

## **SUMMARY OF COMMENTS/RECOMMENDATIONS**

**PROPONENT:** Manitoba Hydro  
**PROPOSAL NAME:** Lower Churchill River Water Level  
Enhancement Weir Project

**CLASS OF DEVELOPMENT:** Two  
**TYPE OF DEVELOPMENT:** Water Development and Control  
**CLIENT FILE NO.:** 4292.00

### **OVERVIEW:**

The Proposal was received on December 24, 1997. It was dated December 22, 1997. The advertisement of the proposal was as follows:

“A Proposal has been filed by Manitoba Hydro for the construction of a rockfill overflow weir on the lower Churchill River to enhance water levels. The weir would extend across the river from the east bank immediately downstream of the mouth of Goose Creek to a point on the west bank between Mosquito Point and Drachm Point. Water levels would be raised by approximately 2 metres upstream of the weir. This depth would diminish further upstream. The backwater effect of the weir would increase water levels in the river to a point approximately 10 kilometres upstream of the weir. The weir is designed to rewater a portion of the Churchill River which has been dewatered since the completion of the Churchill River Diversion project. Approximately 480 hectares of former riverbed would be rewatered, and approximately 170 hectares of additional land would be flooded.

Fish passage facilities would be provided near the centre of the weir and at Goose Creek. A marina with boat launching and picnic facilities would be located on the east side of the river a short distance upstream of the weir. Most of the rock and sand for the project would be obtained from existing quarry areas in the vicinity of the airport. Some rock could be quarried near the west end of the weir. Construction is proposed to start in the summer of 1998, and would continue through the winter of 1998-1999. Construction would be completed by the end of the summer of 1999.”

The Proposal was advertised in the Thompson Nickel Belt News on Monday, February 16, 1998. It was placed in the Main, Centennial, Eco-Network and Churchill Public Library public registries. It was distributed to TAC members on January 6, 1998. The closing date for comments from TAC members was February 13, 1998. The closing date for public comments was March 9, 1998. (The advertisement of the project was delayed at the request of the Proponent to allow placement of an advertisement respecting the Navigable Waters Protection Act in the same issue of the local newspaper.)

The Proposal was filed following a project development process which started in 1993. The project was planned jointly by Manitoba Hydro and the Town of Churchill, and the identification and assessment of the selected project components involved

community participation and consultation with the Technical Advisory Committee. With respect to TAC involvement, several meetings with TAC members were organized to report on planning activities and to identify potential environmental and regulatory concerns. TAC members were provided with the Environmental Impact Statement and its Appendices in draft form for review in November, 1997.

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### **COMMENTS FROM THE PUBLIC:**

**Hudson Bay Port Company** Concerned about the following effects of the Churchill River Diversion and the proposed weir project: Sedimentation levels, past, present and future, harbour currents, ice formation in the harbour, control structures and water levels, and the tidal estuary. The Manitoba Hydro control structure at Missi Falls has drastically impacted the watershed on the lower Churchill River and the Port of Churchill since its implementation in the late 1970s. The Port needs assurance that there will be no further negative impacts on the navigable waters at the Port and that all outstanding issues will be resolved before licensing the implementation and construction of the weir project. These issues are currently being discussed with Manitoba Hydro but there has been no resolution to date.

#### Disposition:

The concerns identified involve the Churchill River Diversion; the proposed project will not affect these issues since flows will not be affected. The water residence time in the rewatered reach is expected to double under average summer flow conditions from 10 hours to 20 hours; this would not significantly affect sedimentation upstream or downstream of the weir. A letter responding to the Port's concerns should be sent, and the Port and the Proponent should be encouraged to continue to resolve outstanding issues arising from the Churchill River Diversion's impact on the Port.

**Donald N. MacIver** on behalf of the Southern Indian Lake Commercial Fisherman's Association Inc. and South Indian Trappers Association Inc. Object to the project because the headwaters of the Churchill River includes Southern Indian Lake and recent outflows from that lake are hazardous and dangerous to navigation and have caused severe damage.

#### Disposition:

A letter was sent to Mr. MacIver noting that the project backwater area extended approximately 10 km upstream from the proposed weir, and that it would not affect flows or water levels further upstream.

### **COMMENTS FROM THE TECHNICAL ADVISORY COMMITTEE:**

**Manitoba Environment - Northern Region** All comments made by the Northern Region in our review of the Draft EIS have been addressed in the final EIS documentation. No outstanding issues remaining with this project.

**Manitoba Environment - Water Quality Management** No perceived major concerns with this project. The proponent has done an extensive amount of preliminary investigation into possible impacts and appears to have incorporated the scenario that provides the most benefit with the least amount of environmental impact. A previous concern with the draft EIS has been addressed - the EIS now states that there may be a need to re-locate sampling points to accommodate post-weir water levels. That is acceptable provided the sampling points are not too distant from the original locations, and thus, not jeopardizing comparison with pre-development information.

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**Historic Resources Branch** Although heritage resources have been recorded in the project area, no substantial impacts to known heritage resources will occur during any of the components of the project. The proponent retained a heritage consultant to examine Fifteen Mile Esker, other potential aggregate sources and construction sites. No significant heritage resources were located at the proposed sites for weir construction-related activities, in the vicinity of the proposed weir itself or at the marina site. The Branch concurs with the conclusions and decisions in the EIS relating to heritage resources. The proponent intends to develop interpretive display panels highlighting the history of the lower Churchill River and the Branch is prepared to assist with components of this display. The Branch is satisfied that all concerns to heritage resource impacts during the construction phase and as a result of potential cabin construction have been addressed in the EIS.

**Natural Resources** It is noted that a restriction of 1000 litres will be specified in the transfer of gasoline across the Churchill River during the open water period. In winter, however, there would be no such restriction on container size. What precautions would be taken to prevent a large spill in winter? If one occurred, what measures would be taken? Arctic Char should also be considered as a Valued Ecosystem Component (VEC). The criteria used to describe the magnitude of impact do not appear to be very definitive, and given the descriptions provided, it would be difficult to quantify impact. Quantifiable terms should be provided by which the magnitude of impact may be gauged. The EIS states that the total suspended solids in the Lower Churchill River will increase by 2 mg/L or basically double. Has the possibility been considered that this increase may impact downstream marine organisms which in turn may impact species that are important to VECs such as beluga whales?

It is stated that because most of the weir will be inundated, alternate fish habitat will be provided. However, the downstream face of the weir will only be submerged during the spring runoff at which time the flows will likely be too rapid to provide any habitat for fish. During the entire year, only the upstream face of the weir, which will consist of sand and provide very poor habitat for fish, will be inundated. Therefore, it would appear that no alternate fish habitat will be provided by the weir. According to the EIS, the weir will displace 12 ha of existing river bottom. Fisheries management measures to reduce fishing pressure should also be considered for fish stocks downstream of the weir, especially for Arctic Char. The EIS does not provide any indication as to which agencies would be responsible for any increased costs required to implement the intensified management measures.

The EIS notes that pike populations will very likely increase in the reservoir after the weir is completed. The EIS has not considered what effect the increased abundance to pike will have on the rate of infestation by parasites in whitefish, cisco and grayling. The presence of parasites from pike in these species make them unattractive for human consumption. The EIS refers to a 4 ha area of river flats south of Drachm Point which will be used as a borrow area. No information is provided as to how deep the borrow pit will be or whether it can be used to provide some additional fish habitat. Reference is made to the possible stocking of rainbow trout in the rock quarry on the west side of the river. This should not occur, since the trout may escape or be inadvertently released. Escaped rainbow trout could compete with and adversely impact on Arctic char and brook trout in the area.

It appears that fish passage at the weir and Goose Creek will be monitored for only one or two years. Monitoring should be done for two or three years to gain a better understanding of the fish passage structures under varying flow conditions.

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Potential cabin areas within the Churchill River Diversion severance line will only be approved if they meet flood proofing criteria and can be removed from the severance area. The weir requires licensing under the Water Power Act. An amendment to the interim licence for the Churchill River Diversion will be needed. A specific site for aggregate extraction on the west bank should be identified.

Disposition:

Additional information to address these comments was requested. The response dated March 6, 1998 is attached. All concerns are addressed in this response.

**Department of Fisheries and Oceans** (received March 20, 1998) DFO has concluded that additional information is required to make a determination of potential impacts on fish and marine mammals and their habitats, in accordance with the Fisheries Act and the Canadian Environmental Assessment Act. Major areas of concern: potential impacts on harbour seals and on several aquatic components (invertebrates, fish and

seals) resulting from loss of aquatic macrophytes. Several areas will require additional mitigation measures beyond those identified in the EIS.

Summary of DFO concerns: DFO questions the conclusions of the EIS concerning aquatic invertebrates and habitat changes. The removal of 40 ha of macrophytes will have a significant long term effect on invertebrates, as most of the new soft substrate habitat will not produce invertebrates until there has been an adequate amount of sediment deposition. Forage fish species may not increase as predicted, due to the loss of invertebrates for food sources. Pike may also be affected. The proposed 5 year monitoring program should be adjusted to reflect the possible slower re-establishment of habitat. Similar concerns are identified for lake whitefish based on habitat loss. Habitat gains and losses for brook trout also should be quantified.

Harbour seals may be impacted due to the loss of haulout sites. Further studies are recommended to support the EIS assessment of potential impacts.

Clarification is required concerning the area affected by flow concentration downstream of the proposed weir. Additional information is also needed respecting sedimentation due to construction of the non-overflow portion of the weir, and sedimentation due to erosion of excavated organic material immediately downstream of the weir. The ford crossing proposed for the fall of 1998 should not be constructed until all upstream fish migration is complete. If approved, all vehicles using the ford should be clean and free of fuel, grease etc. prior to fording. It is not clear how the removal of up to 10,000 cubic metres of material from the Drachm Point mudflats may affect habitat gain calculations. A year round fuel transport restriction should be placed on the size of fuel containers crossing the river.

The size of areas of dredging for the marina are not reported in the EIS, and it is not known if they are included in the habitat gain / loss calculations. It is also unknown whether the proposed spoil piles are above the projected high water line, and what mitigation measures are proposed to prevent their erosion.

The EIS indicates that the loss of 12 ha of riverbed is a localized and insignificant effect. However, it would appear that it is a large, long-term, site specific and therefore significant impact.

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Monitoring programs are proposed ranging in length from 1 to 5 years. The programs should be extended to more accurately test predicted impacts on aquatic life. Monitoring of compensatory measures will also be required.

Disposition: Additional information to address these concerns was requested. The response dated April 1, 1998 is attached. All concerns are addressed in this response.

**PUBLIC HEARING:**

As no public concerns addressable by a hearing were identified, a public hearing is not recommended.

**RECOMMENDATION:**

All comments received on the Proposal have been addressed in the additional information provided or can be addressed as licence conditions. As soon as Manitoba Environment has received an indication that the necessary federal approval will be forthcoming under the Navigable Waters Protection Act, it is recommended that the Development be licensed under The Environment Act subject to the limits, terms and conditions as described on the attached Draft Environment Act Licence. It is further recommended that enforcement of the Licence be assigned to the Northern Region.

**PREPARED BY:**

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