FISHER FORESTRY, LLC
72 Nashua Rd.
Windham, NH 03087

July 14, 2018

Shannon Ames, Executive Director
Low Impact Hydropower Institute
329 Massachusetts Ave, Suite 2
Lexington, MA 02420

Re: Flooding and Ecological Damage of Beaver Lake

Dear Ms. Ames,

I am writing concerning the Low Impact Hydropower Institute's recertification of Brookfield Renewable Power, Inc. Beaver River Project, FERC No. 2645. Beaver Lake is within the Beaver River Project. It is a natural lake that is not approved as a reservoir for hydro-power operations. Yet, Beaver Lake has been plagued by excessive flooding due to mismanagement of water levels by Brookfield Renewable Power, Inc. and the Hudson River-Black River Regulating District, which operates water releases from Stillwater Reservoir upriver from Beaver Lake. This has been a problem going back at least thirty years and was discussed in some detail by residents, environmental organizations, and the NY State Department of Conservation during FERC re-licensing of the Beaver River Project in 1995. The license was not renewed until these issues were addressed by Niagara Mohawk, the licensee at the time. A settlement agreement was eventually reached by all parties. However, the flooding has continued unabated causing extensive shoreline erosion, impact to wildlife nesting, and damage to personal property. In addition, silt and sludge has been deposited throughout the lake.

Brookfield Power holds water in Beaver Lake due to their inability to manage the outflow from the Eagle Development. By their own admission, they have never removed the flashboards and will not open the sluiceway or spillway to release excess water. When asked why they don't remove the flashboards, they responded, "...it's not in our license…". Please note that LIHI Certification Handbook Questionnaire for the Beaver River Project clearly states for the Eagle Development:

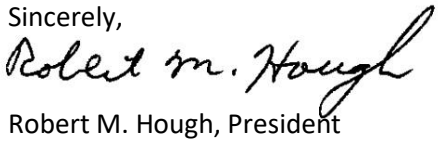
- Flashboard installation: To be installed by May 1 of each year (on/or after July 1) and removed in the fall, as determined by Erie.

On many occasions Loon nests have been flooded and eggs lost due to the high water. Water is typically flowing over the flashboards and on many occasions has been as high as two feet over the flashboards. The maximum headwater elevation allowed is 1426.2 feet with flashboards and 1425.2 without flashboards. Beaver Lake residents regularly see levels in excess of this far up-river from the allowed containment area into the lake proper itself.

The flooding is compounded by the Hudson River-Black River Regulating District releasing large flows of water during Stillwater Reservoir drawdowns. The drawdowns go as high as 950CFS, which far exceeds the Eagle Developments ability to release water. It all simply floods Beaver Lake. Complaints to the regulating district go unheeded. There are occasions where Beaver Lake has been flooded with as much as three feet of water, while the next reservoir down river is merely an inch or two high. The flooding is having a serious impact on the Beaver Lake environment, ecology, and wildlife habitats. In the winter after the ice forms, the flooding causes extensive damage to wetlands. The ice takes hold of bogs, the subsequent high water then uproots them, and they float away.

Both Brookfield Power and the Hudson River-Black River Regulating District show little regard for the major destructive impact their operations are having on Beaver Lake. I request that the LIHI deny recertification of the Beaver River Project until Brookfield Power develops a plan that eliminates their operation's impact to Beaver Lake. That plan must include input from, and be satisfactory to, Beaver Lake property owners.

Sincerely,



Robert M. Hough, President
rmhough44@yahoo.com
603-490-8215

Gmail by Google

Certification Comments <comments@lowimpacthydro.org>

---

barbara schenck <barbaraschenck4@gmail.com> Mon, Sep 10, 2018 at 11:22 AM
To: comments@lowimpacthydro.org, Schenck Barbara <barbaraschenck4@gmail.com>, Robert Hough <Rmhough44@yahoo.com>

I have become aware of a request for recertification of the Beaver River Hydroelectric Project. Until now, it had not been apparent that there was any oversight of the erratic changes in water level on Beaver Lake
Some days the water is so low that tree roots are about 18 inches above the water level, other daysthe trees can be submerged to about that depth. Eggs in loon nests have been disturbed before having time to hatch. I can only guess at the impact on fish and other wild and plant life.
Docks and boathouses have also suffered damage from the changing water level.
my questions about certification would be:
1. Who would oversee the project.
2. How do the homeowners report incidents of rapid water change when it is happening? We need a name and 24 hour phone number.
3. What penalty will be inflicted on the power company when the restrictions are not followed.

September 21, 2018

Shannon Ames, Executive Director
Low Impact Hydropower Institute
329 Massachusetts Ave, Suite 2
Lexington, MA 02420

RE: Flooding and Ecological Damage of Beaver Lake, Lewis County, NY

Dear Ms. Ames –

As a property owner on Beaver Lake in Lewis County, NY, I am writing to you concerning the Low Impact Hydropower Institute's recertification of Brookfield Renewable Power, Inc. Beaver River Project, FERC No. 2645. Beaver Lake is within the Beaver River Project and is a natural lake that is not considered or approved as a reservoir for hydro-power operations. However, Beaver Lake has been subjected to dramatic swings in water levels due to mismanagement by Brookfield Renewable Power, Inc. and the Hudson River-Black River Regulating District. As a result, we have seen extensive shoreline erosion, negative impacts on wildlife nesting, and damage to personal property.

Despite numerous complaints from property owners, Beaver Lake has continued to suffer the impacts of both high and low water events. The flooding events are by far the most severe – often as much as three feet – causing damage to boats, docks, shorelines, loon nesting sites, and bog ecosystems associated with the lake. Both Brookfield Power and the Hudson River-Black River Regulating District show little regard for the destructive impact of their mismanagement of the Beaver River flow.

As a concerned property owner, I request, on behalf of the Seibert family, that the Low Impact Hydropower Institute deny recertification of the Beaver River Project, FERC No. 2645 until Brookfield Power develops a management plan that minimizes their impact on Beaver Lake.

Sincerely,

Christa S. Dillabaugh

Christa Seibert Dillabaugh
csdillabaugh@gmail.com
716-512-9669

On behalf of the Seibert Family
8912 Dart Trail
Lowville, NY 13367

September 24, 2018

Shannon Ames, Executive Director
Low Impact Hydropower Institute
329 Massachusetts Avenue, Suite 2
Lexington, Ma 02420

Re: Flooding and Ecological Damage of Beaver Lake

Dear Ms. Ames,

I am a resident at 8912 Dart Trail on Beaver Lake. Our family has great concern about the excessive flooding due to the mismanagement of water levels on Beaver Lake by Brookfield Renewable Power and the Hudson River - Black River Regulating District that operates water releases from Stillwater Reservoir upriver from Beaver Lake.

In the eighteen years since we built our camp and boat house we have experienced extreme variance of lake water levels. For example . . . in the spring of 2011 the lake level came ½ way up the door of the boat house (photo enclosed) and flooded the area 20 ft. behind it to a storage shed. We had to replace the lawn mower stored there. The boats were floating over the boat slips and had to be tied in place until the water receded.

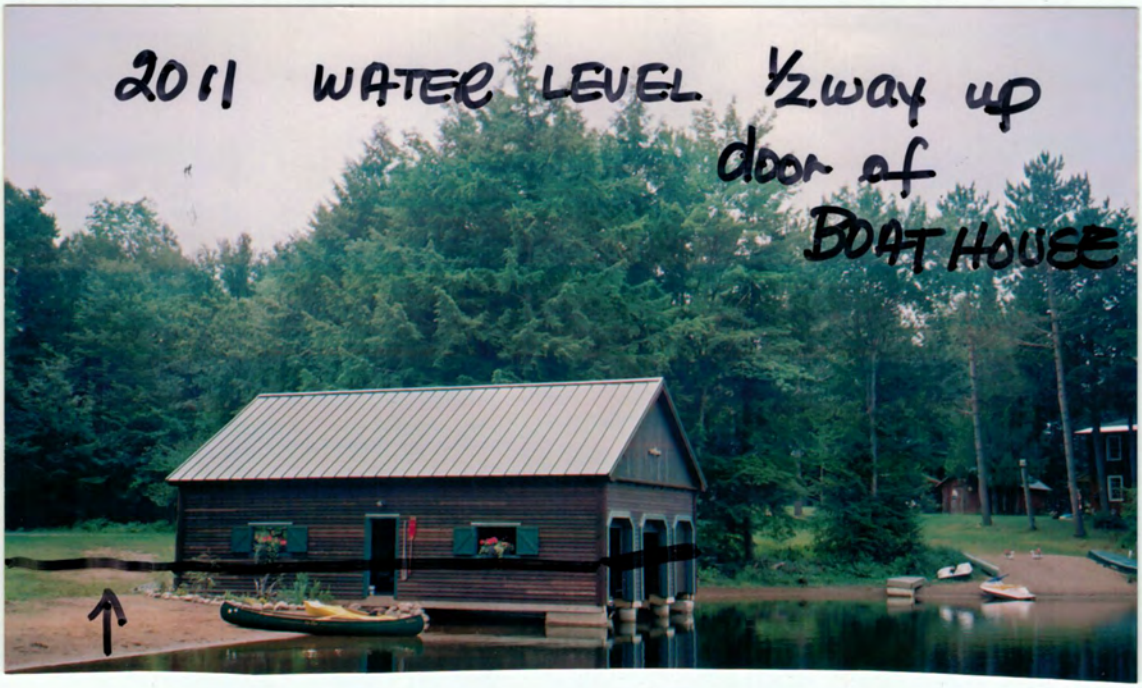
Of course, we are also concerned about the serious impact on the lake environment ... the eroding shore line washing away root systems of white pine, balsam, hemlock .. the destruction of loon nests and other wildlife habitats.

Please deny the recertification of the Beaver

River Project until Brookfield develops and implements a plan to eliminate their negative impact on our beloved Beaver Lake!

Sincerely

Carolyn S. Seibert
8912 Dart Trail
Lowville, New York
13367
315.376.6957
carolynseibert@frontier.com


2011 WATER LEVEL ½ way up
door of
BOAT HOUSE

Henry O and Anna Y Schaab
8920 McMahon Road Lowville, N Y 13367
3710 Gulf of Mexico Drive G2, Longboat Key Fl 34228
315-376-3091; 315-783-0523 (c)

September 25, 2018

Shannon Ames, Executive Director
Low Impact Hydropower Institute
329 Massachusetts Ave, Suite 2
Lexington, MA 02420

Re: Project LIHI #7
Beaver RiverProject

Dear Ms. Ames:

Regarding the above project and the impact on Beaver Lake, we are writing to express our concern, and request that the LIHI deny recertification of the project until Brookfield Power develops a plan that eliminates their operation's impact to Beaver Lake. This project must include input from, and be satisfactory to Beaver Lake property owners.

Several years ago I represented residents of Beaver Lake on a commission that had jurisdiction over the power company responsible for regulating water levels on the Beaver River which flows thru Beaver Lake. Responsible levels at all dams was limited, and monitored, including a monitor on my boathouse. This commission is no longer in effect, and since that time, the levels have been disregarded, by those responsible.

I and my wife Anna, support the efforts of Robert Hough and other residents, of Beaver Lake requesting corrective action be taken to control and maintain our lake levels.

Continued disregard for regulation will destroy this natural lake in the Adirondacks, our lake shoreline, our boathouses, and our wildlife.

Thank you for your attention to our requests.

Sincerely,

Henry O. Schaab
Anna Y Schaab

Edward D. Earl
27 Utica Street
Clinton, NY 13323

September 27, 2018

Low Impact Hydropower Institute
329 Massachusetts Avenue, Suite 2
Lexington, MA 02420

Via email and USPS
Priority Mail

Re: Beaver River Project Comments

This letter comments on the Low Impact Hydropower Institute's (LIHI) Recertification review of Erie Boulevard's Hydropower (Erie) Beaver River Project for the five-year period beginning July 16, 2018. It questions Erie's compliance with the LIHI 's Criterion "A" governing flow releases and water level control downstream from the Moshier development.

LIHI's Criterion "A", "Ecological Flow Regimes," requires the applicant (Erie) to apply an ecosystem approach to achieve appropriate flow management that supports fish and wildlife resources by considering base flows, seasonal variability, high flow pulses, short term rates of storage and year to year variability. Applicants must demonstrate compliance with at least one of LIHI's standards described in A-1 through A-4 of LIHI's handbook.

In its application Erie states it is in compliance with standard A-1 concerning downstream releases from the Moshier development in Zone 3, which extends from the Moshier Powerhouse downstream approximately 0.4 miles to Beaver Lake.

Standard A-1 is defined in LIHI's Handbook as follows:

"Standard A-1 Not Applicable/DeMinimis Effect. The facility operates in a true run of river operational mode (emphasis added) and there are no bypassed reaches or water diversions associated with the facility or the facility is located within an existing water conduit that does not discharge into natural waterways."

Erie's justification for applying Standard A-1 to Zone 3 of the Moshier development states:

> "Zone 3 of the Beaver River Project is the tailrace area downstream of the Moshier powerhouse and does not include a bypassed reach. The Beaver River Project is in compliance with resource agency conditions issued regarding flow conditions. The FERC license, 1995 Settlement Offer, and Section 401 WQC include the requirements for flow releases and water level control recommended by the NYSDEC and USFWS.
>
> All of the license and settlement requirements pertaining to flow conditions and impoundment levels have been implemented at the Beaver River Project.
>
> The 1996 FERC license (Article 409), 1995 Settlement Offer, and 401 WQC require Erie to provide a base flow of 250 cfs through the existing unit and minimum flow structure at the High Falls development. A base flow was not recommended at the Moshier development.
>
> Erie remains in compliance with the established flow conditions and impoundment levels and maintains records of these conditions at the Project. In the event of a deviation from established minimum flows or impoundment levels, Erie files documentation with FERC detailing the reasons for the deviation."

This justification for applying Standard A-1 to Zone 3 is misleading. By selecting Standard A-1 Erie implies the Moshier development is a " true run of river" operation. In fact, Moshier is a peaking operation and the relevant question regarding the waters below the Moshier powerhouse is whether the downstream flow regimes meet the ecological goals of Criterion A.

Erie's releases from the Moshier powerhouse and their relevance to Erie's re-certification application are discussed in the following sections of this letter.

1. Erie does not maintain Beaver River flows in Zone 3 in a "true run of river operational mode."

2. Beaver Lake should be classified as a "designated zone of effect."

3. Within the Beaver Lake zone, the correct LIHI standard for evaluating the impacts of Erie's peaking operation at Moshier is A-4 "Site specific studies."

4. These issues were not made known to LIHI at that the time of LIHI's certification of the Beaver River Project in 2013.

1. Beaver River Flows in Zone 3

The Moshier development operates in a peaking mode. The term "peaking" generally refers to the mode of operation of a hydro facility where water is released in accordance with electricity demand.

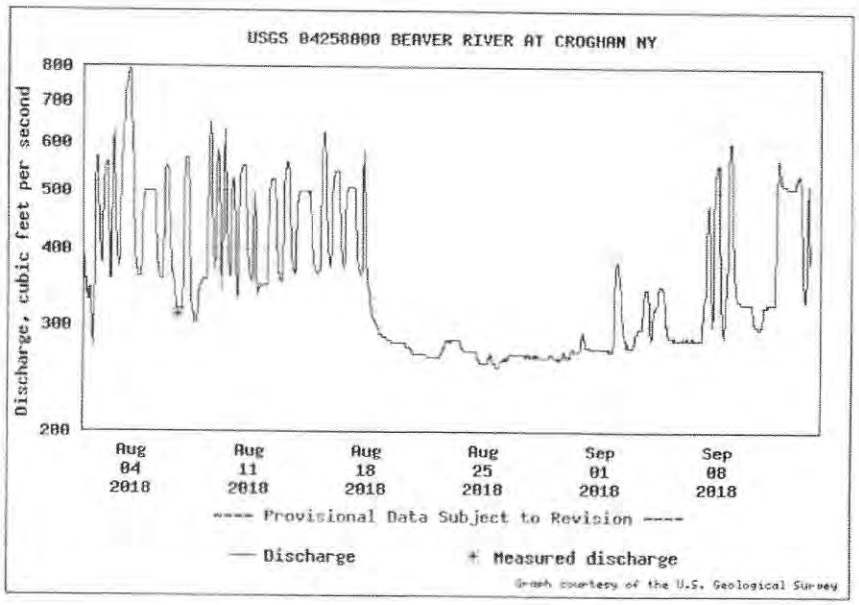
The FERC license P-2645 granted to Niagara Mohawk Power Corporation (NMPC) (and later assigned to Erie and which Erie now holds) states that "NMPC operates the eight developments as store and release facilities that operate in a peaking mode" and that NMPC "discharges water in a concentrated time frame associated with peak electric demand periods." This section of the license further states, "discharges are curtailed during off peak hours." (Project Operation, Page 16, Paragraph 2 of the "Environmental Assessment for Hydropower License")

In the section discussing "River Flow", the Environmental Assessment states on page 32:

> The developments of the Beaver River Project operate in conjunction with the daily releases from Stillwater Reservoir. Normal releases from Stillwater Reservoir are governed in part by the elevation of the downstream reservoir, Moshier. The objective is to keep the water level in Moshier Reservoir at the top of the flashboards, 2 feet over the dam crest. This enables Moshier to operate at maximum head; maximum hydraulic

capacity is about 542 cfs plus an 80 cfs (minimum flow plus leakage) constant release through the dam. Moshier is a peaking plant and operates at maximum capacity during peaking hours. This is possible due to a release at Stillwater of 50 cfs on a 24 hour basis.

A good example of the potential effects of Erie's peaking operation at Moshier on flows throughout Erie's Beaver River Project is illustrated in the following USGS graph showing cfs flows in the Beaver River at Croghan during the period from August 4, 2018 to September 8, 2018:



The graph demonstrates that daily high flows peaked by approximately 300 cfs over low flows from August 4, 2018 to August 18, 2018 when a relatively constant flow of approximately 250 cfs prevailed (250cfs is the minimum flow at Croghan required under Erie's license) until September 2, 2018 when peaking operations recommenced at Moshier. The period from August 19, 2018 to September 7, 2018 coincides with a curtailment of releases from the Moshier impoundment when Erie made repairs to the 2-foot high flashboards on the Moshier dam. (See letter from Brookfield to FERC dated September 7, 2018 included in FERC's Erie license file.)

Two conclusions can be drawn from the above: First, the Beaver River in Zone 3 is not maintained by Erie "in true run of river operational mode",

and Second, the peaking operations at Moshier have a significant effect on water flows throughout Erie's Beaver River Project.

2. Beaver Lake should be classified as a "designated zone of effect"

Erie's application describes Zone 3 as the .4 mile section of the Beaver River between the Moshier powerhouse and Beaver Lake. This section of the river is the tailwater of the Moshier powerhouse. This tailwater surges and subsides in response to Moshier's peaking operations. The fluctuating tailwater empties into Beaver Lake where it pools and forms a short term storage facility serving Erie's Eagle development.

Because the level of the Lake varies in relation to Moshier's tailwater flows, it is arbitrary for Erie to ignore the environmental effects of the Moshier peaking operation on the Lake. Beaver Lake should be classified as a "designated zone of effect" in Erie's application to LIHI. (See LIHI Handbook 4.1.1 Facility Description)

Beaver Lake contains important shoreline wetlands and wildlife habitats. The lake is shallow and its water levels fluctuate in response to releases of water from the Moshier development. The rise and fall of water levels in the lake submerge and expose numerous marshy islands in the lake. Loons, eagles, and beaver are often observed on the lake.

Erie has not disclosed in its application to LIHI any of its data regarding its peaking operations at the Moshier development so the timing and volumes of water discharged into Beaver Lake and the impacts on the lake are unknown.

What is known is that fluctuations of water in Erie's impoundments can have adverse effects on wetlands, water quality and wildlife. The fluctuation of water levels in Beaver Lake caused by the Moshier peaking operation may be similar to water level fluctuations in Erie's impoundments.

Thus, the potential adverse effects on the ecology of Beaver Lake that may be caused by the rise and fall of water levels stemming from Erie's peaking

operations at Moshier may mirror those associated with fluctuations of water levels in Erie's impoundments. The effects on impoundments are well documented.

Thus on page 56 of the Environmental Assessment in a discussion of the environmental impacts of water fluctuations, the following is stated:

> "Impoundment fluctuations create an unstable environment for both plants and wildlife. Although the proposed impoundment fluctuations are, in general, improvements over previous levels, there is still the potential for 3 foot fluctuations in four of the impoundments during low flow periods (when 250 cfs cannot be passed at High Falls with the normal fluctuation restrictions at project impoundments). Depending upon season when low flow condition occurs, these fluctuations could result in the loss of aquatic furbearer denning sites, increased mortality of bottom hibernating reptiles and amphibians, reduced reproductive success of nesting waterfowl and altered plant species composition, growth and water regime of important shoreline wetland and wildlife habitats."

Loons on Beaver Lake are particularly vulnerable. Classified in New York as a "Species of Special Concern" they cannot cope with fluctuating water levels during nesting, See Judith W. McIntyre, The Common Loon University of Minnesota Press, 1988 Pages 196-198.

Concerning water quality, the Environmental Assessment on page 41 states:

> "Water quality studies indicated that increased flows are associated with low pH. Increased flows to the bypassed reaches, therefor, could result in lower pH than would be found under normal, unaltered stream flows."

In its discussion of pH levels in the Moshier Development the Environment Assessment on page 37 states:

The Moshier Development surface water pH levels are extremely low (4.5 to 5.0). These conditions typically occur beneath the ice cover from February to April. During the warmer months, the pH levels tend to be higher at the surface and lower in the hypolimnion. The highest pH values recorded are only slightly above 6.0 while midcolumn pH values are generally between 5.5 and 6.0.

Given what is now known about the potential adverse effects on Beaver Lake that may be caused by its hydro operations at Moshier, Erie should amend its application to LIHI by including Beaver Lake in a separate designated zone of effect.

3. **Within the Beaver Lake Zone the correct LIHI Standard for evaluating the impacts of Erie's peaking operations at Moshier is A-4 "Site specific studies"**

The velocity of Moshier tailwater released into Beaver Lake is reduced as the tailwater enters the lake where it pools and transforms the lake into a temporary storage facility serving the downstream Eagle development. The rate of discharge from the lake of this pooled water affects the rise and fall of lake levels. Since Erie controls these flows, it is appropriate for Erie to classify the Beaver Lake zone under LIHI's Criterion A – "Ecological Flow Regimes". Because there are no applicable state and federal agency recommendations governing the fluctuations of water levels in Beaver Lake, Erie should classify the effects of the tailwater flows on the lake under LIHI's Standard A-4 "Site Specific Studies". These studies should result in a flow ecology model for the lake that discloses the following:

- The real time volumes of water released from its Moshier powerhouse into Beaver Lake during Erie's peak and off-peak operations
- Measurements of water levels at various points in Beaver Lake relating to its releases at Moshier
- Effects of Erie's peak and off peak operations at Moshier on the shoreline vegetation, aquatic vegetation, and wildlife in Beaver Lake

- Measurements of pH values of the water released during its peak and off-peak operations at Moshier
- Measurements of pH values at various points in Beaver Lake

4. The issues of concern raised in this letter were not made known to LIHI at the time of its certification of the Beaver River Project in 2013

At this stage of LIHI's recertification process (Stage 1) LIHI should make a "determination of material change" in Erie's operation of the Beaver River Project. This determination is appropriate because the issues concerning the peaking operations at Moshier were not raised by any party and were not fully disclosed by Erie in connection with its application to LIHI in 2013 The issues of concern identified in this letter are material and relevant. They are not raised for any purpose other than to elicit scientific based studies of the effects on Beaver Lake of Erie's peaking operations at the Moshier development.

Respectfully submitted,

Edward D. Earl

Edward D. Earl

October 1, 2018

Shannon Ames, Executive Director
Low Impact Hydropower Institute
329 Massachusetts Ave, Suite 2
Lexington, MA02420

Re: Flooding and Ecological Damage of Beaver Lake

Dear Ms Ames,

My grandfather built a summer camp on Beaver River just below the outlet of Beaver Lake in 1935, and I have been coming here for most of those summers since 1936. Beaver Lake is a natural lake formed by a glacier, and is not a reservoir caused by a dam. For many of the years that I came to camp, Beaver Lake remained as a natural lake with natural and fairly minor fluctuations in water level. In the last 36 years I have had the blessing of living on Beaver River from May to October. During those 36 years we have had major problems with our property as Beaver Lake is now used as a reservoir. On many occasions the residents have tried calling the people in charge of the dams at both Stillwater and Eagle Falls to request that they coordinate the release of water at these dams, but have had no positive results.

The shoreline of my camp is undercut by at least 40 inches; trees have fallen in the water as the root systems of those trees were no longer supported, and the whole river bank will collapse one day. This widens the river and diminishes the size of the property over time.

The water level of Beaver Lake and Beaver River at the inlet and outlet can vary as much as several feet. Sometimes there is so little water in my boathouse that I can hardly get my boat all the way in the slip, and yet often there is so much water the catwalks are not usable and I can't get to the boat at all. In 2011 the water level was halfway up the wall of the boathouse, a rise of several feet. This amount of water was not caused only by rainfall, but by not coordinating the release of water at the dams, and the result is damage to our boathouse supports and structure, which need repair much too often. I am enclosing photographs to illustrate the fluctuations of the water.

Across the river from my camp there was a shallow area and wetland where blue heron traditionally fished, as well as loons. The high water and the melting of the spring ice have taken all that area away and we no longer have the birds feeding there.

We always have had at least one loon pair nesting on Beaver Lake every year, and sometimes two pairs. Now the nests seem to be flooded out every year due to the fluctuating water level, and there are no chicks for this protected species.

We come here to enjoy the environment and the wonderful wildlife, and do not understand why it is not valued. Our property deteriorates and the wildlife thrives less. Please help us protect the environment in our special place.

We at Beaver Lake hope that the Institute will help the property owners and taxpayers resolve these problems before the recertification goes through. It would seem that up until the present time, no one has listened to the residents, and we hope that a plan can be developed to give us some relief.

Sincerely,

Carolyn B. Malkin

Carolyn B. Malkin
202 Springview Court
Louisville, KY 40243
and
9710 Fairview Lane
Lowville, NY 13367

Photographs #1 and 2 This boathouse was built in the 1950s. The catwalks and supports have had to be rebuilt because of the flooding.

There are 4 distinct levels showing on boathouse wall in these photos:

#1 The lower gray line shows a usual fluctation from the "normal" level of the water and the level often reaches this level, making the catwalks and access to the boathouse unusable.
#2 A lighter tan line is a level than sometmes reaches this level.
#3 A slightly darker line shows the level the water reached in 2011, which put half the boathouse half under water, - a rise of about 5 feet or more?

Photograph #3

This is a photograph of the beautiful wetland across the river. At one time it was wider and more shallow and supported fishing for the blue heron and the loons. The water levels are often high when the ice forms and it tears the water plants from the edge of the wetland when the ice goes out in the spring, ruining this as a feeding area for the wild life.

#1

#2

#3

Gmail by Google

Certification Comments <comments@lowimpacthydro.org>

Beaver River Project Comments

1 message

Josh Garbarino <josh.garbarino@gmail.com> Wed, Oct 3, 2018 at 7:31 PM
To: comments@lowimpacthydro.org

Hello. I am writing concerning the Low Impact Hydropower Institute's recertification of Brookfield Power, Inc. Beaver River Project, FERC No. 2645. My family and I have owned an island on Beaver Lake for over 40 years. My mother passed away in September, and my sister and I are carrying on the legacy of her favorite place in the world.

Brookfield Power holds water at levels in the lake that are too high. They have refused to remove flashboards or open the spillway at Eagle Falls to release excess water, despite the LIHI Certification Handbook Questionnaire stating that the flashboards are to be removed "in the fall..."

Since our entire property is ringed by shoreline, we are especially susceptible to the effects of erosion due to excessively high water levels. We have seen our property shrink over the years, and this is very disturbing. A comparison of aerial photographs taken in the 1940s and in the past few years shows a significant reduction in shoreline.

Indeed, the effects of shoreline erosion can be seen all around the lake as one travels by boat. There are sandbars downriver which increase drastically in size each year as the result of accelerated sedimentation processes upstream. Loons's nests have also been flooded on several occasions, resulting the loss of eggs. (Note that common loons are protected under the federal Migratory Bird Treaty Act of 1918.) Water quality is also affected by the large amounts of silt and sludge that are being deposited into our lake. During one recent high water discharge event, water that is normally clear and fast moving was notably murky with silt, and this is not the first time that this has been observed near the Moshier Station.

I request that LIHI deny recertification of the Beaver River Project until Brookfield Power develops a plan that meets the various standards of LIHI, including preserving water quality, maintaining shoreline, and providing safe habitat for loons and other species. This plan must include input from, and be satisfactory to, all Beaver Lake property owners.

Sincerely,
Joshua C. Garbarino

Gmail by Google

Certification Comments <comments@lowimpacthydro.org>

Beaver River Project Comments

2 messages

Jen <contr5@aol.com> Wed, Oct 3, 2018 at 10:09 PM
To: "comments@lowimpacthydro.org" <comments@lowimpacthydro.org>

October 3, 2018

Dear Ms. Shannon Ames,

I am the manager of the property constituting real estate on Beaver Lake conveyed to me by George Van Santwoord by deed recorded in LIBER 275 on page 311 in Lewis County.

I am sending this letter in order to support the situation on Beaver Lake as described in the letter to you from Robert M. Hough, concerning the management of the water levels on Beaver Lake.

The property we own is described in the deed from George Van Santwoord to me and most currently is being prepared for conveyance to me as primary Trustee of a Revocable Trust entered on January 1, 2008, conveying the property to me, as Trustee of the Revocable Trust.

The damage to our premises is not extensive due to the relative height of our camp site. However, our property has experienced serious erosion which endangers trees within the affected area. The beach area, on our property, has similar erosion.

I therefore support the efforts made by Robert M. Hough in bringing this matter to your attention. I urge you to manage water flow within the allowable limits and request that appropriate variances may be kept within the limits established for such purposes.

The risk of further loss, due to excessive flooding and/or shoreline erosion, must be prevented. Water levels must be managed within the established guidelines.

Photocopy of the survey showing the original parcels conveyed by the Fisher Family to Carolyn Van Stanford is being mailed to you. This conveyance preceded the construction of the Eagle Falls Dam, resulting in a portion of our property being under water. I am unaware of any existing conveyance of flood rights to your company or any prior company. Would you please send me copies of the requests for flood rights of our property?

I also designate Robert M Hough as a person authorized to negotiate the existence of such restrictions and fixing the liability for damages resulting from over or under flooding rights.

Thank you for your attention to this matter.

I will be sending a hard copy with the attachment by mail for your review.

Very truly yours,

Richard C. Cummings

6435 East Shore Road

Glenfield, NY 13343

Tele: (315) 376-2773

Sent from Mail for Windows 10

Jen <contr5@aol.com> Wed, Oct 3, 2018 at 10:09 PM
To: "comments@lowimpacthydro.org" <comments@lowimpacthydro.org>

[Quoted text hidden]

Gmail by Google

Certification Comments <comments@lowimpacthydro.org>

Beaver River Project comments

1 message

Charles Roberts <cbroberts@frontiernet.net> Thu, Oct 4, 2018 at 1:16 PM
To: comments@lowimpacthydro.org

I reside on the Beaver River approximately one mile below Beaver Lake and just below the outlet of Alder Creek. I am a year round resident and my home is on the section of the river between Beaver Lake and the Brookfield Power Eagle Falls hydro plant and dam. My comments concern both the high water levels we have been experiencing and the variations in river flow. Both of these factors have contributed to silting of the river bottom, shoreline erosion, and flooding of my property.

I have noticed this past spring that the water level remained high until well into June and then suddenly overnight dropped to a normal level. This demonstrates that water levels can be controlled in this section of the river and in Beaver Lake. Depending upon a USGS gauging station at Crogan, NY, far downriver from my property will not accurately indicate the water level in the river between Beaver Lake and the Eagle Falls dam.

A continuous gauging station is needed either at Beaver Lake or the outlet of Beaver Lake. Such a gauging station sending data directly to a control center would allow for good control of the water level in this section of the Beaver River and Beaver Lake. Data from this gauging station could be shared between Brookfield and the Hudson River-Black River Regulating District which controls water release from Stillwater Reservoir located up river from Beaver Lake. LIHI should deny re- certification of the Beaver River Project until Brookfield Power has agreed to take timely steps to accurately control water levels and flows in this section of the Beaver River and Beaver Lake.

Charles B Roberts
9084 Buck Point Rd
Lowville, NY 13367

mfischer@lowimpacthydro.org

Subject: FW: Fw: "Beaver River Project LIHI #7" BEAVER RIVER PROJECT COMMENTS

On Saturday, October 6, 2018 4:01 PM, Lucy Foltyniak <lucyfoltyniak@att.net> wrote:

Lucy Reed Foltyniak
lucyfoltyniak@att.net

6

October 2018

Low Impact Hydropower Institute
329 Massachusetts Avenue
Suite 2
Lexington, MA 02420
comments@lowimpacthydro.org

Re: Beaver River Project

Comments

Erie Boulevard

(Brookfield) Hydropower

Beaver River Project

Recertification Issues

To Whom This May Concern:

Regarding Beaver River Project LIHII #7, I wish to make statements regarding Erie Boulevard's current application for recertification.

At this time, I do not believe Erie Boulevard Hydropower Co.(subsidiary of Brookfield) meets LIHI's criteria for recertification. Additionally, I do not believe Erie Boulevard met the criteria in 2013. Property owners on Beaver Lake and Beaver River are asking to be heard **NOW**.
Among the criteria are ecological flow regimes, including consideration of base flows, seasonal variability, high flow pulses, short term rates of change, and year to year variability; water quality; and shoreline and watershed protection.

I am a property owner of two large parcels of land on Beaver Lake, with significant lake frontage, as part of each parcel.
Our family's history and presence on Beaver Lake goes back nearly 100 years and mine personally, nearly 6 decades.
I am now the sole owner of these properties which carry our family's legacy. I take my responsibilities seriously regarding this Land and Legacy.
With this said, I know Beaver Lake and Beaver River very well.

I have experienced the variability in Beaver Lake and Beaver River water levels firsthand.
This letter is a complaint regarding this issue, for many reasons.

Due to the abnormally high water levels at times, over several years, including major flooding, our shorelines on Beaver Lake and Beaver River have eroded, beautiful trees and shrubs and vegetation of many ages and sizes have died. Loons have repeatedly had their nests flooded out and their eggs destroyed.
Regarding personal ownership, our boathouse, well over 100 years old, has been damaged year after year by high water levels. The large storage boathouse, also well over 100 years old, had water come in, flood its flooring and all contents (**first time ever in its history**!) in 2011.
The floor joists rotted in places, boathouse walls buckled, and there was structural damage to the boathouse foundation after this flooding.
Last autumn, late October 2017, shortly after completion of a 2-month huge repair-maintenance-renovation project of my boathouse, at enormous cost to me, the Beaver Lake/Beaver River water level rose to within **1 INCH** of coming into this storage boathouse once again.
This is beyond unacceptable. This is beyond upsetting.
I am very angry with Erie Boulevard for not managing water levels properly.
This cannot be allowed to continue.
There is historical precedent.
All actions going forward need to follow proper rules, laws, protocols.

High Flow Pulses are NOT addressed in Erie Boulevard's application to LIHI.
High flow pulses are caused by Erie's releases of water to meet power production goals that vary from day to day.
Those goals are determined by the real time power prices in the New York wholesale market. On a daily basis, electricity demand in NYS rises through the morning and peaks during the afternoon. At these peak demand hours, the price for wholesale power is highest and wholesale power suppliers, like Erie, regulate their power production by releasing water to rev up their turbines to meet peak power demand and to maximize revenue.
These peaking operations, fueled by pulses of water flowing through Erie's turbines at Moshier and its downstream power plant at Eagle
may cause shoreline erosion, increase turbidity, destruction of loon nesting sites and disruption of Beaver Lake and Beaver River ecology. The ecological flow regimes, water quality, and shoreline and watershed protection have NEVER been studied or addressed on Beaver Lake. Erie does not disclose to LIHI any details of releases or peaking operations.
There needs to be full disclosure of periodic peaking releases. These would show how water volumes cresting into Beaver Lake and the Beaver River vary by the time of day.

The impacts of Erie's peaking operations on Beaver Lake and the Beaver River need to be studied by Erie on a site-specific basis using
science-based flow ecology models. Without these studies, and lacking information on peak flows, The Low Impact Hydropower Institute SHOULD NOT RECERTIFY Erie Boulevard Hydropower Co.'s Beaver River Project #7 at this time.

Respectfully submitted,
Lucy Reed Foltyniak

4:00 PM, 6 October 2018
lucyfoltyniak@att.net

Beaver Lake Address: 8914 Buck Point Road, Lowville, New York 13367
Mailing Address: PO Box 634, Kendallville, Indiana 46755□□

Rachel McCall

7517 Pinnacle Pl. SE, Snoqualmie, WA 98065 | 206-226-6452 | rachelmccall@msn.com

October 6, 2018

Ms. Ames
Executive Director
Low Impact Hydropower Institute
329 Massachusetts Ave., Suite 2
Lexington, MA 02420
comments@lowimpacthydro.org

Re: Beaver River Project – LIHI #7

Dear Ms. Ames:

This letter provides comments on the Low Impact Hydropower Institute's (LIHI) Recertification review of Erie Boulevard's Hydropower (Erie) Beaver River Project for the five-year period beginning July 16, 2018. My family has owned a cabin on Beaver Lake, a lake within the Beaver River Project, for over 60 years. Years of mismanagement of water levels impacting the lake has led to significant adverse impacts on the wildlife and ecology in and around the lake. Loon nests have been flooded and eggs lost due to high water. The wetlands have experienced extensive damage, especially in the winters when the ice takes hold of bogs and the high water uproots them. This damage has been caused by Erie's failure to meet and abide by the LIHI's certification requirements and Erie's current application for recertification does nothing to address these issues. Rather, it further demonstrates that Erie's plans will continue to erode the wildlife and habitat in and around Beaver Lake.

Erie's application for rertification has not met the appropriate criteria to demonstrate compliance with at least one of LIHI's standards described in A-1 through A-4 of LIHI's handbook. Erie's failure to meet these standards are outlined in more detail in a letter to you from Edward D. Earl, to which I sign on to and thus will not reiterate those reasons here. Please review that letter in detail, especially the graph on page 4 that shows the significant fluctuation of water flows in the Beaver River over a one-month period. This alone demonstrates that Erie is not maintaining the Beaver River "in a true run of river operational mode" as required by LIHI. Erie has completely ignored the environmental effects of the Moshier peaking operation on Beaver Lake, which contains important shoreline wetlands and wildlife habitats, all of which will soon be destroyed if Erie is left to continue its mismanagement of its hydropower project.

For these reasons, as well as for the reasons cited in other public comments, and in keeping with LIHI's mission to "reduce the impacts of hydropower generation through the certification of hydropower projects that have committed to environmental, cultural and recreational stewardship," I urge you to deny recertification of the Beaver River Project unless and until Erie can demonstrate a plan to eliminate these significant detrimental impacts on the wildlife and ecological habitat of Beaver Lake.

Respectfully submitted,

Rachel McCall

Rachel McCall

Robert M. Hough, President
603-490-8215

RECEIVED
10-10-18

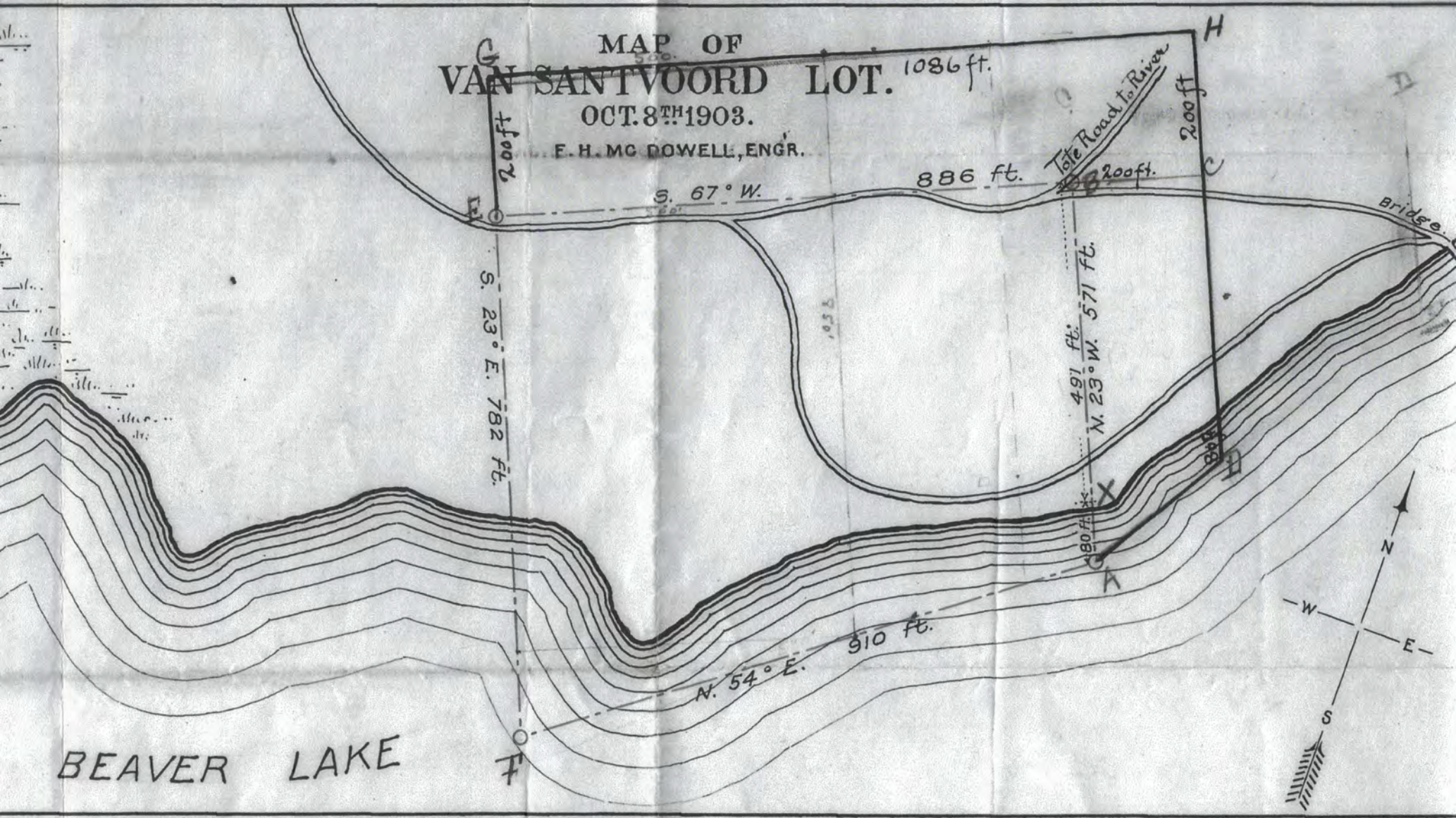
To Bob Hough and
Shannon Ames - Executive Director
Re: Flooding and Ecological Damage of Beaver Lake

To everyone who this may concern:

For many years the fluctuating level of water in Beaver Lake, New York, has been a major problem for residents, property owners and wildlife surrounding this Beautiful place in the Adirondacks of Lewis County, New York. We are all so thankful that you are considering this as a major problem and have begun procedures to correct this situation.

Thank you for your efforts on behalf of all concerned at Beaver Lake. Please proceed to rectify this situation as promptly as possible. This is a real necessity.

Very sincerely,
Sylvia S. Virkler
Camp and property owner
of Beaver Lake



Indicate Purchase of Oct. 1903 = 13 3/4 Acres.
Indicate Purchase of Jan. 1908 = 7 "

October 2, 2018

Shannon Ames, Executive Director
Low Impact Hydropower Institute
329 Massachusetts Ave. Suite 2
Lexington, MA 02420

Re: Flooding and Ecological Damage of Beaver Lake

Dear Ms. Ames,

Verplanc Colvin surveyed the Adirondacks about 1874 using a method of triangulation to locate mountains and lakes and their elevations. He laid out a baseline on the ice of Lake Champlain and finished with a baseline on Beaver Lake. In the 1930's power plants were built on the Beaver River; one of which was on the lake's inlet (Moshier) and one on the lake's outlet (Eagle Falls). Since the construction of these plants, the elevation of Beaver Lake has risen from 1425' in 1912 to 1426.8' in 1989. This increase of lake elevation has caused serious shoreline erosion and the undermining of root systems of old growth trees around the entire lake. The eroded soil is settling on the bottom of the lake and covering the natural sand and gravel, giving aquatic vegetation a fertile bed to grow on.

Every Labor Day weekend the power company entertains kayakers with a four hour 400 cfs release of water from the bottom of Moshier Reservoir. This release sends tons of sediment into Beaver Lake where the power company

impounds the water and the sediment settles onto the bottom of the lake.

The erratic lake levels caused by the power company have caused considerable damage to the ecology of the lake and personal property. The power company owns gauges at Moshier and Eagle Falls power plants that show them the water level changes on Beaver Lake to be more than some of their reservoirs.

Water comes into Beaver Lake through a 10' diameter pipe from Moshier Dam. Water leaves Beaver Lake through a 9' diameter pipe. There are six named streams that enter the lake. Moshier Plant discharges 660 cfs at maximum operation and Eagle Falls Plant discharges a maximum of 650 cfs. In a rain event... it is impossible for the power company NOT to cause flooding on Beaver Lake!

I have been on Beaver Lake for more than 67 years and have witnessed that most of the environmental damage has happened since about 1996. Before 1996 the one foot high flash boards were removed before winter and replaced after loon nesting in late July. Removal of these flash boards or the installation of high capacity release gate would ease the pressure now put on the Beaver Lake environment.

continued

With more water coming into the lake than the power company can physically let out; because of man-made restrictions, I suggest they not be re-licensed until the problem they caused be corrected.

Sincerely,

Peter J. Miller

Peter J. Miller
8039 Dicob Rd.
Lowville, N.Y. 13367
(315)-376-7848

Brookfield

Brookfield Renewable
184 Elm Street
Potsdam, NY 13676

Tel 315.267.1020
www.brookfieldrenewable.com

FERC Project No. P-2645-New York
Beaver River Project
LIHI Certification No. 7
Erie Boulevard Hydropower, LP

October 4, 2018

Shannon Ames – Executive Director
Low Impact Hydropower Institute
329 Massachusetts Ave, Suite 2
Lexington, MA 02420

Subject: Follow-up to Public Comments

Reference: *-Letter to LIHI from Fisher Forestry, LLC dated July 14, 2018*
-Email to LIHI from Ms. Barbara Schenck dated September 10, 2018
-Letter to LIHI from Ms. Christa Seibert Dillabaugh dated September 21, 2018
-Letter to LIHI from Ms. Carolyn Seibert dated September 24, 2018
-Letter to LIHI from Henry O & Anna Y. Schaab dated September 25, 2018
-Letter to LIHI from Mr. Edward Earl dated September 27, 2018

Dear Ms. Ames,

During the public comment period of the Low Impact Hydropower Institute (LIHI) recertification process for the Beaver River Project (the Project), five letters and an e-mail were submitted to LIHI with respect to the relationship between the Project and Beaver Lake. Brookfield Renewable, on behalf of licensee Erie Boulevard Hydropower, LP (Erie), is herein providing LIHI background information to address these concerns.

The FERC license for the Project was issued August 6, 1996. Prior to and throughout the FERC relicensing process, Beaver Lake residents raised concerns regarding Beaver Lake water levels similar to those mentioned in the recent letters received by the LIHI. These concerns were addressed in the context of the FERC relicensing process itself and following relicensing.

As a condition of Erie's FERC license and the associated Settlement Agreement, and in order to address the concerns of Beaver Lake residents, the Beaver River Fund and Advisory Council (BRAC) was formed consisting of the parties to the Settlement Agreement as well as other stakeholders interested in the Beaver River watershed. The purpose of BRAC is to keep stakeholders informed of overall Beaver River water management objectives and changing conditions that may affect flows. Beaver Lake residents are represented on the BRAC by the Town of Watson. Beaver Lake residents may voice their concerns to the BRAC or directly to ERIE, as they have done in the past. Erie has provided information regarding its operation to the residents of Beaver Lake and the BRAC when these concerns have been presented.

Since its acquisition of the Project in July 1999, Erie's operations have been in compliance with the Project's FERC license and the Settlement Agreement. Furthermore, Erie's operations have not changed since the previous LIHI certification in July 2013.

Brookfield

Brookfield Renewable
184 Elm Street
Potsdam, NY 13676

Tel 315.267.1020
www.brookfieldrenewable.com

Moshier Facility and its relation to Beaver Lake

Flows reaching the Moshier facility, which is the Project's first (most upstream) facility on the Beaver River, consist of controlled releases from the Hudson River-Black River Regulating District's (HRBRRD) Stillwater Reservoir, located approximately three miles upstream, together with unregulated tributary discharges into the Moshier reservoir. Erie works diligently with the HRBRRD to coordinate releases into the Beaver River to meet all applicable regulatory requirements and to minimize downstream impacts. This coordination includes monthly meetings along with daily communication to discuss hydrological conditions.

Beaver Lake

Beaver Lake is located between the Moshier and Eagle facilities and is formed by a natural constriction and shallow topographic depression in the channel leading to the Eagle impoundment and dam. The main tributaries consist of Alder Creek, Beaver Meadow Brook, Slough Brook, Three Mile Creek, and Sunday Creek. During high rainfall, when the HRBRRD curtails flows, the only flows entering Beaver Lake are from the unregulated portion of the basin and minimum release and leakage from the Moshier facility.

Eagle Falls Facility and its relation to Beaver Lake

Erie operates the Eagle impoundment with the addition of static one-foot tall flashboards year-round, a request made to Erie's predecessor by the Beaver Lake Association years ago. This additional flashboard elevation benefits the local wetlands and habitat and further improves boating and other recreational activities at Beaver Lake.

As noted in License Article 410, *"Flashboards [at the Eagle facility] will not be erected or replaced during the period May 1 through June 30 so as to protect nests of reservoir spawning fish and of nesting birds."* This is true for times when the flashboards are down or fail during this period.

Efforts to understand Beaver Lake's Hydraulics

In response to concerns raised by Beaver Lake residents in the late 1990s, the BRAC hired the United States Geological Survey (USGS) in 1999 to perform an independent analysis of the hydrological relationship between Beaver Lake and the Moshier facility.

One of the findings from the study addressed how the two generating units at the Moshier facility influence Beaver Lake elevations. It was determined that when one of the two generating units is operating at full capacity it will cause a rise of eight (8) inches in Beaver Lake's elevation. When both generating units are operating at full capacity, a rise of fifteen (15) inches can be expected. This is mainly due to Beaver Lake's hydrological constraint at its outlet.

Based on the study, it was also determined that the Moshier Reservoir makes up approximately 23% of the total unregulated drainage area above the Beaver Lake outlet. Other tributaries including Alder Creek and Sandy Creek account for the remaining 77%. Based on these findings, it was determined that the Moshier facility "is not likely to provide a major control to flooding on the lake during significant run-off events or rainy seasons." Additional inflows to Beaver Lake come from Alder Creek and Sunday Creek which are unregulated and thus subject to greater fluctuations. Due to the narrow geometry of Beaver Lake's outlet, water often leaves Beaver Lake at a much slower rate than the rate at which it enters the Lake. This was evidenced in late April/early May 2011 when many areas around New York experienced record or near record stream flows.

Brookfield

Brookfield Renewable
184 Elm Street
Potsdam, NY 13676

Tel 315.267.1020
www.brookfieldrenewable.com

Current operations and ongoing efforts

Erie remains cognizant of the well-known hydraulic challenges associated with Beaver Lake and Erie acts to minimize the impact of precipitation event on Beaver Lake residents through adjustments to flow from generation at the Moshier Facility and coordination with the HRBRRD.

Erie actively engages with Beaver Lake residents when advised of water level concerns and Erie is currently working with adjacent landowners around Beaver Lake to re-install a staff gage which was originally located on Beaver Lake.

We hope the information set out above will be helpful in enabling the LIHI to understand the context surrounding the concerns raised by residents of Beaver Lake and the measures which have been taken and continue to be deployed to address these concerns.

As always, please feel free to contact me with any questions or concerns.

Respectfully submitted,

Daniel Maguire, P.E.
Compliance Manager
North Atlantic Operations

Cc: M. Johnson
J. Elmer
A. Davis
J. Pelletier
D. Daoust
S. Mascarenhas
S. Faulds
M. Fischer (FERC-NYRO)