



BLACK RIVER HYDRO LIMITED PARTNERSHIP



764 Lexington Cr. Thunder Bay, Ontario, Canada P7B 7B8
Ph: 807-768-4034

August 1, 2017

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

**Re: Project No. 11730 Alverno Project (Black River Hydro Limited Partnership) –
Black Lake – High Water Levels Update**

Dear Secretary Bose,

The purpose of this letter is to provide the Commission with an update regarding high water levels at Black Lake. Since our letter submitted on April 30, 2017, Black River Hydro LP (“BRLP”) has been in communication with the Black Lake Preservation Society (“BLPS”) and the Black Lake Association (“BLA”) through bi-weekly emails. These emails, included in Appendix D below, include the water level of Black Lake and the Alverno headpond, and the flow through the Alverno and Kleber dams.

We have installed river gauges on the Rainy River Bridge and the Harbour Light Bridge on Black River Road. The Rainy River Bridge gage was installed on June 16th, 2017 on the east side. A gage was installed on the west side after meeting with the Cheboygan county engineer on June 19th, 2017. Cheboygan County approved the installation of a level gauge for Black Lake, which is now located on the Harbor Light Bridge. Photographs of these gauges are included below in Appendix B.

In our April 30th, 2017 letter, we discussed the survey shots taken of various headpond levels at the Alverno dam, however the work was not completed at the time of submitting the letter. BRLP provided initial results that suggested at lower headpond elevations (below approximately the 611.2ft elevation), continuously lowering the water in an attempt to control Black Lake starves the headpond of water and does not reduce the elevations of water in the river at the upper end of the falls and Black Lake. As discussed previously, we are continuously noticing that the elevation at the base of the rapids (lower end of the rapids) does rise and fall consistently with the rise and fall of water elevations at the Alverno pond. However, just upstream above the Smith’s Rapids, this pattern is not present. This again provides quick evidence that Smith’s Rapids is a bottleneck, as the U.S. Army Corps of Engineers (“USACOE”) reports and science have stated in the past. The results of these surveys are included along with this submission.

In our April 30, 2017 letter, we discussed ongoing consultation with the USACOE concerning the issue with Black Lake and the study from 1965. We want to determine possible next steps regarding an updated hydraulics study and found out that the County or State must submit a letter to the USACOE and apply for funding for such a study to occur. On Monday, July 31, 2017 our operator James Tucker spoke to Cam Cavitt, Cheboygan County Drain Commissioner, on the phone regarding the USACOE Study Request. Mr. Cavitt said that he has not had the chance to prepare or submit a study request. Mr. Tucker will be sending him some forms filled out by BRLP and any data he may need, along with contact information for USACOE representatives. Mr. Cavitt showed much interest in moving forward with this and we plan to keep in touch with him in a regular basis as this develops. Initial emails between BRLP and Mr. Cavitt are included below in Appendix D.

The following is included under “Black Lake Elevation Control” on page 52 of the 2001 License Order (P-11730):

“As noted in Section III.A.2, at some flow levels, operation of the Alverno Project has a direct influence on water surface elevations of Black Lake. At summer lake levels, operation of the project directly influences the level of Black Lake when the lake's outflow is between 0 and about 800 cfs. As outflow increases to greater than 800 cfs, the restriction at Smith's Rapids, not the operation of the Alverno Project, serves as the hydraulic control for Black Lake. Smith's Rapids continues to exert greater hydraulic control over Black Lake levels as outflows from the lake increase to greater than 800 cfs. In winter, the cross-sectional area at Smith's Rapids is smaller than in summer, because of lowered water levels in Black Lake and in the river system in general. The formation of ice along the banks and on rocks on the river bottom in winter further restricts the available channel cross-sectional area at Smith's Rapids. The BRLP estimates that in winter, Smith's Rapids becomes the primary hydraulic control for Black Lake at outflows of approximately 400 cfs.”

Also included on Page 5 of the 2001 License Order:

“... the licensee [will] operate the project in a run-of-river mode except as necessary to maintain Black Lake at an elevation of 612.2 feet from May 15 through October 31, and 610.2 from December 1 through April 15 with the periods of November 1 to 30 to transition from the summer to winter level and April 15 to May 15 to transition from the winter to summer level (Article 404).”

The Commission has acknowledged, in the 2001 License Order, that the restriction at Smith's Rapids becomes the hydraulic control for Black Lake when flows exceed 800cms in the summer and 400cms in the winter. As previously discussed, the only time BRLP has experienced any real control of Black Lake has been in the summer, and not during extremely high flows. We believe the following conditions are required so that the Alverno dam can successfully lower Black Lake for the winter: low fall inflows followed with cold weather beginning in November, sustained through the winter with minimal to no warm periods during the winter. Should these conditions not present themselves, as we have seen throughout the historical data, the lake level becomes extremely difficult to control and lower to the prescribed level.

As discussed with stakeholders and outlined in previous letters to the Commission, BRLP has considered beginning the drawdown period early this year as a test, on October 15th instead of

the usual November 1st. Although we believe that this may have limited impact on the success of the drawdown period, we are committed to running this test in order to appease the public and demonstrate our willingness to mitigate this issue. Starting earlier will only help with the drawdown if we have a dry fall and will likely only help to a certain elevation. Under dry conditions, it isn't the Rapids that "allow" the lake to come down further, but simple hydrological impacts (i.e. running out of water from less inflow, evaporation, less ground water) and of course this causes the overall level in the watershed system to lower. In advance of formally asking for Commission permission to run this early drawdown test, which will happen on or before September 1st, 2017, we believe it is important to reach out to the appropriate resource agencies beforehand. When it comes to a faster drawdown of the headpond and Black Lake, we believe input from the DNR is required regarding possible environmental impacts. We plan to notify all residents around the lake and river of this change so that they may prepare for the early change in water level. This notification will be sent out in the local newspapers and through the BLA and BLPS websites by September 15th at the latest. We want to ensure there are no strong dissenters on this request before we put it into action on October 15, 2017.

In addition to providing the BLA and BLPS bi-weekly updates on the flow data and water levels, BRLP plans to provide an annual written update to these organizations no later than December 31st each year. These organizations may then share this information with the public via their websites, keeping everyone informed. We do not believe we need to continue to repeat the information we have submitted in the letters and documents over the course of the last year to the Commission and various stakeholders. The information has been presented to the public in at a meeting on February 2nd, 2017, as reported on in our April 30, 2017 letter.

BRLP is not requesting any amendment to the license at this time. Although it has been thoroughly discussed, we believe it would not serve us or the stakeholders to request an amendment that we may not be able to meet. This is based on our much-discussed limited control over Black Lake with changing environmental factors and Smith's Rapids. Although we do believe it would be beneficial to add some language to the license (i.e. make it known that the level for Black Lake is a "target elevation" rather than a concrete requirement, as it clearly cannot be maintained at the winter levels described), we are not requesting an amendment at this time. When and if we decide on proposing an amendment to the license, we will be sure to draft the request and submit it to the agencies (Michigan Department of Natural Resources ("MDNR"), U.S. Fish and Wildlife Service and the Michigan Department of Environmental Quality) before submitting to the Commission.

Response to Black Lake Preservation Society Letter (June 19, 2017)

On June 19, 2017, BLPS filed a letter with the Commission regarding their position on the operation of the Alverno dam in relation to the incompliant water levels at Black Lake. There are several claims in this letter that BRLP does not agree with, however we do agree that a comprehensive study made by a third party would be beneficial.

In the letter, the BLPS state that they are submitting this letter with "public support", and BRLP staff believe this statement is misleading. Our lead operator has spoken to many people in the public who do not support the position held by BLPS. We have seen over the years that newer

property owners are those who speak out about the issue with lake levels, without an adequate understanding of the historical data and dam operation in relation to lake level maintenance. We continue to have the support from the BLA. An article titled “Black Lake Associate Partners with the Black River Hydro Limited Partnership” is included in Appendix C below.

On page 5 of the letter under section “Explanation of Topics of Dispute; #1. Delayed Drawdown”, the BLPS discusses the drawdown period from November 1 – 30 and that they believe the drawdown did not actually begin until at least November 20, 2016. Certainly, we agree that the level of Black Lake did not go below the required winter level until November 18th, however drawdown efforts did begin as usual on November 1st, 2016. The drawdown is always staged as a gradual process over the course of the month to avoid any adverse environmental impacts for the river and Black Lake. In addition, it gives river recreation users enough time to get their boats out of the water. BRLP believes a quick drawdown, if it were even feasible, may cause problems for boaters. We have included the data from November 1 – 10, 2016 with this submission. We were not able to get Black Lake down earlier than November 18th because of the gradual nature of the drawdown process. Usually, we can get about halfway down to the winter level, but it is the last half (approximately 12”) each year that has proven extremely difficult. We acknowledge that during the previous year (2015), we were unsuccessful at drawing the lake down to winter levels. Many years it proves to be nearly impossible to reach the winter level for the many reason discussed in previous letters regarding this issue. We believe that although we may have similar success (or lack thereof, rather) even with an earlier start to the drawdown period, we are open to exploring it for the sake of attempting all we can to help with this ongoing and historical issue.

In our April 30, 2017 letter to the Commission, we stated that the Court Ordered levels for Black Lake were determined under the context of Smith’s Rapids being dredged. On page 5 of the letter under section “Explanation of Topics of Dispute; #2. Validity of the of the Court Ordered Winter Level”, the BLPS claim that the Court Order is independent of any modifications to Smith’s Rapids. They argue that this is because the U.S. Army Corps of Engineers (“USACOE”) Report from 1965, which discusses the possible dredging of the rapids, came after the 1964 Court Order and mentions the Court Order several times. It is true that the USACOE 1965 Report (which has been previously submitted to the Commission by BRLP), references the Court Order from 1964. For example, under “15. Project Design Flood” on page 4 of the Report, it states: “Legal summer and winter lake elevations of 612.2 and 610.5 respectively have been established by a State court decree”. BRLP stands by its position that the Court Order levels were issued under the context of the dredging of Smith’s Rapids because of the following excerpt taken directly from page 1 of the Court Order (1964):

*“... the reason for the determination of the water level of Black Lake is that the Alverno dam, located on the Black River, and which is capable of controlling the water level of Black Lake, will be transferred to the County of Cheboygan and thereafter operated and maintained by the County of Cheboygan, and **that certain dredging operations are anticipated** between the headwaters of Black River, located at Black Lake, and said Alverno dam and that for the purpose of **these dredging operations together with the operation and maintenance of the so-called Alverno dam, it is necessary that the proper level of Black Lake be maintained at a level to be determined by this Court.**”*

It is clear by the language presented in the Court Order that the determined water level for Black Lake was based on the operation of the Alverno dam and the dredging of Smith's Rapids. Should the rapids be dredged, it would mean the Alverno dam having a direct influence on the level of Black Lake.

BRLP believes that there is no conclusive data to support the Exhibit I chart which would include all variables such as total lake inflow, outflow and environmental conditions. We also believe Exhibit II to be speculative at best. We do not recognize nor do we think the Commission should consider the suggested test results and assumptions from the BLPS given their limited expertise in studying or interpreting hydraulic flow data and lack of consideration of all variables pertinent to this issue.

Upon reading the letter from BLPS, we notice there is no mention of when the Cheboygan County operated the dam at run-of-river each winter with the tainter gate open resulting in very limited ability to lower the lake. We feel it is important to reiterate that during the period of 1965 to 1980, the County owned the dam after Consumers Power orphaned the dam. The County chose to leave the spillgate open continuously for 16 years. This information is referenced in Appendix F of our October 31, 2016 letter to the Commission. Given the high and out-of-compliance water level illustrated in the historical data, it is obvious leaving the spillgate wide open had no impact on lake flood levels. This further indicates that Smith's Rapids is the restriction. Even when the dam was out of commission and the spillgate was wide open, major flooding occurred in the spring. Graphical representation of the historical data from these years is include in Appendix J of our October 31, 2016 letter.

BRLP does not agree in an emergency manner of operating the dam out of "possible risk" to property owners' beachfront. It is not certain that property damage will happen and any type of emergency operations at the dam, especially in the winter, has the potential to negatively affect the surrounding environment. The mechanical problems associated with emergency operation of the dam, which would likely include the opening tainter gate in cold weather, would cause the gate to freeze up, causing longer delays in any water level control. It may also cause freezing problems with other plant equipment within the powerhouse if the units have to be taken offline because of low water conditions.

The BLPS ask "what has changed?" several times throughout their letter, in reference to the potential increase in the frequency of Black Lake flooding leading to property damage. They indicate that there is an assumption that because "natural factors have not changed", and as a result, "the controllable variables have changed". The way in which we operate the Alverno dam has not changed, and we have always been wary of the levels of Black Lake, as per the requirements of the license. For many of the reasons discussed in previous letters, it has not been possible to maintain the lake level throughout most winters. In terms of "what has changed" environmentally, BRLP would like to point out that the climate has clearly been changing over the last century and increasingly so in the last several decades. The MDNR stated in a recent online article, "our climate is clearly changing... the Earth's temperature increased about 1.5 degrees Fahrenheit over the 20th century. We are experiencing hotter summers and shorter winters. Ten of the hottest summers have occurred since 2000, and 2016 was recently named the warmest year in recorded history". This article is included below in Appendix A. Not only is the temperature affected, but even slight

warming also causes changes in (both frequency and intensity of) precipitation. Warmer winters and more precipitation greatly limit our ability to control the levels of Black Lake due to higher inflows to the lake and more winter melts. When the winter level is already high, it increases the risk of spring flood as the last of the ice and snow melt.

Further, to make a generalized questioning statement like "what has changed?", without admitting that the graphical evidence that BRLP has submitted and presented at our February 2017 public open house meeting in Tower, Michigan, proves that Black Lake levels in the past reached levels as high or higher as they have in the last 10 years. The BLPS infers that we are operating the plant differently and that there has only been high spring water levels very recently (i.e. in the last 10 year span). This is not true. Ultimately, we believe asking a question like "what has changed?" is misleading and redundant in this case.

Conclusion

BRLP believes our data, the historical documentation we operate by, and our commitment to work with the public have shown that we are making every effort possible to operate in compliance with the license.

Should you require any additional information on this matter, please do not hesitate to contact the undersigned by email or telephone. Many of the appendices are included separately in this submission.

Sincerely,

Tiffany Heon
Environmental Officer
Black River Hydro LP
tiffanyheon@hotmail.com
647-220-4476

cc.

FERC eFile

via email Nelson Turcotte – Northwoods Hydropower, Inc. (General Partner/Manager BRLP)

via email TJ Lovullo – FERC

via email Jeremy Jessup – FERC

via email Kelly Houff - FERC

via email Kyle Kruger – DNR

via email Gary Kohlhepp – MDEQ

via email Burr Fisher - USFWS

via email Jim Tucker – Tuck Energy Services, LLC (Lead Operator for BRLP)

via email Brett Trepanier – BLA

via email Rusty Gowland – BLPS

via email Jason Chrumka – USACOE Detroit

via email James Luke – USACOE Detroit

via email Cameron Cavitt – Cheboygan County Drain Commissioner

APPENDIX A – MDNR ONLINE ARTICLE (2017)

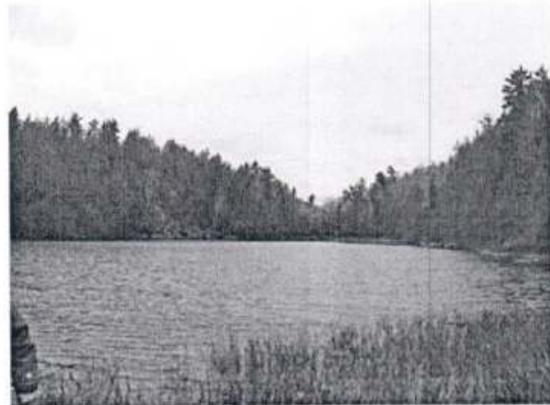
[DNR Home](#) [Contact DNR](#) [DNR Online Services](#) [Key Topics](#) [MI.gov](#)



DNR

Climate change effects on Michigan's fisheries

Climate, the long-term pattern of temperature and precipitation, varies greatly from the Upper Peninsula to southern Michigan. This variation in climate creates differences in water temperatures and stream flows across the state which in turn influences where different fish species live, how well they reproduce and grow, and the types of fisheries we see around the state.



For example, walleye reproduction is better in northern lakes because those fish experience longer winters and cooler summers which favor this species. Therefore, it's critical to understand the importance of climate on Michigan lakes and streams and their fisheries, and how future changes in climate may affect these resources.

"Our climate is clearly changing," said Kevin Wehrly, a DNR-Fisheries Division research biologist from the Institute for Fisheries Research. "The earth's temperature increased about 1.5 degrees Fahrenheit over the 20th century. We are experiencing hotter summers and shorter winters. Ten of the hottest summers have occurred since about 2000, and 2016 was recently named the warmest year in recorded history."

Climate change isn't just changes in temperature, but also changes in precipitation and an increase in intense storm events.

Changes of just a few degrees may seem trivial, but they have important effects. There are some great examples from the agriculture industry. Take for example the plant hardiness maps produced by the U.S. Department of Agriculture (USDA) which have now been updated twice in the past 26 years to reflect changes in our climate. Growing conditions in Michigan today look more like those experienced in Kentucky back in 1990.

"Another example involves the loss of Michigan fruit tree crops in recent years," explained Wehrly. "We are experiencing earlier spring warm ups which cause fruit trees to bloom earlier. However, when an early spring warm-up occurs before the date of the last frost (an event that has become more common), a freeze will destroy the flowers and wipe out the fruit crop for that year."

When you see examples such as these, there's no denying the fact our climate is changing and we

need to pay attention.

What about future climate change? There is overwhelming agreement by the scientific community that our climate is and will continue to change. Summers will get warmer, winters will get shorter, and Michigan will experience more precipitation and an increase in the intensity and number of spring rain events. By mid-century, Michigan's climate may feel more like Ohio and Kentucky and by the end of this century; our climate will be closer to the current Missouri and Arkansas climate.

It is uncertain what future climate change will mean for Michigan's world class fisheries. To allow better planning for the future, the DNR's Fisheries Division has started a program to evaluate how lakes, streams and their associated fish communities will respond to warming temperatures and increasing precipitation. To do this, Fisheries Division is building models that explain current conditions and then examines likely future climate projections to forecast changes. Currently, staff are evaluating about a dozen different climate projections which provide a range of likely scenarios.

"Our preliminary results suggest that under all future climate scenarios there are clear winners and losers," Wehrly said. "Warmwater species such as largemouth bass, bluegill and other panfish are the winners and will see an increase in habitat in Michigan. The losers are coolwater species such as walleye and coldwater species such as trout. Fewer stream miles and lakes are expected to support these species under the projected future climate. Our findings match the results found from similar analyses around the country and our observations are in close agreement with observations from fisheries scientists in Wisconsin and Minnesota."

The results of this program will help the DNR-Fisheries Division identify the aquatic species and waterbodies sensitive to climate change. This information will allow the DNR to protect places that are resilient and shift management to more appropriate species as habitat suitability changes in the future. For example, restoring currently reduced tree cover along coldwater streams that are sensitive to climate change may reduce the rate at which those systems warm up and allow the maintenance of high quality trout populations further into the future.

Another key factor is managing public expectations about our aquatic systems. The DNR needs climate change modeling information to inform anglers and policy makers that Michigan's lakes and streams are changing and we may need to change the way we manage them in the future. The DNR is working to refine its models using the best available information to ensure predictions are realistic and scientifically sound. Increasing monitoring of fish populations and water temperatures around the state will help to better understand how current and future climate influences Michigan's lake and stream fisheries.

Purchase

- DNR e-store
- Buy a license
- Make a reservation
- Buy land
- Make a donation

Connect



Contact

- Contact the DNR
- Customer Service Centers
- Customer Service Guide

Report All

Poaching-call or text 800-292-7800

Jobs

- DNR Jobs
- Become a Conservation Officer
- Volunteer

Explore

- Calendar
- Maps
- Open Data
- Trails

APPENDIX B – PHOTOS OF RIVER GAUGES INSTALLED



River Gage on Rainy Bridge



River Gage on Rainy Bridge



Black Lake Level Gauge on the Harbor Light Bridge on Black River Road



Black Lake Level Gauge on the Harbor Light Bridge on Black River Road

APPENDIX C – BLA SUPPORT ARTICLE (2017)



**2017
MEETING SCHEDULE**

Meetings are on the 2nd
Monday of the month at
7:30 pm,
May through October
GRANT TOWNSHIP HALL

May 8

June 12

Pot Luck* 6:30 pm
Annual Meeting
Election of three Board
Members

July 10

Patrick Hanchin, DNR
Dam Removal Update

August 14

Matt Claunchery
Tip of the Mitt
Shoreline Survey

September 11

October 9

* Bring a dish to
pass and your own plates
and silverware. We will pro-
vide coffee.



**BLACK LAKE ASSOCIATION PARTNERS WITH THE
BLACK RIVER HYDRO LIMITED PARTNERSHIP
ROGER SELVIG**

On February 2, 2017, a meeting to discuss Black Lake water levels was hosted by Alverno Dam owner, Nelson Turcotte and dam operator, Jim Tucker. The meeting was well attended by over 40 area residents. A detailed history of the Alverno Dam and Black Lake water level measurements was shared with the audience, along with numerous steps the dam operators may take to mitigate the damage to lake and riverfront property during periods of "Mother Natures" unpredictable onslaughts of ice, severe winds, heavy rainfalls and other periods of environmental factors.

A lengthy discussion about the "Smith Rapids", a natural occurring geological dam in the Black River, focused attention on a

major factor preventing a rapid drawdown of Black Lake water levels during periods of high or increasing water levels. Please refer to the

www.blacklakeassociation.com

website for further information about Smith Rapids and the Army Corps. Of Engineer's Report. Nelson Turcotte, Alverno Dam Owner, was extremely helpful in aiding audience members to understand the complexities of trying to regulate Black Lake water levels and was very accommodating to suggestions to help control and record lake levels. The owner further committed to install additional gauges at the Harbor Light Bridge and the Rainey River Bridge. The additional

lake level gauges will aid interested parties to monitor levels at two additional locations. Mr. Turcotte also promised to supply to the BLA all data to support his presentation and steps planned and taken to further minimize high water levels.

Speaking on behalf of the BLA, board member Ron Dulak thanked Mr. Turcotte and Mr. Tucker for the opportunity to partner with them on addressing this issue. He also thanked them for their aggressive actions to date. Dulak further stated that along with the BLA's weed study, water quality survey, fish plantings and working with dam owners, the Black Lake watershed will be monitored and protected.

**BLACK LAKE BEACH REPRESENTATIVES
TO VOLUNTEER CALL SHARON DULAK 989-733-2565**

Many thanks go out to all the wonderful people who volunteer their time and energy to walk the beaches, collect dues and give out membership cards and decals.

- Gail Smith
- Marlene George
- Gary Shepherd
- Randy Lewis
- Sheila Kraycs

- Sue Madden
- Diane Kade
- Ron Dulak
- Dana Brophy
- Missy Beardsley
- Kay Hoefflin
- Lynne Henzler
- Sue Roberts
- Eugene Osantowski
- Dar Grund
- Sonny Smith
- Norman Schwartz

- Patti Archambo
- Mike Kretz
- Janice Wood
- Graham Edwards
- Charlene Swihart
- Pam Selvig
- Yvonne Hickerson
- Florence Roberts
- Sandy Schnau
- Linda Van Sickle
- Sarah Soule

APPENDIX D – EMAIL CORRESPONDENCE

CHEBOYGAN COUNTY

From: Cameron Cavitt [mailto:ccavitt@cheboygancounty.net]
Sent: Wednesday, May 17, 2017 3:23 PM
To: Nelson
Cc: Cameron Cavitt
Subject: RE: Request for Letter of Support to be sent to the MPSC

Nelson,

My apologies for not replying in a more timely manner. I mentioned your request for a letter of support for your hydroelectric plants on the Black River to county commissioner Richard Sangster and received a favorable response. I then contacted county administrator Jeff Lawson on the process for the letters.

It is my understanding you are seeking two letters of support. A letter to the Michigan Public Service Commission and another to the Army Corp of Engineers. Obviously, both would need to include separate language. I would be glad help with this process especially the letter to the Army Corp regarding studies to be done on the Smith Rapids.

A quick conversation with Jeff Lawson the administrator should get this ball rolling. Let me know how that conversation goes please. If we need to go through my office to present to the board of commissioners it wont be a problem. I can craft something in a more prompt manner.

Also you requested some info for other local officials I will provide those names bellow:

Jeff Lawson Cheboygan County Administrator. (231) 627-8855 adminlawson@cheboygancounty.net

Tom Eustice is the Cheboygan City Administrator. (231) 627-9931 teustice@cheboygan.org

Mark Bronson is the Mayor of Cheboygan (also director of the Cheboygan Library)

Kelli Stockwell is the Onaway City Manager. (989) 733-8313

Gary Wregglesworth is the Mayor of Onaway

Tim Paulus is the Forrest Township Supervisor (989) 733-8849 (Tower an unincorporated town and Kleber Dam is located here)

Kory Hyde is the Waverly Township Supervisor (989) 733-8995 (Tower Dam is located here)

Andy Archambo is the Benton Township Supervisor (231) 420-3882 Alverno Dam is located here)

Mary Ann Heidemann is the Presque Isle County Drain Commissioner (989) 351-9700 mamaphd@frontier.com

I hope this helps.

Nelson, as always if i can be of any assistance please feel free to pick up the phone and give me a call. Thanks in advance. (231) 420-2118

Sincerely,

Cam Cavitt
Cheboygan County
Drain Commissioner

From: Nelson [hydro@eastlink.ca]
Sent: Monday, May 01, 2017 9:56 AM
To: gary.melow@michiganbiomass.com; tuckerjkgam@aol.com; Cameron Cavitt
Subject: Request for Letter of Support to be sent to the MPSC

Good Morning Cam:

I was wondering if you can point me in the right direction with Cheboygan County to request a County Commissioner or Executive Draft a letter on their letterhead in support of our hydroelectric plants on the Black River.

Of course we have the Tower and Kleber plants under the Tower Kleber LP ownership and the Alverno plant under the Black River LP ownership. All these plants sit in Cheboygan County - and parts of Black Lake are in Presque Iles County.

The case before the MPSC (docket U-18090) has been ongoing for well over a year now and all filings are in and ready to be ruled upon by the three, commissioners noted below.

If you can provide the name and email of a contact at the County who would file a letter or send us a letter, signed and in pdf format that we can have our Gary Melow (representing the MIPPC - Michigan Independent Power Producer's Coalition), this would be quite helpful and appreciated.

Cam - also for the City of Cheboygan and for the Towns of Onaway and Tower - are there Mayors?

Jim - can you get a name at Presque Iles whom we can reach out to.

thx
Nelson

Sally A. Talberg
Chairman
MI Public Service Commission
7109 W. Saginaw Highway
Lansing, MI 48917

Norman J. Saari
Commissioner
MI Public Service Commission
7109 W. Saginaw Highway
Lansing, MI 48917

Rachael A. Eubanks
Commissioner
MI Public Service Commission
7109 W. Saginaw Highway
Lansing, MI 48917

Community Letterhead and Address

Dear Commissioners:

I'm writing to express my support for Michigan's small independent power generators that are part of the Commission's avoided cost docket U-18090. I'm asking you to adopt the positions of the Independent Power Producers Coalition of Michigan.

[FACILITY] is located in **[MY COMMUNITY]**. Without fair and non-discriminatory avoided costs, these and many other small power producers will close, resulting in the loss of resource-based jobs and tax base that contribute greatly to our quality of life here. Unemployment in our region is already high, and we can't afford to lose these jobs and economic support. Gone, too, will be their contributions to the state's energy portfolio, grid support, their significant contributions toward Michigan's renewable energy goals, and a host of other benefits.

[FACILITY] is a major tax payer, job provider, and member of our community that accounts for **[OTHER ATTRIBUTES, I.E. RECs, LOW-COST DISPOSAL, DAM ABANDONMENT, ETC.]**

These ancillary services make these [FACILITIES] a “most” reasonable and prudent source of energy. I encourage the Commission to value these services as it sets the avoided costs that will enable these power generators to continue making valuable contributions to their communities and Michigan’s energy portfolio.

Sincerely,

PUBLIC

From: James Tucker tuckerjkgam@aol.com

Date: Monday, July 31, 2017 at 7:27 AM

To: "blacklakeassociation@gmail.com" <blacklakeassociation@gmail.com>, "bhaas1000@gmail.com" <bhaas1000@gmail.com>, Nelson Turcotte <hydro@eastlink.ca>, "tiffanyheon@hotmail.com" <tiffanyheon@hotmail.com>, James Tucker tuckerjkgam@aol.com

Subject: black Lake Level Update 7/31/17

July 31, 2017

Black Lake Level 612.13

Alverno Head Pond Level 611.90

Alverno Flow 367 CFS

Kleber Dam Flow 235 CFS

BRLP

From: James Tucker <tuckerjkgam@aol.com>

Date: Saturday, July 22, 2017 at 6:36 AM

To: "blacklakeassociation@gmail.com" <blacklakeassociation@gmail.com>, "bhaas1000@gmail.com" <bhaas1000@gmail.com>

Cc: Nelson Turcotte <hydro@eastlink.ca>, "tiffanyheon@hotmail.com" <tiffanyheon@hotmail.com>

Subject: Black Lake Update 7/18/17

Black Lake Level and Flow updates as of 7/18/17.

Cheboygan County approved the installation of a Black Lake Level Gauge and it has been installed on the Harbor Light Bridge on Black River Road and a couple pictures of it are included with this email.

Black Lake Level 6121.17

Alverno Head Pond Level 611.90

Alverno Flow 340 cfs

Kleber Dam Flow 207 cfs

Thank You

Black River Limited Partnership

From: James Tucker tuckerjkgam@aol.com
Date: Monday, July 3, 2017 at 6:36 AM
To: "blacklakeassociation@gmail.com" <blacklakeassociation@gmail.com>, "bhaas1000@gmail.com" <bhaas1000@gmail.com>, Nelson Turcotte <hydro@eastlink.ca>, "tiffanyheon@hotmail.com" <tiffanyheon@hotmail.com>, James Tucker tuckerjkgam@aol.com
Subject: Black Lake Level Update 7-3-17

Black Lake Water Level and Flow update 7-3-17

Black Lake Water Level- 612.42
Alverno Dam Water Level- 611.62
Alverno Dam Flow -719 CFS
Kleber Dam Flow- 340 CFS

BRLP

From: James Tucker <tuckerjkgam@aol.com>
Date: Monday, June 19, 2017 at 7:54 AM
To: "blacklakeassociation@gmail.com" <blacklakeassociation@gmail.com>, "bhaas1000@gmail.com" <bhaas1000@gmail.com>, Nelson Turcotte <hydro@eastlink.ca>, "tiffanyheon@hotmail.com" <tiffanyheon@hotmail.com>, James Tucker <tuckerjkgam@aol.com>
Subject: Black Lake Level Update 6/17/17

Here is the Black Lake Level Update as of 6/17/17

Black Lake Level 612.05
Alverno Pond Level -611.85
Alverno Flow 278 CFS
Kleber Dam Flow 247 CFS

The Rainy River Bridge Lake Level Gauge has been installed. I have attached a couple pictures for location reference at the bridge.

We expect the lake level gauge on the west side to be installed soon and will update when that is completed.

BRLP

From: tuckerjkgam <tuckerjkgam@aol.com>
To: jsmigelski <jsmigelski@piroad.com> (Presque Isle County)
Sent: Mon, Jun 19, 2017 7:05 am
Subject: Fwd: Rainy River Bridge Gauge Boards

Jerry, we have the gauge board for the lake level installed at the Rainy River Bridge on county road 489. Here are a couple photos for your records as requested. Let me know if you have any questions.
Our permit # is 2017-139.

Thanks,

Jim

From: James Tucker <tuckerjkgam@aol.com>
Date: Sunday, May 14, 2017 at 7:36 AM
To: James Miller <mille76532@yahoo.com>, "b3collision@yahoo.com" <b3collision@yahoo.com>, "rustygowland@gmail.com" <rustygowland@gmail.com>, "SDulak@SRC-MILP.com" <SDulak@SRC-MILP.com>, "blacklakeassociation@gmail.com" <blacklakeassociation@gmail.com>, "bhaas1000@gmail.com" <bhaas1000@gmail.com>, Nelson Turcotte <hydro@eastlink.ca>, "tiffanyheon@hotmail.com" <tiffanyheon@hotmail.com>, James Tucker <tuckerjkgam@aol.com>, "rick.scherer@edwardjones.com" <rick.scherer@edwardjones.com>
Subject: Black Lake Level Update

Wednesday 5/10/17

Black Lake Level -612.41
Alverno Head Pond Level -611.49
Alverno Total Flow -963 CFS
Kleber Dam Total Flow -544 CFS

Friday 5/12/17

Black Lake Level -612.24
Alverno Head Pond Level -611.73
Alverno Total Flow -741 CFS
Kleber Dam Total Flow -366 CFS

BRLP

From: James Tucker <tuckerjkgam@aol.com>
Date: Monday, May 8, 2017 at 7:51 AM
To: James Miller <mille76532@yahoo.com>, "b3collision@yahoo.com" <b3collision@yahoo.com>, "rustygowland@gmail.com" <rustygowland@gmail.com>, "SDulak@SRC-MILP.com" <SDulak@SRC-MILP.com>, "blacklakeassociation@gmail.com" <blacklakeassociation@gmail.com>, "bhaas1000@gmail.com" <bhaas1000@gmail.com>, Nelson Turcotte <hydro@eastlink.ca>, "tiffanyheon@hotmail.com" <tiffanyheon@hotmail.com>, James Tucker <tuckerjkgam@aol.com>, "rick.scherer@edwardjones.com" <rick.scherer@edwardjones.com>
Subject: Black Lake Level updates

Friday 5/5/17

Black Lake Level-612.55
Alverno Head Pond Level-611.72
Alverno Total Flow-1072 CFS
Kleber Dam Total Flow-835 CFS

Monday 5/8/17

Black Lake Level-612.50
Alverno Head Pond Level-611.66
Alverno Total Flow-1084 CFS
Kleber Dam Total Flow- 330 CFS

BRLP

From: James Tucker <tuckerjkgam@aol.com>

Date: Thursday, May 4, 2017 at 6:41 AM

To: James Miller <mille76532@yahoo.com>, "b3collision@yahoo.com" <b3collision@yahoo.com>, "rustygowland@gmail.com" <rustygowland@gmail.com>, "SDulak@SRC-MILP.com" <SDulak@SRC-MILP.com>, "blacklakeassociation@gmail.com" <blacklakeassociation@gmail.com>, "bhaas1000@gmail.com" <bhaas1000@gmail.com>, Nelson Turcotte <hydro@eastlink.ca>, "tiffanyheon@hotmail.com" <tiffanyheon@hotmail.com>, James Tucker <tuckerjkgam@aol.com>, "rick.scherer@edwardjones.com" <rick.scherer@edwardjones.com>

Subject: Black Lake Level Update

Monday 5/1/17

Black Lake Level- 612.45

Alverno Head Pond Level- 611.44

Alverno Total Flow- 1017 CFS

Kleber Dam total flow - 297 CFS

NOTE: On Monday at 3:50 pm the lake chart was calibrated to reflect the latest combined survey results from Porter and Granger Survey. The Lake chart was at 612.45 and was corrected .09 to 612.36 to show the corrected lake level.

Wednesday 5/3/17

Black Lake Level - 612.41

Alverno Head Pond Level - 611.52

Alverno Total Flow - 1065

Kleber Dam Total Flow - 816 CFS

BRLP

BLACK LAKE PRESERVATION SOCIETY

On **2017-06-20, 9:56 AM**, "Rusty Gowland" <rustygowland@gmail.com> wrote:

Nelson, Jim, and Tiffany [BRLP],

I am sharing the BLPS response points from the 2016/2017 winter season. We still have some issues to resolve, but feel that the dialog is productive. We are genuine in trying to respect your business interests as we resolve them.

Regards,
Rusty Gowland
President, BLPS

From: Rusty Gowland (BLPS)
Date: Tuesday, June 20, 2017 at 9:56 PM
To: Nelson Turcotte (BRLP), Jim Tucker (BRLP), Tiffany Heon (BRLP)
Cc: Rick Scherer, Bev Haas
Subject: 2016/2017 winter season results

Nelson, Jim, and Tiffany,

I am sharing the BLPS response points from the 2016/2017 winter season. We still have some issues to resolve, but feel that the dialog is productive. We are genuine in trying to respect your business interests as we resolve them.

Regards,
Rusty Gowland
President, BLPS

BLACK LAKE ASSOCIATION

From: James Tucker <tuckerjkgam@aol.com>
Date: Wednesday, May 10, 2017 at 7:28 PM
To: Cindy Trepanier <blacklakeassociation@gmail.com>
Cc: Tiffany Heon <tiffanyheon@hotmail.com>
Subject: Re: Black Lake Level updates

Thanks Cindy, we appreciate the cooperation and support from the Black Lake Association.

Jim

On May 10, 2017, at 11:24 AM, Cindy Trepanier <blacklakeassociation@gmail.com> wrote to Jim Tucker (BRLP):

Jim, the board decided for you to send information to the blacklakeassociation@gmail.com address and I would send out to them. One stop shop. Brett will receive this information from me now, unless there is something you need to discuss with him or inform him of. I hope that helps.

Cindy Trepanier, treasurer
PO Box 302
Onaway, MI 49765
blacklakeassociation@gmail.com

From: James Tucker
Sent: Monday, May 08, 2017 9:30 AM
To: Cindy Trepanier
Subject: Re: Black Lake Level updates

Cindy, I think we are going to an update ever two weeks starting June 1st. We can always supply information upon request. We will also just be sending to one contact at the BLA and one at the BLPS. We would also like the residents to request information and send questions thru those two groups.

Thanks,

Jim

On May 8, 2017, at 08:41, Cindy Trepanier <blacklakeassociation@gmail.com> wrote to Jim Tucker (BRLP):

Jim, I do not know what the agreement is, but once the lake levels out, I think we could do with a reading once a week. I know you keep records so if asked about a certain day we could write you. I think this is over board. I will bring it up at the meeting tonight and see if the board feels the same.

Cindy Trepanier, treasurer
PO Box 302
Onaway, MI 49765
blacklakeassociation@gmail.com

CHEBOYGAN COUNTY

From: Nelson [mailto:hydro@eastlink.ca]
Sent: Sunday, April 30, 2017 3:07 PM
To: ccavitt@cheboygancounty.net
Cc: tuckerjkgam@aol.com; 'Tiffany Heon'; 'Meghan Tucker'; 'Nelson'
Subject: FERC Project P-11730 - Black River LP - Black Lake Level - USACOE
Sample Letter and Program Information FW: [EXTERNAL] P-11730 - Alverno Hydro
Dam - Black Lake Levels issues - conference call with USACOE - March 6th,
2017 - 1:00pm

Hi Cameron -

Listen I have to apologize - I have had this information on my computer since March 6th and just realized now that I have had it.

So - I won't need, at this time, to send an email to Jason Chrumka nor James Luke with the USACOE in Detroit.

So, the following link (see below) gets you to a USACOE website where there is more information about the program under Section 205

<http://www.lre.usace.army.mil/Missions/Planning/Technical-Planning-Assistance/>

Further - I am including a sample draft letter.

Further to a request from BLPS (and I am sure BLA would like to help input into scope request) and I would ask that we might input into the scope detail written into the letter, we are more than willing to work with you on scope development.

If you need a summary of the issue for the letter - we can provide that as well - and I would have Tiffany Heon send something, that is likely already written to you that you can use as an Intro - just let me know.

I think where BLA/BLPS would like to see a new flow study completed at Smith Rapids (i.e. flow curve of water at Smith Rapids vs. Lake Levels), I have heard recently they want flow study completed at our plant as well to integrate that relationship.

Thx Cameron.

It wouldn't hurt for you to review the email string below either as there is some draft scope of study requirements noted below.

Nelson

PORTER'S SURVEY + GRANGER AND ASSOCIATES

From: James Tucker <tuckerjkgam@aol.com>

Date: Monday, May 15, 2017 at 10:39 AM

To: Nelson Turcotte <hydro@eastlink.ca>

Cc: Porter's Survey <ps@portersurvey.com>, Tiffany Heon <tiffanyheon@hotmail.com>

Subject: Re: Black Lake Elevations

Ok I will adjust it

Jim

On May 15, 2017, at 10:12, Nelson <hydro@eastlink.ca> wrote (To Brad Porter; Granger and Jim Tucker):

Great - thx Brad for this.

Jim - it looks like you will have to adjust the Marina gage back by 0.12'. It is saying the lake is lower than it actually is.

Nelson

From: Porter's Survey [mailto:ps@portersurvey.com]

Sent: Monday, May 15, 2017 8:39 AM

To: 'James Tucker'; 'Nelson Turcotte'

Subject: FW: Black Lake Elevations

Nelson;

We went out to the locations and verified the water elevations with the current gauge readings and discussed them with Mr. Granger and found that the following readings are the same as his.

I had Mr. Granger prepare the below E-Mail so that hopefully we can put this to bed with the BLPS. I would suggest having Jim adjust the Black River Marina 0.12' lower to match the water level.

If you have any questions, please feel free to contact me.

There will be no charge for the additional work.

Thank you

Brad Porter

Porter's Survey P. C.
Phone: (989) 733-8813
Fax: (989) 733-2977
e-mail: ps@portersurvey.com

From: Granger & Associates [<mailto:grangerandassociates@gmail.com>]
Sent: Thursday, May 11, 2017 7:48 PM
To: beverly haas <bhaas1000@gmail.com>
Cc: Porter's Survey <ps@portersurvey.com>
Subject: Black Lake Elevations

Bev,

We have received the information for the Porter benchmarks at each site location. We visited each site and ran from our benchmarks to his benchmarks and we were consistent with each other's elevations. We also checked into the water elevations again as well. The results were as follows:

Alverno Dam

Water Elevation: 611.49'
Gauge Reading: 611.5'
Gauge is 0.01' higher than the water level.

Black Lake Marina

Water Elevation: 612.62'
Gauge Reading: 612.5'
Gauge is 0.12' lower than the water level.

After this additional work, all benchmarks on site, by Granger and Porter, are all synonymous with each other and have been verified by both Granger and Porter. Now everyone is working from the same benchmark information. If you have any questions feel free to contact me.

Alan J. Granger

Granger & Associates, Inc.
224 S. Main St.
Cheboygan, MI 49721
Phone: 231-627-2763
Web: www.grangerandassociates.net
Email: grangerandassociates@gmail.com

From: Porter's Survey [<mailto:ps@portersurvey.com>]

Sent: Tuesday, May 09, 2017 8:14 AM
To: 'Nelson Turcotte'; 'James Tucker'
Subject: RE: IMPORTANT - WHAT IS GOING ON????? FW: Black Lake Water Elevations

Nelson;
I can completely understand your frustration during this, as we feel the same way.

I will make the attempt to meet with Mr. Grainger and see if we can come up with a common water elevation at both sites.

In any event we will go up again and verify our work with a current water elevation at both locations however if we both still have different numbers in the end, I would highly suggest 3rd party verification of the elevation as a way to get this settled down.

If this is a direction in which you which you wish to pursue, I could make a few suggestions. But we should only pursue this if we have no other choice, as it very well may add a 3rd set of different numbers into the mix, and as the BLPS has issues with even minor differences.

Sincerely,

Brad Porter
Porter's Survey P. C.
Phone: (989) 733-8813
Fax: (989) 733-2977
e-mail: ps@portersurvey.com

On May 8, 2017, at 5:43 PM, Nelson Turcotte <hydro@eastlink.ca> wrote (TO GRANGER AND ASSOCIATES):

According to what you are providing below Mr. Granger, our gages are saying the water is actually lower than it is actually and that is exactly counter to what Brad Porter told us about two weeks ago.

Nelson

From: Nelson [mailto:hydro@eastlink.ca]
Sent: Monday, May 08, 2017 5:41 PM
To: 'grangerandassociates@gmail.com'; 'Porter's Survey'
Cc: 'tuckerjkgam@aol.com'
Subject: IMPORTANT - WHAT IS GOING ON????? FW: Black Lake Water Elevations

Brad/Mr. Granger - I just got this communication from Rick Scherer, representing Black Lake Association.

Would someone tell me what is going on here?

Mr. Granger - I just spent money getting Porter to sit with you and go through all of this. Based, on what I see below, well - it appears to me you still don't agree.

I have heard from Mr. Porter but not from you.

Any clarity one or both of you can provide to the information below - would be helpful

I would rather not respond on this back and forth with the BLPS and need clarity.

Nelson

From: Scherer,Rick [mailto:Rick.Scherer@edwardjones.com]
Sent: Monday, May 08, 2017 9:27 AM
To: Nelson Turcotte
Subject: FW: Black Lake Water Elevations

Nelson: Here is the survey data we received from Grangers last Friday. Once again they (Grangers and Porters) only agreed on the benchmark elevation together. In talking to Brad Porter Friday, he explained that to me, and then said he did not retake any hits of the dam or the lake. He just adjusted his results from November and had Jim adjust the gauge. Grangers actually went out on April 21st and again on May 3rd and took new hits at the lake and found the gauges at the marina are off anywhere from 0.21 before Jim adjusted the gauge and .25 on the 3rd of May, after Jim adjusted the gauge. This 0.25 or 3 inches may not seem like a lot but it would gain the residents about 3-foot of shoreline.

At Alverno dam it looks like his reading was off 0.17' or 2 inches.

Let me know what your thoughts are.

Rick

Rick Scherer

Financial Advisor
Edward Jones
1673 Haslett Road Suite 28
Haslett, MI 48840
(517) 339-7988
www.edwardjones.com

From: "Granger & Associates" <grangerandassociates@gmail.com>
Date: May 5, 2017 8:36 AM
Subject: Black Lake Water Elevations
To: "beverly haas" <bhaas1000@gmail.com>

Bev,

On the recommendation of all involved, we met with Brad Porter on site on April 21 to take several static long term GPS shots for the benchmark QK0050 to verify the elevation of it. The results of the shots determined the elevation of the benchmark to be 688.10' which is 0.03' different than the recorded elevation. This is the elevation of the benchmark that is being used by Porter Survey and ourselves.

Using this new number for the benchmark, we adjusted our previous work in January and February and the results are as follows:

Alverno Dam

- > Measured water elevation: 609.85'
- > Visual reading of staff gauge: 609.7'

Black Lake Marina

- > Measured water elevation: 611.0'

> Visual reading of meter: 610.8'

We also took another measurement of the the water elevations on April 21, 2017 and May 3, 2017. These results are as follows:

Alverno Dam

> Measured water elevation: 611.77' (5-3-17)

> Visual reading of staff gauge: 611.6' (5-3-17)

Black Lake Marina

> Measured water elevation: 612.75' (5-3-17) 613.11' (4-21-17)

> Visual reading of meter: 612.5' (5-3-17) 612.9' (4-21-17)

As you can see from our results, it appears that the gauges differ from the actual readings by approximately 0.2'.

If you have any questions or comments, feel free to contact me.

Have a great day.

Alan J. Granger

Granger & Associates, Inc.
224 S. Main St.
Cheboygan, MI 49721

Phone: 231-627-2763
Web: www.grangerandassociates.net
Email: grangerandassociates@gmail.com

From: Porter's Survey [<mailto:ps@portersurvey.com>]
Sent: Monday, May 01, 2017 8:35 AM
To: 'James Tucker'; 'Nelson'
Subject: RE: Black Lake Staff Gauges

Nelson, Jim;

If you made the change in November, you are correct you will need to adjust the following based on our results and the agreed upon elevation of 688.10, you would have to readjust the gauge .09' at the Black River Marina you would have to adjust Alverno 0.14' if you had not adjusted it in November, If you had then you only need to adjust it .01' however this amount is so small no adjustment should be necessary.

Thank you

Brad Porter
Porter's Survey P. C.
Phone: (989) 733-8813
Fax: (989) 733-2977
e-mail: ps@portersurvey.com

From: James Tucker [<mailto:tuckerjkgam@aol.com>]
Sent: Sunday, April 30, 2017 12:48 PM
To: Nelson <hydro@eastlink.ca>
Cc: Porter's Survey <ps@portersurvey.com>
Subject: Re: Black Lake Staff Gauges

Nelson, I made the required adjustments last November from the first survey, the only adjustment we would need now would be the change from the agreed to bench number.

Jim

On Apr 30, 2017, at 12:26, Nelson <hydro@eastlink.ca> wrote:

Brad - please tell me how much we need to adjust the staff gage at the Plant by and how much we need to adjust the Marina Chart Recorder.

My understanding is that the chart recorder is now reading .09 feet too high - meaning if it says, for example 612.09 right now, we need to move it down to 612.0 correct?

For the Plant/Dam - we need to move the staff gage out of the water by 0.15 correct?

Just let me know those two things.

Send the \$1,000 invoice to me so I can get you paid.

Later in the year we will have you to do Movement Verification for Tower, Kleber - Alverno is not required I believe - will check with Jim.

As for the other work - I think we will just shoot of the water ourselves to install a gage - it is not having to be overly precise - just an indication for the general public to see where the lake is.

thx Brad.

Nelson

From: Porter's Survey [<mailto:ps@portersurvey.com>]
Sent: Friday, April 28, 2017 1:52 PM
To: 'Nelson'
Cc: tuckerjkgam@aol.com
Subject: Black Lake Staff Gauges

Nelson;

The answer to your question is yes, you are reading slightly higher than the water level truly is.

We currently have 13 hours of work and travel involved in the verification at \$150.00/hour or \$1,950.00, but I feel this is high as we did a lot of sitting waiting for equipment to complete its work, so I am only going to charge \$1,000.00 for the verification and meetings.

To transfer the elevation to both bridges and to help adjust each staff gauge location, based on the recorded elevation of 688.07' from the QK0050 bench, will be no issue at the F-05 bridge between Black Lake and the Alverno Facility

as it is within our GPS radio range. however the Bridge between the Kleber Facility and Black lake by 5 mile point road will take more work to transfer the elevation. We would intend to set a ½" rod & cap at each bridge for future use and a Mark on the Concrete of each bridge for ease of transfer to the gauge should there be need to be verified. I would recommend that Jim place or provide us with two disks similar to those at the Dams for the movement studies set in the concrete on the bridges where we specify. We would be looking at \$2,500.00 this will cover 2 days work on the project.

you may also want to think about getting a Movement Verification study completed on all three Facilities (Tower, Kleber, Alverno) while we are in the area, but only if one is due this year, in order to help keep the price down due to additional trips to the sites. Doing this would add \$1,500.00 to the price.

If this is all agreeable, please let me know, and we can work forward to arranging a common Date with Jim and Mr. Granger. If Mr. Granger does not wish to participate if he does not get authorization from BLPS, we will still be able to complete the work.

Also, if you would like us to set and adjust the gauges based on the adjusted value of 688.10' based on both our results, please let me know however it will only move 0.03' and would not be seen on a staff gauge.

Thank you

Brad Porter
Porter's Survey P. C.
Phone: (989) 733-8813
Fax: (989) 733-2977
e-mail: ps@portersurvey.com

From: Nelson Turcotte <hydro@eastlink.ca>
Date: Friday, April 28, 2017 at 8:51 AM
To: 'Porter's Survey' <ps@portersurvey.com>, "grangerandassociates@gmail.com" <grangerandassociates@gmail.com>
Cc: 'Tiffany Heon' <tiffanyheon@hotmail.com>, James Tucker <tuckerjkgam@aol.com>, "'Scherer,Rick'" <Rick.Scherer@edwardjones.com>, "rustygowland@gmail.com" <rustygowland@gmail.com>
Subject: RE: Black Lake Level Issue - comparison of Surveys from Porter and Granger Surveying Firms - need to have Porter and Granger speak about discrepancies

Thank-you Brad.

So, to be clear:

1. Based on your November work and this work, now, assuming Jim has not made any adjustments to the Marina chart recorder or to our metal staff gage at the Alverno Facility, our chart recorder, at Black Lake Marina and our staff gage at the Alverno facility are saying we are higher in water elevation than we really, in reality are?

If your answer to this is yes, then I will have Jim call you to do a couple of things:

1. meet with him in the field and tell him at that time when you meet - where to adjust the chart recorder at the Black Lake Marina
2. meet with him at the plant and shoot in the installation of a new/clean staff gage (he will have the tools, boat and everything ready to go for your planned meeting day and time)

3. Assuming, we have permission from both Presque Iles County and Cheboygan County to install new staff gages on the bridges on either side of the lake (and Jim has been working on this), install a benchmark on these bridges and shoot in for Jim the install of a new staff gage at each bridge.

4. Bottom Line - assuming Jim did not make any changes to the Black Lake Marina Chart Recorder or the Alverno Facility Staff gage, after your November survey - are we still reading the lake and pond too high (in other words the lake and pond are really lower than we think).

I will leave it up to Jim as to what would be a good day for this and to coordinate with you. It may be two outings to complete this work - not sure. Should Mr. Granger wish to attend, we will most certainly have Jim update him on days and timing and of course his time would be picked up by the BLPS.

Jim

- please make up/purchase three staff gages - one for Alverno and one for each of the two bridges
- maybe pre-install and design into the staff gages slotted grooves for slide adjustment along the anchor screw/bolt - that will save time for the survey team - I will leave that up to you

Brad - can you provide a quote for install of Bench Marks on these bridges so that we (Jim and his team can check the new staff gages on the bridge each year against your bench mark themselves). Also provide a price for, really all the rest of the field work required in 1. through 3., above.

Jim - did you make any changes to the Marina gage in November after Porter Survey's November work and/or to the staff gage at Alverno after Porter's November work?

Nelson

From: Porter's Survey [mailto:ps@portersurvey.com]

Sent: Friday, April 28, 2017 8:33 AM

To: 'Nelson'; grangerandassociates@gmail.com

Cc: 'Tiffany Heon'; tuckerjkgam@aol.com; 'Scherer,Rick'; rustygowland@gmail.com

Subject: RE: Black Lake Level Issue - comparison of Surveys from Porter and Granger Surveying Firms - need to have Porter and Granger speak about discrepancies

Nelson;

1. Are you saying our Black Lake Marina gauge is still reading too high (i.e. we are actually lower on Black Lake than we think we are from the Marina chart recorder)?

When we checked the staff gauge in November based on the Bench QK0050 with a recorded elevation of 688.07, your Staff Gauge was 612.10' and we measured 611.80' making the Staff Gauge 0.30' to high. Please be aware that the adjusted number would not have been used at all

if there had been an established elevation bench at the site. As it was only used to verify the transfer of the bench data, using this adjusted elevation that both Mr. Grainger and Porter's Survey obtained, 688.10' at the bench, and your staff gauge was 612.10' with an adjusted number of 611.71' would leave your staff gauge in November at 0.39' too high a difference of 0.09' over the direct transfer.

2. Was this a table top exercise and you just went through your numbers with Mr. Granger?

No, actually below is the work we performed to finalize the numbers on the Elevation Bench QK0050 as this was the contention that changes our final numbers.

Porter Survey Work

Date	Reading	Description
------	---------	-------------

11-02-2016	688.20'	Original Reading
01-11-2017	688.21'	Reprocess Original Reading (In office)
04-17-2017	687.92'	Re-Take Position #1
04-17-2017	688.10'	Re-Take Position #2
04-21-2017	688.17'	Meeting with Mr. Granger Re-Take Position
04-21-2017	687.93'	Meeting with Mr. Granger, Position taken on ½ rod & cap way from Bench and level looped into bench
04-24-2017	688.09'	All previous readings averaged to verify against Elevation Bench QK0050 at 688.07'

Mr. Granger Work

01-21-2017	687.43'	Original Reading
01-31-2017	687.68'	Re-Take Position
02-25-2017	687.54'	Position taken on ½" rod & cap away from bench and level looped into bench
04-14-2017	687.68'	Reprocess Original Reading (In Office)
04-21-2017	688.10'	Meeting with Mr. Porter, Position taken on ½" rod & cap way from Bench and Level looped into bench
04-24-2017	687.69'	All previous readings averaged to verify against elevation Bench QK0050 at 688.07'

As you can see Mr. Granger is quite a bit different from us in all shots except when we took shots together where the difference is 0.17' which is accountable to the post processing system and different equipment and how it selects its verification, however we both obtained the same reading of 688.10' on 04-17-2017 and 04-21-2017. We have put a lot of time into this to verify the information.

3. For the Alverno Facility, I don't believe Jim has adjusted the staff gage. So, if he hasn't, are you saying that our staff gage is reading too high and it should be raised? In otherwards we are running the pond at the Alverno Facility lower than we think we are by the reading on the Staff Gage at the intake of the Alverno Facility?

When we checked the staff gauge in November based on the Bench QK0050 with a recorded elevation of 688.07, your Staff Gauge was 611.5' and we measured 611.35' making the Staff Gauge 0.15' to high. Please be aware that the adjusted number would not have been used at all if there had been an established elevation bench at the site. As it was only used to verify the transfer of the bench data. as such using this adjusted elevation that both Mr. Grainger and Porter's Survey obtained, 688.10' at the bench, and your staff gauge was 611.5' with an adjusted number of 611.36' would leave your staff in November at 0.14' to high, a difference of 0.01' over the direct transfer.

It is my opinion that the original staff gauges were set and based from a direct reading from a recorded existing Elevation bench as described in my original letter, that has since been destroyed the bench we used is the next closest position and would expect minor differences based on how these positions were established.

I hope this covers all your questions, feel free to contact me regarding anything else you may need

Thank you

Brad Porter
Porter's Survey P. C.

Phone: (989) 733-8813
Fax: (989) 733-2977
e-mail: ps@portersurvey.com

From: Nelson [<mailto:hydro@eastlink.ca>]
Sent: Friday, April 28, 2017 7:20 AM
To: 'Porter's Survey' <ps@portersurvey.com>; grangerandassociates@gmail.com
Cc: 'Tiffany Heon' <tiffanyheon@hotmail.com>; tuckerjkgam@aol.com; 'Scherer,Rick' <Rick.Scherer@edwardjones.com>; 'Nelson' <hydro@eastlink.ca>; rustygowland@gmail.com
Subject: RE: Black Lake Level Issue - comparison of Surveys from Porter and Granger Surveying Firms - need to have Porter and Granger speak about discrepancies

Thank-you Brad and Mr. Granger for your work on this.

Jim - once this string of back and forth emails is concluded today, please send the entire string onto BLA and BLPS.

I would like to verify the following:

1. Are you saying our Black Lake Marina gauge is still reading too high (i.e. we are actually lower on Black Lake than we think we are from the Marina chart recorder)?
2. Was this a table top exercise and you just went through your numbers with Mr. Granger?

The reason I ask question, 2, above is that Jim Tucker adjusted the Marina chart recorder by 0.3' so we would correct to your readings (i.e. adjust the chart recorder down so we are actually reading the proper lower reading that the Lake was actually at).

3. For the Alverno Facility, I don't believe Jim has adjusted the staff gage. So, if he hasn't, are you saying that our staff gage is reading too high and it should be raised? Inotherwards we are running the pond at the Alverno Facility lower than we think we are by the reading on the Staff Gage at the intake of the Alverno Facility?

Based on your responses to the three questions, above, we will then be able to provide direction on actual field work help we need. But, my assumption before your responses is that we will likely need you and Mr. Granger to help us at both facilities, in the field to witness our moves on these gages. Of course, we will need BLPS' approval for Mr. Granger's time and cost to attend in the field with you Brad.

If you can respond today, that would be great.

thx
Nelson

From: Porter's Survey [<mailto:ps@portersurvey.com>]
Sent: Thursday, April 27, 2017 2:54 PM
To: 'Nelson'; grangerandassociates@gmail.com
Cc: 'Tiffany Heon'; tuckerjkgam@aol.com; 'Scherer,Rick'
Subject: RE: Black Lake Level Issue - comparison of Surveys from Porter and Granger Surveying Firms - need to have Porter and Granger speak about discrepancies

Nelson;

Based on our letter dated November 7, 2016 in which we transferred the Bench number QK0050 as referenced in our original letter with an elevation being listed as 688.07' to the water level of both the Alverno Facility and Black River Marina in comparison with the current gauges, we found that the water level at Black River Marina was 611.80' and adjusted to 611.81' the gauge read 612.10' and at the Alverno Facility water level was 611.35' and adjusted to 611.46' the gauge read 611.5'. We verified these readings by using a static long term GPS shot as a comparison to make sure this was the true bench and that the equipment being used could transfer the elevation correctly making up the adjusted number. After your E-Mail below, Mr. Granger and I proceeded to verify the bench several more times with our GPS units. We were both able to obtain a common result of 688.10' on the QK0050 bench being 0.03' different than the recorded elevation.

Using this number to verify the gauge readings from November we find the following water level at Black Lake Marina being 611.80' and adjusted to 611.71' the gauge reading 612.10'. The Alverno Facility being 611.35', adjusted to 611.36' the gauge reading 611.5'. as you can note there is a very small difference from our original readings, and that Mr. Granger now agrees with our results.

If you would like us to revisit the site to set the gauge level, please let me know, Mr. Granger would join us in acquiring these results.

Thank you

Brad Porter
Porter's Survey P. C.
Phone: (989) 733-8813
Fax: (989) 733-2977
e-mail: ps@portersurvey.com

From: Nelson [<mailto:hydro@eastlink.ca>]
Sent: Friday, March 31, 2017 10:09 AM
To: grangerandassociates@gmail.com; 'Porter's Survey' <ps@portersurvey.com>
Cc: Tiffany Heon <tiffanyheon@hotmail.com>; tuckerjkgam@aol.com; 'Scherer,Rick' <Rick.Scherer@edwardjones.com>; 'Nelson' <hydro@eastlink.ca>
Subject: Black Lake Level Issue - comparison of Surveys from Porter and Granger Surveying Firms - need to have Porter and Granger speak about discrepancies

Good Morning Brad and Alan

I am attaching the survey reports from Granger and from Porter for your work to check out Black Lake levels against the Marina gage and against our staff gage at our powerhouse at the Alverno dam.

Brad - can you give Alan, at Granger a call, next week and discuss your procedures and why you might be out. If necessary, if you need to go to the field together, Black River LP is willing to compensate you, Brad for your share of the joint check/work that might be required in the field to double check things. Of course, Alan - if you can work things out with the BLPS that would be good.

At Alverno Dam Headpond

Granger's results showed that our staff gage is sitting .4' too low in the water (i.e. its reading too high) while Porter said .15'. We want to know more precisely where it is sitting so we can adjust the staff gage and adjust the computer settings.

At Black Lake Marina compared to the Lake

In December, Porter said we were .3' high at the Marina Gage and so Jim made the adjustment. Yet, now in January of this year, after Jim made an adjustment, at the Marina gage, Granger's results still have the Marina gage .3' off from the actual lake.

Can you guys help us clean this item up. If and when you plan to go back out to the field - can you please contact Jim Tucker and, in turn, Jim will contact someone from the BLA and BLPS to attend for the last bit of siting work at the Marina and at the Powerhouse

Thank-you

Nelson Turcotte
Black River LP

Jim - please send this email on to BLPS and BLA