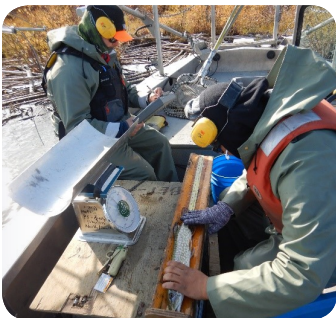




# Keeyask Generation Project Aquatic Effects Monitoring Plan

## Floy-tag Application and Recapture Report

AEMP-2023-10



# **KEYYASK GENERATION PROJECT**

## **AQUATIC EFFECTS MONITORING PLAN**

REPORT #AEMP-2023-10

### **Floy-tag Application and Recapture Information from the Keeyask Study Area, 2022**

Prepared for

Manitoba Hydro

By

S.M. Morrison and C.L. Hrenchuk

June 2023



**North/South Consultants Inc.**  
Aquatic Environment Specialists

83 Scurfield Blvd.  
Winnipeg, Manitoba, R3Y 1G4  
Website: [www.nscons.ca](http://www.nscons.ca)

Tel.: (204) 284-3366  
Fax: (204) 477-4173  
E-mail: [nscons@nscons.ca](mailto:nscons@nscons.ca)

This report should be cited as:

Morrison, S.M. and C.L. Hrenchuk. 2023. Floy-tag application and recapture information from the Keeyask study area, 2022. Keeyask Generation Project Aquatic Effects Monitoring Plan Report #AEMP-2023-10. A report prepared for Manitoba Hydro by North/South Consultants Inc., June 2023. xi + 54 pp.

# SUMMARY

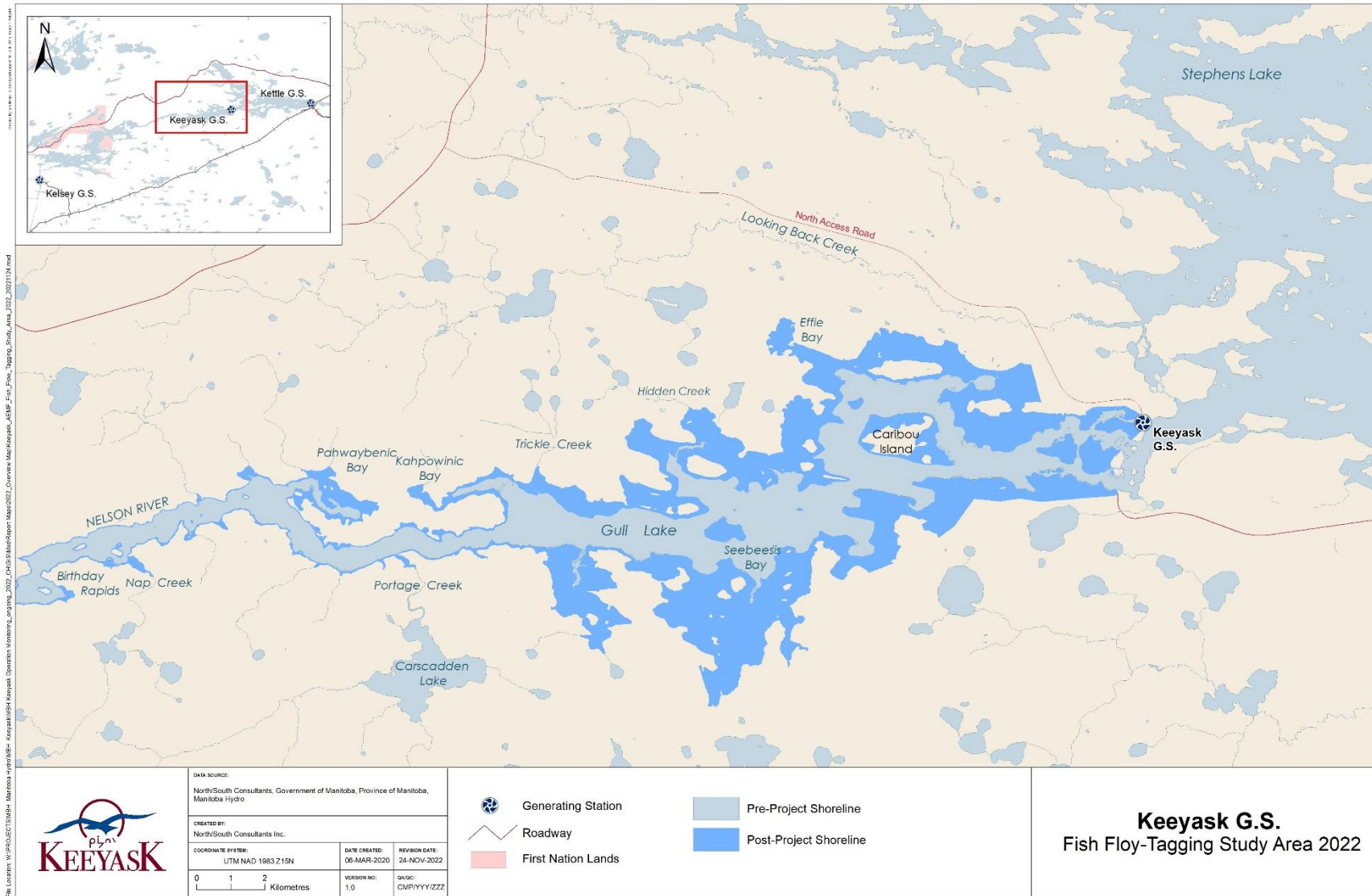
## Background

The Keeyask Hydropower Limited Partnership (KHLP) was required to prepare a plan to monitor the effects of construction and operation of the Keeyask Generating Station (GS) on the environment. Besides measuring the accuracy of the predictions made and actual effects of the GS on the environment, monitoring results will provide information on how construction and operation of the GS will affect the environment and if more needs to be done to reduce harmful effects.

Construction of the Keeyask GS began in mid-July 2014 and instream work was completed in 2020. The reservoir was impounded with water levels being raised to full supply level between August 31 and September 5, 2020. Commissioning of the powerhouse turbines was initiated after impoundment. They were brought into service one at a time with the final of seven turbines completed on March 9, 2022.

Monitoring fish movements is an important component of the overall plan to monitor the impacts of construction and operation of the Keeyask GS on fish. Lake Sturgeon, Lake Whitefish, Northern Pike (jackfish), and Walleye (pickerel) were chosen as the key species to monitor because they are of cultural, commercial and domestic importance and were known to pass Gull Rapids before the start of construction of the Keeyask GS. Fish movements are being monitored using two complementary techniques, Floy-tags and acoustic telemetry. Detailed movements of sturgeon, pickerel, and whitefish are being monitored using acoustic telemetry. This is a technique in which a tag is surgically implanted inside a fish. The tag emits a sound signal that is picked up by receivers placed along the Nelson River between Clark Lake and the Limestone GS. Each fish is given a tag that transmits a unique signal. By looking at the detections that were recorded by different receivers, the movement of each fish can be tracked, but it only allows you to track a small number of fish. Floy-tags are small, numbered tags applied externally to fish. Each tag has a unique number to allow a fish to be identified if it is recaptured. Marking fish with Floy-tags is an effective method of collecting fish movement information over short and long distances. It allows many more fish movements to be tracked but it relies on recapturing the fish and only provides information on a single (recapture) location.

Floy-tags are also being used to mark adult and juvenile Lake Sturgeon and these results are described in the population monitoring reports prepared for this species. This report focuses on tagging and recaptures of Lake Whitefish, jackfish, and pickerel.



**Map showing an overview of where sampling was done to Floy tag Lake Whitefish, jackfish, and pickerel in spring and fall, 2022.**

### Why is the study being done?

Floy-tagging of Lake Whitefish, jackfish, and pickerel is being done to add to our understanding of fish movements in the Keeyask area. Tagged fish may be recaptured during monitoring studies and by local fishers. Fish that move upstream into Split Lake may be caught during the Coordinated Aquatic Monitoring Program (CAMP) monitoring studies, or in the commercial fishery or by domestic or recreational fishers. Fish that move downstream into Stephens Lake may be caught during Keeyask or CAMP studies, or by fishers. Where they are recaptured can tell us if the fish has stayed in the same area it was tagged in or if it has moved. Because the Floy-tagging study requires fish to be recaptured, it can take several years before there are meaningful results.



**Measuring a jackfish (left) and a Lake Whitefish with a Floy-tag (right).**

### What was done?

Lake Whitefish, jackfish, and pickerel were caught over two weeks in the spring and two weeks in the fall using gill nets and a boat electrofisher. Gill nets were set for only a few hours at a time to capture live fish and reduce stress on the fish. The boat electrofisher uses an electrical current to temporarily stun the fish, which are then captured using large dip nets. Fish caught this way typically have less injury and stress than those captured in gill nets.

When a fish was caught, it was measured and weighed. If the fish was not already tagged, then an external (Floy) tag was applied. If the captured fish had already been tagged, then the tag numbers were recorded before the fish was released.

### What was found?

Lake Whitefish, jackfish, and pickerel were tagged and recaptured during studies between 1999 and 2010, before construction of the GS started. Because these fish do not live very long (whitefish to about 25 years old, jackfish between 10 and 15 years old, and pickerel around 15 to 20 years old), it is unlikely that many of these fish are alive and will be recaptured in the current studies. Information on the number of movements before construction of the GS started will be used to compare to that collected after construction. This can help us tell if the number of movements between areas has increased.

A total of 122 Lake Whitefish were tagged during construction between 2014 and 2020. An additional 101 Lake Whitefish were tagged after the Keeyask GS was flooded between 2021 and 2022, including 27 in the Keeyask reservoir, and 74 in Stephens Lake. No Lake Whitefish have been recaptured yet.

No tags were applied to jackfish during the construction period, but 682 were tagged between 2021 and 2022. This includes 403 in the Keeyask reservoir and 279 in Stephens Lake. Thirteen tagged jackfish were recaptured in 2022, including nine in the Keeyask reservoir and four in Stephens Lake. All of these fish were recaptured very near (less than 2 km) to where they were tagged.

A total of 225 pickerel were tagged during construction between 2014 and 2020. An additional 305 pickerel were tagged between 2021 and 2022. This includes 166 in the Keeyask reservoir and 139 in Stephens Lake. Three tagged pickerel were recaptured in 2022, including one in the Keeyask reservoir and two in Stephens Lake. All of these fish were recaptured very near (less than 2.5 km) to where they were tagged.

### **What does it mean?**

Because there have only been two years of tagging (2021 and 2022) and few fish have been recovered, more studies and recaptures are needed before detailed movement results can be presented. None of the 17 fish recaptured so far (one in 2021 and 16 in 2022) have moved far from where they were tagged.

### **What will be done next?**

The program will be repeated in 2023 to tag and recapture more fish. Recaptures from other studies (e.g., CAMP) and fishers will also be recorded.

# ACKNOWLEDGEMENTS

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

The following members of Tataskweyak Cree Nation (TCN) and War Lake First Nation (WLFN) are thanked for their local expertise and assistance in conducting the field work: Grant Connell, Hunter Kitchekeesik, Leslie Flett, Patrick Connell, and Terry Kitchekeesik of TCN; and Nolan Bloomfield and Justin Spence of WLFN.

The collection of biological samples described in this report was authorized by Natural Resources and Northern Development, Fish and Wildlife Branch, under terms of the Scientific Collection Permit #41767128 (SCP 08-2022).



# STUDY TEAM

## **Data Collection**

Brenden Slongo

Brock Kramble

Claire Hrenchuk

Grant Connell

Hunter Kitchekeesik

James Aiken

Jenelle Ehn

Leslie Flett

Nolan Bloomfield

Patrick Connell

Scott Morrison

Ryler Tonner

Natasha Fafard

## **Data Analysis, Report Preparation, and Report Review**

Cam Barth

Chris Kullman

Claire Hrenchuk

Friederike Schneider-Vieira

Scott Morrison

# TABLE OF CONTENTS

<b>1.0</b>	<b>INTRODUCTION .....</b>	<b>1</b>
<b>2.0</b>	<b>STUDY SETTING.....</b>	<b>3</b>
<b>3.0</b>	<b>METHODS.....</b>	<b>5</b>
<b>3.1</b>	<b>GILLNETTING.....</b>	<b>5</b>
<b>3.2</b>	<b>ELECTROFISHING .....</b>	<b>5</b>
<b>3.3</b>	<b>BIOLOGICAL SAMPLING .....</b>	<b>14</b>
<b>4.0</b>	<b>RESULTS.....</b>	<b>15</b>
<b>4.1</b>	<b>LAKE WHITEFISH.....</b>	<b>15</b>
<b>4.2</b>	<b>NORTHERN PIKE.....</b>	<b>17</b>
<b>4.3</b>	<b>WALLEYE.....</b>	<b>19</b>
<b>5.0</b>	<b>DISCUSSION .....</b>	<b>21</b>
<b>6.0</b>	<b>SUMMARY AND CONCLUSIONS .....</b>	<b>22</b>
<b>7.0</b>	<b>LITERATURE CITED .....</b>	<b>23</b>

# LIST OF TABLES

Table 1: Summary of the total number of Floy-tags applied to Lake Whitefish and recaptured in the Upper Split Lake Area (USLA), Keeyask reservoir, and Stephens Lake during fisheries investigations from 1999 to 2022. ....16

Table 2: Summary of the total number of Floy-tags applied to Northern Pike and recaptured in the Upper Split Lake Area (USLA), Keeyask reservoir, and Stephens Lake during fisheries investigations from 1999 to 2022. ....18

Table 3: Summary of the total number of Floy-tags applied to Walleye and recaptured in the Upper Split Lake Area (USLA), Keeyask reservoir, and Stephens Lake during fisheries investigations from 1999 to 2022.....20

# LIST OF MAPS

Map 1: Map of the Keeyask Study Area showing the Upper Split Lake Area, the Nelson River from Clark Lake to the Keeyask GS (referred to herein as the Keeyask reservoir), and Stephens Lake.....4

Map 2: Map of the Keeyask reservoir showing gill net sets to Floy-tag Lake Whitefish, Northern Pike, and Walleye, spring 2022.....6

Map 3: Map of Stephens Lake showing gill net sets to Floy-tag Lake Whitefish, Northern Pike, and Walleye, spring 2022. ....7

Map 4: Map of the Keeyask reservoir showing gill net sets to Floy-tag Lake Whitefish, Northern Pike, and Walleye, fall 2022.....8

Map 5: Map of Stephens Lake showing gillnet sets to Floy-tag Lake Whitefish, Northern Pike, and Walleye, fall 2022. ....9

Map 6: Map of the Keeyask reservoir showing electrofishing runs to Floy-tag Lake Whitefish, Northern Pike, and Walleye, spring 2022.....10

Map 7: Map of Stephens Lake showing electrofishing runs to Floy-tag Lake Whitefish, Northern Pike, and Walleye, spring 2022.....11

Map 8: Map of the Keeyask reservoir showing electrofishing runs to Floy-tag Lake Whitefish, Northern Pike, and Walleye, fall 2022.....12

Map 9: Map of Stephens Lake showing electrofishing runs to Floy-tag Lake Whitefish, Northern Pike, and Walleye, fall 2022.....13



# LIST OF APPENDICES

Appendix 1: Tagging and biological information for all fish captured in the Keeyask Study Area, 2022. ....25

Appendix 2: Recapture data in the Keeyask Study Area, Spring and Fall 2022. ....51



# 1.0 INTRODUCTION

The Keeyask Generation Project (the Project) is a 695-megawatt (MW) hydroelectric generating station on the lower Nelson River in northern Manitoba. The GS is approximately 725 kilometres (km) northeast of Winnipeg, 35 km upstream of the existing Kettle Generating Station, 60 km east of the community of Split Lake, 180 km east-northeast of Thompson and 30 km west of Gillam. Construction of the GS began in July 2014 and the seven generating units were all in-service in March 2022.

The *Keeyask Generation Project: Response to EIS Guidelines*, completed in June 2012, provides a summary of predicted effects and planned mitigation for the Project. Technical supporting information for the aquatic 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: Aquatic Environment Supporting Volume* (AE SV). As part of the licensing process for the Project, an *Aquatic Effects Monitoring Plan* (AEMP) was developed detailing the monitoring activities of various components of the aquatic environment for the construction and operation phases of the Project.

Monitoring of the fish community during the post-impoundment phase of the Project includes a core monitoring program designed to assess changes in the fish community. These studies focused on fish species that were of particular interest during the environmental assessment (referred to as Valued Ecosystem Components, or VECs). VEC species include Lake Sturgeon, Lake Whitefish, Northern Pike, and Walleye. These species were chosen due to their importance to local communities for harvest, because they are sensitive to environmental change, and they use a variety of habitats for spawning and foraging that will be substantially altered by the Project.

The AEMP includes two types of movement studies: fine-scale movements of juvenile and adult Lake Sturgeon, Walleye and Lake Whitefish in the reservoir and immediately downstream in Stephens Lake using acoustic telemetry; and movements (over both large [*i.e.*, between waterbodies] and small scales) of Lake Sturgeon, Walleye, Lake Whitefish and Northern Pike are being recorded using Floy tags (this report). The intent of applying Floy tags to these four species in the reservoir is to provide information on the frequency of fish movements out of the reservoir, either downstream through the Keeyask GS, or upstream into Split Lake. Marked fish will be recaptured by local fishermen, commercial fishermen and/or during biological studies such as index gillnetting conducted in the Keeyask reservoir, Split, Stephens and Assean lakes, Lake Sturgeon gillnetting conducted in the Upper Split Lake Area, the Keeyask reservoir and in Stephens Lake as well as other studies described as part of this AEMP. Annual gillnetting in Split and Assean lakes is also conducted under CAMP. Recapture data will be used to provide a descriptive comparison of the frequency and extent of movement between the pre-Project environment and operation.

Mark-recapture information for Lake Sturgeon is also being used to generate population estimates and is presented separately in juvenile and adult population monitoring reports. Details on Lake Sturgeon mark-recaptures can be found in Burnett *et al.* (2023) and Ambrose *et al.* (2023).

The following report presents biological and tagging information for all Lake Whitefish, Northern Pike, and Walleye marked with Floy tags during fish community investigations in the Keeyask Study Area in 2022, the second year following impoundment of the Keeyask GS. It also provides a summary of tag and recapture data collected during baseline (*i.e.*, 1999–2013), construction (*i.e.*, 2014–2020), and the first year post-impoundment (*i.e.*, 2021) studies.

Although 2022 represents only the second year of tagging data and is therefore too early to make conclusions regarding movements, future monitoring will be conducted to answer the following questions outlined in the AEMP:

- What is the number and proportion of Floy-tagged fish that move downstream past the Keeyask GS into Stephens Lake?
- What is the number and proportion of Floy-tagged fish that move upstream from Gull Lake/Keeyask reservoir into the Split Lake area?

## 2.0 STUDY SETTING

The study area encompasses an approximately 110 km long reach of the Nelson River from Clark Lake to the upstream end of the Limestone Reservoir (Map 1). This section of river offers a diversity of physical habitat conditions, including a variety of substrate types, and variable water depths (range: 0–30 m) and velocities. Clark Lake is located immediately downstream of Split Lake, and approximately 42 km upstream of the Keeyask GS. Current is restricted to the main section of the lake, with off-current bays outside the main channel. The Assean River is the only major tributary to Clark Lake and flows into the north side. Downstream from the outlet of Clark Lake, the Nelson River narrows and water velocity increases for a 3 km stretch, known as Long Rapids. For the next 7 km, the river widens, and water velocity decreases. The area between Clark Lake and Birthday Rapids is referred to herein as the upper Keeyask reservoir.

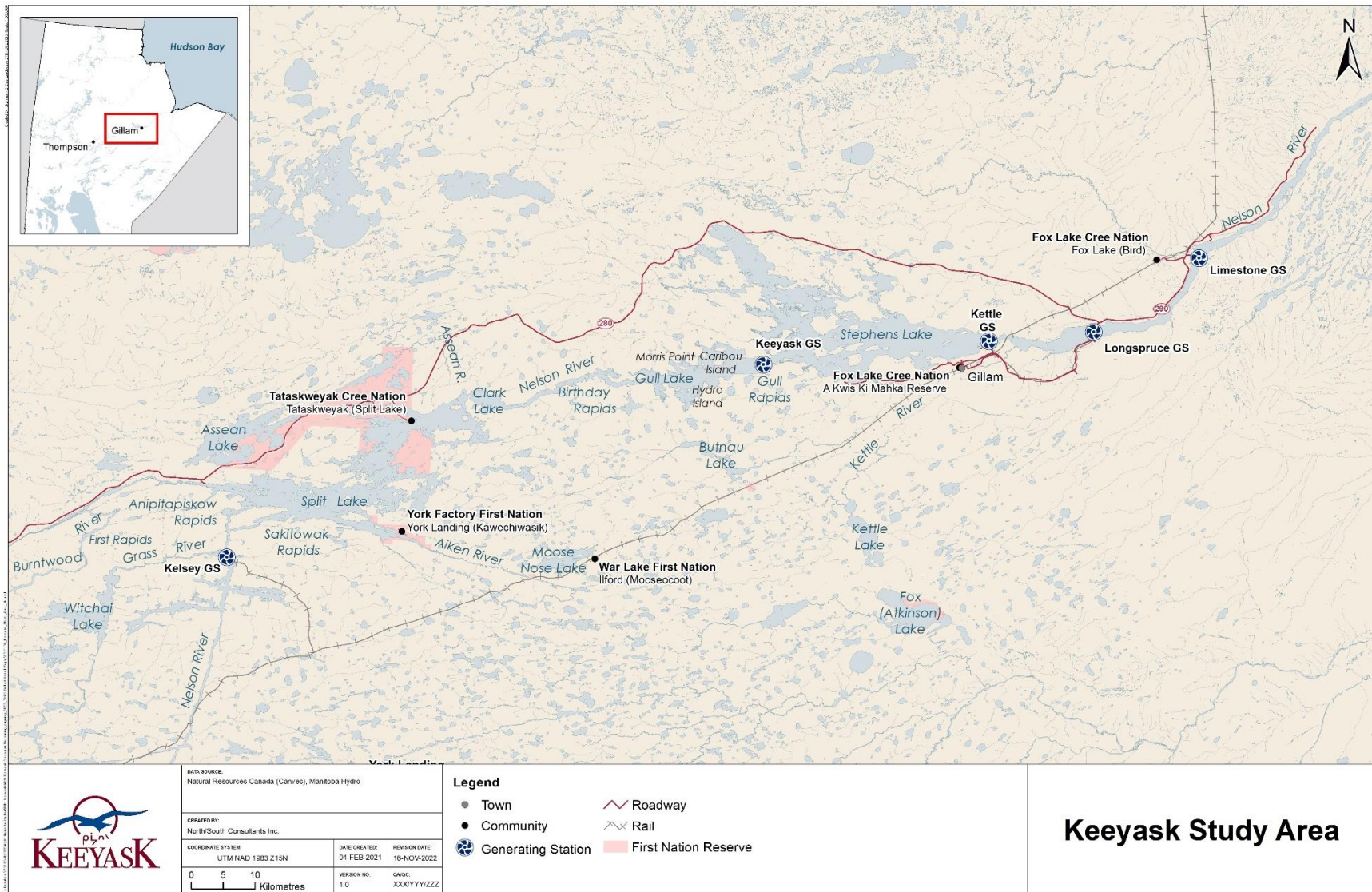
Birthday Rapids is located approximately 10 km downstream of Clark Lake and 30 km upstream of the Keeyask GS and marks the upstream end of major water level changes because of impoundment by the Keeyask GS. The drop in elevation from the upstream to downstream side of Birthday Rapids was approximately 2 m prior to impoundment but is now nearly level, albeit a fast-flowing section of river. The 14 km reach of the Nelson River between Birthday Rapids and Gull Lake was characterized as a large and somewhat uniform channel with medium to high water velocities and a few large bays. This area is now within the Keeyask reservoir, though flooding was limited to mainly shoreline areas, and is referred to herein as the middle Keeyask reservoir.

Prior to impoundment, Gull Lake was a widening of the Nelson River, with moderate to low water velocity beginning approximately 20 km upstream the Keeyask GS. Water levels on Gull Lake increased by several metres following impoundment and flooding along the shoreline and small tributaries entering this reach was extensive. Although this area is larger than prior to impoundment, the portion of the Keeyask reservoir is referred to herein as Gull Lake.

Just below the Keeyask GS, the Nelson River enters Stephens Lake. Stephens Lake was formed in 1971 by construction of the Kettle GS. Construction of the Keeyask GS has altered the flow distribution immediately downstream of the station.

Construction of the Kettle GS flooded Moose Nose Lake (north arm) and several other small lakes that previously drained into the Nelson River, as well as the old channels of the Nelson River that now lie within the southern portion of the lake. Major tributaries of Stephens Lake include the North and South Moswakot rivers that enter the north arm of the lake. Looking Back Creek is a second order stream that drains into the north arm of Stephens Lake. Kettle GS is located approximately 40 km downstream of the Keeyask GS.





**Map 1: Map of the Keeyask Study Area showing the Upper Split Lake Area, the Nelson River from Clark Lake to the Keeyask GS (referred to herein as the Keeyask reservoir), and Stephens Lake.**

## 3.0 METHODS

In 2022, tagging effort was focused over an approximate two-week period in both the spring and the fall to apply tags to Lake Whitefish, Northern Pike, and Walleye in the Keeyask reservoir (*i.e.*, the Nelson River between Birthday Rapids and the Keeyask GS) and Stephens Lake.

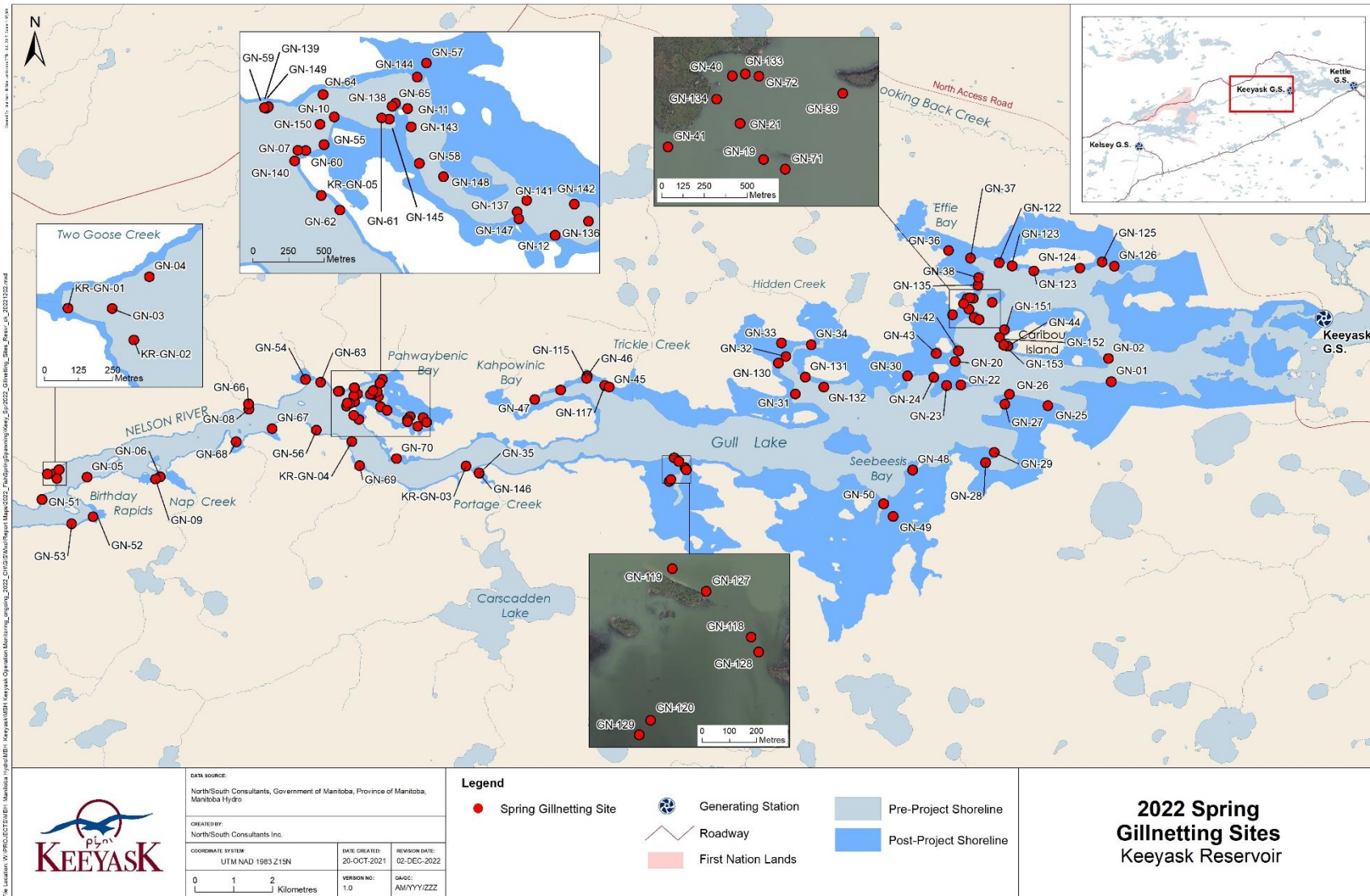
### 3.1 GILLNETTING

Gillnetting was conducted in the Keeyask reservoir and the upper 10 km of Stephens Lake in both spring and fall, 2022 (May 26 to June 11 and September 28 to October 11) in conjunction with spawning studies. Gill nets were composed of five panels of 2, 3, 3 ¾, 4 ¼, and 5" twisted nylon stretched mesh (51, 76, 95, 108, and 127 mm). Each panel was 25 yards (yd) (22.9 m) long and 2.7 yd (2.5 m) deep. Each gill net set was given a unique identification number, and net locations were recorded using a Garmin Marine GPS navigator (Garmin International Inc., Olathe, KS). Water depth at each end of the net was measured using a Lowrance® Elite FS-7 consumer-grade single-beam echosounder (Lowrance Electronics, Tulsa, OK). Gill nets were checked approximately every 1–3 hours to prevent fish mortality. Spring gillnetting sites are outlined in Maps 2 and 3, while fall sites are shown in Maps 4 and 5.

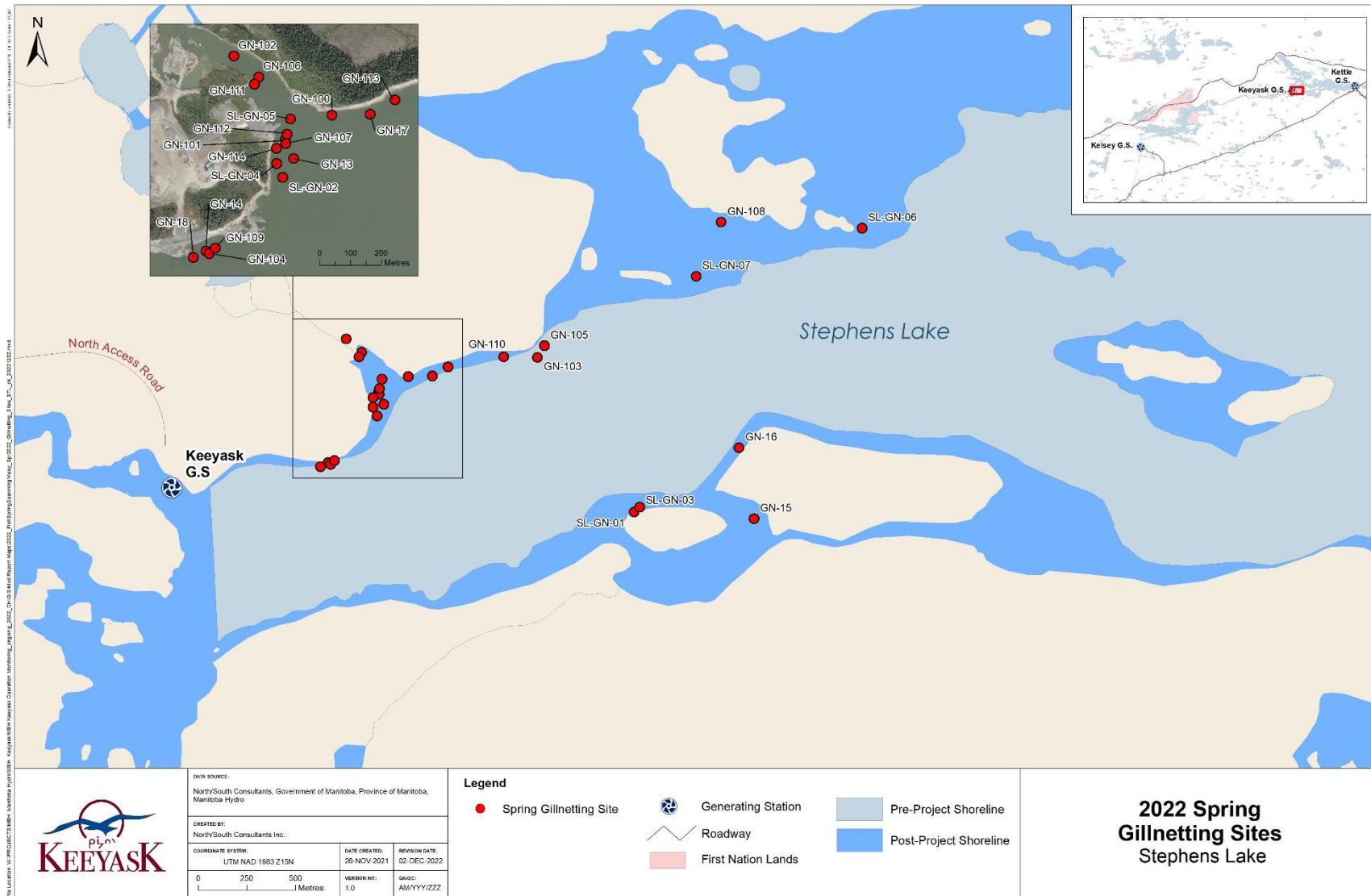
### 3.2 ELECTROFISHING

Boat-based electrofishing was conducted in the Keeyask reservoir and the upper 10 km of Stephens Lake in spring and fall, 2022. In spring, electrofishing was conducted with a Smith-Root AEPC electrofisher while a Smith-Root GPP 5.0 unit was used in fall. Dual boom Smith-Root UAA-6 Umbrella anodes (0.91 m diameter) mounted approximately 2.0 m apart were used during both sampling periods. During electrofisher operation, the boat serves as a cathode, and lines of electrical current are established between the anode and the boat. The electric field causes muscle contractions in fish that lie within the electric field, forcing them to swim towards the anode. Prolonged exposure temporarily stuns the fish. Field technicians stationed at the front of the boat use large dip nets to collect stunned or partially stunned fish.

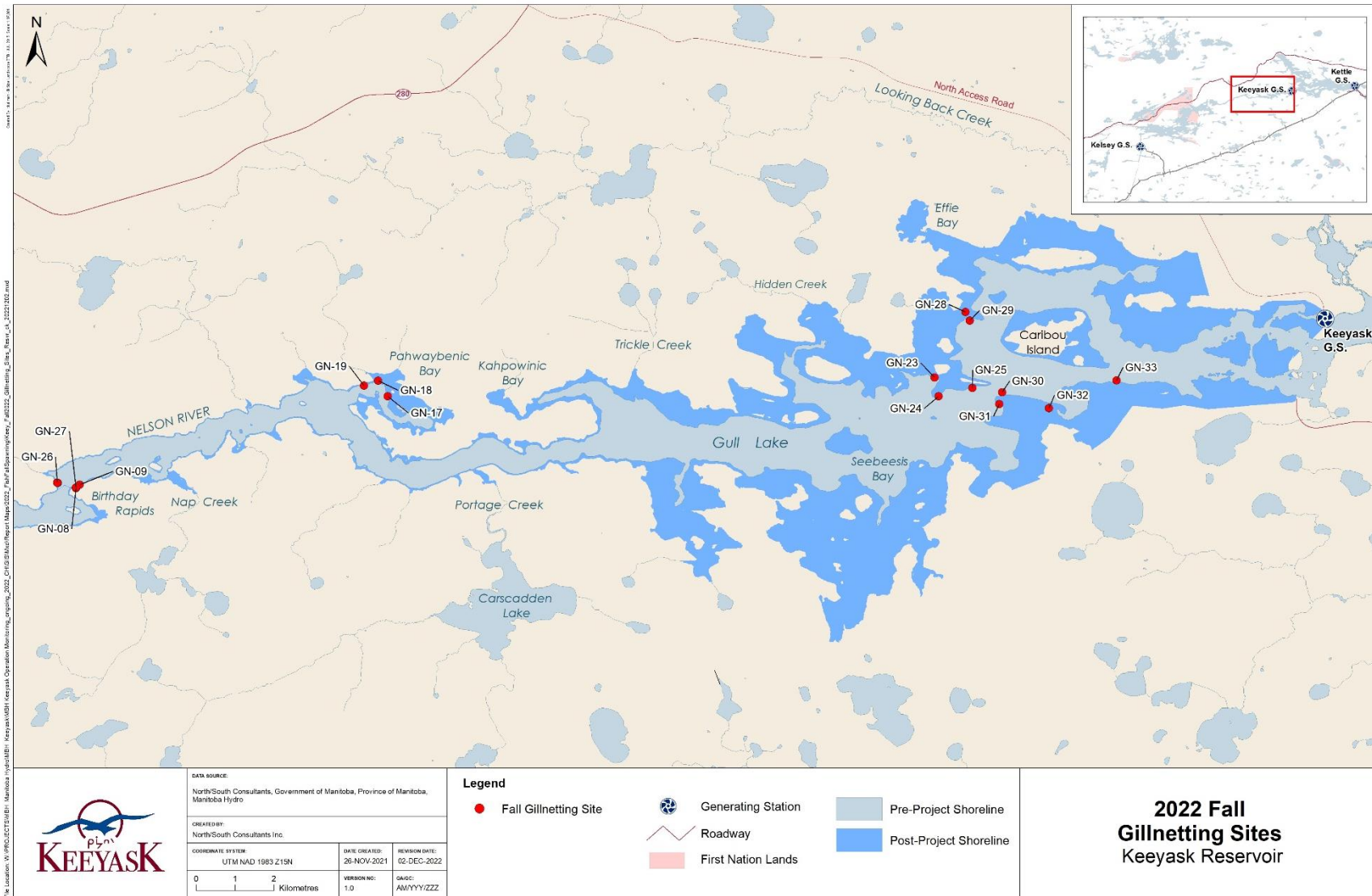
At each electrofishing site, start and end points were recorded using a Garmin Marine GPS navigator (Garmin International Inc., Olathe, KS). The fishing effort (number of seconds of operation) and electrofisher settings (volts, pulse width, and pulses per second) were also recorded. Spring electrofishing sites are outlined in Maps 6 and 7, while fall sites are shown in Maps 8 and 9.



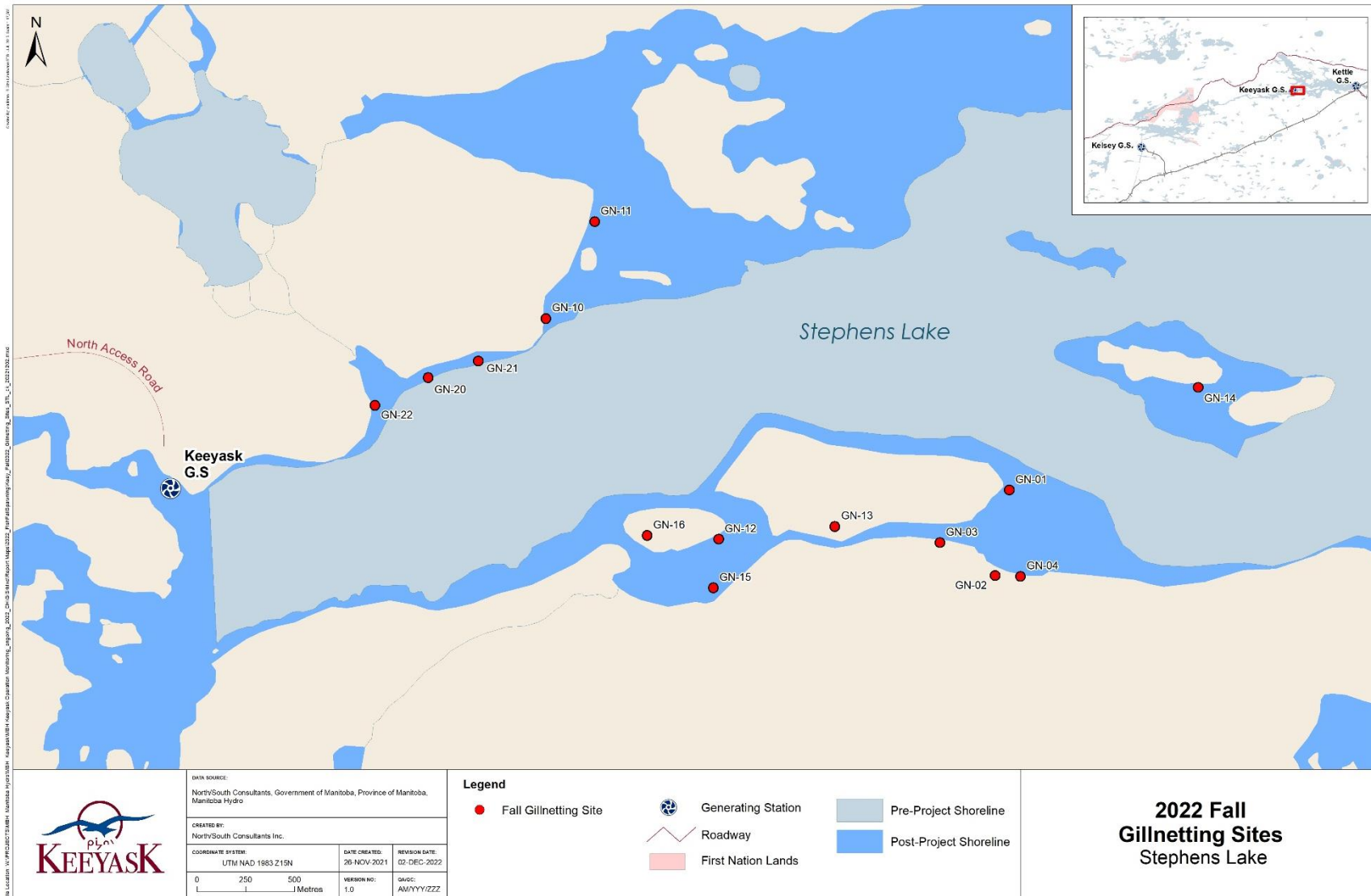
**Map 2: Map of the Keeyask reservoir showing gill net sets to Floy-tag Lake Whitefish, Northern Pike, and Walleye, spring 2022.**



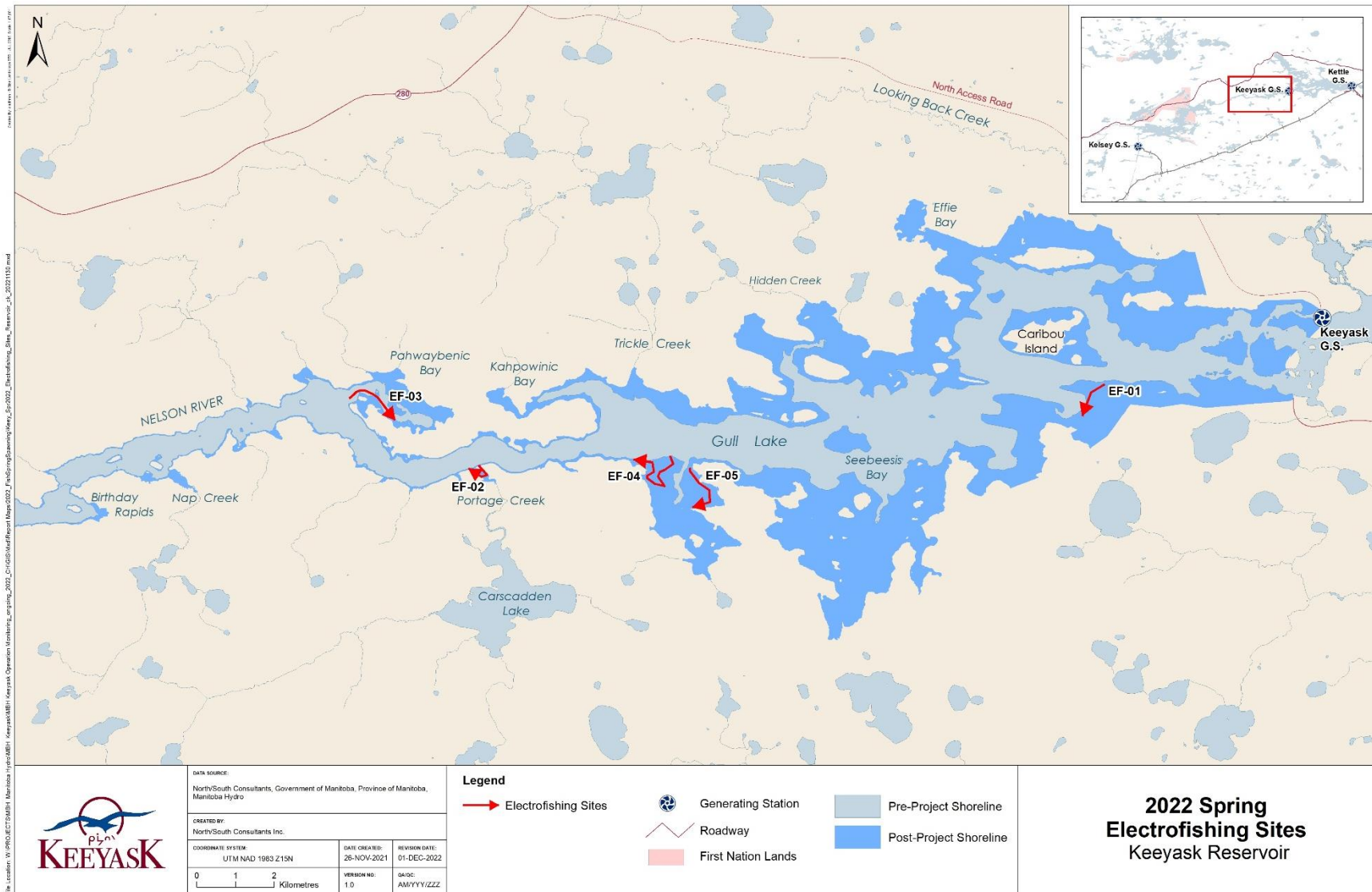
**Map 3: Map of Stephens Lake showing gill net sets to Floy-tag Lake Whitefish, Northern Pike, and Walleye, spring 2022.**



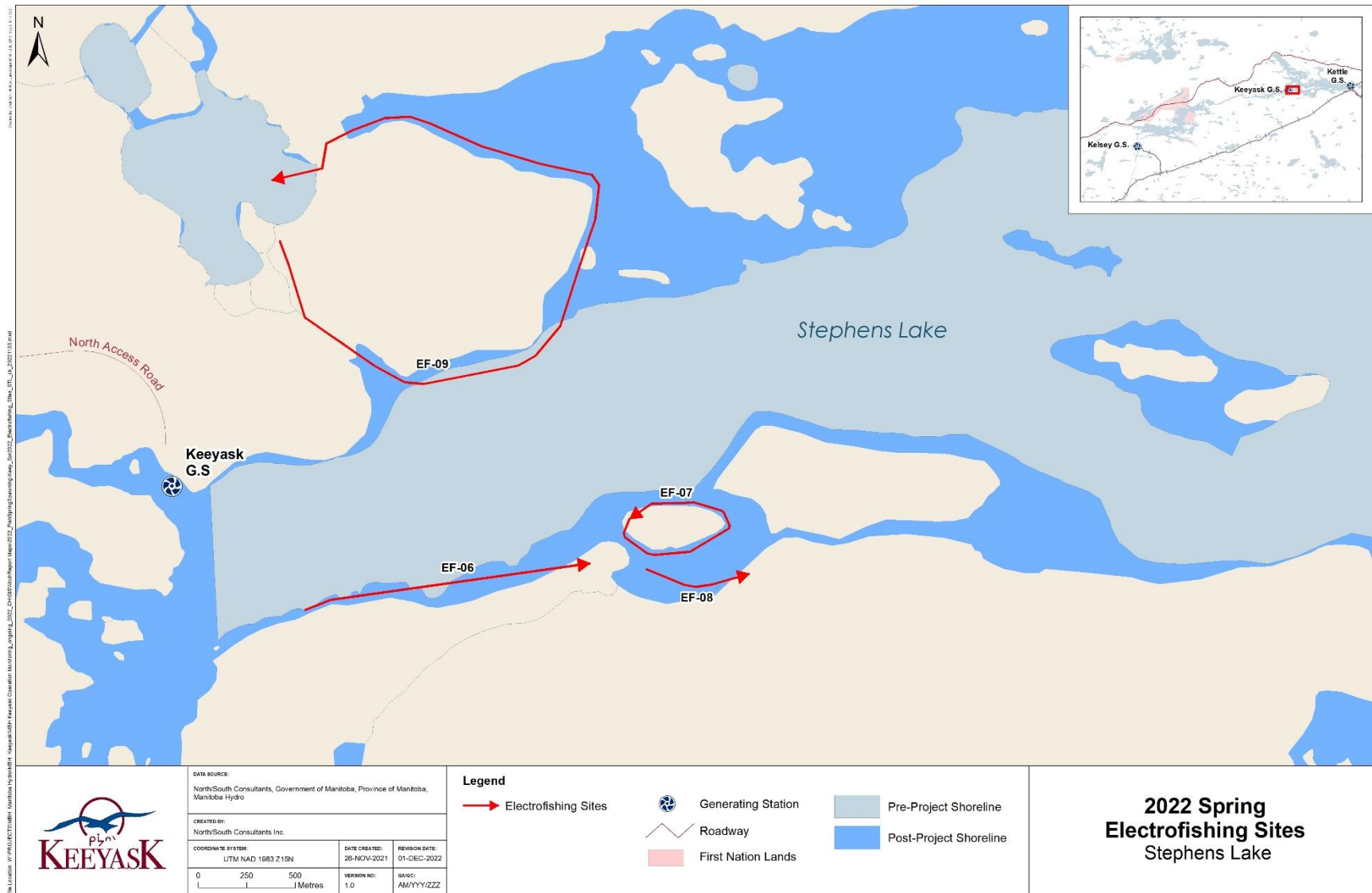
**Map 4: Map of the Keeyask reservoir showing gill net sets to Floy-tag Lake Whitefish, Northern Pike, and Walleye, fall 2022.**



**Map 5: Map of Stephens Lake showing gillnet sets to Floy-tag Lake Whitefish, Northern Pike, and Walleye, fall 2022.**

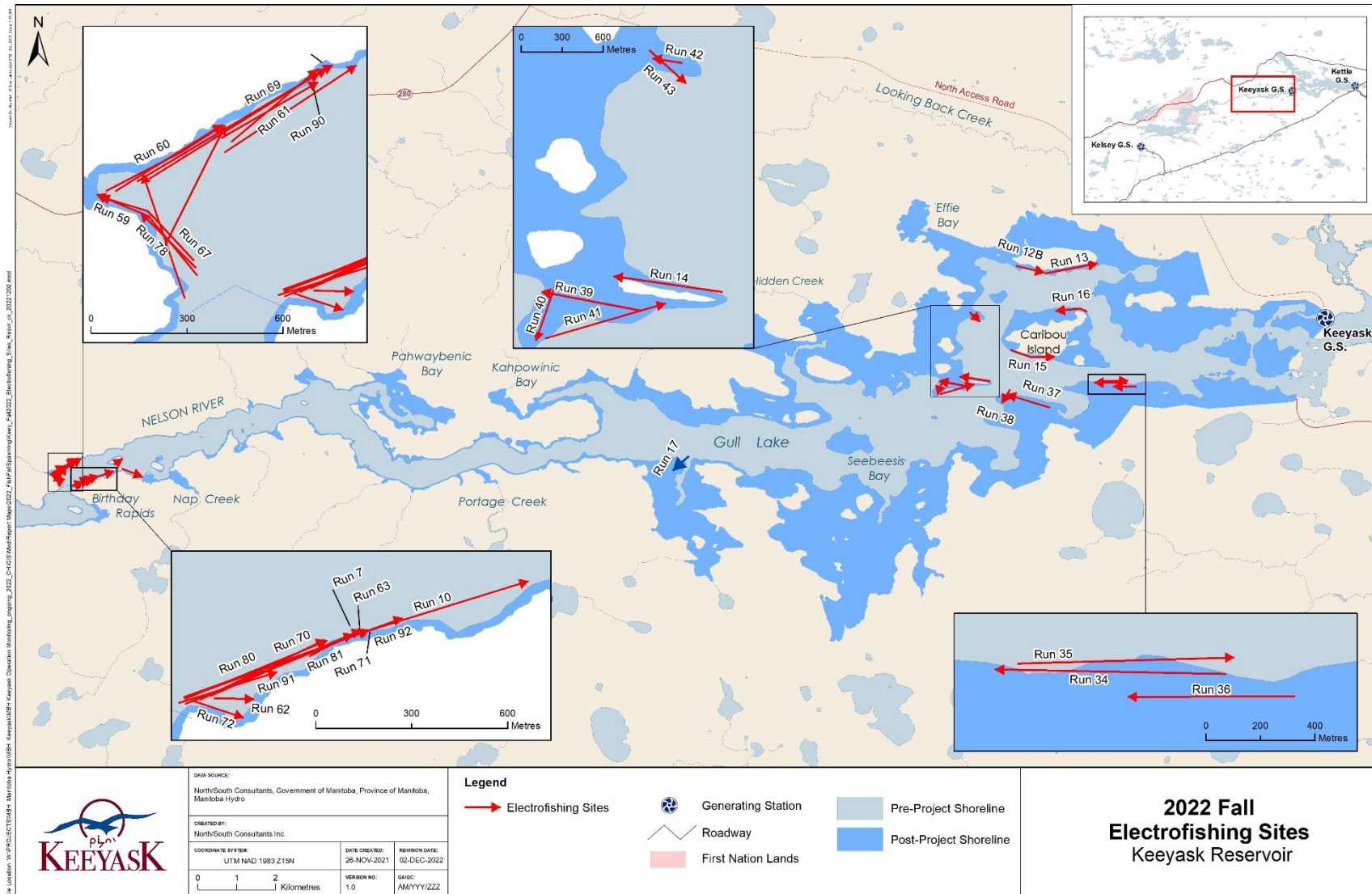


**Map 6: Map of the Keyyask reservoir showing electrofishing runs to Floy-tag Lake Whitefish, Northern Pike, and Walleye, spring 2022.**

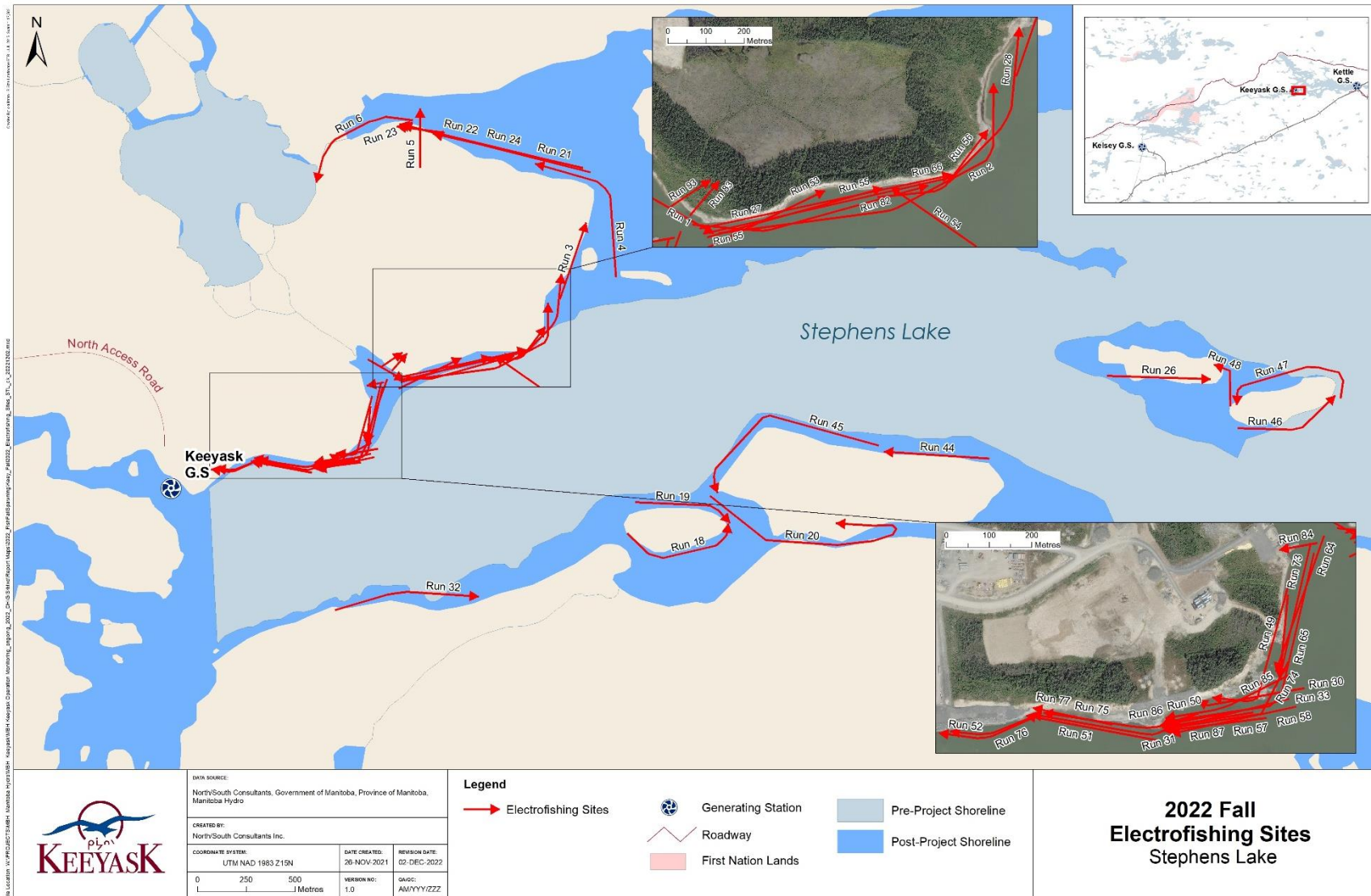


**Map 7: Map of Stephens Lake showing electrofishing runs to Floy-tag Lake Whitefish, Northern Pike, and Walleye, spring 2022.**





**Map 8: Map of the Keeyask reservoir showing electrofishing runs to Floy-tag Lake Whitefish, Northern Pike, and Walleye, fall 2022.**



**Map 9: Map of Stephens Lake showing electrofishing runs to Floy-tag Lake Whitefish, Northern Pike, and Walleye, fall 2022.**

### 3.3 BIOLOGICAL SAMPLING

All fish captured were counted by species and location. Lake Whitefish, Northern Pike, and Walleye were measured for fork length (FL;  $\pm 1$  mm) and weight ( $\pm 5$  g using a digital scale, or nearest 25 g for fish greater than 4,000 g). Each VEC species was marked with individually numbered external Floy FD-94 T-bar anchor tags (Floy-tag & Mfg. Inc., Seattle, WA) using a Dennison® Mark II tagging gun.

## 4.0 RESULTS

Large numbers of Lake Whitefish, Northern Pike, and Walleye were tagged and recaptured during EIS studies conducted between 1999 and 2010. Based on the lifespan of these fish species, it is not expected that many of these tags will be recaptured in the current study. However, the number of tags applied are presented herein as these mark-recapture data will be used to compare pre- and post-Project recapture rates when several years of data are collected.

### 4.1 LAKE WHITEFISH

In 2022, 59 Floy-tags were applied to Lake Whitefish, including 17 in the Keeyask reservoir and 42 in Stephens Lake. A total of 101 tags have been applied to Lake Whitefish in the first two years post-impoundment (*i.e.*, 2021 and 2022), including 27 in the Keeyask reservoir and 74 in Stephens Lake. No tagged Lake Whitefish were recaptured in 2022. Biological information for these fish is outlined in Appendix A1-1.

A total of 1,835 tags were applied to Lake Whitefish prior to reservoir impoundment. Of these, 1,713 Lake Whitefish were tagged during EIS studies between 1999 and 2008, before construction of the Keeyask GS began. An additional 122 tags were applied during the construction period in conjunction with acoustic monitoring studies. Previous tag applications and recaptures are presented in Table 1. No tags applied prior to reservoir impoundment or during the construction period were recaptured in 2022.

**Table 1: Summary of the total number of Floy-tags applied to Lake Whitefish and recaptured in the Upper Split Lake Area (USLA), Keeyask reservoir, and Stephens Lake during fisheries investigations from 1999 to 2022.**

Year	USLA			Keeyask reservoir <sup>1</sup>			Stephens Lake					
	# Tags Applied	Recap Original Tagging Location			# Tags Applied	Recap Original Tagging Location			# Tags Applied	Recap Original Tagging Location		
		USLA	Keeyask reservoir	Stephens Lake		USLA	Keeyask reservoir	Stephens Lake		USLA	Keeyask reservoir	Stephens Lake
<b>1999-2008<sup>2</sup></b>	550	111	-	-	167	-	1	-	996	1	-	29
<b>2009</b>	-	-	-	-	-	-	1	-	-	-	-	-
<b>2010</b>	-	-	-	-	-	-	-	-	-	-	-	-
<b>2011</b>	-	-	-	-	-	-	-	-	-	-	-	-
<b>2012</b>	-	-	-	-	-	-	-	-	-	-	-	-
<b>2013</b>	-	-	-	-	-	-	-	-	-	-	-	-
<b>2014</b>	-	-	-	-	20	-	-	-	40	-	-	-
<b>2015</b>	-	-	-	-	-	-	1	-	-	-	-	-
<b>2016</b>	-	-	-	-	-	-	-	-	-	-	-	-
<b>2017</b>	-	-	-	-	22	-	-	-	40	-	-	-
<b>2018</b>	-	-	-	-	-	-	-	-	-	-	-	-
<b>2019</b>	-	-	-	-	-	-	-	-	-	-	-	-
<b>2020</b>	-	-	-	-	-	-	-	-	-	-	-	-
<b>2021</b>	-	-	-	-	10	-	-	-	32	-	-	-
<b>2022</b>	-	-	-	-	17	-	-	-	42	-	-	-
<b>TOTAL</b>	<b>550</b>	<b>111</b>	<b>0</b>	<b>0</b>	<b>236</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>1,150</b>	<b>1</b>	<b>0</b>	<b>29</b>

1. The area between Clark Lake and Gull Rapids/the Keeyask GS.
2. As reported in the Keeyask EIS.

## 4.2 NORTHERN PIKE

In 2022, 370 Floy-tags were applied to Northern Pike, including 228 in the Keeyask reservoir and 142 in Stephens Lake. A total of 682 tags have been applied during the first two years post-impoundment (2021 and 2022) including 403 in the Keeyask reservoir and 279 in Stephens Lake. Biological information for these fish is outlined in Appendix A1-2.

In 2022, nine tagged Northern Pike were recaptured in the Keeyask reservoir (Appendix A2-1). Five fish were current-year recaptures tagged in 2022 recaptured six to 125 days after tagging. These fish were recaptured between 0.0 and 0.4 km from their original tagging locations. The remaining four fish were tagged in the Keeyask reservoir in 2021 and were recaptured between 0.4 and 1.0 km from their last capture location.

An additional four tagged Northern Pike were recaptured in Stephens Lake in 2022 (Appendix A2-2). All four fish were tagged in Stephens Lake in 2021 and were recaptured between 0.1 and 1.7 km from their original tagging location. Previous tag applications and recaptures are presented in Table 2.

In total, 7,939 Northern Pike were tagged during EIS studies between 1999 and 2010, before construction of the Keeyask GS began. No tags were applied during the construction period. Previous tag applications and recaptures are presented in Table 2. No tags applied prior to reservoir impoundment or during the construction period were recaptured in 2022.

**Table 2: Summary of the total number of Floy-tags applied to Northern Pike and recaptured in the Upper Split Lake Area (USLA), Keeyask reservoir, and Stephens Lake during fisheries investigations from 1999 to 2022.**

Year	USLA			Keeyask reservoir <sup>1</sup>			Stephens Lake					
	# Tags Applied	Recap Original Tagging Location			# Tags Applied	Recap Original Tagging Location			# Tags Applied	Recap Original Tagging Location		
		USLA	Keeyask reservoir	Stephens Lake		USLA	Keeyask reservoir	Stephens Lake		USLA	Keeyask reservoir	Stephens Lake
<b>1999-2008<sup>2</sup></b>	3,770	264	9	1	2,069	1	40	-	2,037	1	6	96
<b>2009</b>	4	-	-	-	-	-	-	-	-	-	-	1
<b>2010</b>	9	-	-	-	20	-	-	-	30	-	-	-
<b>2011</b>	-	-	-	-	-	-	-	-	-	-	-	-
<b>2012</b>	-	-	-	-	-	-	-	-	-	-	-	-
<b>2013</b>	-	-	-	-	-	-	-	-	-	-	-	-
<b>2014</b>	-	-	-	-	-	-	-	-	-	-	-	-
<b>2015</b>	-	-	-	-	-	-	-	-	-	-	-	-
<b>2016</b>	-	-	-	-	-	-	-	-	-	-	-	-
<b>2017</b>	-	-	-	-	-	-	-	-	-	-	-	-
<b>2018</b>	-	-	-	-	-	-	-	-	-	-	-	-
<b>2019</b>	-	-	-	-	-	-	-	-	-	-	-	-
<b>2020</b>	-	-	-	-	-	-	-	-	-	-	-	-
<b>2021</b>	-	-	-	-	175	-	1	-	137	-	-	-
<b>2022</b>	-	-	-	-	228	-	9	-	142	-	-	4
<b>TOTAL</b>	<b>3,783</b>	<b>264</b>	<b>9</b>	<b>1</b>	<b>2,492</b>	<b>1</b>	<b>50</b>	<b>0</b>	<b>2,346</b>	<b>1</b>	<b>6</b>	<b>101</b>

1. The area between Clark Lake and Gull Rapids/the Keeyask GS.
2. As reported in the Keeyask EIS.

## 4.3 WALLEYE

In 2022, 165 Floy-tags were applied to Walleye, including 97 in the Keeyask reservoir and 68 in Stephens Lake. A total of 305 tags were applied during the first two years post-impoundment (2021 and 2022) including 166 in the Keeyask reservoir and 139 in Stephens Lake (Table 3). Biological information for these fish is outlined in Appendix A1-3.

In 2022, one tagged Walleye was recaptured in the Keeyask reservoir (Appendix A2-3). This fish was originally tagged in the Keeyask reservoir in 2021 and was recaptured between 0.3 km from its last capture location.

Two tagged Northern Pike were recaptured in Stephens Lake in 2022 (Appendix A2-3). Both fish were tagged in Stephens Lake in 2021 and were recaptured between 1.0 and 2.4 km from their original tagging locations.

In total, 5,910 Walleye were tagged since studies began in 1999 (Table 3). The majority of Walleye were tagged during EIS studies between 1999 and 2010, and a total of 5,545 were tagged before construction of the Keeyask GS began (*i.e.*, 1999–2013). An additional 225 tags were applied during construction (*i.e.*, 2014–2020) in conjunction with acoustic monitoring studies. No tags applied prior to reservoir impoundment or during the construction period were recaptured in 2022.



**Table 3: Summary of the total number of Floy-tags applied to Walleye and recaptured in the Upper Split Lake Area (USLA), Keeyask reservoir, and Stephens Lake during fisheries investigations from 1999 to 2022.**

Year	USLA			# Tags Applied	Keeyask reservoir <sup>1</sup>			# Tags Applied	Stephens Lake					
	# Tags Applied	Recap Original Tagging Location			# Tags Applied	Recap Original Tagging Location			# Tags Applied	Recap Original Tagging Location				
		USLA	Keeyask reservoir			Stephens Lake	USLA			Keeyask reservoir	Stephens Lake	USLA	Keeyask reservoir	Stephens Lake
<b>1999-2008<sup>2</sup></b>	3,838	900	5	-	496	1	14	1	1,129	1	2	101		
<b>2009</b>	-	-	-	-	-	-	-	-	-	-	-	-		
<b>2010</b>	-	-	-	-	-	-	-	-	-	-	-	-		
<b>2011</b>	-	-	-	-	-	-	-	-	-	-	-	-		
<b>2012</b>	-	-	-	-	-	-	-	-	-	-	-	-		
<b>2013</b>	-	-	-	-	40	-	-	-	42	-	-	-		
<b>2014</b>	-	-	-	-	3	-	2	-	-	-	-	-		
<b>2015</b>	-	-	-	-	48	-	1	-	-	-	-	-		
<b>2016</b>	-	-	-	-	-	-	-	-	40	-	-	-		
<b>2017</b>	-	-	-	-	-	-	-	-	-	-	-	-		
<b>2018</b>	-	1	1	-	17	-	-	-	7	1	-	-		
<b>2019</b>	-	-	-	-	54	-	-	-	56	-	-	-		
<b>2020</b>	-	-	-	-	-	-	-	-	-	-	-	-		
<b>2021</b>	-	-	-	-	69	-	-	-	71	-	-	-		
<b>2022</b>	-	-	-	-	97	-	1	-	68	-	-	2		
<b>TOTAL</b>	<b>3,838</b>	<b>901</b>	<b>6</b>	<b>0</b>	<b>824</b>	<b>1</b>	<b>18</b>	<b>1</b>	<b>1,413</b>	<b>2</b>	<b>2</b>	<b>103</b>		

1. The area between Clark Lake and Gull Rapids/the Keeyask GS.
2. As reported in the Keeyask EIS.

## 5.0 DISCUSSION

The primary objective of the Floy tagging program is to monitor movements of fish in the Keeyask study area. Specifically, to provide information on the frequency of fish movements out of the reservoir, either downstream through the Keeyask GS, or upstream into Split Lake.

Floy-tags were applied to Lake Whitefish (n = 101), Northern Pike (n = 682), and Walleye (n = 305) over a two-week period in both the spring and fall, 2021 and 2022. To date, 13 Northern Pike and three Walleye have been recaptured, representing 2% and 1% of tags applied to each species, respectively. All recaptures occurred within the same waterbody. No fish of either species was recaptured more than 2.5 km from its last capture location.

Because this is the second mark-recapture period and few fish have been recaptured, it is too soon to make inferences about post-impoundment movement patterns. This study will be repeated in 2023 to increase the number of fish tagged and recaptured in the Keeyask reservoir and Stephens Lake.

## 6.0 SUMMARY AND CONCLUSIONS

- Lake Whitefish, Northern Pike, and Walleye were tagged using Floy-tags in both the Keeyask reservoir and Stephens Lake in 2022 (the second year following impoundment of the Keeyask reservoir).
- A total of 59 tags were applied to Lake Whitefish in 2022, including 17 in the Keeyask reservoir, and 42 in Stephens Lake.
  - None of these fish were recaptured.
- A total of 370 tags were applied to Northern Pike in 2022, including 228 in the Keeyask reservoir and 142 in Stephens Lake.
  - Nine tagged Northern Pike were recaptured in the Keeyask reservoir including three fish tagged in 2022 and six tagged in 2021. All nine fish were originally tagged in the Keeyask reservoir.
  - Four Northern Pike originally tagged in 2021 were recaptured in Stephens Lake. All four fish were originally tagged in Stephens Lake.
- A total of 165 Walleye were tagged in 2022, including 97 in the Keeyask reservoir and 68 in Stephens Lake.
  - One Walleye was recaptured in the Keeyask reservoir in 2022. It was originally tagged in the Keeyask reservoir in 2021.
  - Two tagged Walleye were recaptured in Stephens Lake in 2022. Both fish were originally tagged in Stephens Lake in 2021.
- As 2022 represents the second year of tagging data, it is too early to make conclusions regarding fish movements out of the reservoir.
- This study will be repeated in 2023 to increase the number of fish tagged and recaptured in the Keeyask reservoir and Stephens Lake. Comparisons will be made to recapture data collected during EIS studies between 1999 and 2010.

## 7.0 LITERATURE CITED

- Ambrose, K., Hrenchuk, C.L., and P. Nelson. 2023. Adult Lake Sturgeon population monitoring in the Upper Split Lake and Keeyask Areas, 2022. Keeyask Generation Project Aquatic Effects Monitoring Plan Report #AEMP-2023-05. A draft report prepared for Manitoba Hydro by North/South Consultants Inc.
- Burnett, D.C., Hrenchuk, C.L., and P. Nelson. 2023. Juvenile Lake Sturgeon population monitoring, fall 2022: Year 1 Operation. Keeyask Generation Project Aquatic Effects Monitoring Plan Report #AEMP-2023-06. A draft report prepared for Manitoba Hydro by North/South Consultants Inc.

# APPENDICES

# **APPENDIX 1: TAGGING AND BIOLOGICAL INFORMATION FOR ALL FISH CAPTURED IN THE KEEYASK STUDY AREA, 2022.**

---

Table A1-1:	Tagging and biological data for Lake Whitefish (LKWH) captured in the Keeyask reservoir and Stephens Lake in 2022. ....	26
Table A1-2:	Tagging and biological data for Northern Pike (NRPK) captured in the Keeyask reservoir and Stephens Lake in 2022. ....	29
Table A1-3:	Tagging and biological data for Walleye (WALL) captured in the Keeyask reservoir and Stephens Lake in 2022.....	44

**Table A1-1: Tagging and biological data for Lake Whitefish (LKWH) captured in the Keeyask reservoir and Stephens Lake in 2022.**

Location	Prefix	Floy-Tag Number	PIT Tag Number	Species	Date Tagged	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Stephens Lake	NSC	124478	-	LKWH	29-May-22	445	-	1600	-	-
Stephens Lake	NSC	124479	-	LKWH	29-May-22	415	-	1200	-	-
Stephens Lake	NSC	124483	-	LKWH	29-May-22	509	-	2200	-	-
Stephens Lake	NSC	124485	-	LKWH	29-May-22	478	-	1600	-	-
Stephens Lake	NSC	124492	-	LKWH	29-May-22	440	-	1150	-	-
Stephens Lake	NSC	124493	-	LKWH	29-May-22	277	-	300	-	-
Stephens Lake	NSC	123974	-	LKWH	3-Jun-22	471	-	1860	-	-
Keeyask reservoir	NSC	124169	-	LKWH	4-Jun-22	518	-	3020	-	-
Keeyask reservoir	NSC	123888	-	LKWH	8-Jun-22	527	-	-	-	-
Keeyask reservoir	NSC	122867	-	LKWH	9-Jun-22	521	-	-	-	-
Stephens Lake	NSC	118649	-	LKWH	28-Sep-22	355	-	700	-	-
Stephens Lake	NSC	118648	-	LKWH	28-Sep-22	424	-	1300	-	-
Stephens Lake	NSC	93845	-	LKWH	28-Sep-22	490	-	1950	-	-
Keeyask reservoir	NSC	122677	-	LKWH	29-Sep-22	482	-	1660	-	-
Keeyask reservoir	NSC	122678	-	LKWH	29-Sep-22	502	-	2580	-	-
Keeyask reservoir	NSC	102102	-	LKWH	30-Sep-22	533	-	2450	-	-
Keeyask reservoir	NSC	102103	-	LKWH	30-Sep-22	471	-	1890	-	-
Keeyask reservoir	NSC	102104	-	LKWH	30-Sep-22	410	-	1220	-	-
Keeyask reservoir	NSC	102105	-	LKWH	30-Sep-22	482	-	1800	-	-
Keeyask reservoir	NSC	102110	-	LKWH	30-Sep-22	336	-	420	-	-
Stephens Lake	NSC	102127	-	LKWH	2-Oct-22	438	-	1070	-	-
Stephens Lake	NSC	102129	-	LKWH	2-Oct-22	488	-	1730	-	-
Stephens Lake	NSC	102140	-	LKWH	3-Oct-22	486	-	2130	-	-
Keeyask reservoir	NSC	102143	-	LKWH	4-Oct-22	465	-	1950	-	-
Keeyask reservoir	NSC	102144	-	LKWH	4-Oct-22	244	-	270	-	-

**Table A1-1: Tagging and biological data for Lake Whitefish (LKWH) captured in the Keeyask reservoir and Stephens Lake in 2022 (continued).**

Location	Prefix	Floy-Tag Number	PIT Tag Number	Species	Date Tagged	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Stephens Lake	NSC	93809	-	LKWH	5-Oct-22	368	-	560	-	-
Keeyask reservoir	NSC	93817	-	LKWH	11-Oct-22	510	-	2550	-	-
Keeyask reservoir	NSC	120073	-	LKWH	11-Oct-22	474	-	2090	-	-
Keeyask reservoir	NSC	120074	-	LKWH	11-Oct-22	572	-	3410	-	-
Stephens Lake	NSC	119050	-	LKWH	27-Sep-22	311	-	460	-	-
Stephens Lake	NSC	119048	-	LKWH	27-Sep-22	510	-	1750	-	-
Stephens Lake	NSC	119044	-	LKWH	29-Sep-22	330	-	450	-	-
Stephens Lake	NSC	119043	-	LKWH	29-Sep-22	431	-	1470	-	-
Stephens Lake	NSC	119033	-	LKWH	2-Oct-22	419	-	1100	-	-
Stephens Lake	NSC	119028	-	LKWH	2-Oct-22	465	-	1600	-	-
Stephens Lake	NSC	119027	-	LKWH	3-Oct-22	497	-	1840	-	-
Stephens Lake	NSC	119016	-	LKWH	3-Oct-22	413	-	1040	-	-
Stephens Lake	NSC	119006	-	LKWH	3-Oct-22	300	-	380	-	-
Stephens Lake	NSC	122215	-	LKWH	5-Oct-22	431	-	1150	-	-
Stephens Lake	NSC	122212	-	LKWH	5-Oct-22	329	-	600	-	-
Stephens Lake	NSC	122211	-	LKWH	5-Oct-22	338	-	580	-	-
Stephens Lake	NSC	122208	-	LKWH	5-Oct-22	484	-	2020	-	-
Stephens Lake	NSC	122205	-	LKWH	6-Oct-22	401	-	1050	-	-
Stephens Lake	NSC	122204	-	LKWH	6-Oct-22	423	-	1270	-	-
Stephens Lake	NSC	121574	-	LKWH	8-Oct-22	450	-	1500	-	-
Stephens Lake	NSC	121573	-	LKWH	8-Oct-22	472	-	1860	-	-
Stephens Lake	NSC	121569	-	LKWH	8-Oct-22	418	-	1040	-	-
Stephens Lake	NSC	121568	-	LKWH	8-Oct-22	504	-	2100	F	3
Stephens Lake	NSC	121567	-	LKWH	8-Oct-22	480	-	1800	-	-
Stephens Lake	NSC	121566	-	LKWH	8-Oct-22	555	-	2950	-	-



**Table A1-1: Tagging and biological data for Lake Whitefish (LKWH) captured in the Keeyask reservoir and Stephens Lake in 2022 (continued).**

Location	Prefix	Floy-Tag Number	PIT Tag Number	Species	Date Tagged	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Stephens Lake	NSC	121558	-	LKWH	9-Oct-22	405	-	920	-	-
Stephens Lake	NSC	121557	-	LKWH	9-Oct-22	468	-	1600	-	-
Stephens Lake	NSC	121556	-	LKWH	9-Oct-22	403	-	1100	-	-
Stephens Lake	NSC	121554	-	LKWH	9-Oct-22	434	-	1130	M	8
Stephens Lake	NSC	121553	-	LKWH	9-Oct-22	417	-	1150	-	-
Stephens Lake	NSC	121552	-	LKWH	9-Oct-22	495	-	2620	-	-
Stephens Lake	NSC	121551	-	LKWH	9-Oct-22	469	-	2030	-	-
Keeyask reservoir	NSC	121578	-	LKWH	10-Oct-22	460	-	1700	-	-
Keeyask reservoir	NSC	121580	-	LKWH	10-Oct-22	510	-	2620	-	-

**Table A1-2: Tagging and biological data for Northern Pike (NRPK) captured in the Keeyask reservoir and Stephens Lake in 2022.**

Location	Prefix	Floy-Tag Number	PIT Tag Number	Species	Date Tagged	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Keeyask reservoir	NSC	84262	-	NRPK	27-May-22	620	-	1920	-	-
Keeyask reservoir	NSC	84264	-	NRPK	27-May-22	690	-	2650	-	-
Keeyask reservoir	NSC	84265	-	NRPK	27-May-22	452	-	690	M	7
Keeyask reservoir	NSC	84266	-	NRPK	27-May-22	519	-	870	-	-
Keeyask reservoir	NSC	84267	-	NRPK	27-May-22	496	-	1030	-	-
Keeyask reservoir	NSC	84269	-	NRPK	28-May-22	518	-	1130	-	-
Keeyask reservoir	NSC	84270	-	NRPK	28-May-22	513	-	1070	M	8
Keeyask reservoir	NSC	84272	-	NRPK	28-May-22	528	-	1380	-	-
Keeyask reservoir	NSC	84273	-	NRPK	28-May-22	510	-	1040	M	8
Keeyask reservoir	NSC	84274	-	NRPK	28-May-22	558	-	1270	-	-
Keeyask reservoir	NSC	120244	-	NRPK	28-May-22	820	-	-	F	3
Keeyask reservoir	NSC	120245	-	NRPK	28-May-22	527	-	1080	F	3
Keeyask reservoir	NSC	120246	-	NRPK	28-May-22	443	-	650	-	-
Keeyask reservoir	NSC	120247	-	NRPK	28-May-22	463	-	720	-	-
Stephens Lake	NSC	120248	-	NRPK	29-May-22	685	-	2300	-	-
Stephens Lake	NSC	113701	-	NRPK	29-May-22	505	-	875	M	7
Stephens Lake	NSC	113702	-	NRPK	29-May-22	396	-	480	M	8
Stephens Lake	NSC	113703	-	NRPK	29-May-22	471	-	730	M	8
Stephens Lake	NSC	113705	-	NRPK	29-May-22	857	-	-	F	3
Stephens Lake	NSC	113706	-	NRPK	29-May-22	616	-	2100	-	-
Stephens Lake	NSC	113175	-	NRPK	29-May-22	510	-	860	-	-
Stephens Lake	NSC	113172	-	NRPK	29-May-22	434	-	550	M	8
Stephens Lake	NSC	113168	-	NRPK	29-May-22	489	-	750	-	-
Stephens Lake	NSC	117800	-	NRPK	29-May-22	560	-	1100	-	-
Keeyask reservoir	NSC	117797	-	NRPK	31-May-22	476	-	750	M	8
Keeyask reservoir	NSC	117796	-	NRPK	31-May-22	556	-	1300	-	-

**Table A1-2: Tagging and biological data for Northern Pike (NRPK) captured in the Keeyask reservoir and Stephens Lake in 2022 (continued).**

Location	Prefix	Floy-Tag Number	PIT Tag Number	Species	Date Tagged	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Keeyask reservoir	NSC	117790	-	NRPK	31-May-22	594	-	1650	M	8
Keeyask reservoir	NSC	117791	-	NRPK	2-Jun-22	658	-	2200	F	3
Keeyask reservoir	NSC	117792	-	NRPK	2-Jun-22	520	-	1000	M	8
Keeyask reservoir	NSC	117793	-	NRPK	2-Jun-22	449	-	650	-	-
Keeyask reservoir	NSC	117794	-	NRPK	3-Jun-22	556	-	1000	F	3
Keeyask reservoir	NSC	115175	-	NRPK	3-Jun-22	608	-	-	M	8
Keeyask reservoir	NSC	115172	-	NRPK	4-Jun-22	615	-	1800	-	-
Keeyask reservoir	NSC	115174	-	NRPK	4-Jun-22	435	-	650	M	8
Keeyask reservoir	NSC	115173	-	NRPK	4-Jun-22	469	-	760	-	-
Keeyask reservoir	NSC	55266	-	NRPK	4-Jun-22	-	-	-	-	-
Keeyask reservoir	NSC	115171	-	NRPK	4-Jun-22	515	-	1250	-	-
Keeyask reservoir	NSC	115170	-	NRPK	4-Jun-22	445	-	700	-	-
Keeyask reservoir	NSC	115169	-	NRPK	4-Jun-22	447	-	750	-	-
Keeyask reservoir	NSC	115168	-	NRPK	4-Jun-22	630	-	2450	-	-
Keeyask reservoir	NSC	115167	-	NRPK	4-Jun-22	630	-	2300	-	-
Keeyask reservoir	NSC	115166	-	NRPK	4-Jun-22	795	-	-	-	-
Keeyask reservoir	NSC	117986	-	NRPK	4-Jun-22	660	-	-	-	-
Keeyask reservoir	NSC	117987	-	NRPK	4-Jun-22	823	-	-	-	-
Keeyask reservoir	NSC	117988	-	NRPK	4-Jun-22	743	-	-	-	-
Keeyask reservoir	NSC	117989	-	NRPK	4-Jun-22	640	-	2100	-	-
Keeyask reservoir	NSC	117990	-	NRPK	4-Jun-22	555	-	1550	-	-
Keeyask reservoir	NSC	117991	-	NRPK	5-Jun-22	372	-	400	-	-
Keeyask reservoir	NSC	117992	-	NRPK	5-Jun-22	576	-	1430	M	8
Keeyask reservoir	NSC	117993	-	NRPK	5-Jun-22	360	-	350	-	-
Keeyask reservoir	NSC	117994	-	NRPK	5-Jun-22	497	-	900	M	8

**Table A1-2: Tagging and biological data for Northern Pike (NRPK) captured in the Keeyask reservoir and Stephens Lake in 2022 (continued).**

Location	Prefix	Floy-Tag Number	PIT Tag Number	Species	Date Tagged	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Keeyask reservoir	NSC	117995	-	NRPK	5-Jun-22	350	-	300	-	-
Keeyask reservoir	NSC	117324	-	NRPK	5-Jun-22	645	-	1900	-	-
Keeyask reservoir	NSC	117997	-	NRPK	5-Jun-22	890	-	-	-	-
Keeyask reservoir	NSC	117999	-	NRPK	5-Jun-22	490	-	950	-	-
Keeyask reservoir	NSC	118000	-	NRPK	5-Jun-22	608	-	1750	M	8
Keeyask reservoir	NSC	108452	-	NRPK	6-Jun-22	528	-	1200	-	-
Keeyask reservoir	NSC	108453	-	NRPK	6-Jun-22	454	-	600	M	8
Keeyask reservoir	NSC	108454	-	NRPK	6-Jun-22	487	-	850	-	-
Keeyask reservoir	NSC	108455	-	NRPK	6-Jun-22	830	-	-	F	3
Keeyask reservoir	NSC	108457	-	NRPK	6-Jun-22	377	-	400	M	8
Keeyask reservoir	NSC	108458	-	NRPK	6-Jun-22	334	-	400	-	-
Keeyask reservoir	NSC	108459	-	NRPK	6-Jun-22	363	-	375	-	-
Keeyask reservoir	NSC	108460	-	NRPK	6-Jun-22	537	-	1300	-	-
Keeyask reservoir	NSC	108461	-	NRPK	6-Jun-22	703	-	3200	-	-
Keeyask reservoir	NSC	111416	-	NRPK	7-Jun-22	305	-	210	-	-
Keeyask reservoir	NSC	111417	-	NRPK	7-Jun-22	895	-	-	-	-
Keeyask reservoir	NSC	111418	-	NRPK	8-Jun-22	312	-	210	-	-
Keeyask reservoir	NSC	111419	-	NRPK	8-Jun-22	310	-	200	-	-
Keeyask reservoir	NSC	111420	-	NRPK	8-Jun-22	963	-	-	-	-
Keeyask reservoir	NSC	107965	-	NRPK	8-Jun-22	292	-	190	-	-
Keeyask reservoir	NSC	107969	-	NRPK	9-Jun-22	384	-	400	-	-
Keeyask reservoir	NSC	107974	-	NRPK	9-Jun-22	513	-	790	-	-
Keeyask reservoir	NSC	107975	-	NRPK	10-Jun-22	471	-	700	-	-
Keeyask reservoir	NSC	119526	-	NRPK	10-Jun-22	595	-	1500	M	8
Keeyask reservoir	NSC	119527	-	NRPK	10-Jun-22	665	-	2300	-	-

**Table A1-2: Tagging and biological data for Northern Pike (NRPK) captured in the Keeyask reservoir and Stephens Lake in 2022 (continued).**

Location	Prefix	Floy-Tag Number	PIT Tag Number	Species	Date Tagged	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Keeyask reservoir	NSC	119528	-	NRPK	10-Jun-22	490	-	-	-	-
Keeyask reservoir	NSC	55266	-	NRPK	27-May-22	505	-	1000	-	-
Keeyask reservoir	NSC	55265	-	NRPK	27-May-22	790	-	5500	-	-
Keeyask reservoir	NSC	55264	-	NRPK	27-May-22	409	-	600	-	-
Keeyask reservoir	NSC	55263	-	NRPK	28-May-22	503	-	1100	-	-
Keeyask reservoir	NSC	55262	-	NRPK	28-May-22	276	-	325	-	-
Keeyask reservoir	NSC	55261	-	NRPK	28-May-22	627	-	2150	F	3
Keeyask reservoir	NSC	55260	-	NRPK	28-May-22	602	-	2075	-	-
Keeyask reservoir	NSC	55259	-	NRPK	28-May-22	511	-	650	-	-
Keeyask reservoir	NSC	55258	-	NRPK	28-May-22	455	-	800	M	7
Keeyask reservoir	NSC	55257	-	NRPK	28-May-22	664	-	2450	M	7
Keeyask reservoir	NSC	55256	-	NRPK	28-May-22	570	-	1900	-	-
Stephens Lake	NSC	55255	-	NRPK	29-May-22	469	-	680	M	8
Stephens Lake	NSC	55254	-	NRPK	29-May-22	565	-	1300	-	-
Stephens Lake	NSC	55253	-	NRPK	29-May-22	452	-	-	-	-
Stephens Lake	NSC	124480	-	NRPK	29-May-22	470	-	800	M	8
Stephens Lake	NSC	124481	-	NRPK	29-May-22	461	-	700	M	7
Stephens Lake	NSC	124482	-	NRPK	29-May-22	730	-	3200	-	-
Stephens Lake	NSC	124484	-	NRPK	29-May-22	454	-	550	-	-
Stephens Lake	NSC	124486	-	NRPK	29-May-22	525	-	950	M	8
Stephens Lake	NSC	124487	-	NRPK	29-May-22	649	-	1800	-	-
Stephens Lake	NSC	124488	-	NRPK	29-May-22	328	-	300	-	-
Stephens Lake	NSC	124494	-	NRPK	31-May-22	590	-	1250	-	-
Stephens Lake	NSC	124495	-	NRPK	31-May-22	501	-	815	-	-
Stephens Lake	NSC	124497	-	NRPK	31-May-22	912	-	-	-	-

**Table A1-2: Tagging and biological data for Northern Pike (NRPK) captured in the Keeyask reservoir and Stephens Lake in 2022 (continued).**

Location	Prefix	Floy-Tag Number	PIT Tag Number	Species	Date Tagged	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Stephens Lake	NSC	124498	-	NRPK	31-May-22	721	-	2325	F	2
Stephens Lake	NSC	124499	-	NRPK	31-May-22	688	-	2325	F	4
Stephens Lake	NSC	124500	-	NRPK	31-May-22	508	-	975	-	-
Stephens Lake	NSC	123976	-	NRPK	31-May-22	417	-	550	-	-
Stephens Lake	NSC	123977	-	NRPK	31-May-22	815	-	5200	-	-
Stephens Lake	NSC	123978	-	NRPK	31-May-22	870	-	-	M	7
Stephens Lake	NSC	123979	-	NRPK	31-May-22	911	-	-	F	3
Stephens Lake	NSC	123980	-	NRPK	31-May-22	930	-	-	F	3
Stephens Lake	NSC	123982	-	NRPK	31-May-22	482	-	700	-	-
Stephens Lake	NSC	123984	-	NRPK	2-Jun-22	422	-	500	M	8
Stephens Lake	NSC	123985	-	NRPK	2-Jun-22	490	-	650	-	-
Stephens Lake	NSC	123986	-	NRPK	2-Jun-22	576	-	1100	-	-
Stephens Lake	NSC	123987	-	NRPK	2-Jun-22	831	-	4200	-	-
Stephens Lake	NSC	123991	-	NRPK	2-Jun-22	391	-	300	-	-
Stephens Lake	NSC	123992	-	NRPK	2-Jun-22	420	-	500	-	-
Stephens Lake	NSC	123993	-	NRPK	2-Jun-22	629	-	1750	-	-
Stephens Lake	NSC	123995	-	NRPK	2-Jun-22	878	-	5500	-	-
Stephens Lake	NSC	123999	-	NRPK	2-Jun-22	483	-	650	-	-
Stephens Lake	NSC	123975	-	NRPK	2-Jun-22	846	-	5500	-	-
Stephens Lake	NSC	123973	-	NRPK	3-Jun-22	590	-	1420	-	-
Stephens Lake	NSC	123972	-	NRPK	3-Jun-22	781	-	3740	-	-
Stephens Lake	NSC	123971	-	NRPK	3-Jun-22	983	-	-	-	-
Stephens Lake	NSC	123970	-	NRPK	3-Jun-22	609	-	1420	-	-
Stephens Lake	NSC	123965	-	NRPK	3-Jun-22	535	-	1220	F	3
Stephens Lake	NSC	123964	-	NRPK	3-Jun-22	492	-	640	-	-

**Table A1-2: Tagging and biological data for Northern Pike (NRPK) captured in the Keeyask reservoir and Stephens Lake in 2022 (continued).**

Location	Prefix	Floy-Tag Number	PIT Tag Number	Species	Date Tagged	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Stephens Lake	NSC	123962	-	NRPK	3-Jun-22	426	-	580	-	-
Stephens Lake	NSC	123961	-	NRPK	3-Jun-22	430	-	420	-	-
Stephens Lake	NSC	123960	-	NRPK	3-Jun-22	469	-	680	-	-
Stephens Lake	NSC	123958	-	NRPK	3-Jun-22	825	-	4520	-	-
Stephens Lake	NSC	123956	-	NRPK	3-Jun-22	620	-	1460	-	-
Stephens Lake	NSC	123955	-	NRPK	3-Jun-22	771	-	3240	-	-
Stephens Lake	NSC	123954	-	NRPK	3-Jun-22	474	-	700	-	-
Keeyask reservoir	NSC	123953	-	NRPK	4-Jun-22	318	-	240	-	-
Keeyask reservoir	NSC	123952	-	NRPK	4-Jun-22	300	-	160	-	-
Keeyask reservoir	NSC	123951	-	NRPK	4-Jun-22	708	-	2340	F	3
Keeyask reservoir	NSC	124151	-	NRPK	4-Jun-22	805	-	4200	-	-
Keeyask reservoir	NSC	124152	-	NRPK	4-Jun-22	539	-	1040	-	-
Keeyask reservoir	NSC	124155	-	NRPK	4-Jun-22	344	-	280	-	-
Keeyask reservoir	NSC	124156	-	NRPK	4-Jun-22	485	-	840	-	-
Keeyask reservoir	NSC	124157	-	NRPK	4-Jun-22	450	-	640	-	-
Keeyask reservoir	NSC	124158	-	NRPK	4-Jun-22	410	-	460	-	-
Keeyask reservoir	NSC	124159	-	NRPK	4-Jun-22	452	-	560	-	-
Keeyask reservoir	NSC	124160	-	NRPK	4-Jun-22	354	-	320	-	-
Keeyask reservoir	NSC	124161	-	NRPK	4-Jun-22	342	-	220	-	-
Keeyask reservoir	NSC	124162	-	NRPK	4-Jun-22	622	-	1740	-	-
Keeyask reservoir	NSC	124163	-	NRPK	4-Jun-22	571	-	1560	-	-
Keeyask reservoir	NSC	124166	-	NRPK	4-Jun-22	504	-	1040	M	8
Keeyask reservoir	NSC	124167	-	NRPK	4-Jun-22	524	-	1220	-	-
Keeyask reservoir	NSC	124168	-	NRPK	4-Jun-22	550	-	1560	-	-
Keeyask reservoir	NSC	121521	-	NRPK	4-Jun-22	985	-	-	-	-

**Table A1-2: Tagging and biological data for Northern Pike (NRPK) captured in the Keeyask reservoir and Stephens Lake in 2022 (continued).**

Location	Prefix	Floy-Tag Number	PIT Tag Number	Species	Date Tagged	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Keeyask reservoir	NSC	124173	-	NRPK	5-Jun-22	286	-	-	-	-
Keeyask reservoir	NSC	124174	-	NRPK	5-Jun-22	630	-	-	-	-
Keeyask reservoir	NSC	124175	-	NRPK	5-Jun-22	431	-	-	-	-
Keeyask reservoir	NSC	124178	-	NRPK	5-Jun-22	317	-	-	-	-
Keeyask reservoir	NSC	124179	-	NRPK	5-Jun-22	510	-	-	M	8
Keeyask reservoir	NSC	124180	-	NRPK	5-Jun-22	545	-	-	-	-
Keeyask reservoir	NSC	124181	-	NRPK	5-Jun-22	575	-	-	M	8
Keeyask reservoir	NSC	124184	-	NRPK	5-Jun-22	596	-	-	-	-
Keeyask reservoir	NSC	124185	-	NRPK	5-Jun-22	600	-	-	-	-
Keeyask reservoir	NSC	124186	-	NRPK	5-Jun-22	480	-	-	M	8
Keeyask reservoir	NSC	124187	-	NRPK	6-Jun-22	487	-	820	-	-
Keeyask reservoir	NSC	124188	-	NRPK	6-Jun-22	499	-	780	-	-
Keeyask reservoir	NSC	124189	-	NRPK	6-Jun-22	515	-	800	-	-
Keeyask reservoir	NSC	124191	-	NRPK	6-Jun-22	380	-	280	M	8
Keeyask reservoir	NSC	124192	-	NRPK	6-Jun-22	326	-	120	-	-
Keeyask reservoir	NSC	124194	-	NRPK	6-Jun-22	520	-	800	-	-
Keeyask reservoir	NSC	124195	-	NRPK	6-Jun-22	546	-	1180	M	8
Keeyask reservoir	NSC	124197	-	NRPK	6-Jun-22	472	-	780	M	8
Keeyask reservoir	NSC	124196	-	NRPK	6-Jun-22	581	-	1520	M	8
Keeyask reservoir	NSC	124198	-	NRPK	6-Jun-22	496	-	900	-	-
Keeyask reservoir	NSC	124199	-	NRPK	6-Jun-22	515	-	1960	-	-
Keeyask reservoir	NSC	124200	-	NRPK	6-Jun-22	722	-	2560	-	-
Keeyask reservoir	NSC	123876	-	NRPK	7-Jun-22	292	-	180	-	-
Keeyask reservoir	NSC	123877	-	NRPK	7-Jun-22	518	-	1060	-	-
Keeyask reservoir	NSC	123878	-	NRPK	7-Jun-22	521	-	980	-	-



**Table A1-2: Tagging and biological data for Northern Pike (NRPK) captured in the Keeyask reservoir and Stephens Lake in 2022 (continued).**

Location	Prefix	Floy-Tag Number	PIT Tag Number	Species	Date Tagged	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Keeyask reservoir	NSC	123879	-	NRPK	7-Jun-22	915	-	-	-	-
Keeyask reservoir	NSC	123880	-	NRPK	7-Jun-22	303	-	180	-	-
Keeyask reservoir	NSC	123882	-	NRPK	8-Jun-22	350	-	-	-	-
Keeyask reservoir	NSC	123883	-	NRPK	8-Jun-22	488	-	-	-	-
Keeyask reservoir	NSC	123884	-	NRPK	8-Jun-22	489	-	-	-	-
Keeyask reservoir	NSC	123885	-	NRPK	8-Jun-22	540	-	-	-	-
Keeyask reservoir	NSC	123886	-	NRPK	8-Jun-22	519	-	-	-	-
Keeyask reservoir	NSC	123887	-	NRPK	8-Jun-22	623	-	-	-	-
Keeyask reservoir	NSC	122864	-	NRPK	9-Jun-22	551	-	-	-	-
Keeyask reservoir	NSC	122863	-	NRPK	9-Jun-22	620	-	-	-	-
Keeyask reservoir	NSC	122862	-	NRPK	9-Jun-22	447	-	-	-	-
Keeyask reservoir	NSC	122855	-	NRPK	9-Jun-22	545	-	-	-	-
Keeyask reservoir	NSC	122854	-	NRPK	9-Jun-22	539	-	-	-	-
Keeyask reservoir	NSC	122853	-	NRPK	9-Jun-22	284	-	-	-	-
Keeyask reservoir	NSC	123902	-	NRPK	9-Jun-22	445	-	-	-	-
Keeyask reservoir	NSC	123903	-	NRPK	9-Jun-22	815	-	-	-	-
Keeyask reservoir	NSC	123904	-	NRPK	9-Jun-22	570	-	-	-	-
Keeyask reservoir	NSC	123905	-	NRPK	9-Jun-22	430	-	-	-	-
Keeyask reservoir	NSC	123906	-	NRPK	9-Jun-22	523	-	-	-	-
Keeyask reservoir	NSC	123907	-	NRPK	9-Jun-22	319	-	-	-	-
Keeyask reservoir	NSC	123918	-	NRPK	10-Jun-22	277	-	-	-	-
Keeyask reservoir	NSC	123919	-	NRPK	10-Jun-22	493	-	-	-	-
Stephens Lake	NSC	117344	-	NRPK	27-May-22	419	-	560	-	-
Stephens Lake	NSC	117338	-	NRPK	27-May-22	615	-	1740	-	-
Stephens Lake	NSC	122983	-	NRPK	27-May-22	297	-	140	-	-

**Table A1-2: Tagging and biological data for Northern Pike (NRPK) captured in the Keeyask reservoir and Stephens Lake in 2022 (continued).**

Location	Prefix	Floy-Tag Number	PIT Tag Number	Species	Date Tagged	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Keeyask reservoir	NSC	122985	-	NRPK	28-May-22	506	-	980	-	-
Keeyask reservoir	NSC	122986	-	NRPK	28-May-22	415	-	220	-	-
Keeyask reservoir	NSC	122987	-	NRPK	28-May-22	752	-	2080	-	-
Keeyask reservoir	NSC	122988	-	NRPK	28-May-22	644	-	1940	-	-
Keeyask reservoir	NSC	122989	-	NRPK	28-May-22	714	-	2260	-	-
Keeyask reservoir	NSC	122990	-	NRPK	28-May-22	710	-	1540	-	-
Keeyask reservoir	NSC	122991	-	NRPK	28-May-22	823	-	2440	-	-
Keeyask reservoir	NSC	122993	-	NRPK	28-May-22	682	-	1300	-	-
Keeyask reservoir	NSC	122994	-	NRPK	28-May-22	800	-	1960	F	3
Keeyask reservoir	NSC	122995	-	NRPK	28-May-22	900	-	2640	-	-
Keeyask reservoir	NSC	122996	-	NRPK	29-May-22	620	-	960	-	-
Keeyask reservoir	NSC	122997	-	NRPK	29-May-22	689	-	1120	-	-
Keeyask reservoir	NSC	122999	-	NRPK	29-May-22	564	-	640	-	-
Keeyask reservoir	NSC	123000	-	NRPK	29-May-22	570	-	980	F	3
Keeyask reservoir	NSC	122272	-	NRPK	29-May-22	920	-	5000	-	-
Keeyask reservoir	NSC	122874	-	NRPK	29-May-22	1155	-	5380	-	-
Keeyask reservoir	NSC	122869	-	NRPK	29-May-22	544	-	1100	-	-
Keeyask reservoir	NSC	122868	-	NRPK	29-May-22	327	-	280	-	-
Stephens Lake	NSC	122801	-	NRPK	9-Jun-22	507	-	1000	-	-
Stephens Lake	NSC	122802	-	NRPK	9-Jun-22	424	-	500	-	-
Stephens Lake	NSC	122803	-	NRPK	9-Jun-22	488	-	600	-	-
Stephens Lake	NSC	122813	-	NRPK	9-Jun-22	490	-	625	-	-
Stephens Lake	NSC	122814	-	NRPK	9-Jun-22	440	-	600	-	-
Stephens Lake	NSC	122812	-	NRPK	9-Jun-22	434	-	600	-	-
Stephens Lake	NSC	122815	-	NRPK	9-Jun-22	304	-	210	-	-

**Table A1-2: Tagging and biological data for Northern Pike (NRPK) captured in the Keeyask reservoir and Stephens Lake in 2022 (continued).**

Location	Prefix	Floy-Tag Number	PIT Tag Number	Species	Date Tagged	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Stephens Lake	NSC	118641	-	NRPK	28-Sep-22	544	-	1020	-	-
Stephens Lake	NSC	118647	-	NRPK	28-Sep-22	987	-	-	-	-
Stephens Lake	NSC	118643	-	NRPK	28-Sep-22	454	-	600	-	-
Stephens Lake	NSC	93850	-	NRPK	28-Sep-22	562	-	1020	-	-
Stephens Lake	NSC	93849	-	NRPK	28-Sep-22	564	-	1450	-	-
Stephens Lake	NSC	93848	-	NRPK	28-Sep-22	580	-	1140	-	-
Stephens Lake	NSC	93847	-	NRPK	28-Sep-22	810	-	-	-	-
Stephens Lake	NSC	93843	-	NRPK	28-Sep-22	870	-	5700	-	-
Stephens Lake	NSC	93842	-	NRPK	28-Sep-22	554	-	970	-	-
Stephens Lake	NSC	93841	-	NRPK	28-Sep-22	463	-	580	-	-
Stephens Lake	NSC	93840	-	NRPK	28-Sep-22	550	-	1130	-	-
Stephens Lake	NSC	93839	-	NRPK	28-Sep-22	590	-	1220	-	-
Stephens Lake	NSC	93838	-	NRPK	28-Sep-22	817	-	5200	-	-
Keeyask reservoir	NSC	93837	-	NRPK	29-Sep-22	540	-	1320	-	-
Keeyask reservoir	NSC	118650	-	NRPK	29-Sep-22	563	-	1190	-	-
Keeyask reservoir	NSC	122681	-	NRPK	29-Sep-22	539	-	1200	-	-
Keeyask reservoir	NSC	122682	-	NRPK	29-Sep-22	484	-	830	-	-
Keeyask reservoir	NSC	122687	-	NRPK	30-Sep-22	690	-	2550	-	-
Keeyask reservoir	NSC	122688	-	NRPK	30-Sep-22	515	-	1030	-	-
Keeyask reservoir	NSC	122689	-	NRPK	30-Sep-22	870	-	5000	-	-
Keeyask reservoir	NSC	122695	-	NRPK	30-Sep-22	492	-	870	-	-
Keeyask reservoir	NSC	122696	-	NRPK	30-Sep-22	511	-	1100	-	-
Keeyask reservoir	NSC	122697	-	NRPK	30-Sep-22	557	-	1600	-	-
Keeyask reservoir	NSC	122698	-	NRPK	30-Sep-22	564	-	1660	-	-
Keeyask reservoir	NSC	122699	-	NRPK	30-Sep-22	676	-	2480	-	-

**Table A1-2: Tagging and biological data for Northern Pike (NRPK) captured in the Keeyask reservoir and Stephens Lake in 2022 (continued).**

Location	Prefix	Floy-Tag Number	PIT Tag Number	Species	Date Tagged	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Keeyask reservoir	NSC	122700	-	NRPK	30-Sep-22	860	-	5200	-	-
Keeyask reservoir	NSC	122685	-	NRPK	30-Sep-22	693	-	2800	-	-
Keeyask reservoir	NSC	102101	-	NRPK	30-Sep-22	681	-	2650	-	-
Keeyask reservoir	NSC	102106	-	NRPK	30-Sep-22	636	-	2070	-	-
Keeyask reservoir	NSC	102107	-	NRPK	30-Sep-22	523	-	1110	-	-
Keeyask reservoir	NSC	102108	-	NRPK	30-Sep-22	584	-	1980	-	-
Keeyask reservoir	NSC	102109	-	NRPK	30-Sep-22	647	-	2190	-	-
Keeyask reservoir	NSC	102114	-	NRPK	30-Sep-22	624	-	2330	-	-
Keeyask reservoir	NSC	102115	-	NRPK	30-Sep-22	512	-	1160	-	-
Keeyask reservoir	NSC	102116	-	NRPK	30-Sep-22	765	-	3750	-	-
Keeyask reservoir	NSC	102117	-	NRPK	30-Sep-22	860	-	4055	-	-
Keeyask reservoir	NSC	102118	-	NRPK	30-Sep-22	463	-	800	-	-
Keeyask reservoir	NSC	102119	-	NRPK	30-Sep-22	453	-	660	-	-
Keeyask reservoir	NSC	102120	-	NRPK	30-Sep-22	718	-	2710	-	-
Keeyask reservoir	NSC	102122	-	NRPK	30-Sep-22	440	-	570	-	-
Keeyask reservoir	NSC	102123	-	NRPK	30-Sep-22	577	-	1700	-	-
Keeyask reservoir	NSC	102124	-	NRPK	30-Sep-22	659	-	2340	-	-
Keeyask reservoir	NSC	102125	-	NRPK	30-Sep-22	720	-	2580	-	-
Keeyask reservoir	NSC	102126	-	NRPK	30-Sep-22	512	-	870	-	-
Stephens Lake	NSC	123975	-	NRPK	2-Oct-22	846	-	5050	-	-
Stephens Lake	NSC	117978	-	NRPK	2-Oct-22	872	-	6050	-	-
Stephens Lake	NSC	102128	-	NRPK	2-Oct-22	685	-	2900	-	-
Stephens Lake	NSC	102130	-	NRPK	2-Oct-22	863	-	4800	-	-
Stephens Lake	NSC	102131	-	NRPK	2-Oct-22	859	-	5600	-	-
Stephens Lake	NSC	102132	-	NRPK	2-Oct-22	822	-	4800	-	-

**Table A1-2: Tagging and biological data for Northern Pike (NRPK) captured in the Keeyask reservoir and Stephens Lake in 2022 (continued).**

Location	Prefix	Floy-Tag Number	PIT Tag Number	Species	Date Tagged	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Stephens Lake	NSC	102133	-	NRPK	2-Oct-22	511	-	880	-	-
Stephens Lake	NSC	102138	-	NRPK	3-Oct-22	381	-	340	-	-
Keeyask reservoir	NSC	102142	-	NRPK	4-Oct-22	343	-	300	-	-
Keeyask reservoir	NSC	122260	-	NRPK	4-Oct-22	834	-	5300	-	-
Keeyask reservoir	NSC	102145	-	NRPK	4-Oct-22	515	-	980	-	-
Keeyask reservoir	NSC	102146	-	NRPK	4-Oct-22	425	-	550	-	-
Keeyask reservoir	NSC	102147	-	NRPK	4-Oct-22	426	-	600	-	-
Keeyask reservoir	NSC	102148	-	NRPK	4-Oct-22	336	-	320	-	-
Keeyask reservoir	NSC	102149	-	NRPK	4-Oct-22	297	-	240	-	-
Keeyask reservoir	NSC	102150	-	NRPK	4-Oct-22	383	-	470	-	-
Keeyask reservoir	NSC	93808	-	NRPK	4-Oct-22	540	-	1260	-	-
Stephens Lake	NSC	93810	-	NRPK	5-Oct-22	615	-	1750	-	-
Stephens Lake	NSC	93812	-	NRPK	5-Oct-22	893	-	4700	-	-
Stephens Lake	NSC	93813	-	NRPK	5-Oct-22	543	-	1270	-	-
Keeyask reservoir	NSC	118650	-	NRPK	11-Oct-22	563	-	1290	-	-
Keeyask reservoir	NSC	93818	-	NRPK	11-Oct-22	779	-	3250	-	-
Keeyask reservoir	NSC	93819	-	NRPK	11-Oct-22	631	-	2070	-	-
Keeyask reservoir	NSC	93820	-	NRPK	11-Oct-22	733	-	3330	-	-
Keeyask reservoir	NSC	93821	-	NRPK	11-Oct-22	706	-	2910	-	-
Keeyask reservoir	NSC	93822	-	NRPK	11-Oct-22	552	-	1340	-	-
Keeyask reservoir	NSC	93836	-	NRPK	11-Oct-22	500	-	1150	-	-
Keeyask reservoir	NSC	93823	-	NRPK	11-Oct-22	550	-	1360	-	-
Keeyask reservoir	NSC	120897	-	NRPK	11-Oct-22	878	-	5250	-	-
Keeyask reservoir	NSC	120075	-	NRPK	11-Oct-22	494	-	920	-	-
Keeyask reservoir	NSC	119192	-	NRPK	11-Oct-22	662	-	2460	-	-

**Table A1-2: Tagging and biological data for Northern Pike (NRPK) captured in the Keeyask reservoir and Stephens Lake in 2022 (continued).**

Location	Prefix	Floy-Tag Number	PIT Tag Number	Species	Date Tagged	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Keeyask reservoir	NSC	114476	-	NRPK	11-Oct-22	741	-	3650	-	-
Keeyask reservoir	NSC	114480	-	NRPK	11-Oct-22	460	-	760	-	-
Keeyask reservoir	NSC	114482	-	NRPK	11-Oct-22	590	-	1500	-	-
Stephens Lake	NSC	119047	-	NRPK	29-Sep-22	484	-	640	-	-
Stephens Lake	NSC	119046	-	NRPK	29-Sep-22	609	-	2020	-	-
Stephens Lake	NSC	119045	-	NRPK	29-Sep-22	580	-	1160	-	-
Keeyask reservoir	NSC	122993	-	NRPK	30-Sep-22	596	-	1880	-	-
Keeyask reservoir	NSC	119042	-	NRPK	30-Sep-22	559	-	1240	-	-
Keeyask reservoir	NSC	119039	-	NRPK	1-Oct-22	340	-	240	-	-
Keeyask reservoir	NSC	119038	-	NRPK	1-Oct-22	274	-	140	-	-
Keeyask reservoir	NSC	119037	-	NRPK	1-Oct-22	277	-	130	-	-
Keeyask reservoir	NSC	119036	-	NRPK	1-Oct-22	691	-	2500	-	-
Stephens Lake	NSC	119035	-	NRPK	2-Oct-22	514	-	860	-	-
Stephens Lake	NSC	119034	-	NRPK	2-Oct-22	545	-	940	-	-
Stephens Lake	NSC	119032	-	NRPK	2-Oct-22	430	-	440	-	-
Stephens Lake	NSC	119031	-	NRPK	2-Oct-22	501	-	750	-	-
Stephens Lake	NSC	119030	-	NRPK	2-Oct-22	335	-	210	-	-
Stephens Lake	NSC	119029	-	NRPK	2-Oct-22	687	-	2250	-	-
Stephens Lake	NSC	119025	-	NRPK	3-Oct-22	488	-	650	-	-
Stephens Lake	NSC	119024	-	NRPK	3-Oct-22	530	-	1000	-	-
Stephens Lake	NSC	119023	-	NRPK	3-Oct-22	299	-	200	-	-
Stephens Lake	NSC	119022	-	NRPK	3-Oct-22	266	-	120	-	-
Stephens Lake	NSC	119021	-	NRPK	3-Oct-22	320	-	240	-	-
Stephens Lake	NSC	119020	-	NRPK	3-Oct-22	479	-	750	-	-
Stephens Lake	NSC	119019	-	NRPK	3-Oct-22	367	-	260	-	-

**Table A1-2: Tagging and biological data for Northern Pike (NRPK) captured in the Keeyask reservoir and Stephens Lake in 2022 (continued).**

Location	Prefix	Floy-Tag Number	PIT Tag Number	Species	Date Tagged	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Stephens Lake	NSC	119018	-	NRPK	3-Oct-22	524	-	710	-	-
Stephens Lake	NSC	119017	-	NRPK	3-Oct-22	1034	-	-	-	-
Stephens Lake	NSC	119015	-	NRPK	3-Oct-22	520	-	1060	-	-
Stephens Lake	NSC	119014	-	NRPK	3-Oct-22	390	-	420	-	-
Stephens Lake	NSC	119013	-	NRPK	3-Oct-22	349	-	300	-	-
Stephens Lake	NSC	119012	-	NRPK	3-Oct-22	355	-	290	-	-
Stephens Lake	NSC	119011	-	NRPK	3-Oct-22	340	-	250	-	-
Stephens Lake	NSC	119010	-	NRPK	3-Oct-22	357	-	300	-	-
Stephens Lake	NSC	119009	-	NRPK	3-Oct-22	370	-	340	-	-
Stephens Lake	NSC	119008	-	NRPK	3-Oct-22	353	-	270	-	-
Stephens Lake	NSC	119007	-	NRPK	3-Oct-22	345	-	260	-	-
Stephens Lake	NSC	119005	-	NRPK	3-Oct-22	323	-	220	-	-
Stephens Lake	NSC	119004	-	NRPK	3-Oct-22	985	-	-	-	-
Stephens Lake	NSC	119003	-	NRPK	3-Oct-22	360	-	320	-	-
Stephens Lake	NSC	119002	-	NRPK	3-Oct-22	355	-	250	-	-
Stephens Lake	NSC	119001	-	NRPK	4-Oct-22	394	-	350	-	-
Stephens Lake	NSC	122225	-	NRPK	4-Oct-22	561	-	1000	-	-
Stephens Lake	NSC	122224	-	NRPK	4-Oct-22	428	-	440	-	-
Stephens Lake	NSC	118140	-	NRPK	5-Oct-22	881	-	-	-	-
Stephens Lake	NSC	122222	-	NRPK	5-Oct-22	511	-	900	-	-
Stephens Lake	NSC	122221	-	NRPK	5-Oct-22	420	-	550	-	-
Stephens Lake	NSC	122220	-	NRPK	5-Oct-22	356	-	300	-	-
Stephens Lake	NSC	122219	-	NRPK	5-Oct-22	505	-	800	-	-
Stephens Lake	NSC	122218	-	NRPK	5-Oct-22	340	-	290	-	-
Stephens Lake	NSC	116971	-	NRPK	5-Oct-22	846	-	-	-	-

**Table A1-2: Tagging and biological data for Northern Pike (NRPK) captured in the Keeyask reservoir and Stephens Lake in 2022 (continued).**

Location	Prefix	Floy-Tag Number	PIT Tag Number	Species	Date Tagged	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Stephens Lake	NSC	122217	-	NRPK	5-Oct-22	511	-	1010	-	-
Stephens Lake	NSC	122216	-	NRPK	5-Oct-22	602	-	1700	-	-
Stephens Lake	NSC	122214	-	NRPK	5-Oct-22	405	-	360	-	-
Stephens Lake	NSC	122213	-	NRPK	5-Oct-22	440	-	510	-	-
Stephens Lake	NSC	122210	-	NRPK	5-Oct-22	515	-	1000	-	-
Stephens Lake	NSC	122209	-	NRPK	5-Oct-22	465	-	610	-	-
Keeyask reservoir	NSC	102119	-	NRPK	6-Oct-22	-	-	-	-	-
Keeyask reservoir	NSC	122207	-	NRPK	6-Oct-22	625	-	2300	-	-
Keeyask reservoir	NSC	102114	-	NRPK	6-Oct-22	-	-	-	-	-
Stephens Lake	NSC	122203	-	NRPK	6-Oct-22	585	-	1520	-	-
Keeyask reservoir	NSC	122201	-	NRPK	8-Oct-22	458	-	500	-	-
Keeyask reservoir	NSC	121575	-	NRPK	8-Oct-22	594	-	1750	-	-
Stephens Lake	NSC	121572	-	NRPK	8-Oct-22	584	-	1220	-	-
Stephens Lake	NSC	121561	-	NRPK	8-Oct-22	663	-	2200	-	-
Stephens Lake	NSC	121560	-	NRPK	8-Oct-22	842	-	-	-	-
Keeyask reservoir	NSC	121559	-	NRPK	9-Oct-22	383	-	390	-	-
Stephens Lake	NSC	121555	-	NRPK	9-Oct-22	605	-	1570	-	-
Keeyask reservoir	NSC	121577	-	NRPK	10-Oct-22	570	-	1500	-	-
Stephens Lake	NSC	121581	-	NRPK	10-Oct-22	543	-	860	-	-



**Table A1-3: Tagging and biological data for Walleye (WALL) captured in the Keeyask reservoir and Stephens Lake in 2022.**

Location	Prefix	Floy-Tag Number	PIT Tag Number	Species	Date Tagged	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Keeyask reservoir	NSC	84263	-	WALL	27-May-22	401	-	880	-	-
Keeyask reservoir	NSC	84268	-	WALL	27-May-22	454	-	1250	M	8
Keeyask reservoir	NSC	84271	-	WALL	28-May-22	315	-	350	-	-
Keeyask reservoir	NSC	120242	-	WALL	28-May-22	474	-	1150	-	-
Keeyask reservoir	NSC	120243	-	WALL	28-May-22	415	-	860	-	-
Stephens Lake	NSC	120249	-	WALL	29-May-22	320	-	400	-	-
Stephens Lake	NSC	113704	-	WALL	29-May-22	360	-	530	M	8
Stephens Lake	NSC	113171	-	WALL	29-May-22	375	-	550	M	8
Stephens Lake	NSC	113170	-	WALL	29-May-22	470	-	1250	M	8
Stephens Lake	NSC	113169	-	WALL	29-May-22	525	-	1600	-	-
Keeyask reservoir	NSC	117795	-	WALL	3-Jun-22	424	-	-	-	-
Keeyask reservoir	NSC	117996	-	WALL	5-Jun-22	350	-	500	M	8
Keeyask reservoir	NSC	117998	-	WALL	5-Jun-22	325	-	350	-	-
Keeyask reservoir	NSC	108451	-	WALL	6-Jun-22	302	-	300	-	-
Keeyask reservoir	NSC	108456	-	WALL	6-Jun-22	376	-	500	-	-
Keeyask reservoir	NSC	108462	-	WALL	7-Jun-22	461	-	1000	-	-
Keeyask reservoir	NSC	111414	-	WALL	7-Jun-22	397	-	800	-	-
Keeyask reservoir	NSC	111415	-	WALL	7-Jun-22	444	-	1010	-	-
Keeyask reservoir	NSC	111421	-	WALL	8-Jun-22	394	-	600	-	-
Keeyask reservoir	NSC	111422	-	WALL	8-Jun-22	268	-	240	-	-
Keeyask reservoir	NSC	111423	-	WALL	8-Jun-22	393	-	650	-	-
Keeyask reservoir	NSC	111424	-	WALL	8-Jun-22	344	-	400	-	-
Keeyask reservoir	NSC	111425	-	WALL	8-Jun-22	260	-	190	-	-
Keeyask reservoir	NSC	107966	-	WALL	9-Jun-22	462	-	900	-	-
Keeyask reservoir	NSC	107967	-	WALL	9-Jun-22	510	-	1400	-	-
Keeyask reservoir	NSC	107970	-	WALL	9-Jun-22	382	-	650	-	-

**Table A1-3: Tagging and biological data for Walleye (WALL) captured in the Keyyask reservoir and Stephens Lake in 2022 (continued).**

Location	Prefix	Floy-Tag Number	PIT Tag Number	Species	Date Tagged	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Keyyask reservoir	NSC	107971	-	WALL	9-Jun-22	342	-	400	M	8
Keyyask reservoir	NSC	107972	-	WALL	9-Jun-22	352	-	450	M	8
Keyyask reservoir	NSC	107973	-	WALL	9-Jun-22	461	-	1090	-	-
Keyyask reservoir	NSC	119530	-	WALL	10-Jun-22	517	-	1700	-	-
Keyyask reservoir	NSC	119531	-	WALL	10-Jun-22	255	-	150	-	-
Keyyask reservoir	NSC	119532	-	WALL	10-Jun-22	455	-	1000	-	-
Keyyask reservoir	NSC	55267	-	WALL	27-May-22	431	-	1050	-	-
Stephens Lake	NSC	55252	-	WALL	29-May-22	385	-	-	-	-
Stephens Lake	NSC	124477	-	WALL	29-May-22	377	-	-	-	-
Stephens Lake	NSC	124489	-	WALL	29-May-22	429	-	900	-	-
Stephens Lake	NSC	124496	-	WALL	31-May-22	425	-	875	M	8
Stephens Lake	NSC	123981	-	WALL	31-May-22	464	-	1050	-	-
Stephens Lake	NSC	123988	-	WALL	2-Jun-22	370	-	550	-	-
Stephens Lake	NSC	123989	-	WALL	2-Jun-22	415	-	750	-	-
Stephens Lake	NSC	123990	-	WALL	2-Jun-22	390	-	650	M	7
Stephens Lake	NSC	123994	-	WALL	2-Jun-22	449	-	950	-	-
Stephens Lake	NSC	123996	-	WALL	2-Jun-22	377	-	600	-	-
Stephens Lake	NSC	123998	-	WALL	2-Jun-22	380	-	550	-	-
Stephens Lake	NSC	123969	-	WALL	3-Jun-22	418	-	840	M	8
Stephens Lake	NSC	123968	-	WALL	3-Jun-22	414	-	760	-	-
Stephens Lake	NSC	123967	-	WALL	3-Jun-22	457	-	-	-	-
Stephens Lake	NSC	123966	-	WALL	3-Jun-22	389	-	-	-	-
Stephens Lake	NSC	123963	-	WALL	3-Jun-22	350	-	560	M	8
Stephens Lake	NSC	123959	-	WALL	3-Jun-22	333	-	400	-	-
Stephens Lake	NSC	123957	-	WALL	3-Jun-22	449	-	1100	-	-

**Table A1-3: Tagging and biological data for Walleye (WALL) captured in the Keeyask reservoir and Stephens Lake in 2022 (continued).**

Location	Prefix	Floy-Tag Number	PIT Tag Number	Species	Date Tagged	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Keeyask reservoir	NSC	124153	-	WALL	4-Jun-22	297	-	340	-	-
Keeyask reservoir	NSC	124164	-	WALL	4-Jun-22	435	-	760	-	-
Keeyask reservoir	NSC	124165	-	WALL	4-Jun-22	381	-	580	-	-
Keeyask reservoir	NSC	124170	-	WALL	4-Jun-22	452	-	1200	-	-
Keeyask reservoir	NSC	124172	-	WALL	5-Jun-22	379	-	-	-	-
Keeyask reservoir	NSC	124193	-	WALL	6-Jun-22	236	-	120	-	-
Keeyask reservoir	NSC	123889	-	WALL	8-Jun-22	535	-	-	-	-
Keeyask reservoir	NSC	123890	-	WALL	8-Jun-22	358	-	-	-	-
Keeyask reservoir	NSC	123891	-	WALL	8-Jun-22	319	-	-	-	-
Keeyask reservoir	NSC	123892	-	WALL	8-Jun-22	295	-	-	-	-
Keeyask reservoir	NSC	123893	-	WALL	8-Jun-22	215	-	-	-	-
Keeyask reservoir	NSC	123894	-	WALL	8-Jun-22	310	-	-	-	-
Keeyask reservoir	NSC	123895	-	WALL	8-Jun-22	347	-	-	M	8
Keeyask reservoir	NSC	122866	-	WALL	9-Jun-22	389	-	-	-	-
Keeyask reservoir	NSC	122865	-	WALL	9-Jun-22	415	-	-	-	-
Keeyask reservoir	NSC	122861	-	WALL	9-Jun-22	395	-	-	-	-
Keeyask reservoir	NSC	122860	-	WALL	9-Jun-22	309	-	-	-	-
Keeyask reservoir	NSC	122859	-	WALL	9-Jun-22	317	-	-	-	-
Keeyask reservoir	NSC	122858	-	WALL	9-Jun-22	313	-	-	-	-
Keeyask reservoir	NSC	122857	-	WALL	9-Jun-22	446	-	-	-	-
Keeyask reservoir	NSC	122856	-	WALL	9-Jun-22	413	-	-	-	-
Keeyask reservoir	NSC	123901	-	WALL	9-Jun-22	475	-	-	-	-
Keeyask reservoir	NSC	123908	-	WALL	9-Jun-22	492	-	-	-	-
Keeyask reservoir	NSC	123909	-	WALL	9-Jun-22	412	-	-	F	3
Keeyask reservoir	NSC	123910	-	WALL	9-Jun-22	379	-	-	M	8

**Table A1-3: Tagging and biological data for Walleye (WALL) captured in the Keeyask reservoir and Stephens Lake in 2022 (continued).**

Location	Prefix	Floy-Tag Number	PIT Tag Number	Species	Date Tagged	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Keeyask reservoir	NSC	123911	-	WALL	9-Jun-22	387	-	-	-	-
Keeyask reservoir	NSC	123912	-	WALL	9-Jun-22	369	-	-	-	-
Keeyask reservoir	NSC	123913	-	WALL	9-Jun-22	326	-	-	-	-
Keeyask reservoir	NSC	123914	-	WALL	9-Jun-22	409	-	-	-	-
Keeyask reservoir	NSC	123915	-	WALL	9-Jun-22	327	-	-	-	-
Keeyask reservoir	NSC	123916	-	WALL	9-Jun-22	280	-	-	-	-
Keeyask reservoir	NSC	123917	-	WALL	9-Jun-22	437	-	-	-	-
Stephens Lake	NSC	117337	-	WALL	27-May-22	357	-	480	M	8
Stephens Lake	NSC	117339	-	WALL	27-May-22	404	-	760	-	-
Stephens Lake	NSC	117340	-	WALL	27-May-22	323	-	420	M	8
Stephens Lake	NSC	117341	-	WALL	27-May-22	457	-	1160	M	8
Stephens Lake	NSC	117343	-	WALL	27-May-22	254	-	200	-	-
Stephens Lake	NSC	117345	-	WALL	27-May-22	433	-	840	M	8
Stephens Lake	NSC	117342	-	WALL	27-May-22	452	-	980	M	8
Stephens Lake	NSC	117348	-	WALL	27-May-22	467	-	980	M	8
Stephens Lake	NSC	117349	-	WALL	27-May-22	444	-	940	M	8
Stephens Lake	NSC	122977	-	WALL	27-May-22	338	-	440	-	-
Stephens Lake	NSC	122978	-	WALL	27-May-22	365	-	540	M	8
Stephens Lake	NSC	122979	-	WALL	27-May-22	336	-	420	-	-
Stephens Lake	NSC	122980	-	WALL	27-May-22	338	-	480	M	8
Stephens Lake	NSC	122981	-	WALL	27-May-22	404	-	780	M	8
Stephens Lake	NSC	122982	-	WALL	27-May-22	391	-	560	M	8
Keeyask reservoir	NSC	122984	-	WALL	28-May-22	526	-	1620	-	-
Keeyask reservoir	NSC	122998	-	WALL	29-May-22	400	-	740	-	-
Keeyask reservoir	NSC	121627	-	WALL	29-May-22	583	-	1760	M	8

**Table A1-3: Tagging and biological data for Walleye (WALL) captured in the Keeyask reservoir and Stephens Lake in 2022 (continued).**

Location	Prefix	Floy-Tag Number	PIT Tag Number	Species	Date Tagged	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Keeyask reservoir	NSC	122873	-	WALL	29-May-22	467	-	920	-	-
Keeyask reservoir	NSC	122872	-	WALL	29-May-22	452	-	800	M	8
Keeyask reservoir	NSC	122870	-	WALL	29-May-22	425	-	740	M	8
Stephens Lake	NSC	122804	-	WALL	9-Jun-22	372	-	550	M	8
Stephens Lake	NSC	122805	-	WALL	9-Jun-22	328	-	400	-	-
Stephens Lake	NSC	122808	-	WALL	9-Jun-22	314	-	350	-	-
Stephens Lake	NSC	122806	-	WALL	9-Jun-22	378	-	550	M	8
Stephens Lake	NSC	122807	-	WALL	9-Jun-22	415	-	760	-	-
Stephens Lake	NSC	122811	-	WALL	9-Jun-22	364	-	525	-	-
Stephens Lake	NSC	122809	-	WALL	9-Jun-22	484	-	1175	M	8
Stephens Lake	NSC	118646	-	WALL	28-Sep-22	445	-	1000	-	-
Stephens Lake	NSC	118645	-	WALL	28-Sep-22	415	-	720	-	-
Stephens Lake	NSC	118644	-	WALL	28-Sep-22	565	-	2330	-	-
Stephens Lake	NSC	93846	-	WALL	28-Sep-22	245	-	130	-	-
Stephens Lake	NSC	122002	-	WALL	28-Sep-22	335	-	400	-	-
Stephens Lake	NSC	93844	-	WALL	28-Sep-22	361	-	610	-	-
Keeyask reservoir	NSC	118642	-	WALL	29-Sep-22	471	-	990	-	-
Keeyask reservoir	NSC	122676	-	WALL	29-Sep-22	394	-	590	-	-
Keeyask reservoir	NSC	122679	-	WALL	29-Sep-22	519	-	1600	-	-
Keeyask reservoir	NSC	122680	-	WALL	29-Sep-22	461	-	1150	-	-
Keeyask reservoir	NSC	122683	-	WALL	30-Sep-22	435	-	920	-	-
Keeyask reservoir	NSC	122684	-	WALL	30-Sep-22	376	-	620	-	-
Keeyask reservoir	NSC	122686	-	WALL	30-Sep-22	326	-	410	-	-
Keeyask reservoir	NSC	122690	-	WALL	30-Sep-22	390	-	610	-	-
Keeyask reservoir	NSC	122691	-	WALL	30-Sep-22	455	-	1120	-	-

**Table A1-3: Tagging and biological data for Walleye (WALL) captured in the Keeyask reservoir and Stephens Lake in 2022 (continued).**

Location	Prefix	Floy-Tag Number	PIT Tag Number	Species	Date Tagged	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Keeyask reservoir	NSC	122692	-	WALL	30-Sep-22	400	-	660	-	-
Keeyask reservoir	NSC	122693	-	WALL	30-Sep-22	377	-	630	-	-
Keeyask reservoir	NSC	122694	-	WALL	30-Sep-22	520	-	1750	-	-
Keeyask reservoir	NSC	102111	-	WALL	30-Sep-22	435	-	820	-	-
Keeyask reservoir	NSC	102112	-	WALL	30-Sep-22	418	-	770	-	-
Keeyask reservoir	NSC	102113	-	WALL	30-Sep-22	453	-	1060	-	-
Stephens Lake	NSC	102134	-	WALL	3-Oct-22	425	-	760	-	-
Stephens Lake	NSC	102135	-	WALL	3-Oct-22	219	-	100	-	-
Stephens Lake	NSC	102136	-	WALL	3-Oct-22	407	-	820	-	-
Stephens Lake	NSC	102137	-	WALL	3-Oct-22	520	-	1360	-	-
Stephens Lake	NSC	102139	-	WALL	3-Oct-22	380	-	600	-	-
Stephens Lake	NSC	122165	-	WALL	3-Oct-22	399	-	690	-	-
Stephens Lake	NSC	102141	-	WALL	3-Oct-22	433	-	1000	-	-
Stephens Lake	NSC	93811	-	WALL	5-Oct-22	455	-	1130	-	-
Stephens Lake	NSC	93814	-	WALL	5-Oct-22	305	-	430	-	-
Stephens Lake	NSC	93815	-	WALL	5-Oct-22	471	-	1270	-	-
Keeyask reservoir	NSC	93816	-	WALL	6-Oct-22	353	-	540	-	-
Keeyask reservoir	NSC	120898	-	WALL	11-Oct-22	411	-	820	-	-
Keeyask reservoir	NSC	120899	-	WALL	11-Oct-22	305	-	360	-	-
Keeyask reservoir	NSC	120900	-	WALL	11-Oct-22	459	-	1050	-	-
Keeyask reservoir	NSC	120070	-	WALL	11-Oct-22	444	-	1000	-	-
Keeyask reservoir	NSC	120071	-	WALL	11-Oct-22	412	-	800	-	-
Keeyask reservoir	NSC	120072	-	WALL	11-Oct-22	345	-	480	-	-
Keeyask reservoir	NSC	114477	-	WALL	11-Oct-22	510	-	1660	-	-
Keeyask reservoir	NSC	114478	-	WALL	11-Oct-22	415	-	860	-	-

**Table A1-3: Tagging and biological data for Walleye (WALL) captured in the Keeyask reservoir and Stephens Lake in 2022 (continued).**

Location	Prefix	Floy-Tag Number	PIT Tag Number	Species	Date Tagged	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Keeyask reservoir	NSC	114479	-	WALL	11-Oct-22	402	-	710	-	-
Keeyask reservoir	NSC	114481	-	WALL	11-Oct-22	450	-	970	-	-
Keeyask reservoir	NSC	119041	-	WALL	30-Sep-22	490	-	1340	-	-
Keeyask reservoir	NSC	119040	-	WALL	30-Sep-22	457	-	1100	-	-
Stephens Lake	NSC	122223	-	WALL	5-Oct-22	505	-	1530	-	-
Keeyask reservoir	NSC	122202	-	WALL	8-Oct-22	478	-	1290	-	-
Stephens Lake	NSC	121571	-	WALL	8-Oct-22	445	-	970	-	-
Stephens Lake	NSC	121570	-	WALL	8-Oct-22	414	-	770	-	-
Stephens Lake	NSC	121565	-	WALL	8-Oct-22	415	-	920	-	-
Stephens Lake	NSC	121564	-	WALL	8-Oct-22	465	-	1350	-	-
Stephens Lake	NSC	121563	-	WALL	8-Oct-22	424	-	950	-	-
Stephens Lake	NSC	121562	-	WALL	8-Oct-22	454	-	1120	-	-
Keeyask reservoir	NSC	121576	-	WALL	10-Oct-22	458	-	1120	-	-
Keeyask reservoir	NSC	121579	-	WALL	10-Oct-22	495	-	1400	-	-

## **APPENDIX 2: RECAPTURE DATA IN THE KEYYASK STUDY AREA, SPRING AND FALL 2022.**

---

Table A2-1:	Original release date and biological data for Northern Pike recaptured in the Keyyask reservoir, spring and fall 2022. ....	52
Table A2-2:	Original release date and biological data for Northern Pike recaptured in Stephens Lake, spring and fall 2022. ....	53
Table A2-3:	Original release date and biological data for Walleye recaptured in the Keyyask reservoir and Stephens Lake, spring and fall 2022. ....	54



**Table A2-1: Original release date and biological data for Northern Pike recaptured in the Keeyask reservoir, spring and fall 2022.**

Location	Floy-tag #	Date	Fork Length (mm)	Total Length (mm)	Weight (g)	Distance (km)	Days Between Capture
Keeyask reservoir	55266	4-Jun-22	-	-	-	0.1	8
Keeyask reservoir	-	27-May-22	505	-	1000		
			-		-		
Keeyask reservoir	117324	5-Jun-22	645	-	1900	1.0	237
Keeyask reservoir	-	11-Oct-21	650	-	2200		
Keeyask reservoir	121521	4-Jun-22	985	-	-	0.5	362
Keeyask reservoir	-	7-Jun-21	987	-	6800		
Keeyask reservoir	122272	29-May-22	920	-	5000	0.4	362
Keeyask reservoir	-	1-Jun-21	836	-	4500		
Keeyask reservoir	122260	4-Oct-22	834	-	5300	0.7	490
Keeyask reservoir	-	5-Oct-21	814	-	5000		
Keeyask reservoir	-	1-Jun-21	797		3980		
Keeyask reservoir	118650	11-Oct-22	-	-	-	0.0	12
Keeyask reservoir	-	29-Sep-22	563	-	1190		
Keeyask reservoir	122993	30-Sep-22	596	-	1880	0.3	125
Keeyask reservoir	-	28-May-22	682	-	1300		
Keeyask reservoir	102119	6-Oct-22	-	-	-	0.1	6
Keeyask reservoir	-	30-Sep-22	453	-	660		
Keeyask reservoir	102114	6-Oct-22	-	-	-	0.4	6
Keeyask reservoir	-	30-Sep-22	624	-	2330		

**Table A2-2: Original release date and biological data for Northern Pike recaptured in Stephens Lake, spring and fall 2022.**

Location	Floy-tag #	Date	Fork Length (mm)	Total Length (mm)	Weight (g)	Distance (km)	Days Between Capture
Stephens Lake	123975	2-Oct-22	846	-	5050	1.3	122
Stephens Lake	-	2-Jun-22	846	-	5500		
Stephens Lake	117978	2-Oct-22	872	-	6050	1.7	355
Stephens Lake	-	12-Oct-21	805	-	5300		
Stephens Lake	118140	5-Oct-22	881	-	-	0.1	358
Stephens Lake	-	12-Oct-21	835	-	4950		
Stephens Lake	116971	5-Oct-22	846	-	-	0.6	367
Stephens Lake	-	3-Oct-21	803	-	3750		

**Table A2-3: Original release date and biological data for Walleye recaptured in the Keeyask reservoir and Stephens Lake, spring and fall 2022.**

Location	Floy-tag #	Date	Fork Length (mm)	Total Length (mm)	Weight (g)	Distance (km)	Days Between Capture
Keeyask reservoir	121627	29-May-22	583	-	1760	0.3	358
Keeyask reservoir	-	5-Jun-21	431	-	1000		
Stephens Lake	122002	28-Sep-22	335	-	400	1.0	353
Stephens Lake	-	10-Oct-21	323	-	500		
Stephens Lake	122165	3-Oct-22	399	-	690	2.4	482
Stephens Lake	-	8-Jun-21	395	-	650		