

## **TAB 7**

### **Documentation of Compliance**

- 1. 2016 Dog River LIHI Comments from Vermont Department of Environmental Conservation (VT DEC)**
- 2. Correspondence with U.S. Fish and Wildlife Service (FWS) (3 letters)**

**Vermont Department of Environmental Conservation**

Watershed Management Division

1 National Life Drive, Main 2

Montpelier, VT 05620-3522

watershedmanagement.vermont.gov

[phone] 802-490-6180

*Agency of Natural Resources*

DISTRIBUTED ELECTRONICALLY

October 12, 2016

Mark Boumansour  
Gravity Renewables Inc.  
1401 Walnut Street, Suite 220  
Boulder, Colorado 80302

RE: Dog River Hydroelectric Project (FERC No. 7888)  
Comments on Application Submittal to Low Impact Hydropower Institute

Dear Mr. Boumansour:

Thank you for this opportunity to comment on Gravity Renewables Inc.'s (Gravity) application to the Low Impact Hydropower Institute (LIHI) for certification of the Dog River Hydroelectric Project as a low impact hydroelectric project.

**Background**

The Dog River Hydroelectric Project original received a water quality certification (certification) from the Department of Water Resources and Environmental Engineering (now the Department of Environmental Conservation – herein the Department) in 1983. In 1985, the certification was amended to reflect the transference of development rights to the Nantana Mill Dam Partnership and to modify the turbine and generator units proposed for the project. By condition of the certification, the project is required to operate in instantaneous run-of-river mode, maintain a minimum flow of 5 cfs (0.08 csm) or instantaneous inflow in the bypass reach, and maintain a minimum instantaneous flow of 17 cfs (0.28 csm) or instantaneous inflow below the tailrace when hydrologic modification is required for maintenance activities.

Since acquiring the project in 2015, Gravity has proactively engaged the Department in discussions regarding planned improvements at the project to improve efficiency, ensure compliance with the existing water quality certification, and support an application to LIHI for low impact certification. Feedback on specific criteria are included, herein.

**Flows**

The Dog River is an important coldwater fishery resource that supports wild trout including brook, brown, and rainbow trout populations. As conditioned by the water quality certification, instantaneous run-of-river operations are necessary to maintain aquatic habitat below the tailrace. While the certification requires a minimum flow of 5 cfs in the approximately 130-foot reach bypassed by the tailrace, this value is below the current 7Q10 value and is likely not adequate to maintain dissolved oxygen, nor aquatic habitat at the base of the dam. Gravity voluntarily maintains a bypass flow of 20 cfs through the use of an adjustable gate located by the intake, permanent flashboard notching, spillage, and leakage. The additional flow provided to the bypass and the diversity of means in which it is provided are more likely to maintain adequate dissolved oxygen and aquatic habitat at the base of the dam.

Adherence to strict run-of-river operations has been a long standing Department concern at the project. To ensure compliance and optimize performance, Gravity recently rebuilt the turbines and upgraded the controls and automation. These investments will allow the project to operate in full compliance with the flow schedule. The Department recognizes that refining to the new control system to reflect the work done at the site, as well as understanding how the watershed responds will require adjustments to ensure compliance. The Department is confident in Gravity's commitment to ensure compliance and the Department will continue to work cooperatively with Gravity to ensure instantaneous run-of-river operations are maintained. As such, the Agency plans to continue to monitor operational refinements and will plan to provide additional comments on compliance when the application is noticed by LIHI.

### **Water Quality**

The Department is not currently aware of information to suggest that the waters in the area of the Dog River project or downstream reaches are not in compliance with the state's quantitative water quality standards. The Dog River in the vicinity of the project and downstream to the confluence with the Winooski River are not listed on Vermont's list of impaired streams and rivers pursuant to section 303(d) of the Clean Water Act, nor on the state's listing of priority streams and river outside the scope of 303(d).

### **Fish Passage**

As discussed, the Dog River is an important wild trout fishery supporting brook, brown and rainbow trout populations. The Dog River hydroelectric project is located 1.8 miles above an impassable falls, Northfield Falls, and 0.4 miles below a remnant dam, which acts as a barrier. While the Department has no current prescriptions or plans to require fish passage in the immediate future, the Department could revisit the need for passage at the project if fisheries management objectives were to change. For example, if removal of the remnant dam were to occur, fish passage at the facility would open up the Dog River from the falls to its headwaters in Roxbury and to several tributaries, including Cox Brook where the Agency partnered in a dam removal a few years ago. Given the quality of the fishery resource, the certification required the Vermont Department of Fish and Wildlife to approve the thrashrack design at the time of construction. The Department does not have current plans to require additional entrainment protection for riverine fish.

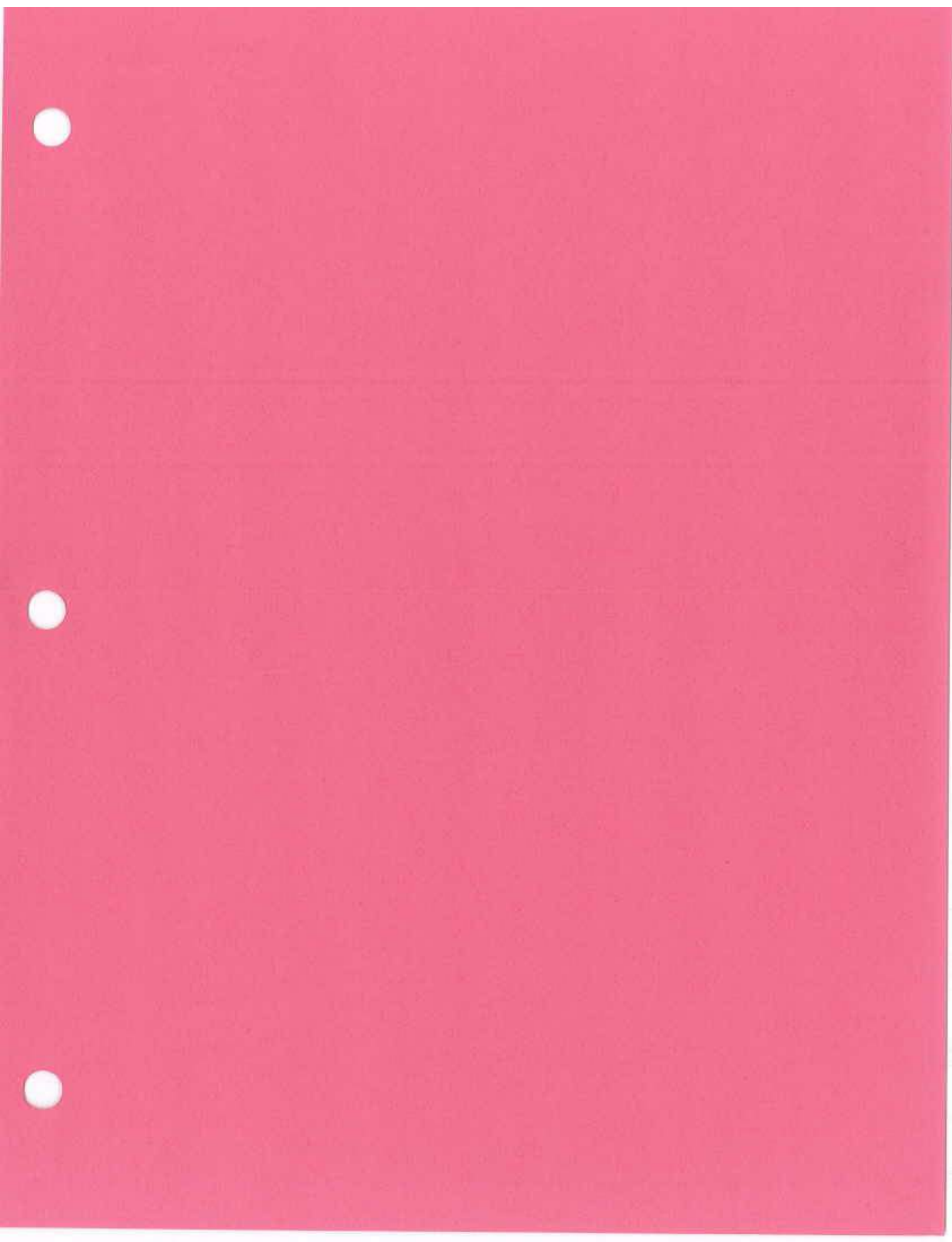
Given the lack of a connection of the basin to the sea, diadromous species are not present in the project area, nor have they been present historically. Land-locked Atlantic salmon, a potadromous species, are present in the Winooski River basin, though access to the Dog River is blocked by downstream dams as well as the natural barrier at Northfield Falls.

Sincerely yours,



Eric Davis  
River Ecologist

c: Jeff Crocker, VTDEC  
Rich Kirn, VTDFW  
Jon Petrillo, Gravity Renewables  
Jonathan Miller, Gravity Renewables





Camila Stark &lt;camila@gravityrenewables.com&gt;

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**Verification from the FWS for LIHI certification of the Dog River Hydroelectric Project (P-6757)**

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**Jonathan Miller** <jonathan@gravityrenewables.com>

Fri, Dec 18, 2015 at 12:48 PM

To: melissa\_grader@fws.gov

Cc: Jon Petrillo &lt;jon@gravityrenewables.com&gt;, Camila Stark &lt;camila@gravityrenewables.com&gt;

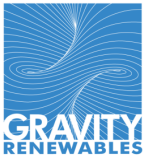
Hi Melissa,

Gravity Renewables is working on submitting a LIHI application for our Dog River project in Northfield, VT (FERC P-6757). In order to apply for the LIHI certification, we need a letter regarding our compliance with our exemption.

I have attached an outline for Dog River's LIHI application for your reference. If you need additional information or have any questions, please let Jon Petrillo, Camila Stark (cc'd) or me know. I really appreciate your time and help.

Best regards,

Jonathan Miller

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

1401 Walnut Street, Suite 220, Boulder, Colorado 80302

Office: [303.615.3102](tel:303.615.3102) | Mobile: [303.827.1108](tel:303.827.1108) | Fax: [720.420.9956](tel:720.420.9956)[www.gravityrenewables.com](http://www.gravityrenewables.com)**Dog River LIHI Application Outline 121815.xlsx**

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Camila Stark &lt;camila@gravityrenewables.com&gt;

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**Followup on Low Impact Hydro application for Dig River**

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**Jonathan Miller** <jonathan@gravityrenewables.com>

Tue, Apr 12, 2016 at 11:38 AM

To: melissa\_grader@fws.gov

Cc: Jon Petrillo &lt;jon@gravityrenewables.com&gt;, Camila Stark &lt;camila@gravityrenewables.com&gt;

Hi Melissa,

I would like to follow up on a previous email regarding our LIHI application for our Dog River project in Northfield, VT (FERC P-6757).

LIHI has completed their preliminary review of our application and had a few follow-up requests. In order to apply for the LIHI certification, they have asked us to obtain a letter or response from FWS confirming the following statements:

- The Dog River project was not responsible in whole or part for the extinction or extirpation of diadromous fish in Dog River or the downstream reach.
- FWS has no current plans or prescriptions at Dog River project to require diadromous and riverine fish passages in the near future.
- The reasons for not prescribing a fish passage at this point in time is not because Dog River project had an adverse affect on diadromous fish.
- FWS has no current plans to require riverine or diadromous fish entrainment protection at the Dig River project.

We have also asked Eric Davis (VT ANR) to provide feedback on these same matters. LIHI has verified that responding to the above topics with "Agree" or "Disagree" is sufficient as a response. If you find that method easiest, please feel free to respond in that manner.

Please let Jon Petrillo, Camila Stark (cc'd), or me know, if you need additional information. Thank you for your attention to this matter.

Best regards,

Jonathan Miller

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

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Camila Stark &lt;camila@gravityrenewables.com&gt;

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**Followup on Low Impact Hydro application for Dig River**

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**Jonathan Miller** <jonathan@gravityrenewables.com>

Mon, May 16, 2016 at 1:34 PM

To: melissa\_grader@fws.gov

Cc: Jon Petrillo &lt;jon@gravityrenewables.com&gt;, Camila Stark &lt;camila@gravityrenewables.com&gt;

Hi Melissa,

I hope this email finds you well. Just wanted to followup and see if you might be able to provide us a schedule to respond to the following with an "agree" or "disagree":

- The Dog River project was not responsible in whole or part for the extinction or extirpation of diadromous fish in Dog River or the downstream reach.
- FWS has no current plans or prescriptions at Dog River project to require diadromous and riverine fish passages in the near future.
- The reasons for not prescribing a fish passage at this point in time is not because Dog River project had an adverse affect on diadromous fish.
- FWS has no current plans to require riverine or diadromous fish entrainment protection at the Dig River project.

Your response will help us complete our application.

We would also like to inform you that we have also just completed an automation package at the plant which came online 5/10.

We look forward to an update from you and are happy to reply to any questions. Best regards,

Jonathan Miller

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

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