POINTE DU BOIS
SPILLWAY REPLACEMENT PROJECT

DRAFT ENVIRONMENTAL ASSESSMENT
SCOPING DOCUMENT

Submitted By

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1.0 Introduction

1.1 Purpose of Scoping Document

The purpose of this Draft Scoping Document is to provide information related to the scoping of the environmental assessment for the Pointe du Bois Spillway Replacement Project (the Project). The Project will consist of constructing new spillways, earth and concrete dams, associated infrastructure for construction and decommissioning of the existing spillway.

The Draft Scoping Document for the Project has been developed with consideration of recent approval, licencing, and guidance matters related to the following:

- The Scoping Document for the Pointe du Bois Modernization Project (i.e. the rebuild alternative);
- Wuskwatim Generating Station;
- CEAA guidance given for two recent hydroelectric projects (i.e. Elizabeth Falls Hydroelectric Project and Lower Mattagami Hydroelectric Complex Redevelopment);
- The importance and need to include the use of Aboriginal and local knowledge and public and stakeholder views in the assessment process; and
- Issues identified during initial pre-commitment public consultations in early 2007, environmental assessment consultations in the fall of 2007 on the Pointe du Bois rebuild alternative, and ongoing interaction with stakeholders.

1.2 Background and Need for the Project

The Pointe du Bois Generating Station, having first produced power in 1911, is the oldest hydroelectric plant operating in Manitoba. In 2002, Manitoba Hydro acquired the generating station as part of its purchase of Winnipeg Hydro. Despite extensive repairs and upgrades that have been conducted over the years, the spillway facilities at Pointe du Bois now require replacement in order to maintain public and dam safety, and provide a modern and safer working environment for staff.

Accordingly, Manitoba Hydro has decided to construct new spillways and new concrete and earth dams at the present site. The existing spillway will be decommissioned. With these improvements, modern dam safety guidelines will be addressed.

The existing powerhouse will continue to be maintained and operated. The operation and maintenance of the powerhouse is not within the scope of the Spillway Replacement Project.

2.0 Regulatory Framework

It is Manitoba Hydro's view that the Project constitutes a Class 2 Development as major modifications to an existing electric generation station as defined by the Classes of Development Regulation under the Manitoba *Environment Act* (MEA). With respect to the *Canadian Environmental Assessment Act* (CEAA), it is Manitoba Hydro's view that a screening review will be required. It is also Manitoba Hydro 's understanding that the filing of an Environment Act Proposal Form (EAPF) under the MEA initiates the formal regulatory review process.

Manitoba Hydro anticipates that the Project will be reviewed under the provisions of the *March 2007 Canada/Manitoba Agreement on Environmental Assessment Cooperation*, and Manitoba Hydro would welcome such a cooperative process. Pursuant to that Agreement, it is expected that a Project Administration Team (PAT) and a Technical Advisory Committee (TAC) will be established to administer and to provide advice on the environmental assessment process and on the scope and content of the Environmental Impact Statement (EIS).

The EIS will outline other regulatory and legislative approvals required for Project implementation.

3.0 Environmental Assessment Consultation and Communication

Consultation and communication is an essential part of the planning and assessment process for the Project. The environmental assessment consultation and communication program (consultation program[1]) for the Project involves Aboriginal communities and organizations, local residents, other stakeholders, government departments and agencies, municipalities and the general public.

The overall objective of the consultation program is to provide information on the Project and to create meaningful opportunities to receive information and views on the Project. The consultation program aims to achieve the following:

- Provide opportunities for the early involvement of Aboriginal people, local residents, the public, and other stakeholders in the process in order to ensure their involvement throughout the process;
- Effectively use a variety of mechanisms to provide information, receive feedback, and engage in a meaningful dialogue with stakeholders;
- Demonstrate an adaptive approach so that the consultation process can be adjusted in response to stakeholder issues and concerns;
- Effectively use the information received through the consultation process to avoid or minimize any negative Project effects and maximize Project benefits; and
- Communicate to stakeholders how the information they provided was used.

[1] The consultation program in this scoping document does not include consultation pursuant to section 35 of *The Constitution Act*.

The consultation program consists of update letters, meetings with Aboriginal groups and stakeholders, and open houses. In addition, meetings with PAT and TAC will be held to present information on the Draft EIS.

4.0 Aboriginal and Local Knowledge

Aboriginal and local knowledge are valuable sources of information for the environmental assessment. Efforts will be made to collect knowledge from these sources for incorporation into the environmental assessment of the Project. A protocol for utilizing Aboriginal knowledge will be established with the providers of the information prior to incorporation into the EIS or any other public document.

5.0 Project Description

5.1 Scope of Project

Note: The following description outlines the current concept for the new spillways, concrete and earth dams. As final engineering and consultation proceeds, the components of the final development will be defined and provided for review.

The Project comprises constructing a new primary spillway, a new secondary spillway, concrete and earth dams at the present site, and decommissioning of the existing spillway.

The Project includes the following major components:

- A new primary spillway immediately downstream of the existing rockfill dam on the east side of the Winnipeg River;
- A new secondary spillway west of the primary spillway;
- New concrete and earthfill dams;
- Stability measures for the existing east and west gravity dams; and
- Decommissioning of the existing spillway structure.

Associated infrastructure with the Project includes:

- On-site contractor facilities;
- A concrete batch plant;
- Storage areas and offices;
- Water and wastewater management;
- Earthfill material source areas (borrow areas) and rock disposal areas;
- Cottage access roadways; and
- Construction access including barge, winter roads and land access across the spillway shelf.

The EIS will describe the Project and use appropriate figures, maps and/or orthophotos to complement the text. The following information will be included:

- Location of the existing generating station, spillway and associated facilities;
- Location of the new spillways and associated facilities;
- Location of staging areas for construction;
- Location of borrow and rock disposal areas;
- Outline of roadways and access routes to be used during pre-construction, construction and operation stages of the Project;
- Anticipated traffic types and volumes;
- Location of on-site contractor facilities;
- Schedule of all construction activities including:
    - Contractor mobilization and demobilization activities;
    - Construction of new buildings and supporting infrastructure;
    - Composition, duration, dewatering and removal of cofferdams;
    - Civil, mechanical, and electrical activities associated with the new spillway; and
    - Decommissioning of existing structures;
- General cost estimates and funding;
- New spillway operation;
- Size and composition of the workforce during construction activities and operation;
- Health and safety programs and measures;
- Plans for decommissioning the existing spillway;
- Plans for decommissioning any temporary infrastructure or facilities;
- Plans to address accidents and malfunctions; and
- Wastes generated by the Project and how waste will be managed and disposed of.

6.0 Scope of Assessment

The scope of the assessment will address the requirements of a Class 2 Development pursuant to the *Environment Act* (Manitoba) and the requirements of a screening pursuant to the *Canadian Environmental Assessment Act*. For the purpose of the assessment the definitions of "environment" and "environmental effect" from the Canadian Environmental Assessment Act will be used (the definition of "environment" is broader in the federal act, and the provincial act does not include a definition of environmental effect).

6.1 Factors to be Addressed in the Assessment

The following factors will be addressed in the environmental assessment:

- The purpose of the Project;
- Alternative means of carrying out the Project that are technically and economically feasible;
- The environmental effects of the Project, including the environmental effects of malfunctions or accidents that may occur in connection with the project and any cumulative environmental effects that are likely to result

from the project in combination with other projects or activities that have been or will be carried out;
- Comments from Aboriginal groups and stakeholders that are received through the consultation process;
- Mitigation measures that are technically and economically feasible for any significant adverse environmental effects of the project; and
- The significance of any residual adverse environmental effects.

7.0 Existing Environmental Setting

Physical, biological and socio-economic studies and activities will be undertaken to describe the physical, biological, and socio-economic components of the existing environment, as related to the current facilities.

7.1 Study Area

Base study areas will be defined for the physical, biological, and socio-economic components. The study areas will vary depending on the specific study activity being reviewed. (e.g. the study area for the terrestrial study activity will include borrow areas that may be remote from the base study area).

7.2 Physical Environment

7.2.1 Climate/General Environment

The EIS will provide information on the following:
- Temperatures and dates of freeze and thaw;
- Precipitation and snow cover;
- Wind velocity;
- Climate change (including both the effects of the project on climate change and effects of climate change on the project);
- Local air quality; and
- Ambient noise.

7.2.2 Water Regime

The EIS will provide information on the following:
- Hydrological regime at the Pointe du Bois site;
- Ice conditions; and
- Woody debris accumulation and deposit.

7.2.3 Physiography and Landscape

The EIS will provide information on the following:
- Topography;
- Geology and geologic deposits that may be used for the Project;
- Terrestrial soils; and

- Groundwater conditions.

7.2.3 Erosion and Sedimentation

The EIS will provide information on the following:

- Erosion; and
- Sedimentation.

7.3 Aquatic Environment

7.3.1 Water and Sediment Quality

The EIS will provide information on the following:

- Water quality (both in the vicinity of the project site and over the broader Study Area); and
- Sediment quality (both in the immediate vicinity of the project site and over the broader Study Area) with emphasis on metals, metalloids and organics.

7.3.2 Lower Trophic Levels

The EIS will provide information on the following:

- Algae, floating and rooted aquatic plants, zooplankton, and benthic and drifting invertebrates; and
- The inter-relationship of lower and higher trophic levels.

7.3.3 Fish Communities and Fish Habitat

The EIS will provide information on the following:

- Abundance and diversity of fish populations, with focus on lake sturgeon, walleye and northern pike;
- Fish habitat use by individual species, with focus on lake sturgeon, walleye and northern pike that frequent the Study Area;
- Fish movement, with focus on lake sturgeon, walleye and northern pike;
- Mercury levels in fish; and
- Threatened and endangered species.

7.4 Terrestrial Environment

7.4.1 Vegetation and Terrestrial Habitat

The EIS will provide information on the following:

- Abundance, diversity and habitats of terrestrial and semi-aquatic vegetation; and
- Threatened and endangered communities/habitats.

7.4.2 Invertebrates

The EIS will provide general information on the following:

- Habitat use;
- Invertebrates species composition and distribution; and
- Threatened and endangered species.

7.4.3 Amphibians and Reptiles

The EIS will provide information on the following:

- Abundance, diversity and habitats of amphibians and reptiles; and
- Threatened and endangered species.

7.4.4 Birds

The EIS will provide information on the following:

- Migratory and breeding birds abundance, diversity and habitats;
- Nesting sites of colonial nesters and raptors; and
- Threatened and endangered species.

7.4.5 Mammals

The EIS will provide information on the following:

- Abundance, diversity and habitats of mammal populations; and
- Threatened and endangered species.

7.5 Socio-Economic Environment

7.5.1 Economy

The EIS will provide information on the following:

- Labour force characteristics including education, business/economic sectors, employment and unemployment, participation rates, and income levels; and
- Profile of economic sectors within the Study Area including commercial resource use.

7.5.2 Property Ownership

The EIS will provide information on the following:

- Property ownership and land tenure, land/resource and water use, and land use and development controls.

7.5.3 Infrastructure and Services

The EIS will provide information on the following:

- Roads and highways, community facilities and other services.

7.5.4 Personal, Family and Community Life

The EIS will provide information on the following:

- Population characteristics, with an emphasis on demographics and health status of potentially affected communities and the region in general; and
- Way of life, community cohesion, culture and spirituality.

7.5.5 Aboriginal Resource Use

The EIS will provide information on the following:

- Existing Aboriginal harvesting, including hunting, fishing, trapping, and gathering.

7.5.6 Commercial Resource Use

The EIS will provide information on the following:

- Trapping;
- Fishing;
- Guiding and outfitting;
- Harvesting of wild rice;
- Mining;
- Forestry; and
- Hydro-electric generation.

7.5.7 Recreational Resource Use and Tourism

The EIS will provide information on the following:

- Hunting;
- Fishing;
- Gathering;
- Lodges and associated facilities;
- Cottage developments;
- Campgrounds;
- Recreational operations;
- Outdoor recreation activities; and
- Tourism and eco-tourism opportunities.

7.5.8 Heritage Resources

The EIS will provide information on the following:

- Historical-cultural characterization;
- Archaeological and culturally important sites;
- Known burial sites; and
- Past and present traditional land use and occupancy.

8.0 Effects Assessment Approach

8.1 Effects Assessment Principles and Objectives

The overall effects assessment approach will consider scientific study and analysis, Aboriginal knowledge, local knowledge and stakeholder perspectives, issues and concerns.

The effects assessment approach will embrace the following principles:

- That an understanding is required of the existing physical, biological, and socio-economic environments in the study area;
- That an understanding is required of the Project and the potential interactions between the Project and the environment;
- That Aboriginal knowledge, local knowledge, and scientific analysis all contribute to gaining an understanding of the existing environment and how the existing environment may be affected by the Project;
- That an understanding is required of how other past and potential future human activities have and continue to affect the environment and how these activities may interact with the Project;
- That Project effects will need to be viewed from the perspective of a variety of stakeholders;
- That stakeholder perspectives will be sought through consultation;
- That adverse effects will be avoided, mitigated or compensated and positive effects will be maximized, to the extent these measures are practicable; and
- That follow-up monitoring is required.

The effects assessment approach is designed to describe and address potential Project effects on the physical, biological, and socio-economic environments for use in the preparation of the EIS for the Project.

The main objectives of the effects assessment for the Project are as follows:

- Assist in the planning and design of the Project by identifying and assessing potential environmental effects and mitigation options to avoid or minimize adverse effects and maximize positive effects to the degree practicable;
- Address concerns and issues identified by Aboriginal peoples, local residents, and other stakeholders with respect to the Project; and
- Provide sufficient information to prepare an EIS for consideration by regulators to exercise their legislated mandate.

The effects assessment will consider the existing environment without the Project, as the baseline condition against which changes caused by the Project will be assessed and measured.

Potential effects of the Project will also be considered in terms of sustainability as outlined in section 8.4 of this Draft Scoping Document.

8.2 Effects Assessment Process

The effects assessment will include the following steps:

- The Project and the existing environment will be described;
- Interactions between the Project and the environment will be identified and assessed;
- Aboriginal and local knowledge will be considered;
- Potential environmental effects of the Project will be identified;
- A selected list of appropriate valued environmental components (VECs) will be determined for the study area(s). These VECs will be used to provide a focus to the assessment and to the evaluation of the significance of the potential environmental effects of the Project;
- Technically and economically feasible measures to mitigate adverse effects or compensation measures will be identified, as will measures to enhance positive effects; and
- The significance of residual adverse effects will be determined.

Using this process, the EIS will describe and assess the potential effects of the Project and associated infrastructure on the physical, biological, and socio-economic environments for each phase of the Project – construction, operation and decommissioning.

8.2.1 Mitigation, Compensation and Residual Effects

The EIS will describe any mitigation measures or effect management proposed to be implemented during the construction, operation and decommissioning phases of the Project, including any need for fish habitat compensation, and navigation safety. Feasible measures to enhance the potential benefits associated with the construction and operation of the Project will also be detailed.

The EIS will identify any residual Project effects expected to remain after mitigation and/or compensation measures have been implemented.

8.2.2 Determination of Significance

The EIS will outline the framework to be used in the evaluation of the significance of residual adverse effects by using the following criteria:

- Nature of the effect;
- Geographic extent of the effect;
- Magnitude of the effect;
- Duration of the effect;
- Timing of the effect;
- Frequency of the effect;
- Reversibility of the effect; and

- Confidence in the prediction of the effect.

Characterization of the significance of the residual adverse effects will consider scientific study and analysis, Aboriginal knowledge, and local knowledge, and will relate to all phases of the Project – construction, operation, and decommissioning.

8.3 Cumulative Effects Assessment

In addition to describing the direct effects of the Project, the EIS will also include an assessment of cumulative effects. The cumulative effects assessment (CEA) will include a consideration of the potential for Project effects to act in combination with the effects of other past, present and/or reasonably forseeable future projects in the study area (to be defined for the CEA). The EIS will outline the approach and methods for the CEA, and will include a description of the spatial and temporal boundaries used in the assessment. Guidance documents such as the Operational Policy Statement *Addressing Cumulative Environmental Effects Under the Canadian Environment Assessment Act* and the *Cumulative Effects Practitioners Guide* will be used to formulate the CEA process.

8.4 Sustainability Assessment

Manitoba Hydro has Corporate Environmental and Sustainable Development Policies in order to help link its responsibilities both for the supply of energy to the Manitoba economy and for the protection of the environment and human health. Manitoba Hydro will incorporate its principles of sustainable development in all of its activities associated with the planning, development, operation and maintenance of the Project.

The EIS for the Project will address and incorporate the Principles and Guidelines of Sustainable Development as contained in *The Sustainable Development Act* (Manitoba).

9.0 Monitoring and Follow-up

The EIS will provide details of, and commit Manitoba Hydro to, a monitoring and follow-up program extending through the construction, operation and decommissioning phases of the Project. The monitoring and follow-up program will incorporate the following:

- Identification of proposed methods to avoid and mitigate adverse environmental effects, including summaries of potential environmental sensitivities and mitigation actions;
- Emergency response plans developed in consultation with local authorities;
- Environmental protection plans for construction, operation and decommissioning;
- Monitoring plans and reporting protocols;

- Closure plans for borrow areas, including mitigation of potential hazards to public safety;
- Information on waste management practices to be utilized during all phases of the Project;
- Documentation of EIS commitments;
- An implementation plan for the EIS commitments; and
- A commitment to mitigate environmental effects throughout the full life-cycle of the Project. Field construction and operating personnel will be provided clear instructions on the mitigation measures to be implemented and on the lines of communication to be followed.

Where appropriate, monitoring of the physical, biological, and socio-economic effects on local, Aboriginal, or other affected communities will be conducted during the construction, operation and decommissioning phases of the Project. The monitoring program is intended to confirm impact predictions related to anticipated effects and to determine whether unexpected effects are occurring.

A compliance monitoring program for the construction, operation and decommissioning phases of the Project will be provided. The monitoring program will describe parameters to be monitored, methodologies and time frames.

As part of the process of follow-up and monitoring, the principles of adaptive management will apply. The EIS will describe a process that will be implemented in the event that it is determined that the Project is having unexpected adverse effects or if mitigation measures are proving to be ineffective.

10.0 Report Format

The EIS for the Project will be written with a minimum of technical terminology and will include a glossary of terms used throughout the document. An executive summary for the EIS will be provided.

The EIS will utilize maps, charts, diagrams and photographs as appropriate for presentation. To the extent possible, maps and diagrams will be presented at a common scale so that these may be overlaid for ease of reference.

Supporting scientific, local and available Aboriginal information will be contained in reference appendices to the EIS.