Falls River Water Use Plan

Monitoring Program Terms of Reference

FLSMON-6 Big Falls Reservoir Wildlife Shoreline Habitat Monitoring

Addendum 1
October 3, 2018

A1.0 Addendum to FLSMON-6 Big Falls Reservoir Wildlife Shoreline Habitat Monitoring

A1.1.1 Addendum Rationale

The Consultative Committee (CC) expressed concern that changes in the seasonal operation of the Big Falls Reservoir would flood wildlife nesting and denning sites. Specifically, the CC was concerned that wildlife species may establish nests or dens around the reservoir, between the elevations of 90.3 metres and 92.4 metres above sea level, and could be vulnerable to flooding impacts which would occur with flashboards installed.

On November 28, 2006 we received approval for the FLSMON-6 TOR in accordance with the Order dated April 4, 2006, Clause 5 (f) for monitoring of

f). Wildlife habitat (nests and dens) in the reservoir drawdown zone.

A key objective during the Water Use Plan (WUP) was to maximize the abundance and diversity of wildlife using the area around the reservoir; a sub-objective was to minimize flooding of wildlife dens and bird nests in the period of time during flashboard installation (February 15 to March 15). Operations under the WUP specify that flashboards be installed from February 15 to May 15.

Field work for FLSMON-6 was initiated in 2007 to assess/confirm that the WUP flashboard operation was not having a negative impact on wildlife nesting and denning in the drawdown zone. FLSMON-6 occurred over three years and was completed in 2010.

The Falls River WUP Annual Report submission, dated November 28, 2017, stated that work under FLSMON-6 was finalized. However during a program review in 2018 an opportunity was identified that would allow the management questions to be answered with greater certainty. While no changes to the terms of reference or management questions are recommended, we request funding to conduct a small additional desk top analysis to supplement the core body of work that was completed previously. Specifically, proposed work will reduce remaining uncertainties regarding the probability of species nesting in the drawdown zone prior to flashboard installation.

A2.0 Monitoring Addendum Program Proposal

A2.1 Approach

A desktop study will be conducted to assess the potential risk to nests (positioned below the full pool elevation: 92.4 m) of ground-nesting bird species associated with WUP flashboard installation at Falls River Reservoir. A comprehensive list of relevant ground nesting species will be compiled, and their nesting season will be determined. From this information there will be increased clarification on (1) which species could potentially be vulnerable to impacts from reservoir operations in general at Falls River Reservoir; and (2) which of these species nest early enough to have been vulnerable to impacts resulting from the WUP-prescribed flashboard operation.

A2.2 **Methods**

Determining which bird species are expected to occur in the Big Falls Reservoir region will utilize existing on-line tools and published literature. For the purposes of this analysis, the Big Falls Reservoir region will be defined as the Central Coast, Kitimat-Stikine and Skeena-Haida-Gwaii Regional Districts.

The desktop analysis will review on-line and published materials including Provincial Ecosystem Explorer (Government of BC, 2018), local bird lists published on-line (e-bird) (Bird Studies Canada, 2018), and Birds of BC (Campbell et al. 1990a, 1990b, 1997, 2001). The regional list will then be refined to a short list of those species that nest on the ground in habitats similar to those found in the reservoir. The timing of nesting (phenology) for each species will provide the final short list to assess for potential interactions between nesting birds and the WUP operation involving flashboard installation between February 15 and May 15.

A2.2.1 Reporting

The desktop review will be summarized in full in a short independent report. The desktop report will provide a clear methods section outlining the sources of the data and the selection process. In addition, disclosing how nesting phenologies (i.e., nesting timing) are determined will be described. The results will highlight which species potentially nest in the drawdown zone, and when the earliest nesting can be expected (i.e. temporal overlap). This data will allow interactions between WUP flashboard operation and birds nesting in the drawdown zone to be verified. A brief discussion will consider limitations and assumptions of the research, and will highlight potential risks of flashboard operations to ground-nesting birds.

A2.3 **Interpretation of Monitoring Program Results**

Results from the desktop review will provide a more detailed account of general bird nest flooding risks. These results will be interpreted with respect to the WUP flashboard operation, and will provide essential information for future WUP-related decisions for Big Falls Reservoir.

A2.4 **Schedule**

The monitoring program will be extended to the end of fall 2018.

A2.5 **Budget**

Total Revised Program Cost: $40,186.

A3.0 References

Bird Studies Canada (2018) Retrieved from website https://ebird.org/canada/home
eBird Canada is a collaborative project managed by Bird Studies Canada

Campbell et al. (1990a) Birds of BC Volume 1. UBC Press, Vancouver, BC.

Campbell et al. (1990b) Birds of BC Volume 2. UBC Press, Vancouver, BC.

Campbell et al. (1997) Birds of BC Volume 3. UBC Press, Vancouver, BC.

Campbell et al. (2001) Birds of BC Volume 4. UBC Press, Vancouver, BC.

Government of BC (2018). BC Species and Ecosystems Explorer. Retrieved from website https://www2.gov.bc.ca/gov/content/environment/plants-animals-ecosystems/conservation-data-centre/explore-cdc-data/species-and-ecosystems-explorer