

December 3, 2016

[REDACTED]  
[REDACTED]  
Ministry of Natural Resources and Forestry

[REDACTED]  
300 Water Street  
Peterborough, ON K9J 8M5

Phone: [REDACTED]

E-mail: [REDACTED]

Dear [REDACTED]:

## **Re: Proposed Hydro-electric Generating Station at the Bala Falls**

### **Summary**

The construction of the proposed Bala generating station would increase the possible flow through the Bala north channel so that the District Municipality of Muskoka's bridge would be exposed to flows it would not have been designed to handle.

Confirming that riparian rights holders have been notified of this change, and that it has been shown this increase in flow would not damage public infrastructure should be part of the MNRF's assessment of the proponent's Plans and Specifications.

### **Detail**

While I continue to look forward to a response to my August 8, 2016 e-mail and August 16, 2016 letter to you, some other concerns have become known to me for the proposed hydro-electric generating station at the Bala falls, as follows.

1) I understand that:

a) The Bala north dam has a maximum capacity of approximately 218 m<sup>3</sup>/s. This would therefore be the maximum flow ever withstood by both:

- The support piers and abutments for the District Municipality of Muskoka's (DMM's) Muskoka Road 169 bridge over the Bala north channel.
- The shoreline of the Bala north channel.

b) By creating a new water outlet to the Moon River, the construction of the proposed hydro-electric generating station at the Bala falls would increase the possible flow through the Bala north channel. This increase would be up to 96 m<sup>3</sup>/s – which is the maximum capacity of the proposed Bala generating station.

2) Therefore, due to the proposed construction, the Bala north channel and the DMM's bridge would need to withstand a flow of (218 + 96 =) 314 m<sup>3</sup>/s – which would be a flow increase of (96/218 m<sup>3</sup>/s =) 44%.

I realize that the Bala south dam is the primary water control structure for flows to the Moon River, but through inadvertent operation of the proposed generating station, or through necessity (for example, if the Bala Falls Road bridge over the Bala south

channel was in need of repair), it should be determined that any operation of the proposed generating station could not result in damage to the DMM's bridge.

- 3) Examining the average daily flow data through Bala from Environment Canada's WaterOffice for the 16,579 days from 1965 through 2010 for which they have confirmed correct data shows this flow:
  - a) Exceeded 314 m<sup>3</sup>/s on a total of 68 days. As noted above, this 44% increase in flow would correspond to both the Bala north dam and the proposed generating station operating at full capacity.
  - b) Exceeded 272 m<sup>3</sup>/s on a total of 269 days. This would correspond to just a 25% increase in the current maximum north channel flow.

These flows have occurred often enough (on 0.4% and 1.6% of all days, respectively), that this increased flow through the Bala north channel must not cause damage to infrastructure.

- 4) Concerns include:
  - a) The ability of the support piers for the DMM's bridge to withstand both:
    - This increased flow.
    - The change in direction of this flow due to the location of the proposed generating station's intake and the deflection wall planned.
  - b) The condition of these support piers, including the detrimental effects of the proposed blasting and excavation, especially considering there have not been any subsurface investigations at these locations.
  - c) The increased flow causing erosion:
    - Of the Bala north channel's banks.
    - At the DMM's bridge abutments.
  - d) Upstream of the DMM bridge is the CP Rail bridge over the Bala north channel. This CP Rail bridge's pier and abutment were substantially widened in the Fall of 2015 as part of major concrete repair work. As this constricted flow would result in greater water velocity to handle the same volume of water, previous flow simulations and calculations would need to be updated.

Please respond with whether:

- Any investigations or changes have been required or should be undertaken as a result.
- These negative impacts have been conveyed to the riparian rights holders, including CP Rail and the DMM.

Thank you.

Sincerely,



Mitchell Shnier, on behalf of SaveTheBalaFalls.com

Cc: Norm Miller, MPP for Parry Sound – Muskoka, Norm.Miller@pc.ola.org

