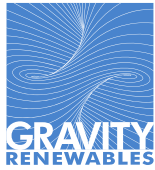


# Stuwe and Davenport Partnership, LLC

A Subsidiary of Gravity Renewables, Inc.



Gravity Renewables, Inc.  
1401 Walnut St. Suite 220  
Boulder, CO 80302  
Phone: 303.440.3378  
Fax: 720.420.9956  
[www.gravityrenewables.com](http://www.gravityrenewables.com)

October 14, 2016

Shannon Ames  
Executive Director  
Low Impact Hydropower Institute  
704 Potters Falls Road  
Wartburg, TN 37887

RE: Complete Certification Application for Dog River (FERC Project P-6757 VT) submitted on 10/14/16

Dear Ms. Ames,

Stuwe and Davenport Partnership Partnership, LLC, a wholly-owned subsidiary of Gravity Renewables, Inc. (Gravity), hereby submits the complete application for the Dog River Hydroelectric Project in Northfield, VT (FERC P-6757) to be certified as a Low Impact Hydropower project. The application package, which we are considering complete as of 10/14/16, includes responses to the LIHI questionnaire, correspondence with the relevant agencies, and additional documentation relevant to the application. As part of this package, the application fee has been mailed to the following address:

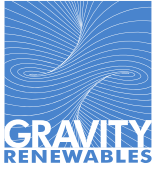
Low Impact Hydropower Institute  
PO Box 194  
Harrington Park, NJ 07640

In December 2015, Gravity submitted a preliminary application for the Intake Review. Based on the Intake Review findings, the application was revised to include additional support documentation that was gathered. Gravity believes that Dog River meets the certification criteria set forth by LIHI and we look forward to continuing our collaboration with LIHI.

Thank you in advance for your review, and please do not hesitate to contact me should you require additional information.

## Stuwe and Davenport Partnership, LLC

A Subsidiary of Gravity Renewables, Inc.



Gravity Renewables, Inc.  
1401 Walnut St. Suite 220  
Boulder, CO 80302  
Phone: 303.440.3378  
Fax: 720.420.9956  
[www.gravityrenewables.com](http://www.gravityrenewables.com)

Sincerely,

A handwritten signature in black ink that reads "Jonathan Miller". The signature is written in a cursive, flowing style.

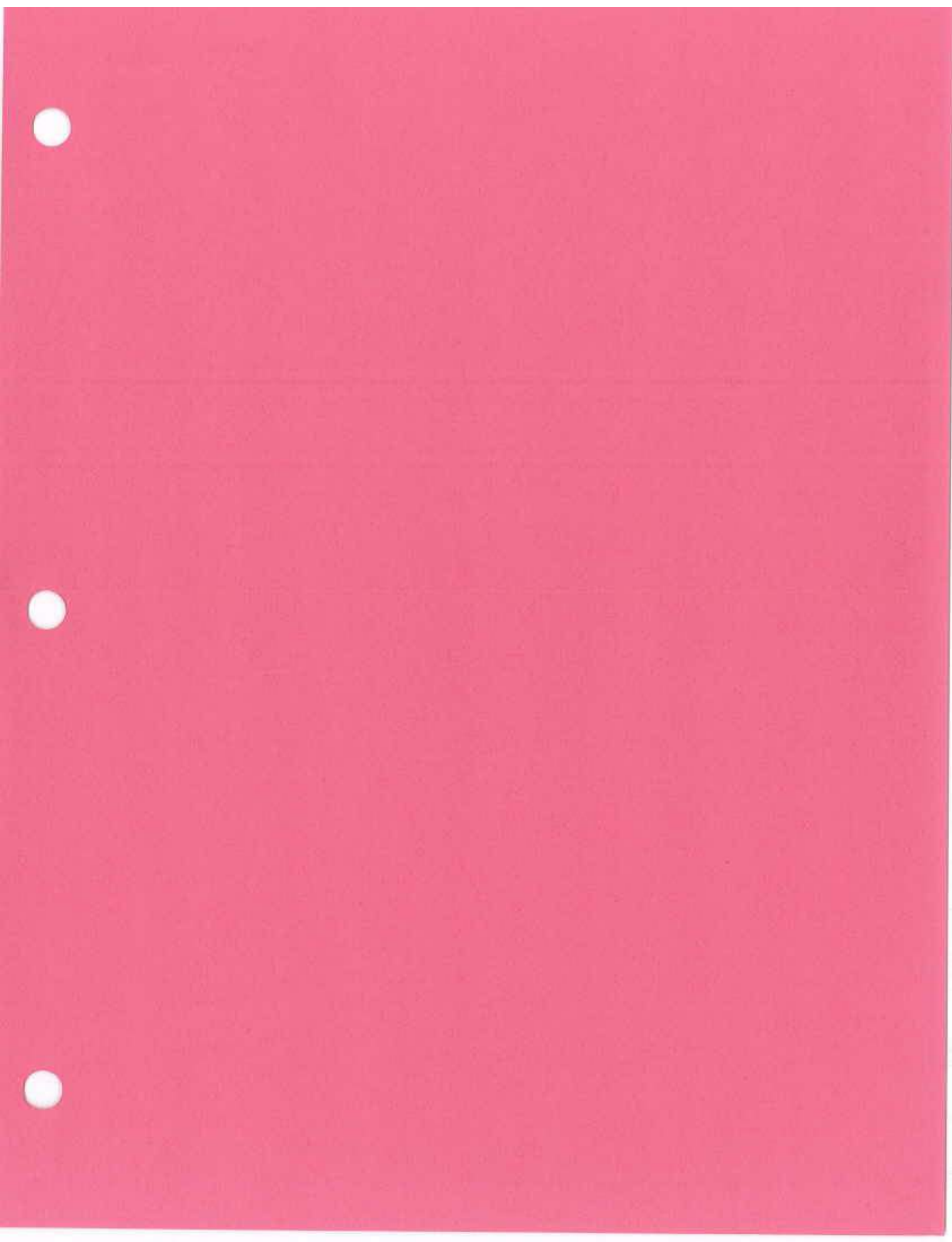
Jonathan Miller  
Director of Financial Analysis and Regulatory Affairs  
Gravity Renewables, Inc.

## LOW IMPACT HYDROPOWER INSTITUTE

### Dog River Hydro LIHI Certification Application: Supplemental Information

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**TAB 1**

**LIHI Certification Questionnaire Response**

## LOW IMPACT HYDROPOWER INSTITUTE

### APPENDIX B – QUESTIONNAIRE

April 2014 REVISION

| <b>Background Information</b>  |   |
|--|---|
| 1) Name of the Facility as used in the FERC license/exemption.   | Dog River Hydroelectric Project   |
| 2) Applicant's complete contact information (please use Appendix D, Project Contact Form)  | See TAB 8: Appendix D – Contact Form  |
| 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. Vermont<br>b. Dog River<br>c. River Miles: 11.8<br>d. River DA = 93 sq. mi. / Project DA = 62 sq. mi.<br>e. Three partially breached dams downstream + at least 2 partially breached dams upstream.<br>f. Latitude: 44.15008900; Longitude: -72.657792<br>See TAB 2: Site Maps and Photographs |
| 4) Installed capacity.   | 222 kw<br>See TAB 3: FERC Order Amending Exemption 1998   |
| 5) Average annual generation.  | 650,000 kwh   |
| 6) Regulatory status.  | Compliant<br>FERC License Exemption (P-6757)<br>See TAB 3: Federal Energy Regulatory Commission   |

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|  | <p>(FERC) Exemption and Amendment</p> <p>VT DEC S. 401 WQC (1983, as amended)</p> <p>VT PSB Certificate of Public Good (Docket No. 4776/1983)</p> <p>See TAB 4: 401 Water Quality Certification (WQC) Documentation</p>  |
| 7) Reservoir volume and surface area measured at the normal maximum operating level. | ~1.5 ac / 8 ac-ft.   |
| 8) Area occupied by non-reservoir facilities (e.g., dam, penstocks, powerhouse).     | ~2 ac.   |
| 9) Number of acres inundated by the Facility.  | ~1.5 ac.   |
| 10) Number of acres contained in a 200-foot zone extending around entire reservoir.  | The reservoir surface area: ~1.5 ac; the area around the reservoir: ~12.1; the area of the reservoir and around the reservoir combined: ~13.6 ac.  |
| 11) Contacts for Resource Agencies and non-governmental organizations                | <ol style="list-style-type: none"> <li>1. Eric Davis, VT DEC<br/>River Ecologist<br/>1 National Life Drive, Main 2<br/>Montpelier, VT 05620<br/>802-490-6180<br/>eric.davis@state.vt.us<br/>Last discussion, on 10/12/16, was regarding Dog River's LIHI application, Gravity Renewables is committed to continue a good working relationship;</li> <li>2. Melissa Grader, US FWS<br/>Fish and Wildlife Biologist</li> </ol> |

|  |  |
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|  | <p>U.S. Fish and Wildlife Service – New England Field Office<br/> 103 East Plumtree Rd.<br/> Sunderland, MA 01375<br/> 413-548-8002 x124<br/> melissa_grader@fws.gov<br/> Last contact, on 5/16/16, was regarding Dog River’s LIHI application<br/> Gravity Renewables is committed to continue communications with contact when applicable;</p> |
| 12) Description of the Facility, its mode of operation (i.e., peaking/run of river) and photographs, maps and diagrams.  | <p>Operated in run of river. The project is required by FERC to provide 5 cfs continuous minimum flow. However, the project provides 20 cfs to the bypass section below the dam through a permanent notch in the flashboards or maintaining 0.2' of flow over the crest of the boards.<br/> See TAB 2: Site Maps and Photographs</p>             |
| <p><b>Questions for “New” Facilities Only:</b><br/> 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.</p> | N/A  |
| 13) When was the dam associated with the Facility completed?   | N/A  |
| 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.   | N/A  |
| 15) Did the added or increased power generation capacity require or include any new dam or other diversion structure?  | N/A  |
| 16) Did the added or increased capacity include or require a change in water   | N/A  |



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| 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>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> | N/A  |      |
| <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>  | N/A  |      |
| <b>A. Flows</b>   | PASS   | FAIL |
| 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?  | N/A = Go to A2<br>WQC was issued prior to 12/31/86 |      |
| 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  | NO = Go to A3                                      |      |

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| 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?   |   |             |
| 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? | YES = Pass, go to B<br>As stated in the letter from the VT Department of Environmental Conservation (DEC), the project is required to provide 5 cfs continuous minimum flow. However, the project voluntarily provides 20 cfs to the bypass section below the dam through a permanent notch in the flashboards or maintaining 0.2' of flow over the crest of the boards. This flow schedule is adequately protective for fish, wildlife, and water quality. We look forward to continuing our work monitoring flows with the VT DEC.<br>See TAB 7: 2016 Dog River LIHI Comments from VT DEC |             |
|   |   |             |
| <b>B. Water Quality</b>   | <b>PASS</b>   | <b>FAIL</b> |
| 1) Is the Facility either:<br><br>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<br><br>b) In Compliance with the quantitative water quality standards established           | a) N/A. WQC Was issued prior to 12/31/86<br>b) YES = Go to B2<br>As stated in the letter from the VT DEC, Dog River is in compliance with water quality   |             |

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| by the state that support designated uses pursuant to the federal Clean Water Act in the Facility area and in the downstream reach?  | standards established by the state.<br>See TAB 7: 2016 Dog River LIHI Comments from VT DEC   |             |
| 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? | NO = Pass<br>The areas surrounding the facility as well as downstream of Dog River facility are not on the list of impaired waters.<br>See TAB 2: Site Maps and Photographs: Dog River Watershed Map<br>See TAB 5: Impaired Surface Waters 303(d) list 2014  |             |
| 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?   | N/A (See answer to B.2)  |             |
|  |  |             |
| <b>C. Fish Passage and Protection</b>  | <b>PASS</b>  | <b>FAIL</b> |
| 1) Are anadromous and/or catadromous fish present in the Facility area or are they known to have been present historically?  | NO = Go to C6<br>As stated in the letter from the VT DEC, Dog River does not have a hydrologic connection to the Atlantic Ocean, therefore, there are no anadromous or catadromous fish present at the Facility, nor have they been present historically.<br>See TAB 2: Site Maps and Photographs<br>See TAB 7: 2016 Dog River LIHI Comments from VT DEC |             |

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| <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>N/A (See answer to C.1)</p> |  |
| <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>N/A (See answer to C.1)</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</p>  | <p>N/A (See answer to C.1)</p> |  |

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| <p>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>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?<br/>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) 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?</p> | <p>N/A (See answer to C.1)</p>  |  |
| <p>6) Is the Facility in Compliance with Mandatory Fish Passage Prescriptions for upstream and/or downstream passage of Riverine fish?</p>  | <p>N/A = Go to C7<br/>As stated in the letter from the VT DEC, "the Department has no current prescriptions or plans to require fish passage in the immediate future." This is due to other dams and barriers located near the facility.<br/>See TAB 7: 2016 Dog River LIHI</p> |  |

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|   | Comments from VT DEC   |  |
| 7) Is the Facility in Compliance with Resource Agency Recommendations for Riverine, anadromous and catadromous fish entrainment protection, such as tailrace barriers?  | N/A = Pass, go to D<br>As stated in the letter from VT DEC, the VT Department of Fish and Wildlife approved Dog River's trashrack design, and "the Department does not have current plans to require additional entrainment protection for riverine fish."<br>See TAB 7: 2016 Dog River LIHI<br>Comments from VT DEC |  |
| <b>D. Watershed Protection</b>  | PASS   | FAIL   |
| 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?          |  | NO = Go to D2<br>No buffer zones exist. See TAB 2: Site Maps and Photographs |
| 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? |  | NO = Go to D3  |
| 3) Has the Facility owner/operator established through a settlement agreement with appropriate stakeholders, with state and federal resource  |  | NO = Go to D4  |

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| 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)?            |  |      |
| 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 = Pass, go to E<br>There is no shoreline management plan for the project.<br>See TAB 2: Site Maps and Photographs  |      |
| <b>E. Threatened and Endangered Species Protection</b>  | PASS   | FAIL |
| 1) Are threatened or endangered species listed under state or federal Endangered Species Acts present in the Facility area and/or downstream reach?   | NO = Pass, go to F<br>There are no endangered or threatened species habitats in the area around Dog River. The Northern Long-eared bat is proposed to be added to the Federal Endangered Sp. list; however, there are no bat habitats near Dog River, so the project has no affect (see attached letter of no effect from FWS). In addition, there are no State listed species of critical habitats in the vicinity of the project (see BioFinder Endangered Species Map; the blue dot in the map shows the location of the Dog River facility).<br>See TAB 5: Supporting Info for Threatened and Endangered Species |      |
| 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 | N/A (See answer to E.1)  |      |

|   |                         |  |
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| relevant to the Facility?   |                         |  |
| 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?   | N/A (See answer to E.1) |  |
| <p>4) If a biological opinion applicable to the Facility for the threatened or endangered species has been issued, can the Applicant demonstrate that:</p> <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> | N/A (See answer to E.1) |  |
| 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?   | N/A (See answer to E.1) |  |
|   |                         |  |



| F. Cultural Resource Protection  | PASS  | FAIL |
|--|---|------|
| 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?   | YES = Pass, go to G<br>The project was not found to affect any properties of historic, architectural or archeological significance during its CPG review process. Further, the FERC exemption does not require Dog River Hydropower project to report on any cultural resource protection plans.<br>See TAB 3: FERC Order Granting Exemption from Licensing 1984<br>See TAB 4: FERC Exemption from Licensing Application 1984 – Including the 401 WQC and the CPG |      |
| 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? | N/A (See answer to F.1)   |      |
|  |   |      |
| G. Recreation  | PASS  | FAIL |
| 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?   | N/A = Go to G2<br>There are no recreational access conditions in License Exemption.<br>See TAB 3: FERC Order Granting Exemption from Licensing 1984   |      |
| 2) If not FERC-regulated, does the Facility provide recreational access,   | YES = Go to G3  |      |

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| <p>accommodation (including recreational flow releases) and facilities, as Recommended by Resource Agencies or other agencies responsible for recreation?</p> | <p>Access to Dog River is limited by natural obstructions and for safety reasons. The 1999 Dam Safety Inspection Report (DSIR) states, “In the interest of public safety, there is railing and fencing around the project waters to keep the public off project limits. No recreational facilities are provided at the site because of a small pond and very limited access posed by the adjacent Nantana Mill/College Town Maza Complex [...] No boating activities were noted in this area and no boater barriers are required. Warning signs as shown in the public safety plan were installed.”<br/>See TAB 6: Dam Safety Inspection Report 1999</p> |  |
| <p>3) Does the Facility allow access to the reservoir and downstream reaches without fees or charges?</p>   | <p>YES = Pass, go to H<br/>We allow free access to the impoundment and downstream areas, although it is limited by natural obstructions and challenges, so rarely utilized by the public. Access is restricted to the area immediately around the project intake and spillway for safety reasons. The 1999 DSIR states, “In the interest of public safety, there is railing and fencing around the project waters to keep the public off</p>   |  |

|   |   |      |
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|   | <p>project limits. No recreational facilities are provided at the site because of a small pond and very limited access posed by the adjacent Nantana Mill/College Town Maza Complex [...]</p> <p>No boating activities were noted in this area and no boater barriers are required. Warning signs as shown in the public safety plan were installed.”</p> <p>See TAB 6: Dam Safety Inspection Report 1999</p> |      |
| <b>H. Facilities Recommended for Removal</b>  | PASS  | FAIL |
| 1) Is there a Resource Agency Recommendation for removal of the dam associated with the Facility? | <p>NO = Pass, Facility is Low Impact</p> <p>Based on our review of publically available information and informal discussions with regulators this facility has not been recommended for removal.</p>  |      |