Keeyask Infrastructure Project

Environmental Protection Plan

Annual Report 2013-2014

KEEYASK
Hydropower Limited Partnership

December 2014

KEEYASK INFRASTRUCTURE PROJECT

ENVIRONMENTAL PROTECTION PLAN

Annual Report 2013 - 2014

Report for

MANITOBA CONSERVATION AND WATER STEWARDSHIP

Prepared on Behalf of the
Keeyask Hydropower Limited Partnership

By

New Generation Construction Division
Manitoba Hydro

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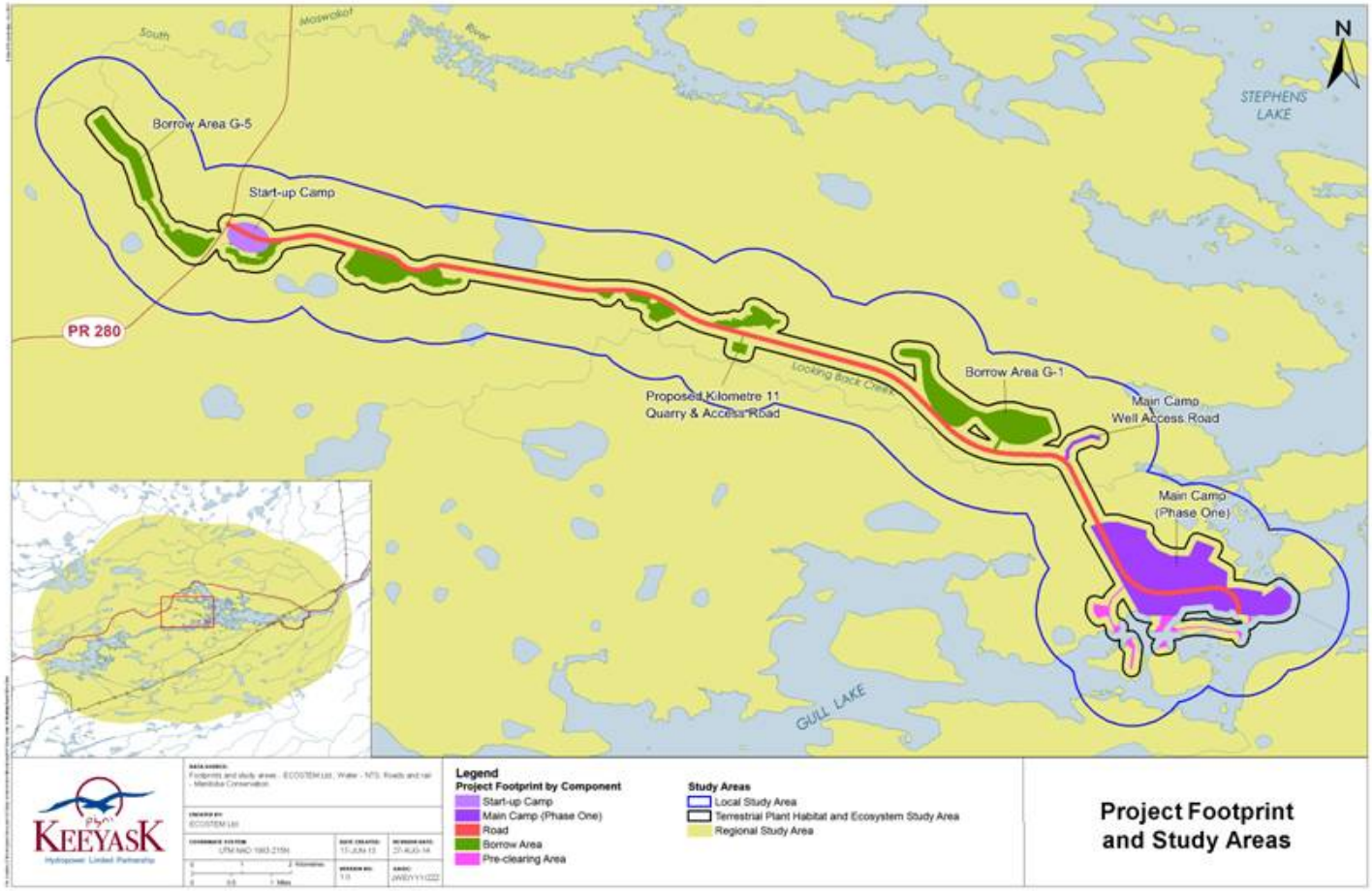
1.0 INTRODUCTION

The Keeyask Hydropower Limited Partnership (KHLP) is constructing the Keeyask Infrastructure Project (the Project or KIP). 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 KHLP to protect the environment and mitigate environmental effects during construction of the Project. The mitigation measures included in the EnvPP are aligned with both provincial and federal regulatory requirements that apply to the Project. The EnvPP is 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. Manitoba Hydro will report on the status and results of the monitoring in connection with this EnvPP to Manitoba Conservation and Water Stewardship. This report covers the period April 1, 2013 to March 31, 2014.



Map 1: The Keeyask Infrastructure Project components, including an access road, start-up camp and the first phase of a main camp.

2.0 OBJECTIVES

The objectives of this annual report on the EnvPP are to provide information on:

- Environmental monitoring and compliance with the EnvPP during Project construction;
- Any findings and improvements on environmental protection measures, particularly in regards to any additional mitigation applied during construction;
- Compliance with environmental licence and permit clauses that are linked to the EnvPP; and
- Interactions with regulators throughout the construction period.

3.0 SUMMARY OF CONSTRUCTION ACTIVITIES

The main components of the Project are the start-up camp, access road, main camp (Phase 1) and work areas. Each of these components consists of a number of sub-components. Construction activities occurring for each component during this reporting period are summarized below.

As a result of the forest fires that occurred in the summer of 2013, some project activities were delayed.

3.1.1 Start-Up Camp

The start-up camp is located approximately 400 m from Provincial Road 280 (PR 280) at its junction with the access road. The start-up camp includes modular camp dormitories, site offices, a kitchen, water treatment plant and the wastewater drain field.

During the reporting period, the start-up camp was operating; however, there was some additional work done on the wastewater drain field, including grading, constructing an access road to it from the camp and completion of ditching.

3.1.2 Access Road

Work continued on constructing a 25 km all-weather access road. Various activities associated with road construction for the reporting period included constructing the road core, placing granular base on the road and installing road signs. Aggregate crushing took place for several months in the G5 borrow pit to produce rock used for road construction. Trenching was completed along the road to install a raw water line from the potable groundwater well to the main camp. Rip rap was placed on the road embankment approaching Looking Back Creek for permanent erosion control and guardrails were installed on the bridge. As of March 31, 2014, construction of the road was complete and the road is now fully operational. Snow clearing took place throughout the winter months, as required.

3.1.3 Main Camp and Work Areas

Construction activities associated with the main camp and work areas included site preparation (stripping and levelling the land); installing storm sewers, water and wastewater and other underground utilities; installing temporary power; foundation work for pre-engineered building; pile installation; constructing a recreation complex; and installing modular camp dormitories, diesel generators, fuel tanks, and fencing.

Additional clearing took place in the winter months in various work areas to prepare for summer construction.

4.0 MONITORING AND FOLLOW-UP RELATED TO CONSTRUCTION ACTIVITIES

Monitoring took place to ensure compliance with regulatory approvals and the environmental protection plan. Below is a summary of monitoring-related activities.

4.1 CLEARING AND GRUBBING

Approximately 31 hectares of land was cleared during the reporting period. All clearing occurred between September 1 and March 31 to avoid impacts to breeding birds. Work included hand clearing in sensitive areas and machine clearing of all other areas (Figure 1). All material was piled in situ and burned (Figure 2).

Figure 1: Example of an area cleared at site.

Figure 2: Burning of cleared debris.

4.2 EROSION AND SEDIMENT CONTROL

Various erosion control measures were installed at site to reduce erosion and protect surrounding water quality.

Straw rolls were placed along the existing sediment fence and rip rap at Looking Back Creek Bridge as an extra layer of protection, to mitigate sediment from entering the creek in the event of heavy rain (Figure 3).

Figure 3: Straw rolls installed at Looking Back Creek.

Wood slash bundles are a natural alternative to filter any runoff from construction activities entering a water body or wet area. Trees that were cleared for Project construction during the winter were used to construct the bundles. To construct the slash bundles, trees are laid in place and tied together in 6ft to 10ft bundles, approximately 60cm in height and staked in place. The needles on the trees act as the natural filter, and eventually the trees will decompose so the bundles can be left in place. Wood slash bundles were added along the bottom of the ditch at the side of the access road near Looking Back Creek to mitigate erosion and sedimentation.

Rip rap is an effective measure for erosion control. It was placed at the entrance and exits to culverts and ditch checks (Figure 4) along the road in areas that were prone to erosion during large rain events, and also used along embankment at Looking Back Creek (Figure 5), which will reduce erosion.

Figure 4: A ditch check along the access road.

Figure 5: Rip rap on the embankment approaching Looking Back Creek.

4.3 START-UP CAMP – INFRASTRUCTURE AND UTILITIES

The potable water treatment facility serving the start-up camp was fully operational at the start of the reporting period. Water quality testing is conducted by the facility operator daily and bi-weekly water samples are collected and sent to an accredited laboratory for analysis to confirm potability.

Final grading of the wastewater drain field (Figure 6) was completed and an access road was constructed to the drain field from the start-up camp.

Figure 6: Start-up camp wastewater drain field.

4.4 HAZARDOUS MATERIALS – RELEASES AND REPORTING

The EnvPP developed for the Project included a Project-specific Hazardous Materials Spill Response Plan (HMSRP) that all contractors are required to conform to, or they are required to provide a plan of their own that meets the minimum standards set out in the Project-

specific HMSRP. When a contractor proposed to use their own plan, it was reviewed and approved by Manitoba Hydro for use on the Project site prior to implementation.

To ensure releases were reported in conformance with applicable regulations, all spills (regardless of volume released) were reported internally and then assessed by the Site Environmental Officer (SEO) and the contractor's environmental representative to ensure the proper reporting protocol was followed.

All spills are required to be reported to the Area Spill Response Coordinator, who is also the SEO, within 24 hours of the release, and immediately if the volume released is to a water body/course or is greater than the reportable quantities listed in *MR 439/87 Environmental Accident Reporting Regulation*. All spill response plans include the requirement that any and all releases that are considered reportable to the regulatory agencies require immediate (or as soon as practicable) notification of the spill.

For the reporting period, six releases were determined to be reportable to regulatory authorities. These spills were reported to Manitoba Conservation and Water Stewardship. All incident reports, including root cause analysis, was transmitted to the regulators as required. No further actions were deemed necessary by the regulators and the incident files were closed.

4.5 WILDLIFE

Wildlife was observed around the Project site throughout the 2013-2014 reporting period, in the start-up camp, along the access road, and within the general Project area. Below are some specific examples of wildlife observed by Project staff, including the SEO.

4.5.1 Mammals

Single black bear sightings were recorded along the access road and in the start-up camp (Figure 7). "Bear-proof" waste disposal bins were put in place in 2012 to reduce the interactions between humans and animals.

Figure 7: Black bears along the access road and in camp.

A moose was struck with a passenger vehicle on the access road. Manitoba Conservation and Water Stewardship was contacted and visited the site the same evening to search for the moose and dispatch it, if required. After their investigation, Manitoba Conservation and Water Stewardship determined the moose was travelling with a calf and did not appear to be severely injured.

There have been multiple wolf sightings around the Project site. Education sessions were provided to site staff to promote awareness.

4.5.2 Small Mammals

Throughout the reporting period, numerous foxes were observed near the Project site. To address this, site workers were reminded not to feed or harass wildlife at all worker orientations and at a number of contractor safety meetings.

4.5.3 Birds

Eagles were observed near the Project site in 2013 near the start-up camp. Gulls, ducks (Figure 8), whiskey jacks, and killdeer were all common birds that were observed by staff on the Project site.

Figure 8: Ducks in the ditch along the access road.

5.0 REGULATORY

5.1 SITE VISITS AND INSPECTIONS

Representatives from Manitoba Conservation and Water Stewardship (MCWS) visited the Project site in 2013. The site tour included travelling to both water crossings, borrow areas and the start-up infrastructure.

5.2 REGULATORY PERMITS/APPROVALS

An alteration to KIP Licence No. 2952R was granted by Manitoba Conservation and Water Stewardship on July 30 to add 31 hectares of land to the KIP footprint to decrease Project effects on breeding birds and maintain the schedule for the Keeyask Generation Project (KGP).

MCWS was notified that clearing activities (alteration to the KIP EAL – clearing of addition 31 hectares to the Project footprint to allow for advanced clearing of the Keeyask Generation Project to avoid impacts to breeding birds) would commence at the beginning of February.

Crown Lands Work Permit 2013-1-11-007 was issued on May 1, 2013 which includes all activities associated with the Keeyask Infrastructure Project.

A burn permit was requested and received from Manitoba Conservation and Water Stewardship for burning of wood slash after March 31.

Water Rights Licence 2012-019 was issued for the Keeyask Infrastructure Project – Start-Up Camp. Water use records are submitted to MCWS.

6.0 DECOMMISSIONING

Site cleanup and decommissioning is occurring as construction is completed in various areas of the Project, including the right of way on the access road and associated ditches. Decommissioning of borrow areas, including removal of equipment and grading slopes in ongoing.

Hydro seeding was completed on a test plot of the access road in October 2013.