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NORWAY HOUSE FISHERMEN'S
COOPERATIVE



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

EXECUTIVE SUMMARY

Norway House Fishermen's Cooperative (NHFC) is a registered cooperative. All NHFC members are also members of Norway House Cree Nation and engage in the commercial fishery on Lake Winnipeg and Playgreen Lake. For this and other reasons, NHFC is deeply invested in the health of the environment in which NHFC members work and live.

NHFC chose to participate in the Clean Environment Commission's (CEC) public outreach process on Phase II of Manitoba and Manitoba Hydro's *Regional Cumulative Effects Assessment for Hydroelectric Developments on the Churchill, Burntwood and Nelson River Systems* (RCEA) because of NHFC's longstanding concerns about hydro development in northern Manitoba. This report presents NHFC's perspectives on the RCEA.

With the assistance of an advisor, NHFC undertook the review of the RCEA with a focus on concerns specific to NHFC. Those concerns are:

- past and current effects of Lake Winnipeg Regulation (LWR) and its adjoining waterways on the commercial fishery in Northern Lake Winnipeg, Playgreen Lake, and the Nelson River sub-watershed;
- shoreline erosion, increased sediment, and debris in the water;
- reduced fish stocks and a change in the relative composition of fish stocks;
- water quality and navigability; and
- the impacts that hydro development have had on the lifestyle and livelihood of the fishers.

NHFC has concluded that the RCEA does *not* accurately reflect the cumulative effects of 50+ years of hydro development as they relates to NHFC. In brief, NHFC has the following concerns about the methodologies used in the RCEA and/or the RCEA more generally:

1. The purported lack of baseline data resulting from a failure to properly consult with Indigenous peoples generally and with NHFC members specifically, and from a failure to take advantage of archived history;

2. The carving up of the Region of Interest (ROI), which is antithetical to the notion of a cumulative effects assessment;
3. The Clean Environment Commission's direction that participants not comment on "the history, effectiveness, implementation of...the Northern Flood Agreement, or other agreements", while Manitoba and Manitoba Hydro hold up such agreements throughout the RCEA as evidence of social, economic, and environmental concerns addressed;
4. The cursory treatment of issues such as the loss of riparian wetlands and fish catch data; and
5. The deficient treatment of Indigenous culture.

NHFC therefore recommends to the CEC that the RCEA be revisited to address the above-noted concerns. Full recommendations follow in the body of this report.

This review is broken down into the following sections:

1. Environmental and social
2. Environmental
3. Social and economic

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1. ENVIRONMENTAL AND SOCIAL

1.1 BASELINE DATA

The report is founded upon a major methodological shortcoming. On both environmental and social issues, it consistently points to a lack of baseline data. However, baseline information and knowledge is available that could have been integrated with contemporary data to provide a strong analysis of likely impacts of hydro activities on both people and lands and waters. This could have been gathered through systematic work with Indigenous local knowledge keepers. Their knowledge of the state of fish and animal populations and the state of the local peoples has been shown in numerous studies to be rich and invaluable (see Freeman, Milton M.R. (ed.) 2000 *Endangered Peoples of the Arctic: Struggles to Survive and Thrive*, Westport, CT, Greenwood Press). When gathered systematically, through research in both focus groups and independent interviews, the knowledge can be tested against other knowledge holders and is subject to verification procedures. Such knowledge then needs to be assessed in light of scientific data, without a predisposition towards which form is accurate, in a three-track approach (McLachlan, Stephane, “Deaf in One Ear and Blind in the Other: Science, Aboriginal Traditional Knowledge, and the Implications of Keeyask for the Socio-Environment.”¹). That no serious attempt was made to undertake such a research approach means an invaluable opportunity for a proper RCEA may have been lost. The report evidences a serious underestimation of the value of traditional knowledge and a systematic denigration of such knowledge where it appears.

One of the ways in which the project methodology leaves little room for Indigenous knowledge is through the criteria for selecting indicators and metrics “to assist in determining the health of the environment” (1.3-18), which Manitoba and Manitoba Hydro purportedly “work[ed] together to develop” in Phase I. The RCEA also noted that several workshops were held to determine the appropriate indicators and metrics for each Regional Study Component, but no additional details were provided on what the process looked like or on who actually participated from Hydro, the province, or from Indigenous communities. The criteria can be read as a values statement about what

¹ Accessed at <http://www.cecmanitoba.ca/resource/hearings/39/CFLGC009%20Deaf%20in%20One%20Ear%20&%20Blind%20Report%20McLachlan.pdf>

counts as evidence; that is, only that which is measurable, available, and “easy to understand and meaningful to the general public” counts:

During the selection of indicators, the following were considered:

- does the indicator assist in determining the health or condition of the RSC;
- is the indicator measurable;
- is there sufficient information available on the indicator to make it useful in determining the condition of the RSC; and
- is the indicator easy to understand and meaningful to the general public.

There are many other examples of this broad shortcoming. A few of the most relevant to the interests of the Norway House commercial fishers follow.

With respect to how MB Hydro responds to Indigenous peoples’ knowledge (in the example below, labelling it “a perception” rather than, for example, qualitative data) and the protection it finds from the “lack of baseline data”, NHFC takes the position that, on the rare occasions when Indigenous knowledge does appear in the reports and associated materials, it is often simultaneously invalidated, undermined or dismissed. An example from the transcript (below) of Richard Remnant (from North/South consultants) speaking on fish community and fish quality as part of Manitoba Hydro’s day-long presentation of the Phase II Summary Report to the CEC (p. 151-152):

In terms of limitations, *fish taste is very subjective*, and there were no pre-hydroelectric studies on fish palatability, so comparisons can only be made with off-system lakes. The pre hydroelectric rate of infestation data are only available for a few water bodies, and the quantity and quality of that data is inconsistent.

With respect to the conclusions, findings with respect to palatability, there is no known scientific study directly linking changes in palatability with hydroelectric development in the region of interest. However, it is understood that hydro development can cause changes to fish diet, water quality, algae, and growth rates, which can all affect the taste and texture.

Tests conducted by DFO on fish from Playgreen Lake, all of the fish passed their tests. Tests were done by University of Manitoba at Nelson House, Split Lake, York Landing, and Bird, which is in the Fox Lake Cree Nation. They found no statistically significant differences between on- and off-system lakes.

Now, that said, *many First Nation members still feel that taste and texture have changed. And that's a perception.*

It is our view that if a significant number of First Nations members report changes in fish taste and quality, this must be seen as more than “perception”.

Manitoba and Manitoba Hydro also seem to pick and choose what information can stand in as data, for example, that high erosion rates have been observed at a location, but basically presume that “that has always been so” (see De Wit testimony in WORKSHOP, Transcript of Proceedings Held at Manitoba Hydro Building, Winnipeg, Manitoba, Thursday June 15, 2017, at pp 106 to 118). This kind of assertion is not attributed to any source.

Another example involves concerns about section 5.3 of the RCEA – Fish Community (starting on p. 5.3-1). The indicators “selected to permit quantitative assessment of changes over time and among waterbodies” (5.3-7) were abundance and diversity for the fish community as a whole, and for the “focal species” (whitefish and walleye), they were abundance, condition, and growth. Associated with each were quantitative metrics. The approach to the assessment focused on published studies that use these metrics, analysis of raw data using the metrics, other sources of quantitative data and “inferential assessments of potential changes or effects of hydroelectric development on fish community metrics based on information collected from other waterbodies and/or linkages to physical effects”. The Manitoba/Manitoba Hydro Coordinated Aquatic Monitoring Program would be an important data source. The “baseline data” denial appears on p. 5.3-9, and the careful iteration of other reasons that any observed changes have occurred.

Interestingly, Manitoba Hydro also includes in its description of approach and method this sentence: “Conclusions from previous scientific studies assessing similar metrics, *reports of Aboriginal traditional knowledge*, and other sources of information (e.g., other fisheries studies, water quality assessments) were also considered” (p. 5.3-9). The word “traditional” in this 238-page section of the report appears 12 times, most often in reference to foods or “traditional” fishing grounds or sites (for example: “There was a decrease in the abundance of Lake Whitefish in *traditional commercial fishing areas* attributed to a redistribution of fish which reduced the harvests in these areas.” p. 5.3-157). The term “Aboriginal traditional knowledge”, however, appears at only two places in the lengthy section: In the original assertion that Manitoba Hydro had taken into consideration “reports of Aboriginal traditional knowledge” (as above) and later, citing Manitoba Hydro and Nisichawayasihk Cree Nation’s (NCN) 2003 report on an

environmental impact assessment undertaken in relationship to Wuskwatim. That reference to traditional knowledge was limited to the statement that, “Aboriginal traditional knowledge collected as part of the Wuskwatim GP EIS (Volume 5, Manitoba Hydro and NCN 2003) indicated that Lake Whitefish had spawned immediately downstream of Early Morning Rapids prior to CRD, but no evidence was found of whitefish using it in the recent period” (p. 5.3-155). In NHFC’s opinion, this is an almost non-existent use of traditional knowledge.

There are many sections/appendices included in *Part V – Water* of the larger report, which includes chapters on Water Quality, Fish Community, Lake Sturgeon, Mercury in Fish, Fish Quality, Seals, and Beluga. Each chapter looks at that particular topic regionally (Norway House is within what is defined as Area 1: Warren Landing to the inlet of Split Lake), and then for the RCEA ROI as a whole. For example, in the assessment of water quality in Area 1, the “data sources subjected to detailed analysis” are restricted to data produced by the Lake Winnipeg, Churchill and Nelson Rivers Study Board (as reported in 1975 and 2014), Manitoba Conservation and Water Stewardship (provided in 2014), Manitoba Ecological Monitoring Program (1990) and Manitoba/Manitoba Hydro’s Coordinated Aquatic Monitoring Program (p. 5.2-24). The time frame over which water quality data was collected, includes (p. 5.2-24):

- pre-construction period: 1972–1973;
- construction/impoundment period: 1974–1976;
- immediate post-impoundment period: 1977–1986;
- post-impoundment period 2: 1987–1992; and
- post impoundment period 3: 1993–2013.

So, the “pre-construction” period is actually a period during which construction was taking place. Lake Winnipeg Regulation construction started with Eight-Mile Channel in 1971, then Ominawin Bypass Channel in 1972, and Two-Mile Channel in 1973. As Hydro notes, instream construction had begun at “many locations” in 1972-1973, with impacts that included reduced flow and ponding on Lake Winnipeg (p. 5.2-19). Hydro acknowledges that “construction activities may have affected water quality in 1972 and 1973 at some locations” (5.2-20).

RECOMMENDATION

The CEC mandate an additional two-phase research process in order to prepare a more accurate RCEA that overcomes methodological shortcomings. In the first phases, Indigenous traditional knowledge about baseline conditions and about subsequent impacts should be gathered, systematically, under the supervision of independent researchers who have demonstrated specialization in working in this field. In the second phase, the results gathered should be weighted in conjunction with the existing report and a new report, integrating both previous ones, and be released for public review.

1. 2 IMPACTS OF HYDRO DEVELOPMENT

It is notable that Norway House sits in a region between the Lake Winnipeg Regulation project and the Churchill River Diversion, and has been affected by both projects. Impacts specific to the Norway House region cannot necessarily be attributed to one or the other of the Lake Winnipeg Regulation or Churchill River diversion project. In particular, the management of the generating facilities downstream of Norway House have an impact on how the Jenpeg facility is operated and therefore how Lake Winnipeg is regulated. It is impossible to produce an accurate picture of how the Norway House region, and in particular the subsistence and commercial fishing areas, are affected without an appreciation of the integrated nature of the system and a review that takes into account overall systemic management.

In trying to better understand what the impacts of the interactions between these two projects might be, NHFC compared maps of hydro development with maps of Manitoba watersheds to confirm where the boundaries between the Churchill and Nelson Watersheds lie. Then, in order to understand what happens when you divert water from one major watershed to another, NHFC turned to work done by Frédéric Lasserre, who, in a 2005 article reported that (using data from 2004) *the Nelson Hydropower Project has diverted 70% of the natural flow from the Churchill River* (p. 146). Earlier in the article he suggests the *scale the impacts might have*:

[B]ulk withdrawals do affect habitats from both the diverted and the augmented rivers. The scale of these impacts remains controversial among biologists. The international academic literature reports that impacts begin when between 2 percent and 10 percent of the river flow is diverted... Although the environmental impacts of smaller diversions may be questionable, the sheer magnitude of some diversions leaves

no room for doubt about harm to the environment (p.143 in Lasserre, Frédéric. "Drawers of Water: Water Diversions in Canada and Beyond." Bakker, Karen. *Eau Canada: The Future of Canada's Water*. Vancouver: UBC Press, 2007. 143-162).

Hence the 70% number noted above is very significant and points to the enormous scale of the disruption, something Manitoba Hydro's various metrics appear to downplay.

Furthermore, The November 2016 report from the International Institute for Sustainable Development (below, p. 63), points out a logical fault in the scope of the RCEA, which is that the boundaries established for the RCEA do not align with the boundaries of the watersheds affected by Hydro's activities:²

Waterways affected by hydroelectric development are a prevalent boundary used in the region related to water flows, and were the focus area for the 2015 Regional Cumulative Effects Assessment (RCEA), described in Section 2.7.6. This area, shown in Figure 19, includes the portion of the Churchill, Burntwood and Nelson River watersheds affected by Manitoba Hydro developments in northern Manitoba. The report (Manitoba Hydro, 2015b) states that these areas "were primarily determined by the boundaries of Resource Management Areas [discussed in the next paragraph] and Registered Trapline Zones" (p. 1.3–2). This delineation is logical for understanding the impacts of hydroelectricity development, but does not include the entire northern NCRB – an inclusion necessary for full watershed planning

The Resource Management Areas were set up through agreements between the province and Indigenous nations as part of settlement agreements. These areas are managed for land and resource use, water, harvesting activities, mineral development, forestry and wildlife management (Indigenous and Municipal Relations n.d.). While quite useful from a natural resources management perspective, and hence quite relevant to our study, they still do not consider the watershed scale. Rather, they are usually created along registered traplines.

Finally in this regard, the Public Interest Law Centre's (PILC) September 2017 submission to the CEC focuses on the methodology of Hydro's RCEA. They state that (on p. 12-13 of the PILC's submission), with reference to the Keeyask environmental impact statement:

The aquatic environment of the Nelson River where [new projects may] be constructed has been substantially altered by hydroelectric developments, in particular the Churchill River Diversion (CRD) and

² Accessed at www.iisd.org/sites/default/files/publications/large-area-planning-nelson-churchill-river-basin-full-report.pdf

Lake Winnipeg Regulation (LWR), and the construction of the Kettle GS. Effects of [new projects] will be super-imposed on this disrupted environment” (Ch 6, p. 6-54 of the Keeyask statement).³

RECOMMENDATION

Two particular facets of research be conducted: one on how the overall operation of the system creates its own dynamic, limiting or enabling decisions around cultural and economic factors of local concern; secondly on how the Norway House region in particular is environmentally and socially effected by the cumulative impact of both regional projects.

1.3 AGREEMENTS BETWEEN MANITOBA HYDRO AND AFFECTED FIRST NATIONS

Although the CEC specifically asks respondents not to discuss or comment upon the agreements negotiated between Manitoba Hydro and the affected First Nations, the report continually and consistently refers to these agreements, particularly respecting mitigation issues. For example, the RCEA specifies that “Various settlement agreements contain specific provisions addressing impacts on culture, way of life and heritage resources” (RCEA Integrated Summary Review, p. 112) and that “The agreements include programming intended to promote healing and well-being, provide opportunities for traditional lifestyles and healthy food consumption and strengthen cultural identity” (RCEA Integrated Summary Review, p. 112). It is, simply as a matter of natural justice, unfair to allow Manitoba Hydro to make claims about the nature or effectiveness of these agreements without allowing First Nations parties, such as the Commercial Fishers of Norway House, to assess and evaluate their claims.

This approach seems inconsistent with the Terms of Reference for the review, which invite “all affected First Nations and communities identified in the assessment study area and the Manitoba Metis Federation (MMF) to provide written input on the regional cumulative effects assessment *and its accuracy in presenting past effects and community perspectives and concerns, and to provide any additional information relevant to the assessment*” (p. 4 of Manitoba Clean Environment Commission’s Review Directive for RCEA, emphasis is as per the CEC). How is it possible for First

³ Accessed at www.cecmanitoba.ca/resource/hearings/42/17%2009%2029%20MB%20Hydro%20RCEA%20Review_Blakley%20and%20Olagunju_SUBMITTED.pdf

Nations/communities to assess the report's accuracy in presenting past effects without commenting on the nature or effectiveness of the agreements, which exist because of the impacts that Hydro has on culture, way of life and heritage resources?

Hydro's references to agreements in the RCEA Integrated Summary Report (and the word "agreement" is used 144 times in the 152-page document) are positioned strategically with the goal of (inaccurately) representing Manitoba Hydro as a goodwill partner, ready and willing to address and remediate any problematic impacts of its activities. Nearly all these references appear in two sections of the report: The 8-page section *History of Interactions with People and Communities* (begins on p. 34) describes Manitoba Hydro's work (joined by Manitoba and Canada in some instances) with "communities on various adverse effects settlement agreement processes in an effort to resolve grievances" (p. 34). The section consists primarily of discussions of the Northern Flood Agreement (NFA), Comprehensive Implementation Agreements, ongoing implementation of NFA at Cross Lake, and other settlement agreements, including that established with the MMF. Additionally, the RCEA section entitled "People" includes a subsection entitled "Settlement Agreements", which (as noted above) discusses provisions within some of these agreements that address "impacts on culture, way of life and heritage resources" (3.4-33). Settlement agreements are mentioned over and over again in other subsections that include "Navigation, Transportation and Public Safety" (p. 115 of RCEA Integrated Summary Report), "Resource Use" (p. 118 of RCEA Integrated Summary Report), "Domestic and Commercial Fisheries" (p. 119 of RCEA Integrated Summary Report), "Hunting, Trapping and Gathering" (p. 123 of RCEA Integrated Summary Report), "Home Relocation" (p. 128 of RCEA Integrated Summary Report), "Land Use" (p. 130 of RCEA Integrated Summary Report), "Mercury and Human Health" (p. 137 of RCEA Integrated Summary Report), "Personal Property Loss and Damage" (p. 139 of RCEA Integrated Summary Report), and "Employment, Training and Business Opportunities" (p. 142 of RCEA Integrated Summary Report).

RECOMMENDATION

Either Manitoba Hydro remove all reference to all agreements negotiated in relation to these projects, or First Nations parties be given a special window of opportunity, with associated funding, to conduct an analysis and evaluation of Hydro's claims respecting them.

1.4 OMISSION OF HISTORICAL ARCHIVAL SOURCES

The RCEA, as noted, consistently refers to a failing due to an inability to begin with baseline data. Yet it also takes very little notice of historical archival sources that could be used to unpack the impacts of historical events (the fur trade, residential schools, and so on) from the impacts of Hydro development. A more systemic review of historical records, including Canadian Geographic Survey reports, for example, would generate a great deal of data on the state of the regional ecology before the Hydro projects. These do not seem to have been used in any systemic way, nor have fur trade post documents or other archival sources been used in a systemic way to produce a richer picture of pre-Hydro environment, culture, social and economic conditions. There are no substantive archival materials listed in the bibliography, except a reference to links to a no longer active page on the fur trade from a Manitoba historical group.

RECOMMENDATION

A systematic review of archival sources be conducted in order to gather potential baseline data or information, and these then be integrated into the analysis of impacts.

2. ENVIRONMENTAL

2.1 RIPARIAN WETLANDS

The RCEA indicates that:

- A considerable proportion of the shoreline wetlands, including marsh and riparian peatlands, disappeared with hydroelectric development. These wetlands were largely replaced by shallow open water, disintegrating peatlands and vegetation growing on peatlands that sank after flooding. In general, where vegetated wetlands have developed, they are different from what was previously there (p. 48 from the RCEA Integrated Summary Report).
- Wildlife populations that rely heavily on shoreline areas in their annual cycles (such as moose, waterfowl or beaver) have been affected in many on-system areas due to the loss or alteration of shoreline habitat. This has tended to shift their populations to areas inland that provide suitable habitat, and has generally

made them less available to local hunters using on-system waterways (p. 48 from the RCEA Integrated Summary Report).

It also states:

As previously mentioned, 45.6 km² (17.6 mi²) of land was flooded along the Nelson River upstream of the Jenpeg Generating Station. A large portion of the shoreline vegetation and offshore marshes were lost, as were much of the riparian peatlands. These wetlands were replaced by areas of shallow open water, peat beaches with limited vegetation or peatlands breaking down within the flooded area. The marked effects to shoreline habitat in this area are still ongoing, as much of the shore zone continues to adjust to changing shoreline positions, water levels and the seasonal pattern of water levels (p. 52 of the RCEA Integrated Summary Report).

This in sum indicates a serious underestimation of the importance of riparian wetlands to the overall health of the river system. The notion that “a considerable portion” or “a large portion” of these areas has disappeared is inadequate, especially when, through the use of aerial and satellite images, it should be possible to quantify this loss. Furthermore, a stronger analysis of the value of riparian wetlands to the overall ecology is required. As well, it is of critical concern that “the marked effects to shoreline habitat in this area are still ongoing”.

RECOMMENDATION

A systemic analysis of the loss of riparian wetlands that captures quantitative data should be undertaken as an integral aspect of the RCEA. Furthermore, an acknowledgement of the ecological value and importance of these biological zones needs to have a foundational place in the assessment of the impact of hydro electric development.

2.2 BASELINE DATA ON FISHERIES AND FISH POPULATIONS

Comments above (in 1.1) respecting baseline data apply to the RCEA’s analysis of fish populations and fisheries. The comment below is of particular concern and typifies the overall approach:

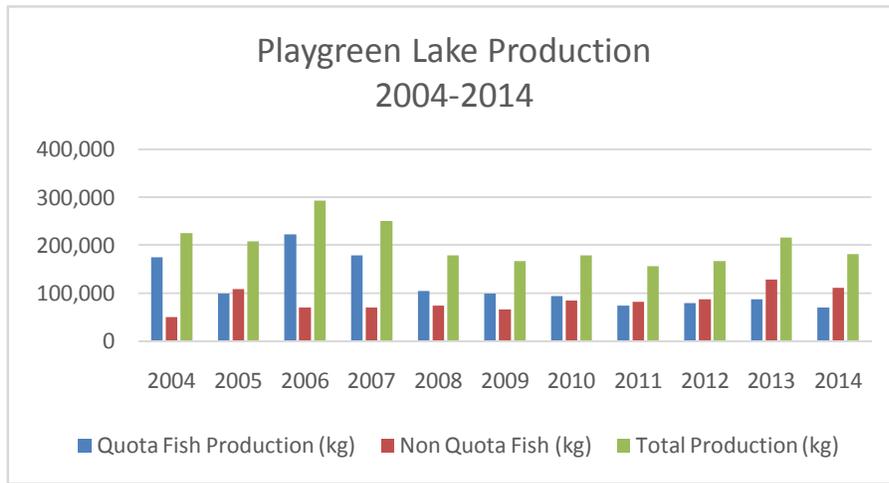
Norway House Commercial Fishers' concerns about the fishery in Playgreen Lake have tended to relate to decreases in fishing success and increased costs due to debris and organic material associated with LWR fouling nets. Currently, commercial harvests continue to be high in Playgreen Lake and data collected under Manitoba Hydro and Manitoba's Coordinated Aquatic Monitoring Program show that Playgreen Lake fish populations are relatively healthy with high fish catches compared to many other waterbodies in the area (including those not affected by Manitoba Hydro) (p. 51-52 of RCEA Integrated Summary Report).

This is simply insulting to the Norway House Commercial Fishers, and amounts to saying: "while the fishers expressed concern about fewer fish, our data shows that this is not true." Similar statements can be found throughout the Report. In fact, the qualifications noted here deserve attention: the data they cite "show that Playgreen Lake fish populations are relatively healthy with high fish catches compared to many other waterbodies in the area (including those not affected by Manitoba Hydro)"; if historically Playgreen Lake was a central, desired fish and fishery location, it would not be useful to compare it to "other waterbodies in the area".

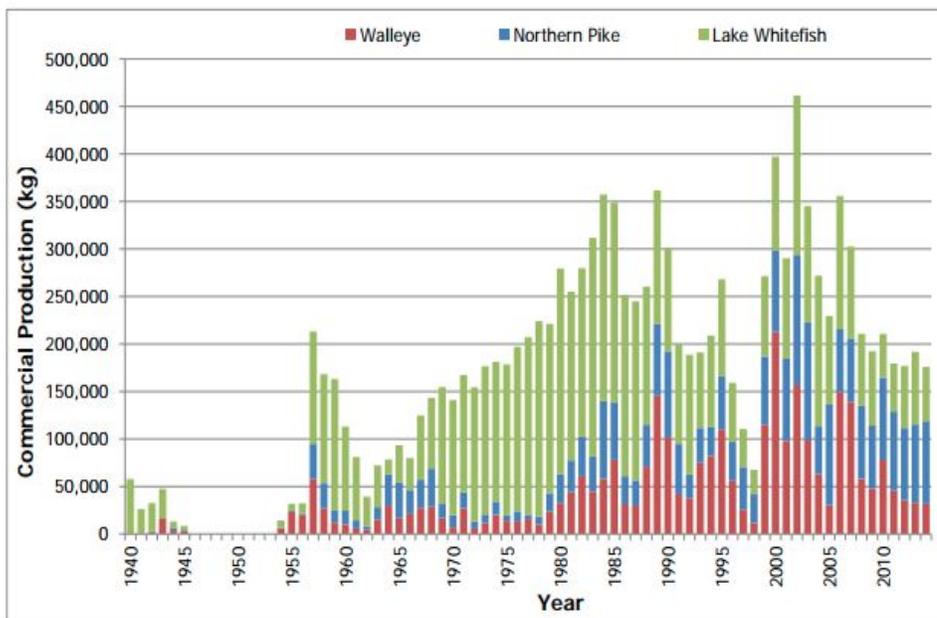
In fact, on this point, the 1975 Summary Report of the Lake Winnipeg, Churchill and Nelson Rivers Study Board⁴ (p. 35 on Outlet Lakes fishery, with additional info on size of Manitoba fish harvest in 1972-73 fishing year on p. 28) show that: In 72-73, Outlet lakes contributed 3% (600,000 lbs) of the province's total commercial fish output of 20,000,000 lbs, while Playgreen Lake provided 60% (360,000 lbs) of the overall production (mainly whitefish and walleye) in the Outlet Lakes area – that reflects its historic value as a central, desired fish and fishery location.

Furthermore, data on production from 2004 to 2014 produced by the Commercial Fishers of Norway House (bearing in mind that the quota on Playgreen Lake was reduced dramatically during this period – from 235,000 kg to 115,900 kg in 2008, when production clearly tapered down), the total harvest from the 72/73 fishing year (which equals about 164,000 kg) is lower than the total harvest for every year other than 2011, even after the quota is reduced. The following chart confirms this:

⁴ Accessed at www.gov.mb.ca/waterstewardship/licensing/pdf/summary_report.pdf



In one of the several appendices to the Report part on water (Figure 5.3.2A-5), a Manitoba Hydro chart similar to that above (commercial production of whitefish, walleye and northern pike from Playgreen Lake, 1940-2014) shows their numbers (data from Freshwater Fish Marketing Corporation) are significantly higher than the numbers produced from the Commercial Fishermen, and confirm the Commercial Fisher’s findings regarding the overall drop in production.



Sources: 1940-1991 data from Macdonald (1992) in marketed weights (kg) to 1979, round weights (kg) since 1980; 1992-2014 data from FFMC 2015 (unpubl.) in round weight equivalents.

Figure 5.3.2A-5: Production (kg) (marketed weight 1940-1991; round weight 1992-2014) of Lake Whitefish (green), Walleye (red) and Northern Pike (blue) from Playgreen Lake, 1940-2014.

In a similar vein, NHFC also takes issue with Manitoba and Manitoba Hydro's assertion at 5.3-26 of the RCEA that

Although production of Lake Whitefish has remained high post-LWR, averaging about 127,000 kg/y since 1976, Lake Whitefish became increasingly less important to the overall fishery in Playgreen Lake (Figure 5.3.2A-5). *This decline has been attributed to a shift in species selection by commercial fishermen as a result of market price.*

NHFC vigorously disputes this assertion and questions how Manitoba and Manitoba Hydro arrived at this conclusion. Interviews with commercial fishermen conducted in 2014 in Norway House point to the absence of whitefish in Playgreen Lake and other areas as the reason whitefish catch numbers have declined, not a shift in species selection attributable to market conditions. In place of whitefish, fishermen reported catching non-quota fish such as jackfish and suckers. Excerpts from those interviews are as follows:

- Interview with Kennedy Budd Senior, a fisherman since 1967, fishing the area of Two Mile Channel and south of Playgreen Point:

"When the two channels were opened the fishing has gone down and we don't catch any whitefish at the same area we fished before. We are catching a lot of suckers and jackfish."

- Interview with Elmer Clarke, a fisherman since 1997, fishing the area of Weasel Point to Two Rivers:

"Ever since I started fishing the fishing on Playgreen Lake has been dropping very steadily and we are working harder to make a living...When I first started I used about 10 nets to get 10 to 15 tubs of fish and most of them were whitefish. Today I use 14 nets to get about 12 tubs of suckers, jackfish and whitefish."

- Interview with George Queskekapow, a fisherman since 1970, fishing the area of Weasel Point to Mud Point:

"[When I started] there was a lot of whitefish at Two Mile Channel but the fishing has been dropping very steadily since the channel opened...When I first started I

used about 4 nets to get 10 to 16 tubs of fish and most of them were whitefish. Today I use 12 to 14 nets to get about 9 tubs of suckers, jackfish and whitefish.”

- Interview with Leslie Apetagon, a fisherman on-and-off since 1963, fishing Playgreen Lake and Tait Island:

“When I started fishing again in 1985, the fishing was still good all over. Whitefish fishing was good at the south end of the lake and the pickerel fishing was still good around the 40 mile portage area...I fish the north end today but only in the fall where fishing is still feasible for all species. Not much whitefish in the north end.

- Interview with John Muswagon, a fisherman since 1989, fishing the Eight Mile area and into Kiskitogisiu Lake:

“When I first started fishing at Eight-Mile Channel area I would use eight nets to get about 25 tubs of fish. About 20 tubs were pickerel and the rest were jacks and suckers. Today, I use about 16 nets to get 14 tubs of jackfish, suckers and very few whitefish and pickerel.

- Interview with Langford Saunders, a fisherman since 1996, fishing the area of Two-Mile Channel and Catfish Bay:

“When I first started fishing in 1996, I used eight nets to get about 14 tubs of mixed fish. The majority of these were pickerel and whitefish and the rest were jackfish and mullets. Today at Catfish Bay, I use six nets to get about 20 tubs of fish each lift, but not as many pickerel and whitefish.

The fishermen attributed the decline in whitefish (and pickerel) abundance to the destruction of whitefish spawning habitat with the construction of Two-Mile Channel, changes to the flow of the water, ongoing erosion and substantial debris in the water, and shallower and murkier water.

Moreover, Manitoba Hydro’s claim that whitefish production on Playgreen Lake has “averag[ed] about 127,000 kg/y since 1976” is inherently problematic given that NHFC’s annual *total* quota has been less than 127,000 kg/y since 2008. The following table represents the combined quota and non-quota production numbers (kg/y) from 2013-2017, according to the Freshwater Fish Marketing Corporation:

	2013	2014	2015	2016	2017
Whitefish	63,624	47,536	53,316	35,682	38,161
Whitefish Roe	20,5066	16,075	16,647	7005	13,563
Pickeral	23,439	22,635	30,013	27,167	21,052
Sauger	157	137	69	206	302
Northern Pike	61,478	62,160	39,821	33,248	21,684
Perch	7	12	36	35	17
Mullet	46,552	32,669	40,353	20,588	30,590
Carp	265	353	145	55	122
Tulibee	303	3,780	6,576	4,206	5,428

Finally, it should be noted that in the quote from Manitoba Hydro that begins this section of NHFC's report, the phrase "relatively healthy" with respect to fish populations in Playgreen Lake is of virtually no value, and one could just as easily say with equal truth "relatively unhealthy". So, although Manitoba and Manitoba Hydro discredit the Commercial Fishers based on "data", the comparisons may be invalid. It is also worth noting that "high fish catches compared to many other waterbodies" may not mean much if the other waterbodies include many also affected by Manitoba Hydro and if those not affected are not traditional fish-rich bodies of water.

RECOMMENDATION

More systemic attention and value be given to the concerns expressed by the Norway House Commercial Fisher's analysis of the impacts of Hydro development on their fishery.

3. SOCIAL AND ECONOMIC

3.1 CULTURE

The RCEA exhibits a serious deficiency in its treatment of culture. Although it uses the Inninew/Inniniwak concept of *pimatsiwin*, citing Hart (2002) and Adelson (2000), it is notable that few or no local elders appear to have been consulted. Furthermore, there appears to be negligible attention to what the United Nations has called Intangible

Cultural Heritage: the practices and other non-material aspects of culture, including the manner in which it is transmitted, language, skills, knowledge, songs, stories and so on. There appears to be no serious attempt to discuss the impact of hydro development on this whole area of culture. Hence while the report pays lip service to culture, anything beyond a cursory reading shows a near complete lack of attention and understanding. Since the Supreme Court of Canada has defined an Aboriginal right as a practice, custom or tradition “integral to the distinctive culture of the Aboriginal group” (*R v Van der Peet*, [1996] 2 SCR 507 at para 45), Intangible Cultural Heritage now has legal status within Canada. Furthermore, recent research has shown a strong correlation between cultural strength and community well-being.

The references to Hart and Adelson on *pimatsiwin* come from Manitoba Hydro’s nearly 400 page *Part III: People* of the RCEA Phase II report, where Hydro also cites Manitowabi & Shawande’s 2011 article entitled “The meaning of Anishinabe healing and wellbeing on Manitoulin Island” in the journal *Pimatsiwin*. It is noteworthy that this article focuses on Manitoulin Island, in Ontario, when the lands/waters/lives impacted by Manitoba Hydro are in northern Manitoba, and the people are Inninew or Inninuwak (Cree). It appears likely that Manitoba Hydro found the journal and this article because it googled *pimatsiwin*.

Had Manitoba Hydro actually consulted with Indigenous peoples in northern Manitoba on their perspectives of *pimatsiwin*, it might have included in the RCEA the fact that some people feel that *pimatsiwin* has been lost as a consequence of Hydro’s impacts. This tragedy is not properly acknowledged by the brief paragraphs dealing with *pimatsiwin* in the report.

Members of NHFC have observed the complex web of ripple effects from hydro development that have undermined their community’s sense of *pimatsiwin* since the 1970s. For example, the loss of wetlands has driven fur-bearing animals away. As a result, trapping has declined, and the community’s ability to access medicines derived from fur-bearing animals such as beaver has been hindered. In turn, they have become dependent on western medicines. By way of another example, fluctuating water levels at Eight-Mile Channel have fundamentally changed the ebb and flow of community life: 40-50 duck and moose hunters used to camp for several weeks in the area during the fall to secure food for the community for winter. Now, most hunters avoid the area because of the unpredictability of the water level and the hazards that can cause. Even snaring rabbits in the winter is difficult when travelling by skidoo because water overflow can create dangerous conditions. Hydro development has also negatively impacted

water quality, which has created the need to treat all water before consuming it or using it, even when using it as ice for packing fish. *These phenomena have indelibly altered the health, vitality and identity of NHFC's community.* The loss of access to traditional medicines and food, the decline in environmental health, and the fundamental changes in roles and relationships between community members and the environment all translate into a devastating loss of culture. NHFC members have personally witnessed the deleterious consequences created by this loss of culture on the youth and families of Norway House. In short, altering one thing in the environment changes everything. This is not captured in the RCEA.

With respect to Aboriginal Traditional Knowledge, Manitoba Hydro states, twice (at the start of the document (p. 3.2-9) and again in the final section, the Summary of Community Information (p. 3.5-3)), that information presented in this section of the report is drawn from sources that include "Aboriginal Traditional Knowledge (ATK) reports". ATK also appears in the acronym list: the only occurrences of that term. However, the term "traditional" appears 120 times in this section – 116 times, it is used in reference to tangible things like lands, territories, areas; lifestyles, practices, or activities; food, diet, mode of transport; occupation, economy, harvesting, and so on. The term is used in exactly four places to refer to intangible things such as ways of knowing, teachings and communalism.

Section 3.5 of the RCEA, titled "Summary of Community Information", was intended as a summary of "available documentation regarding hydroelectric effects on individual communities in the [RCEA] Region of Interest and Members of the [MMF]" (p. 3.5-1) including 11 First Nations, four cities/towns, and the MMF. Each summary was to provide information re: background, summary of hydroelectric development, what Hydro heard about community experiences, perspectives and concerns, trends in resource use, and mitigation and compensation measures. In fact, while this section of the report does include, as context, short subsections on the importance of resource harvesting to culture and way of life (which cites reports by NCN, WLFN, FLCN developed for earlier hydro projects such as Keeyask, as well as a few other older sources), the relationship between domestic and commercial harvesting, other agents of change affecting resource use in the ROI (that is, deflecting hydro's responsibility), rights and management, *the individual community summaries do not appear in the section.* Hydro states that this is "in response to concerns heard" and states that "communities will have the opportunity to review and comment on their summaries before they are made public... through the RCEA Public Outreach Program being undertaken by the CEC" (p. 3.5-9). Additionally (as reported in a footnote on p. 3.5-3), organizations in O-Pipon-Na-

Piwin Cree Nation (which Manitoba Hydro calls “the former community of South Indian Lake (Now OPCN)”) refused to share materials with Hydro. This may well have been a pattern, and if so would reflect on the fact that communities appear aware of Manitoba Hydro’s lack of respect regarding their views.

Moreover, the RCEA only relied upon “existing sources of information” (3.5-2) for the Summary of Community Information section, noting that “the amount of information available varies from community to community, depending on the amount of previous study” (3.5-3). How Manitoba Hydro engaged with communities to receive their input on the summaries is not clear from the RCEA report. If Manitoba Hydro were truly interested in preparing an RCEA that accurately reflects the effects of 50+ years of hydro development in northern Manitoba, it would have engaged with communities anew *in a manner or using methods that were acceptable to the communities* during the year-and-a-half it took to prepare Phase I and Phase II of the report. A more collaborative approach may have overcome the communities’ concerns about the release of the summaries.

RECOMMENDATION

The RCEA needs to be revised to address impacts of Manitoba Hydro operations on Intangible Cultural Heritage. Studies can use traditional knowledge to demonstrate the state of cultural richness and decay at the time preceding construction, and examine its current level of strength. A more detailed, community by community, summary of impacts needs to be included in the Report, based on information obtained through meaningful collaboration and fresh engagement with communities.

3.2 “HERITAGE” RESOURCES

It is worth noting that the discussion of “heritage resources” quickly devolves into a description of the many archaeological programs being supported by Manitoba Hydro. While many of these are worthy, it is notable that they are all archaeological programs under the direction of outside experts with particular community support. As well, there are programs to deal with burial site disturbances, and a description of the removal and eventual replacement of the “footprints” near Nisichawayasihk (without acknowledging that this is a severe desecration of a sacred site). This illustrates the emphasis of Manitoba Hydro on material culture—things—over intangible culture. Manitoba Hydro has sponsored “cultural ceremonies” at the site of its new projects.

RECOMMENDATION

A greater effort needs to be made to assess impacts on intangible culture and to develop programs to mitigate those impacts. A specific report should be developed based on research overseen by an inter community board.

3.3 BASELINE DATA ON SOCIAL AND ECONOMIC CONDITIONS

As with the questions around wildlife populations, the social and economic aspects of the RCEA note a deficiency in baseline data. In this area, extensive work with community members can clearly produce very strong information and knowledge respecting community well-being, economic self-sufficiency, food security and other indicators of social and economic conditions prior to the involvement of Manitoba Hydro. These can be keyed to a particular era to clearly show the impacts of Hydro specifically, rather than the multiple impacts of other colonial efforts such as residential schools. The appalling lack of trust Manitoba Hydro evinces in even producing knowledge respecting their own communities is a systemic deficiency in the Report and evidence of the continuing problems faced by Manitoba Hydro in its attitude towards the communities it has most directly impacted.

RECOMMENDATION

Baseline knowledge be produced from research conducted with older community members, and be used in conjunction with contemporary socio-economic community-based research to produce an analysis of the real impact of Manitoba Hydro's involvement in the region. Furthermore, studies should compare socio-economic conditions of Hydro-affected communities in the region with those of selected unaffected communities.