



WUSKWATIM

Power Limited Partnership

Monitoring Overview

2006–07



Monitoring Overview for the period ending March 31, 2007



WUSKWATIM

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Message from the Chair of the general partner of WPLP

The Wuskwatim Power Limited Partnership (WPLP) is pleased to present the first Wuskwatim Monitoring Overview for the period ending March 31, 2007. The Wuskwatim Project's inaugural monitoring activities were undertaken in accordance with licences, permits and authorizations, and are consistent with the Wuskwatim Project Development Agreement (PDA) signed by Manitoba Hydro and the Nisichawayasihk Cree Nation. This document, while not a technical report intended to fulfill regulatory requirements, is intended to provide laypeople with an easy to understand summary of the results of monitoring programs underway as part of this project.

Manitoba Hydro is proud to be managing the project on behalf of the WPLP, and is committed to fulfilling the objectives set out in its Corporate Environmental Management Policy and Sustainable Development Guiding Principles. Manitoba Hydro prepared the following overview for the WPLP.

The inclusion of *EthnieseWIN* — the traditional knowledge and wisdom of the Nisichawayasihk people — as part of the report is a unique and important component of the monitoring plans for the Wuskwatim Generation Project. For the first time in Manitoba, traditional knowledge is helping guide the planning and development of a major hydroelectric project. We are proud to be associated with this innovative approach, and hope that it serves as a model for future resource developments not only in Canada, but also around the world.

Sincerely,

Ken R.F. Adams, P. Eng
Chair of the general partner of WPLP
(5022649 Manitoba Ltd.)

Introduction

For over a century, Manitobans have come to rely on clean, renewable hydroelectricity to power their homes, industries and businesses. With abundant water resources available for future development, Manitoba is well-poised to take advantage of the public's growing demand for electrical energy — both within the province and in export markets. The 200-megawatt Wuskwatim Generation Project, now under construction on the Burntwood River in northern Manitoba, is one project that will help meet that demand. Wuskwatim is the first hydroelectric generating station to be built in Manitoba since completion of the Limestone Generating Station in 1992.

The WPLP, an entity consisting of Manitoba Hydro and the Nisichawayasihk Cree Nation (NCN), is developing the Wuskwatim Generation Project. The WPLP marks the beginning of a new era — the first time in Canada that an electric utility has entered into such a comprehensive partnership with a First Nation to develop a generating station. Wuskwatim is located in NCN's traditional territory at Taskinigup Falls, at the outlet of Wuskwatim Lake.

The Wuskwatim PDA, approved by the community in June 2006, gives NCN the opportunity to own up to 33 per cent of the Wuskwatim Generating Station. NCN has made an initial investment of \$1 million, and the First Nation has until the completion of construction, anticipated to be 2012, to make the balance of its equity investment.

Wuskwatim Generating Station is a run-of-river plant with a low-head design that will create less than one-half of one square kilometre of flooding, minimizing local environmental impact. This is the least amount of flooding for any hydroelectric project developed in northern Manitoba.

Use of NCN's traditional knowledge was an essential part of the Wuskwatim planning process, helping to reduce the impact of the dam and establish the location of the construction camp and routes for the access road and transmission lines. Traditional knowledge will continue to be used — along with conventional environmental monitoring procedures — as a major source of information to help ensure there is minimum disruption to the local environment as the project moves into the detailed design and major construction phases.



Current project status

During the past year, environmental approvals to begin construction of the Wuskwatim Generating Station and associated transmission facilities were received from federal and provincial regulators. Environmental approvals considered the environmental impact assessment conducted by Manitoba Hydro and NCN, as well as recommendations of the Manitoba Clean Environment Commission, and the findings of a comprehensive study report prepared by the federal Department of Fisheries and Oceans (DFO).

Construction commenced in mid-August 2006, with the major focus of the site work being to establish infrastructure and camps, ensure completion of limited all-weather access to the main dam site, and have critical activities for the construction power substation completed prior to the 2007 spring break-up. Work was performed following the conditions of environmental approvals, including the Environment Act Licence, and federal and provincial permits and authorizations.

All culvert installations at stream crossings were completed prior to this year's spring break-up, and approximately 80 per cent of the construction power substation and transmission line were completed by the end of March. Work will continue on the access road — including constructing the roadbed to finished grade, as well as excavating and filling to shape ditches and back slopes — with a completion date of March 2008.

Construction of the 650-person main camp will also be finished by March 2008 following the completion of site infrastructure facilities, including roads, power, water, and sewage systems. The main camp will feature offices, bunkhouses, kitchen, dining, and recreational facilities.

For the first time in Manitoba Hydro's major construction history, on-site cultural ceremonies were performed in advance of various work activities, such as installing culverts at stream crossings. Directly negotiated contracts worth over \$100 million were awarded to NCN joint venture businesses for the supply of a range of services such as access road construction, site preparation, camp catering, security, and cultural services. In addition, the turbine and generator contract was awarded to General Electric Hydro, and the general civil contract request for tenders was issued.

WPLP monitoring plans

This report presents an overview of monitoring activities undertaken for the Wuskwatim Generation Project between August 2006 and March 31, 2007.

Environmental, social and economic monitoring for the construction and operational phases of the Wuskwatim Generation Project is being conducted in accordance with the limits, terms and conditions of regulatory approvals issued by the Province of Manitoba and the Government of Canada. Environmental approvals, including an Environment Act Licence and federal and provincial permits and authorizations, were issued following an extensive regulatory and public review process. The process included environmental impact assessment (EIA) studies, preparation of an Environmental Impact Statement (EIS), and technical reviews and assessments conducted by both governments under the cooperative provincial/federal environmental assessment and review process. In addition, the process included participant assistance funding, a Manitoba Clean Environment Commission public hearing (with a subsequent report and recommendations to the Minister of Conservation), as well as a Comprehensive Study Report (CSR) prepared by DFO under the Canadian Environmental Assessment Act (CEAA).

In addition to monitoring required by regulators, Manitoba Hydro and NCN also made specific environmental monitoring and follow-up commitments in the Wuskwatim Generation Project EIS, incorporating accepted environmental assessment and sustainable development best practices, as well as *Ethinesewin*. See the next section of this overview for additional details on the *Ethinesewin* program.





The Environment Act Licence for the Wuskwatim Generation Project, issued by the Minister of Conservation on June 21, 2006, prescribes monitoring for specific elements of the project, and required the development and approval of the following documents:

- Environmental Protection Plan for construction and operation of the access road
- Environmental Protection Plan for construction and operation of the construction camp
- Environmental Protection Plan for construction and operation of the generating station
- Aquatic Effects Monitoring Plan
- Terrestrial Effects Monitoring Plan
- Physical Environment Monitoring Plan
- Resource Use Monitoring Plan
- Heritage Resources Protection Plan
- Road Access Management Plan
- Socio-economic Monitoring Plan
- Sediment Management Plan
- No Net Loss Plan (compensation plan for fish habitat loss)

An Interim Water Power Act Licence, issued by Manitoba Water Stewardship, also prescribes monitoring related to water levels and flows in the Burntwood River.

Under the Federal Fisheries Act, authorizations are issued for various components of the project. These authorizations outline specific monitoring requirements related to the protection of fish and fish habitat. To date, authorizations have been issued for stream crossings on the Wuskwatim access road and for various aspects of the Wuskwatim construction camp. It is anticipated that authorizations for the construction and operation of the generating station and associated facilities will be issued in the near future.



Ethinesewin **(traditional knowledge and wisdom)**

Ethinesewin, the traditional knowledge and collective wisdom of Nisichawayasihk people, was an integral component of the Wuskwatim Generation Project EIS studies.

The goal of including *Ethinesewin* in this process is to ensure that as the project moves forward it achieves *Kistethichekewin*, meaning that the conduct of those involved in the development of Wuskwatim is always based on the sacred responsibility to treat all things with respect and honour, as outlined in *Kihche'othasowewin* (the Great Law of the Creator).

During the project planning stage, NCN members participated in field studies, and in formal and informal programs incorporating *Ethinesewin*, including NCN's program of interviews, meetings with resource harvesters, and discussions at workshops and open houses. NCN will continue to be involved in monitoring and field studies during both construction and operation of the project, thereby ensuring that *Ethinesewin* is treated equally and meaningfully in environmental studies and programs.

The objectives of including *Ethinesewin* in ongoing project monitoring and evaluation are:

- to better document any observed changes in relation to Wuskwatim Lake and surrounding areas during and following construction of the project
- to document *Ethinesewin* regarding resource harvesting activities in areas potentially affected by the project
- to identify any negative effects of the project that NCN resource users may observe or be concerned about, particularly where such effects may fall outside the scope of other monitoring programs.

Information will be gathered primarily in an annual workshop. The timing of the workshop will be coordinated to ensure that holders of *Ethinesewin* are available. It is anticipated workshop participants will meet at the construction site, tour the lake and adjoining water bodies, then move on to other areas of interest such as the access road.

Results of the *Ethinesewin* program will be included in future monitoring overviews and as part of the regular reporting process with other monitoring programs. The first workshop is expected to take place in the fall or early winter of 2007.

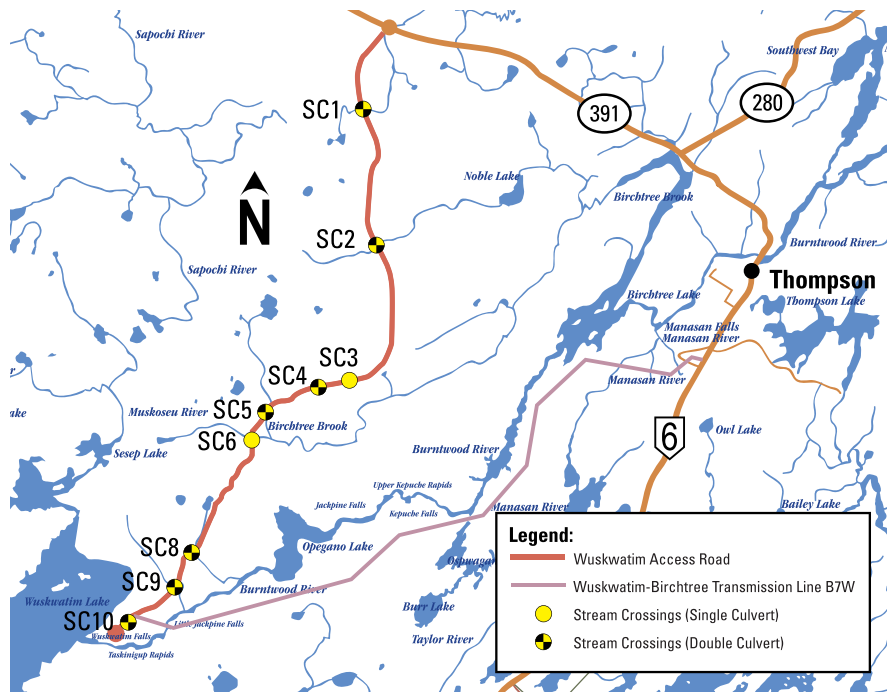
Biophysical Monitoring

Aquatic Effects Monitoring Plan

To date, monitoring under the Aquatic Effects Monitoring Plan has focused on construction of access road stream crossings and the water intake for the Wuskwatim construction camp. Under authorizations issued by DFO, the WPLP is required to minimize the input of sediment to surface waters. DFO also requires that the concentration of sediment be measured in surface waters during construction. The authorizations also require that fish that may be injured or killed during construction be removed in a salvage fishery prior to construction, where conditions permit.

Aquatic monitoring at stream crossings

A survey was undertaken at eight stream crossing sites along the access road in August 2006 to determine flow and channel characteristics, and measure water turbidity prior to construction at any of the sites. Measuring turbidity provides information on the amount of sediment in the water.



Wuskwatim Access Road Plan showing locations of stream crossings

Monitoring at the first stream crossing began in October 2006 when construction at the site began. Using hand-held meters, turbidity was measured at locations upstream and downstream of the construction site. Data from upstream and downstream sites was compared to see the effects of construction. In addition to hand-held meters, automated turbidity loggers were installed upstream and downstream of the construction site (Figure 1) to provide a continuous record of changes in turbidity. Samples of surface water were collected and sent for analysis of Total Suspended Solids (TSS). TSS is a measure of the amount of solid material, or sediment, in the water.

Turbidity monitoring data at the first stream crossing showed that diversion of the stream flow — required to isolate the site and allow construction of the crossing to proceed — increased the turbidity downstream for about a week. The biggest effect occurred around the time the diversion itself was completed. After this peak, the upstream and downstream turbidity levels were more closely matched.

Minnows at the first stream crossing were salvaged from pools created when the water was diverted around the original channel (Figure 2). The salvage fishery removed 482 brook stickleback, 20 fathead minnows, and 10 pearl dace from the site. Fish removed from the area were taken downstream and released.

Monitoring at the other seven stream crossings along the access road took place concurrent with construction of each crossing. Monitoring of turbidity with hand-held meters and collection of surface water samples was performed where ice and site conditions permitted. Turbidity loggers were placed in streams that had sufficient water and flow (some streams were dry and/or frozen to the bottom). Not all monitoring data from these locations had been obtained as of March 31, 2007 because some turbidity loggers were still in place. Salvage fisheries did not occur at these locations because of ice cover.

A detailed report describing the results of monitoring at each of the crossings for the construction period will be submitted to DFO in summer 2007. Results from this report will be summarized in the 2007-08 Annual Monitoring Report.



Figure 1 Turbidity Logger: downstream of stream crossing 1



Figure 2 Salvage fishery at stream crossing 1



Aquatic monitoring at the water intake construction site

Construction of the water intake along the southeastern shore of Wuskwatim Lake began in February 2007. Construction of the intake involved the placement of rocks in Wuskwatim Lake. Turbidity and TSS were measured in the water around the construction site to determine if the surrounding water was becoming muddier and, if so, how far out into the lake the water was affected.

Terrestrial Effects Monitoring Plan

Given the timing of the start of the Wuskwatim Generation Project in August 2006, monitoring of the terrestrial environment to the end of March 2007 focused on effects to vegetation and mammals (in particular woodland caribou).

The habitat and vegetation studies focused on three major areas:

- identification of ecologically sensitive plants or sites
- monitoring of accidental fires
- initiation of a White spruce and Balsam fir habitat association study

Habitat and vegetation monitoring

Identification of ecologically sensitive plants or sites

The objective of this study was to minimize the loss or disturbance of ecologically sensitive plants or sites. Numerous aerial and foot surveys were conducted prior to clearing the access road center line. The positions of identified sensitive sites were recorded with a Global Positioning System unit, and physically marked with flagging tape for easy identification by construction personnel.

A survey was also conducted in the region of the temporary connection road. The results of this survey were used to identify a route for the temporary connection, which provided short-term access to the Wuskwatim road from an existing winter trail. The survey helped mitigate the loss of sensitive plants and sites in the area.

Monitoring of accidental fires

Project construction staff watch for and document any accidental fires on site on an ongoing basis. This information will be used in conjunction with provincial fire reports to determine whether any ground inspections are needed during the 2007 summer construction season.

No accidental fires were identified on the construction site to the end of March 2007.

White spruce and Balsam fir habitat association study

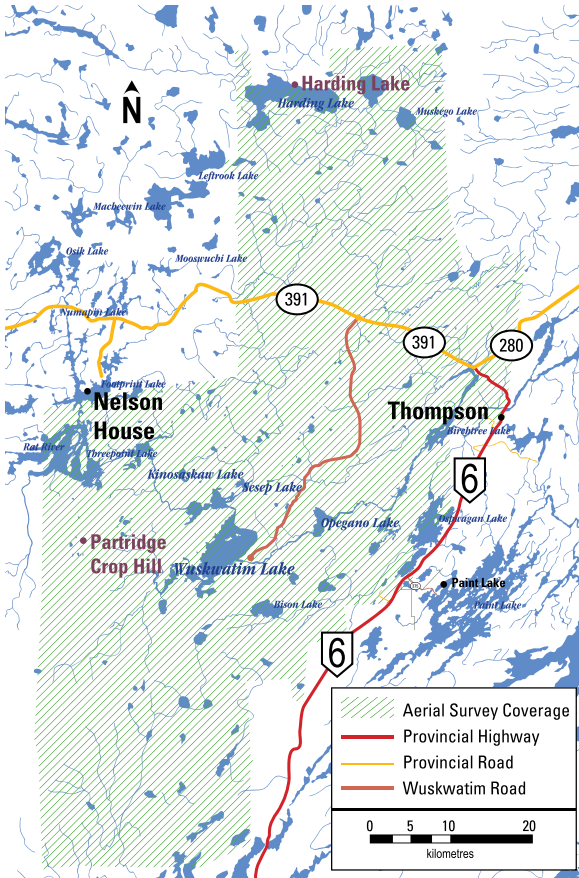
To avoid significant project impacts on regionally rare tree species, the Wuskwatim EIS included a commitment to minimize disturbances outside of the cleared areas and regenerate 120 hectares of White spruce and Balsam fir in ecologically appropriate areas. To work towards this commitment, fieldwork began on a two-year White spruce and Balsam fir habitat association study.

The study is designed to provide a better understanding of the habitat interactions of White spruce and Balsam fir in the Wuskwatim area. The results will be used to help identify ecologically appropriate areas for regeneration efforts, and to develop guidelines that will give the highest probability of successful regeneration. All first-year sampling occurred in the generating station area, as this is where most of the affected White spruce and Balsam fir are concentrated. Tree, understory vegetation, woody material, soils and other data was collected from 64 plots. Fieldwork will continue in 2007.

Mammal monitoring

Aerial surveys flown in 2005 and 2007, and ground surveys conducted in 2004, 2005 and 2006 are being used to monitor the impacts of the Wuskwatim access road and generating station on local mammal populations, particularly the Wapisi woodland caribou population. The results of these surveys will be included in future monitoring reports.





Location of woodland caribou aerial surveys

Aerial surveys

Winter aerial surveys were used to determine the range and abundance of caribou in the Wuskwatim Lake region. In 2005 and 2007, a fixed-wing aircraft was used to search a 4,825 square kilometre area between Harding Lake and Partridge Crop Hill. This area represents an estimated 70 per cent of the Wapisi woodland caribou core range.

In February 2005, using counts of observed caribou and fresh tracks, the Wapisi population was estimated at between 133 and 272 animals. Most caribou were observed near Partridge Crop Hill, in sparsely treed Black spruce stands located on peatlands (muskeg).

In February 2007, 170 caribou were observed and about 5,600 track sets, feeding craters, and beds were recorded. Using this information, the Wapisi woodland caribou population was estimated at between 170 and 288 animals. More caribou were observed near Harding Lake than at Partridge Crop Hill in 2007.

Wapisi Caribou Committee

The Wuskwatim Power Limited Partnership, together with federal and provincial regulators and NCN resource users, has formed the Wapisi Caribou Committee to safeguard the critical habitat and life functions of the Wapisi woodland caribou in the Partridge Crop Hill area. Under the Environmental Act Licence, the committee will monitor the effect of project construction and operation on the caribou herd, which is designated threatened under the Species at Risk Act. The committee will employ adaptive management strategies to protect the caribou and educate resource users on the importance of preserving this threatened species.

Ground surveys

Summer and fall ground surveys provided baseline data on the presence, absence and abundance of mammals such as moose, black bear and woodland caribou in the areas beside the Wuskwatim access road and generating station site. One effect of the access road may be the loss of caribou habitat due to noise-related disturbances. In order to measure these effects, transects up to four kilometres in length were established perpendicular to the road.

In 2006, about 6,000 caribou signs were recorded along these transects, including over 5,500 tracks and 500 caribou trails. Other caribou signs included beds, craters, and scat observations. Baseline data collected in 2004 and 2005 indicated that caribou selected habitat greater than 2,000 metres away from the future access road. This trend may have been the result of unsuitable habitat near the site of the access road, or of higher quality habitat at distances greater than 2,000 metres from the road. Data from 2006 is undergoing analysis to determine if the trend continued after construction of the road commenced. The results will be available in future monitoring reports.

Wuskwatim construction staff are monitoring accidental and harvest-related caribou mortality on an ongoing basis. Information collected will be available in future reports.

A NCN Member (top) and field technician consultant (middle) collect data along a caribou-tracking transect

Nelson House Resource Management/TLE Coordinator participating in an aerial survey (right)



Woodland caribou habitat located near the site



Heritage Resources Protection Plan

The Manitoba Heritage Resources Act requires that areas that may contain archaeological sites be subject to a Heritage Resource Impact Assessment (HRIA) before undergoing any development. The HRIA for the Wuskwatim Generating Station and access road recommended that monitoring at stream crossings be performed because of the high potential for the presence of heritage material.

Three site visits took place between August and October 2006. First, a heritage resource inspection of the existing winter road from Provincial Road 391 — used to access the Wuskwatim road route — was performed at the start of construction. The inspection included examination of the forest floor for any human-made features. The temporary connection road between the winter road and exploration cut line for the Wuskwatim access road was also inspected. Shovel tests were performed at the intersection of the connecting road and access road. The archaeological team also inspected the location of the communication tower, construction camp and borrow pits. No heritage resources were found at any of these locations.

The second visit took place in September 2006, and included inspection of the first two stream crossings. No heritage resources were identified during this inspection.

The third visit was undertaken in October 2006 and included inspection of the remaining stream crossings using helicopter and ground surveys. No indications of heritage resources were found at any of these locations.

As construction of Wuskwatim continues, locally-hired environmental inspectors (Aski Kihche O'nanakachechikeo, or AKOs) will be responsible for monitoring under the Heritage Resources Protection Plan. The AKOs have received training in identifying the most common types of heritage resources that might be found during site clearing and construction. If any artifacts are identified during construction, the AKOs will inform the Resident Manager, and the project archaeologist will be consulted.

Physical Environment Monitoring

The Physical Environment Monitoring Program (PEMP) is an adaptive program designed to measure various components of the physical environment that may experience some form of change as a result of construction and operation of the project.

Components of the physical environment addressed in the PEMP include:

- local air quality
- water regime
- ice processes
- erosion
- sedimentation
- woody debris

Preparation work on some components of the PEMP began in summer 2005.

Once the project received an Environment Act Licence and Interim Water Power Act Licence, a summer field data collection program was undertaken along the Burntwood River and in Wuskwatim Lake. This program will continue throughout construction and will continue for at least seven years following station completion.

Specific activities undertaken between August 2006 and the end of March 2007 — or prior to the start of construction in August 2006 — included water regime, and erosion and sediment transport monitoring.



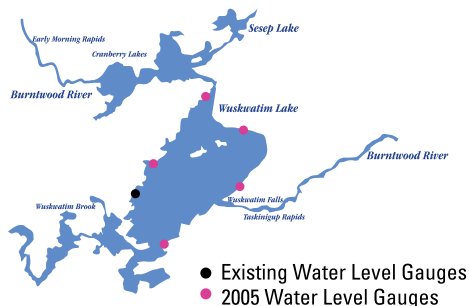


Figure 3 Location of automatic water level gauges on Wuskwatim Lake



Sample erosion transect

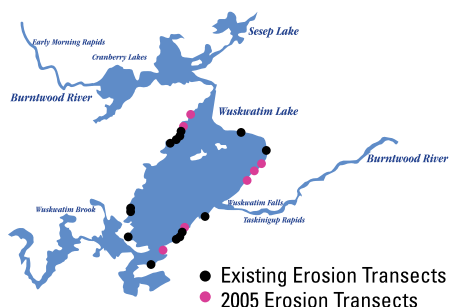


Figure 4 Location of erosion monitoring sites on Wuskwatim Lake

Water regime

Testing and set-up of five new automatic water level gauges on Wuskwatim Lake (Figure 3) and two new automatic water level gauges on Birchtree Lake began in 2005. Sub-hourly water level data continues to be collected to compliment existing monitoring programs in the area. This information will be used to determine where and when water levels will be measured during project operation. Results of this analysis will be covered in future monitoring reports.

Erosion and sediment transport

Seven new erosion monitoring sites were set-up on Wuskwatim Lake in 2005 (Figure 4), complimenting 13 existing sites established on the lake in previous years. Baseline data were collected in the summer of 2006 at all of the new erosion monitoring sites. In addition, as part of a one-time program, sediment core information was collected from Wuskwatim Lake in March 2007.

Over the reporting period, TSS were sampled at 25 sites, and turbidity was continuously monitored at 19 sites on Wuskwatim Lake and downstream of the generating station site. In addition, measurements of the size of particles on the Burntwood River bottom (i.e. bed load) just upstream and downstream of Wuskwatim Falls were also taken. This baseline study will allow for a future assessment of the impact of the generating station on the Burntwood River bottom.

Analysis of this erosion and sedimentation monitoring is underway and results will be reported in future monitoring reports.

Socio-economic Monitoring

Economic monitoring

The Wuskwatim Project will impact the economy of Manitoba in many ways:

- employment
- labour income
- purchases
- tax revenues
- contributions to provincial gross domestic product (GDP)

Impacts are either direct or indirect. Direct impacts refer to employment, purchases and income generated by the project itself. Indirect impacts refer to the employment, purchases and income created in other industries as the effects of the initial investment in the project work their way through the provincial and national economies. There will be indirect impacts on businesses supplying material and equipment, on the businesses that supply them, and so on. Additionally, the spending and re-spending of direct and indirect income generated by the project will result in indirect — or induced — effects upon consumer goods industries and the businesses that supply them.

The information provided in this report includes estimates of direct employment, purchases, labour income and tax revenue impacts of the Wuskwatim Generation Project from the start of construction to March 31, 2007. Impacts of the project on the provincial GDP are not included. In future years, information will be provided on some indirect economic impacts of the project.

Economic impacts of the project

Estimates of major direct economic benefits from the Wuskwatim Project to the end of March 2007:

- 98 person-years of direct employment
- \$42.2 million in direct project purchases
- \$4 million in labour income
- \$4.6 million in federal and provincial taxes





Employment

Hires on the project

Construction projects routinely report “hires”, referring to the number of people hired for any duration at a job site. As of the end of March 2007, there were 274 hires on the Wuskwatim Generation Project, of which 269 were Manitoba hires. Total northern Manitoba and Aboriginal hires represent approximately 79 per cent (212 hires) and 77 per cent (207 hires) respectively of Manitoba hires.

Table 1 (below) presents the breakdown of total project hires by job classification.

Table 1

Wuskwatim Generation Project hires by job classification to March 31, 2007

Job Classification	Total # of Hires
Labourers	53
Security Guards	9
Operating Engineers (Crane Operators)	1
Operating Engineers	58
Teamsters	37
Carpenters	5
Electrical Workers	3
Plumbers and Pipe Fitters	2
Office and Professional	13
Caterers	34
Other*	59
TOTAL	274

**The “Other” category refers to on-site hires in job classifications not covered by the Burntwood Nelson Agreement. This would include contractor, managerial and supervisory staff, other Manitoba Hydro on-site staff, and certain technical staff (engineers and technicians).*

Employee turnover rate

Over the duration of this reporting period there were 31 incidences where employees left the job site before the job was complete. This represents a rate of turnover of 11 per cent for the total labour force. Of the 31 individuals that left the job site before the job was complete, 27 (87 per cent) reported being of Aboriginal decent. This represents a 13 per cent rate of turnover among Aboriginal hires on the job site.

Person-years of employment

An accepted method to standardize the concept of hires is to define a person-year of employment. A person-year of employment is the same as a full-time equivalent (FTE), or one full-time job for one year. This typically represents about 2,000 hours of paid employment per year.

Over this reporting period it was estimated that approximately 98 person-years of direct employment were created on the project, of which 96 person-years represents Manitoba employment. Total northern Manitoba and northern Aboriginal employment impacts represent approximately 76 per cent (73 person-years) and 74 per cent (71 person-years) respectively of Manitoba employment.

Pre-project training

The federal government, Government of Manitoba and Manitoba Hydro have partnered to fund a \$60 million training initiative known as the Hydro Northern Training and Employment Initiative (HNTEI). The initiative is administered by the Wuskwatim Keeyask Training Consortium, comprised of five Cree Nations (Fox Lake Cree Nation, Nisichawayasihk Cree Nation, Tataskweyak Cree Nation, War Lake Cree Nation, and York Factory Cree Nation), Manitoba Keewatinook Ininew Okimowin, the Manitoba Métis Federation, Manitoba Hydro and the Province of Manitoba.

Under the initiative, northern Aboriginal people participate in pre-project training to develop the skills necessary to acquire employment on proposed hydro developments in northern Manitoba. It is expected that over the life of the program more than 1000 northern Aboriginal people will receive training in a broad range of skill areas, including designated, non-designated and construction support occupations. As of the end of March, 2007 approximately 30 HNTEI trainees had worked on the Wuskwatim construction site.

Purchasing

To the end of March 2007 a total of \$42.2 million was spent on goods and services for the project. Of this, \$34.9 million were Manitoba purchases. Total northern Manitoba (Aboriginal and non-Aboriginal) purchases represent 72 per cent or \$25.2 million of total Manitoba purchases. Total northern Aboriginal purchases represent 69 per cent or \$24.1 million of total Manitoba purchases. Another \$0.5 million was spent on other purchases using credit card or cheques. These purchases were not associated with a vendor number and therefore cannot be attributed to a northern or Aboriginal business.

Labour income

The labour income impact is the sum of the average wages and salaries associated with direct person-years of employment over the reporting period. The total direct labour income impact of Wuskwatim over this period is estimated at \$4 million¹, of which \$3.9 million represents that associated with direct Manitoba employment. Total northern Manitoba and northern Aboriginal direct labour income impacts represent approximately 73 per cent (\$2.85 million) and 71 per cent (\$2.75 million) respectively of the total Manitoba direct labour income.

Tax revenues

The direct tax revenue impacts reported here include provincial and federal taxes associated with the project such as payroll tax, personal income tax, capital tax, fuel tax and provincial sales tax. Not all of these taxes are payable by the project; however, they are generated as a result of it.

The estimate of these taxes to the end of March 2007 is \$4.6 million and includes \$86,000 in payroll taxes², \$820,000 in personal income taxes³, \$815,000 in capital tax, \$22,000 in fuel tax⁴ and \$2.9 million in provincial sales tax⁵.

1 Labour income is calculated based on average wages for various classifications and assumed wages for a small number of positions that do not fall under the BNA agreement. Therefore, it is an estimate of actual wages paid.

2 Health and Post-Secondary Education Tax is calculated as 2.15 per cent of the estimated labour income of \$4 million.

3 Personal income taxes are paid by individual employees to the Federal and Provincial governments. Each individual's personal tax situation (and therefore taxes payable) will vary. However, this estimate is based on a range of reasonable assumptions.

4 Fuel tax estimate does not include all fuel purchases by the project as not all data was available at the time of reporting. The fuel tax estimate is based on provincial taxes of 11.5 cents/litre for both diesel and gasoline and federal taxes of 4 cents/litre for diesel fuel and 10 cents/litre for gasoline.

5 PST is based on estimates of taxes paid directly by the project and PST on materials provided by suppliers under real property contracts.

Social monitoring

Cultural awareness activities and retention support programs

Over the reporting period various measures were put in place to support the retention of northern and Aboriginal employees at the job site, and to ensure that sensitivity and respect for local culture is demonstrated throughout construction of the project. These measures include on-site cultural awareness training for employees, voluntary counseling services, and cultural ceremonies prior to many key construction activities. NCN provides cross-cultural and retention programming on-site under contract.

Cultural awareness training

The purpose of cross-cultural awareness training is to assess and address the challenges that arise out of cultural differences experienced on the job site and interactions between employees and nearby communities. The cultural awareness training program includes one-day and half-day sessions (depending on the level of the employee's job responsibilities) and a two-hour refresher course. Training sessions consist of facilitated face-to-face awareness workshops delivered by qualified NCN members.

Over this fiscal year, efforts largely focused on finalizing the cross-cultural curriculum and constructing the physical infrastructure required to provide training to on-site employees. The first training session occurred on February 22, 2007, and included a trial run one-day session with 11 senior contractor and Manitoba Hydro supervisory staff. In addition, one half-day session was held on March 26, 2007 with 16 employees.





On-site counseling

On-site counseling is available to help all employees, on a voluntary basis, deal with any issues experienced while working on the project. This could include, for example, work adjustment problems, vocational/career issues, cultural adjustments, family stresses and money management. Employees have the option to involve other family members in counseling sessions and to meet with community elders.

Counseling services were available to on-site employees starting in February 2007. Other activities undertaken during the reporting period included the development, production and distribution of a brochure advertising the service.

Cultural site ceremonies

Site ceremonies were held at key construction milestones to help mitigate the effect of the project on culture and heritage, and to demonstrate respect for the land. Ceremonies were organized by NCN spiritual leaders, and attended by Manitoba Hydro staff and NCN members. To the end of March 2007, there have been two start up ceremonies, five stream crossing ceremonies and two borrow pit ceremonies. An additional ceremony was held to recognize the beginning of the spring season.

NCN impact management process

Manitoba Hydro and NCN have been working together to establish appropriate monitoring and impact management measures at Nelson House. Information on these measures will be provided in future monitoring reports.

Ongoing discussions with the City of Thompson

In its capacity as project manager for the WPLP, Manitoba Hydro met with various representatives from the City of Thompson between August 2006 and March 2007, including Thompson City Council, the Burntwood Regional Health Authority, Thompson RCMP, Thompson Fire Department and EMS, Thompson Airport Authority and the Local Government District of Mystery Lake. These discussions included updates on the project and planned schedule as well as the provision of services to the construction workforce. General feedback from all local business and stakeholders has been positive and supportive of the development. No issues of concern were identified in these meetings.



Transportation monitoring

Traffic Safety

The Wuskwatim access road connects Provincial Road (PR) 391 to the Wuskwatim Generating Station construction site. As a private road, access is restricted to a list of authorized road users. Access is controlled by means of a gate at the PR 391/ access road intersection. The gate office is staffed 24 hours per day, seven days per week, and security staff document all authorized vehicles entering the roadway.

The table below provides a summary of traffic use on the Wuskwatim access road during the reporting period. On average, 104 vehicles per day used the road from September 2006 to March 2007. No traffic accidents were reported.

Traffic levels on PR 391 for 2006 are not currently available from Manitoba Infrastructure and Transportation, as levels are reported only every second year. However, it is assumed that a significant portion of daily traffic on the Wuskwatim access road also makes use of PR 391, both west of the access road junction (toward Nelson House) and east of the junction (toward Thompson).

Traffic levels on PR 391 during 2006 and 2007 will be included in next year’s report.

Table 2

Traffic Use on the Wuskwatim Access Road – by Month and Time of Day¹

	Number of Trips							Total
	Sept 2006	Oct 2006	Nov 2006	Dec 2006	Jan 2007	Feb 2007	March 2007	
Total Monthly Trips¹	881	1 964	2 318	2 118	3 944	4 606	5 765	21 596
Daily Average	35	63	77	68	127	165	186	104

Source: Manitoba Hydro

¹ One trip represents one visit (entry plus departure)



Navigation Safety

During construction and operation of the generating station, new access to the Wuskwatim Lake area may bring more people in contact with Wuskwatim Lake and areas downstream of the station on the Burntwood River. New access safety measures will be put in place early in the construction phase to mitigate potential effects caused by this new access. Measures will include new signage regarding potential navigational hazards, construction of a floating dock, and safe haven cabins upstream of the station.

In addition, a new boat patrol will operate in the Wuskwatim forebay during construction and during the first years of plant operation to monitor debris in the water and along the shoreline. Patrols will take place two to three times per week for approximately six months each year. Any reported incidents on Wuskwatim Lake and downstream on the Burntwood River will also be tracked. Updates on these new safety measures will be provided in the next monitoring report.





Construction on the Wuskwatim Access Road continued throughout the winter of 2006–2007





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