REVIEW OF THE REGIONAL CUMULATIVE EFFECTS ASSESSMENT FOR HYDROELECTRIC DEVELOPMENTS ON THE CHURCHILL, BURNTWOOD AND NELSON RIVER SYSTEMS (RCEA)

Prepared for

Northern Association of Community Councils

by

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1. Introduction

In its 2013 report on the Bipole III Project, the Clean Environment Commission (CEC) recommended that Manitoba Hydro, in cooperation with the Manitoba Government, conduct a regional cumulative effects assessment (RCEA) for all Manitoba Hydro projects and associated infrastructure in the Nelson River sub-watershed. This recommendation was accepted by Manitoba and Terms of Reference were agreed to in May 2014. Subsequently, the scope of the RCEA was expanded to include the Churchill, Burntwood and Nelson River systems.

The Terms of Reference require Manitoba and Manitoba Hydro to:

- "identify, describe and acknowledge the cumulative impacts of past Hydro developments; and
- describe the current state of the environment in areas affected by Manitoba Hydro's system".

Phase I and Phase II reports were completed by December 2015. Subsequently, an integrated summary report was also prepared. These three reports are collectively referred to as the RCEA report. Due to the considerable public interest in the RCEA, it was decided that a public outreach program should be implemented to supplement the findings of the Phase II report. The CEC made funding available to affected communities for the purpose of reviewing the RCEA report and provide input on the report's accuracy, in presenting past and current effects and community perspectives and concerns, and to identify any additional information relevant to the assessment.

The Northern Association of Community Councils (the NACC) applied for and received funding from the CEC for this purpose. The NACC retained Boothroyd & Associates to:

- review the Phase II report and integrated summary report to determine the extent to which they address the issues of concern to the communities of Wabowden, Pikwitonei, Herb Lake Landing, Ilford and Thicket Portage (collectively referred to in this report as the five communities) and their residents;
- review the reports submitted to the CEC by the Manitoba Métis Federation (MMF) and War Lake First Nation based on their reviews of the RCEA reports; and
- prepare a report on the findings for submission to the CEC.

2. The Phase II Report

2.1 Report Organization

The Phase II report is divided into six parts:

- Part I: Introduction and Approach
  This part includes the Terms of Reference for the RCEA, scope and general methodology.
- Part II: History of Hydroelectric Development in the Region of Interest
- Part III: People
  This part summarizes the socioeconomic effects of hydroelectric development and various settlement agreements.
- Part IV: Physical Environment
  This part describes key changes to the physical environment resulting from hydroelectric development including changes to the water regime, ice regime, erosion and sedimentation, area flooded and the terrestrial landscape.
- Part V: Water
  This part provides a detailed description of changes to the aquatic environment based on a series of RSCs. The RSCs were: water quality, fish populations, Lake Sturgeon, mercury in fish, fish quality, seals and beluga whales.
- Part VI: Land
  This part provides a detailed description of changes to the terrestrial environment based on a series of RSCs. The RSCs were: terrestrial habitat, intactness, colonial waterbirds, waterfowl, aquatic furbearers, moose, caribou and polar bear.

2.2 Region of Interest

All five communities are included in the list of communities that are located within the Region of Interest (RoI) in Table 3.2.1-1.

Table 3.3D-1 in Appendix 3.3D provides the populations of these communities in 2011.

2.3 Settlement Agreements and Programs

This section includes statements made in the Phase II report relating to settlement agreements with the five communities and their involvement in Manitoba Hydro's mitigation programs.

2.3.1 Wabowden

Table 3.4.2-1 on page 3.4-15 makes references to a settlement agreement reached in 1992 between Manitoba Hydro and the Community of Wabowden. The agreement was not available for review.

Under the heading Debris Management Program on page 3.4-22, it states that a “debris contract” was entered into with the Community in 2014.

Under the heading Safe Ice Trails on page 3.4-23, it states that members of the Community were hired for the Safe Ice Trails Program during the 2014/2015 season.

2.3.2 Pikwitonei

Table 3.4.2-1 on page 3.4-13 makes references to a settlement agreement reached in 1987 between Manitoba Hydro and the Community of Pikwitonei. The agreement was not available for review.

Under the heading Other Settlement Agreements on page 3.4-6, it states that Manitoba Hydro is continuing to work with the Community to “resolve outstanding grievances”. The report did not elaborate on the nature of these grievances.

Under the heading Debris Management Program on page 3.4-22, it states that a “debris contract” was entered into with the Community in 2014.

Under the heading Safe Ice Trails on page 3.4-23, it states that members of the Community were hired for the Safe Ice Trails Program during the 2014/2015 season.

2.3.3 Herb Lake Landing

No information was provided in the report on settlement agreements or involvement of the Community in mitigation programs.

2.3.4 Ilford

Table 3.4.2-1 on page 3.4-11 makes references to a settlement agreement reached in 1976 between Manitoba Hydro and the Community of Ilford. The agreement was not available for review.

2.3.5 Thicket Portage

Under the heading of Other Settlement Agreements on page 3.4-6, it states that Manitoba Hydro is continuing to work with the Community to “resolve outstanding grievances”. The report did not elaborate on the nature of these grievances.

Under the heading Debris Management Program on page 3.4-22, it states that a “debris contract” was entered into with the Community in 2014.

Under the heading Safe Ice Trails on page 3.4-23, it states that members of the Community were hired for the Safe Ice Trails Program during the 2014/2015 season.

3. Adverse Effects

This section describes information contained in the Phase II report relating to adverse effects on community interests resulting from Manitoba Hydro’s hydroelectric developments.

3.1 Wabowden

3.1.1 Aquatic Furbearers

On page 6.6-39, it is states that the Community “agreed that there was a loss of habitat and decreased productivity for aquatic furbearers because of the flooding and increased water flows resulting from the construction of dams and diversion of the Churchill River”. The decline in numbers was linked to “annual water fluctuations resulting from Manitoba Hydro’s operations” and was attributed to the loss of shoreline habitat because of flooding, erosion and the accumulation of large amounts of debris”.

3.1.2 Boreal Woodland Caribou

Map 6.9.2-1 shows that the Community is located in the Wabowden Range. Map 6.9.3-5 shows the presence of “summer predicted habitat” for the species near the Community.

3.1.3 Moose

The Community is located in Game Hunting Area (GHA) 9A. According to page 6.10-27, the Moose population in GHA 9A declined from 2,293 animals in 2000 to 487 in 2013. In Table 6.10.3-5, the population is described as “considerable reduced” based on the results of aerial

surveys.conducted in 2013/2014. Riparian habitat has been affected by changes in the Nelson River as a result of hydroelectric development. There has been a reduction in high quality shore zone habitat and an increase in shoreline debris and tall shrubs which have served to limit Moose and harvester access to shoreline areas.

3.2 Pikwitonei

The Phase II report did not include information on adverse effects on the Community.

3.3 Herb Lake Landing

The Phase II report did not include information on adverse effects on the Community.

3.3.1 Boreal Woodland Caribou

Map 6.9.2-1 shows that the Community is located in the Naosap-Reed Range. Map 6.9.3-5 shows the presence of “summer predicted habitat” for the species near the Community.

3.4 Ilford

3.4.1 Fish Community

Page 3.3-20 states that the decline in commercial fisheries in the early 1970s contributed to the decline of the Community. Ilford fishers commercially fish at War Lake, located to the south of the Community and not affected by flooding, and Moose Nose Lake, which was inundated when the Kettle Generating Station was constructed and became part of the north arm of Stephens Lake. About two families fish in Split Lake for sustenance.

Page 5.3-65 states that there was “no marked change in the total numbers of fish in Split Lake” following the Churchill River Diversion (CRD). However, current catches are “notably lower than those in the 1980s and late 1990s/early 2000s”. Species composition of the catch in Split Lake has changed (page 5.3-67). White Sucker and Goldeye/Mooneye made up the majority of the catch totalling around 60% in 1966, while in the mid-1980s Mooneye and Lake Whitefish made up the majority of the catch. By the late 1990s, Walleye, Northern Pike, and Sauger comprised the majority of the catch. Page 5.3-68 points out that “the fish community in Split Lake, which is situated at the confluence of the Nelson and Burntwood rivers and thus experiences the

combined effects of flow regulation as a result of LWR and CRD, is potentially affected by a wide range of factors, both related to and independent of hydroelectric development".

High catches of Lake Whitefish in the north arm of Stephens Lake shortly after impoundment are attributed to the existence of a strong population of this species in the former Moose Nose Lake (page 5.3-68).

3.4.2 Mercury in Fish

Page 5.5-34 indicates that Aiken River near the Community is the only river in the entire RCEA Region of Interest for which fish mercury data is available from two separate sites. According to the Phase II report, the water levels of Aiken River at Ilford are not affected by flooding in Split Lake.

Page 5.3-43 provides the following information on mercury in fish taken from Aiken River at Ilford:

"Walleye and Northern Pike from the Aiken River at Ilford have been analyzed for mercury since 1978. However, until 2002 sample sizes have always been small (3–8 fish) for both species and only in two cases has the relationship between fish length and mercury concentration been significant during this time period. Except for the relatively small samples of pike and Walleye from the Aiken River at York Landing, information on fish mercury concentrations from this site only exist since 2003. Mercury data for Lake Whitefish are not available for the Aiken River, but some information exists for White Sucker.

"Mercury concentrations in pike and Walleye from the Aiken River at Ilford have fluctuated substantially prior to 2002, likely a result of the generally small sample sizes. Concentrations in pike ranged from 0.20 ppm to 0.40 ppm whereas Walleye always had lower arithmetic mean concentrations than pike (sometimes significantly for the same year), ranging from 0.08 ppm to 0.24 ppm[1]. Since 2002 standard means of Walleye have consistently and significantly increased and are currently (2012) approximately 60% higher. In contrast, standard means of pike have fluctuated without a significant change."

Page 5.3-34 provides the following information on mercury in fish from Split Lake:

[1] Compare to the Health Canada standard of 0.5 ppm

"Mean mercury concentrations in Northern Pike and Walleye from Split Lake have fluctuated greatly over the 20-year period from 1970–1990 without showing any trends that could be attributed to the operation of either LWR (which affected flows into Split Lake by mid-1976)

or CRD (which would have reduced flows into Split Lake from May 1974 to November 1975 and substantially increased flows by mid-1976).Maximum mean concentrations for survey samples of at least 10 fish were observed in 1982 for both pike (0.52 ppm) and Walleye (0.66 ppm).

"Starting in 1992, mercury concentrations began to decrease almost continuously and by 2005 reached all-time minimums of 0.18 ppm in pike and 0.12 ppm in Walleye. Lake Whitefish, for which non-commercial data are only available since 1983, showed a much smaller range in mercury concentrations than the two piscivorous species, but also decreased significantly from a maximum concentration of 0.11 ppm in 1986 to 0.03 ppm in 2005. Since then, mercury levels have increased significantly in all three focal fish species and currently (2013) are 2–3 times higher than the 2005 minima".

3.4.3 Moose

According to page 6.10-28, the moose population in the Split Lake Resource Management Area (RMA) is "stable to increasing".

3.5 Thicket Portage

The Phase II report did not include information on adverse effects on the Community.

4. Integrated Summary Report

In addition to summarizing information provided in the Phase II report, page 41 of the report points out that Manitoba Hydro entered into settlement agreement with affected community councils of Northern Affairs Communities, many of which have Métis populations". It also stated that "Individual Metis residents are included in these agreements". It was then noted that "the MMF [Manitoba Métis Federation] has expressed a concern that agreements with geographic communities (such as Northern Affairs Communities) may not capture the perspectives of the Manitoba Metis Community as represented by the MMF".

5. Additional Information

This section of the report provides additional information to the CEC that was not captured in the RCEA reports.

5.1 Wabowden

Commercial fishing continues to be one of the major sources of employment. The Wabowden fish station serves the communities of Wabowden, Thicket Portage, Pikwitonei and Herb Lake Landing.

The Community is located on the Hudson Bay Railway. A Métis Local is located in the Community.

5.2 Pikwitonei

Trapping is a vital economic activity. Commercial fishers harvest on six lakes located near the Community and deliver fish to the Wabowden fish station.

The Community is located on the Hudson Bay Railway. A Métis Local is located in the Community.

The following information was received from the Community:

“In the 1970s, an agreement was reached [between Manitoba Hydro and] ... the trappers of Pikwitonei but did not include the community of Pikwitonei. We agree that the trappers were affected greatly by Manitoba Hydro (MH). ... By affecting the trappers MH does not recognize that this in turn impacted the community. This has never been addressed. MH offered the community a take it or leave it deal some twenty years back. This ... basically amounted to constructing some sheds on the Nelson River. MH met with council in 2012 and we have never heard from them since.”

5.3 Herb Lake Landing

Wild rice growing and harvesting are the major economic resources. Commercial fishers deliver their fish to either the Wabowden or Winnipeg fish station.

The Community is situated on the eastern shore of Wekusko Lake. It is also located on the

Hudson Bay Railway.

5.4 Ilford

Ilford is home to members of War Lake First Nation. The local economy is based on trapping and the service sector. Trapping is conducted in the Split Lake Registered Trapline Zone.

The Community is located on the Hudson Bay Railway.

The Community is presently in co-management and is no longer a Northern Affairs Community.

5.5 Thicket Portage

Commercial fishers utilize Landing Lake and Wintering Lake and deliver their catches to the Wabowden fish station.

The Community is located on the Hudson Bay Railway. A Métis Local is located in the Community.