



Keeyask Generation Project
Resource Use Monitoring Plan

Resource Use Monitoring Report

RUMP-2017-01



KEYYASK GENERATION PROJECT

RESOURCE USE MONITORING PLAN

Report #RUMP-2017-01

RESOURCE USE MONITORING REPORT: YEAR 3 CONSTRUCTION

Prepared for

Manitoba Hydro

By

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June 2017



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This report should be referenced as:

Eaton, G.J. and R. Bretecher 2017. Keeyask Generation Project Resource Use Monitoring Plan, #RUMP-2017-01. Resource Use Monitoring Report: Year 3 Construction. A report prepared for Manitoba Hydro by North/South Consultants Inc., June 2017.

SUMMARY

Background

Construction of the Keeyask Generation Project (the Project) at Gull Rapids began in July 2014. The Keeyask Hydropower Limited Partnership (KHLP) was required to prepare a plan to monitor the effects of construction and operation of the generating station on resource use. Monitoring results will help the KHLP, government regulators, members of local First Nation communities, and the general public understand how construction and operation of the generating station will affect the environment, and whether or not more needs to be done to reduce harmful effects.

Resource use is important to monitor because it is important to local First Nation people. On-site harvests by Project workforce personnel are not expected because of rules that prohibit hunting and fishing there (KHLP 2014). However, if the workforce is harvesting resources in off-site areas, this may affect the success of local First Nation peoples' domestic resource use. The Project also may increase the use of the area by other resource harvester groups such as licensed hunters and fishers in off-site areas. Levels of harvest, occurring on the Project site by local authorized resource users, is also important to understand.

Why is the study being done?

The 2016 monitoring was done to answer three questions:

- Has the construction workforce been harvesting resources and, if so, how much? It is important to understand if harvest by construction workers is reducing the resources available for harvest by local First Nation people.
- Has the Project or its workforce caused a change in the levels of licensed (non-Aboriginal) harvest? In other words, is there more use of the area for resource harvest due to the presence of the workforce?
- Have authorized resource users accessed the site through the access gates? It is important to understand how the site is being used for resource harvesting.

What was done?

A construction workforce survey was conducted at the end of November 2016 to ask construction workers about harvesting in the area; previous surveys were completed in June 2015 and November 2014. Keeyask camp site personnel were interviewed to provide information on the harvesting activities of the workforce and to understand any use of the site by authorized resource users. Officials from Manitoba Sustainable Development (MSD) were interviewed to provide information regarding changes in licensed (non-Aboriginal) harvests in the area.

What was found?

Survey results suggest that there has been a small decline in regional resource use undertaken by the construction workforce when compared with findings from 2015 and 2014. Based on the results of the 2016 workforce survey, no fishing or hunting was occurring on site. A limited amount of berry, mineral and mint harvest was reported through the 2016 survey.

The North Moswakot River at Provincial Road 280 continues to be a preferred catch and release fishing location for a limited number of construction workforce members during days worked. Survey results suggest a small decrease in effort at this location in 2016 compared to 2014 and 2015, and no fish harvested. Fish harvest in other locations was reported in the survey only by local First Nation residents.

Workforce survey results documented that two moose and one caribou were harvested in areas towards the edges of the study area by licensed hunters who regularly visit the area regardless of employment. Interviews with Manitoba Sustainable Development officials indicated that the number of licenced hunters for caribou and moose in Game Hunting areas 3 and 9 remained stable since the last interview for RUMP in June 2015. It was noted in the interview that no noticeable changes in big game hunting pressure have been linked to the Project. Licence sales for caribou hunting have increased in Game Hunting Area 2 north and east of the Project area.

On-site environmental staff were not aware of resource harvesting undertaken by the workforce or of any gate records indicating authorized resource users accessing the site for the purposes of hunting, fishing or gathering.

What does it mean?

Overall, workforce harvest monitoring conducted to date has not identified the potential for workforce harvest to affect domestic resource use undertaken by local First Nation residents.

What will be done next?

The next construction workforce survey is expected to be conducted in November 2018. Interviews with on-site Keeyask environmental staff and Manitoba Sustainable Development officials will take place in 2017.

ACKNOWLEDGEMENTS

We would like to thank Manitoba Hydro for the opportunity and resources to conduct this study.

Keeyask site personnel provided extensive support to the workforce survey and offered their expertise. Thanks to the Manitoba Sustainable Development, Parks and Regional Services (Northeast Division) for providing information on hunting and fishing activity in the region.

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1.0 INTRODUCTION

The Keeyask Generation Project (the Project) is a 695-megawatt (MW) hydroelectric generating station currently under construction in northern Manitoba. The Project is located at Gull Rapids on the lower Nelson River in northern Manitoba where Gull Lake flows into Stephens Lake, 35 kilometres (km) upstream of the existing Kettle GS.

The *Keeyask Generation Project: Response to EIS Guidelines* (the EIS), completed in June 2012, provides a summary of predicted effects and planned mitigation for the Project. Technical supporting information for the resource use environment, including a description of the environmental setting, effects and mitigation, and a summary of proposed monitoring and follow-up programs is provided in the *Keeyask Generation Project Environmental Impact Statement: Socio-Economic Environment Supporting Volume* (SE SV). As part of the licensing process for the Project, a Resource Use Monitoring Plan (RUMP) was developed detailing the monitoring activities of various components of the resource use environment for the construction and operation phases of the Project.

This document provides results of RUMP Year 3 monitoring activities. Results in the report are available for the following RUMP key objectives:

- To determine if the workforce is hunting, fishing, or gathering within or outside the Project site and, if so, whether the harvest would adversely affect domestic resource use;
- To document Project-related changes to moose and caribou licence demand, harvest patterns, and, if feasible, quantify harvests;
- To document Project-related changes to licensed fish harvest patterns and fishing intensity; and
- To summarize resource use access requests and collect voluntary harvest information from authorized resource harvesters.

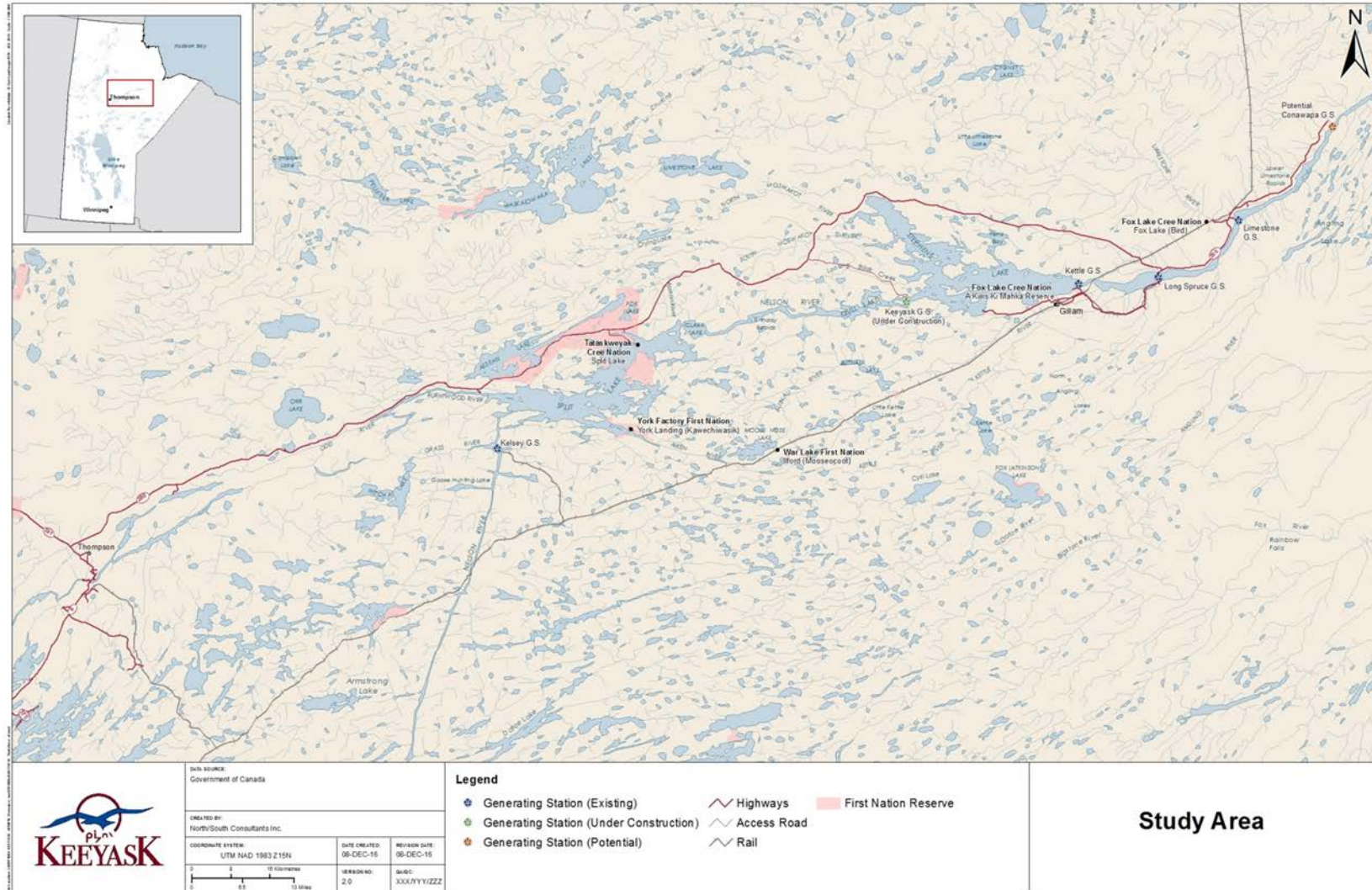
To achieve these objectives, the following activities were conducted:

- A construction workforce survey was undertaken to document fishing, hunting, and plant gathering activities that may be conducted by the workforce;
- An interview was conducted with Manitoba Sustainable Development (MSD) officials to understand any changes to licensed hunting and fishing and potential linkages to the Project or its workforce; and
- Keeyask site personnel were interviewed to understand harvesting activities undertaken by the workforce and to request gate records of site access by authorized resource users.

The study area included areas east of Thompson, the PR 280 corridor, the Keeyask site area, and west to the Gillam area (Map 1).

Information was not available for this reporting period pertaining to the RUMP objective to consolidate information generated from other monitoring plans/programs as information becomes available. This information will be incorporated in future reports as available.

It should be noted that participation in the workforce survey is voluntary. It is therefore possible that some harvesting activity has not been reported.



Map 1: Keyyask Study Area.

2.0 METHODS

2.1 WORKFORCE SURVEY

The purpose of the workforce survey was to document fishing, hunting, and plant gathering activities that may be conducted by the Project workforce. Survey results provide an indication of whether the construction workforce is harvesting at levels that may have the potential to affect local domestic use of resources.

A workforce survey (Appendix 1), the third completed since the beginning of the Keeyask Generation Project's construction phase, was conducted in late November 2016. The survey included resource use from June 2015 to end of November 2016. Previous resource use surveys were conducted in November 2014 (see Eaton 2015) and June 2015 (see Eaton 2016).

Notification of the November 2016 workforce survey was posted in advance at Keeyask Camp in common areas to generate awareness of the survey and to inform potential workforce participants that participation in the survey was voluntary and results would be kept confidential (Appendix 2).

The survey was conducted between November 28 and December 2, 2016 using two different approaches to maximize participation:

- In-person surveys were conducted in the Keeyask Café on November 30 and December 1, 2016 during mealtimes; and
- Surveys were also provided to contractors, to distribute at their morning safety meetings with their staff, between November 28 and December 2, 2016.

Sampling targets were set to gain an understanding of the percentage of the workforce surveyed and to determine if enough people were surveyed to get reliable results. Sampling targets were set at 10% of the total construction workforce.

Knowledge of where resource harvesters normally reside is also important as it reveals whether harvesters are new to the area (and are conducting new or additional harvests) or if they already reside in, or visit the area (and their harvest would occur regardless of Project employment. Keeyask Cree Nation (KCN) personnel are local Aboriginal people that reside in communities close to the Project (e.g., Split Lake, Ilford, Gillam, Fox Lake, and York Landing). These workforce members conduct harvests that are not new or additive due to the Project. Other personnel, who do not normally live in the area, however, may be conducting harvests that are new. It is these new potential harvests that are being monitored.

If additional harvesting is being conducted by non-local groups, an estimated total additive harvest can be calculated from the known (surveyed) harvest to represent harvests by for the

entire workforce. In the case of the November 2016 survey, the estimated total additive harvest was not calculated because additive harvests were not found among non-local groups.

2.2 SITE PERSONNEL INTERVIEWS

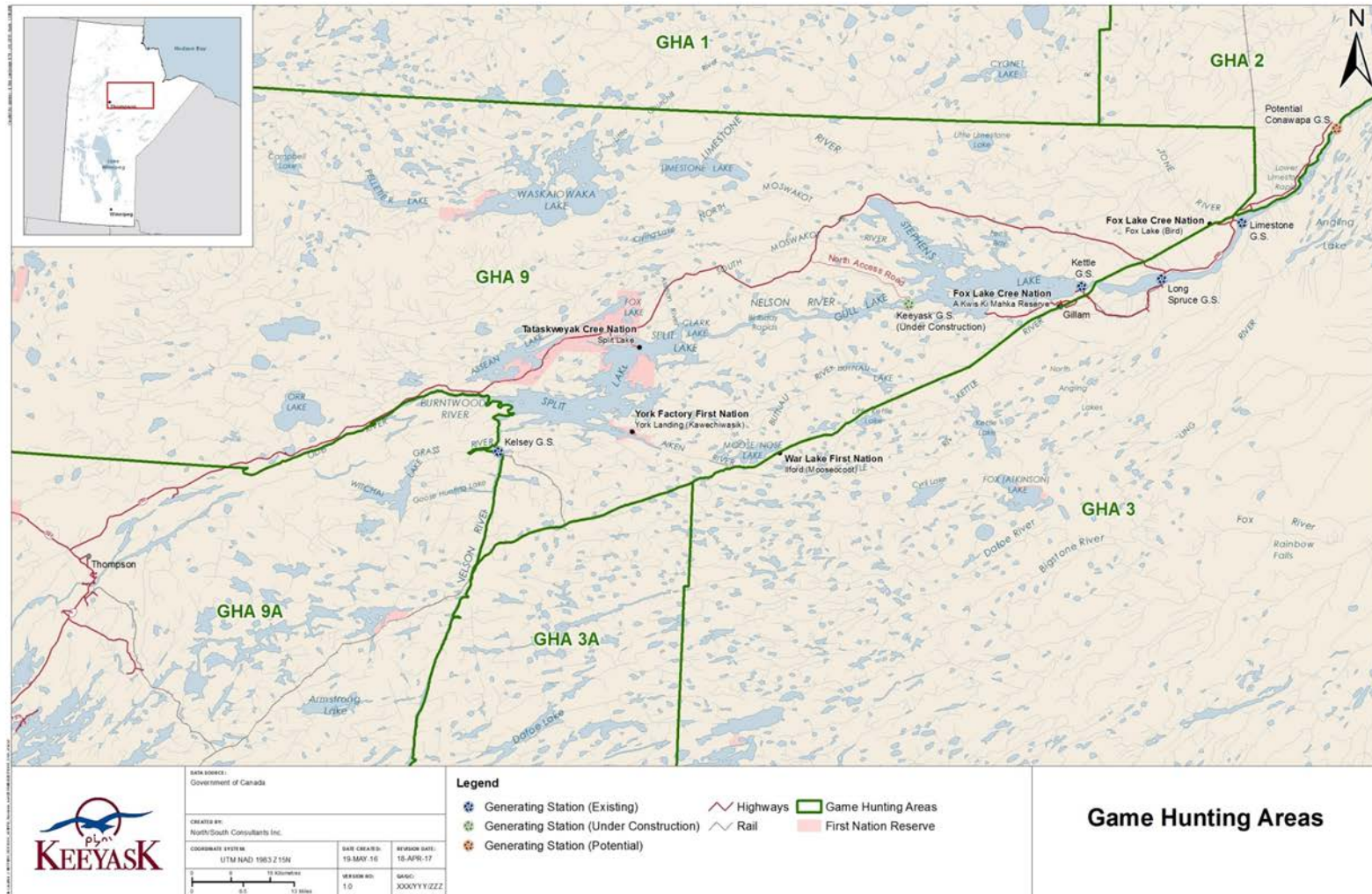
To build on and verify workforce survey results, Keeyask site environmental staff (Ms. K. Bryson and Ms. M. Anger) were interviewed on February 23, 2017. The site environmental staff were asked for information regarding resource use conducted by the construction workforce and any available details about that use. Additionally, Keeyask access gate records containing resource user access requests and voluntary statements of harvests were requested from the site environmental staff members.

2.3 INTERVIEW WITH MANITOBA SUSTAINABLE DEVELOPMENT OFFICIALS

Interview questions were provided to the Manitoba Sustainable Development (MSD) Northeast Regional Director on January 16, 2017 to gather expert perspectives on the changing demand for licences (moose, caribou, and fish), changes in the spatial distribution of resource use associated with the Project or its workforce, and changes in intensity of resource use associated with the Project or its workforce. Interview questions are provided in Appendix 3; responses to questions were received on February 27, 2017.

It should be noted that it is not possible to directly link changes in licence demand to effects of the Project on resource use due to other factors (e.g., moose hunters coming from the south due to Game Hunting Area [GHA] closures there). The areas where licences are issued are also a factor. For example, for the six GHAs that intersect within the Project region (Map 2) and several other GHAs, moose licensing is open or general and harvest is not tracked specifically by GHA. Fishing licences also are valid for any location within Manitoba (i.e., they can be purchased in one location and used in another within Manitoba).

Despite these limitations, consulting the local expertise of MSD officials, in addition to workforce survey results and ATK monitoring results (which were not available for this report), provides the best available understanding of any Project-related changes to the nature, distribution, and intensity of licensed harvest.



Map 2: Game Hunting Areas.

3.0 RESULTS

3.1 WORKFORCE SURVEY

One hundred and sixty-eight surveys were completed by construction workforce personnel (57 in-person and 111 at on-site safety meetings). Employment statistics (see Appendix 4, KHLP 2016) indicated a total workforce count of 2,398 including 833 Aboriginal (35%) and 1,565 non-Aboriginal (65%) personnel at the end of December 2016. These statistics were used to calculate the proportion of the workforce surveyed by identity (Table 1).

Survey respondents represented 6% non-Aboriginal and 10% of the Aboriginal (including local, non-local and Metis) workforce. Representation from each identity group was equal to or greater than 6%.

The overall survey response rate in proportion to the total workforce was the lowest among the three surveys conducted to date at 7%. In 2014, 23% of the total workforce was surveyed and in 2015 the rate was 21%. The reduction was primarily due to the doubling of the workforce since the 2015 survey (from 1159 to 2398 members). While the survey remains voluntary (*i.e.*, individuals are not required to complete it), methods to improve participation rates for future surveys will need to be explored and implemented or the target number of surveys will need to be reduced. The total number of surveys completed in 2016 (168) exceeded the number of surveys completed in 2014 (154) but was less than in 2015 (244). The total number of people surveyed suggests that survey results remain valid as they were in 2014. The lack of additive or new harvest found (see below) would suggest that increasing the survey response rate would not likely have resulted in different results.

Table 1: Surveyed Personnel by Identity and Proportion of Total Workforce Surveyed

Identity	# Surveyed	Total Employed ²	Proportion of Total Workforce Surveyed (%)
Non-Aboriginal	92	1565	6
KCN Aboriginal ¹	24	366	7
Non-Local Aboriginal	29	260	11
Metis	23	207	11
Total/Average	168	2,398	7

1. 'KCN Aboriginal' includes members of: Tataskweyak Cree Nation, War Lake First Nation, Fox Lake Cree Nation, and York Factory First Nation.
2. Source: KHLP (2017).

Of the 168 completed surveys, 14 (8%) workforce personnel indicated that they had conducted resource use in the study area during the reporting period (June 2015 to November 2016). Of

the 14 individuals who conducted resource use, four (29%) were KCN members, four (29%) were Metis, two (14%) were non-local Aboriginals and four (29%) were non-Aboriginal.

3.1.1 RESOURCE USE DURING DAYS WORKED

Of the 14 workforce members who conducted resource use, eight conducted resource use during days they worked.

Five workforce members fished during days worked, one of whom was non-Aboriginal, one was a local Aboriginal and the remainder were Metis and non-local Aboriginals. Fishing locations included off-site areas of Split Lake and the North Moswakot and Nelson rivers. No harvest was recorded as fishing was catch and release of a total of 22 Walleye and Northern Pike in approximately equivalent numbers. The five workforce members spent an estimated total of 284 hours fishing over the 18 month period or an average of just under four hours per month per person fishing.

Non-Aboriginal, non-local Aboriginal, and Metis participants did not hunt on days worked. One KCN member reported hunting on days worked, but did not disclose the species or location of harvest. Effort amounted to approximately 10 hours per month.

Two non-Aboriginal and one Metis participant reported gathering resources on days worked. Unknown quantities of quartz, granite, blueberries, raspberries and mint were harvested on site. Appendix 5 contains a summary of all resource use.

3.1.2 RESOURCE USE DURING DAYS OFF

Of the 168 surveys completed, seven (4%) participants indicated that they had engaged in resource harvesting during days off.

Angling and/or ice fishing for Walleye and Northern Pike was conducted by six participants; three were KCN, two were non-Aboriginal, and one was a non-local Aboriginal. Fishing locations included Split, Assean, Troy and Gull lakes, Odei, Aiken, Assean, Moswakot and Limestone rivers and Sky Pilot Creek for Walleye and Northern Pike. Of those who reported fishing, approximately 90 fish were caught. Of those fish, 80 were released and 10 were harvested by a KCN member. Total hours spent fishing during days off was estimated at 284 total hours over the 18 month survey period or an average of 4 hours/person/month.

Hunting was conducted by three workforce members during days off and included one KCN, one Metis, and one non-Aboriginal participant. Two participants which included one Metis and one non-Aboriginal respectively, harvested one moose each at locations near the outer boundaries of the study area: along the transmission line corridor south of the Burntwood River (east of Thompson); and near Herchmer which is halfway between Gillam and Churchill. The non-Aboriginal hunter also harvested one caribou near Herchmer. It is very likely that these

harvests were conducted under provincial hunting licences and both hunters reported having local connections to people residing in the area. Participants reported that this harvest would have occurred regardless of Project employment due to their local connections. One KCN member reported moose and caribou hunting, but did not disclose a harvest. Waterfowl and upland bird hunting was not reported.

Gathering was reported by one non-local Aboriginal person who gathered blueberries at Troy Lake and the Odei River bridge at Provincial Road 280 west of Split Lake. Appendix 5 contains a summary of resource harvesting survey data.

3.1.3 OTHER RESULTS

Five workforce participants indicated they had an interest in fishing and/or hunting while employed at site; however construction site rules did not allow the individuals to engage in these types of activities. One participant considered the cost and logistical challenges of hunting and fishing to be prohibitive.

3.1.4 RESULTS FROM OTHER MONITORING ACTIVITIES

There was no resource use information available from other monitoring plans/programs in this reporting period. This information will be incorporated in future reports as available.

3.2 SITE PERSONNEL INTERVIEWS

3.2.1 KNOWLEDGE OF WORKFORCE RESOURCE USE AND HARVESTS

Based on email correspondence provided to North/South Consultants Inc., Keeyask site environmental staff members were not aware of any fishing, hunting or gathering activities undertaken by the Project workforce between June 2015 and November 2016 (Bryson *pers. comm.* February 23, 2017).

3.2.2 GATE ACCESS

Keeyask site environmental staff members were not aware of any records indicating that authorized resource users were accessing the construction site via the gate to conduct resource use activities from June 2015 to November 2016 (Bryson *pers. comm.* February 23, 2017). It should be noted that the Partnership has the ability to manage site access through the security gates; however, trail use or water access by local resource users may still occur.

3.3 INTERVIEWS WITH MANITOBA SUSTAINABLE DEVELOPMENT OFFICIALS

3.3.1 LICENSED MOOSE AND CARIBOU HUNTING

Changes in demand for moose licences in GHAs 9, 2, and 3 were not detected by MSD officials between June 2015 and November 2016 in contrast to increases in demand for moose licences in 2013 and 2014 (MSD *pers. comm.* February 27, 2017). This suggests some stabilization of demand. A total of 42 moose licences were sold out of the Gillam District office in 2016.

Demand for caribou licences were considered to be unchanged in GHA 3¹. A total of 75 GHA 3 licences were available for purchase and all were sold (MSD *pers. comm.* February 27, 2017). Twenty-four licences were sold to hunters from locations other than Gillam. In GHA 2, of the 120 licences available in 2016, 37 were sold showing an increase in demand greater than 50% over the previous year when 18 were sold. Twenty licences were sold to hunters from southern Manitoba and the remainder went to residents of Gillam, Churchill and Thompson (MSD *pers. comm.* February 27, 2017). MSD officials indicated that changes in licence demand were not considered to be associated with the Project.

3.3.2 LICENSED FISHING

MSD officials did not detect changes in levels of angling or ice fishing in the region in 2016 (MSD *pers. comm.* February 27, 2017).

¹ The study area also includes portions of GHA 9. Caribou licences are not issued in this GHA.

4.0 SUMMARY AND CONCLUSIONS

4.1 WORKFORCE HARVEST LEVELS

The first objective of the monitoring program was to determine if, and how much, the workforce was harvesting resources. This information was to be used to determine if harvest by the Project workforce had the potential to affect local First Nation resource harvesting success.

Harvests documented through the current survey amounted to 10 fish, two moose and one caribou. Fish harvest was conducted by a KCN member. Additional fish that were caught but released amounted to 22 caught during days worked and 80 caught during days off. When compared to construction years' 1 and 2 results, average hours of fishing effort by all groups was greater at 4 hours/fisher/month as opposed to 1.3 and 1.25 hours per person per month found in 2014 and 2015 respectively. The increase can mostly be attributed to a high level of fishing effort reported by four KCN survey respondents (3.3 hours per person per month) versus all other groups at 1.5 hours per person per month (Table A5-1). Fishers who identified as Metis, Non-local Aboriginal and non-Aboriginal released all fish caught in 2016 which suggests there is no additive fish harvests over this survey period which is consistent with previous surveys when little to no additional harvest was found.

Two moose and one caribou were harvested by two hunters, one non-Aboriginal and one Metis, in areas near the outside boundaries of the study area. These hunters noted that they would have harvested in these locations regardless of Project employment due to connections with area residents. A KCN member reported moose and caribou hunting but did not report a harvest. A limited amount of berries, mint and minerals were harvested on site by workforce members including three who were non-Aboriginal, one who identified as Metis and one who said they were a non-local Aboriginal person. Harvests of waterfowl, upland birds and rabbit were not documented during the 2016 survey.

Survey results suggest that resource harvest by the construction workforce are similar to, or have declined, when compared with 2015 and 2014 findings including fish, moose and caribou harvests (Table A5-3). The results of the surveys suggest that KCN members continue to be the group that accounts for the most harvest and harvest effort among all groups that form the construction workforce.

4.2 CHANGES IN LICENSED HUNTING AND FISHING

The second and third objectives of resource use monitoring were to determine if licensed hunting and licensed fishing changed, and if those changes were caused by the Project.

Interviews with Manitoba Sustainable Development resource managers indicate the demand for fishing and moose licences in the region showed little or no change from the previous two survey years. Changes to licensed hunting or fishing locations were not detected. Demand for caribou licences in GHA 2 increased in 2016, however, this increase was not considered related to the Project.

4.3 USE OF THE SITE BY AUTHORIZED RESOURCE USERS

The fourth objective of resource use monitoring was to document resource user requests to access the site and their harvests (if voluntarily provided).

Keeyask site environmental staff personnel were not aware of any gate records documenting access to the site between June 2015 and November 2016 for the purposes of resource harvesting. It should be noted that the Partnership has the ability to manage site access through the security gates; however, trail use or water access by local resource users may still occur.

4.4 CONCLUSION

Overall, workforce harvest monitoring conducted to date has not identified concerns with respect to the potential for workforce harvest to affect domestic resource use undertaken by local First Nation residents. It is recommended that the frequency of the workforce survey be shifted to a biennial schedule as per the RUMP schedule and that interviews with Keeyask environmental staff and MSD continue on an annual basis.

5.0 LITERATURE CITED

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Keeyask Hydropower Limited Partnership [KHLP]. 2014. Keeyask Generation Project Construction Access Management Plan, project site rules and information, July 2014. Online access: <http://keeyask.com/wp-content/uploads/2014/08/KGP-Construction-Access-Management-Plan-Final.pdf> [Accessed April 17, 2017].

KHLP. 2016. Active Hires. Online Access: <http://keeyask.com/the-project/employment/employment-statistics/active-hires/> [Accessed February 27, 2017].

5.1 PERSONAL COMMUNICATIONS

Bryson, K. Keeyask Site Environmental Lead. February 23, 2017. E-mail correspondence with G. Eaton, North/South Consultants Inc.

Manitoba Sustainable Development Resource Managers (Northeast Region). February 27, 2017. Email correspondence with G. Eaton, North/South Consultants Inc.

APPENDICES

APPENDIX 1: CONSTRUCTION WORKFORCE RESOURCE HARVEST SURVEY

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Figure A1-1: Construction workforce resource harvest survey.

APPENDIX 2: NOTIFICATION POSTER FOR WORKFORCE SURVEY

Figure A2-1: Notification poster for workforce survey.18

Figure A2-1: Notification poster for workforce survey.

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APPENDIX 3: INTERVIEW GUIDE FOR MANITOBA SUSTAINABLE DEVELOPMENT RESOURCE MANAGERS

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Table A3-1: Interview guide for Manitoba Sustainable Development resource managers.**Keeyask Generation Project (KGP) Resource Use Monitoring Plan (RUMP)**

Purpose - To consult resource MSD managers' expertise to meet the following RUMP objectives:

1. To document any changes to moose and caribou licence demand, harvest patterns, and, if feasible, quantify harvests; and
2. To document any changes to licensed fish harvest patterns and fishing intensity.

Results will be published in a short report entitled: Resource Use Monitoring Plan: Results of Year 3 Monitoring produced for the Keeyask Hydropower Limited Partnership.

Questions:Moose:

For the period between June 2015 and November 2016,

- Are you aware of changes to demand for moose licences in the Project area including GHA's 9, 2 and 3? If so, could you please explain changes?
- Have you noticed any changes to the patterns of moose hunting / harvest by resident licensed hunters specifically in GHA 9 (eastern portion), GHA's 2 (south portion) and 3 (north central portion)? If so, are any changes considered to be associated with the Project or its workforce?
- Have you noticed any changes to the patterns of moose hunting / harvest by non-resident licensed hunters? If so, are any changes associated with the Project or its workforce?
- Can a quantitative estimate of licenses/ harvest be developed for the Project area relating to the GHA areas noted above?
- Are there any other changes that you would like to note?

Caribou:

For the period between June 2015 and November 2016,

- Are you aware of changes to demand for caribou licences? If so, could you please explain.
- Are the same numbers of licences being issued for GHA 2 and GHA 3 as in previous years? If so, could you please confirm the number of licences issued for each GHA and the success rate.
- Have you noticed any changes to the patterns of caribou hunting/ harvest by resident licensed hunters? If so, are any changes associated with the Project or its workforce?
- Are there any other changes that you would like to note?

Fish:

For the period between June 2015 and November 2016,

- Are you aware of changes to the overall intensity of licensed fishing? Have there been increases or decreases in activity at specific locations? If so, would you consider any changes noted related to the Project or its workforce?
- Have any increases or decreases led to changes in harvest, species harvested or a redistribution of harvest? Are any changes noted related to the Project or its workforce?
- Are there any other changes that you would like to note?

APPENDIX 4: EMPLOYMENT STATISTICS FOR END OF NOVEMBER 2016 FROM KEEYASK.COM

Table A4-1: Employment statistics for end of November, 2016.23

Table A4-1: Employment statistics for end of November, 2016.

Insert here....

APPENDIX 5: SUMMARY OF YEAR 1, YEAR 2, AND YEAR 3 WORKFORCE SURVEY DATA

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Table A5-1: Summary of Year III workforce survey data for the period of 15 June, 2015 to 30 November, 2016.

Identity	Non-Harvesters			Resource Users			Harvests										
	Count	Total Days On	Total Days Off	Count	Total Days On	Total Days Off	Fish				Hunting				Plants and Berries		
							Catch & Release Total	Harvest Total (# fish)	Effort Days On	Effort Days Off	Harvest Total (# moose)	Harvest Total (# caribou)	Effort Days On	Effort Days Off	Harvest Total	Effort Days On	Effort Days Off
KCN	20	4088	1384	4	1107	369	20	10	23	36	0	0	23	23	0	0	0
Metis	19	4478	1502	4	729	243	4	0	12	0	1	0	0	2	n/s	2	0
Non-Local Aboriginal	27	7123	2384	2	313	104	64	0	0	13	0	0	0	0	n/s	0	13
Non-Aboriginal	88	19312	6945	4	1502	545	14	0	1	1	1	1	0	6	n/s	1	0
Totals (n=168)	154	35001	12215	14	3651	1261	102	10	36	50	2	1	23	29	n/s	2	13

Note: Effort is expressed as total number of eight hour days.
n/s refers to harvest quantities that were not specified.

Table A5-2: Summary of workforce survey data in RUMP monitoring Year I, Year II, and Year III

Workforce	Year I						Year II						Year III					
	KCN	Metis	Non-Local	Non-Aboriginal	Non-Specified	Total	KCN	Metis	Non-Local	Non-Aboriginal	Non-Specified	Total	KCN	Metis	Non-Local	Non-Aboriginal	Non-Specified	Total
Non-Harvesters																		
Total No:	15	12	21	84	2	134	25	26	39	127	0	217	20	19	27	88	0	154
Total Days On:	1350	1034	1394	5952	200	9930	2969	3165	5347	15564	0	27045	4088	4478	7123	19312	0	35001
Total Days Off:	436	337	482	2067	67	3389	993	1085	1779	5417	0	9274	1384	1502	2384	6945	0	12215
Resource Users																		
Total No:	9	3	1	6	1	20	12	1	0	14	0	27	4	4	2	4	0	14
Total Days On:	1350	1034	1292	5551	200	9427	1557	181	0	1401	0	3159	1107	729	313	1502	0	3651
Total Days Off:	436	337	448	1933	67	3221	521	45	0	474	0	1040	369	243	104	545	0	1261
Total Surveyed (n=154)						Total Surveyed (n=244)						Total Surveyed (n=168)						

Table A5-3: Summary of resource harvests and effort in RUMP monitoring Year I, Year II, and Year III.

Workforce	Year I						Year II						Year III						Average					
	KCN	Metis	Non-Local Aboriginal	Non-Aboriginal	Non-Specified	Total	KCN	Metis	Non-Local Aboriginal	Non-Aboriginal	Non-Specified	Total	KCN	Metis	Non-Local Aboriginal	Non-Aboriginal	Non-Specified	Total	KCN	Metis	Non-Local Aboriginal	Non-Aboriginal	Non-Specified	Total
Fishing																								
Catch/Release:	88	60	0	0	0	148	19	9	0	75	0	103	20	4	64	14	0	102	42	24	21	30	0	118
Harvest Total:	90	0	0	0	0	90	63	0	0	8	0	71	10	0	0	0	0	10	54	0	0	3	0	57
Total Days On:	0	7	0	3	0	10	6	0	0	10	0	16	23	12	0	1	0	36	10	6	0	5	0	21
Total Days Off:	12	6	0	4	0	22	61	3	0	6	0	70	36	0	13	1	0	50	36	3	4	4	0	47
Hunting																								
Total Moose:	1	0	2	0	0	3	3	0	0	1	0	4	n/s	1	0	1	0	2	2	0	1	1	0	3
Total Caribou:	0	0	0	0	0	0	5	0	0	0	0	5	n/s	0	0	1	0	1	3	0	0	0	0	2
Total Rabbits:	0	0	0	0	0	0	0	0	0	11	0	11	0	0	0	0	0	0	0	0	0	4	0	4
Total Birds:	0	0	0	0	0	0	66	0	0	10	0	76	0	0	0	0	0	0	22	0	0	3	0	25
Total Days On:	0	0	0	0	0	0	2	0	0	0	0	2	23	0	0	0	0	23	8	0	0	0	0	8
Total Days Off:	17	0	3	0	0	20	39	0	0	25	0	64	23	2	0	6	0	29	26	1	1	10	0	38
Plants and Berries																								
Harvest Total:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	n/s	0	n/s	0	0	0	0	0	0
Total Days On:	0	0	0	0	0	0	0	0	0	3	0	3	0	2	0	1	0	3	0	1	0	1	0	2
Total Days Off:	8	0	0	0	0	8	16	0	0	1	0	17	0	0	13	0	0	13	8	0	4	0	0	13
Total Harvesters Surveyed (n=20)						Total Harvesters Surveyed (n=27)						Total Harvesters Surveyed (n=14)						Total Harvesters Surveyed (n=61)						

Note: Effort is expressed as total number of eight hour days.
n/s refers to harvest quantities that were not specified.

