection-Map. The	N O = G

	yellow bordered area (12 acres) was also purchased but it is primarily underwater. ROB) No. There is no formal buffer zone because the project impoundment is surrounded by an old paper mill and several residences.	o t o D 2
2) Has the Facility owner/operator established an approved watershed enhancement fund that: 1) could achieve within the project's watershed the ecological and recreational equivalent of land protection in D.1, and 2) has the agreement of appropriate stakeholders and state and federal resource agencies?	YES, at least in our opinion! ARH has over the years voluntarily made several contributions to a land trust, The Society for the Protection of NH Forests, to purchase and permanently conserve land in the upper Ashuelot watershed. With a donation this August, the total amount is \$25,000. See Appendix K, file name xK Watershed Protection 2014.	N O = G o t o D 3
3) Has the Facility owner/operator established through a settlement agreement with appropriate stakeholders, with state and federal resource agencies agreement, an appropriate shoreland buffer or equivalent watershed land protection plan for conservation purposes (to protect fish and wildlife habitat, water quality, aesthetics and/or low impact recreation)?	See answer for 2) directly above. There is no settlement agreement because there was never any debate with stakeholders. ARH's watershed protection efforts have been entirely voluntary and initiated from within the organization.	N O = G o t o D 4
4) Is the facility in compliance with both state and federal resource agencies recommendations in a license approved shoreland management plan regarding protection, mitigation or enhancement of shorelands surrounding the project?	N/A	N o = F

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E. Threatened and Endangered Species Protection	PASS	F A I L
1) Are threatened or endangered species listed under state or federal Endangered Species Acts present in the Facility area and/or downstream reach?	NO. The U.S. Fish & Wildlife Service indicated by email that there are no target species in the vicinity of these projects.	
2) If a recovery plan has been adopted for the threatened or endangered species pursuant to Section 4(f) of the Endangered Species Act or similar state provision, is the Facility in Compliance with all recommendations in the plan relevant to the Facility?	YES = Go to E3 N/A = Go to E3	N O = F a i l
3) If the Facility has received authorization to incidentally Take a listed species through: (i) Having a relevant agency complete consultation pursuant to ESA Section 7 resulting in a biological opinion, a habitat recovery plan, and/or (if needed) an incidental Take statement; (ii) Obtaining an incidental Take permit pursuant to ESA Section 10; or (iii) For species listed by a state and not by the federal government, obtaining authorization pursuant to similar state procedures; is the Facility in Compliance with conditions pursuant to that authorization?	YES = Go to E4 N/A = Go to E5	N O = F a i l
4) If a biological opinion applicable to the Facility for the threatened or endangered species has been issued, can the Applicant demonstrate that:	YES = Pass, go to F	N O

<p>a) The biological opinion was accompanied by a FERC license or exemption or a habitat conservation plan? Or</p> <p>b) The biological opinion was issued pursuant to or consistent with a recovery plan for the endangered or threatened species? Or</p> <p>c) There is no recovery plan for the threatened or endangered species under active development by the relevant Resource Agency? Or</p> <p>d) The recovery plan under active development will have no material effect on the Facility's operations?</p>		= Fail
<p>5) If E.2 and E.3 are not applicable, has the Applicant demonstrated that the Facility and Facility operations do not negatively affect listed species?</p>	YES = Pass, go to F	NO = Fail
<p>F. Cultural Resource Protection</p>	PASS	FAIL
<p>1) If FERC-regulated, is the Facility in Compliance with all requirements regarding Cultural Resource protection, mitigation or enhancement included in the FERC license or exemption?</p>	Yes. Article 10 of the Exemption required of the original project owner certain conditions for cultural and historic preservation. To the best of our knowledge, these conditions were met. There have been no issues of this kind during our ownership or, to our knowledge, in the decade	NO = Fail

	before our ownership.	a il
2) If not FERC-regulated, does the Facility owner/operator have in place (and is in Compliance with) a plan for the protection, mitigation or enhancement of impacts to Cultural Resources approved by the relevant state or federal agency or Native American Tribe, or a letter from a senior officer of the relevant agency or Tribe that no plan is needed because Cultural Resources are not negatively affected by the Facility?	YES = Pass, go to G	N O = F a il
G. Recreation	PASS	F A I L
1) If FERC-regulated, is the Facility in Compliance with the recreational access, accommodation (including recreational flow releases) and facilities conditions in its FERC license or exemption?	Yes. Article 2 of the Exemption requires adherence to conditions issued by agencies including the requirement to allow basic riverine access. During LIHI certification in 2009, a local paddlers' association asked that ARH install a portage trail at ASH. This was completed in 2010 and photographs submitted to LIHI in March of 2011.	N O = F a il
2) If not FERC-regulated, does the Facility provide recreational access, accommodation (including recreational flow releases) and facilities, as Recommended by Resource Agencies or other agencies responsible for recreation?	N/A	N O = F a il

3) Does the Facility allow access to the reservoir and downstream reaches without fees or charges?	Yes. The project lands around the reservoirs and downstream are neither fenced nor posted, and no fees or charges are applied to visitors. The actual power plants are fenced.	N O = F a i l
H. Facilities Recommended for Removal	PASS	F A I L
1) Is there a Resource Agency Recommendation for removal of the dam associated with the Facility?	NO = Pass, Facility is Low Impact	Y E S = F a i l