Keeyask Generation Project

Environmental Impact Statement

Executive Summary

KEEYASK

Hydropower Limited Partnership

June 2012

10. Appendix - Environmental Effects Analysis: Summary of Potential Effects, Mitigation/Enhancement and Residual Effects

Aquatic Valued Environmental Components

Potential Effect on VEC	Mitigation/Enhancement	Residual Effect
Water Quality		
• Construction activities such as the discharge of effluents and the dewatering of cofferdams will result in local increases in parameters such as total suspended solids (TSS), nutrients, metals, and pH • Installation and removal of cofferdams and river diversion could result in larger TSS increases in the river downstream of the construction site • After the station is in operation, there will be short-term (10-15 years) increase in levels of nutrients, metals and TSS, and declines in dissolved oxygen during winter, mainly in nearshore off-current areas of the reservoir • During operation, TSS concentrations will be lower than existing conditions in the mainstem of the reservoir and south western portion of Stephens Lake	• Management methods such as treating and testing effluents prior to discharge, controlling surface runoff, and developing effective methods to prevent and manage accidental spills will be used during construction • Implementing protocols in a sediment management plan during instream construction will maintain TSS levels within pre-determined limits • No specific mitigation for water quality is planned during the operation phase	• Measurable increases to TSS and other parameters are expected in the vicinity of the construction site • For several open water seasons during construction, there will be small increases in TSS levels further down the Nelson River • During operation, most effects to water quality will be confined to flooded areas, though TSS will decline in the main body of the reservoir and further downstream • Overall, water quality will always be suitable for aquatic life in the main part of the reservoir, and be suitable at most locations and at most times in the flooded area

Aquatic Valued Environmental Components (Continued)

Potential Effect on VEC	Mitigation/Enhancement	Residual Effect
Pickerel / Jackfish / Lake Whitefish		
• Construction activities such as the installation of cofferdams, dewatering of Gull Rapids, blasting, and water withdrawals will disturb fish • Impoundment of the reservoir will create a large area of newly flooded terrestrial habitat, which over time will evolve into productive aquatic habitat • Creation of the reservoir will disrupt existing spawning habitat (pickerel and lake whitefish) • The loss of Gull Rapids will reduce the amount of spawning habitat in Stephens Lake, though these species spawn in other areas as well • A large off-current bay created during reservoir impoundment has shallow outlets that would freeze to the bottom in winter and trapped fish could die • Fish in pools downstream of the spillway could become trapped and die after the spillway operation ceases • The presence of the generating station will alter downstream fish movements and block upstream movements. This change is not expected to affect fish abundance in the reservoir or Stephens Lake	• Adverse effects of construction will be addressed by adhering to instream construction timing windows, following blasting guidelines, screening water intakes, and salvaging fish prior to dewatering • Spawning shoals will be created for lake whitefish and pickerel in the reservoir, a spawning structure will be created below the tailrace of the generating station, and a spawning reef will be created for lake whitefish downstream in Stephens Lake • Channels will be constructed to connect the large off-current bay in the reservoir to deeper sections of the reservoir • Channels that connect spillway pools to Stephens Lake will be constructed to prevent fish stranding • A trap/catch and transport program for upstream fish passage will be implemented. Downstream fish passage will be provided via the turbines and spillway, which incorporate design features that reduce the risk of injury and mortality	• During construction, a reduction in available spawning habitat in Stephens Lake may result in fewer pickerel and lake whitefish being produced for a few years • After the reservoir is formed, pickerel and whitefish populations are expected to increase over time due to more habitat • After the station is in operation, pickerel and whitefish populations are expected to be the same as they are today in Stephens Lake • Jackfish populations are expected to remain stable in the reservoir and Stephens Lake in the long-term, though short term declines may occur in the reservoir

Aquatic Valued Environmental Components (Continued)

Potential Effect on VEC	Mitigation/Enhancement	Residual Effect
Lake Sturgeon		
• Construction effects listed above also apply to lake sturgeon • During construction, rising water levels in Gull Lake may cause sturgeon to move either upstream or downstream • During construction, sturgeon may not spawn in Gull Rapids due to construction activity • Reservoir creation will alter existing spawning habitat - sturgeon may continue to use this habitat or move to spawning habitat further upstream • After reservoir creation, existing young-of-the-year rearing habitat will be lost. It is unclear whether other suitable habitat will be available • In the reservoir, preferred habitat for sub-adult lake sturgeon will be altered, but there will be a general increase in the amount of foraging habitat for both sub adults and adults • Spawning habitat in Gull Rapids, the only spawning location for fish in Stephens Lake, will be lost when the generation station is built • Fish could become stranded after spillway operation ceases • The presence of the generating station will alter downstream movements and block upstream movements of fish. This change is not expected to affect sturgeon abundance • The access road will increase access by domestic harvesters and potentially increase lake sturgeon harvest	• Construction mitigation measures listed above also apply to lake sturgeon • Stocking will be used to mitigate population losses due to reduced spawning and movement to other locations that may occur during construction • After the generating station is in operation, monitoring will determine whether lake sturgeon spawn in fast-water habitat in the reservoir. If not, suitable habitat will be modified to make it attract spawning fish • Monitoring will determine if suitable young-of-the-year habitat occurs in the reservoir and, if not, suitable habitat will be created • Spawning habitat will be constructed downstream of the generating station based on designs that have been successful elsewhere • Trap/catch and transport will allow for the transport of sturgeon that have moved downstream past the generating station to be moved back upstream, while avoiding depleting the remnant population in Stephens Lake • Downstream fish passage is described above • A lake sturgeon conservation awareness initiative will be developed to inform domestic resource users of the vulnerability of the lake sturgeon populations in the Keeyask reservoir and Stephens Lake and of the various enhancement programs being developed to increase numbers • A regional conservation stocking program in the Kelsey to Kettle generating station reach of the Nelson River will increase the regional population of lake sturgeon. Stocking in the Project area will compensate for any temporary reductions in sturgeon production while habitat mitigation measures become fully functional	• During construction, potential movement of adults from the reservoir could cause in a shift in the age structure of the population • Stocking is expected to prevent a decline in abundance due to construction effects • During the operation period, no long-term adverse effects to lake sturgeon numbers in the area directly affected by the Project are expected due to mitigation measures that provide habitat for all life history stages both above and below the generating station, and an extensive stocking program • An overall increase in the number of sturgeon in the Kelsey Generating Station to Kettle Generating Station reach of the Nelson River is expected due to stocking

Terrestrial Valued Environmental Components

Potential Effect on VEC	Mitigation/Enhancement	Residual Effect
Ecosystem Diversity / Intactness / Wetland Function / Priority Plants		
• Habitat will be lost and altered, the amount of core habitat area will be reduced, the sizes of large core habitat areas will be reduced, priority plants will be lost and priority plant habitat will be lost and altered • These effects are due to: – Clearing, borrow area development, excavated material placement, physical disturbance, altered hydrology and the associated indirect effects on habitat – Reservoir flooding, reservoir expansion, changes to the water regime, higher groundwater and the associated indirect effects on habitat	• Many effects have been avoided or minimized through the planning and design process • Access to some existing trails and cutlines will be blocked and re-vegetated • A portion of borrow area N-6 will be withdrawn from use to minimize effects on a sensitive habitat area • Priority habitats will be rehabilitated in some construction areas that are not needed for operation • Measures will be applied to prevent and/or reduce erosion, siltation and other effects to off-system marshes • New marshes will be developed • If plant surveys identify very rare species, the site will be avoided or the plants will be transplanted	• Ecosystem diversity effects are expected to be adverse but regionally acceptable because no ecosystem types are lost, the proportion of the habitat types is not expected to change substantially, and the area losses for all of the priority habitat types will be below 10% of historical area • Intactness effects are expected to be adverse but regionally acceptable because no very large core areas will be lost and amount of core area should remain over 80% of regional land area • Wetland function effects are expected to be adverse but regionally acceptable because no globally, nationally or provincially significant wetlands will be affected, there is no net loss of off-system marshes, and losses of remaining native wetlands will be below 10% of historical area • Effects on priority plants are expected to be adverse but regionally acceptable because there are no predicted effects on very rare plants. Effects on most species of particular interest to Keeyask Cree Nations are expected to be low because of their widespread distribution. Effects on the remaining priority species are expected to be low because low percentages of their known locations and/or available habitat are affected by the Project

Terrestrial Valued Environmental Components (Continued)

Potential Effect on VEC	Mitigation/Enhancement	Residual Effect
Canada Goose / Mallard / Bald Eagle / Olive-sided Flycatcher / Common Nighthawk / Rusty Blackbird		
• Habitat will be lost and altered through clearing and flooding • Construction activities (e.g. noise) will cause some species to avoid the construction area • Increased traffic and access will increase harvest and vehicle mortality of some species	• Vegetated buffers will be established around lakes, creeks, and other waterbodies to reduce construction noise • Land clearing will be avoided to the extent practicable during the sensitive breeding season (April 1 to July 31) • Access to cut lines will be blocked and re-vegetated as soon as they are no longer needed • New wetland habitats will be created • A construction Access Management Plan will be implemented to minimize waterfowl harvest • During the fall or winter, bald eagle nests will be removed from trees that may fall into the reservoir • Nesting structures will be installed for bald eagles and mallards • Some standing-dead trees will be retained for olive-sided flycatcher breeding habitat • Some flat open areas will be retained for common nighthawk breeding habitat	• The effect on Canada goose is expected to be adverse but regionally acceptable because of the large amount of staging habitat in the region and lack of locally/ regionally important breeding habitat being affected • The effect on bald eagles is expected to be regionally acceptable as the adverse construction effects are small and operation effects are neutral overall • The effect on mallard is expected to be adverse but regionally acceptable because there is limited breeding habitat being affected and staging habitat is not limiting • The effects on olive-sided flycatcher, rusty blackbird and common nighthawk are expected to be adverse but regionally acceptable because breeding habitat losses are small and such habitat is abundant in the wider area
Beaver		
• Habitat will be lost and/or altered • Increased access will increase predation and harvest	• Beavers will be trapped by licensed trappers in the area where the reservoir will be created • A 100 metre buffer will be maintained or established at most creeks, streams and ponds to protect shoreline habitat • Beaver bafflers will be installed along culverts and control structures that are repeatedly blocked by beaver activity	• Effects are expected to be adverse but regionally acceptable because beaver will continue to create their own habitat, compensate for population reductions, and adjust to some changing conditions in the reservoir. The Nelson River will continue to be unsuitable beaver habitat because of fluctuating water levels

Terrestrial Valued Environmental Components (Continued)

Potential Effect on VEC	Mitigation/Enhancement	Residual Effect
Caribou		
• Habitat, including calving islands, will be lost and/or altered through reservoir clearing and flooding • Construction disturbance may cause altered movements • Improved access may increase predation, harvest and vehicle mortality	• Access road routing and construction activities have been planned to avoid important calving habitat • Areas that could become calving islands in the reservoir will not be cleared of vegetation • Blasting will be limited to the extent practicable during the calving season (May 15 to June 30) • Other mitigation measures include prohibitions on firearms in the construction camps; signage on roadways; rehabilitation of construction sites; re-vegetating ditches with plants that are not normally eaten by caribou; and access to some existing trails and cutlines will be blocked and re-vegetated • A plan for Manitoba Hydro's northern developments is being developed to facilitate coordination of caribou mitigation and monitoring activities with government authorities and existing caribou management boards	• Effects are expected to be adverse but regionally acceptable for several reasons. Habitat loss in the area will be small (less than 1%). Changes to intactness and mortality are negligible. Altered movements and distribution are likely limited to habitat near the Project infrastructure, and will have little effect on landscape level movements and distribution
Moose		
• Habitat will be lost and/or altered • Construction activities (e.g. noise) may cause sensory disturbance and may cause moose to alter their movements • Improved access will increase predation, harvest and vehicle mortality	• The development of new wetlands will partially offset losses of some moose habitat • Tataskweyak Cree Nation will implement a moose harvest sustainability plan for the Split Lake Resource Management Area • Other mitigation measures include prohibitions on firearms in the construction camps; rehabilitation of construction sites; re-vegetating ditches with plants that are not normally eaten by moose; and access to some existing trails and cutlines will be blocked and re-vegetated	• Effects are expected to be adverse but regionally acceptable for several reasons. Habitat loss in the area will be small (less than 1%). Changes to intactness and mortality are negligible. Altered movements and distribution are likely limited to habitat near the Project infrastructure, and will have little effect on landscape level movements and distribution

Socio-Economic Valued Environmental Components

ECONOMY

Potential Effect on VEC	Mitigation/Enhancement	Residual Effect
Employment Opportunities		
• Construction of the Project will create 4,200 person-years of employment • Operation of the Project will create 46 permanent jobs	• Pre-project training undertaken between 2001 and 2010 to develop construction skills • The collective bargaining agreement (BNA) governing the Project provides preferences for northern Aboriginal and northern Manitoba workers on the Project • The Keeyask Cree Nations can hire their Members whether living on-reserve or elsewhere in the province to work on directly-negotiated contracts (without going through the job referral process) • Targets have also been established for Keeyask Cree Nations Members to work across the province with Manitoba Hydro	• There are between 550 and 1,700 person years of northern Aboriginal employment expected during the construction phase resulting in a positive effect on employment • The Joint Keeyask Development Agreement provides a target of 182 operation jobs for Keeyask Cree Nations Members across the Manitoba Hydro system over the next 20 years, resulting in a positive long-term benefit
Business Opportunities		
• Construction of the Project will create opportunities for northern Manitoba businesses, particularly joint venture contracts with Keeyask Cree Nations-owned businesses	• The Partnership has identified contracts to be directly negotiated with businesses (DNCs) in which the Keeyask Cree Nations are majority owners in joint venture companies	• Keeyask Cree Nations-owned businesses will gain substantial contract opportunities through the direct negotiated contracts outlined in the Joint Keeyask Development Agreement, resulting in a positive effect on business opportunities • Other local businesses may also find opportunities, either directly associated with the Project or as a result of economic spinoffs
Income		
• Increased employment opportunities will result in increased income opportunities • Potential investment income for the Keeyask Cree Nations through the terms of the Joint Keeyask Development Agreement	• Note the enhancements under 'Employment'	• Effects on Income are expected to be positive due to substantial employment opportunities during construction; and the opportunity for long-term jobs in Hydro operational positions • Investment income can result in substantial benefits to the Keeyask Cree Nations communities over the long-term

Socio-Economic Valued Environmental Components (Continued)

Potential Effect on VEC	Mitigation/Enhancement	Residual Effect
Cost of Living		
• An increase in worker populations may increase spending in the area, resulting in increased demand	• No mitigation or enhancement measures are planned	• An increase in demand may be offset in part by more businesses competing to provide goods and services or expanding their range of goods and services; however, little tangible effect on cost of living is expected
Resource Economy		
• Limited effect on cash and in-kind income from domestic resource use • Loss of income for some local commercial trappers • Closure of Stephens Lake small (single-licence) fishery • Limited effect on lodges and outfitters	• Offsetting Programs in each Keeyask Cree Nations' Adverse Effects Agreement (AEA), including guidelines and principles for participants • Compensation for loss of income to commercial trappers • Compensation for loss of income to Stephens Lake fishery operator	• Limited residual effects on resource economy are expected due to existing Keeyask Cree Nations' Adverse Effects Agreement Offsetting Programs and compensation provided

Socio-Economic Valued Environmental Components (Continued)

INFRASTRUCTURE

Potential Effect on VEC	Mitigation/Enhancement	Residual Effect
Housing		
• An in-migration of workers during construction could potentially increase demand for housing and temporary accommodation in nearby communities • The addition of 46 permanent jobs during operation phase will increase demand for housing in Gillam	• Construction workers will be housed in a construction camp • Manitoba Hydro is developing plans for new housing in Gillam for its permanent staff as part of the Gillam Land Use Planning Process	• The Project's adverse effect on increased housing demand is expected to be small during the construction phase • The Project is expected to result in an ongoing demand for temporary accommodation during construction • Housing is expected to be available for additional Keeyask operational staff living in Gillam
Infrastructure and Services		
• More workers, particularly during the construction phase, could increase the demand on infrastructure and services	• On-going communication with local service providers to allow for effective and timely planning of service delivery, including the RCMP • The Gillam Land Use Planning Process will consider increased need for infrastructure and services	• Some residual effects are expected on infrastructure and services due to existing programming already in place
Transportation Infrastructure		
• An increase in workers, especially during construction, will increase demands on transportation infrastructure • Once the Project goes into operation, the north and south access roads will become part of the provincial highway system • The existing section of PR 280 from the north access road to Gillam will be abandoned by Manitoba Infrastructure and Transportation	• PR 280 is being upgraded including widening, grading and curve shaping	• Project effects on transportation infrastructure are expected to be adverse during construction due to the increased use of road, rail and air networks • Over the long-term, effects are positive as travel time between Gillam and Thompson will be shortened by about an hour due to PR 280 being re-routed along the north access road, across the generating station and along the south access road
Land		
• No Keeyask Cree Nations reserve land or treaty land entitlement is required • The Project will be built on Provincial Crown land	• No mitigation is required	• There are no expected residual effects on reserve land or land selected for treaty land entitlement

Socio-Economic Valued Environmental Components (Continued)

PERSONAL, FAMILY AND COMMUNITY LIFE

Potential Effect on VEC	Mitigation/Enhancement	Residual Effect
Governance, Goals and Plans		
• An increased demand on Keeyask Cree Nations' community leadership to be actively involved in Project activities/committees • An increased demand on Gillam leadership	• Provisions within the Joint Keeyask Development Agreement include participation in the Keeyask Hydropower Limited Partnership Board, advisory committees on employment and ongoing monitoring • Gillam Land Use Planning Process is currently underway	• Project effects on governance, goals and plans are expected to be positive as ongoing involvement by Keeyask Cree Nations leadership and Future Development teams build capacity within the Keeyask Cree Nations communities and incorporate Keeyask Cree Nations perspectives into project activities
Community Health		
• An increase in workers (construction) and population (operation) will put greater demands on health and social services	• Emergency medical and ambulance services, as well as a health clinic will be available for workers at the camp • See measures under Infrastructure and Services and Public Safety and Worker Interaction	• Effects on community health services are expected to be adverse during construction due to potential increased demand
Mercury and Human Health		
• An increase in mercury levels in fish could potentially affect the health of people eating fish from Gull and Stephens lakes; and could potentially reduce the amount of fish eaten, particularly for the Keeyask Cree Nations communities	• Through the Keeyask Cree Nations' Adverse Effects Agreements Offsetting Programs, Keeyask Cree Nations Members will be able to eat fish from 'off-system' unaffected lakes • A communication strategy and information materials providing recommended guidelines regarding the safe consumption of fish (and other country food) will be provided to local and Keeyask Cree Nations communities and health-service providers • Mercury levels in fish and other wildlife will be monitored and results shared with local resource users and health-service providers	• Mercury and human health effects during the operation phase are expected to be adverse; however, Tataskweyak Cree Nation and War Lake First Nation will have plenty of healthy fish available through their Adverse Effects Agreement Offsetting Programs. York Factory First Nation and Fox Lake Cree Nation also have Adverse Effects Agreement Offsetting Programs • Other people who regularly eat fish will be instructed to restrict consumption of large pickerel (walleye) and jackfish (northern pike) from Gull and Stephens lakes, likely for 25-30 years after the Project goes into service • Particular attention is given to toddlers and women of child-bearing age who should avoid eating pickerel (walleye) and jackfish (northern pike) from both Gull and Stephens lakes • The health of people following these guidelines should not be affected

Socio-Economic Valued Environmental Components (Continued)

Potential Effect on VEC	Mitigation/Enhancement	Residual Effect
Public Safety and Worker Interaction		
• The presence of non-local construction workers may result in adverse interactions with local community members	• Measures at the main camp include cultural training, lounge and recreational facilities • A Construction Access Management Plan and camp rules, will restrict worker activities • A shuttle will be operated to take workers to and from Gillam and Thompson airports • Ongoing dialogue with RCMP • Coordinated discussions in advance of the Project among Manitoba Hydro, the Town of Gillam, Fox Lake Cree Nation and Tataskweyak Cree Nation to determine the best mechanism for tracking and addressing worker interaction issues and concerns across all Manitoba Hydro proposed projects in the vicinity of Gillam	• During construction, public safety and worker interaction effects are expected to be adverse due to potential adverse worker interactions • There is the potential for small adverse effects during the operation phase due to the increased population in Gillam
Travel, Access and Safety		
• The Project will change local waterways, thereby affecting water and ice-based travel • Increased construction traffic on PR 280 has the potential for safety issue for users of the road • After construction, PR 280 will be re-routed along the north access road, across the generating station and along the south access road to Gillam	• The Reservoir Clearing Plan will eliminate most of the vegetation that otherwise would interfere with boat travel • The Waterways Management Program includes a boat patrol team responsible for collecting floating debris that does enter the waterway and marking/maintaining safe travel routes among other activities • Boat launches, safe landing sites and safety shelters will be provided • A portage with docks will assist boaters to get around the Project once it goes into operation • Safe ice trails will be established and monitored • Safety measures around the construction site during construction (e.g., warning signage, buoys and booms) • Safety measures at the generation station once built (railings, fencing and siren system) during operation • Manitoba Infrastructure and Transportation is undertaking road improvements to PR 280 prior to construction start	• During construction, Project effects on travel, access and safety are expected to be adverse • Boaters will not be able to access the area around Gull Rapids or move past Gull Rapids while the Project is being constructed for safety reasons • Once the Project goes into operation, Project effects are positive as boaters will use the new portage and associated docks to get around the Project infrastructure • In addition, enhancements under the Waterways Management Program are long-lasting benefits to all users of the area

Socio-Economic Valued Environmental Components (Continued)

Potential Effect on VEC	Mitigation/Enhancement	Residual Effect
Culture and Spirituality		
• The Project will result in the loss of the rapids, flooding of land, and changes to the cultural landscape causing great sorrow to local Aboriginal people	• Appropriate ceremonies and rituals consistent will local culture and spirituality will be conducted at key Project milestones • The Keeyask Cree Nations' Adverse Effects Agreement Offsetting Programs provide important initiatives to maintain and enhance Cree culture • Other initiatives include a video of the existing environment, an interpretative display, and other cultural training for operation staff • Counselling services will be available at the Project site during construction	• Culture and spirituality effects are expected to be adverse and long-term due to the permanent loss of the rapids, and changes to the cultural landscape due to the presence of Project infrastructure and creation of the reservoir • The Keeyask Cree Nations' Adverse Effects Agreement Offsetting Program and participation as Project partners address these residual effects
The Way the Landscape Looks (Aesthetics)		
• The local landscape will be permanently changed, scenic views and Gull Rapids will be lost	• The Reservoir Clearing Plan will greatly reduce unsightly debris • Decommissioned construction sites will be rehabilitated • Ceremonies and rituals will assist in addressing the long-term loss of landscape elements • Enhancement measures include a park/rest area at the boat launches, commemorative plaque, nature trails for workers at site, a video and an interpretative display	• Project effects on the way the landscape looks (aesthetics) are expected to be adverse and long-term due to the permanent change in the physical landscape, views and loss of rapids; and Gull Lake will become a reservoir • The Keeyask Cree Nations' Adverse Effects Agreement Offsetting Programs and participation as Project partners have addressed these permanent effects

Socio-Economic Valued Environmental Components (Continued)

RESOURCE USE

Potential Effect on VEC	Mitigation/Enhancement	Residual Effect
Domestic Fishing		
• Changes to access and navigation on local waterbodies may affect domestic fishing • Elevated mercury levels will affect fish consumption preferences • Domestic fishers may notice increased recreational fishing due to population increases in Gillam • Shifting patterns of fishing activity may result in pressure on a wider area	• Through the Adverse Effects Agreement Offsetting Programs, Keeyask Cree Nations Members will be able to fish at 'off-system' unaffected lakes • Communication of local fish consumption recommendations will help domestic fishers make informed decisions with regard to fish harvest and consumption • Waterways Management Program and Reservoir Clearing Plan will aid in access and travel safety on local waterbodies • A fish harvest sustainability plan will assist in the long-term sustainability of fish resources in the Split Lake Resource Management Area	• Domestic fishing effects are expected to be neutral • Improved community-wide opportunity to conduct domestic fishing through the Keeyask Cree Nations' Adverse Effects Agreement Offsetting Programs • Some Keeyask Cree Nations Members may experience changes to fish consumption preferences • Some domestic fishers will experience a change in their resource use experience due to the presence of the Project, resulting in increased pressure for resources in new areas
Domestic Hunting and Gathering		
• Changes in access and navigation on local waterbodies may affect domestic hunting and gathering • Clearing and flooding will result in a loss of plant harvest areas and may affect local cabins • Hunting activity may increase due to increased population in Gillam • Shifting patterns of hunting and gathering activities and resultant pressure to a larger area	• The Keeyask Cree Nations' Adverse Effects Agreement Offsetting Programs will provide access to alternative hunting and gathering areas • Waterways Management Program and Reservoir Clearing Plan will aid in access and travel safety on local waterbodies • Measures in the Keeyask Cree Nations' Adverse Effects Agreement are available to recover losses to personal property or cabins • The Construction Access Management Plan will restrict access to the Project area by the public which will reduce potential pressure on resources • A moose harvest sustainability plan will assist in the long-term sustainability of the moose population in the Split Lake Resource Management Area	• Domestic hunting and gathering effects are expected to be neutral • Improved community-wide opportunity to hunt and gather through the Keeyask Cree Nations' Adverse Effects Agreement Offsetting Programs • Some domestic hunters and gatherers will experience a change in their resource use experience due to the presence of the Project, resulting in increased pressure for resources in new areas

Socio-Economic Valued Environmental Components (Continued)

Potential Effect on VEC	Mitigation/Enhancement	Residual Effect
Commercial Trapping		
• Project local disturbances (noise, dust, safety issues) may affect commercial trapping activity • Shifting patterns of resource use due to Adverse Effects Agreement Offsetting Programs may disturb commercial trappers • New access roads and navigable forebay will improve access	• Compensation agreements with trapline holders • The Construction Access Management Plan addresses construction disturbances for trappers • Tataskweyak Cree Nation's Adverse Effects Agreement Access Program includes guidelines and principles that will minimize potential effects of the Offsetting Programs on trappers	• Commercial trapping effects are expected to be neutral
Heritage Resources		
• Project construction may disturb or destroy seven known archaeological sites (and probably sites not discovered to date) • Forty-three sites found and investigated as part of the Project's archaeological program will be flooded when the reservoir is created • Ongoing shoreline erosion may result in the loss of additional heritage resources	• An extensive program has been undertaken to identify sites; the seven known sites will undergo an archaeological salvage to recover and record valuable cultural information • The shoreline will be monitored should erosion expose any unknown sites; controlled artifact collection will occur if required • A consecrated cemetery for the reburial of human remains will be provided on the north side of the Nelson River • A Heritage Resources Protection Plan (HRPP) will be developed to protect heritage resources that may be discovered during construction • Tataskweyak Cree Nation's Adverse Effects Agreement Offsetting Programs provide for a Cultural Centre Museum and Oral Histories Program that may include the display and interpretation of heritage resources	• Project effects on heritage resources are expected to result in the potential loss of unknown sites due to flooding of the reservoir and ongoing shoreline erosion, along with the loss of the cultural link to those sites • Through the Project's archaeological program, thousands of artifacts have been found and recovered; and the Project's Heritage Resources Protection Plan will provide a level of protection during construction

The Keeyask Cree Nations

Tataskweyak Cree Nation logo represents our culture and that which sustains our way of life. The beaver is the economic foundation of our culture. The wolf represents the extended kinship among our clan. The moose, the forest and the fish provide for us with food, clothing, and shelter. The fish bones represent the environmental changes in our waters that have occurred due to development. The Canada goose, which arrives annually in the spring, represents new growth. The river which is the giver of all life, sustains us all. All of these things are interrelated in *Askiy*.

War Lake First Nation logo represents the moose, northern pike and the eagles that frequent our area. The feathers in the Chieftain's headdress represent all the families that grew up on Mooseocoot (Moose-Nose) Lake, before we became a First Nation and moved to where we live now at War Lake (Ilford). Behind the moose, the sun is setting over the lake, to mark the end of another beautiful day.

The York Factory First Nation logo shows a tipi located on the shore of a body of water with a sunset as backdrop set in a circle. The tipi represents the traditional relationships of the people of the First Nation with *Askiy*, while at the same time representing the modern community of York Landing (Kawechiwasik), located at the mouth of the Aiken River on Split Lake, where the First Nation was relocated in 1957.

The circle is embraced by two Eagle feathers. The eagle is a sacred bird and represents power, strength and loyalty.

There is a reflection of the tipi in the water, but upon closer inspection you realize the reflection is that of Kischewaskahekan (the "Big House" at York Factory). The reflection reminds us of the First Nation's long relationship with the Hudson's Bay Company post at York Factory, and the First Nation's ties to its traditional lands and former settlements at the Hudson Bay coast.

The Fox Lake Cree Nation logo represents the Makeso Sakahikan Inninewak and our inter-relationships with *Askiy*. A local community member designed the current logo in 2004. It was modified using the original Fox Lake logo, which was only the Fox. Incorporating the medicine wheel represents our culture and the teachings of how First Nations view the world. Living mino-pimatisiwin is what we will continue to strive for as a community.

Manitoba Hydro

KEEYASK
Hydropower Limited Partnership

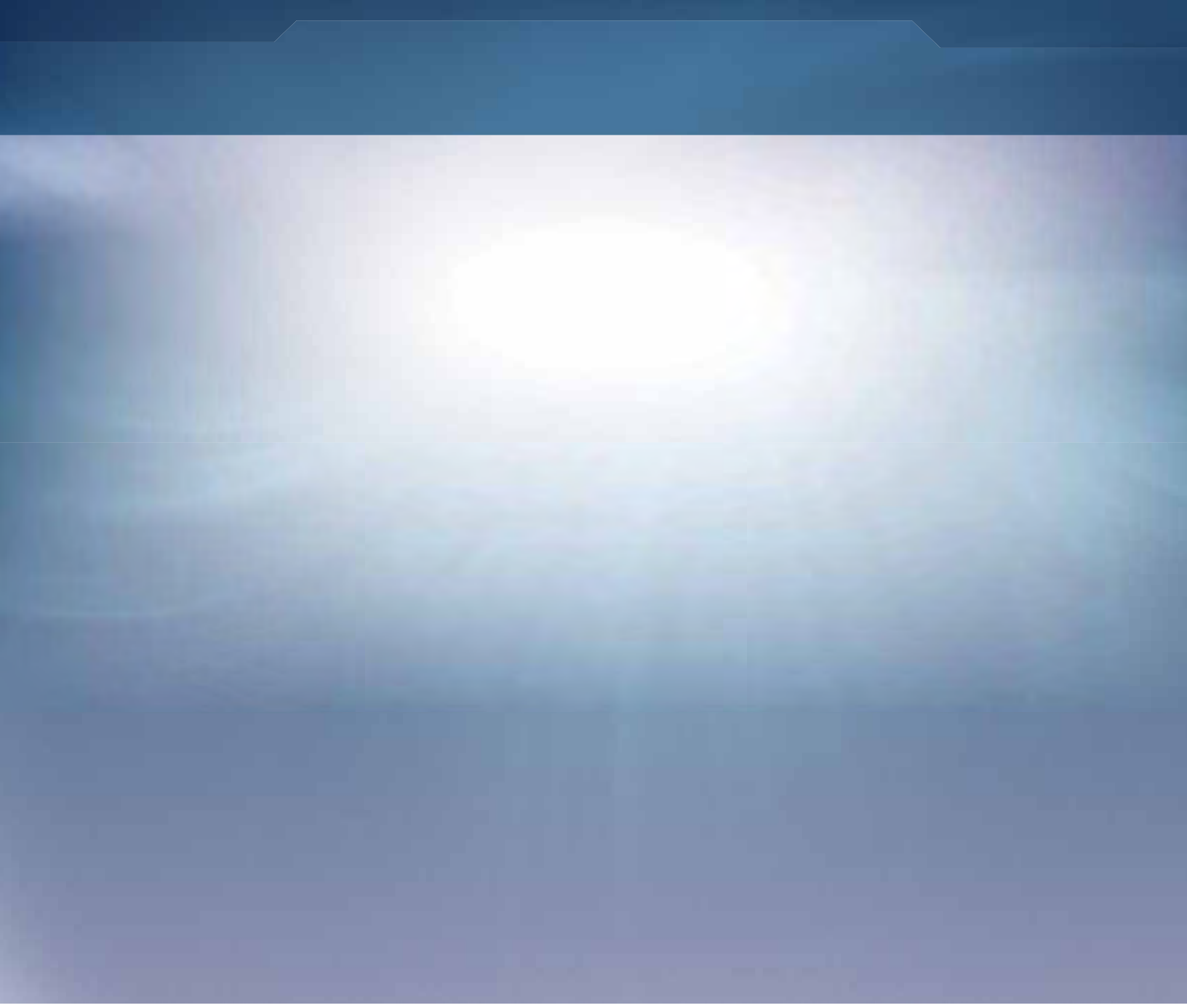
Keeyask Generation Project Environmental Impact Statement Material and Information

The Environmental Impact Statement for the Keeyask Generation Project is submitted to Canada and Manitoba by the Keeyask Hydropower Limited Partnership, which consists of Manitoba Hydro and four Cree Nations (referred to collectively as the Keeyask Cree Nations or KCNs): Tataskweyak Cree Nation (TCN) and War Lake First Nation (WLFN), acting collectively as the Cree Nation Partners (CNP), York Factory First Nation (YFFN), and Fox Lake Cree Nation (FLCN).

In summary, the Environmental Impact Statement for the Project consists of:

- **A video, Keeyask: Our Story,** which presents the Keeyask Cree Nations' history and perspectives related to hydroelectric development. Presented through the lens of their holistic Cree worldview, it explains the journey taken by the Keeyask Cree Nations as they evaluated their concerns about the Project, the nature of their participation as Partners, and the decisions they ultimately made to support the Project;
- **This Executive Summary**
- **A Response to EIS Guidelines** issued by Canada March 30, 2012 in response to an application by the Partnership for environmental approvals under the government regulatory environmental assessment process. This response includes findings and conclusions[1], with charts, diagrams, and maps to clarify information in the text, and a concordance table to cross reference requirements of the EIS Guidelines with information in the EIS; and
- **The Keeyask Cree Nations' Environmental Evaluation Reports** providing each of the Keeyask Cree Nation's own environmental evaluation of the effects of the Project on their community and Members and including Aboriginal traditional knowledge relevant to the Partnership's response to the Environmental Impact Statement Guidelines.

[1] Technical supporting volumes are also provided, as developed by the Manitoba Hydro environmental team in consultation with the Keeyask Cree Nations and their Members, to provide details on the Project Description and on the research and analysis of the following topics: Public Involvement Program, Physical Environment, Aquatic Environment, Terrestrial Environment, Socio-economic Environment, Resource Use, and Heritage Resources.



KEEYASK
Hydropower Limited Partnership

Mailing Address

Keeyask Hydropower Limited Partnership

360 Portage Avenue

Winnipeg, MB R3C 0G8

Email Address

keeyask@hydro.mb.ca

Website Address

www.keeyask.com

2234-07-06-2012