KEEYASK HYDROPOWER LIMITED PARTNERSHIP

Rebuttal to D. Soprovich Report and Presentation, Keeyask CEC Hearings

December 31, 2013

1. In his review of the olive-sided flycatcher model, Mr. Soprovich made a number of claims that information was lacking. For instance:
    - *(Pg 21)-"I have been unable to determine if Keeyask Generation Project and its consultants attempted to constrain sampling to some distance from edges, as Keeyask Generation Project (Terrestrial Environment. Section 6: Birds) and Ecostem et al. (2013) in its draft document are silent in this regard."*

Response:

The olive-sided flycatcher model was verified using data points from a large breeding bird dataset consisting of over 1100 survey locations sampled between 2001 and 2012.

The sampling design evolved over the years so as to better answer Project-related questions, with surveys targeting the bird community as a whole between 2001 and 2011. Between2011-2013, species-specific sampling occurred for species listed under the *Species at Risk Act* (SARA). In addition to sampling homogenous habitats, surveys of natural edge habitat (e.g., creeks, lake shores, beaver floods) and areas supporting edge habitat (e.g., regenerating forest) were also surveyed, particularly as these edge habitats are preferred by certain species (including olive-sided flycatcher [Altman and Salabanks 2012]). While published survey protocols suggest avoiding edge habitat, it is very difficult to do so in a region that is dominated by wetland habitats and Stantec (formerly TetrES) viewed this as important habitat to characterize and understand in relation to bird communities.

Stantec provides the following detail on the methods used, as described in the Keeyask Avian 2012 Field Report, to survey for olive-sided flycatcher:

- *Using the Ecostem habitat dataset, point count listing stations/stops were located in primary olive-sided flycatcher habitat (as defined in the TE SV Appendix 6B, Table 6B-8). Listening stops were located 300 m apart in order to minimize double counting of birds.*
    - *Point count surveys followed standard protocols for sampling forest birds (*Ralph *et al*. 1993; Welsh 1993)*. All birds detected within 75 m during a 5 minute listening period were recorded.*
- *Remote recording units were deployed in forest openings (within 100 m of forest edge) and along riparian zones (e.g., lakeshores, edges of wetlands). These areas provide suitable habitat for species at risk including olive-sided flycatcher. Units were programed to record nocturnally active birds (e.g., common nighthawk, yellow rail) and also diurnally active birds (e.g., olive-sided flycatcher, rusty blackbird that sing or call during the early morning hours).*

- *Reconnaissance – although not a method, olive-sided flycatchers detected between survey locations or beyond the 5 minute listening period were recorded as incidentals (details recorded included the approximate distance between singing bird and biologist and direction of its call such that an approximate location of the bird could be determined).*

2. In his review of the olive-sided flycatcher model, Mr. Soprovich made a number of claims that information was lacking. For instance:
    - *(Pg 24) -"In its draft report, Ecostem et al. (2013) state that "As the majority of field observations fell within habitat identified as primary or secondary habitat, the model appears to perform well.". However, the 'evidence' provided by Keeyask Generation Project's consultants (Ecostem et al. 2013) does not support the statement."*

Response:

All data (where olive-sided flycatcher were observed within the 75 m radius sample plots), were used in the model verification analysis. As described in the modeling report (Section 7.4.1, pg 7-21):

> 'In total, there were 39 observations of olive-sided flycatcher that fell within the 75-m radius point-count stops between 2001 and 2012. Of these observations, 23 (59%) were within areas identified as either primary or secondary habitat for olive-sided flycatcher. Five (13%) of the observations were within 100 m of primary or secondary habitat, while 6 (15%) were between 100 m and 500 m from the identified primary or secondary habitat. Five observations (13%) were between 500 m and 1100 m from either primary or secondary habitat."

Mr. Soprovich indicates that areas not identified as primary and secondary habitats are considered 'non-habitat', however for olive-sided flycatcher this is not always the case. Due to the modelling assumptions and data input (i.e., vegetation mapping), there will be instances where non-primary or secondary habitat within olive-sided flycatcher territories have observations. We took a conservative approach and modeled nesting habitat along forest edge, within the limitations of the mapping scale used (1:15,000 [TE SV Section 2.2.4.4] where minimum mapped habitat polygon size was 5000 m^2). Patches of edge habitat smaller than 5000 m^2 are too small to be mapped but could support olive-sided flycatcher. Stantec acknowledges that for a songbird species with a large territory and relatively large effective detection radius (i.e., it can be heard or detected at greater distances than most songbirds; BAMP 2013; COSEWIC 2007) like olive-sided flycatcher, the model verification process can be challenging. However, the model itself is still of high value for the assessment process.

3. Mr. Soprovich recommends that since methods and sampling design were not described in detail, an audit of the breeding bird dataset should occur. For instance:

- *(Pg 22)-"Given the lack of information in Keeyask Generation Project materials, there is only one means by which the objective and critical practitioner can evaluate the significance of this matter, and that is to audit the raw data"; and*
- *(Pg 26) –"On the basis of what I have seen from Ecostem et al. (2013) and TetrES (2004), there is a need for an audit of Keeyask Generation Project's olive-sided flycatcher data to understand the extent to which plots incorporated multiple coarse habitat types, and to determine the relationships between plot locations and edge. There is simply far too much uncertainty respecting this dataset. Subject to the findings of the audit, there may be a need to conduct further survey, including near edges and possibly within burns, to ensure that there is an accurate understanding of the realised habitat quality of Keeyask Generation Project's area for olive-sided flycatcher.*

Response:

Please refer to the additional information provided on the breeding bird survey sampling design in the response to question 1.

The Partnership (including Stantec, hired to conduct an assessment on birds) gathered information on olive-sided flycatcher in a professional manner, using standard protocols, and trained biologists. Sampling designs were developed with consideration and understanding of olive-sided flycatcher breeding ecology and habitat requirements.

4. Mr. Soprovich indicates that *"subject to the findings of the audit, there may be a need to conduct further survey…"*

Response:

As described in the Terrestrial Effects Monitoring Plan (see Section 5), Manitoba Hydro will undertake further breeding bird surveys as part of the monitoring program for the Project. The data from monitoring program will be used to further strengthen the model verification process for olive-sided flycatcher (and the other species).

References:

Altman, B and Salabanks, R. 2012. Olive-sided flycatcher (*Contopus cooperi*), The Birds of North American Online (A. Poole Ed). Ithaca: Cornell Lab of Ornithology, Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu/bna/species/502.

BAMP 2013. The Boreal Avian Modelling Project. Accessed Online: http://www.borealbirds.ca/avian_db/accounts.php/Contopus+cooperi

COSEWIC. 2007. COSWEIC assessment and status report for the Olive-sided flycatcher *Contopus cooperi* in Canada. Committee on the Status of Endangered Species in Canada; Ottawa vii +25 pp. (www.sararegistry.gc.ca/status/status_e.cfm).

Ralph, C.J., G.R. Guepel, P. Pyle, T.E. Martin and P.F. Desante. 1993. Handbook of field methods for monitoring landbirds. Pacific Southwest Research Station. Albany, California

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