



YEAR IN **REVIEW**

For the year ending March 31, 2023



WUSKWATIM
Power Limited Partnership



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Directors of the General Partner of WPLP

Marcel Moody (Nisichawayasihk Cree Nation), Jimmy Hunter-Spence (Nisichawayasihk Cree Nation), Brenda Froese (Manitoba Hydro), Quinn Menec, Chair (Manitoba Hydro), Tara Carson (Manitoba Hydro), Wesley Penner (Manitoba Hydro)



WUSKWATIM
Power Limited Partnership

Wuskwatim Power Limited Partnership (WPLP), a legal entity involving Manitoba Hydro and Nisichawayasihk Cree Nation through its wholly owned Taskinigahp Power Corporation (TPC), has developed the Wuskwatim Generating Station on the Burntwood River in northern Manitoba. It marked the first time in Manitoba and Canada that a First Nation and an electric utility have entered into a formal equity partnership to develop and operate a hydroelectric project. Manitoba Hydro provides management and operational services to WPLP in accordance with the Project Development Agreement (PDA).



INTRODUCTION AND BACKGROUND

Nisichawayasihk Cree Nation and Manitoba Hydro spent nearly a decade discussing, planning and undertaking the environmental studies and regulatory processes for the 200-megawatt Wuskwatim Generation Project operating in Nisichawayasihk Cree Nation's traditional territory on the Burntwood River downstream of Wuskwatim Lake at Taskinigup Falls.

In 2006, the Wuskwatim Project Development Agreement (PDA) that governs all aspects of the Project was approved by Nisichawayasihk Cree Nation Citizens and signed by senior Manitoba Hydro officials and Nisichawayasihk Cree Nation Chief and Council. Construction started in August that year.

The agreement provided the option for Nisichawayasihk Cree Nation to own up to one-third of the Wuskwatim Generating Station through its wholly owned Taskinigahp Power Corporation. Nisichawayasihk Cree Nation has confirmed its intent to maintain its 33 per cent ownership position in the Wuskwatim Project.

The Wuskwatim Power Limited Partnership (WPLP) is governed by the Board of Directors of its General Partner (5022649 Manitoba Ltd., a wholly owned Manitoba Hydro subsidiary). The Board consists of two Nisichawayasihk Cree Nation and four Manitoba Hydro representatives.

Pursuant to the PDA, WPLP contracted Manitoba Hydro to construct, manage, operate and maintain the Wuskwatim Generating Station.

Manitoba has a large self-renewing supply of waterpower with many hydroelectric generating stations developed to provide electrical energy for its citizens. Wuskwatim became fully operational in October 2012 and produces clean, renewable hydroelectric power. It adds to Manitoba's generation assets, helps to meet the province's domestic needs and provides energy to export customers.

MESSAGE FROM THE CHAIR



As Chair of the Board of Directors I am pleased to present the 2022-23 Year in Review highlighting this year's activities of the Wuskwatim Power Limited Partnership (WPLP). The following pages will provide much useful detail of these activities and the work undertaken over the past year.

This year I would like to acknowledge and highlight the work and outstanding contributions of Jimmy Hunter-Spence who announced his departure from the Board in April 2023. Jimmy has been instrumental in the success of the Wuskwatim project from the outset. He was key in promoting and securing support from Elders and other community members for the long-term benefits of the WPLP to his community. Jimmy was a visionary in recognizing the positive impacts of this project and partnership for future generations.

Jimmy was chosen by Nisichawayasihk Cree Nation (NCN) in 2005 as one of two original Board Directors to represent community interests and to ensure that the new partnership with Manitoba Hydro

would be established on the right footing. As a Board member he was diligent in his work and brought a calm wisdom to Board deliberations which was appreciated by all. His participation provided stability to the work of the Board, and we recognize the important role Jimmy played in ensuring that positive and constructive relations with NCN's new partner developed beneficially over the years.

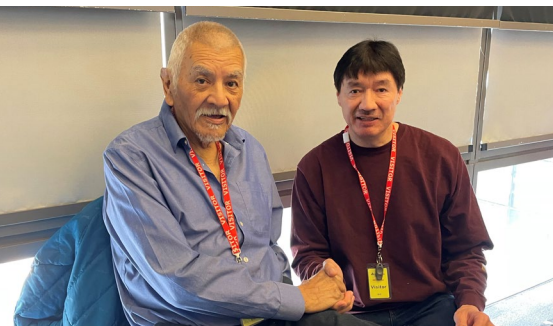
Your efforts are greatly appreciated by all who had the pleasure of working with you. You will be sadly missed! On behalf of all members of the Board I would like to thank you for your important contributions and wish you the very best in your future.

Kinanâskomitin,

Quinn Menec

Quinn Menec

Chair of the General Partner of Wuskwatim Power Limited Partnership (5022649 Manitoba Ltd.)



OPERATIONS

STATION PERFORMANCE

Manitoba Hydro uses three main criteria to measure generating station performance: net generation output, unit availability and unit forced outage rate.

Net Generation Output

Wuskwatim Generating Station produced 1.44 million megawatt hours of electricity this year. Output at the generating station was as forecasted and reflects normal flows. Monthly production averaged 119,913 megawatt hours, with peak production of 139,705 megawatt hours in March and a low of 87,887 megawatt hours in August.

These production numbers are a result of the near-normal water supply available in the Burntwood and Churchill River watersheds.

Unit Availability Factor

The generating station had an average monthly unit availability factor of 98 per cent, a measure of when the station is available to run when required. This is above average for a hydraulic generating station of this kind.

Unit Forced Outage Rate

The generating station had a forced outage rate of 0.5 per cent, a measure of the frequency of electrical or mechanical problems that remove a unit from service. The total of 119.7 hours of unit forced outage time is 0.5 per cent which is lower than the 1 per cent target.

MAINTENANCE AND REPAIRS

In May 2022 the three-year maintenance was done on unit 2.

In June 2022, units 1 and 3 were taken out of service to test the unit fire deluge systems.

In November 2022, all three units were taken out of service to make necessary programing adjustments and conduct performance testing by our engineering support groups.

DIRECT CONTRACT OPPORTUNITIES

A service agreement is in place with Nisichawayasihk Construction Limited Partners (NCLP) for the provision of equipment rentals and contract labour for work on the Wuskwatim roads. The contract is in effect until July 31, 2023.



SAFETY

Safety incident and activity reports are prepared monthly. During the past year, quarterly Workplace Safety and Health Committee meetings were held.

NAVIGATION SAFETY

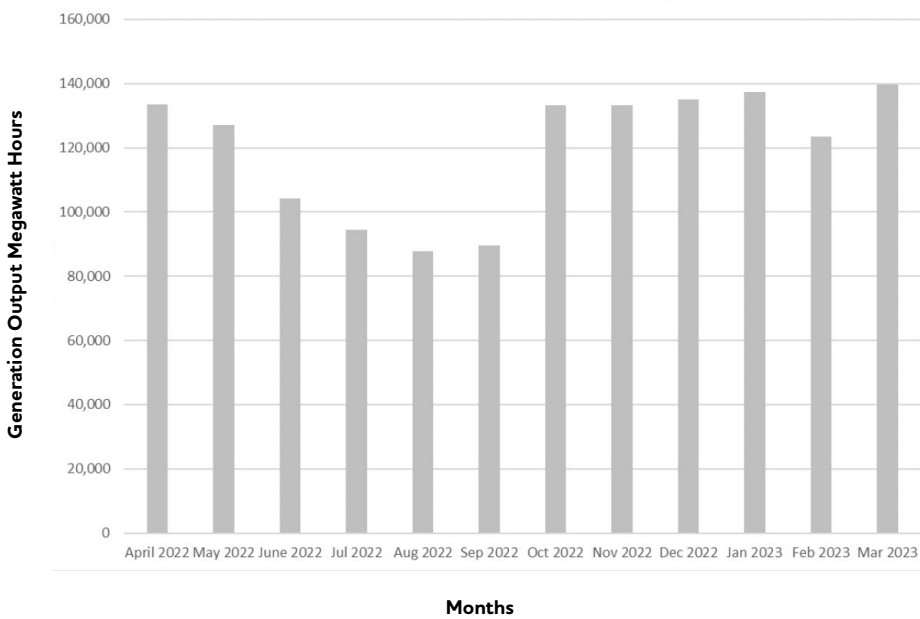
During the 2023 open water season, two Nisichawayasihk Cree Nation members were hired through Manitoba Hydro's Waterways Management Program to patrol Wuskwatim Lake and gather data, record safe travel routes and remove floating debris from the waterways.

The boat patrol ran for approximately 24 weeks, from May to October, resulting in 3,040 kilometres of shoreline patrolled. This work will continue during the 2023 open water season.

PLANT TOURS

Due to COVID, no plant tours were conducted during 2022-2023.

Wuskwatim Monthly Gross Generation Output



ENVIRONMENTAL MONITORING

ETHINESEWIN MONITORING

Ethinesewin is the traditional knowledge and collective wisdom of Nisichawayasi Nehethowuk (the people from where the three rivers meet and who speak the language of the four winds) that has been communicated orally for generations. Like the traditional knowledge systems of other Aboriginal peoples, *Ethinesewin* includes observation, classification, description, and recording of observations and results. The central focus of *Ethinesewin* is on relationships with and between the land, nature, and people. Nisichawayasi Nehethowuk and the NCN Elders, have been creating an understanding through *Ethinesewin* with Manitoba Hydro and Aski 'Otutoskeo Ltd (AOL) as an integral part of the environmental monitoring activities conducted during construction and the

current operational phase. Communicating *Ethinesewin* is vital to ensure the Project achieves Kistethichikewin, meaning the conduct of a person must adhere to the sacred responsibility to treat all things with respect and honour, according to Kihche'othasowewin (the Great Law of the Creator).

Ethinesewin Monitoring 2022

Fall Tour – August 16 – 25, 2022

Participating Elders:

- Sam Dysart
Retired Fisherman/Trapper
- Lena Dysart
Retired Educational Assistant
- Lydia Linklater
Retired Custodian
- James Spence
Retired DMP
- Mathew Wood
Retired Forestry Ranger
- George Wood
Retired Carpenter/Trapper
- Clifford Spence
Retired Camp Cook/Radio Announcer
- Clifford Hart
Retired Water Treatment Plant Operator/ NCN Pipe Carrier
- Ella Hart
Retired Treatment Councillor/ Traditional
- John Peter Spence
Retired Helitac

COVID-19 Pandemic

The COVID-19 pandemic was still a concern and the NCN Policy and Procedures for COVID-19 were still in effect so daily testing took place. The 2022 NCN Elders' *Ethinesewin* tour started as



planned, however, ended early once a daily test revealed a positive case. The Elders were immediately taken home for five days of isolation and a five-man crew stayed behind to carry out cleaning, disinfecting, packing, and locking up the cabins.

Wuskwatim Access Road – Stream Crossings

The Elders noticed many sudden dips and eroded areas on the Access Road particularly near the stream crossings. They observed standing water in the ditches which they felt could be contributing to the erosion of the road. Fortunately, there was a crew working on the road and added gravel to the weakened areas. The Elders would like to see signage added near the stream crossings warning drivers of potential bumps/dips in the road.

Wuskwatim Boat Dock

NCN Elders noted the Wuskwatim boat launch dock needs to be replaced as it's a safety hazard. *Ethinesewin* only happens twice a year during the summer months, and it would be beneficial if regular maintenance on the dock could take place.

Wuskwatim Village

On the boat ride to Wuskwatim Village the Elders went past the northern islands and noticed shoreline erosion taking place which was causing fresh vegetation to slump into the water. The rapid loss of the islands is apparent as there was once two large islands and there are now six smaller islands. The debris floating in the area is a safety concern due to the size and volume of debris.

The eroding shoreline at Wuskwatim Village has been a concern since the development of the Village many years ago.

Elders were advised that team of Manitoba Hydro staff will be coming to site to assess the situation and to develop a plan to stabilize the shoreline.

The NCN Elders suggested in the past that the five-man work crew should work to protect the shoreline. The leaning trees should be taken down and used as firewood. Any stumpage should be left in place for erosion protection. The work crew cleared the site, and it was used as a staging site for floating debris placement and stockpiling of firewood.

The NCN Elders recommended the use of solar power be explored for use at the Village. Solar power may prove to have positive outcomes; both financially and environmentally. The solar energy could be used to power a bathroom and an expanded/renovated kitchen with heating, lighting, and an irrigation system.



Wuskwatim Brook

Wuskwatim Brook is where Elders harvest wikis (rat root/ginger root) due to their abundance. The NCN Elders noticed a drastic change in the accumulation of debris on the shoreline and downed trees that had fallen into the water. The Elders also noticed a large number of floating cattails, numerous dead heads, and an incredible amount of floating debris. Despite this, the Elders had a fantastic day harvesting wikis and laughing with one another. It was especially satisfying harvesting jumbo-sized wikis embedded in the clay.

Heritage

Heritage has always been important to NCN Elders, and they continuously express that repatriation is important and therefore the grave sites must be cared for with yearly maintenance, and this will also ensure minimal disturbance to the grave sites. Workers visited the Wuskwatim Lake Mistoos Sipi Repatriation Site and the Wuskwatim Lake South Island Grave Site. The sites were cleaned of debris, fallen trees were removed, prayers were given, and tobacco was offered.

Shoreline Bio-Engineered Stabilization & Restoration

There are six experimental soil sites on Wuskwatim Lake as part of the Soil Bioengineering Stabilization and Restoration Project. The Elders

requested that work continue at these sites as it ensures the land can be saved. Due to limited travel, only sites 3, 4, 5 and 6 were visited and cleaned of debris along the shorelines.

Garden

NCN Elders would love to see the garden preparation begin in early spring. May long weekend would be an ideal time to prepare the land for seeding. They would like to see funding used to purchase equipment such as a tiller, shovels, hoes, and garden supplies, as well as a small greenhouse.



AQUATIC & TERRESTRIAL MONITORING

2022 marked the beginning of Phase II monitoring associated with operating the Wuskwatim Generating Station. It extends from 2022 until 2032. A portion of the Phase I monitoring results fell within predictions made in the Environmental Impact Statement (EIS) and as a result Phase II has fewer studies and less frequent monitoring for those that will continue.

Aquatic Monitoring

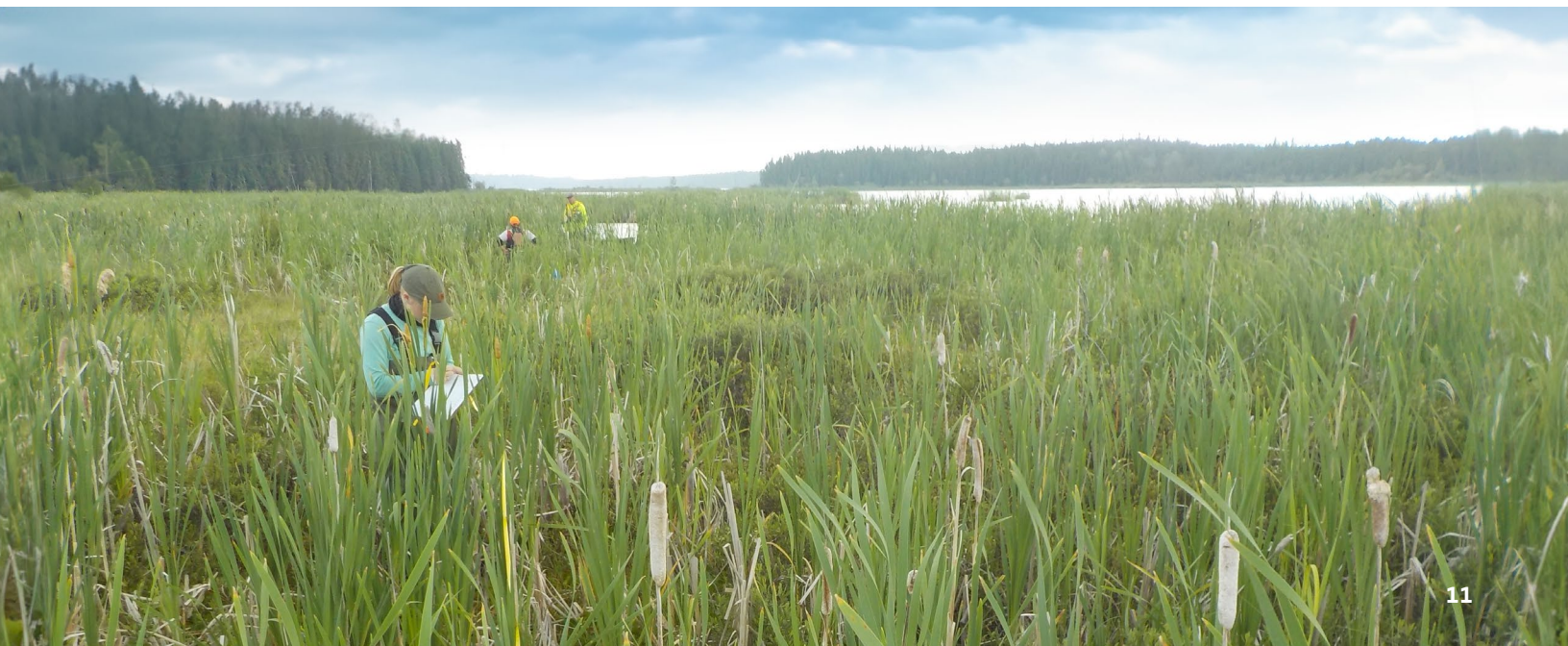
Aquatic effects monitoring during Phase II will include aquatic habitat, fish community and fish use of the No Net Loss Plan (NNLP) enhancement sites on Threepoint and Wapisu lakes. This work began in 2022 and will be carried out every three years.

Despite not being monitored for the Wuskwatim Project specifically, some key aquatic components, such as, water quality and mercury in fish flesh, will continue to be monitored on Wuskwatim Lake under the Manitoba Hydro/Manitoba Coordinated Aquatic Monitoring Program (CAMP). CAMP is a system-wide environmental monitoring program that tracks aquatic ecosystem health along Manitoba Hydro affected waterways.

Aquatic Habitat

At the end of Phase I monitoring, there was no measurable change to the aquatic habitat upstream from the station. An increase in the frequency of water level changes downstream from the generating station did not eliminate aquatic plants as was predicted in the EIS, but the results showed a shift in the types of plants growing. For this reason, it was decided to carry out an additional year of aquatic habitat monitoring downstream from the GS.

In 2022, water levels downstream from the station were low, such that two of the three monitoring sites could not be accessed by boat. Visual observations made at these two backbay areas on the Burntwood River confirmed aquatic plants were growing along the exposed shorelines, which means that plants continue to grow under the daily changes of water levels that occur during station operation. The third site was on the north shore of Opegano Lake, where aquatic plants covered a large area. Overall, aquatic habitat monitoring has shown that aquatic plants continue to grow in the downstream environment during station operation and no further aquatic habitat monitoring is planned.



ENVIRONMENTAL MONITORING

Fish Community

The EIS predicted that operations would cause a small increase in the abundance of fish upstream from the GS, an increase in fish in the Wuskwatim forebay from increased accessibility and presence of food, and a decrease in fish downstream caused by frequent water level changes and fewer fish moving downstream from Wuskwatim Lake. Some differences were measured during Phase I, where the size of Lake Whitefish and Walleye appeared to have decreased upstream and fewer fish were captured in the forebay than anticipated. Downstream, the number of Northern Pike found had decreased. Given the importance of Wuskwatim Lake to commercial fishing, three additional years of fish community monitoring were planned for Phase II.

Results collected in 2022 showed that the number of fish in Wuskwatim Lake and further upstream remains unchanged, but the fish caught were smaller. This finding is consistent with what has been found in the upstream reference locations as well, so the change is not a result of Wuskwatim operations. The number of fish found in the forebay area remains lower than expected, despite extra efforts to try and capture more fish. Downstream, no change to fish numbers was measured when compared to those collected before the Project.

Fish community monitoring has also shown that fish continue to reproduce in all upstream and downstream areas during station operation. Juvenile Walleye and Northern Pike were captured in the forebay, but it is unknown if the two species are actually spawning there, or if they came from Wuskwatim Lake. Fish community monitoring will take place again in 2025.

No Net Loss Plan

Constructing the GS required the WPLP to provide compensation habitat for aquatic life to make up for those areas that were lost to build the Project. Most of the sites were constructed around the GS and on Wuskwatim Lake; however, NCN members expressed their preference for having some site-specific compensation work on lakes used for domestic fishing. Selections of tributaries for these works was based on *Ethinesewin* from NCN Elders, and site inspections conducted by Project biologists and NCN members. One of the chosen sites is located on Wapisu Lake and the two others are on Threepoint Lake.

Enhancements at each site included clearing debris to restore access for fish, and habitat enhancements, such as planting aquatic vegetation, to encourage fish use.



Monitoring during Phase I showed that most of the compensation works constructed are fulfilling their purpose, but additional monitoring would be appropriate at the Wapisu and Threepoint sites to confirm their effectiveness. Few fish were caught in the spring and fall of 2022 in the three tributaries; one Sculpin was caught at Wapisu in both May and September and a total of 60 young-of-the-year White Sucker were captured in pools at the two Threepoint sites in September. More fish were caught in the embayment areas in the spring and fall. Common species found in the spring at the three sites were White Sucker, Walleye and forage species like Emerald and Spottail shiners. Sucker species, Walleye and Northern Pike were observed in spawning condition at each site in the spring. In September, shiner species dominated the catch.

Water levels in the fall were approximately a meter lower than during spring monitoring. Woody debris continues to accumulate in the embayment areas on Threepoint Lake. This, coupled with high water levels over the last few years, has limited the success of wetland vegetation planted at the three sites. This monitoring will be repeated in 2025.

Terrestrial Monitoring

Terrestrial monitoring in 2022 included monitoring habitat regeneration, lake peatlands, mammal tracking (including caribou) and beaver lodges.

Habitat Regeneration

Habitat regeneration monitoring is being conducted to track the growth of planted trees and natural regeneration in areas that were disturbed while constructing Wuskwatim GS.

Data collected in 2022 showed a decrease in planted jack pine density, especially in the excavated portions of the borrow areas. For black spruce, there was an overall increase in density. Treed habitat regeneration as of 2022 is approximately 67.6 ha for jack pine habitat and 57.2 ha for black spruce habitat.

In areas targeted for white spruce and balsam fir forest, 2022 surveys found that white spruce densities continue to decrease. Overall, approximately 37 ha of the planted areas meet the target for white spruce and balsam fir forest.

Those areas that are showing poor growth will be evaluated to assess options for improved rehabilitation success. Further monitoring of the habitat regeneration areas will take place in 2029.



ENVIRONMENTAL MONITORING

Lake Peatland

As predicted in the EIS, monitoring in 2022 showed that the size of some lake peatland areas has decreased, most likely because changed water levels caused peatland disintegration. Twenty-seven different plant species were counted in the areas visited and the most widely distributed species were peat moss and leather-leaf. Boreal bog sedge and marsh cinquefoil were also commonly found in the area around South Bay. Overall, there was no change to the plant species present when compared to when the area was last monitored in 2017. A portion of the lake peatland monitoring conducted in 2022 was not completed and will be finished and reported on in 2023.

Mammals Tracking

In the EIS, long-term, negative Project effects on mammals were predicted because of habitat loss and avoidance of the area because of sensory disturbances, such as noise. These effects were observed during construction and operation; however, caribou activity near the generating station and access road was inhibited more than expected during Phase I. Monitoring in 2022 found there is still less caribou activity near the GS and the road.

Along with caribou monitoring, concurrent studies of moose, black bear, and gray wolf were also conducted. Data from 2022 show moose are also avoiding the area near the road, but black bear are abundant in this area. It is possible moose and caribou are avoiding the road for this reason. Mammal tracking will be undertaken again in 2023.

Beaver Lodges

The effects of the Wuskwatim Project on beaver populations were predicted to be insignificant in the EIS. As expected, Phase I monitoring results indicate that stable upstream water levels resulted in a slight increase in the density of beaver lodges. Downstream from the GS, it was predicted in the EIS there would be a negative effect on the number of active lodges because of fluctuating water levels, however this was not observed.

Because the local beaver population may have still been adjusting to the altered habitat upstream and downstream of the generating station, an aerial beaver survey was conducted in 2022 to confirm results. Findings showed the beaver population remains stable and there has been no changes in the density of active lodges caused by the Project. This monitoring work is now complete.



PHYSICAL ENVIRONMENT MONITORING

The Physical Environment Monitoring Program (PEMP) is an adaptive program designed to measure various physical environment components that may experience some change from Wuskwatim Generating Station operations. The components addressed in the PEMP include climate, water regime and erosion. The geographic area subject to PEMP monitoring includes a section of the Burntwood River upstream of the Wuskwatim Generating Station to the foot of Early Morning Rapids, including Wuskwatim Lake, and downstream to Birch Tree Lake. The initial PEMP, developed in 2007, identified that the program would be adaptive and modified based on results on

an ongoing basis. Current monitoring is less intensive than it was during the first seven years of operation. Climate and water regime data continue to be collected on an ongoing basis. Shoreline erosion is being examined at five-year intervals.

Climate

To characterize climatic conditions in the Wuskwatim monitoring area, weather data from the Environment and Climate Change Canada station at Thompson was analyzed. The 2022–23 annual average temperature recorded at Thompson was 0.1°C warmer than 1981 to 2010 normals and total annual precipitation was 13 mm below normal.

Water Regime

Flows at the Notigi Control Structure were reduced in the spring and summer to reduce flows and water levels on the lower Nelson River during a flood event and returned to the operating maximum in late September for the remainder of the monitoring period. Wuskwatim Lake operated within its licence limits of 233.75 to 234.0 metres.



ENVIRONMENTAL MONITORING



SOCIO-ECONOMIC MONITORING

Operational employment is being tracked through the life of the Project.

Direct Employment

At the end of March 2023, there were 13 staff working at Wuskwatim, of which three self-identified as NCN members.

Indirect Employment

Indirect employment throughout the 2022 field season included terrestrial and aquatic monitoring. Activities included: large mammal tracking (including woodland

caribou); fish surveys at habitat compensation sites on Threepoint and Wapisu lakes; fish community gillnetting; aquatic habitat and peatland plant surveys; and habitat regeneration surveys.

Employment associated with these activities resulted in 1622 hours of work.

Since operations began in 2012, there have been approximately 24,500 hours of indirect work, associated with environmental monitoring, or approximately 12.25 person-years of employment. A person-year of employment is defined as one full-time job for one year, which is typically about 2,000 hours of work.





PHASE 2 OF OPERATIONAL MONITORING									
	2023	2024	2025	2026	2027	2028	2029	2030	2031
ETHINESEWIN MONITORING									
Traditional Knowledge Annual Tour	X	X	X	X	X	X	X	X	
BIOPHYSICAL									
AQUATIC									
Aquatic Habitat									
Fish Community			X			X			
No Net Loss Plan			X			X			
TERRESTRIAL									
Beaver Population									
Habitat Regeneration							X		
Mammals	X	X							
Shore zone Habitat	X							X	
Peatland Habitat	X						X		
Invasive Plants	X					X			
PHYSICAL MONITORING									
Climate	X	X	X	X	X	X	X	X	X
Water Regime	X	X	X	X	X	X	X	X	X
Erosion			X					X	
Sediment Transport			X					X	
SOCIO-ECONOMIC MONITORING									
Operations Employment	X	X	X	X	X	X	X	X	

Summary report preparation

2022–2023 FINANCIAL REPORT

Statement of Income

(for the year ended March 31)

(in millions of dollars)	2023	2022
Revenue	125	124
Expenses		
Operating and administrative	8	7
Finance expense	66	75
Depreciation	17	18
Amortization	3	4
Water rentals	3	5
	97	109
Net Income	28	15

Partnership Assets, Liabilities and Equity

(as at March 31)

(in millions of dollars)	2023	2022
Assets		
Property, plant and equipment	1,145	1,162
Intangible assets	246	249
Deposit for debt retirement	34	22
Current assets	98	65
	1,523	1,498
Liabilities and Equity		
Current liabilities	23	24
Long-term debt	1,369	1,371
Partners' capital	131	103
	1,523	1,498

Partners' Capital
(as at March 31, 2023)

	Units	%	(net) Capital (in millions of dollars)
General Partner ¹	32.967	0.01	–
Manitoba Hydro	220,843.700	66.99	88
Taskinighp Power Corporation	108,790.000	33.00	43
	329,666.667	100.00	131

Operating, Financing and Investing Activities
(for the year ended March 31)

(in millions of dollars)	2023	2022
Operating Activities		
Cash receipts from customers	114	124
Cash paid to suppliers	(11)	(10)
Interest paid	(70)	(76)
Interest received	3	1
Cash provided by operating activities	36	39
Financing Activities		
Repayment of long-term debt	(2)	(2)
Cash used for financing activities	(2)	(2)
Investing Activities		
Additions to property, plant and equipment	–	(1)
Term investment	(22)	(25)
Deposit for debt retirement	(12)	(11)
Cash used for investing activities	(34)	(37)

¹ The business affairs of WPLP are carried out by a general partner (GP), 5022649 Manitoba Ltd., a wholly owned Manitoba Hydro subsidiary.



WUSKWATIM
Power Limited Partnership

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