



# Keeyask Infrastructure Project

## Environmental Protection Plan

Annual Report April 2014- July 2014



December 2015

# **KEYYASK INFRASTRUCTURE PROJECT**

## **ENVIRONMENTAL PROTECTION PLAN ANNUAL REPORT APRIL 2014 – JULY 2014**

Report for

MANITOBA CONSERVATION AND WATER STEWARDSHIP

Prepared By

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Manitoba Hydro

Prepared on Behalf of the

Keyyask Hydro Power Limited Partnership

**December 2015**

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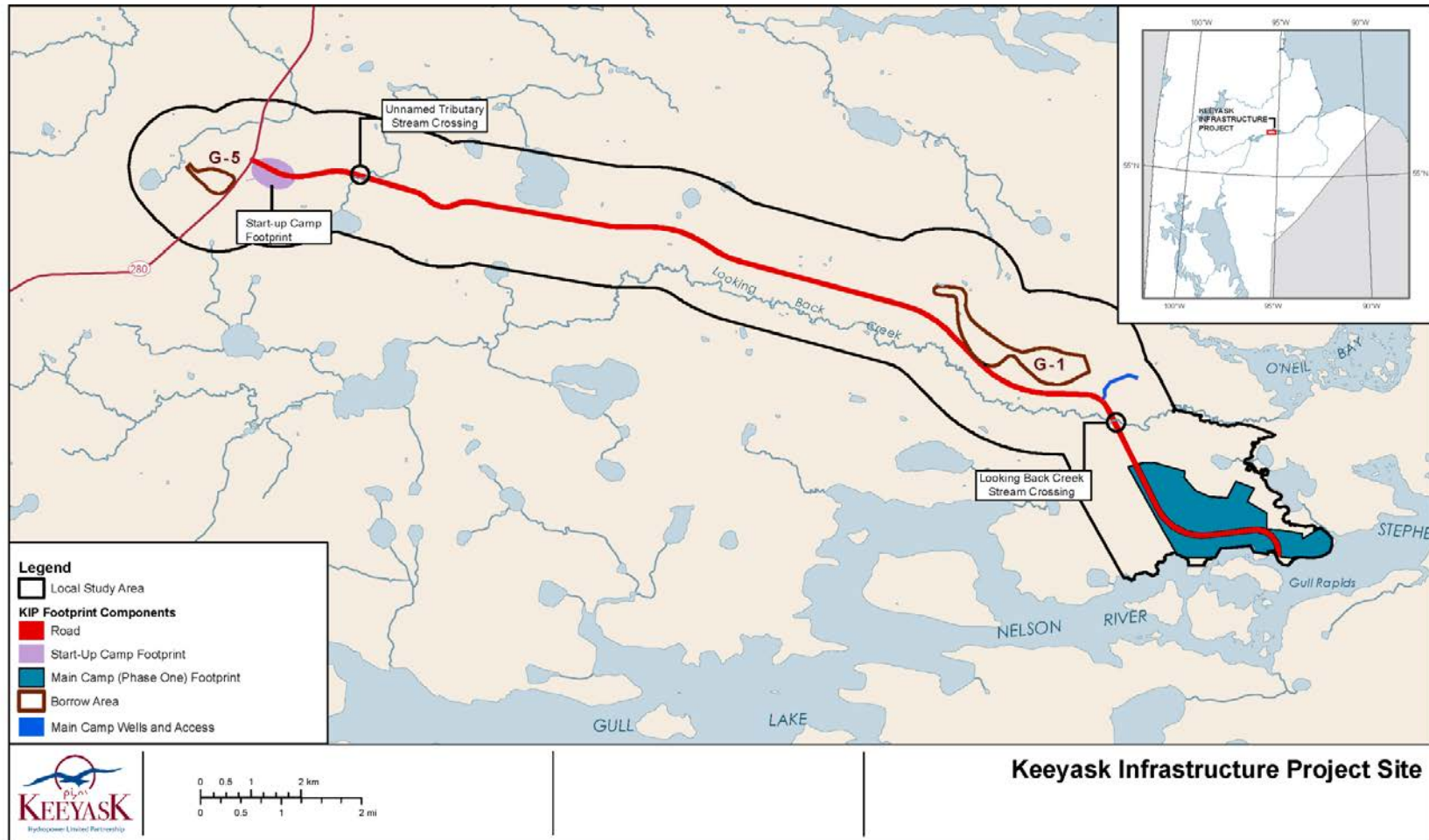
## **1.0 INTRODUCTION**

The Keeyask Hydropower Limited Partnership constructed the Keeyask Infrastructure Project (the Project or KIP) between 2012 to July 2014, after which construction of the Keeyask Generation Project began.

The Project is located approximately 40 km southwest of Gillam, extending between Provincial Road (PR) 280 and Gull Rapids on the Nelson River. The Project includes a start-up camp and associated infrastructure, a 25 km all weather access road and the first phase of a main camp (see Map 1).

The *Keeyask Infrastructure Project Construction Environmental Protection Plan* (EnvPP) outlines the commitments and efforts undertaken by the KHLPP to protect the environment and mitigate environmental effects during construction of the Project. The mitigation measures included in the EnvPP address both provincial and federal regulatory requirements that apply to the Project. The EnvPP was a key element in implementing effective environmental protection and minimizing the environmental effects associated with the Project.

As stated in the EnvPP, an annual report will be produced on the compliance monitoring undertaken in connection with the construction of the Project. This is the final report on EnvPP compliance monitoring that will be submitted and it covers the period from April 2014 to July 2014.



Map 1: Keyask Infrastructure Project Site

## **2.0 SUMMARY OF CONSTRUCTION ACTIVITIES**

During the reporting period, the main components of the Project were the operation of the Start-Up Camp and North Access Road, construction of Phase 1 of the Main Camp (includes the installation and commissioning of the water and wastewater treatment plants) and various work areas. Construction activities associated with each component for the reporting period are summarized below.

### **2.1 START-UP CAMP AND NORTH ACCESS ROAD OPERATION**

The KIP Start-Up Camp continued to be operated throughout the reporting period and will continue to be operated during the Keeyask Generation Project. It provides lodging for project workers, including dormitories, kitchen facilities and water and wastewater treatment.

Various operation and maintenance work took place along the North Access Road during the final few months of the KIP, including snow clearing, grading and dust control. There was some additional grading and ditching that was carried out in the right of way. The aggregate quarries along the road continued to be used as a source of material for other areas of the project.

### **2.2 WORK AREAS**

Work took place to clear and strip the vegetation off various work areas required for the project. Underground utilities, such as water and sewer pipes, were installed in these areas and gravel work pads were also built. Additional work included building a fuel tank farm, installing a back-up generator and some drilling and blasting.

Well pumps were installed and a pump house was constructed over the groundwater well servicing the Main Camp. A raw water line was constructed from the well to the Main Camp, which sits to the south east, and included directional drilling under Looking Back Creek.

## **2.3 MAIN CAMP**

During KIP, construction of Phase 1 of the Main Camp facilities occurred (Figure 1). For the reporting period, work consisted of constructing underground facilities and electrical distribution lines, installing a back-up generator, driving in support piles and installing dormitories.

Construction of the Wastewater Treatment Plant foundation and supporting infrastructure, such as lift stations, commenced in May 2014. The plant was constructed in July (see Figure 2).

Commissioning the wastewater treatment plant took place in September and the first discharge of effluent to the Nelson River was in October 2014, both of which occurred after the Keeyask Generation Project had started.

A water treatment plant and storage reservoirs were also constructed to treat raw water from the well and provide potable water to the Main Camp.

Phase 2 construction of the Main Camp falls under the Keeyask Generation Project.



**Figure 1: Aerial view of the Main Camp - Phase 1**





**Figure 2: Aerial photo of the Wastewater Treatment Plant**

### 3.0 MONITORING AND FOLLOW-UP RELATED TO CONSTRUCTION

#### 3.1 TERRESTRIAL

##### 3.1.1 EROSION AND SEDIMENT CONTROL

Manitoba Hydro site environmental personnel conducted regular inspections and monitored the erosion and sediment controls measures that were installed onsite to ensure that they were functioning correctly and being maintained. For example, riprap was placed along the road embankment nearby Looking Back Creek and Unnamed Tributary to help reduce erosion and protect surrounding water quality.



**Figure 3: Erosion control measures installed along road embankment near Looking Back Creek, before and after photos**

##### 3.1.2 WILDLIFE OBSERVATIONS

Wildlife interactions within the Project footprint were monitored on a daily basis by the Site Environmental and construction staff. Wildlife observed included black bear (*Ursus americanus*), moose (*Alces alces*; Figure 4), red fox (*Vulpes vulpes*), wolf (*Canis lupus*), as well as ptarmigan (*Lagopus sp.*), mallard (*Anas platyrhynchos*), and sandhill cranes (*Grus Canadensis*; Figure 5), bald eagle (*Haliaeetus leucocephalus*; Figure 6).



**Figure 4: Moose observed at Kilometer 13 along the North Access Road**



**Figure 5: Sandhill Crane observed at the upstream Boat Launch**

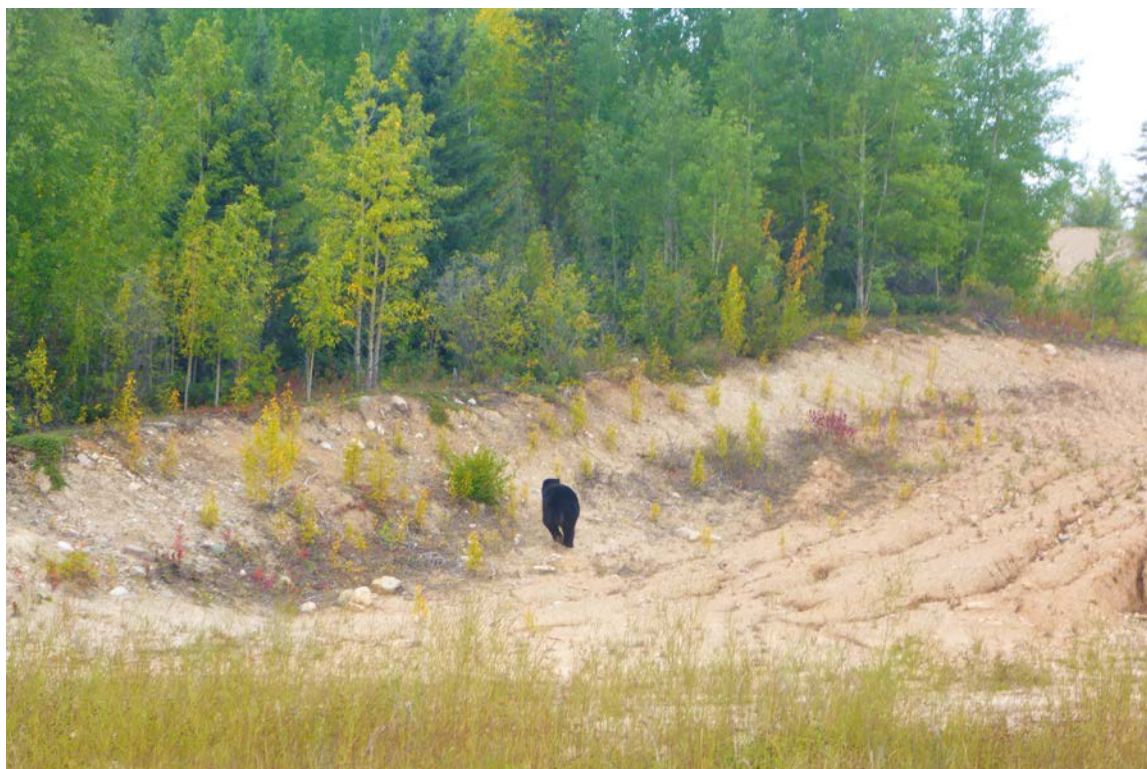


**Figure 6: Bald Eagle observed flying over the North Access Road**

### **3.1.3 WILDLIFE RELOCATION**

During the reporting period, Manitoba Hydro staff relocated one bear that was visiting the Start-up Camp (SUC) daily. It was relocated using a baited, mobile bear trap. The bear was released approximately 50 kilometers north of the Keeyask Project Site, just off Provincial Route 280 (Figure 7). Before the bear was relocated, the local Natural Resource Officer (NRO) was consulted on the release location.

In order to discourage bears from entering garbage bins at the SUC, an electric fence and lids were installed around the garbage bins and the steps leading up to the garbage bins were removed to reduce accessibility.



**Figure 7: Relocated bear 50 km north of the Keeyask Site**

### **3.1.4 WILDLIFE MORTALITY**

One (1) wildlife mortality occurred on the Keeyask Infrastructure Project during the reporting period. The mortality was a result of a vehicle collision with a moose that was crossing the North Access Road near Kilometer 10. The local Natural Resource Officer (NRO) was notified and the moose was offered to an Elder from Tataskweyak Cree Nation.

## **4.0 HAZARDOUS MATERIALS**

### **4.1 HAZARDOUS MATERIALS RELEASES**

The *Keeyask Infrastructure Project Construction Environmental Protection Plan* was developed to encompass all aspects of environmental protection on site. This included but is not limited to hazardous materials on site, including spill response plans, handling and storage of hazardous materials, hazardous waste disposal, and spill prevention.

All releases of hazardous materials, regardless of the volume, are required to be reported internally to Manitoba Hydro. Each release is assessed, documented and reported by Manitoba Hydro and contractor environmental staff.

A total of 72 hazardous material releases were recorded over the duration of the reporting period from April 2014 to July 2014. There were no releases that required reporting to the regulators under legislation.

## **5.0 HERITAGE RESOURCES**

There were no heritage resources found during the reporting period.

## **6.0 PERMITS / APPROVALS**

Manitoba Hydro requested an alteration to Licence No.2952R on June 20, 2014 for a temporary alteration to the operation of the start-up camp wastewater collection and disposal system associated with the Keeyask Infrastructure Project. Specifically, the request was to increase the loading rate of wastewater sent to the start-up camp drain field from July 2014 to October 2014 to accommodate disposal of wastewater generated from the Main Camp. This was required to give adequate time to commission the wastewater treatment plant serving the Main Camp. Manitoba Conservation and Water Stewardship approved the request on July 3, 2014.

### **6.1 SITE VISITS AND INSPECTIONS**

Regular site visits were conducted by Manitoba Conservation and Water Stewardship to inspect such items such as fuel storage locations and wastewater holding tanks, along with several site visits to monitor the general progression of construction activities. The regulators had no major concerns.



## **7.0 LITERATURE CITED**

Keeyask Hydropower Limited Partnership. 2011. Keeyask Infrastructure Project Construction Environmental Protection Plan. Winnipeg, Manitoba. July 2011