Keeyask Generation Project

Aquatic Effects Monitoring Plan

Adult Lake Sturgeon Population Monitoring Report

AEMP-2023-05

KEEYASK

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KEEYASK GENERATION PROJECT

AQUATIC EFFECTS MONITORING PLAN

REPORT #AEMP-2023-05

ADULT LAKE STURGEON POPULATION MONITORING IN THE UPPER SPLIT LAKE AND KEEYASK AREAS, 2022

Prepared for

Manitoba Hydro

By

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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.

Lake Sturgeon were identified as one of the key species for monitoring. They were chosen because they are culturally important to local people, the local sturgeon populations have been previously impacted, and construction and operation of the GS will change or negatively impact important habitat. The plan to monitor the impacts of GS construction and operation on sturgeon includes several types of studies:

- Estimating the number of adults;
- Estimating the number and growth of juveniles (less than 800 millimetres [mm] in length);
- Identifying spawning locations and numbers of spawning fish; and
- Recording seasonal habitat use and long-distance movements (*i.e.*, over GS's or rapids) through movement studies.

Sampling for adult Lake Sturgeon is scheduled to alternate between the Upper Split Lake Area (the Burntwood River and the Nelson River downstream of the Kelsey GS) and the Keeyask Area (the Keeyask reservoir and Stephens Lake) with each area being sampled every second year. Because of complications associated with conducting field work during the COVID-19 pandemic, data were collected in the Upper Split Lake Area in 2022 for the first time since 2019. The Keeyask Area was also sampled at the same time. This area was sampled in spring 2021 but after sampling a large number of adult Lake Sturgeon moved downstream through the Keeyask GS. It was sampled again in 2022 to see if this downstream migration was big enough to impact the adult Lake Sturgeon population in the Keeyask reservoir.

This report presents results of adult Lake Sturgeon population monitoring conducted in the Upper Split Lake Area (*i.e.*, the Nelson River between the Kelsey GS and Split Lake, and the Burntwood

River), the Keeyask reservoir (*i.e.*, the Nelson River between Long Rapids and the Keeyask GS) and Stephens Lake (see study area map below), during spring, 2022.

Why is the study being done?

Monitoring of the adult Lake Sturgeon population in both the Upper Split Lake and Keeyask areas is being done to answer several questions:

Is there a change in how many Lake Sturgeon are in the Upper Split Lake Area, the Keeyask reservoir and Stephens Lake?

Population estimates will allow us to determine how the number of adults is changing as we try to increase the number of sturgeon by stocking young fish. Lake Sturgeon are different from other fish in Manitoba because they do not begin to reproduce until they are at least 15 years old and they can live a very long time (more than 60 years and even up to 100 years). If the remaining adult fish disappear before enough young fish are born or stocked, then the population will not recover.

Is there a change in the mortality rate of Lake Sturgeon in the Upper Split Lake Area, the Keeyask reservoir, and Stephens Lake?

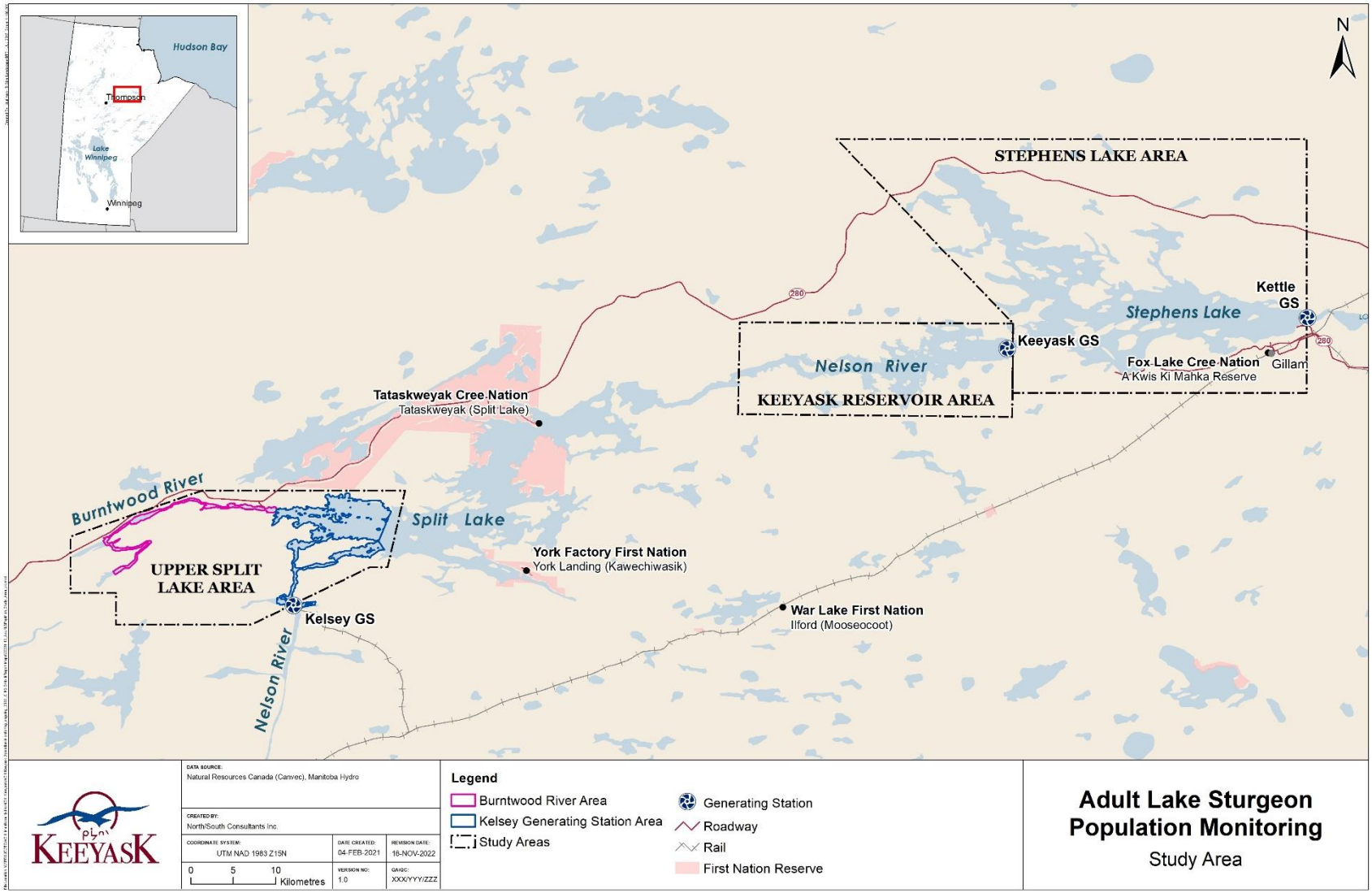
If the mortality rate increases, then steps would need to be taken to determine the cause and to develop a plan to stop further decreases in the population.

Is there a change in the number of Lake Sturgeon captured in Stephens Lake each year the monitoring occurs?

This question is important because natural spawning sites for adult Lake Sturgeon in Stephens Lake are no longer present after construction except when water is released from the spillway. Sturgeon will need to use new spawning habitat downstream of the tailrace. Changes in the number of fish captured will tell us if the population is increasing or decreasing.

Is there a significant change in the condition (how fat they are) of Lake Sturgeon in the Upper Split Lake Area, the Keeyask reservoir, and in Stephens Lake?

This question is important because if sturgeon become fatter or skinnier than they used to be, something is changing in their environment. It might also mean that stocking has increased population levels to the point that there is not enough food for all the fish, and stocking should be reduced or stopped.



Map of the lower Nelson River showing the site of the Keeyask Generating Station and the Lake Sturgeon study setting.

Why is the study being done?

Because the Keeyask GS was recently completed, the study is being done in the Keeyask Area to answer two extra questions:

Are spawning adults present in the Keeyask reservoir and Stephens Lake?

This question is important because if there are no spawning fish, recruitment will not happen and the populations will decrease. If this happens, we would need to try and find the cause (for example, if there is no suitable habitat for spawning).

Where (on a coarse-scale) do Lake Sturgeon spawn after the Keeyask GS was built?

This question is important to make sure that there is suitable habitat for Lake Sturgeon spawning.

What was done?

Sampling in 2022 was conducted from May 28–July 4 in the Burntwood River, May 27–July 4 in the Kelsey GS Area, and from May 27–July 3 in both the Keeyask reservoir and Stephens Lake. Gill nets were set to target adult Lake Sturgeon. For this study, sturgeon that were 800 mm or longer were considered adults. The exact size when Lake Sturgeon become mature and ready to spawn can vary, but previous information from the area tells us that 800 mm is a good standard size to use to determine whether or not fish are mature.

Measuring a Lake Sturgeon (left), captured adult Lake Sturgeon (middle), and releasing an adult Lake Sturgeon after it was caught and sampled (right).

Gill nets were set at places where adults are known to occur, including at spawning sites, because sturgeon gather there to spawn in spring and are easy to catch. When a fish was caught it was measured, weighed, and examined for signs of spawning. If the fish was not already tagged, then two different tags were applied; an external (Floy) tag and a small internal (PIT) tag. If the captured fish had already been tagged, then the tag numbers were recorded before the fish was released. Tagging and recapturing fish makes it possible to estimate how many sturgeon are in a population. Populations are estimated using a model. Each year, as more data are collected and added to the model, the population estimates get more precise and accurate. Therefore, these estimates are recalculated each sampling year, so they might differ between reports. A catch-per-unit-effort (CPUE) is also calculated which is the total catch divided by the total amount of effort (time and net size) used to harvest the catch. This number can also tell us about abundance is the CPUE goes up or down over time.

What was found?

A total of 270 Lake Sturgeon were captured in the Burntwood River in 2022. Most (234 fish) were classified as adults because they measured 800 mm or longer. Of the 270 fish, 108 were recaptures from previous gillnetting studies, four were hatchery-reared fish that weren't captured since stocking, and 158 had not been tagged before. A total of 94 spawning fish were caught including 91 males and three females. Milt and eggs were collected from five of these fish (one female and four males) to use as part of the stocking program. Condition factor (a measure of how fat a fish is) was similar to previous years. A computer model was used to generate estimates of population size and survival for adult Lake Sturgeon. In 2022, the population was estimated at 707 individuals with 88% survival. The estimate shows that the number of fish in the Burntwood River is increasing. The CPUE (0.75 Lake Sturgeon/91.4 m net/24 h) was higher than all other study years except for 2012.

A total of 231 Lake Sturgeon were captured in the Kelsey GS Area in 2022. Most (195 fish) were classified as adults. Of these, 74 were recaptures from previous gillnetting studies, two were hatchery-reared fish that weren't captured since stocking, and 155 had not been tagged before. A large number of recaptured fish (18) were last captured in the Keeyask reservoir. One spawning male fish was caught downstream of the Kelsey GS. It is not unusual to catch few spawners because the area where fish spawn has very fast water and is difficult to set gill nets in. Lake Sturgeon showed a lower condition factor (they were skinnier) than in past sampling years. In 2022, the population was estimated at 957 individuals with 86% survival. The estimate shows that the number of fish in the Kelsey GS Area is increasing. The CPUE (0.66 Lake Sturgeon/91.4 m net/24 h) was higher than in any previous year.

Lake Sturgeon caught in the Kelsey GS Area (left), Keeyask reservoir (middle), and Stephens Lake (right) in spring 2022.

A total of 63 Lake Sturgeon were captured in the Keeyask reservoir in 2022. Approximately half (32 fish) were classified as adults. Of these, 26 were recaptures from previous gillnetting studies, two were hatchery-reared fish that weren't captured since stocking, and 35 had not been tagged before. A total of three spawning fish were caught including two males and one females. All three spawning fish were caught at Birthday Rapids. Too few fish were caught in 2022 to compare condition factor to previous years, but average condition was within the range seen in other years. In 2022, the population was estimated at 345 individuals with a 92% survival rate which is much

lower than in previous years. The CPUE (0.14 Lake Sturgeon/91.4 m net/24 h) was lower than any recent study year (since 2011).

A total of 176 Lake Sturgeon were captured in Stephens Lake in 2022. Most (132 fish) were classified as adults. Of these, 110 were recaptures from previous gillnetting studies, one was a hatchery-reared fish that wasn't captured since stocking, and 65 had not been tagged before. A large number (48 fish or 44%) were last captured in the Keeyask reservoir. Two spawning male fish were caught downstream of the Keeyask GS near the powerhouse tailrace. It is not unusual to catch few spawners because the area where fish spawn has very fast water and is difficult to set gillnets in. Condition factor was similar to previous years. In 2022, the population was estimated at 1,164 individuals with 97% survival, which is high. The estimate shows that the number of fish in Stephens Lake is increasing. The CPUE (0.48 Lake Sturgeon/91.4 m net/24 h) was higher than all other study years except for 2021.

What does it mean?

Based on the number of fish captured and the population estimates, the number of adult Lake Sturgeon in the Burntwood River and in the Nelson River downstream of the Kelsey GS appears to be increasing. Condition factors in the Burntwood have not changed much since studies began, but were higher during earlier study years in the Kelsey GS Area than recent study years. Despite this, condition factor of Lake Sturgeon in both areas continue to be similar to those seen elsewhere in Northern Manitoba.

The EIS predicted that the number of adult Lake Sturgeon in the Keeyask reservoir would decrease after impoundment because fish would move out of the area, both upstream and downstream. Fewer adult Lake Sturgeon were captured in the Keeyask reservoir in 2022 than in recent study years. The population estimate shows that the population is decreasing. This is likely because a large number of fish moved out of the Keeyask reservoir in 2021 and 2022. This can be seen in the large number of fish from this area that were recaptured downstream of the Kelsey GS and in Stephens Lake and was also observed in an adult Lake Sturgeon movement study being conducted in the area. It may also because there is more water in the Keeyask reservoir since it was flooded, making fish harder to catch. Despite this, spawning fish were captured in the Keeyask reservoir in 2022 including both male and female fish. All three fish were captured at Birthday Rapids. Of the fish that were captured, condition factor fell within the range seen in previous years.

Unlike the Keeyask reservoir, the number of adult Lake Sturgeon in Stephens Lake is increasing. There was a large increase in the population estimate between 2021 and 2022. This may partly be due to the large number of fish that have moved downstream from the Keeyask reservoir. The population estimate also shows a significant increasing trend since 2003 showing that the population is growing in the long-term. Spawning fish were captured downstream of the Keeyask GS near the powerhouse tailrace in 2022. Condition of fish captured in 2022 did not change from other sampling years.

What will be done next?

Sampling in each area (the Upper Split Lake and Keeyask areas) will return to an every second year schedule in 2023 and will continue until 2044. Sampling will happen in the Keeyask reservoir and Stephens Lake in spring 2023.

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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).

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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 (AESV)*. 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, including the focus of this report, adult Lake Sturgeon populations, for the construction and operation phases of the Project.

Adult population monitoring studies were initiated in 2001. Two areas were considered: the area that would be directly affected by the Project (including the reach of the Nelson River from Clark Lake to Gull Rapids) and Stephens Lake; and rivers flowing into the upstream portion of Split Lake (referred to as the Upper Split Lake Area). When studies were initiated in 2001, it was known that Lake Sturgeon habitat in the Upper Split Lake Area would not be affected by the Project, but the degree of interaction between Lake Sturgeon in the Upper Split Lake Area and Gull and Stephens lakes was not known. Genetic studies completed since that time have demonstrated that sturgeon in the Keeyask reservoir are a separate population from sturgeon in the Upper Split Lake Area and that, within this area, the Kelsey GS and Burntwood River populations differ (Gosselin *et al*. 2016). However, some movement of adult Lake Sturgeon between the Keeyask reservoir and the Nelson River downstream of the Kelsey GS has been recorded. Studies have continued in the Upper Split Lake Area because this area was selected as a location where the KHLP could support the recovery of a Lake Sturgeon population outside the direct influence of the Project as an offsetting measure[1].

Since 2001, Lake Sturgeon data have been collected in multiple years from the Upper Split Lake, the Keeyask reservoir, and Stephens Lake areas (Barth and Mochnacz 2004; Barth 2005; Barth and Murray 2005; Barth and Ambrose 2006; Barth and MacDonald 2008; MacDonald 2008a, b; Michaluk and MacDonald 2010; MacDonald and Barth 2011; Hrenchuk and McDougall 2012; Hrenchuk 2013; Groening *et al*. 2014; Henderson *et al.* 2016; Legge *et al.* 2017; Lacho *et al.* 2018; Holm and Hrenchuk 2019; Ambrose *et al.* 2020; Loeppky and Hrenchuk 2022). Studies

1 See the Fisheries Offsetting and Mitigation Plan for more information on the selection of stocking locations and the stocking plan.

focused on adults were conducted during alternate years among locations, i.e., alternating between the Upper Split Lake Area and the Keeyask reservoir and Stephens Lake. These studies were conducted during spring and identified sturgeon spawning areas, determined the relative importance of spawning sites, and contributed to the understanding of sturgeon movements. Mark-recapture data have also been used to develop adult abundance estimates for populations in all three areas.

Adult Lake Sturgeon population monitoring was scheduled to occur in spring 2020 within the future Keeyask reservoir and Stephens Lake; however, due to complications associated with conducting field work during the COVID-19 pandemic, monitoring was deferred to spring 2021 and sampling in the Upper Split Lake Area was deferred to 2022.

Following sampling in 2021, a large number of adult Lake Sturgeon were observed moving downstream through the Keeyask GS during acoustic telemetry studies (Hrenchuk and Small 2022). Monitoring in the Keeyask Area was repeated in 2022 to determine if the downstream movements observed after the population study was completed in spring 2021 were substantial enough to change the population estimate. Therefore, sampling was conducted in all study areas in spring 2022.

This report presents results of adult Lake Sturgeon population monitoring conducted in the Burntwood River, the Nelson River downstream of the Kelsey GS, the Keeyask reservoir (*i.e.*, the Nelson River between Clark Lake and the Keeyask GS) and in Stephens Lake in spring 2022, and compares these results to previous years. Sampling in 2022 represents the first year of sampling during operation conditions in both the Keeyask reservoir and Stephens Lake. Because of this, several key questions identified in the AEMP that have not been previously discussed are addressed. The key questions set out in the AEMP for adult population monitoring were:

- Is there a biologically relevant (and statistically significant) change in the rate of population growth for the Keeyask reservoir and Stephens Lake populations?
- Is there a biologically relevant (and statistically significant) change in survival for the Keeyask reservoir and Stephens Lake populations?
- Is there a biologically relevant (and statistically significant) change in the condition factor of Lake Sturgeon?
- Is the relative abundance/CPUE of adult Lake Sturgeon in Stephens Lake changing?
- Are spawning adults present in the Keeyask reservoir and Stephens Lake?
- Where (on a coarse-scale) do Lake Sturgeon spawn in the post-Project environment?
- Over the long-term, is there a measurable effect on population growth due to stocking?
- Over the long-term, is the Lake Sturgeon population considered sustainable based on the size of the adult population and the population viability analysis?

The last two questions in this list relate to long-term changes and are not addressed in this report.

2.0 STUDY SETTING

2.1 UPPER SPLIT LAKE AREA

The Upper Split Lake Area consists of two locations: 1) the Burntwood River between First Rapids and Split Lake (Map 1), and 2) the Nelson River between the Kelsey GS and Split Lake (including the Grass River downstream of Witchai Lake Falls and upper Split Lake). The sections of riverine and lacustrine habitat that represent the Upper Split Lake Area offer a diversity of physical conditions, including a variety of substrate types, variable water depths (ranging from 0 to 30 m) and water velocities. Water velocities were classified as low (0.2–0.5 m/s), moderate (0.5–1.5 m/s), or high (> 1.5 m/s), as described in the Keeyask AE SV.

The Burntwood River flows in a north-easterly direction from First Rapids for approximately 35 km prior to emptying into the western arm of Split Lake. It is unknown if First Rapids represents a natural barrier to upstream fish passage but is assumed to be under high flow conditions. Hard substrates predominate in the main channel, while loose fine sediments and associated macrophyte growth occur in many off-current areas. The hydrology of the Burntwood River has been affected by the Churchill River Diversion (CRD). Outflow from the Burntwood River to Split Lake at First Rapids increased nearly 10-fold from 90.0 m3/s prior to diversion to 849.0 m3/s following diversion.

The Kelsey GS is located on the upper Nelson River, approximately 90 km upstream of the Keeyask GS. Kelsey GS was completed in 1961 and was the first hydroelectric station built on the Nelson River. Downstream of the GS there is an approximately 5 km long reach of the Nelson River, characterized by predominantly fast-moving water with rocky shoreline and substrate, after which the Nelson River splits into two channels around a large island. Each channel contains a set of rapids: the Anipitapiskow Rapids (~7 km north of the GS on the north channel) and Sakitowak Rapids (~10.0 km northeast of the GS on the south channel). Both channels empty into Split Lake.

The Grass River enters the Nelson River from the west immediately downstream of the Kelsey GS. Between Witchai Lake Falls (approximately 5.0 km upstream of the mouth) and the mouth of the Grass River, the shorelines are gradual in slope and water velocities are generally lower than in the Nelson River. Witchai Lake Falls appears to be a natural barrier to upstream fish passage.

Split Lake, which is immediately downstream of the Kelsey GS at the confluence of the Burntwood and Nelson rivers, is the second largest waterbody in the Keeyask study area. Due to large inflows from the Nelson and Burntwood rivers, the lake has a detectable current in several locations. Split Lake has maximum and mean depths of 28.0 m and 3.9 m respectively, at a water surface elevation of 167.0 m above sea level (ASL) (Lawrence *et al.* 1999). The surface area of Split Lake was determined to be 26,100 ha (excluding islands), with a total shoreline length, including islands, of 940.0 km (Lawrence *et al.* 1999). The numerous islands in Split Lake represent 411.6 km of the total shoreline.

2.2 KEEYASK AREA

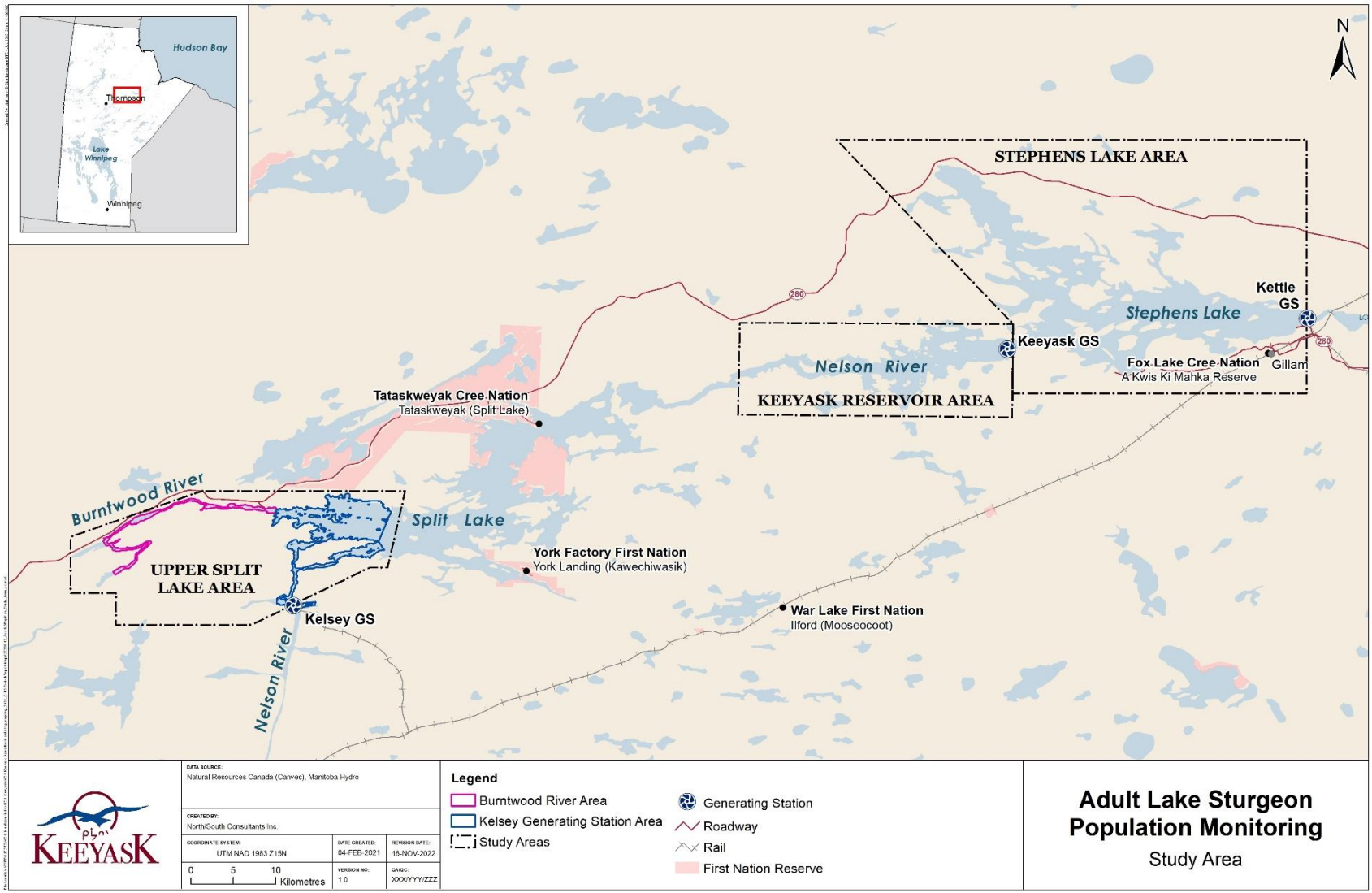
The study area encompasses an approximately 110 km long reach of the Nelson River from Clark Lake to the upstream end of the Limestone Reservoir (Map 1). This section of river offers a diversity of physical habitat conditions, including a variety of substrate types, and variable water depths (range: 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 lower Nelson River showing the site of the Keeyask Generating Station and the Lake Sturgeon study setting.

3.0 METHODS

3.1 GILLNETTING

Large mesh gill nets were used to capture adult Lake Sturgeon (≥800 mm fork length) in the Burntwood River (between First Rapids and Split Lake) from May 28 to July 4, the Nelson River downstream of the Kelsey GS (including the Grass River and the upper reaches of Split Lake) from May 27 to July 4, and in the Keeyask reservoir and Stephens Lake from May 27 to July 3, 2022.

Gill net gangs consisted of four 100 yd (91.4 m) long, 2.7 yd (2.5 m) deep panels of 8, 9, 10, and 12" (203, 229, 254, and 305 mm) twisted nylon stretched mesh. Gill nets were checked approximately every 24 hours, weather permitting. At each gillnetting site, UTM coordinates were taken using a handheld GPS unit (Garmin Limited, Olathe, Kansas).

Water temperature was measured daily using a handheld thermometer (± 0.5°C) in the Burntwood River. Mean daily water temperature downstream of the Kelsey GS was taken from Manitoba Hydro's water temperature gauging station (#05UF791). HOBO Water Temperature Pro data loggers (± 0.2°C), set approximately 1 m off the substrate were also used in the Keeyask reservoir and Stephens Lake to log water temperature at 6-hour intervals.

Captured Lake Sturgeon were measured for fork length (FL) and total length (TL; ± 1 cm), weighed (with a digital handheld hanging scale, handheld conventional scale, or pan scale ± 25 g), and externally marked with an individually numbered plastic Floy-FD-94 T-bar anchor tag (Floy tag). Floy tags were inserted between the basal pterygiophores of the dorsal fin using a Dennison Mark II tagging gun. In addition to the external tag, each sturgeon had an individually numbered Passive Integrated Transponder (PIT) tag (Oregon RFID Ltd., Portland, Oregon) injected under the third dorsal scute using Oregon RFID tag injector needles, dipped in Polysporin to minimize the risk of infection. Tags were injected into dorsal muscle tissue parallel to the horizontal axis of the fish. Following implantation, the fish was scanned using a Biomark HPR Lite Handheld PIT tag reader (Biomark; Boise, Idaho).

Sex and maturity were determined for individual adult Lake Sturgeon by applying pressure to the ventral surface of the fish to express gametes. If no gametes were expressed, sex and maturity codes were not assigned. The following sexual maturity codes were used:

Female (F)	Male (M)
2 – maturing to spawn (pre-spawn)	7 – maturing to spawn (pre-spawn)
3 – ripe	8 – ripe
4 – spent (post-spawn)	9 – spent (post-spawn)

Species other than Lake Sturgeon captured in the gill nets were measured for FL, weighed, and released.

3.2 DATA ANALYSIS

As was done in previous years, data analysis included all sizes of Lake Sturgeon captured (as opposed to only those with FL measuring 800 mm or greater). Mesh sizes are used to target large Lake Sturgeon, but smaller fish are also captured. Inclusion of all fish in the summary statistics ensures comparability among years.

Mean FL (mm), weight (g), and condition factor (K) were calculated for all first-time captures and recaptured Lake Sturgeon tagged in a previous year. Condition factor was calculated for individual fish based on the following equation (after Fulton 1911, in Ricker 1975):

$$K = W / (L^3/10^5)$$

Where:

W = round weight (g); and

L = fork length (mm)

Mean condition factor was calculated by 50 mm FL interval for adult Lake Sturgeon. Mean condition factor by FL interval was compared between pre-Project (*i.e.*, 2001–2014), construction (*i.e.*, 2015–2021), and operation (*i.e.*, 2022) using a Kruskal-Wallis H test (significance level set at 0.05). If a significant difference was found, a Dunn's test was conducted to determine which sampling period differed. The test was only used if the sample size (*i.e.*, the number of fish captured) was greater than ten.

A length-frequency distribution for Lake Sturgeon was plotted in 50 mm FL intervals (*e.g.*, 1,000–1,049 mm).

A length-weight relationship was calculated using least squares regression analysis on logarithmic transformations of FL and weight according to the following relationship:

$$Log_{10}(W) = Log_{10}(a) + b*Log_{10}(L)$$

Where:

W = round weight (g);

L = fork length (mm);

a = Y-intercept; and

b = slope of the regression line

Catch-per-unit-effort (CPUE) was calculated and expressed as the number of Lake Sturgeon captured in 91.4 m (50 yd; the standard length of adult Lake Sturgeon nets) of net per 24-hour period using the following formula:

CPUE = Σ # Lake Sturgeon / Σ gillnetting hours x 24 h / length of gill net used x 91.4 m

Where:

Σ = sum of the number of fish or gillnetting hours at all sites.

Lake Sturgeon that were tagged in a previous year and recaptured in 2021 were included in all analyses; however, current-year recaptures (*i.e.*, those captured multiple times within the same sampling year) were only included for the first capture.

3.3 POPULATION ESTIMATION

Mark-recapture population estimates have been calculated for the Burntwood River during the spring of twelve different years (2005-2007, 2009-2013, 2015, 2017, 2019, 2022), for the Kelsey GS area during the spring of ten different years (2005-2007, 2009, 2011, 2013, 2015, 2017, 2019, 2022), for the Keeyask reservoir during the spring of 14 different years (1995, 2001-2004, 2006, 2008, 2010, 2012, 2014, 2016, 2018, and 2021-2022) and for Stephens Lake during the spring of 14 different years (2001–2006, 2008, 2010, 2012, 2014, 2016, 2018, and 2021-2022). For Stephens Lake, 2022 was the third year during which sufficient numbers of fish were re-captured that mark-recapture population estimates could be calculated. Given that encounter histories were developed for these fish, estimates were calculated for the spring in all the years that sturgeon gillnetting studies were conducted in Stephens Lake (2001-2006, 2008, 2010-2012, 2014, 2016, 2018, 2021, and 2022). However, estimates from years prior to 2018 are associated with a higher degree of uncertainty due to the small numbers of fish captured. Sampling methods and protocols differed between time periods. Lake Sturgeon were tagged in 1995 in Gull Lake by Manitoba Fisheries Branch and the Split Lake Resource Management Board. All data for the period 2001–2012 were collected annually as part of environmental studies related to the pre-Project environment, while data from 2014 until 2044 are collected biennially as part of monitoring studies related to the Keeyask GS project.

After spring sampling in 2021, a large number of adult Lake Sturgeon began to move downstream out of the Keeyask reservoir (Hrenchuk 2022). This impacted the population model for the Keeyask reservoir in 2022. The population model interprets fish that move from the Keeyask reservoir to Stephens as mortalities as they are not able to return and are lost from the upstream population. Although these fish moved downstream after sampling in 2021, the model assumes the event happened over time, impacting the survival rates between 2018 and 2022 (instead of for 2022 alone). This leads to falsely low estimates for 2018 and 2021. To account for this, abundance estimates generated for the Keeyask reservoir in 2021 were used for the years between 1995–2021 and the 2022 estimate was only generated for the current study year.

The Jolly-Seber model (POPAN formulation; Arnason and Schwarz 2002), as implemented within MARK, was used to estimate the annual abundance of adult Lake Sturgeon in the Burntwood River, Kelsey GS Area, Keeyask reservoir and Stephens Lake. Survival estimates calculated based on model recommendations. These differed based on location as follows:

- Burntwood River: 2001–2007, 2008–2013, and 2014–2022;

- Kelsey GS Area: 2001–2013 and 2014–2022;
- Keeyask reservoir: 1995–2001, 2001–2004, 2004–2021, and 2021–2022; and
- Stephens Lake: 2001–2013 and 2014–2022.

In order to track short-term trends in population size, current-year estimates were compared to those from the previous one and two sampling periods. Both the Burntwood River and Kelsey GS estimates were compared to 2017 and 2019. The Keeyask reservoir and Stephens Lake were compared to 2018 and 2021. A statistically significant change was determined as an increase beyond the 95th percentile or a decrease below the 5th percentile (*e.g.,* if the 2022 estimate was greater than the 95th percentile from the 2021 estimate, the increase in population size was significant).

Long-term population trajectory was analysed using a standard linear regression. Slopes that were significantly different than zero (F-tests, $p < 0.05$) indicated an increasing or decreasing trend. The slope of the regression through time indicated the approximate number of individuals added to or removed from the population each year.

Fish that moved downstream from the Keeyask reservoir to Stephens Lake prior to the spring sampling period were removed from upstream analysis and added to Stephens Lake.

Detailed methods for the population estimation can be found in Appendix 3.

4.0 RESULTS

Tag and biological data for all first-time Lake Sturgeon captures are presented in Appendix 1 and data from recaptured Lake Sturgeon are presented in Appendix 2.

4.1 BURNTWOOD RIVER

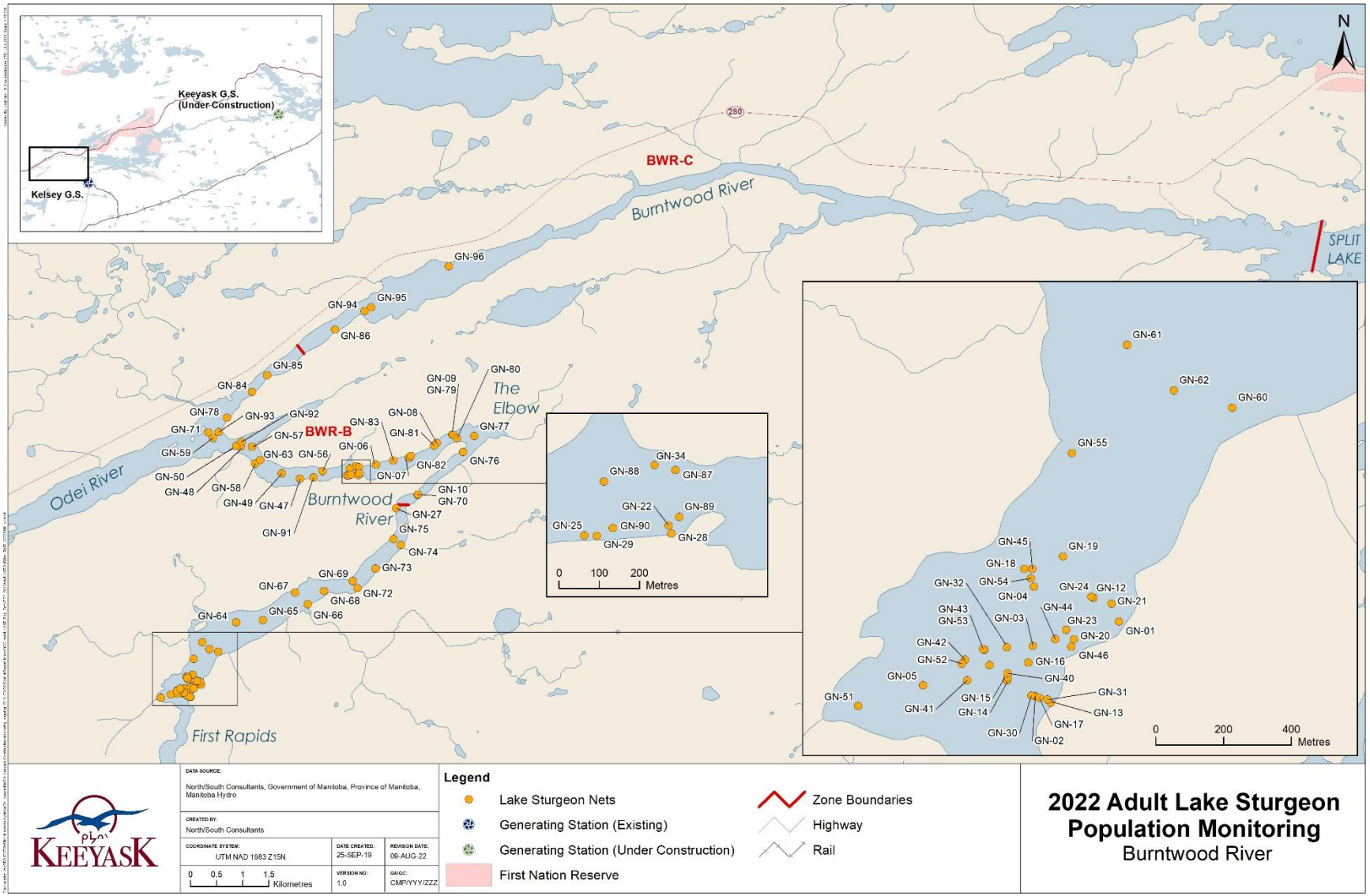
4.1.1 RELATIVE ABUNDANCE/CPUE

Gill nets were set at 90 sites in the Burntwood River between May 28 and July 4, 2022 (Table 1; Map 2). Water temperature ranged from 5.0 to 16.0°C during the study (Figure 1). A total of 286 fish were captured, the majority of which (n = 270; 94%) were Lake Sturgeon (Table 1). No Lake Sturgeon mortalities occurred during sampling.

Table 1. Number of fish, by species, captured during adult Lake Sturgeon population monitoring in the Burntwood River, spring 2022.

Common Name	Scientific Name	Abbreviation	Burntwood River	% of Catch
Burbot	*Lota lota*	BURB	1	0.3
Common Carp	*Cyprinus carpio*	CMCR	3	1.0
Freshwater Drum	*Aplodinotus grunniens*	FRDR	2	0.7
Lake Sturgeon	***Acipenser fulvescens***	***LKST*[1]**	***270***	***94.4***
Northern Pike	*Esox lucius*	NRPK	6	2.1
Walleye	*Sander vitreus*	WALL	4	1.4
Total			**286**	100

1. Does not include fish recaptured in the same waterbody in the season/year in which they were tagged.



Map 2. Sites fished with large mesh gill net gangs in the Burntwood River, spring 2022.

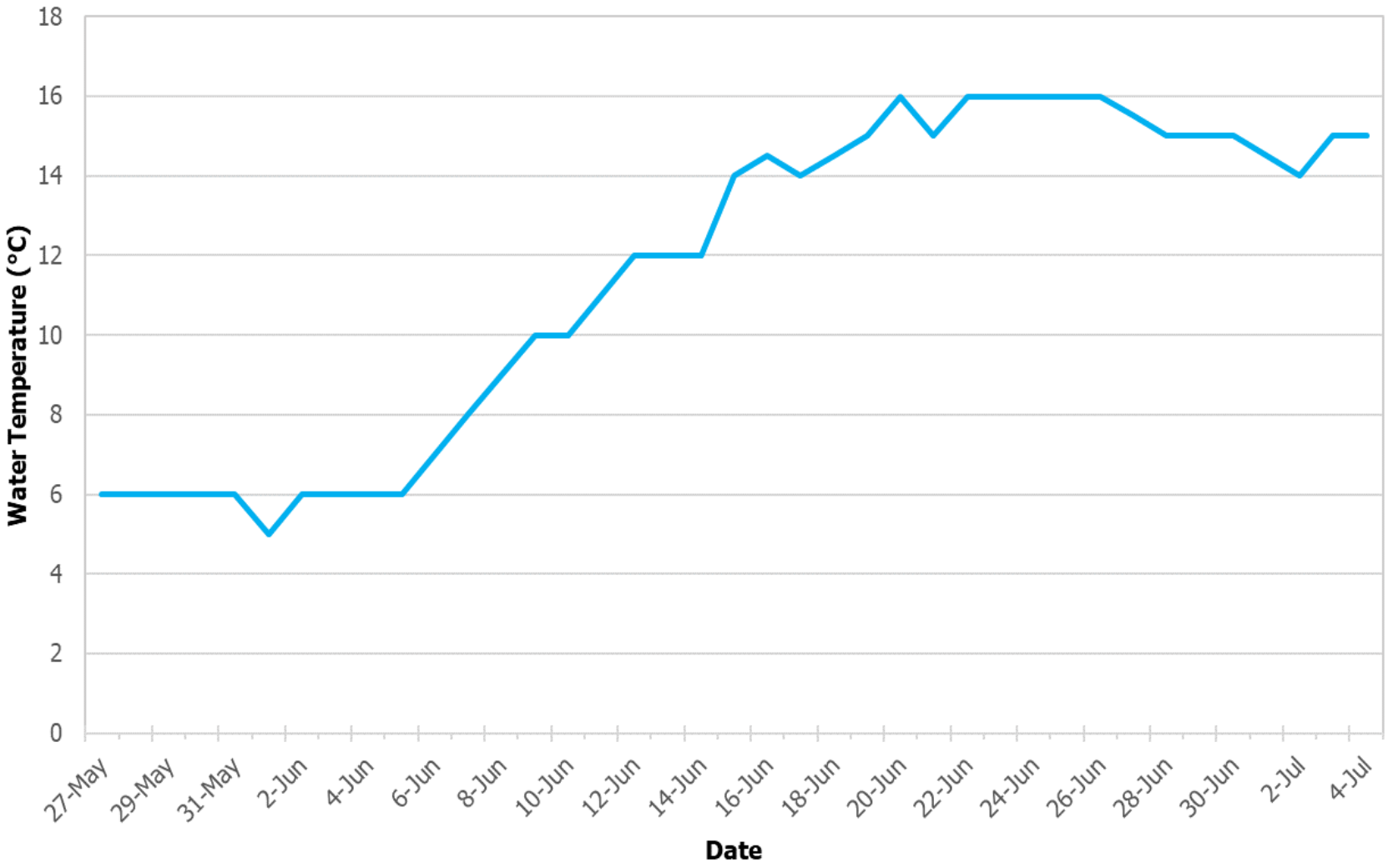


Figure 1. Mean daily water temperature of the Burntwood River, May 28 to July 4, 2022.

In total, 270 Lake Sturgeon were captured in 8,665 gill net hours, resulting in an overall CPUE of 0.75 LKST/91.4 m net/24 h (Table 2). Site-specific CPUE ranged from 0.0–3.3 LKST/91.4 m net/24 h. Gillnetting effort and CPUE was highest in Zone BWR-A (the area immediately downstream of First Rapids (Table 3).

Table 2. Lake Sturgeon catch-per-unit-effort (CPUE; # LKST/91.4 m net/24 h) values observed during mark/recapture studies in the Burntwood River spring 2001-2022.

Year	# Sites	Total Lake Sturgeon[1]	Total Gill Net Hours[2]	Total CPUE
2001	26	23	1,975	0.28
2002	30	16	-	0.38
2005	18	14	1,874	0.18
2006	16	37	2,577	0.34
2007	27	60	6,247	0.24
2009	21	70	3,139	0.54
2010	15	30	1,716	0.42
2011	29	65	2,728	0.50
2012	19	29	590	1.18
2013	79	123	7,610	0.38
2015	67	109	5,835	0.44
2017	78	207	7,726	0.64
2019	72	231	9,258	0.60
2022	**90**	**270**	**8,665**	**0.75**

1. Does not include fish recaptured in the same waterbody in the season/year in which they were tagged.
2. The effort has been corrected to account for panel length. For example, the duration of a gill net gang consisting of four panels (i.e., 91.4 m long) was doubled (i.e., equivalent of two 91.4 m gang sets).

Table 3. Number and catch-per-unit-effort (CPUE; # LKST/91.4 m net/24 h) values, by zone, observed during adult Lake Sturgeon population monitoring in the Burntwood River, spring 2022.

Zone	# Sites	Total Lake Sturgeon[1]	Total Gill Net Hours[2]	Total CPUE
BWR-A	48	230	5,286	1.04
BWR-B	38	36	3,194	0.27
BWR-C	4	4	185	0.52

1. Does not include fish recaptured in the same waterbody in the season/year in which they were tagged.
2. The effort (h) has been corrected to account for panel length set at each site. For example, the duration of a gill net gang consisting of four panels (i.e., 91.4 m long) was doubled (i.e., equivalent of two 91.4 m gang sets)

4.1.2 BIOLOGICAL METRICS

Lake Sturgeon captured had a mean fork length of 939 mm (range: 310–1,600 mm), a mean weight of 7,392 g (range: 250–33,566 g), and a mean condition factor of 0.81 (range: 0.48–1.15) (Table 5). One fish was unintentionally released prior to being measured. Of the 269 Lake Sturgeon measured, 234 were considered adults (FL ≥ 800 mm) and 35 were considered juveniles (FL < 800 mm). Lake Sturgeon measuring 900–999 mm FL were captured most frequently (n = 97), making up 19% of the total catch and 22% of the adult Lake Sturgeon catch (Figure 2).

Mean condition factor of adult Lake Sturgeon did not differ significantly between baseline (2001–2013), construction (2015, 2017, and 2019) and operation (2022) for six of the seven FL intervals for which comparisons were possible. Mean condition of fish captured in the 1,000–1,049 mm FL interval was significantly lower during operation than baseline but did not differ from construction (Figure 3). The length-weight relationship is presented in Figure 4.

Sex and maturity were confirmed for 94 individuals, including 91 males and three females. The catch included 37 pre-spawn, 61 ripe, and one post-spawn male, two pre-spawn females, and one ripe female (Table 4). All spawning Lake Sturgeon were captured immediately below First Rapids (Zone BWR-A) (Map 2).

Five mature fish (Floy tag #119595 [female], #119594 [male], #114070 [male], #98902 [male], #119577 [male]) were used as broodstock for the Project's stocking program. Details on gamete collection, egg fertilization, egg transport, hatch, larval rearing, and stocking can be found in Klassen *et al.* (2023).

Table 4. Sex and maturity data for Lake Sturgeon captured in the Burntwood River during adult population monitoring, spring, 2001–2022.

Year	Sex and Maturity[1]						# of Spawners[2]	Unknown maturity	Total
	Male			Female					
	7	8	9	2	3	4			
2001	7	-	-	-	-	-	7	16	23
2002	3	-	1	-	-	-	4	12	16
2005	-	-	-	-	-	-	-	14	14
2006	-	7	3	-	-	-	8	29	37
2007	9	4	4	-	-	-	15	45	60
2009	7	24	2	-	-	-	30	40	70
2010	12	4	-	-	-	-	16	14	30
2011	9	30	1	-	-	-	40	25	65
2012	10	12	-	-	-	-	20	9	29
2013	18	27	5	1	1	-	52	71	123
2015	16	28	-	1	-	-	43	66	109
2017	26	77	7	-	2	-	96	111	207
2019	28	27	4	2	-	-	61	171	231
2022	**37**	**61**	**1**	**2**	**1**	**-**	**94**	**176**	**270**

1. Refer to Section 3.1 for maturity codes.
2. Maturity status columns include recaptures of fish whose maturity status progressed between captures (*e.g.*, would include recaptures of fish initially captured in maturing condition and recaptured in ripe or spent condition), but the columns may not add up to the "# of Spawners" column since this only includes individual fish captured (*i.e.*, CYTR that were captured in different maturity classifications were only counted once).

Table 5. Mean fork length (mm), weight (g), and relative condition factor (K) of Lake Sturgeon captured during adult Lake Sturgeon population monitoring in the Burntwood River (Upper Split Lake Area), spring 2001-2022.

Year	Fork Length (mm)				Weight (g)				K		
	n[1]	Mean	Std[2]	Range	n	Mean	Std	Range	n	Mean	Range
2001	23	945	189	600-1,436	22	6,620	3,279	1,600-15,600	22	0.76	0.46-1.04
2002	15	982	173	644-1,315	16	9,227	5,716	2,200-22,000	15	0.81	0.71-0.92
2005	14	1,002	146	838-1,310	14	9,542	5,637	4,990-22,226	14	0.86	0.70-1.01
2006	37	1,014	148	734-1,325	37	9,654	5,030	3,629-23,133	37	0.86	0.66-1.02
2007	59	984	159	354-1,362	57	9,179	4,324	2,727-25,000	57	0.88	0.71-1.12
2009	69	965	156	485-1,360	69	8,263	3,864	907-21,772	68	0.85	0.56-1.09
2010	30	919	166	242-1,100	28	6,520	2,277	1,361-10,886	28	0.76	0.52-1.11
2011	63	987	133	641-1,350	63	8,686	4,066	2,100-25,855	63	0.85	0.57-1.10
2012	29	966	76	809-1,105	26	7,820	1,874	4,082-12,701	26	0.87	0.71-1.11
2013	119	942	173	560-1,720	122	7,714	6,025	1,247-54,658	119	0.76	0.47-1.07
2015	109	971	152	260-1,341	107	8,756	3,321	1,588-22,906	107	0.89	0.70-1.35
2017	206	931	178	336-1,457	210	7,305	3,901	295-26,308	200	0.80	0.41-1.20
2019	228	932	155	336-1,457	228	6,908	3,648	100-24,494	227	0.77	0.46-1.31
2022	**269**	**939**	**173**	**310-1,600**	**269**	**7,392**	**4,030**	**250-33,566**	**269**	**0.81**	**0.48-1.15**

1. Number of fish measured.
2. Standard deviation.

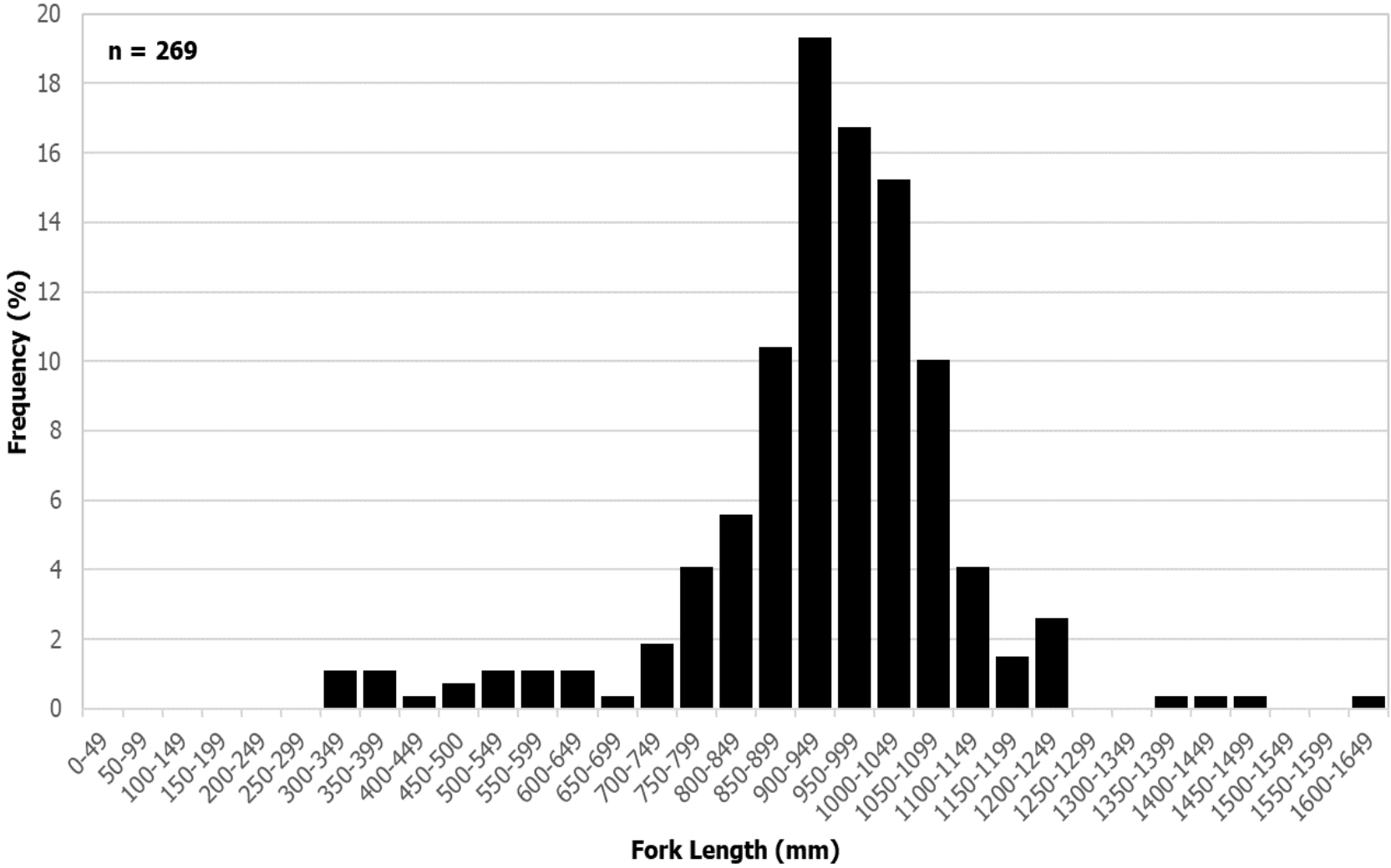


Figure 2. Length-frequency distribution for Lake Sturgeon captured in large mesh gill nets set in the Burntwood River, spring 2022.

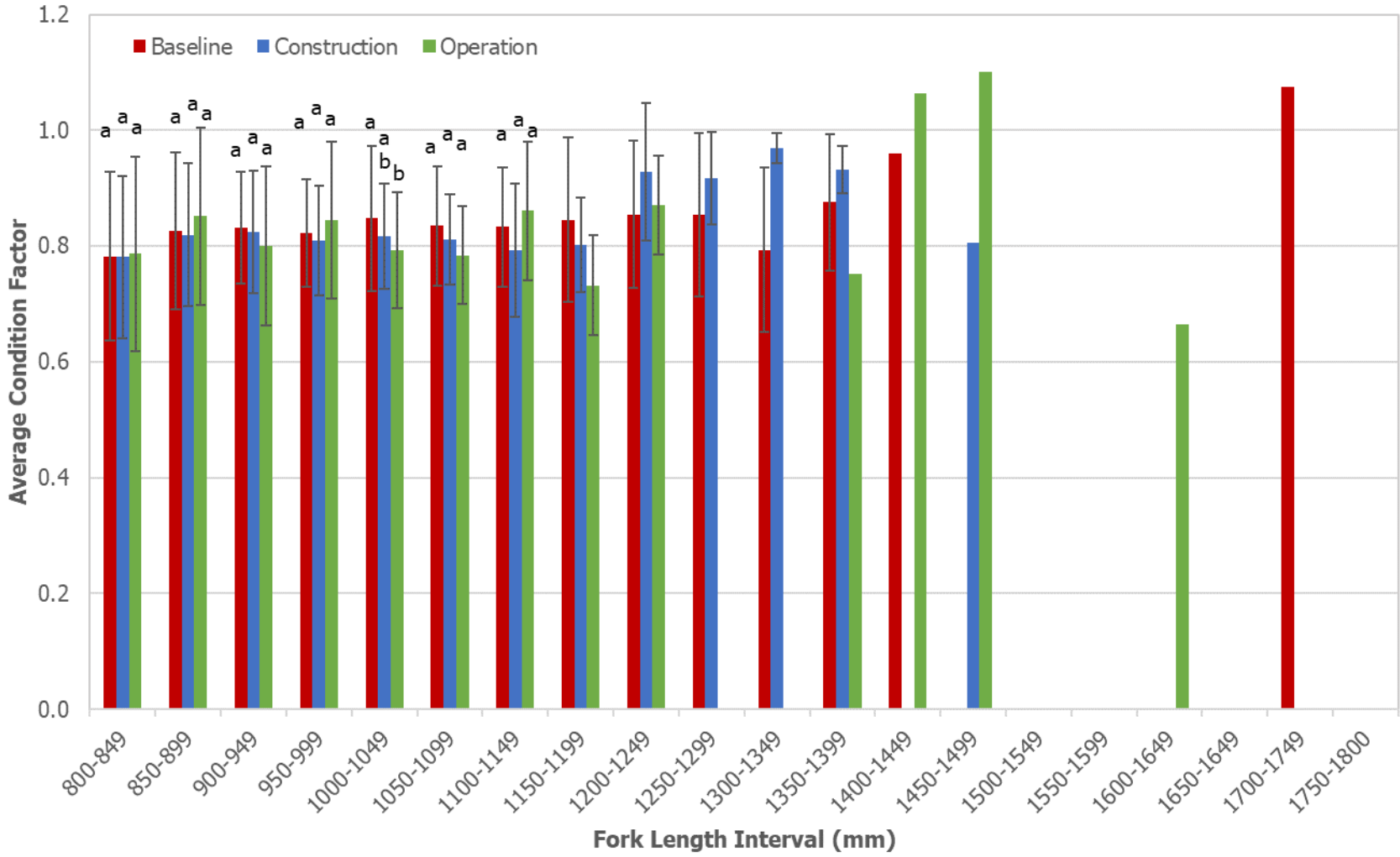


Figure 3. **Mean condition factor by 50 mm length intervals for adult (≥ 800 mm) Lake Sturgeon captured in the Burntwood River during baseline studies (red bars), construction monitoring (blue bars), and operation monitoring (green bars). Letters denote significant differences between groups (Kruskal-Wallis, $p<0.05$). Error bars represent standard deviations.**

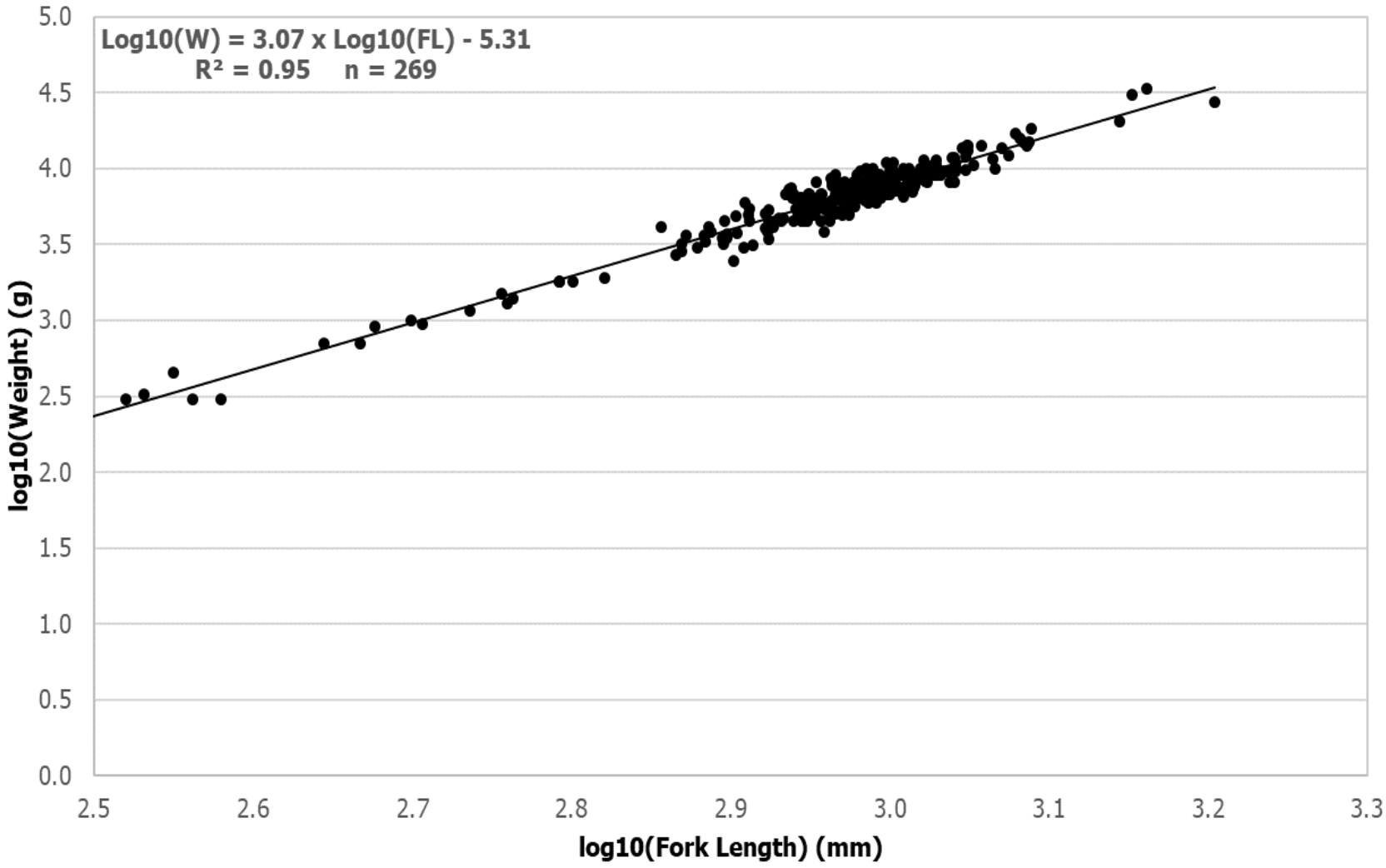


Figure 4. Length-weight regression for Lake Sturgeon captured in large mesh gill nets set in the Burntwood River, spring 2022.

4.1.3 MOVEMENTS

Of the 270 Lake Sturgeon captured in the Burntwood River, 108 were recaptures from previous gillnetting studies, four were hatchery-reared fish captured for the first time since stocking, and 158 were un-tagged (new captures). Floy and/or PIT tags were applied to 157 newly captured fish; one was released prior to being tagged (Appendix 1).

All four hatchery-reared fish were stocked in the Burntwood River in zone BWR-B, three in 2018 and one in 2021. None of the hatchery-reared Lake Sturgeon made significant movements or have been captured since initial release.

Excluding the four hatchery-reared fish, 40% of Lake Sturgeon were recaptures from previous gillnetting studies (n = 108) (Table 6). Eight of the 108 recaptured Lake Sturgeon (7%) lost their Floy tag since initial tagging or last recapture but retained their PIT tag. Biological and previous year capture information are provided in Table A2-1 and movements are summarized below:

- Eighty-five (79%) were originally tagged or have remained in the Burntwood River since their last recapture event (after initial tagging in other areas in previous years).
- Ten were originally tagged or last recaptured in the Kelsey GS Area:
- Ten were originally tagged or last recaptured in Split Lake (SPL-A):
- Three fish were tagged in Gull Lake in 2014, 2018, and 2019 and have not been recaptured since the date of original capture.

Table 6. Recapture data for Lake Sturgeon captured in the Burntwood River during adult population monitoring, spring 2002–2022.

Recapture Location	Year	Original Tagging / Last Capture Location[2]							Total Recaptures[1]	Total LKST Captured	% Recaptures
		U/S of Kelsey GS	D/S of Kelsey GS	Burntwood River	Odei River	Split Lake	D/S of Birthday Rapids	Gull Lake			
Burntwood River	2002	0	0	2	0	0	0	0	2	16	12.5
	2005	0	1	2	0	0	0	0	3	14	21.4
	2006	0	1	8	0	0	0	0	9	37	24.3
	2007	0	4	13	0	0	0	0	17	60	28.3
	2009	0	6	30	0	0	0	0	36	70	51.4
	2010	0	2	7	0	0	0	0	9	30	30.0
	2011	0	6	19	0	0	0	0	25	65	38.5
	2012	0	1	11	0	0	0	0	12	29	41.4
	2013	0	8	33	0	0	0	0	41	123	33.3
	2015	0	9	33	0	0	0	0	42	109	38.5
	2017	0	16	57	0	0	0	0	73	207	35.3
	2019	0	9	75	3	3	1	2	95	231	40.3
	2022	**0**	**10**	**85**	**0**	**10**	**0**	**3**	**108**	**270**	**40.0**

1. Does not include fish recaptured in the same waterbody in the season/year in which they were tagged; nor does it include hatchery-reared fish that were captured for the first time since release.
2. Initial tagging location of fish recaptured for the very first time since tagging or last known location of fish caught multiple times over multiple years.

4.1.4 POPULATION ESTIMATION

The population estimate for adult Lake Sturgeon (measuring ≥ 800 mm FL) in the Burntwood River in 2022 was 707 individuals (95% CI: 520–961) (Figure 5; Table A3-1). The estimated annual survival (2014–2022) was 88%. The annual population growth rate (lambda) fluctuated greatly between 2005 and 2011 (between 2.3 and 57.0% annual change), but only ranged from 0.03 to 15.5% change between 2012 and 2022. This indicates a relatively stable population growth rate (Figure 6).

The mean population abundance in 2022 increased significantly (by 29.5%) from 2017 but did not differ significantly from 2019 (Figure 7). Overall, abundance estimates calculated between 2005 and 2022 show a significant increasing trend ($r^2 = 0.81$, $F = 43.15$, $p < 0.0001$) (Figure 8).

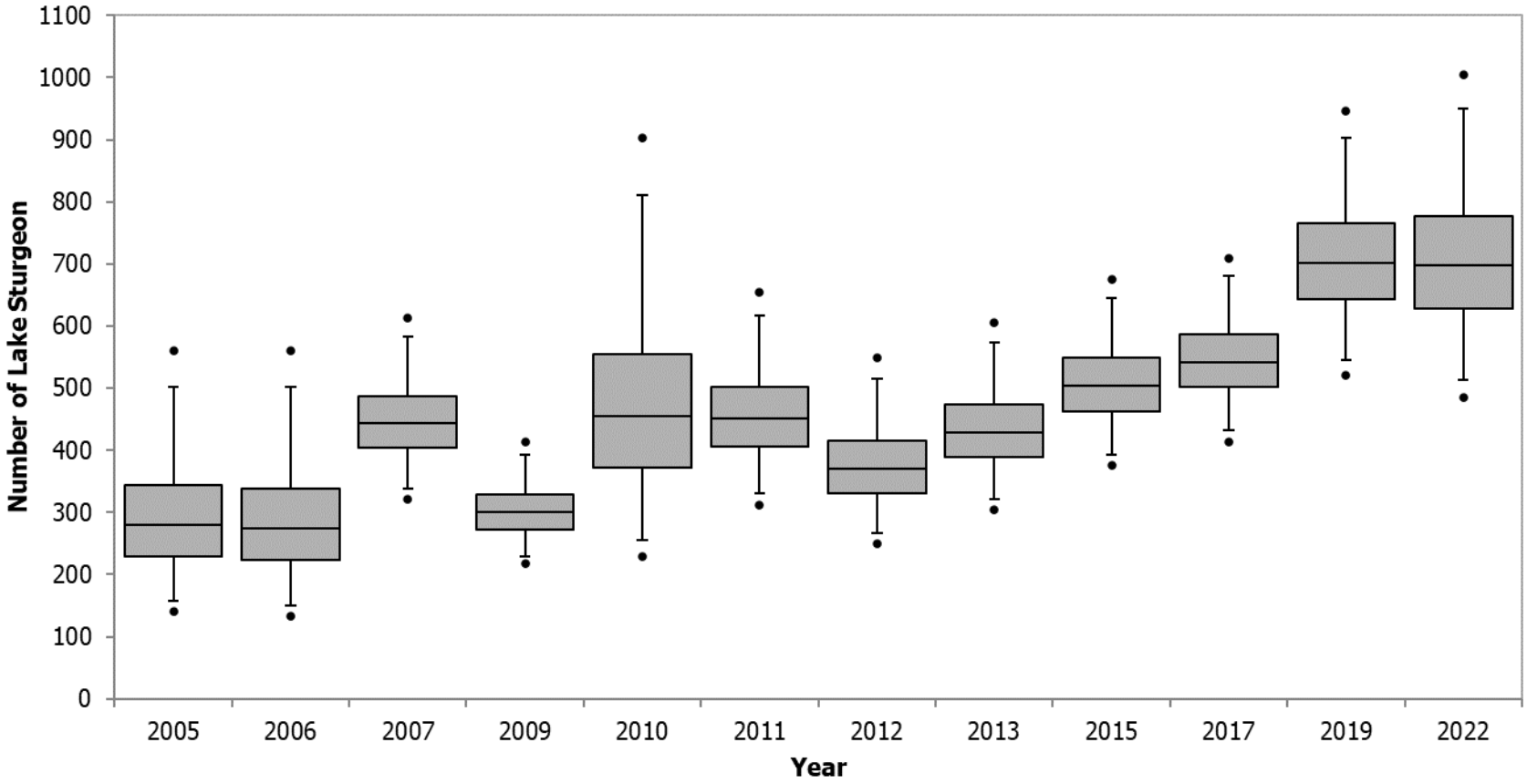


Figure 5. **Adult Lake Sturgeon abundance estimates based on POPAN best model for the Burntwood River (2005–2022). Horizontal line inside the box represents the estimated abundance (*i.e.*, the number of adult Lake Sturgeon in the area during the time of capture), the black dots represent the minimum and maximum estimates, and the vertical bar lines represent the upper and lower 95% confidence intervals.**

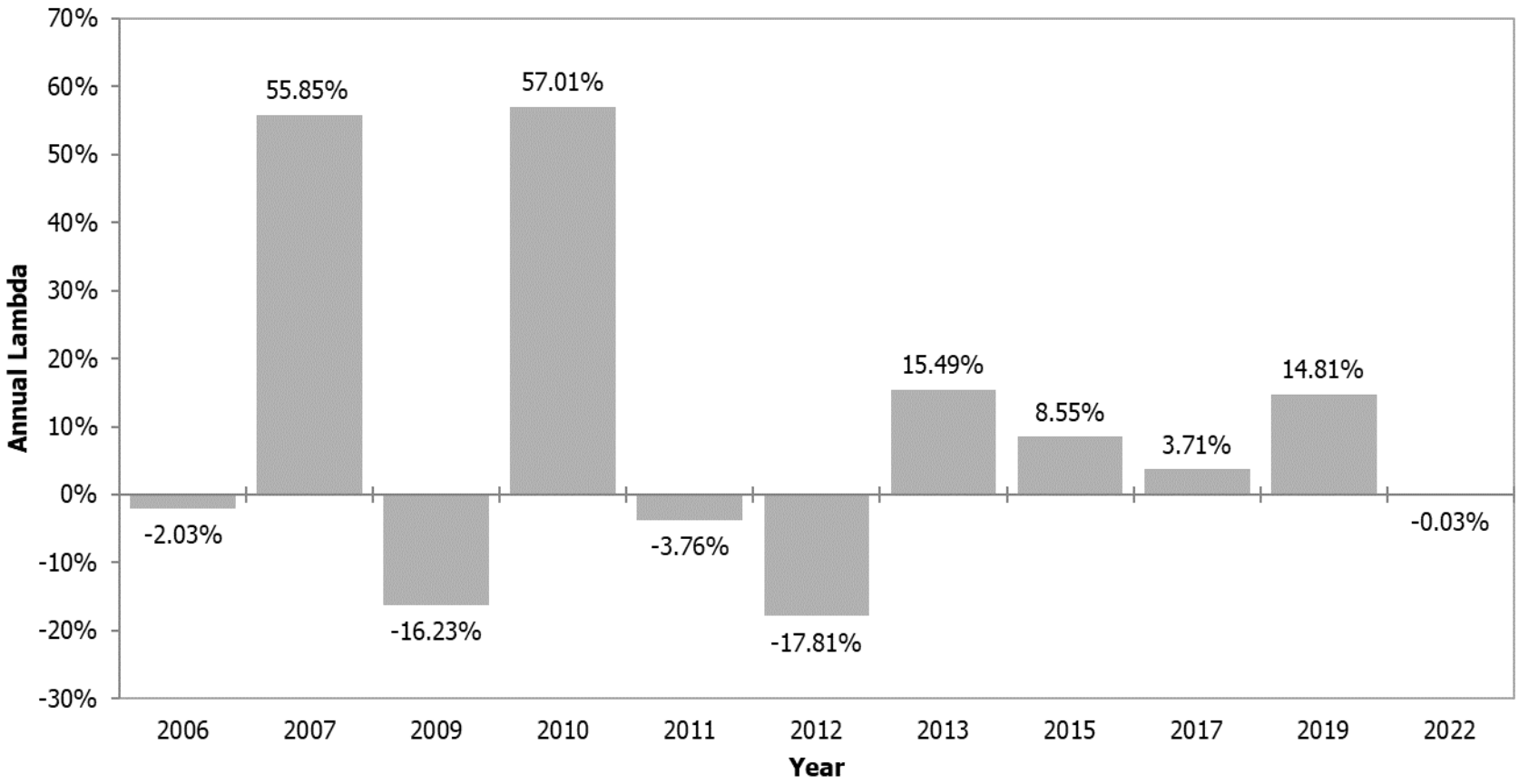


Figure 6. Annual percent change in adult Lake Sturgeon population growth estimates (lambda) based on the POPAN annual estimates for the Burntwood River. Percentages indicate change in population abundance between years.

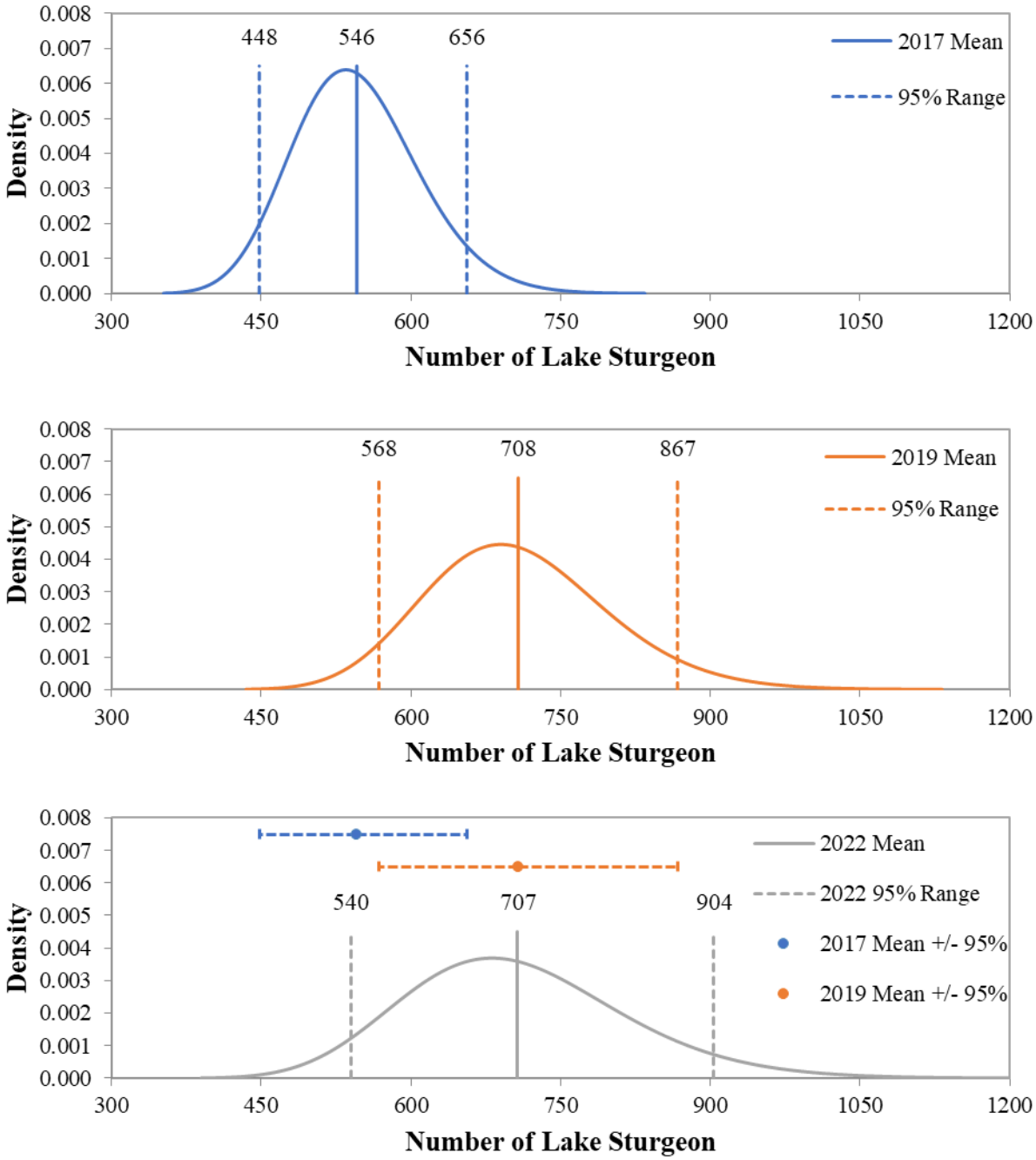


Figure 7. **Analysis of change in mean population abundance estimates for the Burntwood River between one sample period (2019 to 2022) and two sampling periods (2017 to 2022). A significant change from the 2017 estimate would be a 18% decrease or a 20% increase. A significant change from the 2018 estimate would be a 20% decrease or a 23% increase. The mean population estimate in 2022 showed a 30% increase from 2017 and a 0.1% increase from 2019.**

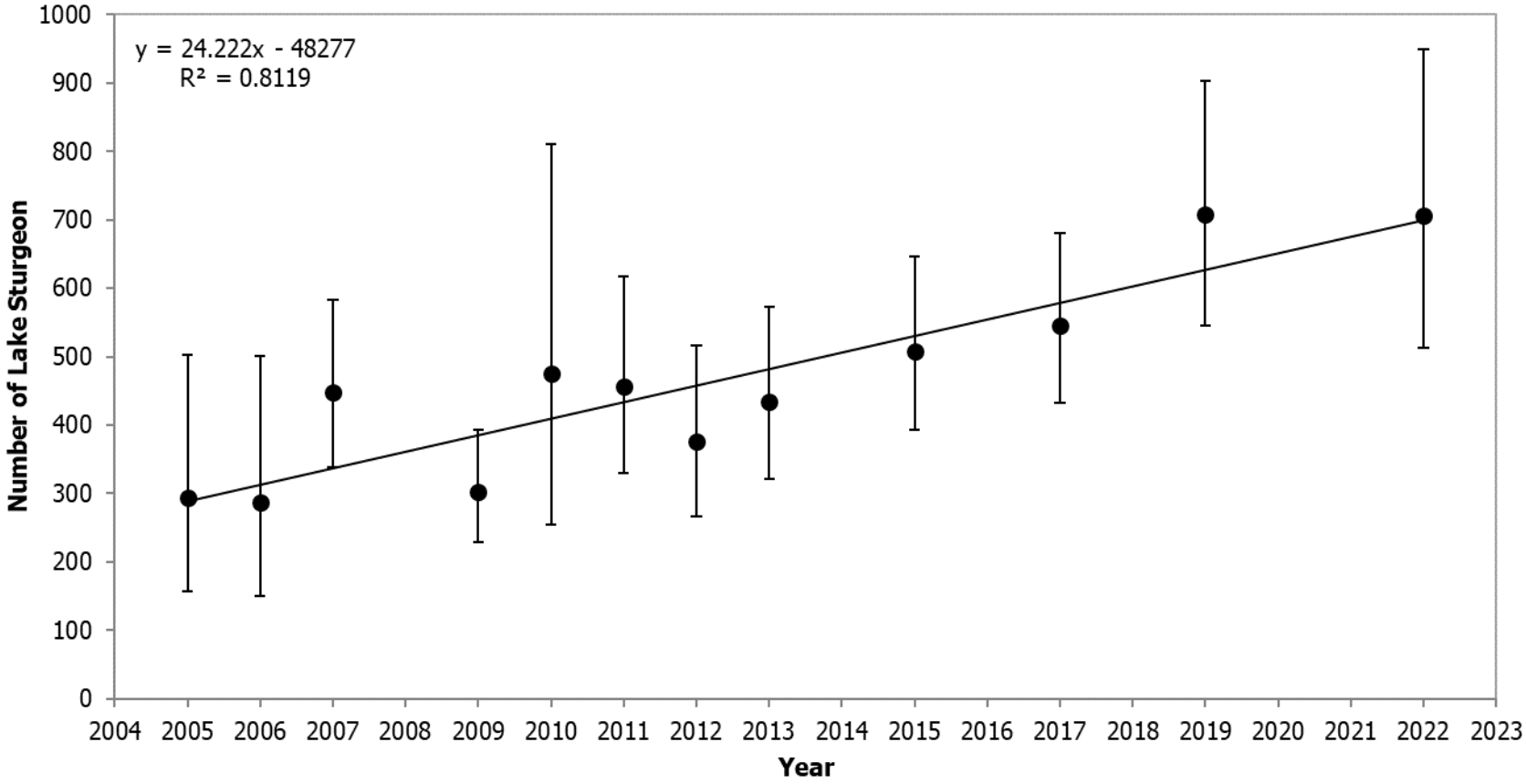


Figure 8. Abundance estimates for adult Lake Sturgeon in the Burntwood River by sampling year (2005–2022) showing a significant positive trend.

4.2 KELSEY GS AREA

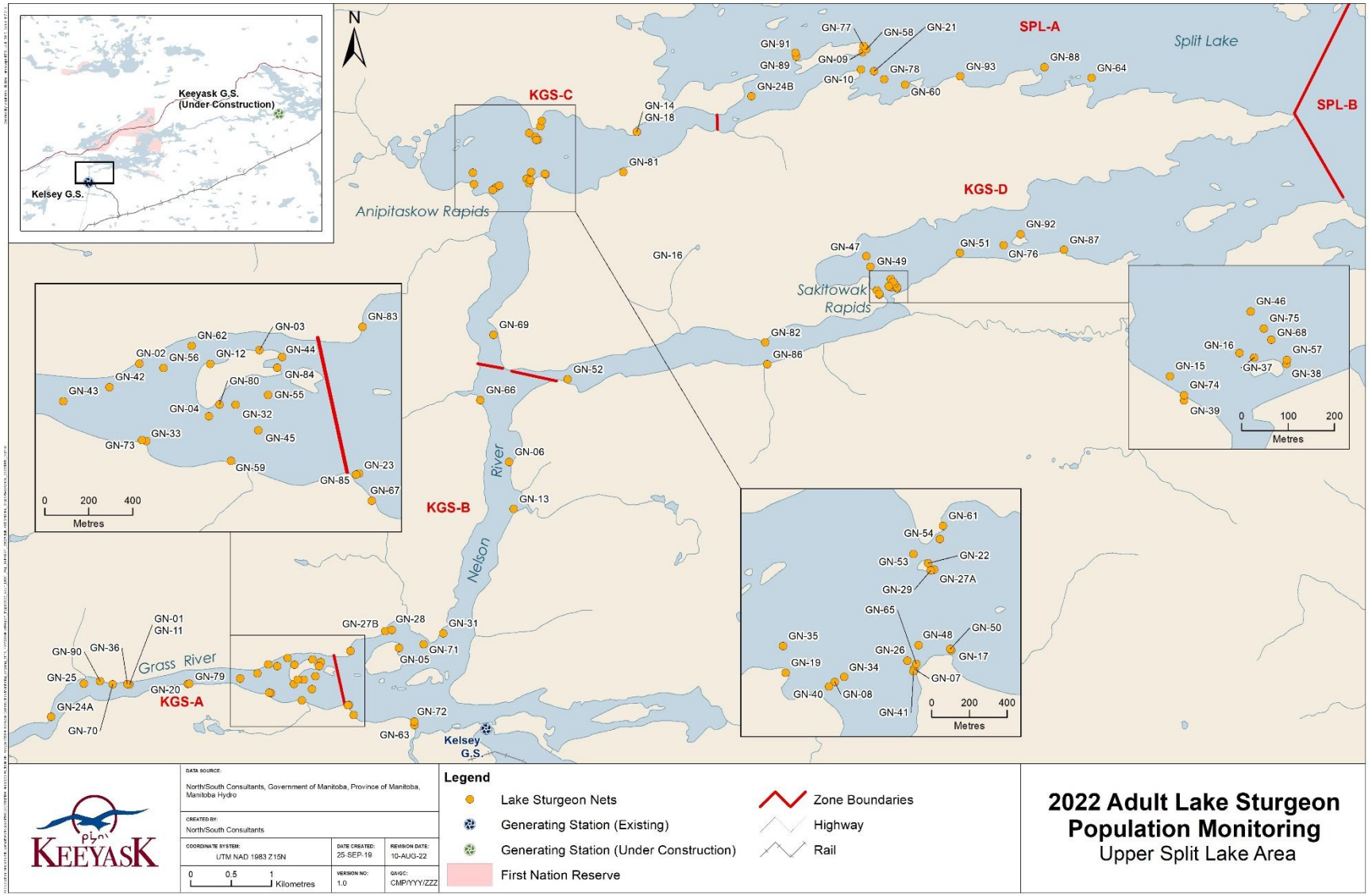
4.2.1 RELATIVE ABUNDANCE/CPUE

Large mesh gill nets were set at 95 sites in the Kelsey GS (KGS) Area between May 27 and July 4, 2022 (Map 3). Water temperature ranged from 5.2 to 16.1°C during the study (Figure 9). A total of 272 fish were captured, the majority of which (n = 231; 85%) were Lake Sturgeon (Table 7). No Lake Sturgeon mortalities occurred during sampling.

Table 7. Number of fish, by species, captured during adult Lake Sturgeon population monitoring in the Kelsey GS Area (including the Grass River), spring 2022.

Common Name	Scientific Name	Abbreviation	Kelsey GS Area	% of Catch
Channel Catfish	*Ictalurus punctatus*	CHCT	2	0.7
Common Carp	*Cyprinus carpio*	CMCR	4	1.5
Freshwater Drum	*Aplodinotus grunniens*	FRDR	6	2.2
Lake Sturgeon	***Acipenser fulvescens***	***LKST***	***231***	***84.9***
Northern Pike	*Esox lucius*	NRPK	23	8.5
Walleye	*Sander vitreus*	WALL	5	1.8
White Sucker	*Catostomus commersonii*	WHSC	1	0.4
Total			**272**	**100**

1. Does not include fish recaptured in the same waterbody in the season/year in which they were tagged.



Map 3. Sites fished with large mesh gill net gangs in the Kelsey GS Area, spring 2022.

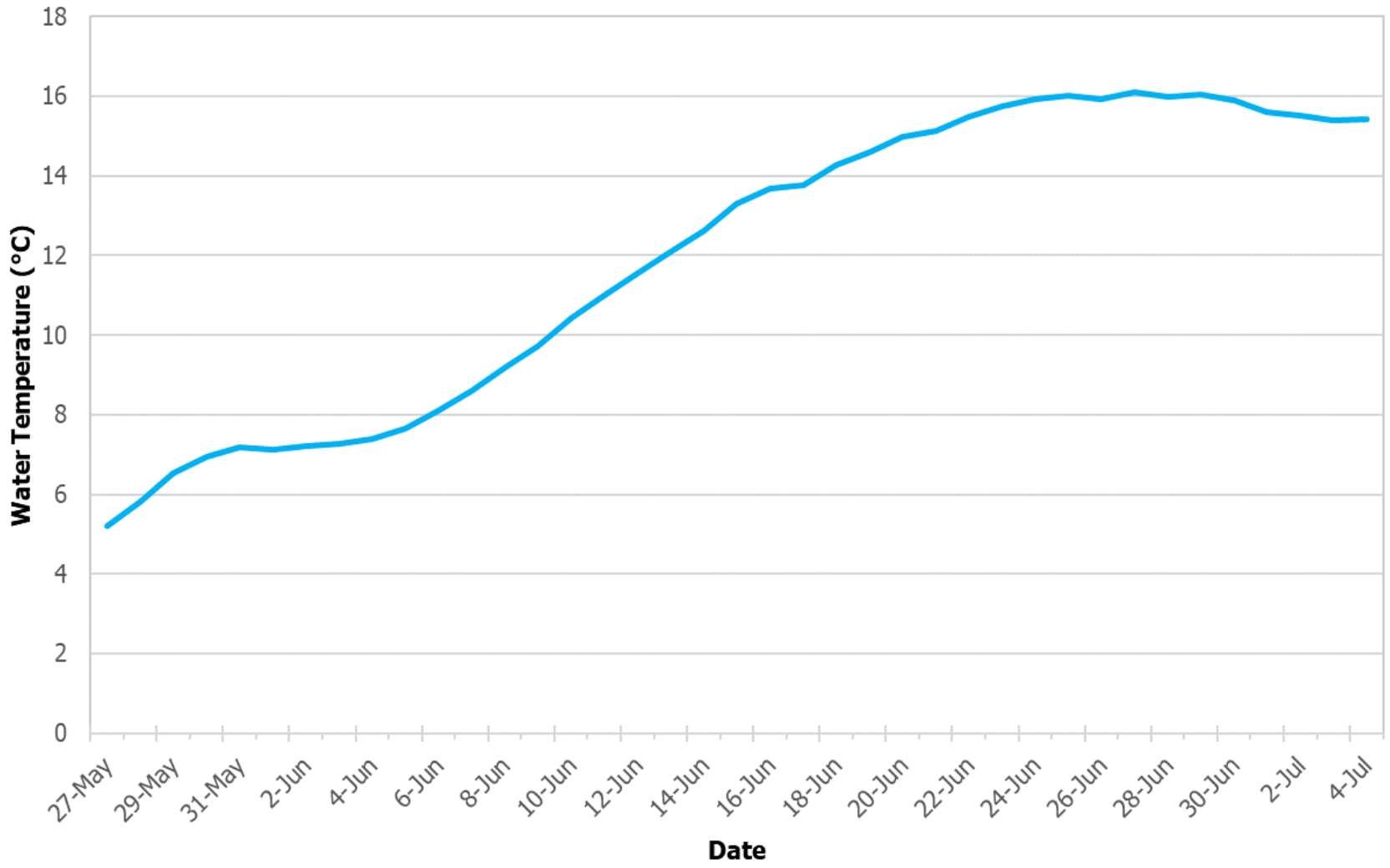


Figure 9. Mean daily water temperature of the Nelson River recorded at the Kelsey GS (Station #05UF791; Manitoba Hydro unpublished data), May 27 to July 4, 2022.

In total, 231 Lake Sturgeon were captured in 8,456 gill net hours, resulting in an overall CPUE of 0.66 LKST/91.4 m net/24 h (Table 8). Site-specific CPUE ranged from 0.0–2.6 LKST/91.4 m net/24 h. Gillnetting effort and CPUE was highest in Zone KGS-A (the area downstream of Kelsey GS including the Grass River) (Table 9).

Table 8. Lake Sturgeon catch-per-unit-effort (CPUE; # LKST/91.4 m net/24 h) values observed during mark/recapture studies in the Kelsey GS Area (including the Grass River), spring 2001-2022.

Year	# Sites	Total Lake Sturgeon[1]	Total Gill Net Hours[2]	Total CPUE
2001	44	13	2,813	0.12
2002	26	5	-	0.06
2005	20	7	1,753	0.10
2006	56	29	8,709	0.08
2007	78	69	13,150	0.13
2009	61	48	4,689	0.24
2010	5	1	239	0.10
2011	50	50	6,032	0.20
2013	150	125	7,088	0.42
2015	98	147	7,647	0.38
2017	63	147	8,387	0.43
2019	58	172	9,138	0.45
2022	**95**	**231**	**8,456**	**0.66**

1. Does not include fish recaptured in the same waterbody in the season/year in which they were tagged.
2. The effort has been corrected to account for panel length. For example, the duration of a gill net gang consisting of four panels (i.e., 91.4 m long) was doubled (i.e., equivalent of two 91.4 m gang sets).

Table 9. Number and catch-per-unit-effort (CPUE; # LKST/91.4 m net/24 h) values, by zone, observed during adult Lake Sturgeon population monitoring in the Kelsey GS Area (including the Grass River), spring 2022.

Zone	# Sites	Total Lake Sturgeon[1]	Total Gill Net Hours[2]	Total CPUE
KGS-A	27	146	4,065	0.86
KGS-B	14	26	1,040	0.60
KGS-C	22	16	1,139	0.34
KGS-D	19	24	1,384	0.42
SPL-A	13	19	828	0.55

1. Does not include fish recaptured in the same waterbody in the season/year in which they were tagged.
2. The effort (h) has been corrected to account for panel length set at each site. For example, the duration of a gill net gang consisting of four panels (i.e., 91.4 m long) was doubled (i.e., equivalent of two 91.4 m gang sets).

4.2.2 BIOLOGICAL METRICS

Lake Sturgeon captured in the KGS Area had a mean fork length of 920 mm (range: 427–1,460 mm), a mean weight of 6,234 g (range: 700–22,680 g), and a mean condition factor of 0.76 (range: 0.62–1.15) (Table 11). Two fish were unintentionally released prior to being measured. Of the 229 Lake Sturgeon measured, 195 were considered adults (FL ≥ 800 mm) and 34 were considered juveniles (FL < 800 mm). Lake Sturgeon measuring 850–999 mm FL were captured most frequently (n = 118), making up 52% of the total catch and 61% of the adult Lake Sturgeon catch (Figure 10).

Mean condition factor was significantly higher during baseline studies than both construction and operation, and higher during construction than operation for (2022) for all six FL intervals for which comparisons were possible (Figure 11). The length-weight relationship is presented in Figure 12. Sex and maturity were confirmed for one ripe male (Table 10).

Table 10. Sex and maturity data for Lake Sturgeon captured in the Kelsey GS Area (including the Grass River) during adult population monitoring, spring, 2001–2022.

Location	Year	Sex and Maturity[1]						# of Spawners[2]	Unknown maturity	Total
		Male			Female					
		7	8	9	2	3	4			
Kelsey GS Area	2001	-	-	-	-	-	-	-	13	13
	2002	-	-	-	-	-	-	-	5	5
	2005	-	-	-	-	-	-	-	7	7
	2006	-	1	-	1	-	-	2	27	29
	2007	-	1	-	-	-	-	1	59	60
	2009	-	-	-	-	-	-	-	45	45
	2010	-	-	-	-	-	-	-	1	1
	2011	-	-	-	-	-	-	-	46	46
	2013	3	-	-	-	1	-	4	119	123
	2015	1	2	-	-	-	-	3	143	146
	2017	-	7	2	-	-	-	9	138	147
	2019	1	-	-	-	-	-	1	171	172
	2022	**-**	**1**	**-**	**-**	**-**	**-**	**1**	**230**	**231**
Grass River[3]	2007	-	-	1	-	-	-	1	8	9
	2009	-	-	1	-	-	-	1	2	3
	2011	-	1	-	-	-	-	1	3	4
	2013	-	1	-	-	-	-	1	1	2

1. Refer to Section 3.1 for maturity codes.
2. Maturity status columns include recaptures of fish whose maturity status progressed between captures (*e.g.*, would include recaptures of fish initially captured in maturing condition and recaptured in ripe or spent condition), but the columns may not add up to the "# of Spawners" column since this only includes individual fish captured (*i.e.*, CYTR that were captured in different maturity classifications were only counted once).
3. Data analyzed separately for fish captured in the Grass River during these years.

Table 11. Mean fork length (mm), weight (g), and relative condition factor (K) of Lake Sturgeon captured during adult Lake Sturgeon population monitoring in the Kelsey GS Area (Upper Split Lake Area), spring 2001-2022.

Location	Year	Fork Length (mm)				Weight (g)				K		
		n[1]	Mean	Std[2]	Range	n	Mean	Std	Range	n	Mean	Range
Kelsey GS Area	2001	13	940	198	692–1,423	12	8,334	6,522	3,200–26,000	12	0.92	0.81–1.09
	2002	5	963	144	774–1,130	5	9,370	5,549	4,300–18,500	5	0.97	0.77–1.28
	2005	7	841	78	737–960	7	5,520	1,582	3,182–7,500	7	0.9	0.77–1.01
	2006	29	936	168	698–1,346	29	8,904	6,070	3,402–27,216	28	0.98	0.69–1.48
	2007	60	906	185	605–1,475	56	7,565	5,988	1,588–33,112	56	0.88	0.54–1.15
	2009	44	886	122	688–1,295	44	7,093	3,074	3,175–19,958	44	0.98	0.63–1.26
	2010	1	-	-	955	1	-		7,711	1	-	0.89
	2011	46	890	148	292–1,403	46	7,753	3,597	702–24,040	46	1.02	0.70–1.46
	2013	122	911	145	270–1,438	121	8,035	4,056	75–26,082	121	0.99	0.38–2.20
	2015	147	922	139	445–1,362	146	7,159	2,895	200–21,999	144	0.84	0.36–1.76
	2017	147	922	139	445-1,362	147	7,760	3,598	454-24,948	147	0.93	0.51-1.34
	2019	172	895	133	411-1,270	172	6,081	2,778	500-18,144	172	0.79	0.43-1.25
	2022	**229**	**920**	**125**	**427-1,460**	**228**	**6,234**	**2,848**	**700-22,680**	**228**	**0.76**	**0.62-1.15**
Grass River[3]	2007	9	1,191	248	840–1,640	9	21747	13,902	6,804–49,895	9	1.14	0.89–1.36
	2009	3	1,310	382	910–1,670	2	29257	32,395	6,350–52,163	2	0.74	0.56–0.91
	2011	4	1,353	335	888–1,650	4	32432	19,811	9,979–19,811	4	1.19	0.97–1.43
	2013	2	935	3	932–937	2	7598	340	7,257–7,938	2	0.93	0.90–0.10

1. Number of fish measured.
2. Standard deviation.
3. Data analyzed separately for fish captured in the Grass River during these years.

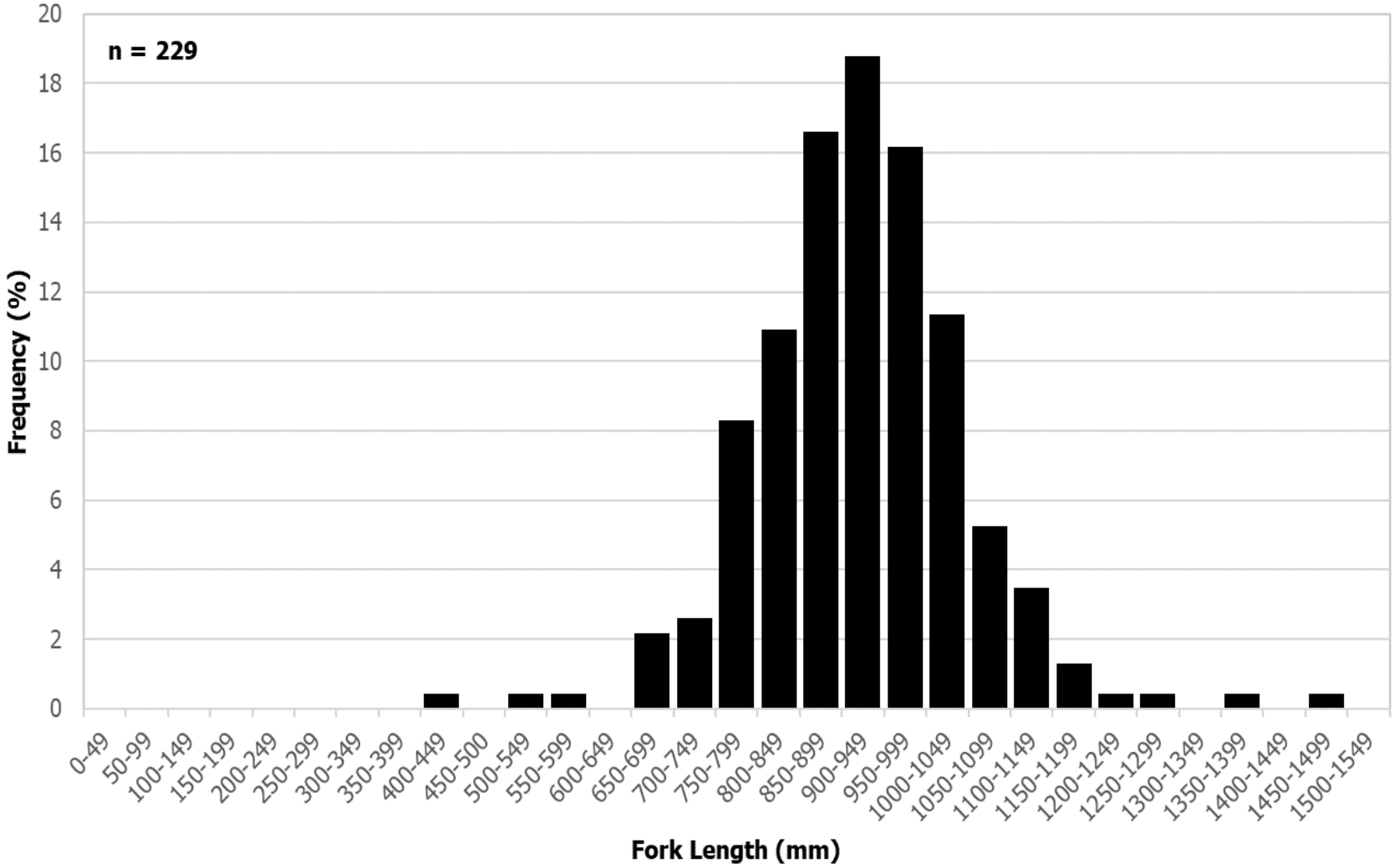


Figure 10. Length-frequency distribution for Lake Sturgeon captured in large mesh gill nets set in the Kelsey GS Area, spring 2022.

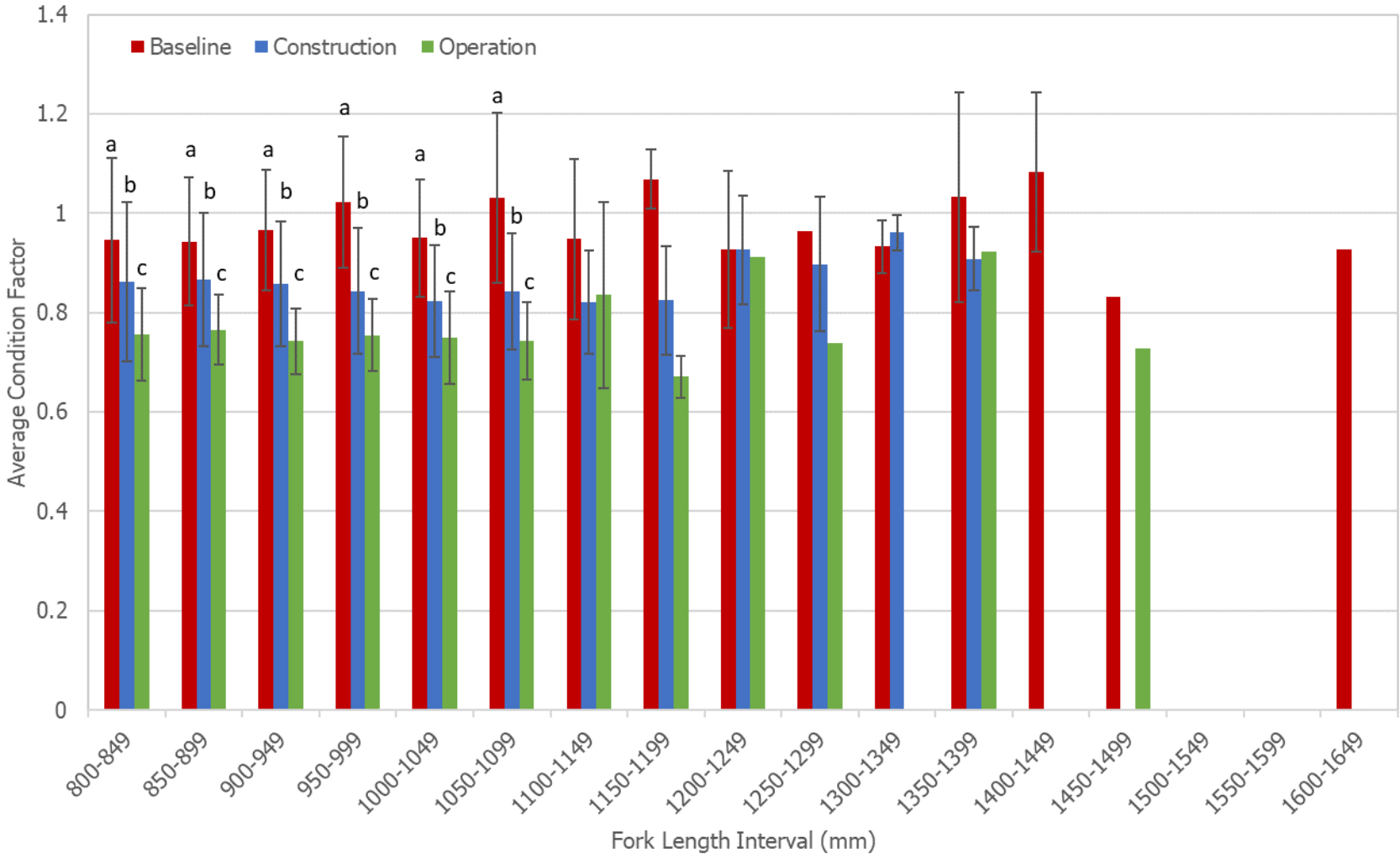


Figure 11. **Mean condition factor by 50 mm length intervals for adult (≥ 800 mm) Lake Sturgeon captured in the Kelsey GS Area during baseline studies (red bars), construction monitoring (blue bars), and operation monitoring (green bars). Significant differences were found in all Fork Length intervals between 800 and 1,099 mm (Kruskal-Wallis $p<0.05$). Error bars represent standard deviations.**

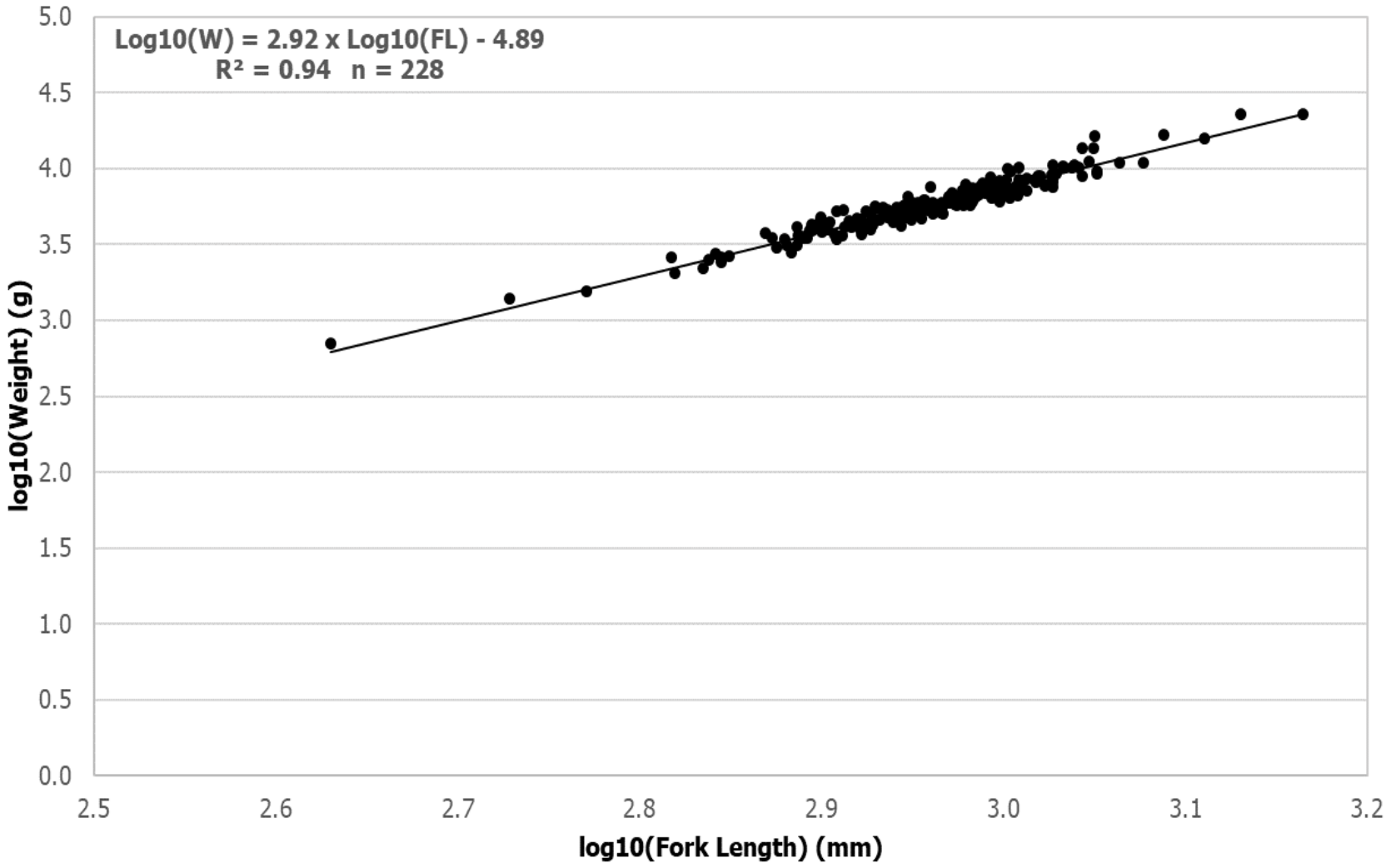


Figure 12. Length-weight regression for Lake Sturgeon captured in large mesh gill nets set in the Kelsey GS Area, spring 2022.

4.2.3 MOVEMENTS

Of the 231 Lake Sturgeon captured in the Kelsey GS Area, 74 were recaptures from previous gillnetting studies, two were hatchery-reared fish captured for the first time since stocking, and 155 were untagged fish (Table 12). Floy and PIT tags were applied to all 155 new captures (Table A1-2).

Both hatchery-reared fish were stocked in the Burntwood River at Zone BWR-B, one in 2014, and one in 2018. Neither have been captured since release.

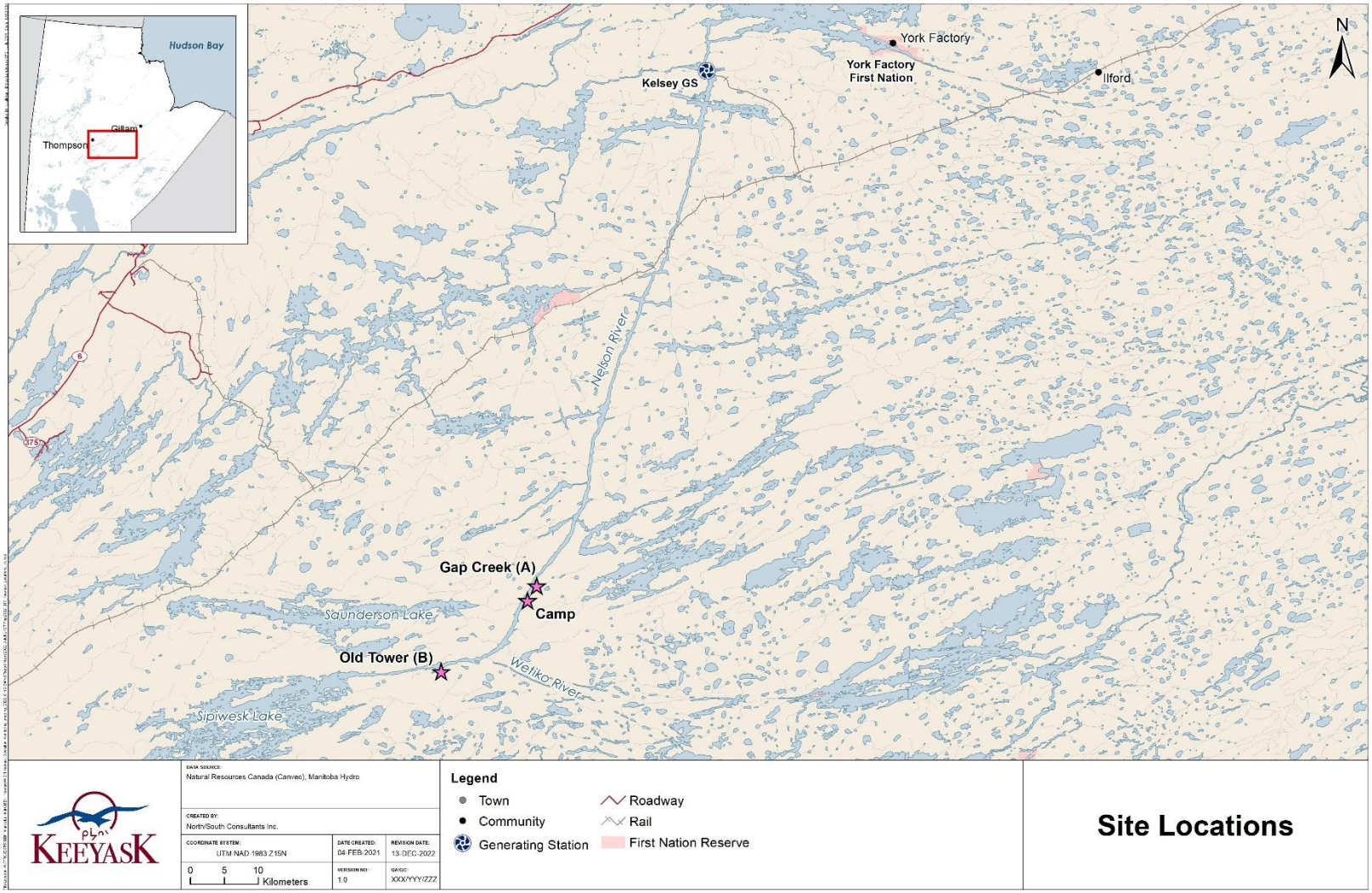
Excluding the two hatchery-reared fish, 32% of Lake Sturgeon were recaptures from previous gillnetting studies (n = 74). Nine of the 74 recaptured Lake Sturgeon (12%) lost their Floy tag since initial tagging or last recapture but retained their PIT tag. Biological and previous year capture information are provided in Table A2-2 and movements are summarized below.

- Thirty-three (45%) were last captured in the Nelson River between the Kelsey GS and Split Lake.
- Eleven (15%) last captured in Split Lake near the outlet of the Nelson River (SPL-A).
- Seven (9%) were last recaptured in the Burntwood River between 2009 and 2019.
- Two (3%) were captured in the Burntwood River in 2022:
    - One (Floy #114182) was tagged in the Burntwood River in 2019 and was recaptured in the same area on June 8, 2022. It was then captured downstream of the Kelsey GS on June 25.
    - One (Floy #123311) was tagged in the Burntwood River on June 11, 2022 and was recaptured on July 3 in Split Lake (SPL-A).
- Three (4%) were tagged upstream of Kelsey GS during spawning studies conducted by the Nelson River Sturgeon Board (Map 4):
    - One (Floy #4655) was tagged on July 5, 2014, at Gap Creek on the Nelson River approximately 81 km upstream of the Kelsey GS (Site ID: Gap Creek A).
    - One (Floy #4081) was tagged on June 14, 2014, on the Nelson River near the Landing River Spawn Camp approximately 85 km upstream of the Kelsey GS (Site ID: Camp).
    - One (Floy #4034) was tagged on June 6, 2015, on the Nelson River at the Old Tower approximately 14 km downstream of the outlet of Sipiwesk Lake and 102 km upstream of the Kelsey GS (Site ID: Old Tower B).

Table 12. Recapture data for Lake Sturgeon captured in the Kelsey GS Area during adult population monitoring, spring 2002–2022.

Recapture Location	Year	Original Tagging / Last Capture Location[2]							Total Recaptures[1]	Total LKST Captured	% Recaptures
		U/S of Kelsey GS	D/S of Kelsey GS	Burntwood River	Odei River	Split Lake	D/S of Birthday Rapids	Gull Lake			
Kelsey GS Area	2002	0	0	0	0	0	0	0	0	5	0.0
	2005	0	0	0	0	0	0	0	0	7	0.0
	2006	0	2	0	0	0	1	0	3	29	10.3
	2007	1	5	1	0	0	0	1	8	69	11.6
	2009	0	12	0	0	0	0	0	12	48	25.0
	2010	0	1	0	0	0	0	0	0	1	0.0
	2011	0	11	1	0	0	0	0	12	50	24.0
	2013	1	17	5	0	0	3	1	27	125	21.6
	2015	0	21	7	0	0	2	2	32	147	21.8
	2017	1	29	7	0	0	1	4	42	147	28.6
	2019	2	36	4	0	4	0	3	49	172	28.5
	2022	**3**	**33**	**9**	**0**	**11**	**0**	**18**	**74[3]**	**231**	**32.0**

1. Does not include fish recaptured in the same waterbody in the season/year in which they were tagged; nor does it include hatchery-reared fish that were captured for the first time since release
2. Initial tagging location of fish recaptured for the very first time since tagging or last known location of fish caught multiple times over multiple years.
3. Includes two fish captured and tagged in the Burntwood River during the current study.



Map 4. Initial tagging locations of three Lake Sturgeon tagged upstream of the Kelsey GS and recaptured in the Kelsey GS Area, spring 2022.

- Eighteen (24%) were last captured in the Keeyask reservoir.
    - Sixteen were recaptured for the first time since tagging. Of these fish, one was tagged in 2008, two in 2010, one in 2012, three in 2014, three in 2016, four in 2018, and two in 2021.
    - Two were previously recaptured in the Keeyask reservoir, one in 2018 and one in 2021.

4.2.4 POPULATION ESTIMATION

The population estimate for adult Lake Sturgeon (measuring ≥ 800 mm FL) in the Kelsey GS Area in 2022 was 957 individuals (95% CI: 586–1,563), which is higher than previous years (Figure 13; Table A3-1). The estimated annual survival (2004–2021) was 86%. The annual population growth rate (lambda) has been increasing since 2011 (other than a slight decrease in 2019) indicating that the population might be increasing (Figure 14).

The mean population abundance in 2022 increased significantly from both 2017 and 2019 (Figure 15). Overall, abundance estimates calculated between 2005 and 2022 show a positive although not significant trend ($r^2 = 0.09$, $F = 0.82$, $p = 0.39$) (Figure 16).

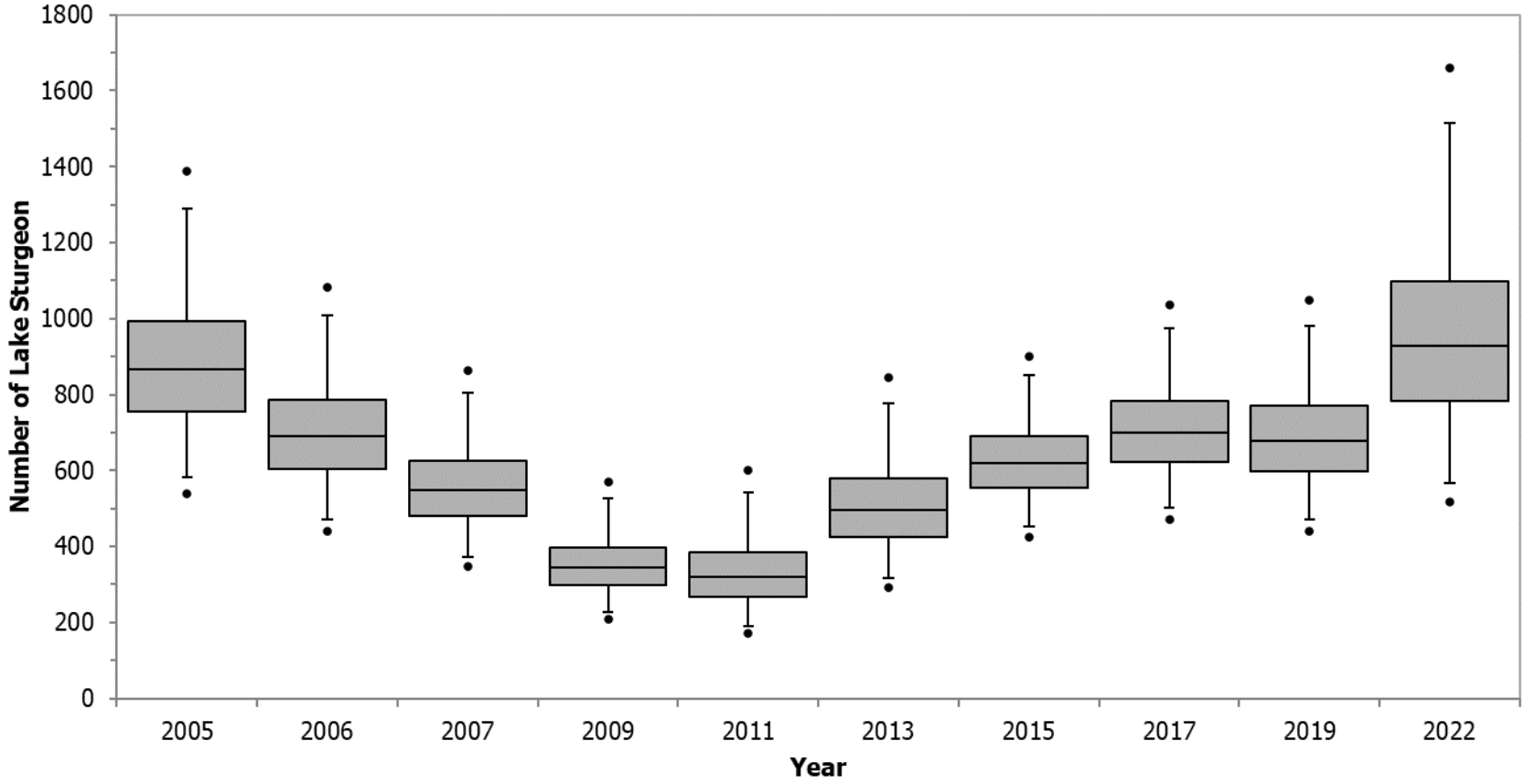


Figure 13. **Adult Lake Sturgeon abundance estimates based on POPAN best model for the Kelsey GS Area (2005–2022). Horizontal line inside the box represents the estimated abundance (*i.e.*, the number of adult Lake Sturgeon in the area during the time of capture), the black dots represent the minimum and maximum estimates, and the vertical bar lines represent the upper and lower 95% confidence intervals.**

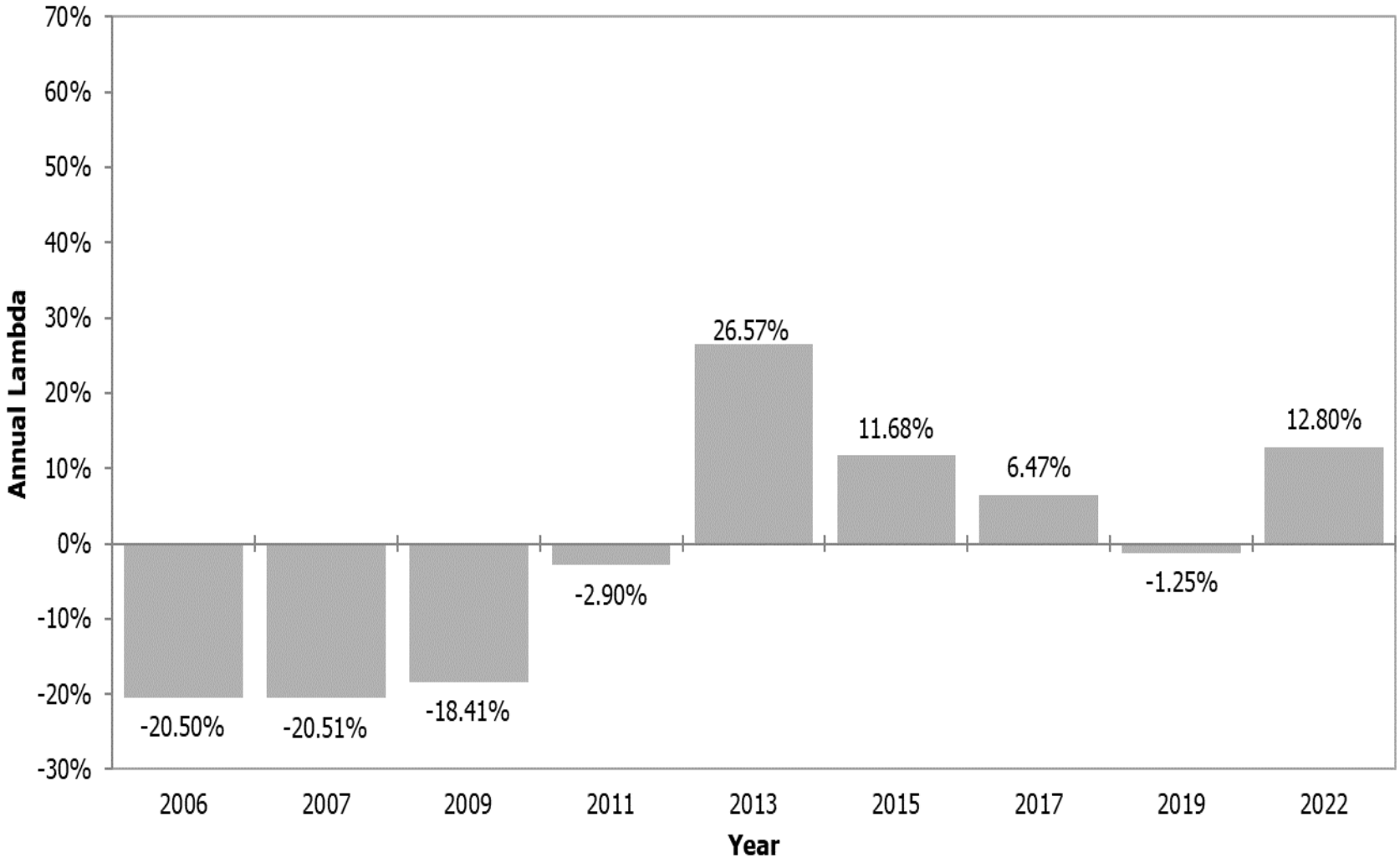


Figure 14. Annual percent change in adult Lake Sturgeon population growth estimates (lambda) based on the POPAN annual estimates in the Kelsey GS Area. Percentages indicate change in population abundance between years.

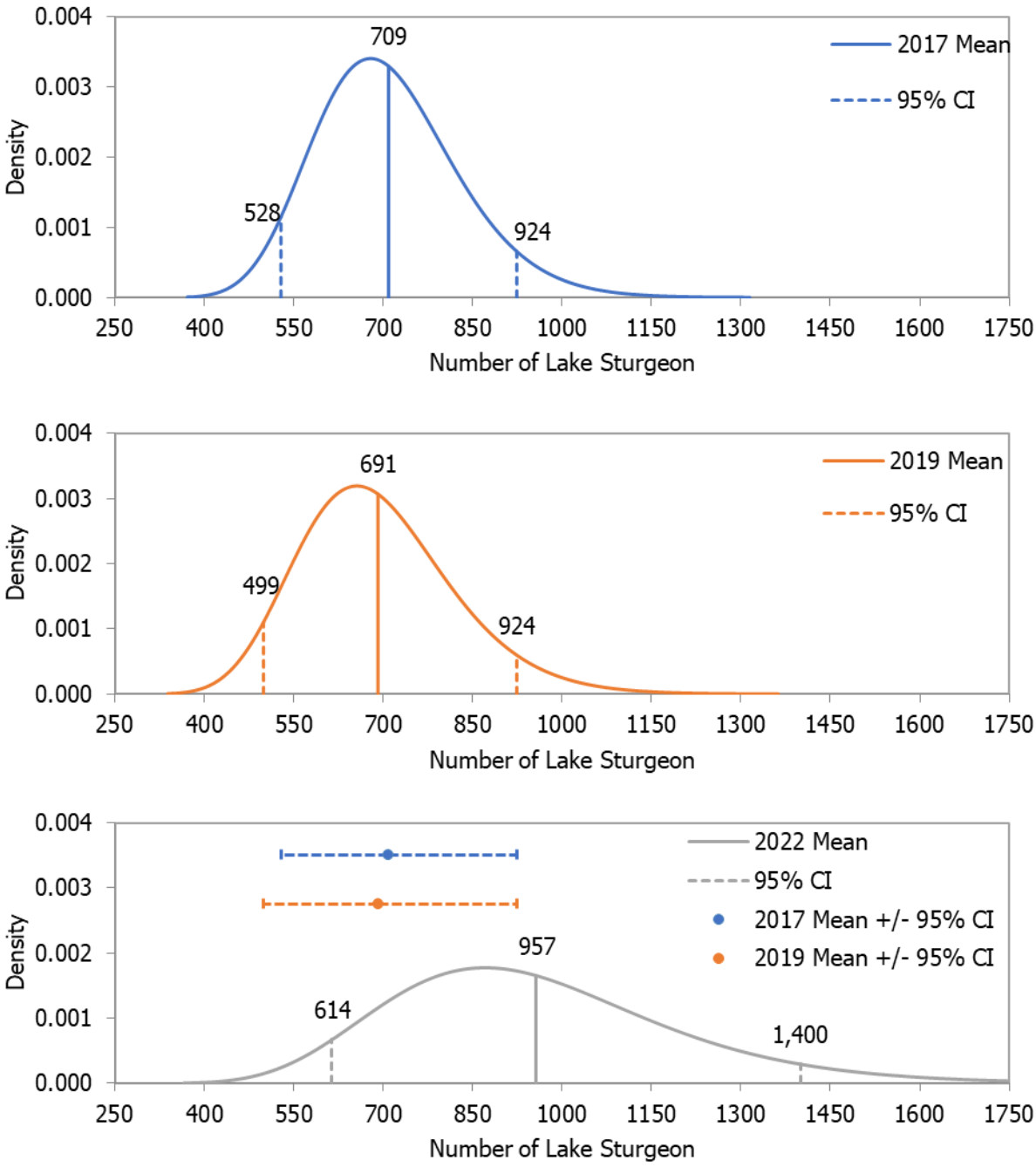


Figure 15. Analysis of change in mean population abundance estimates for the Kelsey GS Area between one sample period (2019 to 2022) and two sampling periods (2017 to 2022). A significant change from the 2017 estimate would be a 25% decrease or a 30% increase. A significant change from the 2019 estimate would be a 28% decrease or a 34% increase. The mean population estimate in 2022 showed a significant increase from both 2017 (35%) and 2019 (38%).

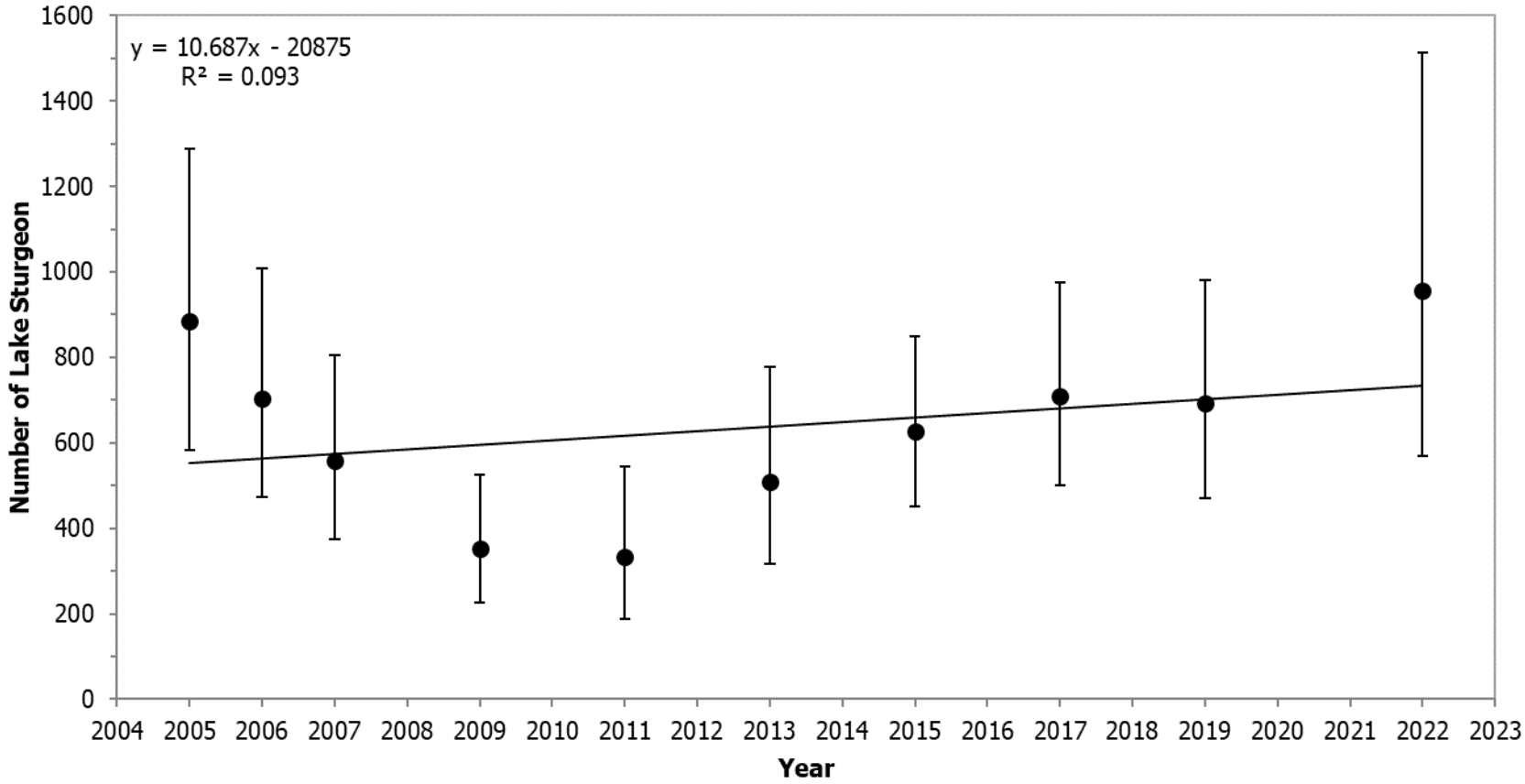


Figure 16: Abundance estimates for adult Lake Sturgeon in the Kelsey GS Area by sampling year (2005–2022) no significant trend.

4.3 KEEYASK RESERVOIR

4.3.1 RELATIVE ABUNDANCE/CPUE

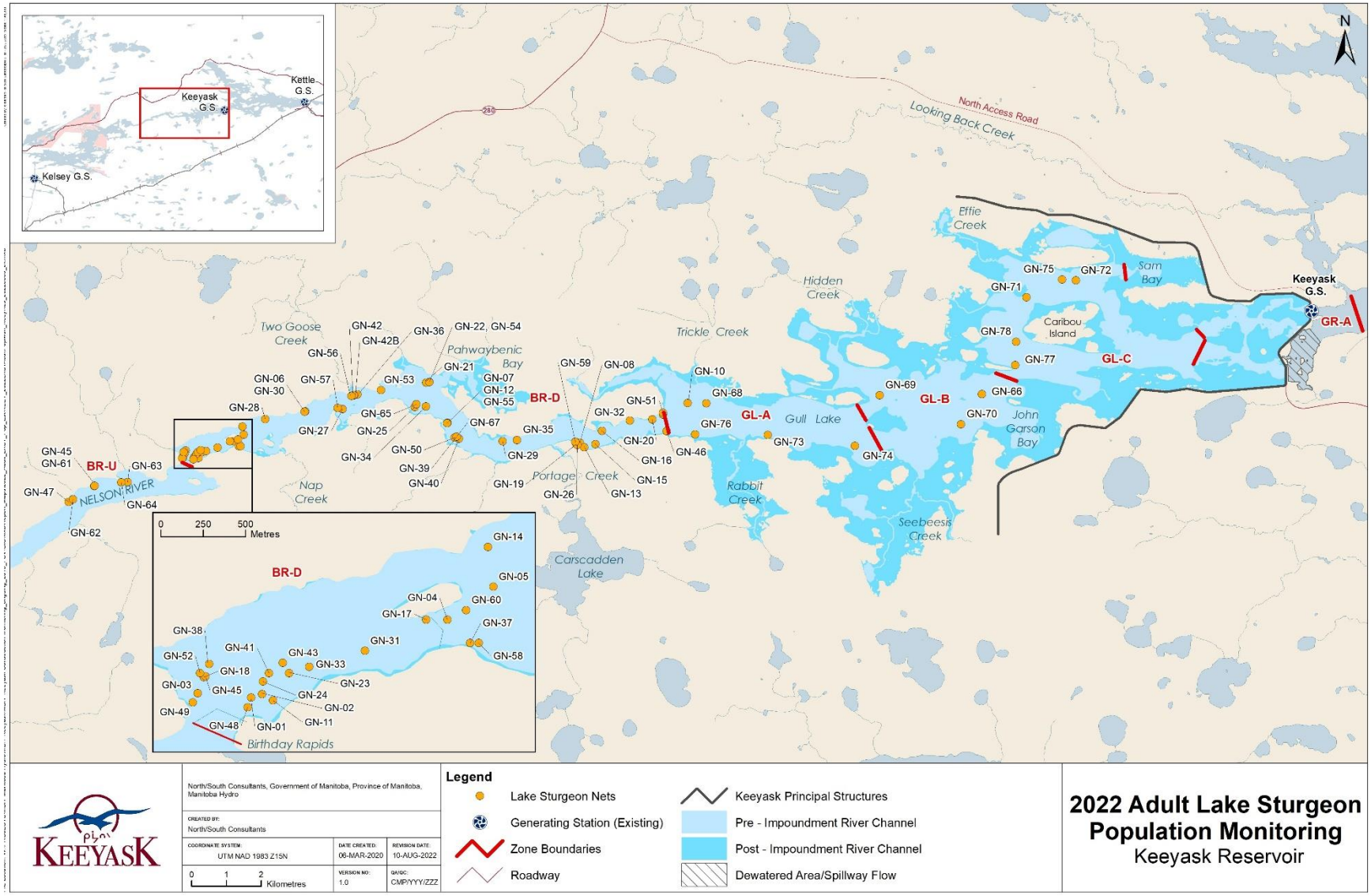
Gill nets were set at 79 sites between Clark Lake and the Keeyask GS between May 27 and July 3, 2022 (Map 5). Water temperature ranged from 5.1 to 16.4°C during the study (Figure 17). A total of 72 fish were captured, the majority of which (n = 63; 88%) were Lake Sturgeon (Table 13). No Lake Sturgeon mortalities occurred during sampling.

Table 13. Number of fish, by species, captured during adult Lake Sturgeon population monitoring in the Keeyask reservoir, spring 2022.

Common Name	Scientific Name	Abbreviation	Keeyask reservoir[1,2]	% of Catch
Lake Sturgeon	***Acipenser fulvescens***	***LKST***	***63***	***87.5***
Northern Pike	*Esox lucius*	NRPK	8	11.1
Walleye	*Sander vitreus*	WALL	1	1.4
Total			**72**	**100**

1. Does not include fish recaptured in the same waterbody in the season/year in which they were tagged
2. Includes catch and effort from gillnetting in the reach upstream of Birthday Rapids (BR-U).

In total, 63 Lake Sturgeon were captured in 11,057 gill net hours, resulting in an overall CPUE of 0.14 LKST/91.4 m net/24 h (Table 14). Site-specific CPUE ranged from 0.0–1.6 LKST/91.4 m net/24 h. Gillnetting effort and CPUE was highest in Zone BR-D (the reach of the Nelson River downstream of Birthday Rapids) (Map 5; Table 15).



Map 5. Sites fished with large mesh gill net gangs in the Keeyask reservoir, spring 2022.

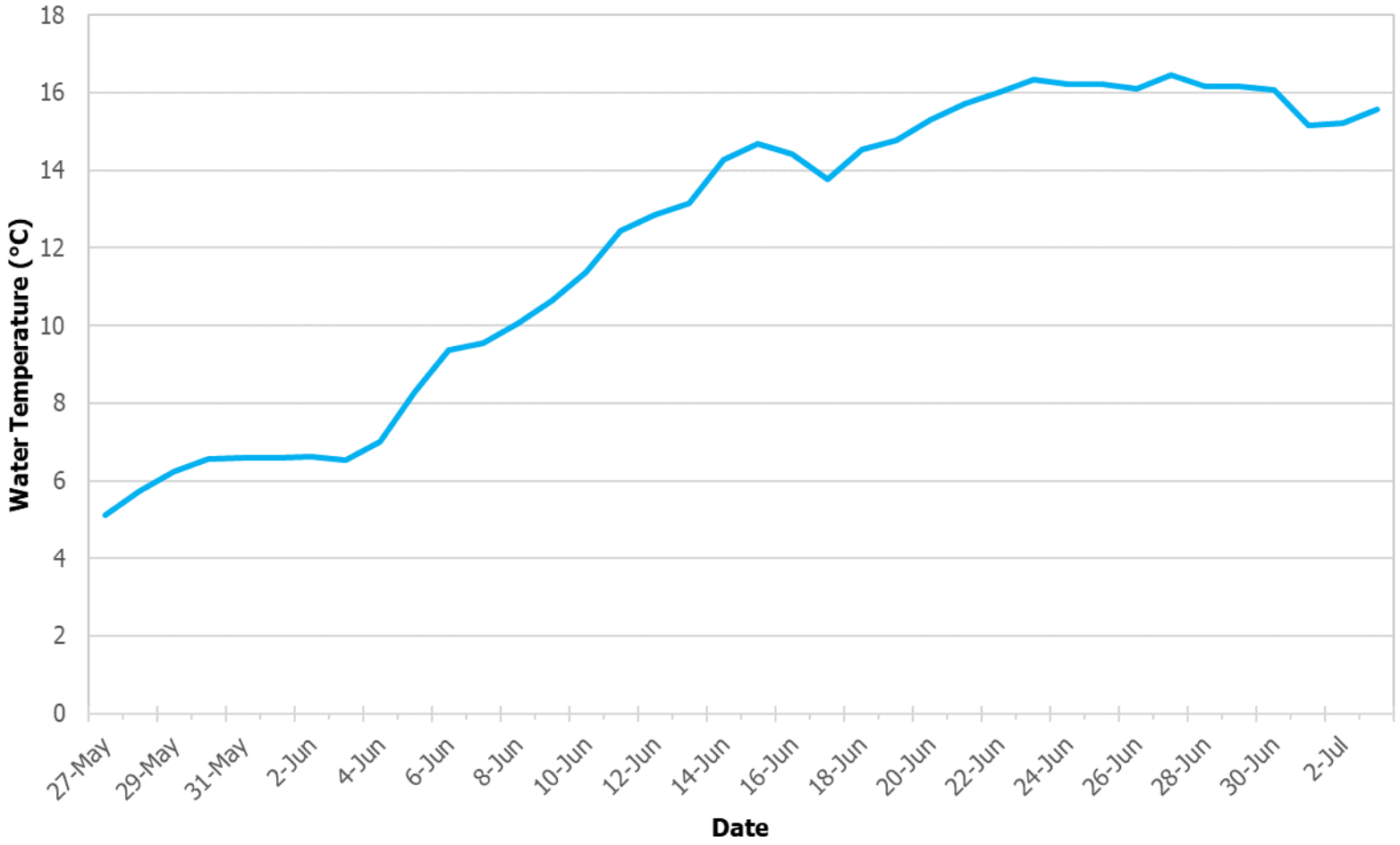


Figure 17. Mean daily water temperature of the Nelson River in the Keeyask reservoir May 27 to July 3, 2022.

Table 14. Lake Sturgeon catch-per-unit-effort (CPUE; # LKST/91.4 m net/24 h) values observed during mark/recapture studies in the Keeyask reservoir, spring 2001-2022.

Year	# Sites	Total Lake Sturgeon[1]	Total Gill Net Hours[2]	Total CPUE
2001	37	60	4,538	0.32
2002	19	59	4,918	0.29
2003	30	85	7,565	0.27
2004	17	51	6,907	0.18
2006	22	150	12,587	0.29
2008	16	52	9,960	0.13
2010	18	65	9,128	0.17
2011[3]	34	33	6,734	0.12
2012[3]	32	114	10,018	0.27
2014	62	239	17,897	0.32
2016[3]	55	189	15,503	0.29
2018[3]	49	232	16,763	0.33
2021[3]	61	178	7,911	0.54
2022[3]	**79**	**63**	**11,057**	**0.14**

1. Does not include fish recaptured in the same waterbody in the season/year in which they were tagged.
2. The effort has been corrected to account for panel length. For example, the duration of a gill net gangs consisting of four panels (i.e., 91.4 m long) was doubled (i.e., equivalent of two 91.4 m gang sets).
3. Includes catch and effort from gillnetting in the reach upstream of Birthday Rapids (BR-U).

Table 15. Number and catch-per-unit-effort (CPUE; # LKST/91.4 m net/24 h) values, by zone, observed during adult Lake Sturgeon population monitoring in the Keeyask reservoir, spring 2022.

Zone	# Sites	Total Lake Sturgeon[1]	Total Gill Net Hours[2]	Total CPUE
BR-U	6	0	831	0.00
BR-D	60	58	9,043	0.15
GL-A	5	1	486	0.05
GL-B	3	2	415	0.12
GL-C	5	2	403	0.12

1. Does not include fish recaptured in the same waterbody in the season/year in which they were tagged.
2. The effort (h) has been corrected to account for panel length set at each site. For example, the duration of a gill net gang consisting of four panels (i.e., 91.4 m long) was doubled (i.e., equivalent of two 91.4 m gang sets).

4.3.2 BIOLOGICAL METRICS

Lake Sturgeon had a mean fork length of 843 mm (range: 400–1,495 mm), a mean weight of 6,020 g (range: 475–40,000 g), and a mean condition factor of 0.76 (range: 0.41–1.27) (Table 17). Of the 63 Lake Sturgeon measured, 32 were considered adults (FL ≥ 800 mm) and 31 were considered juveniles (FL < 800 mm). Lake Sturgeon measuring 750–799 mm FL were captured most frequently (n = 13), making up 21% of the total and 42% of the juvenile Lake Sturgeon catch (Figure 18).

Too few Lake Sturgeon were captured in 2022 to compare mean condition factor between sampling periods. Mean condition factor ranged from 0.57–1.49 during baseline (2001–2014), 0.38–1.46 during construction (2016, 2018, and 2021), and 0.41–1.27 during operation (2022) (Figure 19). The length-weight relationship is presented in Figure 20.

Sex and maturity were confirmed for three fish including one pre-spawn male, one spawning male, and one pre-spawn female. Fish were captured between June 10 and 16 when water temperatures ranged from 11.4 to 14.4°C (Table 16).

Table 16. Sex and maturity data for Lake Sturgeon captured in the Keeyask reservoir (Birthday Rapids to the Keeyask GS), spring, 2001–2022.

Year[1]	Sex and Maturity[2]						# of Spawners[3]	Unknown maturity	Total
	Male			Female					
	7	8	9	2	3	4			
2001	5	10	1	3	-	-	19	41	60
2002	8	1	5	-	-	-	14	46	60
2003	3	-	-	1	-	-	4	89	93
2004	3	2	-	-	-	-	5	46	51
2006	13	3	-	-	-	-	16	134	150
2008	1	1	1	-	-	-	3	49	52
2010	5	3	-	-	-	-	8	57	65
2011*	6	4	1	1	1	2	15	19	34
2012*	1	4	2	-	-	-	7	109	116
2014	8	7	2	4	-	3	21	227	248
2016*	16	2	-	2	2	-	22	168	190
2018*	13	4	-	1	-	-	18	217	235
2021	14	5	-	-	1	-	20	158	178
2022	**1**	**1**	**-**	**1**	**-**	**-**	**3**	**60**	**63**

1. An * indicates that a few individuals from the Nelson River between Clark Lake to Birthday Rapids are included in the analysis.
2. Refer to Section 3.1 for maturity codes.
3. Maturity status columns include recaptures of fish whose maturity status progressed between captures (*e.g.*, would include recaptures of fish initially captured in maturing condition and recaptured in ripe or spent condition), but the columns may not add up to the "# of Spawners" column since this only includes individual fish captured (i.e., CYTR that were captured in different maturity classifications were only counted once).

Table 17. Mean fork length (mm), weight (g), and relative condition factor (K) of Lake Sturgeon captured during adult Lake Sturgeon population monitoring in the Keeyask reservoir, spring 2001–2022.

Year[1]	Fork Length (mm)				Weight (g)				K		
	n[2]	Mean	Std[3]	Range	n	Mean	Std	Range	n	Mean	Range
2001	79	1,022	148	739-1,355	78	9,984	5,059	3,500-24,000	78	0.88	0.64-1.26
2002	67	1,055	149	680-1,415	66	12,198	6,367	2,722-34,020	66	0.97	0.73-1.44
2003	52	1,067	148	700-1,540	87	11,949	6,681	3,000-54,431	87	0.94	0.67-1.49
2004	51	1,149	152	870-1,468	51	14,115	6,747	5,443-31,298	51	0.87	0.67-1.10
2006	150	1,003	217	300-1,550	146	10,343	7,071	1,134-43,091	146	0.86	0.61-1.44
2008	52	1,057	223	648-1,551	50	12,186	8,207	2,268-40,823	50	0.87	0.66-1.09
2010	65	901	267	443-1,390	65	8,056	6,977	500-29,937	65	0.83	0.57-1.11
2011*	34	1,090	219	664-1,610	34	13,209	9,052	2,268-43,092	34	0.89	0.61-1.19
2012*	116	844	284	330-1,620	116	7,536	8,214	200-37,648	116	0.85	0.51-1.23
2014	239	838	229	449-1,640	238	6,111	5,873	650-29,710	238	0.82	0.38-1.39
2016*	189	872	229	301-1,439	184	7,569	6,531	227-33,566	184	0.90	0.49-1.46
2018*	235	850	189	436-1,550	235	5,960	4,960	318-30,844	235	0.81	0.28-1.43
2021	178	908	189	401-1,435	178	6,892	4,760	450-27,216	178	0.82	0.61-1.54
2022	**63**	**843**	**234**	**400-1,495**	**63**	**6,020**	**7,193**	**475-40,000**	**63**	**0.76**	**0.41-1.27**

1. An * indicates that a few individuals from the Nelson River between Clark Lake to Birthday Rapids are included in the analysis.
2. Number of fish measured.
3. Standard deviation.

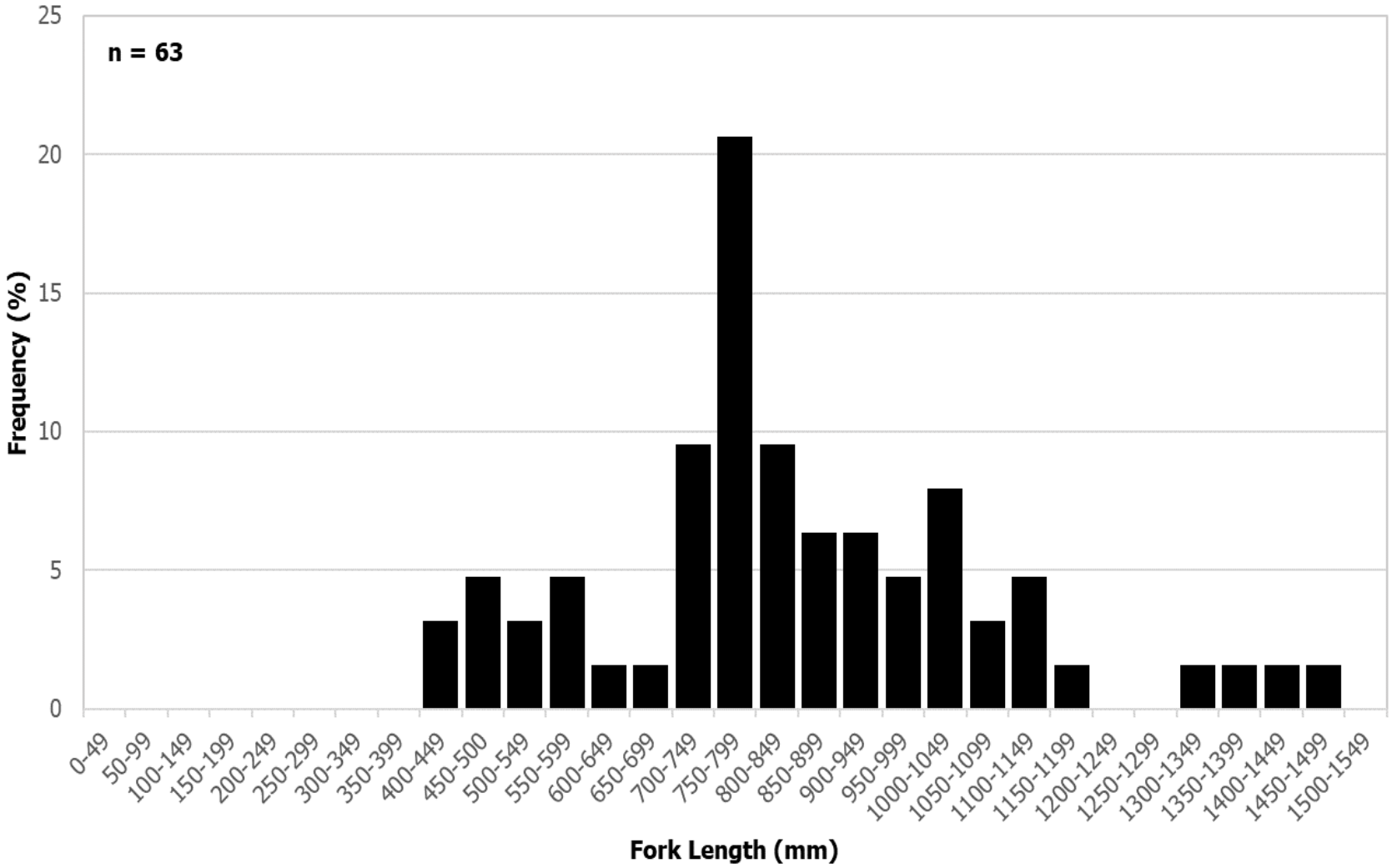


Figure 18. Length-frequency distribution for Lake Sturgeon captured in large mesh gill nets set in the Keeyask reservoir, spring 2022.

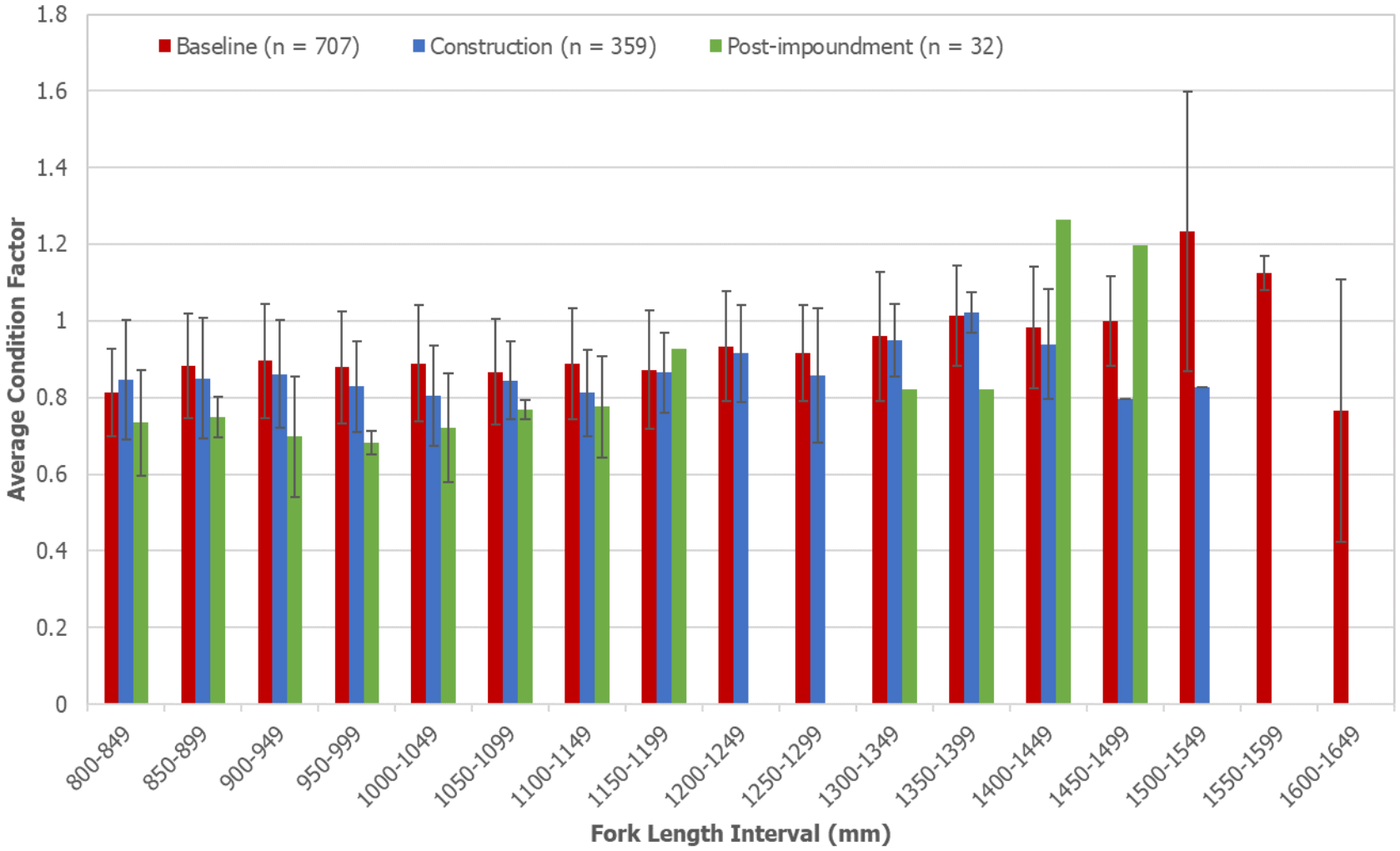


Figure 19. Mean condition factor by 50 mm length intervals for adult (≥ 800 mm) Lake Sturgeon captured in the Keeyask reservoir during baseline studies (red bars), construction monitoring (blue bars), and operation monitoring (green bars). Too few fish were captured post-impoundment to statistically compare any Fork Length interval. Error bars represent standard deviations.

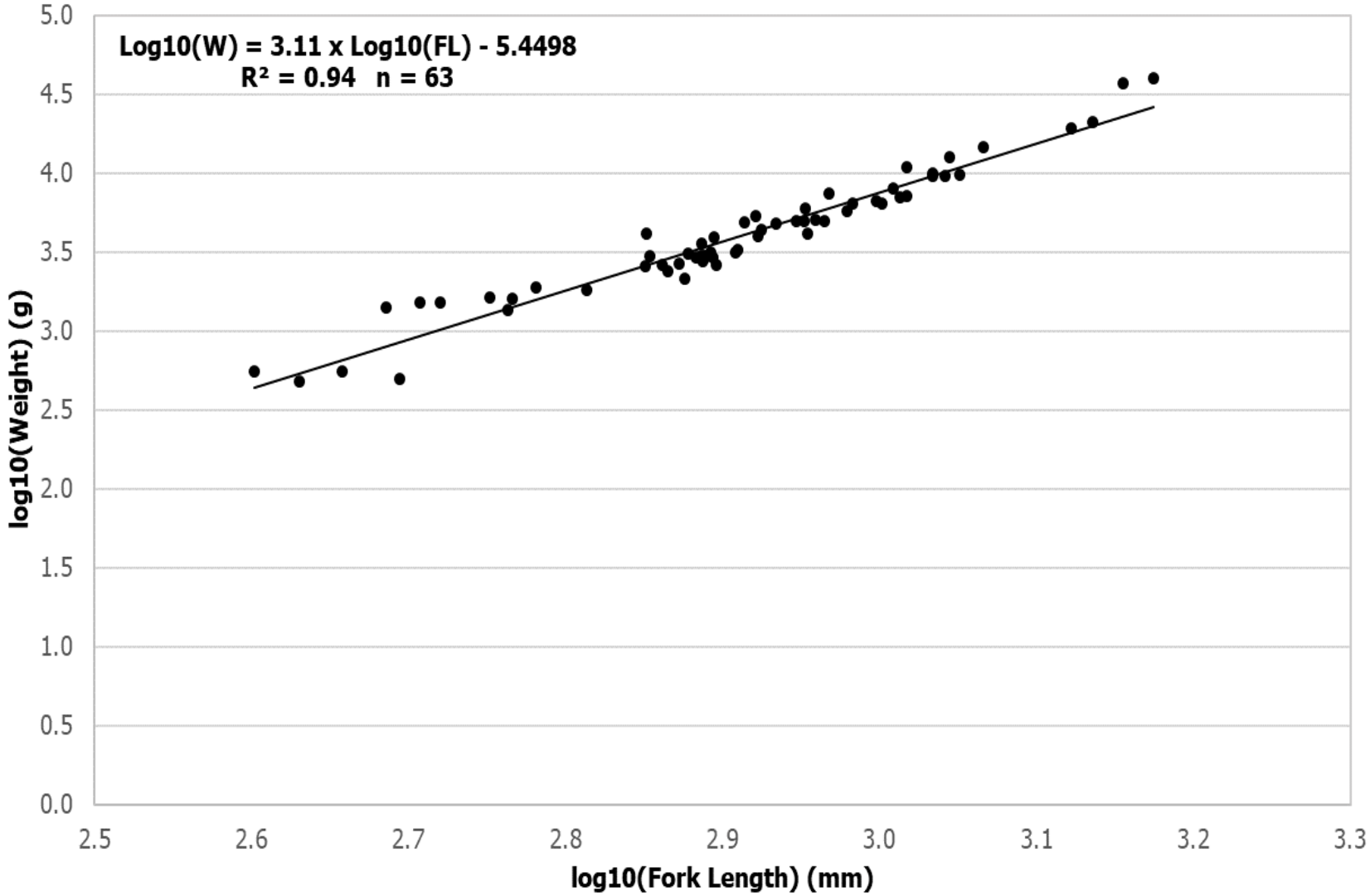


Figure 20. Length-weight regression for Lake Sturgeon captured in large mesh gill nets set in the Keeyask reservoir, spring 2022.

4.3.3 MOVEMENTS

Of the 63 Lake Sturgeon captured in the Keeyask reservoir, 26 were recaptures from previous gillnetting studies, two were hatchery-reared fish captured for the first time since stocking, and 35 were untagged fish. All 35 newly captured fish were tagged (Table A1-3). Acoustic transmitters were applied to 23 fish to continue ongoing acoustic telemetry studies (described in Hrenchuk 2023).

Of the two hatchery-reared fish:

- One was stocked in Gull Lake on June 6, 2019.
- One was stocked in the Burntwood River in (Zone BWR-B) on October 2, 2014, and captured downstream of Birthday Rapids (Zone BR-D).

In total, 41% (26 of 63) of Lake Sturgeon were recaptures from previous gillnetting studies (Table 18). Two (8%) lost their Floy tag (since initial tagging or last recapture) but retained their PIT tag. Biological and previous year capture information are provided in Table A2-3 and movements are summarized below:

- Twenty-five fish were last captured in the reach of the Nelson River between Birthday Rapids and the Keeyask GS.
    - Nine have been captured multiple times within this area since initial tagging.
- One (Floy #116621) was initially tagged in Split Lake (SPL-A) in 2019 and was recaptured below Birthday Rapids (BR-D) in 2022.

Table 18. Recapture data for Lake Sturgeon captured in the Keeyask reservoir during adult population monitoring, spring 2002–2022.

Recapture Location	Year	Original Tagging / Last Capture Location[3]							Total Recaptures[2]	Total LKST Captured	% Recaptures
		Kelsey GS Area	Split Lake	Upstream Birthday Rapids	Downstream Birthday Rapids	Gull Lake	Stephens Lake	Unknown			
Keeyask reservoir[1]	2002	0	0	0	6	9	0	0	15	59	25.4
	2003	0	0	0	10	5	1	0	16	85	18.8
	2004	0	0	0	11	4	0	0	15	51	29.4
	2006	0	0	0	23	2	0	0	25	150	16.7
	2008	1	0	0	16	7	0	0	24	52	46.2
	2010	0	0	0	11	9	1	0	21	65	32.3
	2011*	0	0	0	10	4	0	1	15	34	44.1
	2012*	0	0	0	6	27	0	0	33	116	28.4
	2014	1	1	0	16	50	1	1	70	239	29.3
	2016*	1	0	0	20	51	2	2	76	190	40.0
	2018*	0	0	0	16	57	0	1	74	235	31.5
	2021	0	0	1	29	40	1	0	71	178	39.9
	2022	**0**	**1**	**0**	**19**	**6**	**0**	**0**	**26**	**63**	**41.3**

1. An * indicates that a few individuals from the Nelson River between Clark Lake to Birthday Rapids are included in the analysis.
2. Does not include fish recaptured in the same waterbody in the season/year in which they were tagged, nor does it include hatchery fish that were captured in gill nets for the first time.
3. Initial tagging location of fish recaptured for the very first time since tagging or last known location of fish caught multiple times over multiple years.

4.3.4 POPULATION ESTIMATION

The population estimate for adult Lake Sturgeon (measuring ≥ 800 mm FL) in the Keeyask reservoir in 2022 was 345 individuals (95% CI: 221–537), which is much lower than in previous years (Figure 21; Table A3-3). The estimated annual survival (2021–2022) was 78%. The low survival was driven by a large number of fish that moved downstream out of the Keeyask reservoir beginning in summer 2021 which are interpreted as mortalities by the model as they are lost from the population. When emigration (14% based on mark-recapture data) is considered, the actual survival is 92%.

The mean population abundance in 2022 decreased significantly from both 2018 and 2021 (Figure 22). Overall, abundance estimates calculated between 2002 and 2022 do not show a significant increasing or decreasing trend (r^2 = 0.18, F = 2.14, p = 0.17) (Figures 23 and 24).

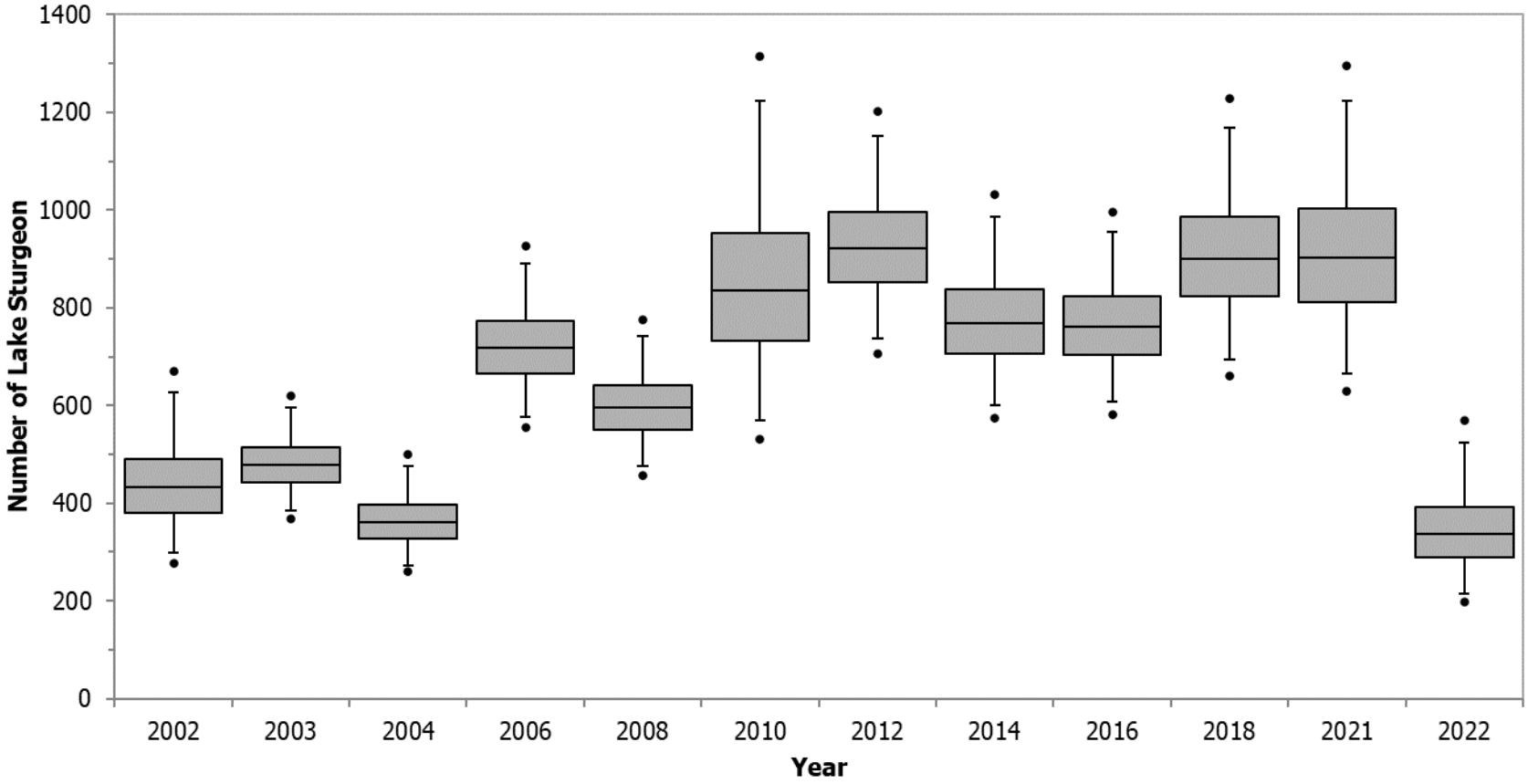


Figure 21. **Adult Lake Sturgeon abundance estimates based on POPAN best model for the Keeyask reservoir (2002–2022). Horizontal line inside the box represents the estimated abundance (*i.e.*, the number of adult Lake Sturgeon in the area during the time of capture), the black dots represent the minimum and maximum estimates, and the vertical bar lines represent the upper and lower 95% confidence intervals.**

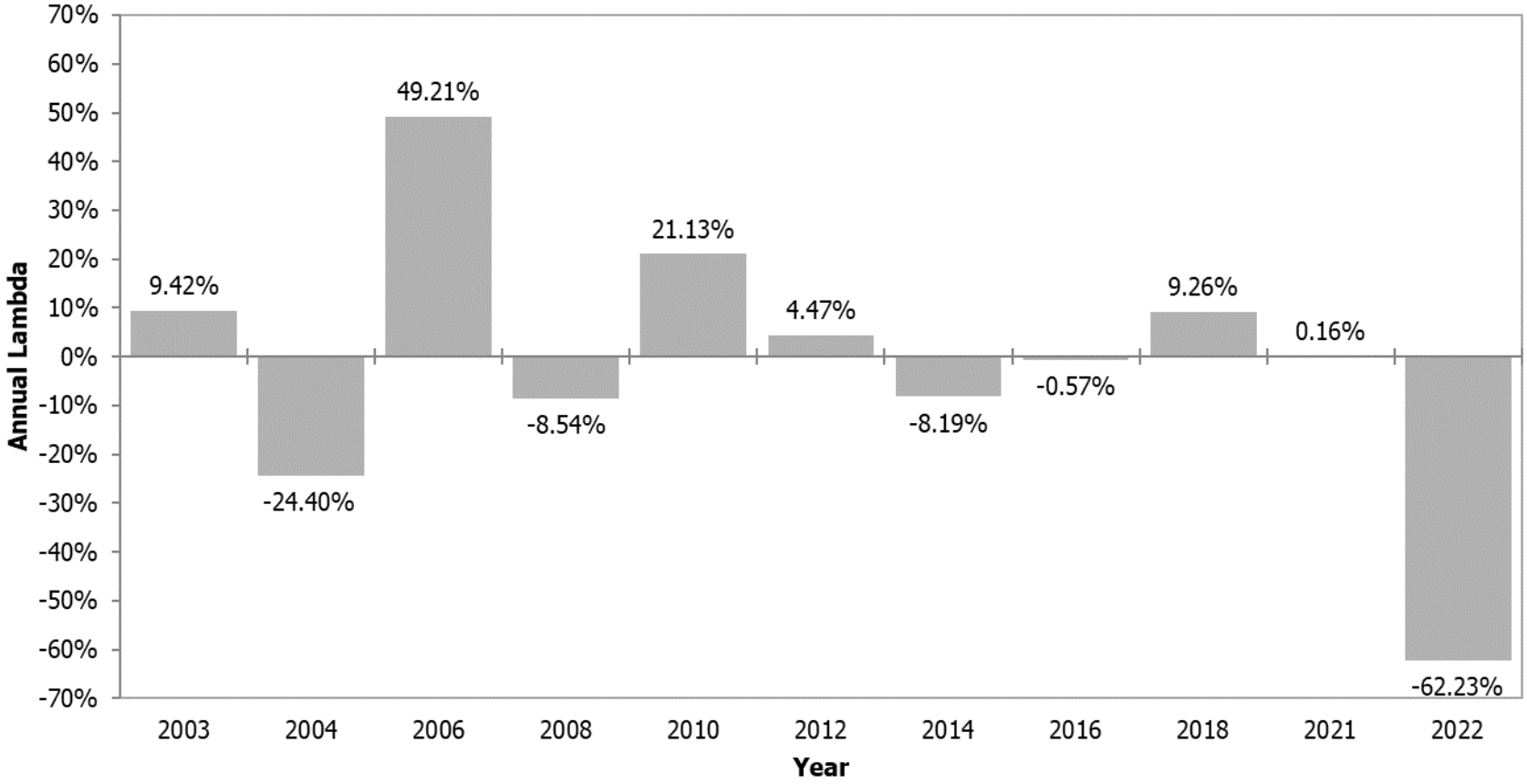


Figure 22. Annual percent change in adult Lake Sturgeon population growth estimates (lambda) based on the POPAN annual estimates in the Keeyask reservoir. Percentages indicate change in population abundance between years.

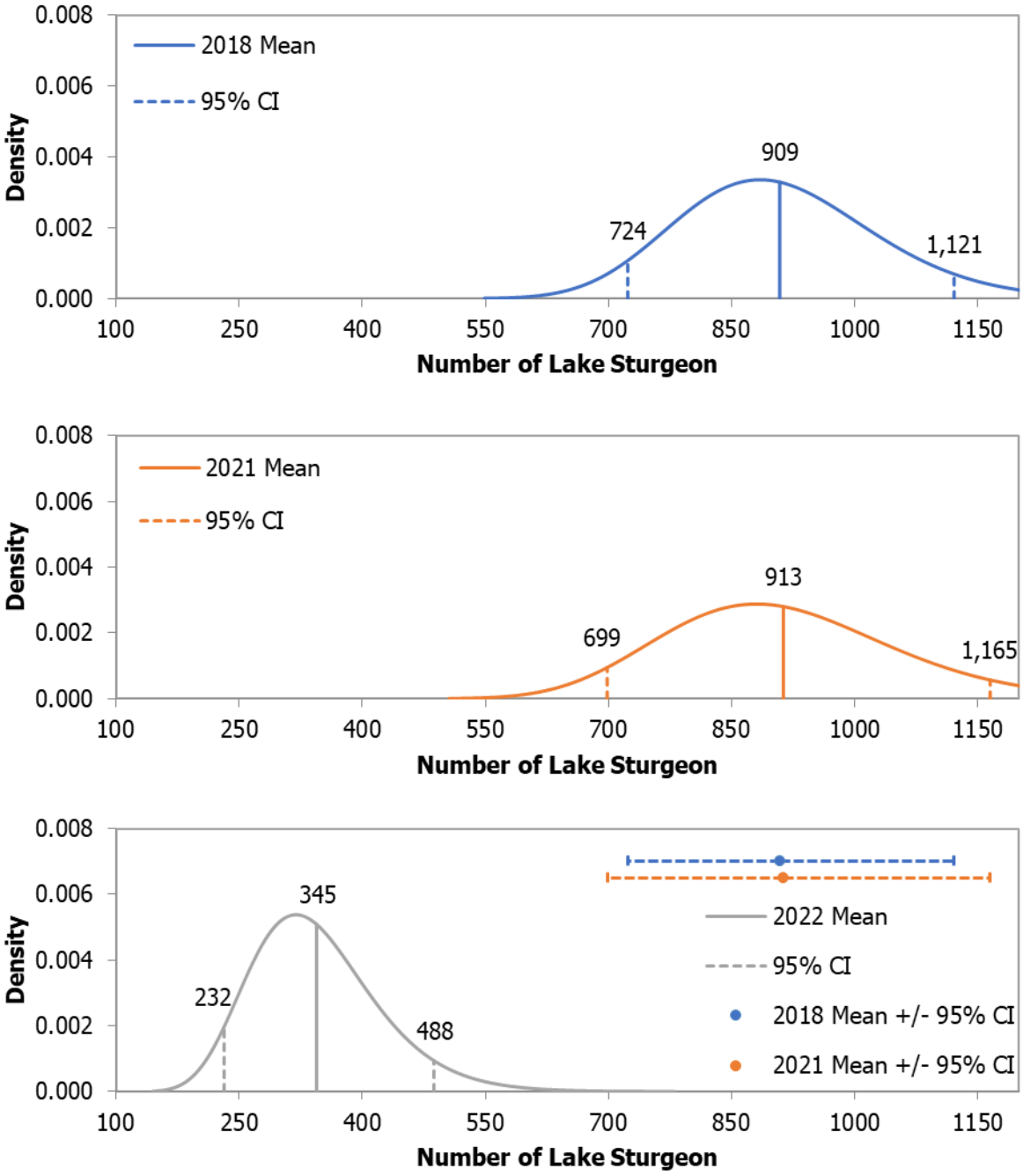


Figure 23. **Analysis of change in mean population abundance estimates for the Keeyask reservoir between one sample period (2021 to 2022) and two sampling periods (2018 to 2022). A significant change from the 2018 estimate would be a 20% decrease or a 23% increase. A significant change from the 2021 estimate would be a 23% decrease or a 28% increase. The mean population estimate in 2022 showed a significant decrease both from the 2018 (62%) and 2021 (62%) estimates.**

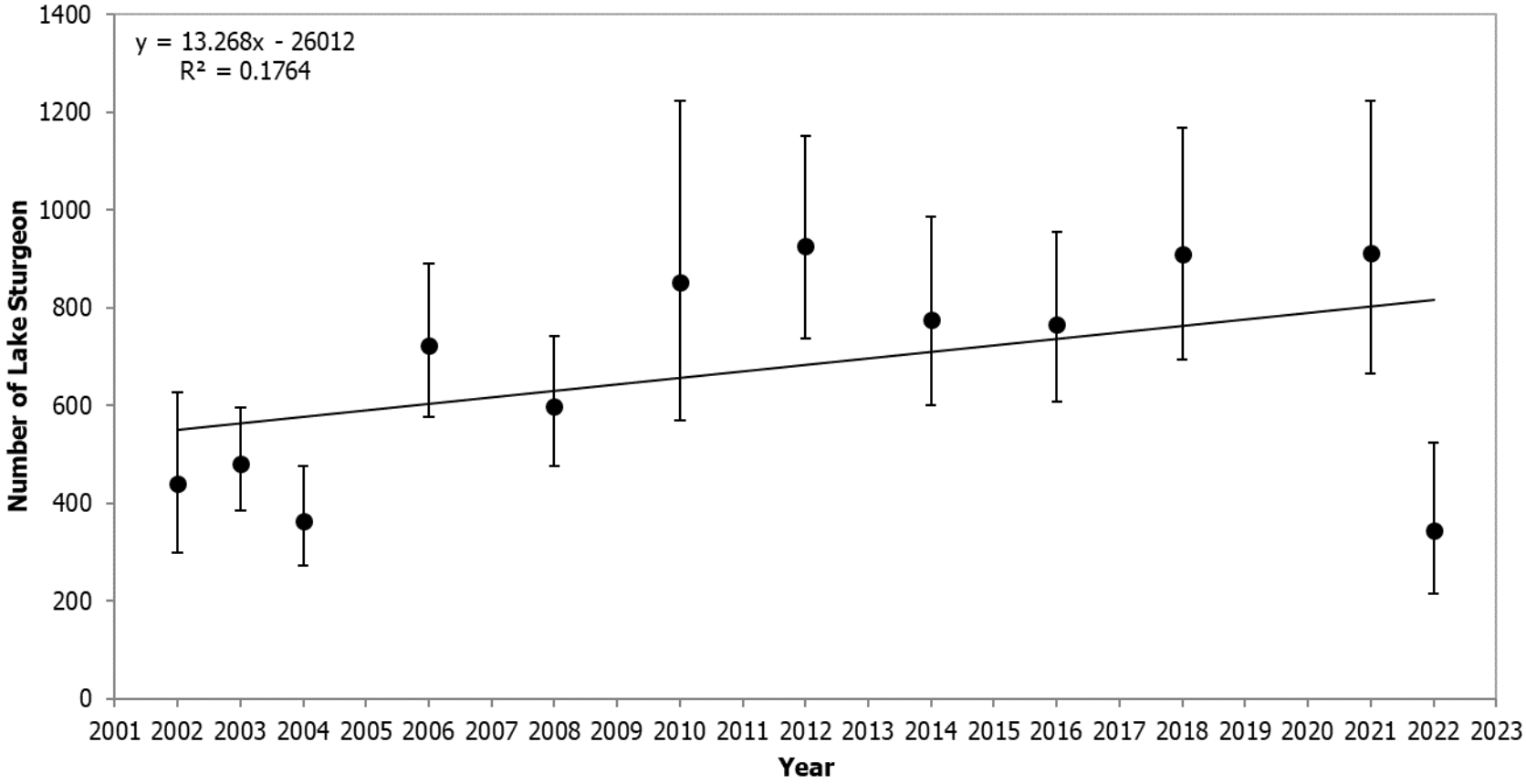


Figure 24. Abundance estimates for adult Lake Sturgeon in the Keeyask reservoir by sampling year (2002–2022) showing no significant trend.

4.4 STEPHENS LAKE

4.4.1 RELATIVE ABUNDANCE/CPUE

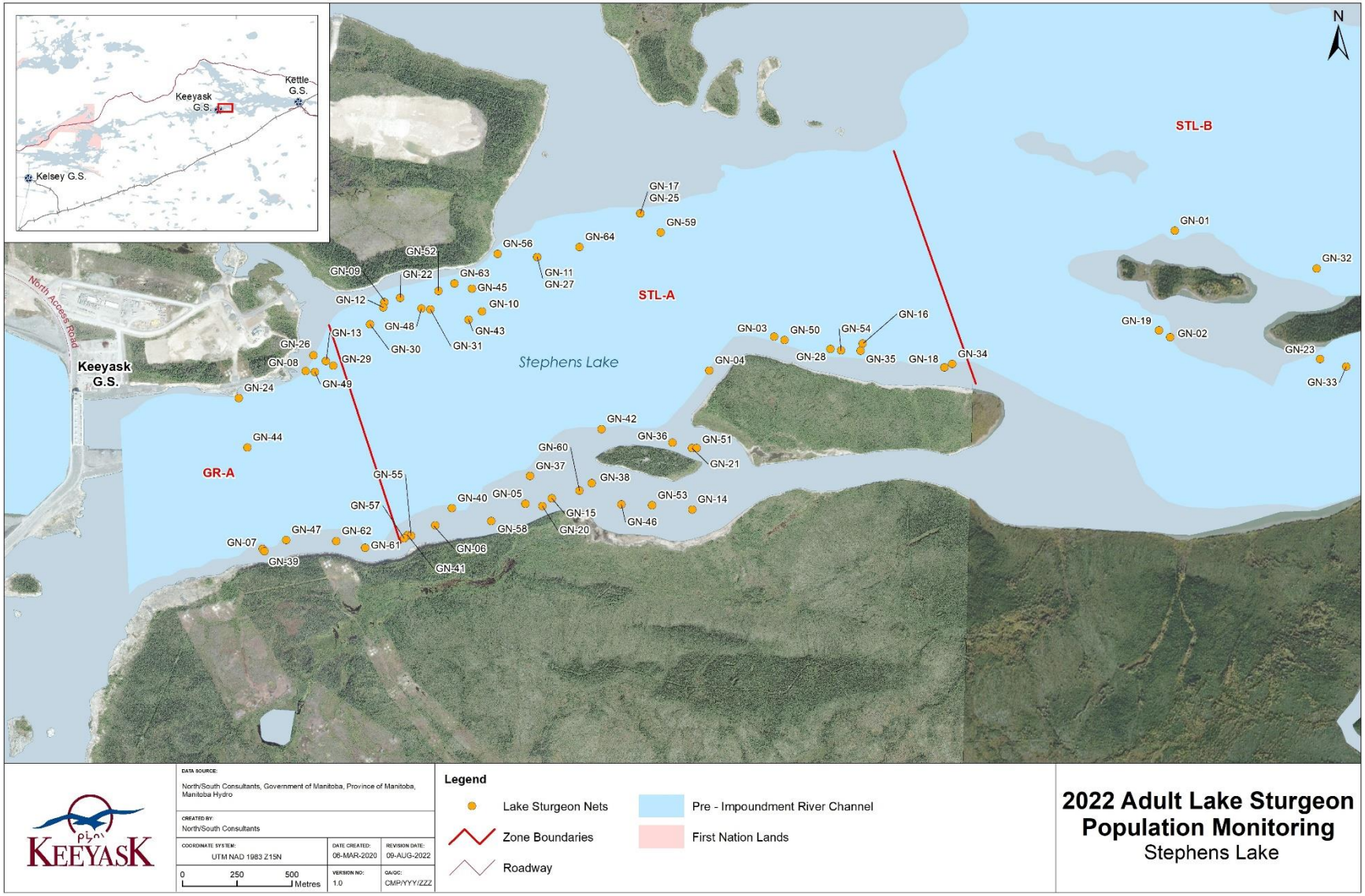
Large mesh gill nets were set at 64 sites in Stephens Lake between May 27 and July 3, 2022 (Map 6). Water temperature ranged from 5.1 to 16.4°C during this time (Figure 25). A total of 197 fish, comprised of five species, were captured, the majority of which (n = 176; 89%) were Lake Sturgeon (Table 19). No Lake Sturgeon mortalities occurred during sampling.

Table 19. Number of fish, by species, captured during adult Lake Sturgeon population monitoring in the Stephens Lake, spring 2022.

Common Name	Scientific Name	Abbreviation	Stephens Lake[1]	% of Catch
Lake Sturgeon	***Acipenser fulvescens***	***LKST***	***176***	***89.3***
Longnose Sucker	*Catostomus catostomus*	LNSC	1	0.5
Northern Pike	*Esox lucius*	NRPK	12	6.1
Sauger	*Sander canadense*	SAUG	5	2.5
Walleye	*Sander vitreus*	WALL	3	1.5
Total			**197**	**100**

1. Does not include fish recaptured in the same waterbody in the season/year in which they were tagged.

In total, 176 Lake Sturgeon were captured in 8,759 gill net hours, resulting in an overall CPUE of 0.48 LKST/91.4 m net/24 h (Table 20). Gillnetting effort was highest in Zone STL-A (6,744 gill net hours) (Table 21).



Map 6. Sites fished with large mesh gill net gangs in Stephens Lake, spring 2022.

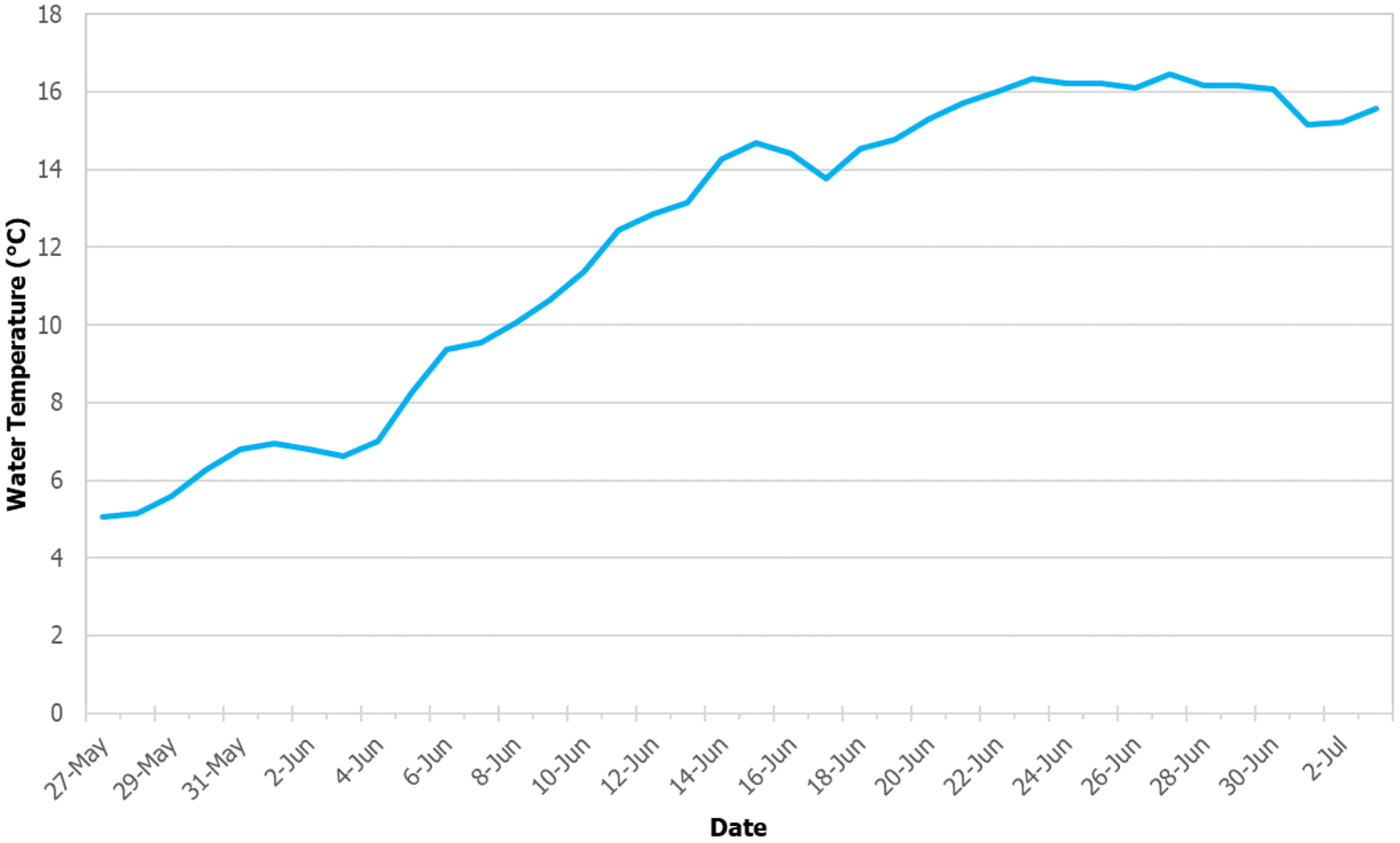


Figure 25. Mean daily water temperature of the Nelson River in Stephens Lake, May 27 to July 3, 2022.

Table 20. Lake Sturgeon catch-per-unit-effort (CPUE; # LKST/91.4 m net/24 h) values observed during mark/recapture studies in Stephens Lake, spring 2001-2022.

Year	# Sites	Total Lake Sturgeon[1]	Total Gill Net Hours[2,3]	Total CPUE
2001	18	24	6,254	0.09
2002	15	4	3,250	0.03
2003	29	24	9,638	0.06
2004	8	5	4,638	0.03
2005	35	6	7,933	0.02
2006	21	13	6,084	0.05
2010	37	17	4,898	0.08
2011	49	18	6,663	0.06
2012[4]	23	15	3,555	0.10
2014[4]	5	9	473	0.46
2016	90	71	17,037	0.10
2018	62	241	15,863	0.36
2021	72	170	6,382	0.64
2022	**64**	**176**	**8,759**	**0.48**

1. Does not include fish recaptured in the same waterbody in the season/year in which they were tagged.
2. The effort has been corrected to account for panel length. For example, the duration of a gill net gangs consisting of four panels (i.e., 91.4 m long) was doubled (i.e., equivalent of two 91.4 m gang sets).
3. The catch and effort from gillnetting conducted in other areas of Stephens Lake other than the reach downstream of the Keeyask GS (i.e., zones GR-A, STL-A, and STL-B) have been excluded from this table in the years it was conducted
4. CPUE value reflects study objective (i.e., fish were captured for acoustic tagging) and may not be comparable to studies conducted in other years.

Table 21. Number and catch-per-unit-effort (CPUE; # LKST/91.4 m net/24 h) values, by zone, observed during adult Lake Sturgeon population monitoring in Stephens Lake, spring 2022.

Zone	# Sites	Total Lake Sturgeon[1]	Total Gill Net Hours[2]	Total CPUE
GR-A	12	24	1,485	0.39
STL-A	46	131	6,744	0.47
STL-B	6	21	530	0.95

1. Does not include fish recaptured in the same waterbody in the season/year in which they were tagged.
2. The effort (h) has been corrected to account for panel length set at each site. For example, the duration of a gill net gang consisting of four panels (i.e., 91.4 m long) was doubled (i.e., equivalent of two 91.4 m gang sets).

4.4.2 BIOLOGICAL METRICS

Lake Sturgeon captured in Stephens Lake had a mean FL of 918 mm (range: 410–1,475 mm), a mean weight of 6,807 g (range: 450–24,040 g), and a mean condition factor of 0.76 (range: 0.48–1.30) (Table 23). Six fish were accidentally released prior to being measured and nine were released without being weighed. Of the 170 Lake Sturgeon measured, 132 were classified as adults (FL ≥ 800 mm) and 38 were classified as juveniles (FL < 800 mm). Lake Sturgeon measuring 800–899 mm FL were captured most frequently (n = 51), 30% of the total and 39% of the adult Lake Sturgeon catch (Figure 26). Most (47%; n = 18) of the 38 juvenile fish (FL < 800 mm) captured were in the 750–799 mm interval.

Mean condition factor of adult Lake Sturgeon did not differ significantly between baseline (2001–2014), construction (2016, 2018, and 2021), and operation (2022) for the two FL intervals (850–899 and 900–949 mm) for which comparisons were possible (Figure 27). The length-weight relationship is presented in Figure 28.

Sex and maturity were confirmed for two pre-spawn males, one on June 16 and one on June 19 at water temperatures of 14.0 and 14.5°C, respectively (Table 22).

Table 22. Sex and maturity data for Lake Sturgeon captured in Split Lake spring, 2001–2022.

Year[1]	Sex and Maturity[2]						# of Spawners[3]	Unknown maturity	Total
	Male			Female					
	7	8	9	2	3	4			
2001	5	-	-	3	-	-	8	16	24
2002	3	-	-	-	-	-	3	1	4
2003	2	-	-	1	-	-	3	21	24
2004	-	-	-	-	-	-	-	5	5
2005*	-	-	-	-	-	-	-	7	7
2006*	-	1	-	-	-	-	1	15	16
2010	-	-	-	-	-	-	-	17	17
2011	1	-	-	-	-	-	1	29	30
2012	3	1	-	-	-	-	4	11	15
2014	-	2	-	-	-	-	2	7	9
2016	4	4	-	-	-	-	8	63	71
2018	11	15	6	-	-	-	30	211	241
2021	5	-	-	-	-	-	5	165	170
2022	**2**	**-**	**-**	**-**	**-**	**-**	**2**	**174**	**176**

1. An * indicates a few individuals from farther downstream in Stephens Lake are included in the analysis.
2. Refer to Section 3.1 for maturity codes.
3. Maturity status columns include recaptures of fish whose maturity status progressed between captures (*e.g.*, would include recaptures of fish initially captured in maturing condition and recaptured in ripe or spent condition), but the columns may not add up to the "# of Spawners" column since this only includes individual fish captured (i.e., CYTR that were captured in different maturity classifications were only counted once).

Table 23. Mean fork length (mm), weight (g), and relative condition factor (K) of Lake Sturgeon captured during adult Lake Sturgeon population monitoring in Stephens Lake, spring 2001–2022.

Year	Fork Length (mm)				Weight (g)				K		
	n[2]	Mean	Std[3]	Range	n	Mean	Std	Range	n	Mean	Range
2001	24	1,077	181	792-1,447	24	13,148	9,499	4,400-40,000	24	0.94	0.71-1.56
2002	4	1,045	51	1,001-1,100	4	10,888	2,995	8,050-15,000	4	0.94	0.80-1.13
2003	24	1,018	206	555-1,340	23	11,212	7,205	1,700-26,000	23	0.90	0.61-1.20
2004	5	1,180	112	1,025-1,324	4	15,347	4,577	9,450-20,412	4	0.97	0.72-1.32
2005*	7	922	130	763-1,100	7	8,701	4,989	3,636-15,455	7	1.00	0.82-1.44
2006*	14	1,144	162	902-1,421	13	13,224	6,071	5,897-24,948	13	0.86	0.73-1.03
2010	17	1,028	162	730-1,349	16	9,993	5,272	3,200-24,040	16	0.83	0.65-0.98
2011	18	890	255	362-1,208	12	9,053	3,984	1,082-16,556	12	0.87	0.76-0.99
2012	15	896	144	645-1,176	11	7,468	3,113	3,901-14,969	11	0.92	0.74-1.07
2014	9	941	115	810-1,150	9	6,854	3,374	4,082-13,608	9	0.77	0.66-1.01
2016	71	902	152	343-1,425	69	6,740	3,540	253-22,680	69	0.85	0.63-1.20
2018	240	901	159	361-1,411	240	6,692	3,951	250-27,125	239	0.83	0.43-1.53
2021	170	837	215	335-1,480	170	6,717	4,538	250-29,000	170	0.97	0.64-1.77
2022	**170**	**918**	**190**	**410-1,475**	**167**	**6,807**	**4,727**	**450-24,040**	**167**	**0.76**	**0.48-1.30**

1. An * indicates a few individuals from farther downstream in Stephens Lake are included in the analysis.
2. Number of fish measured.
3. Standard deviation.

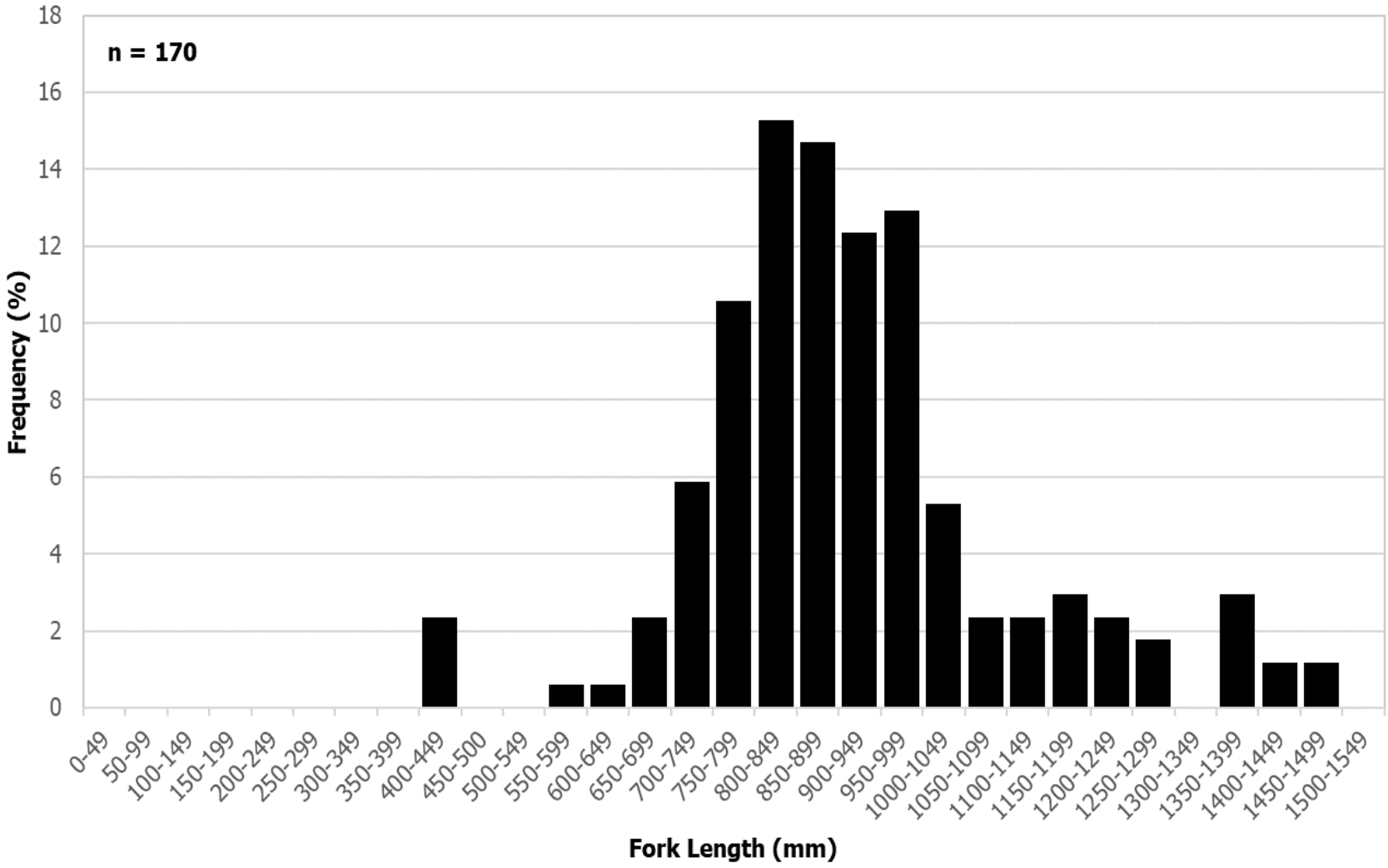


Figure 26. Length-frequency distribution for Lake Sturgeon captured in large mesh gill nets set in Stephens Lake, spring 2022.

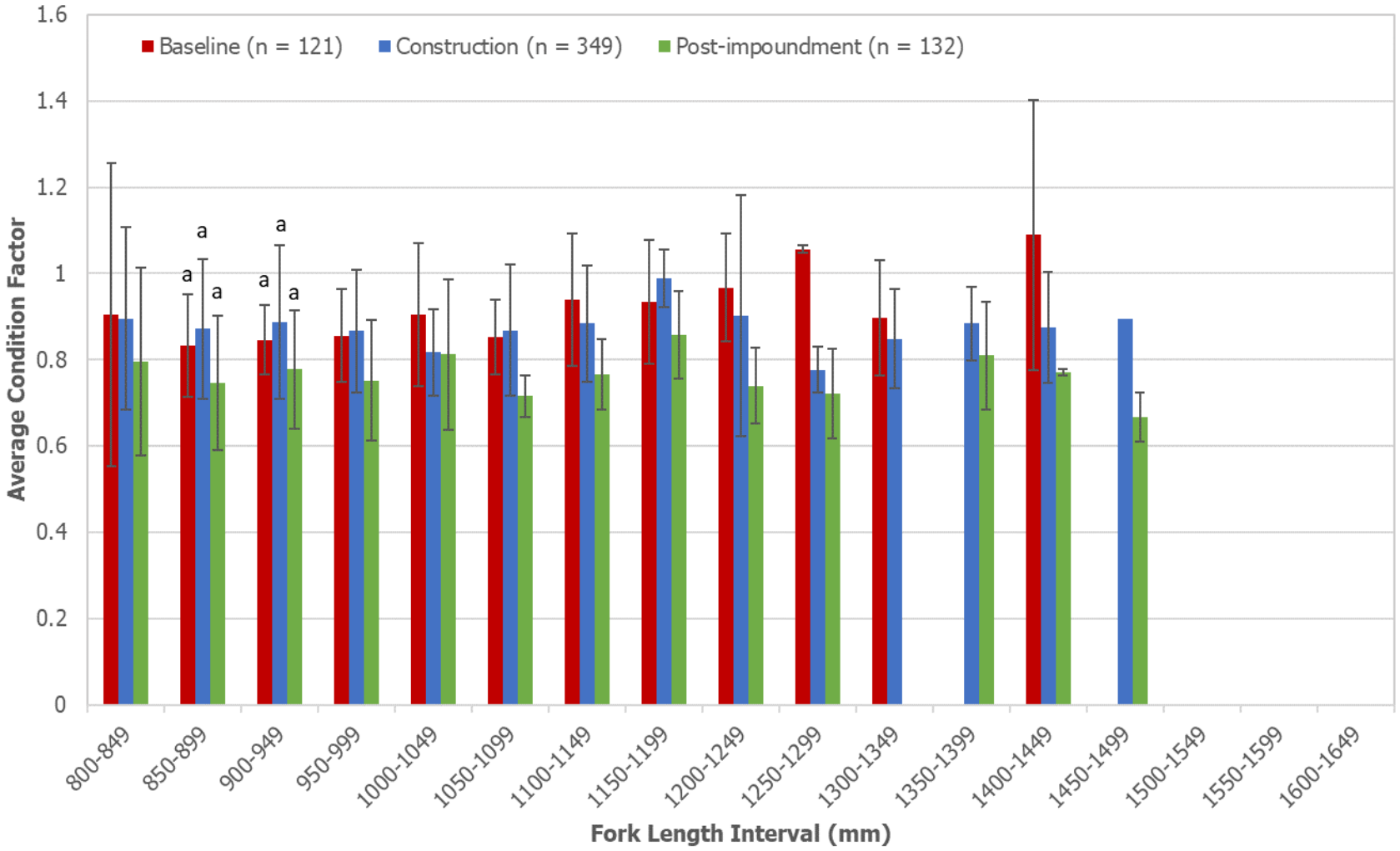


Figure 27. **Mean condition factor by 50 mm length intervals for adult (≥ 800 mm) Lake Sturgeon captured in Stephens Lake during baseline studies (red bars), construction monitoring (blue bars), and operation monitoring (green bars). No significant differences were found for the two Fork Length intervals (850–899 and 900–999 mm) that could be compared (Mann Whitney U test, $p > 0.05$). Error bars represent standard deviations.**

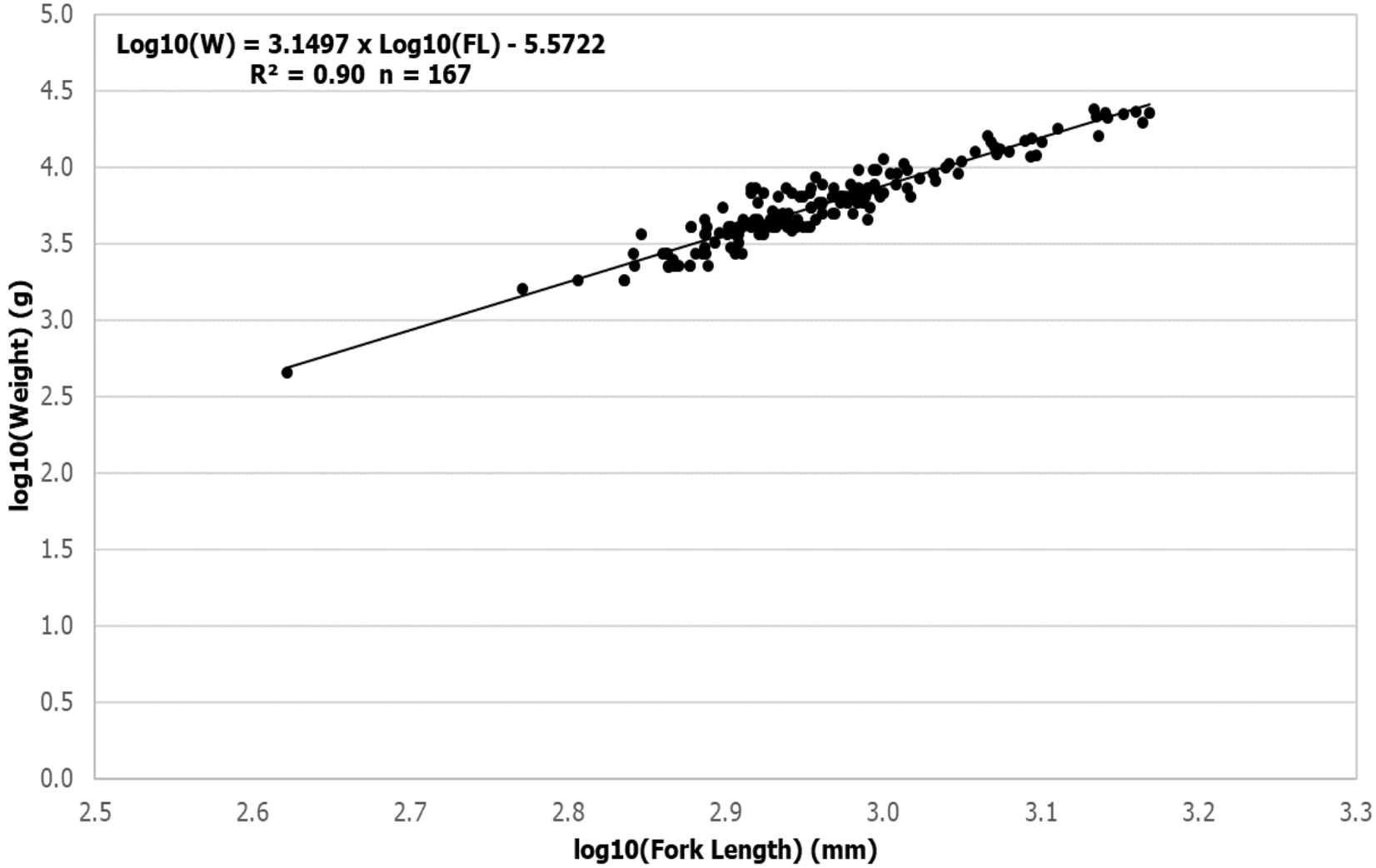


Figure 28. Length-weight regression for Lake Sturgeon captured in large mesh gill nets set in Stephens Lake, spring 2022.

4.4.3 MOVEMENTS

Of the 176 Lake Sturgeon captured in Stephens Lake, 110 were recaptures from previous gillnetting studies, one was a hatchery fish that was captured for the first time since stocking, and 65 were newly captured fish (all which received a Floy and PIT tag; Table A1-4).

A single hatchery-reared fish (PIT #900067000109660) was captured for the fist time since initial release. It was stocked in Gull Lake on June 6, 2019, and measured 231 mm FL. It was captured in Stephens Lake on June 27, 2022, and measured 419 mm FL, an increase of 188 mm in the three years since release.

Excluding the one hatchery-reared fish that was captured for the first time since stocking, 63% of Lake Sturgeon were recaptures from previous gillnetting studies (n = 110) (Table 24). Nineteen of the 110 recaptured Lake Sturgeon (17%) lost their Floy tag but retained their PIT tag. Biological and previous year capture information are provided in Table A2-4 and movements are summarized below:

Of the two hatchery-reared fish that were recaptured from previous year studies:

- One (PIT #900067000109308) was stocked in Stephens Lake on May 23, 2019. It was captured in Stephens Lake during the juvenile population study on September 13, 2019.
- One (PIT #900067000109322) was stocked in Stephens Lake on June 13, 2019. It was captured in Stephens Lake during the juvenile population study on September 17, 2021.

Sixty-one fish (55%) were last captured in Stephens Lake between 2002 and 2021.

- One fish was a previous year recapture with an old Floy tag but no PIT tag. Due to a miss read of the Floy tag its location of initial tagging could not be determined; however, it did receive a PIT tag at time of capture in 2022.
- Four were originally tagged in Gull Lake but were last captured in Stephens Lake during previous studies.
    - #80374 was tagged in 2008 and was captured in Stephens Lake in 2012.
    - #105424 was tagged in 2014 and was captured in Stephens Lake in 2018.
    - #107222 was tagged in 2016 and was captured in Stephens Lake in 2017.
    - #94085 was tagged in 2010 and was captured in Stephens Lake in 2018.

Table 24. Recapture data for Lake Sturgeon captured in Stephens Lake during adult population monitoring, spring 2002–2022.

Recapture Location	Year	Original Tagging / Last Capture Location[3]							Total Recaptures[2]	Total LKST Captured	% Recaptures
		Kelsey GS Area	Split Lake	Upstream Birthday Rapids	Downstream Birthday Rapids	Gull Lake	Stephens Lake	Unknown			
Stephens Lake[1]	2002	0	0	0	0	0	0	0	0	4	0.0
	2003	0	0	0	0	1	3	0	4	24	16.7
	2004	0	0	0	0	0	3	0	3	5	60.0
	2005*	0	0	0	0	0	2	0	2	7	28.6
	2006*	0	0	0	0	2	7	0	9	14	64.3
	2010	0	0	0	2	0	8	0	10	17	58.8
	2011	0	0	0	0	0	6	0	6	18	33.3
	2012	0	0	0	1	0	5	0	6	15	40.0
	2014	0	0	0	0	1	3	0	4	9	44.4
	2016	0	0	0	0	1	15	0	16	71	22.5
	2018	0	0	1	2	3	81	0	87	241	36.1
	2021	0	0	0	0	6	82	1	89	170	52.3
	2022	**0**	**0**	**0**	**16**	**31**	**60**	**1**	**110**	**176**	**62.5**

1. An * indicates a few individuals from farther downstream in Stephens Lake are included in the analysis.
2. Does not include fish recaptured in the same waterbody in the season/year in which they were tagged, nor does it include hatchery fish that were captured in gill nets for the first time.
3. Initial tagging location of fish recaptured for the very first time since tagging or last known location of fish caught multiple times over multiple years.

Forty-seven (43%) were last captured in the Nelson River between Clark Lake and the Keeyask GS between 2006 and 2021.

- One (Floy #79711) was originally tagged in the Kelsey GS area in 2009. It was last captured in the Keeyask reservoir in 2019.

4.4.4 POPULATION ESTIMATION

The 2022 population estimate for adult Lake Sturgeon (measuring ≥ 800 mm FL) in Stephens Lake was 1,164 individuals (CI 95%: 853–1,589; Figure 29; Table A3-4). The annual survival estimate (2014–2021) was 97%. The annual population growth rate (lambda) has continued to fluctuate, showing a 26% increase between 2018 and 2021 and 52% between 2021 and 2022 (Figure 30).

Overall, there was a significant increase in the estimated mean abundance of Lake Sturgeon in Stephens Lake compared to 2018 and 2021 (Figure 31). The 2022 population estimate showed an increase of 171% from 2018 and 52% from 2021. Abundance estimates between 2003 and 2022 show a significant increasing trend ($r^2 = 0.79$, $F = 36.94$, $p = 0.0001$; Figure 32).

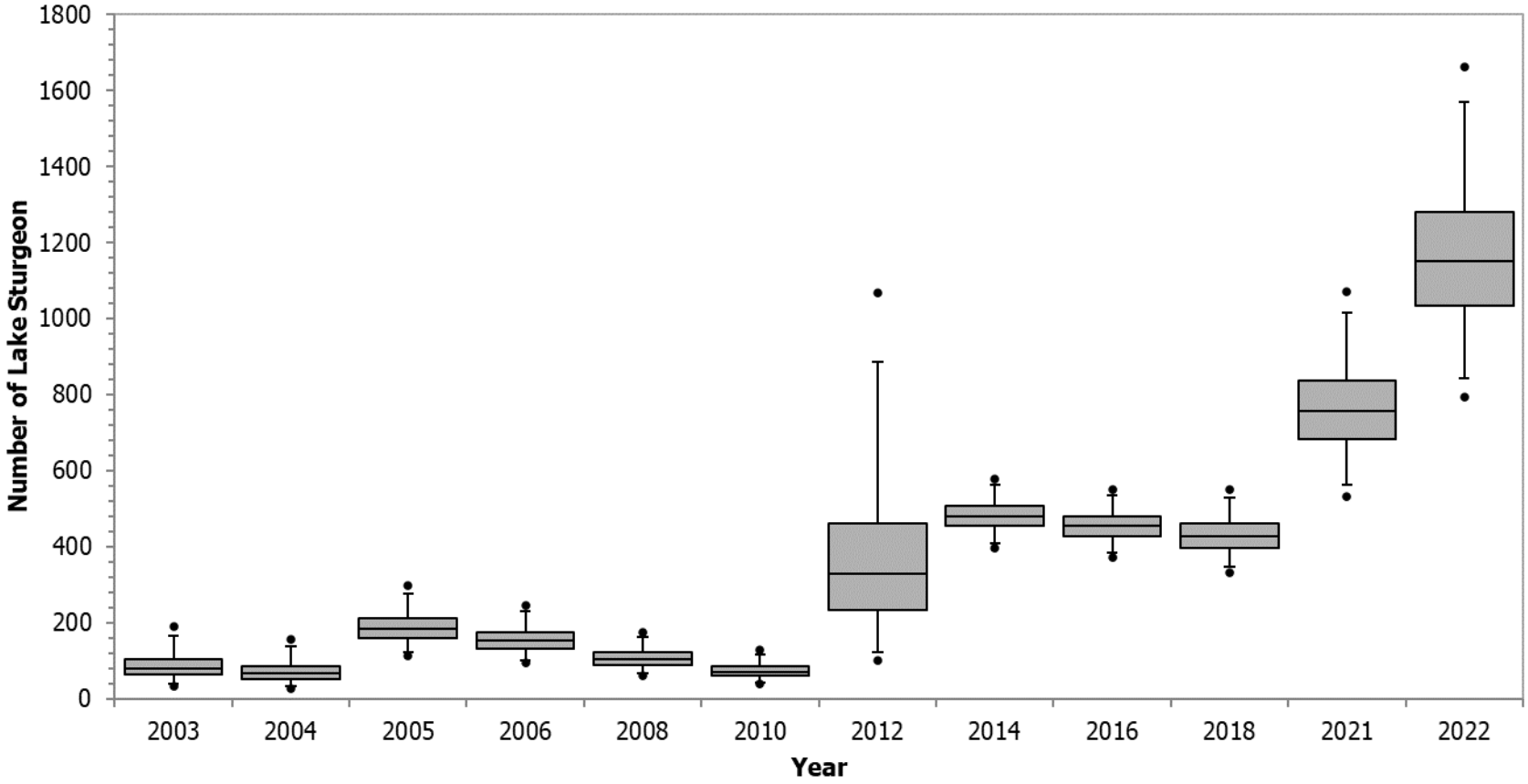


Figure 29. **Adult Lake Sturgeon abundance estimates based on POPAN best model for Stephens Lake (2003–2022). Horizontal line inside the box represents the estimated abundance (*i.e.*, the number of adult Lake Sturgeon in the area during the time of capture), the black dots represent the minimum and maximum estimates, and the vertical bar lines represent the upper and lower 95% confidence intervals.**

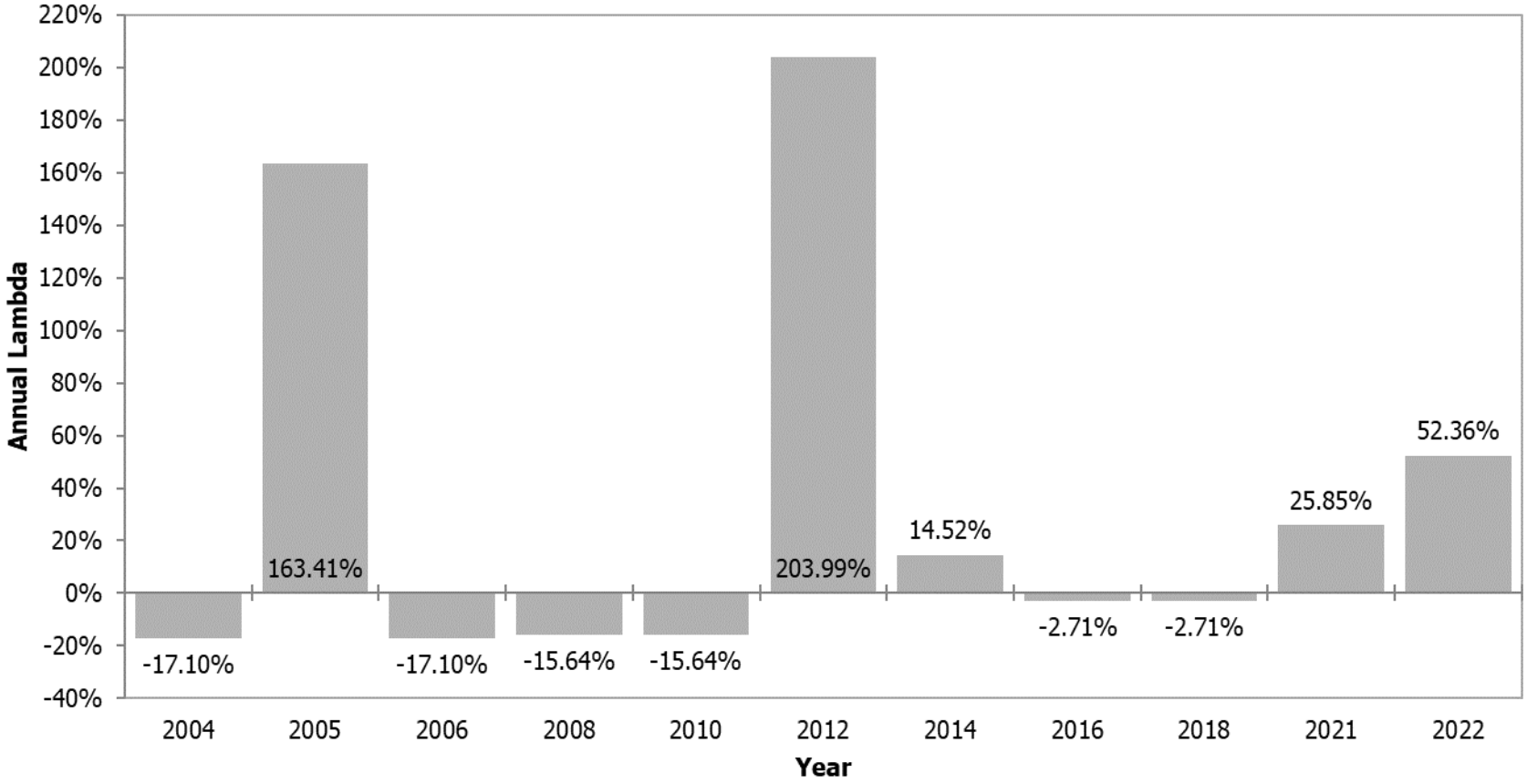


Figure 30. Annual percent change in adult Lake Sturgeon population growth estimates (lambda) based on the POPAN annual estimates in Stephens Lake. Percentages indicate change in population abundance between years.

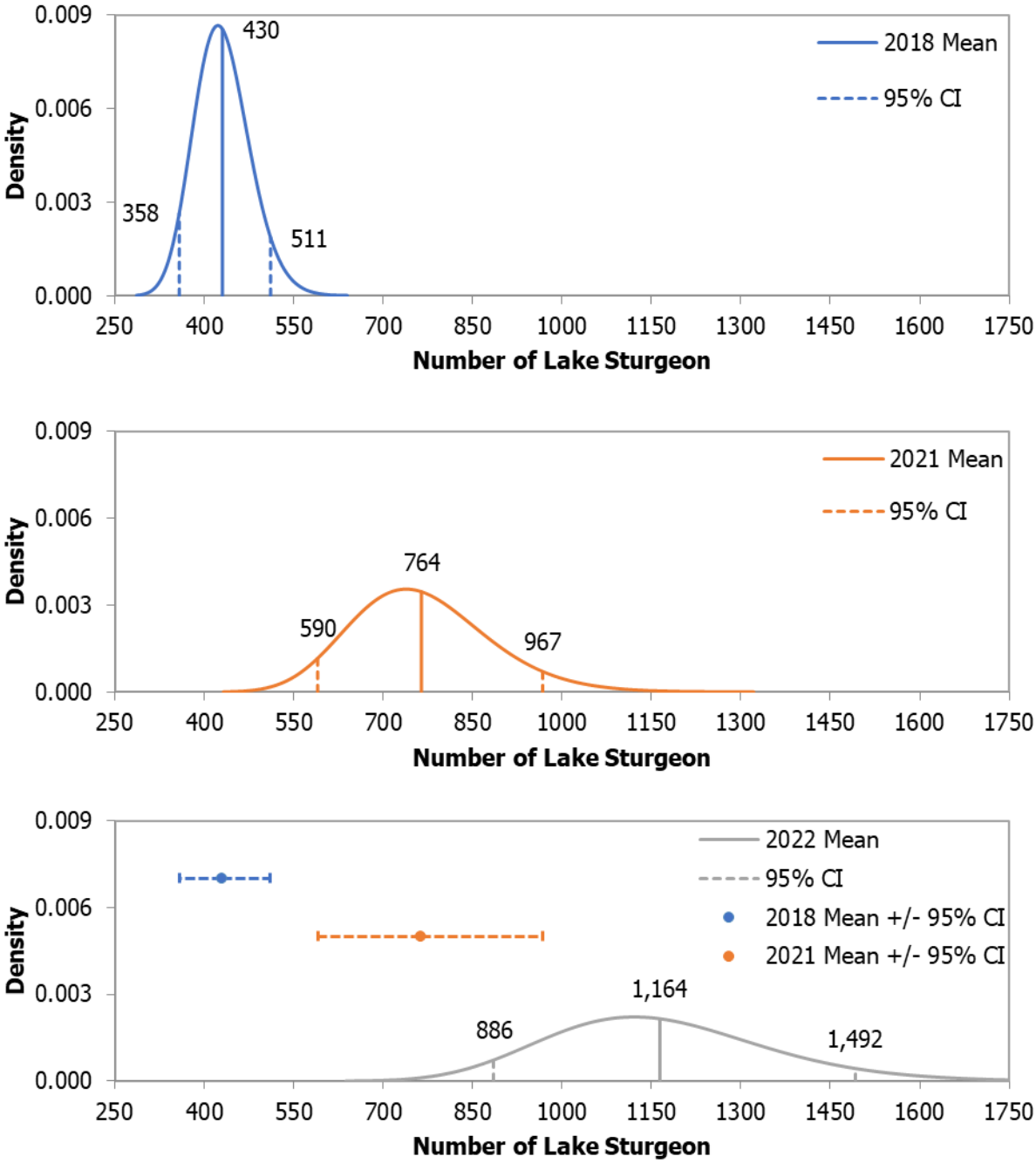


Figure 31. Analysis of change in mean population abundance estimates for Stephens Lake between one sample period (2021 to 2022) and two sampling periods (2018 to 2022). A significant change from the 2018 estimate would be a 17% decrease or a 19% increase. A significant change from the 2021 estimate would be a 23% decrease or a 27% increase. The mean population estimate in 2022 showed a significant increase from both the 2018 (171%) and 2021 (52%) estimates.

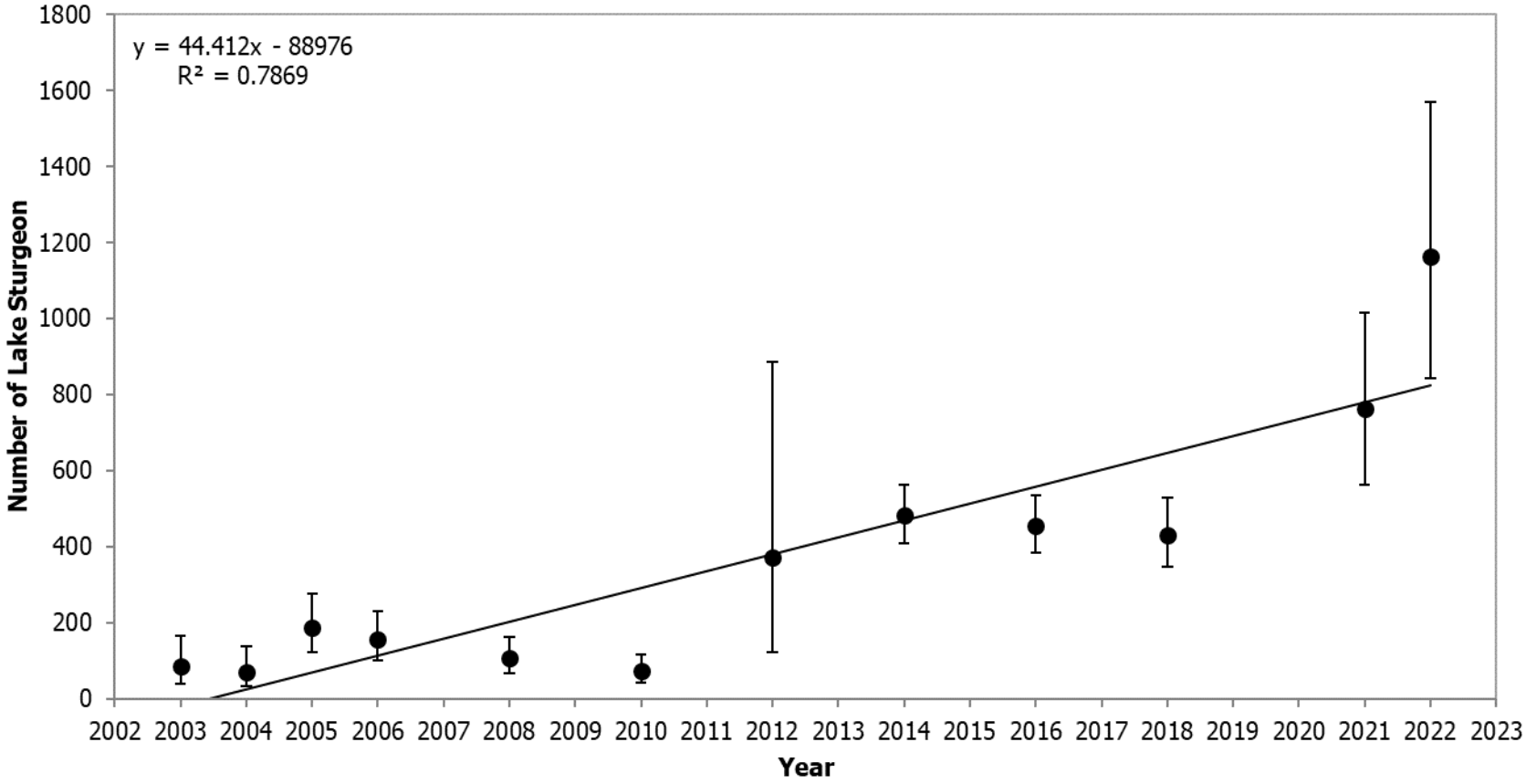


Figure 32. Abundance estimates for adult Lake Sturgeon in Stephens Lake by sampling year (2003–2022) showing a significant positive trend.

5.0 DISCUSSION

5.1 UPPER SPLIT LAKE AREA

The main objective of long-term adult Lake Sturgeon population monitoring in the Upper Split Lake Area is to identify changes in abundance, survival, and condition factor over time. Continued monitoring will also identify long-term trends in the size of the spawning population and monitor the influence of stocking (initiated in 2013). Although sampling in this area is planned to occur biennially, due to complications associated with conducting field work during the COVID-19 pandemic, the Upper Split Lake Area was last sampled in 2019.

5.1.1 MOVEMENT

Since spring adult population monitoring was initiated in 2001, 472 and 259 Lake Sturgeon have been recaptured in the Burntwood River and Kelsey GS Area, respectively. The majority of recaptured sturgeon have been tagged and recaptured in the same general area, however, movements between the Kelsey GS area and the Burntwood River are common.

It was predicted in the EIS that increased numbers of Lake Sturgeon may leave the Keeyask reservoir due to rapid changes in water levels and velocities during impoundment and decreased water velocity at Birthday Rapids. It was predicted that both upstream and downstream emigration may occur. In 2022, a large proportion of the fish recaptured in the Kelsey GS Area were tagged in Gull Lake representing 24% of recaptured fish (n = 18). In previous years, fish from this area have represented between 0 and 10% of recaptured fish (n = 0-3). Movement monitoring studies using acoustic telemetry conducted in 2022 observed an increase in adult Lake Sturgeon movements upstream out of the Keeyask reservoir (Hrenchuk 2023). Although these fish are only tracked as far as the inlet to Clark Lake, it is possible that they continued to move as far upstream as the Kelsey GS.

5.1.2 ADULT LAKE STURGEON ABUNDANCE

In the short-term (2017, 2019, and 2022 data sets), Lake Sturgeon abundance in both the Burntwood River and the Kelsey GS Area has increased significantly. The 2022 abundance estimate was significantly higher than 2017 in the Burntwood River and significantly higher than both 2017 and 2019 in the Kelsey GS Area. The long-term trajectory between 2005 and 2022 shows a significant increasing trend over time in the Burntwood River. Although the long-term trajectory in the Kelsey GS Area is positive, the increase is not significant.

This increasing trend is also reflected in the CPUE of fish captured in both sampling locations. Overall CPUE in the Burntwood River in 2022 (0.75 Lake Sturgeon) was higher than in any

previous year since sampling began in 2001 (0.18–0.60 Lake Sturgeon) other than in 2012. Similarly, CPUE in the Kelsey GS Area in 2022 (0.66 Lake Sturgeon/91.4 m net/24 h) was higher than in any previous year (0.06–0.46 Lake Sturgeon).

5.1.3 SPAWNING

In 2022, 94 spawning-condition Lake Sturgeon were captured in the Burntwood River, representing 35% of the total catch. Spawning sturgeon have represented a large portion of the catch from this area (between 26 and 69% of captured fish) since 2011. In 2022, one ripe female fish was captured and eggs were collected and used to produce broodstock for the Keeyask Lake Sturgeon production and stocking program. A total of 91 male Lake Sturgeon were identified as being in spawning condition, which is within the range observed in previous years.

Spawning-condition Lake Sturgeon are captured less frequently in the Kelsey GS Area and have only been observed in seven of the past 13 years. A single ripe male was captured in 2022 in the area immediately downstream of the Kelsey GS. Based on the capture of spawning-condition fish in this area in previous years, it is likely that Lake Sturgeon spawn immediately below the Kelsey GS where high water velocities and a lack of structure make it difficult to set gill nets.

5.1.4 KEY QUESTIONS

Is there a biologically relevant (and statistically significant) change in the rate of population growth for the Upper Split Lake Area population?

The population estimate for adult Lake Sturgeon (measuring ≥ 800 mm FL) in 2022 was 707 individuals (95% CI: 520–961) in the Burntwood River and 957 individuals (CI 95%: 586–1,563) in the Kelsey GS Area. The 2022 population estimate for the Burntwood River shows a significant increase from the 2017 estimate but not the 2019 estimate. The 2022 population estimate for the Kelsey GS area increased significantly from both 2017 and 2019. Based on data collected from 2005–2022, the population in both areas appears to be increasing.

Is there a biologically relevant (and statistically significant) change in survival for Upper Split Lake Area population?

The best-fit model did not indicate a marked change in the survival rate in either sampling area compared to the estimate calculated in 2019. The survival rate for the Burntwood River (2014–2022) was 88%, while the survival rate for the Kelsey GS Area (2014–2022) was 86%.

Is there a biologically relevant (and statistically observable) change in the condition factor of Lake Sturgeon?

In the Burntwood River, mean condition factor was significantly lower during operation (2022) than baseline (2001–2013) for a single fork length interval (1,000–1,049 mm) but did not differ

significantly from construction (2015, 2017, and 2019). Significant differences were found for all FL intervals between 800 and 1,099 mm FL in the Kelsey GS Area. In all intervals, condition was significantly higher during baseline (2001–2013) than either construction (2015, 2017, and 2019) or operation, and operation (2022) was significantly lower than construction.

Will the frequency of long-distance movements (from the Keeyask/Stephens Lake area to the Upper Split Lake Area) by sub-adult and adult Lake Sturgeon increase during Project operation?

In 2022, 21 Lake Sturgeon originally tagged in the Keeyask reservoir were recaptured in the Upper Split Lake Area (three in the Burntwood River and 18 in the Kelsey GS area). The number captured in the Burntwood River is comparable to the number recaptured previously, while the number captured in the Kelsey GS area is higher than any other year. In previous years, fish tagged in the Keeyask reservoir have represented between 0 and 10% of recaptured fish in the Kelsey GS Area. In 2022, they represented 24% of recaptures.

5.2 KEEYASK AREA

Although adult Lake Sturgeon population monitoring was conducted in the Keeyask reservoir and Stephens Lake in 2021, sampling was repeated in 2022. Following sampling in 2021, a large number of adult Lake Sturgeon were observed moving downstream through the Keeyask GS during acoustic telemetry studies (Hrenchuk and Small 2022). Monitoring was repeated in 2022 to determine if the downstream movements observed after the population study was completed in spring 2021 were substantial enough to impact the population size.

5.2.1 MOVEMENT

Adult population monitoring was initiated in 2001, and 481 and 346 Lake Sturgeon have been recaptured in the Keeyask reservoir and in Stephens Lake, respectively. Increased emigration from the Keeyask reservoir into Stephens Lake was identified as a potential impact of construction of the Keeyask GS. Prior to 2022, only a small proportion of fish recaptured in Stephens Lake (0–7%) were tagged in the Keeyask reservoir. In 2022, this number increased substantially. In total, 47 fish captured in Stephens Lake in 2022 (43% of recaptured fish and 27% of all captures) were originally tagged in the Keeyask reservoir. It is not possible to determine when the majority of these fish moved downstream or whether they moved through the powerhouse or spillway due to the length of time between last capture and recapture. However, eight fish were last captured in the Keeyask reservoir in late 2020 or 2021 and moved downstream following reservoir impoundment.

Acoustic telemetry studies have also identified an increase in downstream movements of adult Lake Sturgeon through the Keeyask GS following reservoir impoundment. Prior to 2021, only six fish tagged with acoustic transmitters had been observed moving downstream. In 2021, 13 of 41 adult Lake Sturgeon tagged upstream of the Keeyask GS moved downstream through the GS

between July and September (Hrenchuk and Small 2022). One additional fish moved downstream during winter 2021/2022 and six moved downstream in open-water 2022 (Hrenchuk 2023).

5.2.2 ADULT LAKE STURGEON ABUNDANCE

It was predicted in the EIS that Lake Sturgeon abundance may decline in the Keeyask reservoir due to emigration upstream and downstream in response to environmental disturbance associated with initial operation. Fewer adult Lake Sturgeon were captured in the Keeyask reservoir in 2022 compared to previous years, leading to a substantial decrease in abundance estimates. The total CPUE in 2022 (0.14 Lake Sturgeon/91.4 m net/24 h) was the lowest since 2011 (0.12 Lake Sturgeon/91.4 m net/24 h). The population estimate for the Keeyask reservoir in 2022 was significantly lower than the previous two study years and was the lowest number recorded since estimates have been produced. Comparatively, population estimates for Stephens Lake have shown a significant increasing trend between 2011 and 2022. In the short term, Lake Sturgeon abundance in Stephens Lake in 2022 increased significantly from both 2018 (171% increase) and 2021 (52% increase). The decrease in population abundance in the Keeyask reservoir and the increase in Stephens Lake is largely driven by an increase in the number of fish moving downstream through the Keeyask GS between summer 2021 and 2022. It should be noted that this reduction may also be due to the increase in the volume of the reservoir and lower capture efficiency.

5.2.3 SPAWNING

A total of three spawning-condition fish were captured in the Keeyask reservoir in 2022 including two male and one female fish. All three fish were captured in the vicinity of Birthday Rapids (Map 2). This is similar to capture locations in previous years (Hrenchuk *et al.* 2015; Legge *et al.* 2017; Holm and Hrenchuk 2019; Loeppky and Hrenchuk 2022). Spawning condition fish are often underrepresented in the catch and their presence is not always indicative of spawning success. For example, in 2008, only three spawning fish were captured (the lowest number caught from 2001–2021) yet the 2008 cohort has been one of the strongest cohorts recorded since studies began.

It was predicted in the EIS that the inundation of Birthday Rapids may change spawning habitat and potentially result in Lake Sturgeon no longer using this area to spawn, potentially moving upstream to spawn at Long Rapids instead. However, no Lake Sturgeon were captured in gill nets set downstream of Long Rapids in 2022. Ongoing acoustic telemetry studies also suggest that post-impoundment, Lake Sturgeon continued to use spawning areas in the vicinity of Birthday Rapids. Ten fish (34% of all tracked) were detected downstream of Birthday Rapids during the spawning period in 2022 (Hrenchuk 2023). This, along with evidence of spawning individuals at Birthday Rapids, suggests Lake Sturgeon continue to use this habitat post-impoundment.

In Stephens Lake, spawning Lake Sturgeon have been observed in the majority of recent sampling years, representing between 3% and 75% of the total number of fish captured. In 2022, the Keeyask GS was fully operational during the spawning period for the first time. During this time, high water levels on the Nelson River necessitated the use of both the Keeyask spillway and powerhouse. Two pre-spawn male fish were captured along the north shore downstream of the tailrace, representing only 1% of the total catch. However, 22 wild young-of-the-year Lake Sturgeon were captured during juvenile Lake Sturgeon monitoring conducted in September 2022, indicating that successful spawning occurred downstream of the Keeyask GS in 2022 (Burnett and Hrenchuk 2023).

5.2.4 KEY QUESTIONS

Commissioning of the Keeyask GS was completed in March 2022, when all powerhouse units became functional. Therefore, 2022 represents the first year of sampling during operation conditions in both the Keeyask reservoir and Stephens Lake. Key questions identified in the AEMP are addressed below.

Is there a biologically relevant (and statistically significant) change in the rate of population growth for the Keeyask reservoir and Stephens Lake populations?

The population estimate for adult Lake Sturgeon (measuring ≥ 800 mm FL) in 2022 was 345 individuals (95% CI: 221–537) in the Keeyask reservoir and 1,164 individuals (CI 95%: 853–1,589) in Stephens Lake. The population estimate for the Keeyask reservoir in 2022 was significantly lower than both the 2018 and 2021 estimates. The 2022 population estimate for Stephens Lake was significantly higher than both the 2018 and 2021 estimates. The overall abundance estimates calculated between 2003 and 2022 show a significant increasing trend in Stephens Lake over time.

Is there a biologically relevant (and statistically significant) change in survival for the Keeyask reservoir and Stephens Lake populations?

The best-fit model indicated a marked decrease in adult Lake Sturgeon survival in the Keeyask reservoir, decreasing from 91% in 2004–2021 to 78% from 2021–2022. However, this is the result of a large number of Lake Sturgeon moving out of the reservoir. The model interprets fish that move from the Keeyask reservoir to Stephens Lake as mortalities as they are not able to return and are lost from the upstream population. Therefore, the decrease in survival reflects the large downstream migration observed in 2021 and 2022 rather than fish mortality. When emigration (14% based on mark-recapture) is considered, the survival estimate becomes 92%, which is comparable to previous years.

The survival estimate for Stephens Lake was 97%, which is very high.

Is there a biologically relevant (and statistically observable) change in the condition factor of Lake Sturgeon?

Too few adult Lake Sturgeon were captured in the Keeyask reservoir to compare condition at FL interval between baseline, construction, and post-impoundment. However, annual mean condition during operation (2022; 0.41–1.27) fell within the ranges observed during baseline (2001–2014; 0.57–1.49) and construction (2016, 2018, and 2021; 0.38–1.46). No significant differences were found between the two size classes that could be compared in Stephens Lake.

Is the relative abundance/CPUE of adult Lake Sturgeon in Stephens Lake changing?

The CPUE of Lake Sturgeon in 2022 in Stephens Lake (0.48 LKST/91.4 m net/24 h) was higher than any sampling year other than 2021. In addition to the population estimate, these results suggest that the abundance of Lake Sturgeon is increasing in Stephens Lake.

Are spawning adults present in the Keeyask reservoir and Stephens Lake?

Spawning adult Lake Sturgeon were captured both in the Keeyask reservoir and Stephens Lake during spring 2022. Both spawning females (n=1) and males (n=2) were captured in the reservoir, and spawning males (n=2) were captured in Stephens Lake.

Where (on a coarse-scale) do Lake Sturgeon spawn in the post-Project environment?

All spawning adult Lake Sturgeon were captured in the Keeyask reservoir at Birthday Rapids. In Stephens Lake, spawning fish were captured on the north shore downstream of the Keeyask GS powerhouse.

6.0 SUMMARY AND CONCLUSIONS

- Population monitoring was conducted in spring 2022 to derive an adult Lake Sturgeon population estimate and examine size and condition of the sturgeon populations in the Burntwood River, Kelsey GS Area, Keeyask reservoir and Stephens Lake.
    - Although adult Lake Sturgeon population monitoring was conducted in the Keeyask reservoir and Stephens Lake in 2021, sampling was repeated in 2022. Following sampling in 2021, a large number of adult Lake Sturgeon were observed moving downstream through the Keeyask GS during acoustic telemetry studies. Monitoring was repeated in 2022 to determine if the downstream movements observed after the population study was completed in spring 2021 were substantial enough to impact the population size.
- A total of 740 individual Lake Sturgeon were captured in the four different areas in 2022. Of these, 270 were caught in the Burntwood River (234 adults [≥ 800 mm] and 35 juveniles), 231 were caught in the Kelsey GS Area (195 adults and 35 juveniles), 63 were caught in the Keeyask reservoir (32 adults and 31 juveniles) and 176 were caught in Stephens Lake (132 adults and 32 juveniles).
- In the Burntwood River, CPUE in 2022 (0.75 Lake Sturgeon/91.4 m net/24 h) was the second highest recorded since studies began. Similarly, CPUE in the Kelsey GS Area in 2022 was the highest ever recorded (0.66 Lake Sturgeon)
- Overall CPUE in the Keeyask reservoir in 2022 (0.14 Lake Sturgeon/91.4 m net/24 h) was the third lowest since studies began in 2001 (0.12–0.54 Lake Sturgeon). Comparatively, CPUE in Stephens Lake (0.48 Lake Sturgeon) was the second highest recorded since 2001 (0.02–0.64 Lake Sturgeon).
- Sex and maturity were confirmed for 94 individuals in the Burntwood River: 91 males (37 pre-spawn, 53 ripe and one post-spawn) and three females (two pre-spawn and one ripe). In the Kelsey GS Area, sex and maturity was confirmed for one ripe male fish. A total of three fish including one pre-spawn male, one spawning male and one pre-spawn female were captured in the Keeyask reservoir. In Stephens Lake, sex and maturity was confirmed for two pre-spawn males.
- The population estimates for adult Lake Sturgeon (measuring ≥ 800 mm FL) in the Burntwood River, Kelsey GS Area, Keeyask reservoir and Stephens Lake in 2022 were 707 individuals (95% CI: 540-904), 957 individuals (95% CI: 614-1,400), 345 individuals (95% CI: 232-488) and 1,164 individuals (95% CI: 886-1,492), respectively.
- Key questions in the AEMP related to Lake Sturgeon monitoring in the Upper Split Lake Area are addressed below:
    - *Is there a biologically relevant (and statistically significant) change in the rate of population growth for the Upper Split Lake Area population?*

The 2022 population estimate for the Burntwood River shows a significant increase from the 2017 estimate but not the 2019 estimate. The 2022 population estimate for the Kelsey GS area increased significantly from both 2017 and 2019. Based on data collected from 2005 to 2022, the population in both areas appears to be increasing.

- *Is there a biologically relevant (and statistically significant) change in survival for Upper Split Lake Area population?*

  The best-fit model did not indicate a marked change in the survival rate in either sampling area compared to the estimate calculated in 2019. The survival rate for the Burntwood River (2014–2022) was 88%, while the survival rate for the Kelsey GS Area (2014–2022) was 86%.

- *Is there a biologically relevant (and statistically observable) change in the condition factor of Lake Sturgeon?*

  In the Burntwood River, mean condition factor was significantly lower during operation than baseline for a single fork length interval (1,000–1,049 mm) but did not differ significantly from construction. Significant differences were found for all FL intervals between 800 and 1,099 mm FL in the Kelsey GS Area. In all intervals, condition was significantly higher during baseline than either construction or operation and operation was significantly lower than construction.

- *Will the frequency of long-distance movements (from the Keeyask/Stephens Lake area to the Upper Split Lake Area) by sub-adult and adult Lake Sturgeon increase during Project operation?*

  In 2022, 21 Lake Sturgeon originally tagged in the Keeyask reservoir were recaptured in the Upper Split Lake Area (three in the Burntwood River and 18 in the Kelsey GS area). In previous years, fish tagged in the Keeyask reservoir have represented between 0 and 10% of recaptured fish in the Kelsey GS Area. In 2022, they represented 24% of recaptures. This observation is consistent with the movement of adult Lake Sturgeon out of the Keeyask reservoir observed during the acoustic telemetry study.

- Key questions in the AEMP related to Lake Sturgeon monitoring in the Keeyask Area are addressed below:

  - *Is there a biologically relevant (and statistically significant) change in the rate of population growth for the Keeyask reservoir and Stephens Lake populations?*

    The population estimate for the Keeyask reservoir in 2022 was significantly lower than both the 2018 and 2021 estimates. The 2022 population estimate for Stephens Lake was significantly higher than both the 2018 and 2021 estimates. The overall abundance estimates calculated between 2003 and 2022 show a significant increasing trend over time.

- *Is there a biologically relevant (and statistically significant) change in survival for the Keeyask reservoir and Stephens Lake populations?*

  The best-fit model indicated a marked decrease in adult Lake Sturgeon survival in the Keeyask reservoir, decreasing from 91% in 2004–2021 to 78% from 2021–2022. However, this is the result of a large number of Lake Sturgeon moving out of the reservoir. The model interprets fish that move from the Keeyask reservoir to Stephens Lake as mortalities as they are not able to return and are lost from the upstream population. Therefore, the decrease in survival reflects the large downstream migration observed in 2021 and 2022 rather than fish mortality. When emigration (14% based on mark-recapture) is considered, the survival estimate becomes 92%, which is comparable to previous years.

  The survival estimate for Stephens Lake was 97%, which is very high.

  Is there a biologically relevant (and statistically observable) change in the condition factor of Lake Sturgeon?

  Too few Lake Sturgeon were captured in the Keeyask reservoir to compare condition between baseline, construction, and post-impoundment. No significant differences were found between the two size classes that could be compared in Stephens Lake.

- *Is the relative abundance/CPUE of adult Lake Sturgeon in Stephens Lake changing?*

  The CPUE of Lake Sturgeon in 2022 in Stephens Lake (0.48 LKST/91.4 m net/24 h) was higher than any sampling year other than 2021. In addition to the population estimate, these results suggest that the abundance of Lake Sturgeon is increasing in Stephens Lake.

- *Are spawning adults present in the Keeyask reservoir and Stephens Lake?*

  Spawning adult Lake Sturgeon were captured both in the Keeyask reservoir and Stephens Lake during spring 2022. Both spawning females (n=1) and males (n=2) were captured in the reservoir, and spawning males (n=2) were captured in Stephens Lake.

- *Where (on a coarse-scale) do Lake Sturgeon spawn in the post-Project environment?*

  All spawning adult Lake Sturgeon were captured in the Keeyask reservoir at Birthday Rapids. In Stephens Lake, spawning fish were captured on the north shore downstream of the Keeyask GS powerhouse.

- During the initial years of Project operation, the EIS predicted that increased numbers of Lake Sturgeon would leave the Keeyask reservoir (both upstream and downstream) leading to a decrease in population abundance. Floy-tag recaptures suggest that both

upstream and downstream emigration has occurred. Eighteen fish tagged in the Keeyask reservoir were captured in the Kelsey GS area and 47 were captured in Stephens Lake in 2022, representing an increase over previous years. Seven fish tagged in Gull Lake were captured in the Kelsey GS area between 2006 and 2019 while 14 were captured in Stephens Lake between 2003 and 2021. This was reflected both in the decreases in overall CPUE and calculated population estimate in the Keeyask reservoir. The total CPUE in 2022 (0.14 Lake Sturgeon/91.4 m net/24 h) was the lowest since 2011 (0.12 Lake Sturgeon/91.4 m net/24 h). Population abundance was estimated at 345 individuals (95% CI: 221–537) was significantly lower than 2018 (909 individuals; 95% CI: 700–1,180) and 2021 (913 individuals (95% CI: 673–1,239). It should be noted that this reduction may also be in part due to the increase in the volume of the reservoir and lower capture efficiency. The EIS also predicted that habitat alterations would lead to a decrease in attraction and use of spawning habitat at Birthday Rapids. Although there has been a reduction in the amount of white water present, water velocities have remained high and spawning Lake Sturgeon were captured downstream of Birthday Rapids following reservoir impoundment in both 2021 and 2022.

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APPENDICES

APPENDIX 1:
TAGGING AND BIOLOGICAL INFORMATION FOR LAKE STURGEON CAPTURED IN THE UPPER SPLIT LAKE AND KEEYASK AREAS, SPRING 2022

Table A1-1. Tagging and biological information for Lake Sturgeon marked with Floy tags and PIT tags in the Burntwood River, spring 2022.

Location	Zone	Date	Prefix	Floy tag	PIT tag	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity[1]
Burntwood River	BWR-A	29-May-22	NSC	119551	900 226001232134	910	1010	3800	-	-
Burntwood River	BWR-B	29-May-22	NSC	119553	900 226001232486	441	496	700	-	-
Burntwood River	BWR-A	31-May-22	NSC	119554	900 226001232261	1220	1330	14500	-	-
Burntwood River	BWR-A	31-May-22	NSC	119555	900 226001232262	500	575	1000	-	-
Burntwood River	BWR-A	31-May-22	NSC	119556	900 226001232258	800	900	4900	-	-
Burntwood River	BWR-B	31-May-22	NSC	119557	900 226001232214	1100	1223	9525	-	-
Burntwood River	BWR-A	3-Jun-22	NSC	119559	900 226001232299	950	1080	8165	-	-
Burntwood River	BWR-A	3-Jun-22	NSC	119560	900 226001232227	1020	1111	9072	-	-
Burntwood River	BWR-A	3-Jun-22	NSC	119562	900 226001232278	969	1080	6804	-	-
Burntwood River	BWR-A	4-Jun-22	NSC	119563	900 226001232250	770	865	4082	-	-
Burntwood River	BWR-A	4-Jun-22	NSC	119564	900 226001232284	1065	1175	9979	-	-
Burntwood River	BWR-A	4-Jun-22	NSC	119565	900 226001232223	1188	1204	12247	-	-
Burntwood River	BWR-A	4-Jun-22	NSC	119595	900 226001232229	1450	1550	33566	M	11
Burntwood River	BWR-A	5-Jun-22	NSC	119566	900 226001232263	816	899	4536	-	-
Burntwood River	BWR-A	5-Jun-22	NSC	119567	900 226001232283	924	1036	9072	-	-
Burntwood River	BWR-A	5-Jun-22	NSC	119568	900 226001232269	1065	1111	10433	-	-
Burntwood River	BWR-A	5-Jun-22	NSC	119570	900 226001232273	788	881	4536	-	-
Burntwood River	BWR-B	5-Jun-22	NSC	119572	900 226001232257	1069	1185	10433	-	-
Burntwood River	BWR-B	5-Jun-22	NSC	119573	900 226001232254	985	1090	9072	-	-
Burntwood River	BWR-A	7-Jun-22	NSC	119574	900 226001232295	949	1082	8165	-	-
Burntwood River	BWR-A	7-Jun-22	NSC	119575	900 226001232293	1048	1155	9525	-	-
Burntwood River	BWR-A	8-Jun-22	NSC	119576	900 226001232267	899	1008	8165	M	7
Burntwood River	BWR-A	8-Jun-22	NSC	119577	900 226001232252	928	1031	8165	M	7
Burntwood River	BWR-A	8-Jun-22	NSC	119578	900 226001232238	718	803	4082	-	-
Burntwood River	BWR-A	8-Jun-22	NSC	119579	900 226001232255	885	997	4536	M	7
Burntwood River	BWR-A	8-Jun-22	NSC	119580	900 226001232297	811	905	5897	M	7
Burntwood River	BWR-A	8-Jun-22	NSC	119581	900 226001232298	1228	1377	18144	M	7
Burntwood River	BWR-A	8-Jun-22	NSC	119582	900 226001232208	890	986	6804	M	7
Burntwood River	BWR-A	9-Jun-22	NSC	119583	900 226001232202	945	1082	7711	-	-
Burntwood River	BWR-A	9-Jun-22	NSC	119584	900 226001232286	1070	1180	11340	-	-
Burntwood River	BWR-A	9-Jun-22	NSC	119585	900 226001232289	880	985	6350	-	-

Table A1-1. Tagging and biological information for Lake Sturgeon marked with Floy tags and PIT tags in the Burntwood River, spring 2022 (continued).

Location	Zone	Date	Prefix	Floy tag	PIT tag	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity[1]
Burntwood River	BWR-A	9-Jun-22	NSC	119586	900 226001232270	1045	1141	9979	M	7
Burntwood River	BWR-A	9-Jun-22	NSC	119587	900 226001232201	910	1004	5443	M	7
Burntwood River	BWR-A	9-Jun-22	NSC	119588	900 226001232275	864	961	7257	M	7
Burntwood River	BWR-A	9-Jun-22	NSC	119589	900 226001232290	1223	1335	14969	M	8
Burntwood River	BWR-A	9-Jun-22	NSC	119591	900 226001232206	816	911	5443	-	-
Burntwood River	BWR-A	9-Jun-22	NSC	119592	900 226001232228	966	1056	9979	M	7
Burntwood River	BWR-A	9-Jun-22	NSC	119593	900 226001232243	995	1122	10886	M	7
Burntwood River	BWR-B	9-Jun-22	NSC	119594	900 226001232428	919	1011	8618	-	-
Burntwood River	BWR-A	10-Jun-22	NSC	119598	-	1005	1125	10886	M	7
Burntwood River	BWR-A	10-Jun-22	NSC	119599	-	1020	1139	9979	M	7
Burntwood River	BWR-A	10-Jun-22	NSC	119600	900 226001232241	1098	1200	11793	M	8
Burntwood River	BWR-A	10-Jun-22	NSC	123301	900 226001232287	953	1059	9072	-	-
Burntwood River	BWR-A	10-Jun-22	NSC	123302	900 226001232204	941	1060	6350	M	7
Burntwood River	BWR-A	10-Jun-22	NSC	123303	900 226001232246	1029	1156	9525	-	-
Burntwood River	BWR-A	10-Jun-22	NSC	123304	900 226001232215	959	1062	6804	-	-
Burntwood River	BWR-B	10-Jun-22	NSC	123305	900 226001232265	960	1078	6804	M	7
Burntwood River	BWR-A	11-Jun-22	NSC	123306	900 226001232218	745	844	3629	-	-
Burntwood River	BWR-A	11-Jun-22	NSC	123308	900 226001232230	917	1025	4536	-	-
Burntwood River	BWR-A	11-Jun-22	NSC	123309	900 226001232247	870	970	4536	-	-
Burntwood River	BWR-A	11-Jun-22	NSC	123310	900 226001232236	1025	1139	7711	M	7
Burntwood River	BWR-A	11-Jun-22	NSC	123311	900 226001232276	889	1010	6350	M	7
Burntwood River	BWR-A	12-Jun-22	NSC	123313	-	888	993	4536	M	8
Burntwood River	BWR-A	12-Jun-22	NSC	123314	900 226001232244	815	906	4990	M	8
Burntwood River	BWR-A	12-Jun-22	NSC	123315	900 226001232200	926	1039	6804	M	8
Burntwood River	BWR-A	12-Jun-22	NSC	123316	900 226001232217	1036	1154	9072	M	8
Burntwood River	BWR-A	12-Jun-22	NSC	123317	900 226001232226	905	1011	6350	M	7
Burntwood River	BWR-A	12-Jun-22	NSC	123318	900 226001232272	734	833	2722	-	-
Burntwood River	BWR-A	12-Jun-22	NSC	123319	900 226001232219	980	1091	7711	M	8
Burntwood River	BWR-A	12-Jun-22	NSC	123320	900 226001232279	873	972	5443	M	8
Burntwood River	BWR-A	12-Jun-22	NSC	123322	900 226001232291	905	1004	6804	-	-
Burntwood River	BWR-A	12-Jun-22	NSC	123323	900 226001232221	964	1060	8165	M	8

Table A1-1. Tagging and biological information for Lake Sturgeon marked with Floy tags and PIT tags in the Burntwood River, spring 2022 (continued).

Location	Zone	Date	Prefix	Floy tag	PIT tag	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity[1]
Burntwood River	BWR-A	12-Jun-22	NSC	123325	900 226001232203	878	984	6350	-	-
Burntwood River	BWR-B	12-Jun-22	NSC	123326	900 226001232213	880	979	4536	M	7
Burntwood River	BWR-B	12-Jun-22	NSC	123328	900 226001232231	475	544	907	-	-
Burntwood River	BWR-B	12-Jun-22	NSC	123329	900 226001232253	1176	1288	13608	F	2
Burntwood River	BWR-B	12-Jun-22	NSC	123330	900 226001232212	620	698	1814	-	-
Burntwood River	BWR-A	13-Jun-22	NSC	123331	900 226001232242	1070	1192	9072	M	8
Burntwood River	BWR-A	13-Jun-22	NSC	123332	900 226001232210	1035	1163	8618	M	8
Burntwood River	BWR-A	13-Jun-22	NSC	123333	900 226001232220	1026	1143	8165	-	-
Burntwood River	BWR-A	13-Jun-22	NSC	123334	900 226001232249	1064	1183	9525	-	-
Burntwood River	BWR-A	13-Jun-22	NSC	123335	900 226001232268	1600	1730	27216	-	-
Burntwood River	BWR-A	13-Jun-22	NSC	123336	900 226001232459	875	992	5443	M	8
Burntwood River	BWR-A	13-Jun-22	NSC	123337	900 226001232248	1046	1158	9072	M	8
Burntwood River	BWR-A	13-Jun-22	NSC	123338	900 226001232277	947	1064	6804	M	8
Burntwood River	BWR-A	13-Jun-22	NSC	123339	900 226001232264	1010	1119	7711	-	-
Burntwood River	BWR-A	13-Jun-22	NSC	123340	900 226001232209	1029	1092	9979	M	8
Burntwood River	BWR-A	13-Jun-22	NSC	123341	900 226001232271	1395	1520	20412	F	3
Burntwood River	BWR-A	13-Jun-22	NSC	123342	900 226001232234	1021	1132	9072	M	8
Burntwood River	BWR-A	13-Jun-22	NSC	123343	900 226001232233	979	1091	6804	M	8
Burntwood River	BWR-A	13-Jun-22	NSC	123344	900 226001232274	889	1002	6804	M	8
Burntwood River	BWR-A	13-Jun-22	NSC	123345	900 226001232282	906	1004	6804	M	8
Burntwood River	BWR-A	13-Jun-22	NSC	123346	900 226001232281	909	1012	5897	M	8
Burntwood River	BWR-A	13-Jun-22	NSC	123347	900 226001232146	924	1036	6804	-	-
Burntwood River	BWR-A	13-Jun-22	NSC	123348	900 226001232224	1097	1164	8165	-	-
Burntwood River	BWR-A	13-Jun-22	NSC	123349	900 226001232165	937	1026	8165	M	8
Burntwood River	BWR-A	13-Jun-22	NSC	123350	900 226001232140	1090	1120	8165	M	8
Burntwood River	BWR-A	14-Jun-22	NSC	123251	900 226001232127	924	1025	5000	-	-
Burntwood River	BWR-A	14-Jun-22	NSC	123252	900 226001232194	925	1026	6200	M	8
Burntwood River	BWR-A	14-Jun-22	NSC	123253	900 226001232122	1052	1183	8250	M	8
Burntwood River	BWR-A	14-Jun-22	NSC	123254	900 226001232191	835	935	5000	M	11
Burntwood River	BWR-A	14-Jun-22	NSC	123355	900 226001232156	970	1069	7000	M	11
Burntwood River	BWR-A	14-Jun-22	NSC	123256	900 226001232145	904	1008	6000	M	11

Table A1-1. Tagging and biological information for Lake Sturgeon marked with Floy tags and PIT tags in the Burntwood River, spring 2022 (continued).

Location	Zone	Date	Prefix	Floy tag	PIT tag	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity[1]
Burntwood River	BWR-A	14-Jun-22	NSC	123257	900 226001232151	920	1020	6200	M	8
Burntwood River	BWR-A	14-Jun-22	NSC	123258	900 226001232123	839	932	4500	M	8
Burntwood River	BWR-A	14-Jun-22	NSC	123259	900 226001232115	1000	1100	7500	M	11
Burntwood River	BWR-A	14-Jun-22	NSC	123260	900 226001232163	944	1042	7000	M	11
Burntwood River	BWR-A	14-Jun-22	NSC	123261	900 226001232128	897	1010	5100	-	-
Burntwood River	BWR-A	14-Jun-22	NSC	123262	900 226001232245	989	1106	7000	-	-
Burntwood River	BWR-A	15-Jun-22	NSC	123263	900 226001232211	941	1062	6500	-	-
Burntwood River	BWR-A	15-Jun-22	NSC	123264	900 226001232170	802	896	3750	-	-
Burntwood River	BWR-A	15-Jun-22	NSC	123265	900 226001232118	920	1015	5400	M	8
Burntwood River	BWR-A	15-Jun-22	NSC	123266	900 226001232121	918	1023	5600	-	-
Burntwood River	BWR-A	15-Jun-22	NSC	123267	900 226001232108	1028	1130	7500	M	8
Burntwood River	BWR-A	15-Jun-22	NSC	123268	900 226001232159	940	1050	6250	M	8
Burntwood River	BWR-A	15-Jun-22	NSC	123269	900 226001232174	867	1072	7400	-	-
Burntwood River	BWR-A	15-Jun-22	NSC	123270	900 226001232178	1062	1174	9150	M	11
Burntwood River	BWR-A	15-Jun-22	NSC	123271	900 226001232129	509	573	950	-	-
Burntwood River	BWR-A	16-Jun-22	NSC	123273	900 226001232422	995	1114	8500	M	11
Burntwood River	BWR-A	16-Jun-22	NSC	123274	900 226001232104	891	1005	5700	-	-
Burntwood River	BWR-A	16-Jun-22	NSC	123275	900 226001232112	970	1076	6150	M	11
Burntwood River	BWR-A	16-Jun-22	NSC	123276	900 226001232196	1030	1152	8300	M	11
Burntwood River	BWR-A	17-Jun-22	NSC	123277	900 226001232180	987	1061	6370	-	-
Burntwood River	BWR-A	17-Jun-22	NSC	123278	900 226001232476	840	932	3450	-	-
Burntwood River	BWR-A	17-Jun-22	NSC	123279	900 226001232199	790	878	3500	-	-
Burntwood River	BWR-A	18-Jun-22	NSC	123280	900 226001232158	580	652	1400	-	-
Burntwood River	BWR-A	18-Jun-22	NSC	123281	900 226001232450	838	927	3825	-	-
Burntwood River	BWR-B	18-Jun-22	NSC	123282	900 226001232124	545	615	1150	-	-
Burntwood River	BWR-A	19-Jun-22	NSC	123283	900 226001232430	662	751	1900	-	-
Burntwood River	BWR-A	19-Jun-22	NSC	123284	900 226001232157	937	995	5800	-	-
Burntwood River	BWR-A	19-Jun-22	NSC	123285	900 226001232427	935	1050	6750	-	-
Burntwood River	BWR-A	20-Jun-22	NSC	123286	900 226001232141	1055	1181	8200	-	-
Burntwood River	BWR-A	20-Jun-22	NSC	123288	900 226001232176	937	1040	6100	M	8
Burntwood River	BWR-A	20-Jun-22	NSC	123389	900 226001232447	952	1070	6800	-	-
Burntwood River	BWR-B	20-Jun-22	NSC	123291	900 226001232471	1035	1148	7400	-	-

Table A1-1. Tagging and biological information for Lake Sturgeon marked with Floy tags and PIT tags in the Burntwood River, spring 2022 (continued).

Location	Zone	Date	Prefix	Floy tag	PIT tag	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity[1]
Burntwood River	BWR-A	21-Jun-22	NSC	123292	900 226001232460	880	987	5750	-	-
Burntwood River	BWR-A	21-Jun-22	NSC	123293	900 226001232256	950	1060	5650	-	-
Burntwood River	BWR-A	21-Jun-22	NSC	123295	900 226001232412	888	1000	5150	-	-
Burntwood River	BWR-A	21-Jun-22	NSC	123296	900 226001232461	941	1050	6100	-	-
Burntwood River	BWR-A	21-Jun-22	NSC	123297	900 226001232435	632	709	1800	-	-
Burntwood River	BWR-A	22-Jun-22	NSC	123298	900 226001232487	1020	1135	6900	-	-
Burntwood River	BWR-A	22-Jun-22	NSC	123299	900 226001232130	978	1100	6300	-	-
Burntwood River	BWR-A	22-Jun-22	NSC	123300	900 226001232168	1020	1146	6500	-	-
Burntwood River	BWR-B	22-Jun-22	NSC	123294	900 226001232403	1213	1337	15000	-	-
Burntwood River	BWR-A	23-Jun-22	NSC	102159	900 226001232467	798	910	2450	-	-
Burntwood River	BWR-A	23-Jun-22	NSC	102160	900 226001232474	766	848	3300	-	-
Burntwood River	BWR-A	23-Jun-22	NSC	102161	900 226001232454	949	1067	6950	-	-
Burntwood River	BWR-A	23-Jun-22	NSC	102163	900 226001232449	1030	1160	7450	-	-
Burntwood River	BWR-A	24-Jun-22	NSC	102164	900 226001232175	575	649	1300	-	-
Burntwood River	BWR-B	24-Jun-22	NSC	102165	900 226001232182	1023	1131	7650	-	-
Burntwood River	BWR-B	24-Jun-22	NSC	102166	900 226001232498	1075	1178	9650	-	-
Burntwood River	BWR-A	26-Jun-22	-	-	900 226001232495	810	910	3000	-	-
Burntwood River	BWR-A	26-Jun-22	NSC	102168	900 226001232161	785	895	3500	-	-
Burntwood River	BWR-A	26-Jun-22	NSC	102169	900 226001232105	1142	1280	14000	-	-
Burntwood River	BWR-A	26-Jun-22	NSC	102170	900 226001232187	835	945	4050	-	-
Burntwood River	BWR-B	26-Jun-22	NSC	102172	900 226001232475	987	1090	8200	-	-
Burntwood River	BWR-A	27-Jun-22	NSC	102173	900 226001232419	930	1040	5200	-	-
Burntwood River	BWR-B	27-Jun-22	NSC	102175	900 226001232464	1161	1290	11500	-	-
Burntwood River	BWR-B	28-Jun-22	NSC	93826	900 226001232160	465	530	700	-	-
Burntwood River	BWR-B	29-Jun-22	NSC	93827	900 226001232132	340	379	325	-	-
Burntwood River	BWR-B	29-Jun-22	NSC	93828	900 226001232101	740	841	3200	-	-
Burntwood River	BWR-B	30-Jun-22	NSC	93829	900 226001232482	1200	1333	17000	-	-
Burntwood River	BWR-B	30-Jun-22	NSC	93830	900 226001232195	905	1004	5875	-	-
Burntwood River	BWR-C	02-Jul-22	NSC	93831	900 226001232442	1120	1265	14000	-	-
Burntwood River	BWR-B	03-Jul-22	NSC	93832	900 226001232166	331	371	300	-	-
Burntwood River	BWR-C	03-Jul-22	NSC	93833	900 226001232137	772	870	3850	-	-
Burntwood River	BWR-C	04-Jul-22	NSC	93834	900 226001232131	945	1054	5800	-	-

Table A1-1. Tagging and biological information for Lake Sturgeon marked with Floy tags and PIT tags in the Burntwood River, spring 2022 (continued).

Location	Zone	Date	Prefix	Floy tag	PIT tag	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity[1]
Burntwood River	BWR-B	04-Jul-22	NSC	93835	900 226001232103	905	1005	4500	-	-
Burntwood River	BWR-B	20-Jun-22	NSC	123390	900 067000109916	355	412	450	-	GRH
Burntwood River	BWR-B	5-Jun-22	NSC	119571	900 067000108777	310	358	250	-	GRH
Burntwood River	BWR-A	23-Jun-22	NSC	102162	900 067000110307	380	430	300	-	GRH
Burntwood River	BWR-B	27-Jun-22	NSC	102174	900 067000111334	365	410	300	-	GRH

1. Fish labeled GRH in the maturity column are Grand Rapids Hatchery released fish.

Table A2-1: Tagging and biological information for Lake Sturgeon marked with Floy tags and PIT tags in the Kelsey GS Area, spring 2022.

Location	Zone	Date	Prefix	Floy tag	PIT Tag	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity[1]
Kelsey GS Area	SPL-A	28-May-22	NSC	122393	900 226001226213	974	1085	8000	-	-
Kelsey GS Area	KGS-C	28-May-22	NSC	122394	900 226001226221	878	983	4200	-	-
Kelsey GS Area	KGS-A	28-May-22	NSC	122395	900 226001227855	1193	1315	10886	-	-
Kelsey GS Area	KGS-A	28-May-22	NSC	122397	900 226001226219	866	977	4800	-	-
Kelsey GS Area	KGS-A	28-May-22	NSC	122398	900 226001227872	807	889	3700	-	-
Kelsey GS Area	KGS-A	28-May-22	NSC	122399	900 226001227840	825	938	4100	-	-
Kelsey GS Area	KGS-A	28-May-22	NSC	122400	900 226001226254	970	1073	6800	-	-
Kelsey GS Area	KGS-A	29-May-22	NSC	122390	900 226001226289	894	942	5050	-	-
Kelsey GS Area	KGS-A	29-May-22	NSC	122391	900 226001227804	907	1012	5500	-	-
Kelsey GS Area	KGS-A	29-May-22	NSC	122392	900 226001227824	782	869	3900	-	-
Kelsey GS Area	SPL-A	30-May-22	NSC	122381	900 226001227817	810	915	3400	-	-
Kelsey GS Area	KGS-A	30-May-22	NSC	122382	900 226001226265	831	936	4650	-	-
Kelsey GS Area	KGS-A	30-May-22	NSC	122383	900 226001226264	939	1055	6400	-	-
Kelsey GS Area	KGS-A	30-May-22	NSC	122384	900 226001227892	785	868	3900	-	-
Kelsey GS Area	KGS-A	30-May-22	NSC	122385	900 226001226280	967	1090	7200	-	-
Kelsey GS Area	KGS-A	30-May-22	NSC	122386	900 226001226292	848	955	4300	-	-
Kelsey GS Area	KGS-A	30-May-22	NSC	122387	900 226001227802	835	940	4000	-	-
Kelsey GS Area	KGS-A	30-May-22	NSC	122388	900 226001226208	977	1090	7100	-	-
Kelsey GS Area	KGS-A	31-May-22	NSC	122377	900 226001227841	1015	1150	7300	-	-
Kelsey GS Area	KGS-A	31-May-22	NSC	122378	900 226001226293	835	950	4600	-	-
Kelsey GS Area	KGS-A	31-May-22	NSC	122379	900 226001226224	880	977	5500	-	-
Kelsey GS Area	KGS-A	31-May-22	NSC	122380	900 226001226296	822	915	4500	-	-
Kelsey GS Area	KGS-C	1-Jun-22	NSC	122376	900 226001226537	834	945	4000	-	-
Kelsey GS Area	KGS-C	1-Jun-22	NSC	122901	900 226001226235	740	828	3750	-	-
Kelsey GS Area	SPL-A	1-Jun-22	NSC	122902	900 226001226587	937	1045	6950	-	-
Kelsey GS Area	KGS-A	1-Jun-22	NSC	122904	900 226001226267	896	994	5000	-	-
Kelsey GS Area	KGS-A	1-Jun-22	NSC	122906	900 226001226255	855	982	4600	-	-
Kelsey GS Area	KGS-A	1-Jun-22	NSC	122907	900 226001226204	995	1131	6100	-	-
Kelsey GS Area	KGS-A	1-Jun-22	NSC	122908	900 226001227619	968	1077	7400	-	-
Kelsey GS Area	KGS-A	1-Jun-22	NSC	122909	900 226001226260	1007	1122	7400	-	-
Kelsey GS Area	KGS-A	1-Jun-22	NSC	122910	900 226001226245	890	1007	5000	-	-

Table A2-1: Tagging and biological information for Lake Sturgeon marked with Floy tags and PIT tags in the Kelsey GS Area, spring 2022 (continued).

Location	Zone	Date	Prefix	Floy tag	PIT Tag	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity[1]
Kelsey GS Area	SPL-A	2-Jun-22	NSC	122911	900 226001226283	926	1043	5000	-	-
Kelsey GS Area	SPL-A	2-Jun-22	NSC	122913	900 226001227819	870	971	4800	-	-
Kelsey GS Area	KGS-C	2-Jun-22	NSC	122914	900 226001226232	803	900	4400	-	-
Kelsey GS Area	KGS-A	2-Jun-22	NSC	122915	900 226001226271	855	960	5400	-	-
Kelsey GS Area	KGS-A	2-Jun-22	NSC	122916	900 226001226262	1064	1197	8200	-	-
Kelsey GS Area	KGS-A	2-Jun-22	NSC	122917	900 226001226210	913	1025	5800	-	-
Kelsey GS Area	KGS-A	2-Jun-22	NSC	122918	900 226001227865	777	885	3500	-	-
Kelsey GS Area	KGS-A	3-Jun-22	NSC	122919	900 226001226230	892	1008	5100	-	-
Kelsey GS Area	KGS-A	3-Jun-22	NSC	122920	900 226001226279	933	1043	6300	-	-
Kelsey GS Area	KGS-A	3-Jun-22	NSC	122921	900 226001227826	834	926	4600	-	-
Kelsey GS Area	KGS-A	3-Jun-22	NSC	122922	900 226001226214	750	854	3000	-	-
Kelsey GS Area	KGS-A	4-Jun-22	NSC	122876	900 226001226269	919	1050	5500	-	-
Kelsey GS Area	KGS-A	4-Jun-22	NSC	122877	900 226001226281	961	1076	7000	-	-
Kelsey GS Area	KGS-C	4-Jun-22	NSC	122923	900 226001226299	980	1090	6950	-	-
Kelsey GS Area	KGS-A	4-Jun-22	NSC	122924	900 226001226217	1018	1133	7200	-	-
Kelsey GS Area	KGS-A	4-Jun-22	NSC	122925	900 226001226250	994	1120	7300	-	-
Kelsey GS Area	KGS-C	5-Jun-22	NSC	122878	900 226001226200	695	795	2750	-	-
Kelsey GS Area	KGS-A	5-Jun-22	NSC	122879	900 226001226270	878	977	5500	-	-
Kelsey GS Area	KGS-A	5-Jun-22	NSC	122880	900 226001226277	700	790	2600	-	-
Kelsey GS Area	KGS-A	5-Jun-22	NSC	122881	900 226001226247	783	887	4000	-	-
Kelsey GS Area	KGS-C	6-Jun-22	NSC	122882	900 226001226212	1350	1555	22680	-	-
Kelsey GS Area	KGS-A	6-Jun-22	NSC	122883	900 226001226286	923	1032	5200	-	-
Kelsey GS Area	KGS-A	6-Jun-22	NSC	122884	900 226001227822	1159	1283	10900	-	-
Kelsey GS Area	KGS-A	6-Jun-22	NSC	122885	900 226001226579	930	1036	5900	-	-
Kelsey GS Area	KGS-A	6-Jun-22	NSC	122886	900 226001226239	999	1095	6600	-	-
Kelsey GS Area	KGS-A	7-Jun-22	NSC	122887	900 226001226205	844	960	4200	-	-
Kelsey GS Area	KGS-A	7-Jun-22	NSC	122888	900 226001227846	890	1006	4600	-	-
Kelsey GS Area	KGS-A	7-Jun-22	NSC	122889	900 226001226285	758	861	3400	-	-
Kelsey GS Area	KGS-B	7-Jun-22	NSC	122891	900 226001227890	978	1095	6900	-	-
Kelsey GS Area	KGS-B	8-Jun-22	NSC	122892	900 226001227881	1020	1135	10100	-	-
Kelsey GS Area	KGS-A	8-Jun-22	NSC	122893	900 226001226256	976	1096	7400	-	-
Kelsey GS Area	KGS-A	8-Jun-22	NSC	122894	900 226001226227	810	907	3500	-	-

Table A1-2: Tagging and biological information for Lake Sturgeon marked with Floy tags and PIT tags in the Kelsey GS Area, spring 2022 (continued).

Location	Zone	Date	Prefix	Floy tag	PIT Tag	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity[1]
Kelsey GS Area	KGS-A	8-Jun-22	NSC	122895	900 226001227875	798	904	3950	-	-
Kelsey GS Area	KGS-A	9-Jun-22	NSC	122896	900 226001227899	936	1060	6000	-	-
Kelsey GS Area	KGS-A	9-Jun-22	NSC	122897	900 226001226263	898	1019	6000	-	-
Kelsey GS Area	KGS-A	9-Jun-22	NSC	122898	900 226001226297	923	1035	5300	-	-
Kelsey GS Area	KGS-A	9-Jun-22	NSC	122900	900 226001227816	965	1070	6500	-	-
Kelsey GS Area	KGS-A	11-Jun-22	NSC	122161	900 226001226237	890	991	5000	-	-
Kelsey GS Area	KGS-A	11-Jun-22	NSC	122602	900 226001227801	707	792	2650	-	-
Kelsey GS Area	KGS-A	12-Jun-22	NSC	122603	900 226001227854	700	792	2500	-	-
Kelsey GS Area	KGS-D	12-Jun-22	NSC	122604	900 226001226275	1041	1140	8200	-	-
Kelsey GS Area	KGS-D	13-Jun-22	NSC	122605	900 226001226580	700	805	2400	-	-
Kelsey GS Area	KGS-D	13-Jun-22	NSC	122606	900 226001226222	961	1070	7460	-	-
Kelsey GS Area	KGS-C	13-Jun-22	NSC	122607	900 226001226558	660	750	2050	-	-
Kelsey GS Area	KGS-A	13-Jun-22	NSC	122609	900 226001226573	1054	1160	7650	-	-
Kelsey GS Area	KGS-A	14-Jun-22	NSC	122611	900 226001226236	794	910	4050	-	-
Kelsey GS Area	KGS-A	14-Jun-22	NSC	122612	900 226001227877	746	895	3500	-	-
Kelsey GS Area	KGS-A	14-Jun-22	NSC	122613	900 226001226295	776	865	3550	-	-
Kelsey GS Area	KGS-A	14-Jun-22	NSC	122614	900 226001226522	873	970	5000	-	-
Kelsey GS Area	KGS-A	14-Jun-22	NSC	122615	900 226001226596	942	1053	5750	-	-
Kelsey GS Area	KGS-C	15-Jun-22	NSC	122616	900 226001227858	904	1000	6150	-	-
Kelsey GS Area	KGS-C	15-Jun-22	NSC	122617	900 226001227803	871	995	5000	-	-
Kelsey GS Area	KGS-A	15-Jun-22	NSC	122618	900 226001226225	910	1050	5500	-	-
Kelsey GS Area	KGS-A	15-Jun-22	NSC	122619	900 226001226565	990	1010	7000	M	8
Kelsey GS Area	KGS-D	16-Jun-22	NSC	122620	900 226001227642	535	600	1400	-	-
Kelsey GS Area	KGS-C	16-Jun-22	NSC	122621	900 226001226229	1120	1135	13608	-	-
Kelsey GS Area	KGS-A	16-Jun-22	NSC	122622	900 226001226257	885	974	4800	-	-
Kelsey GS Area	KGS-A	16-Jun-22	NSC	122623	900 226001226203	880	985	5500	-	-
Kelsey GS Area	KGS-A	16-Jun-22	NSC	122624	900 226001227887	962	1090	7000	-	-
Kelsey GS Area	KGS-C	17-Jun-22	NSC	122625	900 226001226599	657	736	2600	-	-
Kelsey GS Area	KGS-C	17-Jun-22	NSC	122626	900 226001226261	760	856	3100	-	-
Kelsey GS Area	KGS-C	17-Jun-22	NSC	122627	900 226001658217	915	1050	5000	-	-
Kelsey GS Area	KGS-A	17-Jun-22	NSC	122649	900 226001226512	965	1055	6750	-	-
Kelsey GS Area	KGS-A	18-Jun-22	NSC	122645	900 226001226273	845	4000	4000	-	-

Table A1-2: Tagging and biological information for Lake Sturgeon marked with Floy tags and PIT tags in the Kelsey GS Area, spring 2022 (continued).

Location	Zone	Date	Prefix	Floy tag	PIT Tag	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity[1]
Kelsey GS Area	KGS-A	18-Jun-22	NSC	122646	900 226001226594	1065	1162	10433	-	-
Kelsey GS Area	KGS-A	18-Jun-22	NSC	122647	900 226001226559	863	971	4750	-	-
Kelsey GS Area	KGS-D	18-Jun-22	NSC	122648	900 226001226530	981	1092	7350	-	-
Kelsey GS Area	KGS-D	20-Jun-22	NSC	122641	900 226001227833	590	672	1550	-	-
Kelsey GS Area	KGS-D	20-Jun-22	NSC	122642	900 226001226202	1022	1160	7500	-	-
Kelsey GS Area	KGS-A	21-Jun-22	NSC	122638	900 226001226544	870	981	4450	-	-
Kelsey GS Area	KGS-A	21-Jun-22	NSC	122639	900 226001227827	1460	1474	22680	-	-
Kelsey GS Area	KGS-A	21-Jun-22	NSC	122640	900 226001226548	995	1018	8300	-	-
Kelsey GS Area	KGS-B	23-Jun-22	NSC	122631	900 226001226547	1065	1192	7550	-	-
Kelsey GS Area	KGS-A	23-Jun-22	NSC	122632	900 226001225594	810	910	5225	-	-
Kelsey GS Area	KGS-A	23-Jun-22	NSC	122633	900 226001227851	905	1010	6150	-	-
Kelsey GS Area	KGS-A	23-Jun-22	NSC	122634	900 226001226539	895	1010	5550	-	-
Kelsey GS Area	KGS-A	23-Jun-22	NSC	122635	900 226001226511	960	1070	6000	-	-
Kelsey GS Area	KGS-D	23-Jun-22	NSC	122636	900 226001227885	900	1000	5150	-	-
Kelsey GS Area	KGS-D	23-Jun-22	NSC	122637	900 226001226266	873	982	4750	-	-
Kelsey GS Area	KGS-A	24-Jun-22	NSC	122629	900 226001227878	949	1065	7150	-	-
Kelsey GS Area	KGS-A	25-Jun-22	NSC	122401	900 226001227896	915	1020	5800	-	-
Kelsey GS Area	KGS-D	26-Jun-22	NSC	122403	900 226001227886	870	985	5100	-	-
Kelsey GS Area	KGS-D	26-Jun-22	NSC	122404	900 226001227852	980	1090	6900	-	-
Kelsey GS Area	KGS-D	26-Jun-22	NSC	122405	900 226001227879	792	884	4400	-	-
Kelsey GS Area	KGS-D	26-Jun-22	NSC	122406	900 226001227882	874	982	5500	-	-
Kelsey GS Area	KGS-D	26-Jun-22	NSC	122407	900 226001227842	1002	1120	7900	-	-
Kelsey GS Area	SPL-A	26-Jun-22	NSC	122408	900 226001227853	785	879	4300	-	-
Kelsey GS Area	KGS-A	26-Jun-22	NSC	122409	900 226001226534	794	894	4750	-	-
Kelsey GS Area	KGS-A	26-Jun-22	NSC	122412	900 226001226576	1004	1139	7000	-	-
Kelsey GS Area	KGS-B	26-Jun-22	NSC	122414	900 226001227815	951	1043	5700	-	-
Kelsey GS Area	KGS-A	26-Jun-22	NSC	122415	900 226001227830	850	956	5600	-	-
Kelsey GS Area	KGS-D	27-Jun-22	NSC	122415	900 226001226567	1090	1224	10200	-	-
Kelsey GS Area	SPL-A	27-Jun-22	NSC	122416	900 226001226246	1105	1244	13608	-	-
Kelsey GS Area	KGS-A	27-Jun-22	NSC	122417	900 226001225522	1020	1130	8500	-	-
Kelsey GS Area	KGS-B	27-Jun-22	NSC	122418	900 226001227820	1008	1137	6400	-	-
Kelsey GS Area	KGS-A	28-Jun-22	NSC	122419	900 226001226298	1002	1100	6700	-	-

Table A1-2: Tagging and biological information for Lake Sturgeon marked with Floy tags and PIT tags in the Kelsey GS Area, spring 2022 (continued).

Location	Zone	Date	Prefix	Floy tag	PIT Tag	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity[1]
Kelsey GS Area	KGS-A	28-Jun-22	NSC	122423	900 226001226583	946	1060	6250	-	-
Kelsey GS Area	KGS-D	29-Jun-22	NSC	122424	900 226001226682	818	925	4100	-	-
Kelsey GS Area	KGS-A	29-Jun-22	NSC	122425	900 226001226563	872	773	5000	-	-
Kelsey GS Area	KGS-A	29-Jun-22	NSC	122426	900 226001226524	878	976	4900	-	-
Kelsey GS Area	KGS-A	29-Jun-22	NSC	122428	900 226001226540	1100	1211	10200	-	-
Kelsey GS Area	KGS-A	29-Jun-22	NSC	122429	900 226001227657	955	1075	7000	-	-
Kelsey GS Area	KGS-B	29-Jun-22	NSC	122430	900 226001227669	863	972	5300	-	-
Kelsey GS Area	SPL-A	30-Jun-22	NSC	122433	900 226001227821	770	871	3100	-	-
Kelsey GS Area	SPL-A	30-Jun-22	NSC	122435	900 226001226541	1125	1240	9300	-	-
Kelsey GS Area	KGS-A	30-Jun-22	NSC	122436	900 226001226585	1094	1215	10600	-	-
Kelsey GS Area	KGS-A	30-Jun-22	NSC	122438	900 226001226595	910	1013	5800	-	-
Kelsey GS Area	KGS-B	2-Jul-22	NSC	122431	900 226001226284	872	892	4600	-	-
Kelsey GS Area	KGS-D	2-Jul-22	NSC	122439	900 226001224067	1192	1310	-	-	-
Kelsey GS Area	SPL-A	2-Jul-22	NSC	122440	900 226001226533	795	908	3800	-	-
Kelsey GS Area	KGS-A	2-Jul-22	NSC	122442	900 226001226588	985	1100	6400	-	-
Kelsey GS Area	KGS-A	2-Jul-22	NSC	122443	900 226001227618	815	921	3650	-	-
Kelsey GS Area	KGS-B	2-Jul-22	NSC	122444	900 226001226249	895	995	5800	-	-
Kelsey GS Area	KGS-B	2-Jul-22	NSC	122445	900 226001227625	1045	1159	8600	-	-
Kelsey GS Area	KGS-A	2-Jul-22	NSC	122446	900 226001225577	764	848	2800	-	-
Kelsey GS Area	KGS-A	2-Jul-22	NSC	122447	900 226001230070	924	1050	5100	-	-
Kelsey GS Area	KGS-A	2-Jul-22	NSC	122448	900 226001227829	870	984	4800	-	-
Kelsey GS Area	KGS-B	2-Jul-22	NSC	122450	900 226001224949	1016	1125	7700	-	-
Kelsey GS Area	KGS-B	2-Jul-22	NSC	122451	900 226001226515	1055	1184	7800	-	-
Kelsey GS Area	KGS-A	3-Jul-22	NSC	122434	900 226001658951	780	889	3500	-	-
Kelsey GS Area	KGS-A	3-Jul-22	NSC	122441	900 226001226556	973	1065	7700	-	-
Kelsey GS Area	KGS-B	3-Jul-22	NSC	122449	900 226001230064	1005	1123	10000	-	-
Kelsey GS Area	KGS-B	4-Jul-22	NSC	122369	900 226001226514	840	959	4200	-	-
Kelsey GS Area	KGS-B	4-Jul-22	NSC	122370	900 226001226525	920	1016	5600	-	-
Kelsey GS Area	SPL-A	30-Jun-22	NSC	122432	900 067000110709	427	491	700	-	GRH
Kelsey GS Area	SPL-A	2-Jun-22	NSC	122912	900 043000119488	684	760	2200	-	GRH

1. Fish labeled GRH in the maturity column are Grand Rapids Hatchery released fish.

Table A1-3. Tagging and biological information for Lake Sturgeon marked with Floy tags and PIT tags in the Keeyask reservoir, spring 2022.

Location	Zone	Date	Prefix	Floy tag	PIT tag	Acoustic Serial No.	Acoustic Tag Code	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Keeyask reservoir	BR-D	28-May-22	NSC	121676	-	-	-	783	870	2900	-	-
Keeyask reservoir	BR-D	28-May-22	NSC	121677	-	-	-	711	814	4100	-	-
Keeyask reservoir	BR-D	28-May-22	NSC	121678	-	-	-	770	860	2950	-	-
Keeyask reservoir	BR-D	31-May-22	NSC	121679	900 226001224083	1520526	57486	859	962	4800	-	-
Keeyask reservoir	BR-D	2-Jun-22	NSC	121681	900 226001224033	-	-	584	674	1600	-	-
Keeyask reservoir	BR-D	2-Jun-22	NSC	121682	900 226001227551	-	-	525	600	1500	-	-
Keeyask reservoir	BR-D	2-Jun-22	NSC	121683	900 226001227532	-	-	1108	1294	12600	-	-
Keeyask reservoir	BR-D	4-Jun-22	NSC	121684	900 226001224085	-	-	651	737	1800	-	-
Keeyask reservoir	BR-D	5-Jun-22	NSC	121689	900 226001224024	-	-	400	450	550	-	-
Keeyask reservoir	BR-D	5-Jun-22	NSC	121690	900 226001226909	-	-	510	570	1525	-	-
Keeyask reservoir	BR-D	5-Jun-22	NSC	121691	900 226001227537	-	-	755	852	3100	-	-
Keeyask reservoir	BR-D	6-Jun-22	NSC	121693	900 226001224073	1520532	57492	911	1001	5050	-	-
Keeyask reservoir	BR-D	6-Jun-22	NSC	121694	900 226001227360	1520529	57489	885	991	5000	-	-
Keeyask reservoir	BR-D	8-Jun-22	NSC	121697	900 226001224076	-	-	604	681	1875	-	-
Keeyask reservoir	BR-D	9-Jun-22	NSC	121698	900 226001227393	-	-	812	915	3250	-	-
Keeyask reservoir	BR-D	9-Jun-22	NSC	121699	900 226001227501	-	-	745	845	2650	-	-
Keeyask reservoir	BR-D	9-Jun-22	NSC	121700	900 226001227508	-	-	1165	1291	14650	-	-
Keeyask reservoir	BR-D	11-Jun-22	NSC	121923	900 226001227343	1520533	57439	1367	1472	21000	F	2
Keeyask reservoir	BR-D	12-Jun-22	NSC	121922	900 226001227550	1520530	57490	1325	1404	19100	-	-
Keeyask reservoir	BR-D	14-Jun-22	NSC	121919	900 226000629045	1520521	57481	1040	1177	10810	-	-
Keeyask reservoir	BR-D	18-Jun-22	NSC	121916	900 226001227313	-	-	787	885	2600	-	-
Keeyask reservoir	BR-D	19-Jun-22	NSC	121914	900 226001227592	-	-	764	861	2900	-	-
Keeyask reservoir	BR-D	19-Jun-22	NSC	121915	900 226001227504	-	-	485	552	1400	-	-
Keeyask reservoir	BR-D	20-Jun-22	NSC	121912	900 226001227581	-	-	780	872	3150	-	-
Keeyask reservoir	BR-D	20-Jun-22	NSC	121913	900 226001227523	-	-	770	871	3600	-	-
Keeyask reservoir	BR-D	21-Jun-22	NSC	121910	900 226001224054	-	-	709	805	2550	-	-

Table A1-3. Tagging and biological information for Lake Sturgeon marked with Floy tags and PIT tags in the Keeyask reservoir, spring 2022 (continued).

Location	Zone	Date	Prefix	Floy tag	PIT tag	Acoustic Serial No.	Acoustic Tag Code	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Keeyask reservoir	BR-D	21-Jun-22	NSC	121911	900 226001224022	-	-	775	865	2950	-	-
Keeyask reservoir	BR-D	23-Jun-22	NSC	121909	900 226001224023	-	-	774	868	3000	-	-
Keeyask reservoir	BR-D	24-Jun-22	NSC	121907	900 226001227591	-	-	770	876	2950	-	-
Keeyask reservoir	BR-D	24-Jun-22	NSC	121908	900 226001227375	-	-	733	827	2400	-	-
Keeyask reservoir	BR-D	28-Jun-22	NSC	121905	900 226001224032	-	-	714	799	3000	-	-
Keeyask reservoir	BR-D	28-Jun-22	NSC	121906	900 226001227507	-	-	455	518	550	-	-
Keeyask reservoir	GL-B	2-Jul-22	NSC	121901	900 226001227526	-	-	809	895	3150	-	-
Keeyask reservoir	GL-A	2-Jul-22	NSC	121902	900 226001227502	-	-	495	563	500	-	-
Keeyask reservoir	GL-C	2-Jul-22	NSC	121903	900 226001227565	-	-	565	612	1625	-	-

Table A1-4. Tagging and biological information for Lake Sturgeon marked with Floy tags and PIT tags in Stephens Lake, spring 2022.

Location	Zone	Date	Prefix	Floy tag 1	Floy tag 2	PIT tag	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Stephens Lake	STL-A	29-May-22	NSC	122927	-	900 226001226009	800	895	2948	-	-
Stephens Lake	STL-A	29-May-22	NSC	122929	-	900 226001226031	952	1083	6350	-	-
Stephens Lake	STL-A	31-May-22	NSC	122931	-	900 226001226061	940	1055	5897	-	-
Stephens Lake	STL-A	31-May-22	NSC	122932	-	900 226001226090	810	925	3175	-	-
Stephens Lake	STL-A	31-May-22	NSC	122933	-	900 226001226004	685	776	1814	-	-
Stephens Lake	STL-A	31-May-22	NSC	122934	-	900 226001226019	1120	1219	10886	-	-
Stephens Lake	STL-B	31-May-22	NSC	122935	-	900 226001226098	834	938	3629	-	-
Stephens Lake	STL-A	31-May-22	NSC	122937	-	900 226001226048	1202	1303	12701	-	-
Stephens Lake	STL-A	1-Jun-22	NSC	122938	-	900 226001226007	805	900	3629	-	-
Stephens Lake	STL-A	1-Jun-22	NSC	122939	-	900 226001226001	840	946	3629	-	-
Stephens Lake	STL-A	2-Jun-22	NSC	122941	-	900 226001226020	754	854	2268	-	-
Stephens Lake	STL-A	2-Jun-22	NSC	122942	-	900 226001226003	854	955	4536	-	-
Stephens Lake	STL-B	3-Jun-22	NSC	122946	-	900 226001226014	760	850	2722	-	-
Stephens Lake	STL-A	3-Jun-22	NSC	122950	-	900 226001226024	1475	1550	22680	-	-
Stephens Lake	STL-A	4-Jun-22	NSC	121976	-	900 226001226053	1460	1560	19504	-	-
Stephens Lake	STL-A	4-Jun-22	NSC	121977	-	900 226001226017	742	841	2268	-	-
Stephens Lake	STL-A	4-Jun-22	NSC	121978	-	900 226001226034	820	917	4309	-	-
Stephens Lake	STL-A	5-Jun-22	NSC	121980	-	900 226001226022	875	1001	3856	-	-
Stephens Lake	STL-B	5-Jun-22	NSC	121981	-	900 226001226002	871	992	4309	-	-
Stephens Lake	STL-B	5-Jun-22	NSC	121982	-	900 226001226094	805	908	2722	-	-
Stephens Lake	STL-A	5-Jun-22	NSC	121983	-	900 226001226011	796	900	3629	-	-
Stephens Lake	STL-A	5-Jun-22	NSC	121984	-	900 226001226055	835	930	4309	-	-
Stephens Lake	STL-A	5-Jun-22	NSC	121985	-	900 226001226027	735	814	2495	-	-
Stephens Lake	STL-A	5-Jun-22	NSC	121986	-	900 226001226097	694	785	2722	-	-
Stephens Lake	STL-A	6-Jun-22	AAE	371	-	989 001038119596	774	873	2268	-	-
Stephens Lake	STL-A	6-Jun-22	NSC	121989	-	900 226001226028	590	700	1588	-	-
Stephens Lake	STL-B	6-Jun-22	NSC	121990	-	900 226001226059	737	836	2268	-	-
Stephens Lake	STL-A	7-Jun-22	NSC	121991	-	900 226001227432	869	958	4082	-	-
Stephens Lake	STL-B	8-Jun-22	NSC	121993	-	900 226001226075	833	946	4536	-	-
Stephens Lake	STL-A	8-Jun-22	NSC	121994	-	900 226001226074	754	856	2268	-	-
Stephens Lake	STL-A	8-Jun-22	NSC	121995	-	900 226001226083	685	770	1814	-	-
Stephens Lake	STL-A	8-Jun-22	NSC	121997	-	900 226001226072	695	769	2268	-	-

Table A1-4. Tagging and biological information for Lake Sturgeon marked with Floy tags and PIT tags in Stephens Lake, spring 2022 (continued).

Location	Zone	Date	Prefix	Floy tag 1	Floy tag 2	PIT tag	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Stephens Lake	STL-B	8-Jun-22	NSC	121998	121999	900 226001226023	725	815	2722	-	-
Stephens Lake	STL-A	9-Jun-22	NSC	121786	-	900 226001226066	880	1000	4082	-	-
Stephens Lake	STL-A	9-Jun-22	NSC	121797	-	900 226001226008	1370	1470	15876	-	-
Stephens Lake	STL-A	9-Jun-22	NSC	121798	-	900 226001226005	851	938	4082	-	-
Stephens Lake	STL-B	9-Jun-22	NSC	121800	-	900 226001225388	770	905	3629	-	-
Stephens Lake	STL-A	11-Jun-22	NSC	121793	-	900 226001225379	770	864	4536	-	-
Stephens Lake	STL-A	14-Jun-22	NSC	121792	-	900 226001227407	755	815	4082	-	-
Stephens Lake	STL-A	15-Jun-22	NSC	121788	-	900 226001226010	853	950	4990	-	-
Stephens Lake	STL-A	15-Jun-22	NSC	121789	-	900 226001226015	899	1003	4082	-	-
Stephens Lake	STL-A	17-Jun-22	NSC	121784	-	900 226001226046	931	1031	4990	-	-
Stephens Lake	GR-A	17-Jun-22	NSC	121785	-	900 226001226026	1420	2000	22226	-	-
Stephens Lake	STL-A	17-Jun-22	NSC	121787	-	900 226001226045	987	1085	7711	-	-
Stephens Lake	GR-A	18-Jun-22	NSC	121783	-	900 067000121553	435	494	-	-	-
Stephens Lake	GR-A	19-Jun-22	NSC	121776	-	900 226001226018	858	944	6350	M	7
Stephens Lake	STL-A	19-Jun-22	NSC	121777	-	900 226001226041	728	810	2722	-	-
Stephens Lake	GR-A	20-Jun-22	NSC	121778	-	900 226001226052	863	971	4990	-	-
Stephens Lake	STL-A	20-Jun-22	NSC	121779	-	900 226001226036	900	1015	7257	-	-
Stephens Lake	STL-A	22-Jun-22	NSC	121780	-	900 226001226069	885	987	6350	-	-
Stephens Lake	STL-A	22-Jun-22	NSC	122952	-	900 226001226096	1360	1505	24040	-	-
Stephens Lake	GR-A	23-Jun-22	NSC	122953	-	900 226001226091	867	976	7257	-	-
Stephens Lake	STL-A	23-Jun-22	NSC	122954	-	900 226001226088	824	935	7257	-	-
Stephens Lake	STL-A	25-Jun-22	NSC	122958	-	900 226001226851	990	1135	9525	-	-
Stephens Lake	STL-A	25-Jun-22	NSC	122959	-	900 226001225655	830	945	7257	-	-
Stephens Lake	GR-A	25-Jun-22	NSC	122967	-	900 226001226062	1000	1120	11340	-	-
Stephens Lake	STL-A	26-Jun-22	NSC	122960	-	900 226001225628	770	868	3000	-	-
Stephens Lake	GR-A	26-Jun-22	NSC	122961	-	900 226001225588	791	844	5443	-	-
Stephens Lake	STL-A	27-Jun-22	NSC	122962	-	900 226001224658	965	1180	9525	-	-
Stephens Lake	GR-A	27-Jun-22	NSC	122964	-	900 226001225539	731	835	2200	-	-
Stephens Lake	GR-A	27-Jun-22	NSC	122965	-	900 226001224702	787	885	3700	-	-
Stephens Lake	STL-A	29-Jun-22	NSC	122966	-	900 226001225571	1185	1320	13154	-	-
Stephens Lake	STL-A	30-Jun-22	NSC	122967	-	900 226001224721	1383	1470	22680	-	-
Stephens Lake	STL-A	30-Jun-22	NSC	122968	-	900 226001224878	953	1064	7711	-	-
Stephens Lake	GR-A	2-Jul-22	NSC	122969	-	900 226001225532	731	823	2268	-	-

APPENDIX 2:
TAGGING AND BIOLOGICAL INFORMATION FOR LAKE STURGEON RECAPTURED IN THE UPPER SPLIT LAKE AND KEEYASK AREAS, SPRING 2022

Table A2-1. Tagging and biological information for Lake Sturgeon recaptured in the Burntwood River, spring 2022. A Floy tag that was lost and fish was retagged in 2022 is indicated by bold font.

Waterbody	Reach	Date	Prefix	Floy tag 1	Floy tag 2	PIT tag 1	PIT tag 2	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Burntwood River	BWR-A	26-Jun-19	NSC	55274	-	900 226000327019	-	992	1110	7394	-	-
Burntwood River	BWR-A	14-Jun-22	NSC	55274	-	900 226000327019	-	1030	1150	9000	-	-
Burntwood River	BWR-A	21-Jun-22	NSC	55274	-	900 226000327019	-	-	-	-	M	8
Burntwood River	BWR-A	13-Jun-17	NSC	**103196**	-	900 226000153419	-	545	620	1179	-	-
Burntwood River	BWR-A	25-Jun-19	NSC	55276	-	900 226000153419	-	560	636	1225	-	-
Burntwood River	BWR-A	24-Jun-22	NSC	55276	-	900 226000153419	-	570	649	1500	-	-
Burntwood River	BWR-A	22-Jun-19	NSC	55280	-	900 226000327714	-	937	1040	7620	-	-
Burntwood River	BWR-A	12-Jun-22	NSC	55280	-	900 226000327714	-	964	1066	7711	M	8
Burntwood River	BWR-A	27-Jun-22	NSC	55280	-	900 226000327714	-	-	-	-	-	-
Burntwood River	BWR-A	19-Jun-19	NSC	55296	-	900 226000327899	-	1096	1213	11431	-	-
Burntwood River	BWR-A	15-Jun-22	NSC	55296	-	900 226000327899	-	1115	1235	12000	-	-
Burntwood River	BWR-A	01-Sep-15	NSC	56597	-	-	-	680	780	2000	-	-
Burntwood River	BWR-A	09-Jun-17	NSC	56597	-	900 226000703418	-	700	797	2495	-	-
Burntwood River	BWR-A	23-Jun-22	NSC	56597	-	900 226000703418	-	740	845	2850	-	-
Burntwood River	BWR-A	04-Jul-05	NSC	75136	-	-	-	838	935	5670	-	-
Burntwood River	BWR-A	11-Jun-17	NSC	75136	-	900 226000768050	-	997	1100	7938	-	-
Burntwood River	BWR-A	3-Jun-22	NSC	75136	-	900 226000768050	-	1000	1111	9525	-	-
Burntwood River	BWR-A	13-Jun-22	NSC	75136	-	900 226000768050	-	-	-	-	-	-
Burntwood River	BWR-A	21-Jun-22	NSC	75136	-	900 226000768050	-	-	-	-	-	-
Odie River	ODR-A	06-Jun-07	NSC	76829	-	-	-	1000	1110	8636	-	-
Burntwood River	BWR-A	10-Jun-11	NSC	76829	-	-	-	1010	1138	9072	M	8
Burntwood River	BWR-A	12-Jun-22	NSC	76829	-	900 226000548433	-	1060	1161	9072	M	8
Nelson River (CL-GR)	GL-B	29-Jun-18	NSC	79420	-	900 226000629595	-	920	1018	-	-	-
Burntwood River	BWR-B	26-Jun-22	NSC	79420	-	900 226000629595	-	986	1086	7500	-	-
Burntwood River	BWR-A	02-Jun-06	NSC	80020	-	-	-	962	1075	6804	-	-
Burntwood River	BWR-A	08-Jun-11	NSC	80020	-	-	-	999	1104	-	M	8
Burntwood River	BWR-A	3-Jun-22	NSC	80020	-	900 226001232237	-	1080	1180	9525	-	-
Burntwood River	BWR-A	4-Jun-17	NSC	80022	-	900 226000153438	-	935	1031	6350	M	7
Burntwood River	BWR-A	1-Jun-19	NSC	80022	-	900 226000153438	-	935	1040	6305	-	-
Burntwood River	BWR-A	14-Jun-22	NSC	80022	-	900 226000153438	-	965	1059	6200	-	-

Table A2-1. Tagging and biological information for Lake Sturgeon recaptured in the Burntwood River, spring 2022. A Floy tag that was lost and fish was retagged in 2022 is indicated by bold font (continued).

Waterbody	Reach	Date	Prefix	Floy tag 1	Floy tag 2	PIT tag 1	PIT tag 2	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Burntwood River	BWR-A	11-Jun-06	NSC	80050	-	-	-	1051	1165	10433	M	8
Burntwood River	BWR-A	24-Jun-06	NSC	80050	-	-	-	-	-	-	-	-
Burntwood River	BWR-A	13-Jun-22	NSC	80050	-	900 226000548649	-	1207	1322	15876	M	8
Kelsey GS Area	KGS-D	19-Jun-06	NSC	80067	80068	-	-	711	811	3629	-	-
Burntwood River	BWR-A	12-Jun-22	NSC	80067	80068	900 226001232288	-	1129	1250	10433	M	8
Burntwood River	BWR-A	16-Jun-13	NSC	81956	-	900 226000548323	-	720	821	2550	-	-
Burntwood River	BWR-A	21-Jun-15	NSC	81956	-	900 226000548323	-	738	840	3856	-	-
Burntwood River	BWR-A	13-Jun-17	NSC	81956	-	900 226000548323	-	-	-	-	-	-
Burntwood River	BWR-A	15-Jun-17	NSC	81956	-	900 226000548323	-	-	-	-	-	-
Burntwood River	BWR-A	22-May-19	NSC	81956	-	900 226000548323	-	790	896	5262	-	-
Burntwood River	BWR-A	31-May-19	NSC	81956	-	900 226000548323	-	-	-	-	-	-
Burntwood River	BWR-A	8-Jun-19	NSC	81956	-	900 226000548323	-	-	-	-	-	-
Burntwood River	BWR-A	31-May-22	NSC	81956	-	900 226000548323	-	790	875	3700	-	-
Burntwood River	BWR-A	7-Jun-13	NSC	86933	-	900 226000548379	-	914	1014	4990	-	-
Burntwood River	BWR-A	25-Jun-13	NSC	86934	-	900 226000548379	-	-	-	-	-	-
Burntwood River	BWR-A	14-Jun-17	NSC	86933	-	900 226000548379	-	944	1045	-	-	-
Burntwood River	BWR-A	29-Jun-17	NSC	86933	-	900 226000548379	-	-	-	-	-	-
Burntwood River	BWR-A	6-Jun-19	NSC	86933	-	900 226000548379	-	941	1045	4890	-	-
Burntwood River	BWR-A	5-Jun-22	NSC	86933	-	900 226000548379	-	920	1020	8165	-	-
Burntwood River	BWR-A	9-Jun-13	NSC	86943	-	900 226000548415	-	881	984	4990	-	-
Burntwood River	BWR-A	1-Jul-13	NSC	86943	-	900 226000548415	-	-	-	-	-	-
Burntwood River	BWR-B	31-May-19	NSC	86943	-	900 226000548415	-	966	1070	7031	-	-
Burntwood River	BWR-A	4-Jun-22	NSC	86943	-	900 226000548415	-	970	1080	9072	-	-
Burntwood River	BWR-A	29-May-10	NSC	87933	-	-	-	850	942	4536	-	-
Burntwood River	BWR-A	3-Jun-10	NSC	87933	-	-	-	-	-	-	-	-
Burntwood River	BWR-B	18-Jun-22	NSC	87933	-	900 226001232433	-	950	1055	7300	M	8
Burntwood River	BWR-B	28-Jun-22	NSC	87933	-	900 226001232433	-	-	-	-	-	-

Table A2-1. Tagging and biological information for Lake Sturgeon recaptured in the Burntwood River, spring 2022. A Floy tag that was lost and fish was retagged in 2022 is indicated by bold font (continued).

Waterbody	Reach	Date	Prefix	Floy tag 1	Floy tag 2	PIT tag 1	PIT tag 2	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Burntwood River	BWR-A	29-May-10	NSC	87934	-	-	-	1010	1125	9072	M	7
Burntwood River	BWR-A	09-Jun-13	NSC	87934	-	900 226000548395	-	1050	1170	8618	M	9
Burntwood River	BWR-A	01-Jun-15	NSC	87934	-	900 226000548395	-	1055	1166	10433	M	7
Burntwood River	BWR-A	5-Jun-22	NSC	87934	-	900 226000548395	-	1058	1169	9525	-	-
Burntwood River	BWR-A	21-Jun-17	NSC	88196	-	900 226000768034	-	940	1020	5897	M	8
Burntwood River	BWR-A	9-Jun-22	NSC	88196	-	900 226000768034	-	975	1060	8165	M	7
Kelsey GS Area	KGS-C	25-Jun-11	NSC	88605	-	-	-	800	890	3600	-	-
Burntwood River	BWR-A	6-Jun-19	NSC	88605	-	900 226000327875	-	1004	1110	7756	-	-
Burntwood River	BWR-A	15-Jun-19	NSC	88605	-	900 226000327875	-	-	-	-	-	-
Burntwood River	BWR-A	22-Jun-22	NSC	88605	-	900 226000327875	-	1010	1125	7150	-	-
Burntwood River	BWR-A	31-May-13	NSC	88685	-	-	-	-	-	32205	-	-
Burntwood River	BWR-A	8-Jun-22	NSC	88685	-	900 226001232285	-	1419	1510	30391	F	2
Burntwood River	BWR-A	3-Jun-13	NSC	88695	-	-	-	877	985	3175	-	-
Burntwood River	BWR-A	9-Jun-15	NSC	88695	-	900 226000548489	-	901	1006	6124	M	8
Burntwood River	BWR-A	5-Jun-17	NSC	88695	-	900 226000548489	-	958	1075	58977	-	-
Burntwood River	BWR-A	11-Jun-17	NSC	88695	-	900 226000548489	-	-	-	-	-	-
Burntwood River	BWR-A	15-Jun-19	NSC	88695	-	900 226000548489	-	-	-	-	-	-
Burntwood River	BWR-A	13-Jun-22	NSC	88695	-	900 226000548489	-	942	1056	4990	-	-
Burntwood River	BWR-A	8-Jun-15	NSC	89028	-	900 226000628894	-	950	1080	8391	M	8
Burntwood River	BWR-A	9-Jun-22	NSC	89028	-	900 226000628894	-	970	1101	5897	M	7
Burntwood River	BWR-A	15-Jun-22	NSC	89028	-	900 226000628894	-	-	-	-	-	-
Burntwood River	BWR-A	08-Jun-15	NSC	89031	-	900 226000628761	-	926	1061	7938	-	-
Burntwood River	BWR-A	13-Jun-22	NSC	89031	-	900 226000628761	-	964	1075	7711	M	8
Burntwood River	BWR-A	26-Jun-22	NSC	89031	-	900 226000628761	-	-	-	-	-	-
Burntwood River	BWR-A	09-Jun-15	NSC	89037	-	900 226000628933	-	925	1042	5670	M	8
Burntwood River	BWR-A	21-Jun-22	NSC	89037	-	900 226000628933	-	977	1090	6250	-	-

Table A2-1. Tagging and biological information for Lake Sturgeon recaptured in the Burntwood River, spring 2022. A Floy tag that was lost and fish was retagged in 2022 is indicated by bold font (continued).

Waterbody	Reach	Date	Prefix	Floy tag 1	Floy tag 2	PIT tag 1	PIT tag 2	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Burntwood River	BWR-A	09-Jun-15	NSC	89040	-	900 226000628965	-	941	1046	7484	-	-
Burntwood River	BWR-A	13-Jun-15	NSC	89040	-	900 226000628965	-	-	-	-	-	-
Burntwood River	BWR-A	11-Jun-17	NSC	89040	-	900 226000628965	-	982	1085	7530	M	8
Burntwood River	BWR-A	26-Jun-17	NSC	89040	-	900 226000628965	-	-	-	-	-	-
Burntwood River	BWR-B	04-Jun-19	NSC	89040	-	900 226000628965	-	995	1098	7530	-	-
Burntwood River	BWR-B	31-May-22	NSC	89040	-	900 226000628965	-	1010	1110	9072	-	-
Burntwood River	BWR-A	11-Jun-15	NSC	89045	-	-	-	1070	1218	8845	M	8
Burntwood River	BWR-A	13-Jun-15	NSC	89045	-	-	-	-	-	-	-	-
Burntwood River	BWR-A	12-Jun-19	NSC	89045	-	900 226000327889	-	1062	1172	10841	M	7
Burntwood River	BWR-A	12-Jun-22	NSC	89045	-	900 226000327889	-	1077	1194	9072	M	8
Burntwood River	BWR-A	13-Jun-15	NSC	89050	-	900 226000628817	-	849	971	6124	-	-
Burntwood River	BWR-A	2-Jun-15	NSC	89050	-	900 226000628817	-	-	-	-	-	-
Burntwood River	BWR-B	6-Jun-19	NSC	89050	-	900 226000628817	-	890	1000	5625	-	-
Burntwood River	BWR-B	10-Jun-19	NSC	89050	-	900 226000628817	-	-	-	-	-	-
Burntwood River	BWR-B	16-Jun-19	NSC	89050	-	900 226000628817	-	-	-	-	-	-
Burntwood River	BWR-A	22-Jun-22	NSC	89050	-	900 226000628817	-	905	1009	5550	-	-
Burntwood River	BWR-A	31-May-15	NSC	89059	-	900 226000703380	-	917	1013	6804	-	-
Burntwood River	BWR-A	9-Jun-22	NSC	89059	-	900 226000703380	-	936	1031	7711	-	-
Burntwood River	BWR-A	13-Jun-22	NSC	89059	-	900 226000703380	-	-	-	-	-	-
Burntwood River	BWR-A	4-Jun-15	NSC	89067	-	900 226000628873	-	1031	1119	9299	-	-
Burntwood River	BWR-A	14-Jun-22	NSC	89067	-	900 226000628873	-	1033	1142	7000	M	11
Burntwood River	BWR-B	07-Jun-15	NSC	89075	-	900 226000628752	-	848	954	5216	-	-
Burntwood River	BWR-A	11-Jun-22	NSC	89075	-	900 226000628752	-	899	1018	5443	-	-
Odie River	ODR-A	30-May-11	NSC	89872	-	-	-	1060	1180	8165	-	-
Burntwood River	BWR-A	6-Jun-15	NSC	89872	-	900 226000628847	-	1103	1218	11793	M	8
Burntwood River	BWR-A	3-Jun-17	NSC	89872	-	900 226000628847	-	1094	1205	11340	-	-
Burntwood River	BWR-A	6-Jun-17	NSC	89872	-	900 226000628847	-	-	-	-	M	8
Burntwood River	BWR-A	20-Jun-17	NSC	89872	-	900 226000628847	-	-	-	-	-	-
Burntwood River	BWR-A	9-Jun-22	NSC	89872	-	900 226000628847	-	1118	1226	14061	-	-
Burntwood River	BWR-A	16-Jun-22	NSC	89872	-	900 226000628847	-	-	-	-	-	-

Table A2-1. Tagging and biological information for Lake Sturgeon recaptured in the Burntwood River, spring 2022. A Floy tag that was lost and fish was retagged in 2022 is indicated by bold font (continued).

Waterbody	Reach	Date	Prefix	Floy tag 1	Floy tag 2	PIT tag 1	PIT tag 2	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Burntwood River	BWR-A	30-May-11	NSC	89873	-	-	-	965	1080	7711	-	-
Burntwood River	BWR-A	05-Jun-11	NSC	89873	-	-	-	-	-	-	-	-
Burntwood River	BWR-A	03-Jun-12	NSC	89873	-	-	-	990	1103	8618	M	7
Burntwood River	BWR-A	15-Jun-15	NSC	89873	-	900 226000628926	-	1020	1162	9299	-	-
Burntwood River	BWR-A	3-Jun-22	NSC	89873	-	900 226000628926	-	1050	1155	9979	-	-
Burntwood River	BWR-A	5-Jun-22	NSC	89873	-	900 226000628926	-	-	-	-	-	-
Burntwood River	BWR-A	12-Jun-22	NSC	89873	-	900 226000628926	-	-	-	-	-	-
Split Lake	SPL-A	26-May-19	NSC	90292	-	900 226000327606	-	904	976	5443	-	-
Burntwood River	BWR-A	10-Jun-22	NSC	90292	-	900 226000327606	-	958	1026	9525	-	-
Burntwood River	BWR-A	20-Jun-11	NSC	91157	-	-	-	501	572	1000	-	-
Burntwood River	BWR-A	3-Sep-12	NSC	91157	-	-	-	550	628	1125	-	-
Burntwood River	BWR-A	14-Jun-17	NSC	91157	-	900 226000153433	-	612	695	1724	-	-
Burntwood River	BWR-A	15-Jun-22	NSC	91157	-	900 226000153433	-	620	705	1800	-	-
Burntwood River	BWR-A	15-Jun-11	NSC	91182	-	-	-	1030	1147	7711	-	-
Burntwood River	BWR-A	11-Jun-17	NSC	91182	-	900 226000153450	-	1075	1196	9299	-	-
Burntwood River	BWR-A	21-Jun-19	NSC	91182	-	900 226000153450	-	1077	1192	8210	-	-
Burntwood River	BWR-A	6-Jun-22	NSC	91182	-	900 226000153450	-	1089	1196	9525	-	-
Kelsey GS Area	KGS-A	23-Jun-13	NSC	94135	-	900 226000548044	-	917	1024	8618	-	-
Burntwood River	BWR-A	10-Jun-15	NSC	94135	-	900 226000548044	-	939	1042	8391	-	-
Burntwood River	BWR-A	9-Jun-17	NSC	94135	-	900 226000548044	-	970	1078	7484	M	8
Burntwood River	BWR-A	9-Jun-22	NSC	94135	-	900 226000548044	-	1010	1100	9072	M	7
Burntwood River	BWR-A	13-Jun-22	NSC	94135	-	900 226000548044	-	-	-	-	M	8
Burntwood River	BWR-A	14-Jun-22	NSC	94135	-	900 226000548044	-	-	-	-	M	11
Kelsey GS Area	KGS-C	16-Jun-15	NSC	98638	-	900 226000548669	-	776	863	3402	-	-
Burntwood River	BWR-A	8-Jun-22	NSC	98638	-	900 226000548669	-	932	1030	7257	M	7
Kelsey GS Area	KGS-A	20-Jun-15	NSC	98902	-	900 226000548606	-	868	972	7031	-	-
Burntwood River	BWR-A	8-Jun-22	NSC	98902	-	900 226000548606	-	945	1050	7711	M	7
Kelsey GS Area	KGS-A	27-Jun-15	NSC	98933	-	900 226000548730	-	895	989	5670	-	-
Burntwood River	BWR-A	9-Jun-22	NSC	98933	-	900 226000548730	-	940	1041	6350	M	7

Table A2-1. Tagging and biological information for Lake Sturgeon recaptured in the Burntwood River, spring 2022. A Floy tag that was lost and fish was retagged in 2022 is indicated by bold font (continued).

Waterbody	Reach	Date	Prefix	Floy tag 1	Floy tag 2	PIT tag 1	PIT tag 2	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Kelsey GS Area	KGS-A	4-Jun-15	NSC	98977	-	900 226000548577	-	855	947	6350	-	-
Burntwood River	BWR-A	27-Jun-17	NSC	98977	-	900 226000548577	-	862	960	5035	-	-
Burntwood River	BWR-A	2-Jul-17	NSC	98977	-	900 226000548577	-	-	-	-	-	-
Burntwood River	BWR-A	11-Jun-22	NSC	98977	-	900 226000548577	-	894	985	4990	M	7
Burntwood River	BWR-A	15-Jun-22	NSC	98977	-	900 226000548577	-	-	-	-	M	-
Nelson River (CL-GR)	GL-C	30-Aug-12	NSC	100474	-	-	-	554	639	1200	-	-
Burntwood River	BWR-A	16-Jun-22	NSC	100474	-	900 226001232154	-	852	965	4650	-	-
Burntwood River	BWR-B	30-Jun-22	NSC	100474	-	900 226001232154	-	-	-	-	-	-
Nelson River (CL-GR)	GL-B	22-Jun-14	NSC	101391	-	900 226000629125	-	794	890	3400	-	-
Burntwood River	BWR-A	17-Jun-22	NSC	101391	-	900 226000629125	-	995	1097	6750	-	-
Split Lake	SPL-A	30-May-19	NSC	101765	-	900 226000327692	-	911	1011	6350	-	-
Burntwood River	BWR-B	12-Jun-22	NSC	101765	-	900 226000327692	-	950	1051	7257	-	-
Burntwood River	BWR-A	19-Jun-22	NSC	101765	-	900 226000327692	-	-	-	-	M	8
Burntwood River	BWR-A	03-Jun-12	NSC	102203	-	-	-	993	1083	8165	M	7
Burntwood River	BWR-A	8-Jun-22	NSC	102203	-	900 226001232280	-	1111	1210	13608	M	7
Burntwood River	BWR-A	6-Jun-12	NSC	102209	-	-	-	968	1068	6804	-	-
Burntwood River	BWR-A	3-Jun-22	NSC	102209	-	900 226001232225	-	1090	1210	9525	-	-
Burntwood River	BWR-A	8-Jun-12	NSC	102212	-	-	-	1045	1163	-	M	8
Burntwood River	BWR-B	5-Jun-19	NSC	102212	-	900 226000327022	-	1160	1282	11975	-	-
Burntwood River	BWR-A	16-Jun-22	NSC	102212	-	900 226000327022	-	1165	1281	9900	M	11
Burntwood River	BWR-A	09-Jun-12	NSC	102216	-	-	-	825	925	4082	M	8
Kelsey GS Area	KGS-D	21-Jun-17	NSC	102216	-	900 226001232102	-	938	1038	7711	-	-
Burntwood River	BWR-A	14-Jun-22	NSC	102216	-	900 226001232102	-	980	1085	6000	M	8
Burntwood River	BWR-A	07-Jun-17	NSC	103162	-	900 226000153449	-	945	1036	-	M	8
Burntwood River	BWR-B	27-May-19	NSC	103162	-	900 226000153449	-	955	1051	6214	-	-
Burntwood River	BWR-A	13-Jun-19	NSC	103162	-	900 226000153449	-	-	-	-	-	-
Burntwood River	BWR-A	14-Jun-22	NSC	103162	-	900 226000153449	-	-	-	-	M	8
Burntwood River	BWR-A	11-Jun-17	NSC	103180	-	900 226000153456	-	960	1045	6124	M	8
Burntwood River	BWR-A	27-Jun-22	NSC	103180	-	900 226000153456	-	1003	1091	8250	-	-

Table A2-1. Tagging and biological information for Lake Sturgeon recaptured in the Burntwood River, spring 2022. A Floy tag that was lost and fish was retagged in 2022 is indicated by bold font (continued).

Waterbody	Reach	Date	Prefix	Floy tag 1	Floy tag 2	PIT tag 1	PIT tag 2	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Burntwood River	BWR-A	11-Jun-17	NSC	103184	-	900 226000153431	-	882	1007	5216	-	-
Burntwood River	BWR-A	26-May-19	NSC	103184	-	900 226000153431	-	890	1012	4899	-	-
Burntwood River	BWR-A	18-Jun-19	NSC	103184	-	900 226000153431	-	-	-	-	-	-
Burntwood River	BWR-A	12-Jun-22	NSC	103184	-	900 226000153431	-	939	1051	5443	M	8
Burntwood River	BWR-A	12-Jun-17	NSC	103185	-	900 226000153472	-	970	1090	7484	M	8
Burntwood River	BWR-A	13-Jun-22	NSC	103185	-	900 226000153472	-	1010	1135	7711	M	8
Burntwood River	BWR-A	22-Jun-17	NSC	103799	-	900 226000768044	-	911	1011	9072	-	-
Burntwood River	BWR-A	12-Jun-22	NSC	103799	-	900 226000768044	-	977	1081	9072	M	8
Burntwood River	BWR-A	25-Jun-13	NSC	104527	-	900 226000548366	-	650	745	1701	-	-
Burntwood River	BWR-A	9-Jun-17	NSC	104527	-	900 226000548366	-	725	820	1588	-	-
Burntwood River	BWR-A	31-May-19	NSC	104527	-	900 226000548366	-	750	835	2722	-	-
Burntwood River	BWR-A	10-Jun-22	NSC	104527	-	900 226000548366	-	765	861	3629	-	-
Kelsey GS Area	KGS-D	2-Jun-13	NSC	91664	-	900 226000548081	-	875	971	6350	-	-
Burntwood River	BWR-A	5-Jun-17	NSC	108603	-	900 226000548081	-	942	1045	8165	M	7
Burntwood River	BWR-A	6-Jun-17	NSC	108603	-	900 226000548081	-	-	-	-	-	-
Burntwood River	BWR-A	15-Jun-17	NSC	108603	-	900 226000548081	-	-	-	-	-	-
Burntwood River	BWR-B	9-Jun-19	NSC	108603	-	900 226000548081	-	962	1064	6940	-	-
Burntwood River	BWR-A	13-Jun-22	NSC	108603	-	900 226000548081	-	961	1062	7257	M	8
Burntwood River	BWR-A	7-Jun-17	NSC	108613	-	900 226000153443	-	940	1058	6350	M	7
Burntwood River	BWR-A	13-Jun-22	NSC	108613	-	900 226000153443	-	956	1074	6350	-	-
Burntwood River	BWR-A	6-Jun-17	NSC	108616	-	900 226000768828	-	945	1055	7031	M	7
Burntwood River	BWR-C	03-Jul-22	NSC	108616	-	900 226000768828	-	1000	1110	8750	-	-
Burntwood River	BWR-A	6-Jun-17	NSC	108618	-	900 226000153430	-	1000	1130	7711	M	8
Burntwood River	BWR-A	8-Jun-17	NSC	108618	-	900 226000153430	-	-	-	-	-	-
Burntwood River	BWR-A	22-Jun-22	NSC	108618	-	900 226000153430	-	1037	1170	7850	-	-
Burntwood River	BWR-A	01-Jun-17	NSC	108627	-	900 226000768869	-	1033	1158	8618	M	7
Burntwood River	BWR-A	26-Jun-17	NSC	108627	-	900 226000768869	-	-	-	-	-	-
Burntwood River	BWR-A	26-Jun-19	NSC	108627	-	900 226000768869	-	1039	1162	9788	-	-
Burntwood River	BWR-A	3-Jun-22	NSC	108627	-	900 226000768869	-	1050	1160	8618	-	-

Table A2-1. Tagging and biological information for Lake Sturgeon recaptured in the Burntwood River, spring 2022. A Floy tag that was lost and fish was retagged in 2022 is indicated by bold font (continued).

Waterbody	Reach	Date	Prefix	Floy tag 1	Floy tag 2	PIT tag 1	PIT tag 2	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Burntwood River	BWR-A	2-Jun-17	NSC	108632	-	900 226000548475	-	910	1023	4763	-	-
Burntwood River	BWR-A	31-May-22	NSC	108632	-	900 226000548475	-	1010	1113	8950	-	-
Burntwood River	BWR-A	4-Jun-17	NSC	108640	-	900 226000768892	-	953	1072	7031	M	8
Burntwood River	BWR-A	12-Jun-19	NSC	108640	-	900 226000768892	-	965	1082	5761	M	8
Burntwood River	BWR-A	9-Jun-22	NSC	108640	-	900 226000768892	-	968	1089	7257	M	8
Burntwood River	BWR-A	14-Jun-22	NSC	108640	-	900 226000768892	-	-	-	-	-	-
Kelsey GS Area	KGS-D	13-Jun-17	NSC	110726	-	900 226000768210	-	935	1030	6804	-	-
Kelsey GS Area	KGS-B	05-Jun-19	NSC	110726	-	900 226000768210	-	950	1047	6441	-	-
Burntwood River	BWR-A	9-Jun-22	NSC	110726	-	900 226000768210	-	1005	1093	9525	M	7
Burntwood River	BWR-A	14-Jun-22	NSC	110726	-	900 226000768210	-	-	-	-	M	11
Split Lake	SPL-A	09-Jun-17	NSC	110745	-	900 226000768278	-	1000	1100	11340	-	-
Burntwood River	BWR-A	26-Jun-19	NSC	110745	-	900 226000768278	-	-	-	-	-	-
Burntwood River	BWR-B	30-Jun-22	NSC	110745	-	900 226000768278	-	1005	1125	8300	-	-
Kelsey GS Area	KGS-D	07-Jun-17	NSC	110749	-	900 226000768286	-	990	1080	9525	-	-
Burntwood River	BWR-A	24-Jun-22	NSC	110749	-	900 226000768286	-	1005	1111	7500	M	9
Kelsey GS Area	KGS-D	30-Jun-17	NSC	111077	-	900 226000154098	-	809	894	5897	-	-
Burntwood River	BWR-A	12-Jun-22	NSC	111077	-	900 226000154098	-	870	954	6804	-	-
Kelsey GS Area	KGS-A	18-Jun-17	NSC	111570	-	-	-	880	973	6350	-	-
Split Lake	SPL-A	11-Jun-19	NSC	111570	-	900 226000327611	-	991	1088	5443	-	-
Burntwood River	BWR-A	21-Jun-22	NSC	111570	-	900 226000327611	-	915	1019	5000	-	-
Split Lake	SPL-A	03-Jun-19	NSC	112890	-	900 226000327687	-	895	1000	5897	-	-
Burntwood River	BWR-A	12-Jun-22	NSC	112890	-	900 226000327687	-	926	1038	6804	M	8
Burntwood River	BWR-B	26-May-19	NSC	114060	114061	900 226000327009	-	910	994	5579	-	-
Burntwood River	BWR-A	3-Jun-19	NSC	114060	114061	900 226000327009	-	-	-	-	-	-
Burntwood River	BWR-A	15-Jun-22	NSC	114060	114061	900 226000327009	-	942	1040	5100	M	11
Burntwood River	BWR-A	24-Jun-22	NSC	114060	114061	900 226000327009	-	-	-	-	-	-
Burntwood River	BWR-B	26-May-19	NSC	114062	-	900 226000327867	-	942	1051	7530	-	-
Burntwood River	BWR-A	10-Jun-19	NSC	114062	-	900 226000327867	-	-	-	-	-	-
Burntwood River	BWR-A	12-Jun-22	NSC	114062	-	900 226000327867	-	975	1084	8165	M	8
Burntwood River	BWR-A	14-Jun-22	NSC	114062	-	900 226000327867	-	-	-	-	-	-

Table A2-1. Tagging and biological information for Lake Sturgeon recaptured in the Burntwood River, spring 2022. A Floy tag that was lost and fish was retagged in 2022 is indicated by bold font (continued).

Waterbody	Reach	Date	Prefix	Floy tag 1	Floy tag 2	PIT tag 1	PIT tag 2	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Burntwood River	BWR-B	28-May-19	NSC	114070	-	900 226000327446	-	949	1052	7031	-	-
Burntwood River	BWR-A	8-Jun-22	NSC	114070	-	900 226000327446	-	975	1073	9072	M	7
Kelsey GS Area	KGS-D	5-Jun-13	NSC	93886	-	900 226000548172	-	840	934	5443	-	-
Burntwood River	BWR-A	12-Jun-19	NSC	114107	-	900 226000548172	-	930	1037	6169	M	9
Burntwood River	BWR-A	10-Jun-22	NSC	114107	-	900 226000548172	-	949	1058	6804	M	7
Burntwood River	BWR-A	13-Jun-22	NSC	114107	-	900 226000548172	-	-	-	-	M	8
Burntwood River	BWR-A	12-Jun-19	NSC	114108	-	900 226000327083	-	956	1072	7439	-	-
Burntwood River	BWR-A	14-Jun-19	NSC	114108	-	900 226000327083	-	-	-	-	-	-
Burntwood River	BWR-A	27-Jun-19	NSC	114108	-	900 226000327083	-	-	-	-	-	-
Burntwood River	BWR-A	10-Jun-22	NSC	114108	-	900 226000327083	-	967	1091	9525	M	7
Burntwood River	BWR-A	23-Jun-22	NSC	114108	-	900 226000327083	-	-	-	-	-	-
Burntwood River	BWR-A	13-Jun-19	NSC	114112	-	900 226000327824	-	833	919	4627	M	8
Burntwood River	BWR-A	11-Jun-22	NSC	114112	-	900 226000327824	-	845	933	4082	-	-
Burntwood River	BWR-A	13-Jun-19	NSC	114113	-	900 226000327733	-	951	1050	6895	-	-
Burntwood River	BWR-A	4-Jun-22	NSC	114113	-	900 226000327733	-	979	1080	8165	-	-
Burntwood River	BWR-A	10-Jun-22	NSC	114113	-	900 226000327733	-	-	-	-	-	-
Burntwood River	BWR-A	13-Jun-19	NSC	114115	-	900 226000327728	-	989	1103	7394	-	-
Burntwood River	BWR-A	10-Jun-22	NSC	114115	-	900 226000327728	-	1000	1121	6804	-	-
Burntwood River	BWR-A	14-Jun-19	NSC	114118	-	900 226000327000	-	923	1041	6033	-	-
Burntwood River	BWR-A	12-Jun-22	NSC	114118	-	900 226000327000	-	939	1059	6804	M	8
Burntwood River	BWR-A	15-Jun-19	NSC	114119	-	900 226000327805	-	1103	1241	10659	-	-
Burntwood River	BWR-A	24-Jun-22	NSC	114119	-	900 226000327805	-	1115	1255	9800	-	-
Burntwood River	BWR-A	18-Jun-19	NSC	114124	-	900 226000327431	-	1093	1233	9344	-	-
Burntwood River	BWR-A	9-Jun-22	NSC	114124	-	900 226000327431	-	1120	1258	13154	M	7
Burntwood River	BWR-B	7-Jun-19	NSC	114130	-	900 226000327841	-	915	1030	5307	M	7
Burntwood River	BWR-A	13-Jun-22	NSC	114130	-	900 226000327841	-	934	1044	4990	-	-
Burntwood River	BWR-A	9-Jun-17	NSC	114137	-	900 226000327897	-	854	956	4218	M	7
Burntwood River	BWR-A	12-Jun-22	NSC	114137	-	900 226000327897	-	855	956	4536	M	8
Burntwood River	BWR-B	9-Jun-19	NSC	114139	-	900 226000327827	-	1016	1138	8618	M	8
Burntwood River	BWR-A	12-Jun-22	NSC	114139	-	900 226000327827	-	1055	1184	9072	M	8

Table A2-2. Tagging and biological information for Lake Sturgeon recaptured in the Burntwood River, spring 2022. A Floy tag that was lost and fish was retagged in 2022 is indicated by bold font (continued).

Waterbody	Reach	Date	Prefix	Floy tag 1	Floy tag 2	PIT tag 1	PIT tag 2	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Burntwood River	BWR-B	10-Jun-19	NSC	114142	-	900 226000327878	-	1230	1365	15059	-	-
Burntwood River	BWR-A	23-Jun-22	NSC	114142	-	900 226000327878	-	1220	1335	14000	-	-
Burntwood River	BWR-A	11-Jun-19	NSC	114143	-	900 226000327887	-	884	979	5216	-	-
Burntwood River	BWR-A	14-Jun-19	NSC	114143	-	900 226000327887	-	-	-	-	-	-
Burntwood River	BWR-B	20-Jun-22	NSC	114143	-	900 226000327887	-	900	1000	5750	M	11
Burntwood River	BWR-B	08-Jun-19	NSC	114146	-	900 226000327952	-	871	947	6940	-	-
Burntwood River	BWR-A	10-Jun-22	NSC	114146	-	900 226000327952	-	889	971	6350	-	-
Burntwood River	BWR-A	8-Jun-19	NSC	114150	-	900 226000327822	-	1028	1161	8709	-	-
Burntwood River	BWR-A	14-Jun-19	NSC	114150	-	900 226000327822	-	-	-	-	-	-
Burntwood River	BWR-B	19-Jun-22	NSC	114150	-	900 226000327822	-	1040	1165	8500	-	-
Burntwood River	BWR-B	31-May-19	NSC	114153	-	900 226000327511	-	932	1040	6169	M	7
Burntwood River	BWR-A	10-Jun-22	NSC	114153	-	900 226000327511	-	960	1058	7711	M	7
Burntwood River	BWR-A	31-May-19	NSC	114157	-	900 226000327008	-	765	856	3130	-	-
Burntwood River	BWR-A	7-Jun-19	NSC	114157	-	900 226000327008	-	-	-	-	-	-
Burntwood River	BWR-A	14-Jun-22	NSC	114157	-	900 226000327008	-	757	813	3000	-	-
Burntwood River	BWR-A	31-May-13	NSC	88682	-	900 226000548343	-	957	1062	7756	M	7
Burntwood River	BWR-A	06-Jun-13	NSC	88682	-	900 226000548343	-	-	-	-	-	-
Burntwood River	BWR-A	09-Jun-13	NSC	88682	-	900 226000548343	-	-	-	-	-	-
Burntwood River	BWR-B	01-Jun-19	NSC	114163	-	900 226000548343	-	1076	1160	9752	-	-
Burntwood River	BWR-A	18-Jun-19	NSC	114163	-	900 226000548343	-	-	-	-	-	-
Burntwood River	BWR-A	13-Jun-22	NSC	114163	-	900 226000548343	-	1089	1165	9525	-	-
Burntwood River	BWR-A	2-Jun-19	NSC	114166	-	900 226000327017	-	889	981	5352	-	-
Burntwood River	BWR-A	10-Jun-22	NSC	114166	-	900 226000327017	-	920	965	7711	-	-
Burntwood River	BWR-B	2-Jun-19	NSC	114170	-	900 226000327861	-	847	959	5080	-	-
Burntwood River	BWR-A	8-Jun-22	NSC	114170	-	900 226000327861	-	860	969	6804	M	7
Burntwood River	BWR-B	4-Jun-19	NSC	114179	-	900 226000327880	-	1091	1203	10070	-	-
Burntwood River	BWR-A	14-Jun-22	NSC	114179	-	900 226000327880	-	1100	1215	11000	-	-
Burntwood River	BWR-B	04-Jun-19	NSC	114182	-	900 226000327874	-	920	1023	5534	-	-
Burntwood River	BWR-A	8-Jun-22	NSC	114182	-	900 226000327874	-	952	1052	8165	M	7
Burntwood River	BWR-A	12-Jun-22	NSC	114182	-	900 226000327874	-	-	-	-	M	8

Table A2-1. Tagging and biological information for Lake Sturgeon recaptured in the Burntwood River, spring 2022. A Floy tag that was lost and fish was retagged in 2022 is indicated by bold font (continued).

Waterbody	Reach	Date	Prefix	Floy tag 1	Floy tag 2	PIT tag 1	PIT tag 2	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Burntwood River	BWR-A	6-Jun-19	NSC	114194	-	900 226000327836	-	998	1105	8346	-	-
Burntwood River	BWR-A	1-Jun-22	NSC	114194	-	900 226000327836	-	1025	1145	9525	-	-
Kelsey GS Area	KGS-A	7-Jun-19	NSC	114282	-	900 226000327662	-	1002	1300	7711	-	-
Burntwood River	BWR-A	17-Jun-22	NSC	114282	-	900 226000327662	-	1047	1180	9000	M	8
Split Lake	SPL-A	07-Jun-19	NSC	114285	-	900 226000327631	-	1050	1150	10433	-	-
Split Lake	SPL-A	22-Jun-19	NSC	114285	-	900 226000327631	-	-	-	-	-	-
Burntwood River	BWR-A	13-Jun-22	NSC	114285	-	900 226000327631	-	1068	1165	9072	M	8
Burntwood River	BWR-A	15-Jun-22	NSC	114285	-	900 226000327631	-	-	-	-	M	-
Split Lake	SPL-A	21-Jun-19	NSC	114302	-	900 226000327935	-	840	934	5500	-	-
Burntwood River	BWR-A	10-Jun-22	NSC	114302	-	900 226000327935	-	876	969	4990	-	-
Gull Lake	GL-C	5-Jun-19	NSC	114777	-	900 226000767213	-	868	981	4990	-	-
Burntwood River	BWR-A	26-Jun-22	NSC	114777	-	900 226000767213	-	900	1027	6300	-	-
Split Lake	SPL-A	16-Sep-19	NSC	116617	-	900 067000121253	-	835	954	-	-	-
Burntwood River	BWR-A	6-Jun-22	NSC	116617	-	900 067000121253	-	869	987	6350	-	-
Split Lake	SPL-A	15-Sep-20	NSC	119249	-	900 226001055892	-	770	868	2980	-	-
Burntwood River	BWR-A	22-Jun-22	NSC	119249	-	900 226001055892	-	820	921	3100	-	-
Burntwood River	BWR-B	29-May-19	NSC	-	-	900 226000327835	-	816	912	4037	-	-
Burntwood River	BWR-B	29-May-22	NSC	119552	-	900 226000327835	-	840	941	5300	-	-
Burntwood River	BWR-B	31-May-22	NSC	119557	-	900 226001232214	-	1100	1223	9525	-	-
Burntwood River	BWR-A	13-Jun-22	NSC	119557	-	900 226001232214	-	-	-	-	-	-
Burntwood River	BWR-A	14-Jun-22	NSC	119557	-	900 226001232214	-	-	-	-	-	-
Burntwood River	BWR-A	3-Jun-22	NSC	119559	-	900 226001232299	-	950	1080	8165	-	-
Burntwood River	BWR-A	26-Jun-22	NSC	119559	-	900 226001232299	-	-	-	-	-	-

Table A2-1. Tagging and biological information for Lake Sturgeon recaptured in the Burntwood River, spring 2022. A Floy tag that was lost and fish was retagged in 2022 is indicated by bold font (continued).

Waterbody	Reach	Date	Prefix	Floy tag 1	Floy tag 2	PIT tag 1	PIT tag 2	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Burntwood River	BWR-A	02-Jun-11	NSC	94801	-	-	-	940	1025	6804	-	-
Burntwood River	BWR-A	30-May-13	NSC	94801	-	900 226000548330	-	963	1052	8165	M	8
Burntwood River	BWR-A	14-Jun-13	NSC	94801	-	900 226000548330	-	-	-	-	-	-
Burntwood River	BWR-A	8-Jun-15	NSC	94801	-	900 226000548330	900 226000628765	988	1084	9299	M	8
Burntwood River	BWR-A	12-Jun-15	NSC	94801	-	900 226000548330	900 226000628765	-	-	-	-	-
Burntwood River	BWR-A	04-Jun-17	**NSC**	**94801**	-	900 226000548330	900 226000628765	1017	1110	9525	M	7
Burntwood River	BWR-A	3-Jun-22	NSC	119561	-	900 226000548330	900 226000628765	1050	1140	11340	-	-
Burntwood River	BWR-A	21-Jun-22	NSC	119561	-	900 226000548330	900 226000628765	-	-	-	M	8
Burntwood River	BWR-A	3-Jun-22	NSC	119562	-	900 226001232278	-	969	1080	6804	-	-
Burntwood River	BWR-A	7-Jun-22	NSC	119562	-	900 226001232278	-	-	-	-	-	-
Burntwood River	BWR-A	20-Jun-22	NSC	119562	-	900 226001232278	-	-	-	-	-	-
Burntwood River	BWR-A	4-Jun-22	NSC	119563	-	900 226001232250	-	770	865	4082	-	-
Burntwood River	BWR-A	15-Jun-22	NSC	119563	-	900 226001232250	-	-	-	-	-	-
Burntwood River	BWR-A	4-Jun-22	NSC	119564	-	900 226001232284	-	1065	1175	9979	-	-
Burntwood River	BWR-A	23-Jun-22	NSC	119564	-	900 226001232284	-	-	-	-	-	-
Burntwood River	BWR-A	4-Jun-22	NSC	119565	-	900 226001232223	-	1188	1204	12247	-	-
Burntwood River	BWR-A	7-Jun-22	NSC	119565	-	900 226001232223	-	-	-	-	-	-
Burntwood River	BWR-A	5-Jun-22	NSC	119566	-	900 226001232263	-	816	899	4536	-	-
Burntwood River	BWR-A	24-Jun-22	NSC	119566	-	900 226001232263	-	-	-	-	-	-
Split Lake	SPL-A	07-Jun-19	NSC	**114287**	-	900 226000327642	-	930	1033	6000	-	-
Burntwood River	BWR-A	5-Jun-22	NSC	119569	-	900 226000327642	-	982	1089	9072	-	-
Burntwood River	BWR-B	5-Jun-22	NSC	119572	-	900 226001232257	-	1069	1185	10433	-	-
Burntwood River	BWR-A	15-Jun-22	NSC	119572	-	900 226001232257	-	-	-	-	M	8
Burntwood River	BWR-A	7-Jun-22	NSC	119575	-	900 226001232293	-	1048	1155	9525	-	-
Burntwood River	BWR-A	14-Jun-22	NSC	119575	-	900 226001232293	-	-	-	-	-	-
Burntwood River	BWR-A	8-Jun-22	NSC	119581	-	900 226001232298	-	1228	1377	18144	M	7
Burntwood River	BWR-A	13-Jun-22	NSC	119581	-	900 226001232298	-	-	-	-	-	-
Burntwood River	BWR-A	9-Jun-22	NSC	119585	-	900 226001232289	-	880	985	6350	-	-
Burntwood River	BWR-A	14-Jun-22	NSC	119585	-	900 226001232289	-	-	-	-	M	-

Table A2-1. Tagging and biological information for Lake Sturgeon recaptured in the Burntwood River, spring 2022. A Floy tag that was lost and fish was retagged in 2022 is indicated by bold font (continued).

Waterbody	Reach	Date	Prefix	Floy tag 1	Floy tag 2	PIT tag 1	PIT tag 2	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Burntwood River	BWR-A	14-Jun-19	**NSC**	**114117**	-	900 226000327853	-	946	1073	5851	-	-
Burntwood River	BWR-A	9-Jun-22	NSC	119590	-	900 226000327853	-	975	1098	9979	M	7
Burntwood River	BWR-A	9-Jun-22	NSC	119593	-	900 226001232243	-	995	1122	10886	M	7
Burntwood River	BWR-A	14-Jun-22	NSC	119593	-	900 226001232243	-	-	-	-	-	-
Burntwood River	BWR-A	03-Jun-15	**NSC**	**89063**	-	900 226000703311	-	1047	1145	9525	-	-
Burntwood River	BWR-A	10-Jun-22	NSC	119597	-	900 226000703311	-	1095	1204	11793	M	7
Burntwood River	BWR-A	10-Jun-22	NSC	119598	-	-	-	1005	1125	10886	M	7
Burntwood River	BWR-A	16-Jun-22	NSC	119598	-	-	-	-	-	-	-	-
Burntwood River	BWR-A	21-Jun-22	NSC	119598	-	-	-	-	-	-	-	-
Split Lake	SPL-A	10-Sep-20	NSC	119931	-	900 226001031889	-	858	964	4380	-	-
Burntwood River	BWR-A	22-Jun-22	NSC	119931	-	900 226001031889	-	857	987	4650	-	-
Burntwood River	BWR-A	28-Jun-13	**NSC**	**104534**	-	900 226000548285	-	645	740	1814	-	-
Burntwood River	BWR-B	15-Jun-22	NSC	123272	-	900 226000548285	-	786	888	3200	-	-
Burntwood River	BWR-A	16-Jun-22	NSC	123276	-	900 226001232196	-	1030	1152	8300	M	11
Burntwood River	BWR-A	21-Jun-22	NSC	123276	-	900 226001232196	-	-	-	-	-	-
Burntwood River	BWR-A	19-Jun-22	NSC	123284	-	900 226001232157	-	937	995	5800	-	-
Burntwood River	BWR-A	20-Jun-22	NSC	123284	-	900 226001232157	-	-	-	-	-	-
Burntwood River	BWR-A	20-Jun-22	NSC	123286	-	900 226001232141	-	1055	1181	8200	-	-
Burntwood River	BWR-A	26-Jun-22	NSC	123286	-	900 226001232141	-	-	-	-	-	-
Kelsey GS Area	KGS-A	07-Jun-13	NSC	93894	-	900 226000548221	-	932	1039	7257	M	8
Burntwood River	BWR-A	04-Jun-17	**NSC**	**108639**	-	900 226000548221	-	1019	1132	8618	M	7
Burntwood River	BWR-A	20-Jun-22	NSC	123287	-	900 226000548221	-	1100	1225	10100	M	11
Burntwood River	BWR-A	22-Jun-22	NSC	123287	-	900 226000548221	-	-	-	-	-	-
Burntwood River	BWR-A	21-Jun-22	NSC	123293	-	900 226001232256	-	950	1060	5650	-	-
Burntwood River	BWR-A	26-Jun-22	NSC	123293	-	900 226001232256	-	-	-	-	-	-
Burntwood River	BWR-A	10-Jun-22	NSC	123301	-	900 226001232287	-	953	1059	9072	-	-
Burntwood River	BWR-A	20-Jun-22	NSC	123301	-	900 226001232287	-	-	-	-	-	-
Burntwood River	BWR-A	10-Jun-22	NSC	123303	-	900 226001232246	-	1029	1156	9525	-	-
Burntwood River	BWR-A	16-Jun-22	NSC	123303	-	900 226001232246	-	-	-	-	-	-

Table A2-1. Tagging and biological information for Lake Sturgeon recaptured in the Burntwood River, spring 2022. A Floy tag that was lost and fish was retagged in 2022 is indicated by bold font (continued).

Waterbody	Reach	Date	Prefix	Floy tag 1	Floy tag 2	PIT tag 1	PIT tag 2	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Burntwood River	BWR-A	10-Jun-22	NSC	123304	-	900 226001232215	-	959	1062	6804	-	-
Burntwood River	BWR-A	26-Jun-22	NSC	123304	-	900 226001232215	-	-	-	-	-	-
Burntwood River	BWR-A	07-Jun-11	NSC	94486	-	-	-	1019	1058	9979	M	8
Burntwood River	BWR-A	10-Jun-12	NSC	94486	-	-	-	1018	1080	9979	M	8
Burntwood River	BWR-A	31-May-13	NSC	94486	-	900 226000548324	-	1030	1098	9752	M	8
Burntwood River	BWR-A	05-Jun-15	NSC	94486	-	900 226000548324	-	1052	1118	10433	M	8
Burntwood River	BWR-A	11-Jun-17	**NSC**	**94486**	-	900 226000548324	-	1085	1149	9979	M	8
Burntwood River	BWR-A	11-Jun-22	NSC	123307	-	900 226000548324	-	1099	1179	10886	M	8
Burntwood River	BWR-A	11-Jun-22	NSC	123308	-	900 226001232230	-	917	1025	4536	-	-
Burntwood River	BWR-A	16-Jun-22	NSC	123308	-	900 226001232230	-	-	-	-	M	-
Burntwood River	BWR-A	11-Jun-22	NSC	123309	-	900 226001232247	-	870	970	4536	-	-
Burntwood River	BWR-A	12-Jun-22	NSC	123309	-	900 226001232247	-	-	-	-	-	-
Kelsey GS Area	KGS-C	13-Jun-15	NSC	98649	-	900 226000548665	-	1007	1133	7938	-	-
Kelsey GS Area	KGS-C	14-Jun-15	NSC	**98649**	-	900 226000548665	-	-	-	-	-	-
Burntwood River	BWR-A	11-Jun-22	NSC	123312	-	900 226000548665	-	1036	1151	7711	M	8
Burntwood River	BWR-A	12-Jun-22	NSC	123319	-	900 226001232219	-	980	1091	7711	M	8
Burntwood River	BWR-A	21-Jun-22	NSC	123319	-	900 226001232219	-	-	-	-	-	-
Burntwood River	BWR-A	12-Jun-22	NSC	123322	-	900 226001232291	-	905	1004	6804	-	-
Burntwood River	BWR-A	18-Jun-22	NSC	123322	-	900 226001232291	-	-	-	-	-	-
Burntwood River	BWR-A	13-Jun-22	NSC	123339	-	900 226001232264	-	1010	1119	7711	-	-
Burntwood River	BWR-A	15-Jun-22	NSC	123339	-	900 226001232264	-	-	-	-	-	-
Burntwood River	BWR-A	13-Jun-22	NSC	123340	-	900 226001232209	-	1029	1092	9979	M	8
Burntwood River	BWR-A	14-Jun-22	NSC	123340	-	900 226001232209	-	-	-	-	-	-
Burntwood River	BWR-A	13-Jun-22	NSC	123341	-	900 226001232271	-	1395	1520	20412	F	3
Burntwood River	BWR-B	29-Jun-22	NSC	123341	-	900 226001232271	-	-	-	-	-	-
Burntwood River	BWR-A	13-Jun-22	NSC	123347	-	900 226001232146	-	924	1036	6804	-	-
Burntwood River	BWR-A	15-Jun-22	NSC	123347	-	900 226001232146	-	-	-	-	M	8
Burntwood River	BWR-A	23-Jun-22	NSC	123347	-	900 226001232146	-	-	-	-	-	-
Burntwood River	BWR-A	13-Jun-22	NSC	123349	-	900 226001232165	-	937	1026	8165	M	8
Burntwood River	BWR-A	22-Jun-22	NSC	123349	-	900 226001232165	-	-	-	-	-	-

Table A2-1. Tagging and biological information for Lake Sturgeon recaptured in the Burntwood River, spring 2022. A Floy tag that was lost and fish was retagged in 2022 is indicated by bold font (continued).

Waterbody	Reach	Date	Prefix	Floy tag 1	Floy tag 2	PIT tag 1	PIT tag 2	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Burntwood River	-	31-May-18	-	-	-	900 067000111334	-	231	273	86	-	-
Burntwood River	BWR-B	27-Jun-22	NSC	102174	-	900 067000111334	-	365	410	300	-	-
Burntwood River	-	07-Jun-18	-	-	-	900 067000110307	-	193	225	47	-	-
Burntwood River	BWR-A	23-Jun-22	NSC	102162	-	900 067000110307	-	380	430	300	-	-
Burntwood River	-	07-Jun-18	-	-	-	900 067000109916	-	211	246	61	-	-
Burntwood River	BWR-B	20-Jun-22	NSC	123390	-	900 067000109916	-	355	412	450	-	-
Burntwood River	-	3-Jun-21	-	-	-	900 067000108777	-	266	315	123	-	-
Burntwood River	BWR-B	5-Jun-22	NSC	119571	-	900 067000108777	-	310	358	250	-	-

Table A2-2. Tagging and biological information for Lake Sturgeon recaptured in the Kelsey GS Area, spring 2022. A Floy tag that was lost and fish was retagged in 2022 is indicated by bold font.

Location	Zone	Date	Prefix	Floy tag 1	Floy tag 2	PIT Tag 1	Pit tag 2	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
U/S Kelsey GS	-	6-Jun-15	MB FISHERIES	4034	-	985 121008531296	-	956	1029	5375	-	-
Kelsey GS Area	KGS-B	25-Jun-22	MB FISHERIES	4034	-	985 121008531296	-	1018	1160	6600	-	-
U/S Kelsey GS	-	15-Jun-14	MB FISHERIES	4081	-	989 001003423237	-	932	1003	5420	-	-
Kelsey GS Area	KGS-A	1-Jun-22	MB FISHERIES	4081	-	989 001003423237	-	1078	1285	10300	-	-
U/S Kelsey GS	-	5-Jul-14	MB FISHERIES	4655	-	989 001003423430	-	658	705	1814	-	-
Kelsey GS Area	KGS-A	2-Jun-22	MB FISHERIES	4655	-	989 001003423430	-	900	998	5650	-	-
Kelsey GS Area	KGS-A	30-May-07	NSC	74780	-	-	-	1246	1350	16329	M	8
Kelsey GS Area	KGS-B	1-Jun-07	NSC	74780	-	-	-	-	-	-	-	-
Kelsey GS Area	KGS-D	10-Jun-07	NSC	74780	-	-	-	-	-	-	-	-
Kelsey GS Area	KGS-D	11-Jun-07	NSC	74780	-	-	-	-	-	-	-	-
Kelsey GS Area	KGS-A	8-Jun-15	NSC	74780	-	900 226000548504	-	1285	1391	14742	-	-
Kelsey GS Area	KGS-C	30-May-22	NSC	74780	-	900 226000548504	-	1290	1407	15876	-	-
Kelsey GS Area	KGS-A	13-Jul-05	NSC	75147	-	-	-	742	830	3175	-	-
Kelsey GS Area	KGS-A	12-Jun-09	NSC	75147	-	-	-	920	1030	7484	-	-
Burntwood River	BWR-A	5-Jun-11	NSC	75147	-	-	-	999	1015	8165	M	8
Kelsey GS Area	KGS-A	5-Jun-22	NSC	75147	75148	900 226001226238	-	1125	1225	9600	-	-
Nelson River (CL-GR)	GL-B	14-Sep-08	NSC	75345	-	-	-	515	592	850	-	-
Nelson River (CL-GR)	BR-D	9-Jun-18	NSC	75345	-	900 226000767058	-	868	984	5534	-	-
Kelsey GS Area	SPL-A	27-Jun-22	NSC	75345	-	900 226000767058	-	920	1025	5600	-	-
Nelson River (BR-GR)	GL-B	27-Sep-08	NSC	86143	-	-	-	608	692	1710	-	-
Kelsey GS Area	KGS-A	2-Jun-17	NSC	86143	-	900 226000768243	-	845	948	6804	-	-
Kelsey GS Area	KGS-A	30-Jun-22	NSC	86143	-	900 226000768243	-	925	1037	5900	-	-
Nelson River (CL-GR)	GL-B	23-Sep-08	NSC	87239	-	-	-	484	542	-	-	-
Kelsey GS Area	KGS-A	29-May-22	NSC	87239	-	900 226001227873	-	911	1006	5300	-	-
Kelsey GS Area	KGS-A	23-Jun-22	NSC	87239	-	900 226001227873	-	-	-	-	-	-
Nelson River (CL-GR)	GL-B	28-Sep-10	NSC	87872	-	900 226001226272	-	618	690	1750	-	-
Kelsey GS Area	KGS-A	31-May-22	NSC	87872	-	900 226001226272	-	915	1043	5900	-	-
Kelsey GS Area	KGS-B	25-Jun-11	NSC	88606	-	-	-	811	917	5100	-	-
Kelsey GS Area	KGS-B	26-Jun-11	NSC	88606	-	-	-	818	920	5100	-	-
Kelsey GS Area	KGS-B	17-Jun-13	NSC	88606	-	900 226000548033	-	880	992	6577	-	-
Kelsey GS Area	KGS-B	18-Jun-13	NSC	88606	-	900 226000548033	-	-	-	-	-	-
Kelsey GS Area	KGS-A	30-Jun-22	NSC	88606	-	900 226000548033	-	995	1107	6700	-	-

Table A2-2. Tagging and biological information for Lake Sturgeon recaptured in the Kelsey GS Area, spring 2022. A Floy tag that was lost and fish was retagged in 2022 is indicated by bold font (continued).

Location	Zone	Date	Prefix	Floy tag 1	Floy tag 2	PIT Tag 1	Pit tag 2	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Burntwood River	BWR-A	29-May-15	NSC	89057	-	900 226000577222	-	995	1084	8618	-	-
Kelsey GS Area	KGS-A	29-Jun-22	NSC	89057	-	900 226000577222	-	1123	1235	16329	-	-
Odei River	ODR-A	23-Jun-09	NSC	89362	-	-	-	895	1000	5443	-	-
Burntwood River	BWR-A	14-Jun-17	NSC	89362	-	900 226000768066	-	1070	1182	9525	-	-
Kelsey GS Area	KGS-A	2-Jul-22	NSC	89362	-	900 226000768066	-	1115	1240	11080	-	-
Burntwood River	BWR-A	24-Jun-09	NSC	89367	-	-	-	745	830	3175	-	-
Kelsey GS Area	KGS-A	26-Jun-22	NSC	89367	-	900 226001227834	-	1003	1105	8400	-	-
Kelsey GS Area	KGS-A	27-May-19	NSC	90298	-	900 226000327684	-	874	966	4990	-	-
Kelsey GS Area	KGS-B	30-Jun-22	NSC	90298	-	900 226000327684	-	962	1060	6100	-	-
Kelsey GS Area	KGS-A	21-Jun-13	NSC	91374	-	900 226000548000	-	917	1014	8845	-	-
Kelsey GS Area	KGS-A	30-May-17	NSC	91374	-	900 226000548000	-	980	1090	10886	-	-
Kelsey GS Area	KGS-D	16-Jun-22	NSC	91374	-	900 226000548000	-	1030	1141	8650	-	-
Kelsey GS Area	KGS-D	3-Jul-22	NSC	91374	-	900 226000548000	-	-	-	-	-	-
Nelson River (BR-GR)	GL-B	27-Jun-14	NSC	91393	-	900 226000629106	-	760	853	3250	-	-
Kelsey GS Area	KGS-A	8-Jun-22	NSC	91393	-	900 226000629106	-	913	1025	5600	-	-
Kelsey GS Area	KGS-A	2-Jun-13	NSC	91672	-	900 226000548129	-	929	1024	8391	-	-
Kelsey GS Area	KGS-A	21-Jun-13	NSC	91672	-	900 226000548129	-	-	-	-	-	-
Kelsey GS Area	KGS-B	21-Jun-22	NSC	91672	-	900 226000548129	-	1065	1172	8400	-	-
Kelsey GS Area	KGS-A	3-Jun-13	NSC	93877	-	900 226000548066	-	900	1000	7711	-	-
Kelsey GS Area	KGS-A	4-Jun-13	NSC	93877	-	900 226000548066	-	952	1050	6350	-	-
Kelsey GS Area	KGS-A	16-Jun-13	NSC	93877	-	900 226000548066	-	-	-	-	-	-
Kelsey GS Area	KGS-A	17-Jun-13	NSC	93877	-	900 226000548066	-	-	-	-	-	-
Kelsey GS Area	KGS-A	23-May-19	NSC	93877	-	900 226000548066	-	-	-	-	-	-
Kelsey GS Area	KGS-A	31-May-22	NSC	93877	-	900 226000548066	-	987	1106	6700	-	-
Nelson River (BR-GR)	GL-C	11-Jun-10	NSC	94040	-	-	-	643	708	2200	-	-
Kelsey GS Area	KGS-B	23-Jun-22	NSC	94040	-	900 226001227825	-	1020	1141	7450	-	-
Split Lake	SPL-A	23-Jun-13	NSC	94133	-	000 001380347872	-	682	773	2722	-	-
Kelsey GS Area	KGS-A	29-May-22	NSC	94133	-	000 001380347872	-	903	1015	5700	-	-
Kelsey GS Area	KGS-A	21-Jun-11	NSC	94846	-	-	-	980	1080	9525	-	-
Kelsey GS Area	KGS-B	14-Jun-13	NSC	94846	-	900 226000548155	-	1040	1159	10886	-	-
Kelsey GS Area	KGS-B	28-Jun-13	NSC	94846	-	900 226000548155	-	-	-	-	-	-
Kelsey GS Area	KGS-B	16-Jun-15	NSC	94846	-	900 226000548155	-	1070	1173	9752	-	-
Kelsey GS Area	KGS-A	13-Jun-22	NSC	94846	-	900 226000548155	-	1010	1210	9550	-	-

Table A2-2. Tagging and biological information for Lake Sturgeon recaptured in the Kelsey GS Area, spring 2022. A Floy tag that was lost and fish was retagged in 2022 is indicated by bold font (continued).

Location	Zone	Date	Prefix	Floy tag 1	Floy tag 2	PIT Tag 1	Pit tag 2	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Kelsey GS Area	KGS-A	30-May-15	NSC	98614	-	900 226000548607	-	865	948	6124	-	-
Split Lake	SPL-A	30-May-22	NSC	98614	-	900 226000548607	-	990	1081	6700	-	-
Kelsey GS Area	KGS-A	18-Jun-15	NSC	98629	-	900 226000548668	-	594	673	2041	-	-
Kelsey GS Area	KGS-A	11-Jun-19	NSC	98629	-	900 226000548668	-	700	790	3000	-	-
Kelsey GS Area	KGS-A	9-Jun-22	NSC	98629	-	900 226000548668	-	770	865	4100	-	-
Kelsey GS Area	KGS-A	28-Jun-22	NSC	98629	-	900 226000548668	-	-	-	-	-	-
Kelsey GS Area	KGS-A	19-Jun-15	NSC	98901	-	900 226000548600	-	832	925	5216	-	-
Kelsey GS Area	KGS-A	28-May-22	NSC	98901	-	900 226000548600	-	940	1045	5800	-	-
Kelsey GS Area	KGS-A	7-Jun-15	NSC	98988	-	900 226000548541	-	941	1068	7711	-	-
Kelsey GS Area	KGS-A	2-Jun-17	NSC	98988	-	900 226000548541	-	974	1105	9072	-	-
Split Lake	SPL-A	15-Jun-19	NSC	98988	-	900 226000548541	-	1005	1130	7257	-	-
Kelsey GS Area	KGS-A	29-May-22	NSC	98988	-	900 226000548541	-	1030	1171	7200	-	-
Burntwood River	BWR-C	10-Aug-14	NSC	100364	-	900 226000629971	-	825	914	4660	-	-
Kelsey GS Area	KGS-B	29-Jun-22	NSC	100364	-	900 226000629971	-	905	1000	6000	-	-
Nelson River (CL-GR)	GL-B	8-Jun-12	NSC	100421	-	-	-	612	677	1850	-	-
Kelsey GS Area	KGS-A	6-Jun-22	NSC	100421	-	900 226001226253	-	860	965	5000	-	-
Kelsey GS Area	KGS-A	24-Jun-22	NSC	100421	-	900 226001226253	-	-	-	-	-	-
Nelson River (BR-GR)	GL-B	25-Jun-14	NSC	101433	-	900 226000629100	-	804	895	4082	-	-
Kelsey GS Area	KGS-A	30-Jun-22	NSC	101433	-	900 226000629100	-	930	1030	5900	-	-
Kelsey GS Area	KGS-C	29-May-19	NSC	101758	-	900 226000327607	-	740	815	2950	-	-
Kelsey GS Area	KGS-B	26-Jun-22	NSC	101758	-	900 226000327607	-	840	928	5200	-	-
Kelsey GS Area	KGS-C	30-May-19	NSC	101768	-	900 226000327641	-	753	880	2900	-	-
Kelsey GS Area	KGS-A	1-Jun-22	NSC	101768	-	900 226000327641	-	817	952	5300	-	-
Burntwood River	BWR-A	7-Jun-17	NSC	103162	-	900 226000153449	-	945	1036	-	M	8
Burntwood River	BWR-B	27-May-19	NSC	103162	-	900 226000153449	-	955	1051	6214	-	-
Burntwood River	BWR-A	13-Jun-19	NSC	103162	-	900 226000153449	-	-	-	-	-	-
Kelsey GS Area	SPL-A	29-May-22	NSC	103162	-	900 226000153449	-	958	1060	5750	-	-
Kelsey GS Area	KGS-C	7-Sep-15	NSC	105028	-	900 226000703431	-	710	805	2650	-	-
Kelsey GS Area	KGS-D	29-Jun-22	NSC	105028	-	900 226000703431	-	905	1005	5300	-	-
Nelson River (CL-GR)	GL-B	27-Jun-16	NSC	106989	-	900 226000768561	-	835	940	6350	-	-
Kelsey GS Area	KGS-A	6-Jun-22	NSC	106989	-	900 226000768561	-	983	1093	7750	-	-
Kelsey GS Area	KGS-A	12-Jun-22	NSC	106989	-	900 226000768561	900 226001226206	-	-	-	-	-

Table A2-2. Tagging and biological information for Lake Sturgeon recaptured in the Kelsey GS Area, spring 2022. A Floy tag that was lost and fish was retagged in 2022 is indicated by bold font (continued).

Location	Zone	Date	Prefix	Floy tag 1	Floy tag 2	PIT Tag 1	Pit tag 2	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Nelson River (CL-GR)	GL-C	3-Jun-16	NSC	107211	-	900 226000768582	-	1000	1182	12701	-	-
Nelson River (CL-GR)	BR-D	27-Jun-21	NSC	107211	-	900 226000768582	-	1205	1317	17300	-	-
Kelsey GS Area	KGS-A	3-Jul-22	NSC	107211	-	900 226000768582	-	1225	1340	16783	-	-
Nelson River (CL-GR)	GL-B	5-Jun-16	NSC	107223	-	900 226000768445	-	688	762	2722	-	-
Kelsey GS Area	KGS-D	2-Jul-22	NSC	107223	-	900 226000768445	-	836	944	3700	-	-
Burntwood River	BWR-A	7-Jun-17	NSC	108620	-	900 226000153424	-	1090	1203	8618	-	-
Kelsey GS Area	KGS-A	3-Jun-22	NSC	108620	-	900 226000153424	-	1105	1218	8900	-	-
Kelsey GS Area	KGS-D	15-Sep-17	NSC	110441	-	900 226000153300	-	720	823	2676	-	-
Kelsey GS Area	KGS-A	13-Jun-22	NSC	110441	-	900 226000153300	-	830	942	4300	-	-
Kelsey GS Area	KGS-C	15-Sep-17	NSC	110443	-	900 226000628588	-	831	932	4581	-	-
Kelsey GS Area	KGS-A	18-Jun-22	NSC	110443	-	900 226000628588	-	915	1023	5700	-	-
Kelsey GS Area	KGS-A	11-Jun-17	NSC	110731	-	900 226000768273	-	1000	1105	6804	-	-
Kelsey GS Area	KGS-A	23-May-19	NSC	110731	-	900 226000768273	-	1010	1127	7031	-	-
Kelsey GS Area	KGS-A	28-May-22	NSC	110731	-	900 226000768273	-	1048	1168	8900	-	-
Kelsey GS Area	KGS-D	10-Jun-17	NSC	110737	-	900 226000768237	-	1000	1110	8165	-	-
Kelsey GS Area	KGS-B	28-May-19	NSC	110737	-	900 226000768237	-	1010	1223	7257	-	-
Kelsey GS Area	KGS-B	30-Jun-22	NSC	110737	-	900 226000768237	-	1045	1160	9000	-	-
Kelsey GS Area	KGS-A	8-Jun-17	NSC	110746	-	900 226000768213	-	835	925	7257	-	-
Kelsey GS Area	KGS-A	31-May-19	NSC	110746	-	900 226000768213	-	844	944	5216	-	-
Kelsey GS Area	KGS-D	28-Jun-22	NSC	110746	-	900 226000768213	-	883	974	5600	-	-
Kelsey GS Area	KGS-A	8-Jun-17	NSC	110747	-	900 226000768203	-	1005	1110	10433	-	-
Kelsey GS Area	KGS-A	8-Jun-19	NSC	110747	-	900 226000768203	-	1045	1159	11340	-	-
Kelsey GS Area	KGS-A	14-Jun-19	NSC	110747	-	900 226000768203	-	-	-	-	-	-
Kelsey GS Area	KGS-A	29-Jun-19	NSC	110747	-	900 226000768203	-	-	-	-	-	-
Kelsey GS Area	KGS-A	5-Jun-22	NSC	110747	-	900 226000768203	-	1080	1196	10100	-	-
Kelsey GS Area	KGS-A	6-Jun-17	NSC	110756	-	900 226000548518	-	900	1010	7711	-	-
Kelsey GS Area	KGS-D	10-Jun-17	NSC	110756	-	900 226000548518	-	-	-	-	-	-
Kelsey GS Area	KGS-S	7-Jun-19	NSC	110756	-	900 226000548518	900 226000768257	939	1062	7257	-	-
Kelsey GS Area	KGS-A	25-Jun-19	NSC	110756	-	900 226000548518	900 226000768257	-	-	-	-	-
Kelsey GS Area	KGS-A	14-Jun-22	NSC	110756	-	900 226000548518	900 226000768257	983	1013	8750	-	-
Kelsey GS Area	KGS-C	5-Jun-17	NSC	110761	-	900 226000768266	-	650	705	3629	-	-
Kelsey GS Area	KGS-C	15-Sep-17	NSC	110761	-	900 226000768266	-	679	746	2404	-	-
Kelsey GS Area	KGS-A	12-Jun-22	NSC	110761	-	900 226000768266	-	771	858	3650	-	-

Table A2-2. Tagging and biological information for Lake Sturgeon recaptured in the Kelsey GS Area, spring 2022. A Floy tag that was lost and fish was retagged in 2022 is indicated by bold font (continued).

Location	Zone	Date	Prefix	Floy tag 1	Floy tag 2	PIT Tag 1	Pit tag 2	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Kelsey GS Area	KGS-D	30-Jun-17	NSC	111076	-	900 226000768527	-	814	915	5897	-	-
Split Lake	SPL-A	2-Jul-22	NSC	111076	-	900 226000768527	-	952	1070	6600	-	-
Kelsey GS Area	KGS-A	28-Jun-17	NSC	111596	-	900 226000893285	-	830	934	4536	-	-
Kelsey GS Area	KGS-A	3-Jun-22	NSC	111596	-	900 226000893285	-	933	1056	6500	-	-
Kelsey GS Area	KGS-D	29-Jun-17	NSC	111598	-	900 226000154019	-	861	936	6804	-	-
Kelsey GS Area	KGS-D	29-Jun-22	NSC	111598	-	900 226000154019	-	900	981	5200	-	-
Nelson River (CL-BR)	BR-D	30-May-18	NSC	111763	-	900 226000767096	-	774	865	5534	-	-
Kelsey GS Area	KGS-A	1-Jun-22	NSC	111763	-	900 226000767096	-	834	932	4200	-	-
Nelson River (CL-BR)	BR-D	12-Jun-18	NSC	111926	-	900 226000767003	-	842	946	3992	-	-
Kelsey GS Area	KGS-B	23-Jun-22	NSC	111926	-	900 226000767003	-	891	992	5900	-	-
Nelson River (CL-BR)	GL-C	14-Jun-18	NSC	111928	-	900 226000767055	-	892	997	6033	-	-
Kelsey GS Area	KGS-D	27-Jun-22	NSC	111928	-	900 226000767055	-	953	1040	6150	-	-
Nelson River (CL-BR)	GL-C	18-Jun-18	NSC	111949	-	900 226000629558	-	760	861	3765	-	-
Kelsey GS Area	KGS-A	26-Jun-22	NSC	111949	-	900 226000629558	-	800	911	4000	-	-
Kelsey GS Area	KGS-A	4-Jun-19	NSC	112897	-	900 226000327683	-	900	1007	6804	-	-
Kelsey GS Area	KGS-A	26-Jun-19	NSC	112897	-	900 226000327683	-	-	-	-	-	-
Kelsey GS Area	KGS-A	9-Jun-22	NSC	112897	-	900 226000327683	-	953	1060	7800	-	-
Split Lake	SPL-A	11-Sep-18	NSC	113544	-	900 226000153776	-	538	605	1200	-	-
Kelsey GS Area	KGS-C	30-May-22	NSC	113544	-	900 226000153776	-	689	737	2500	-	-
Kelsey GS Area	KGS-A	5-Jun-19	NSC	114277	-	900 226000327623	-	1000	1104	8936	-	-
Kelsey GS Area	KGS-A	5-Jun-22	NSC	114277	-	900 226000327623	-	1063	1174	9100	-	-
Split Lake	SPL-A	10-Jun-19	NSC	114300	-	900 226000327671	-	860	965	5300	-	-
Kelsey GS Area	SPL-A	28-May-22	NSC	114300	-	900 226000327671	-	906	1020	5900	-	-
Kelsey GS Area	KGS-B	22-Jun-19	NSC	114303	-	900 226000327690	-	935	1042	5443	-	-
Kelsey GS Area	KGS-D	27-Jun-22	NSC	114303	-	900 226000327690	-	1000	1124	7200	-	-
Kelsey GS Area	KGS-A	24-Jun-19	NSC	114304	-	900 226000327998	-	930	1042	6350	-	-
Kelsey GS Area	KGS-A	14-Jun-22	NSC	114304	-	900 226000327998	-	964	1090	7350	-	-
Kelsey GS Area	KGS-A	30-Jun-19	NSC	114321	-	900 226000327910	-	765	840	3629	-	-
Kelsey GS Area	KGS-A	9-Jun-22	NSC	114321	-	900 226000327910	900 226001226287	859	947	5500	-	-
Split Lake	SPL-A	15-Sep-19	NSC	116562	-	900 226000327489	-	838	924	-	-	-
Kelsey GS Area	KGS-B	29-Jun-22	NSC	116562	-	900 226000327489	-	890	975	5200	-	-
Split Lake	SPL-A	14-Sep-19	NSC	116574	-	900 226000327467	-	845	934	-	-	-
Kelsey GS Area	KGS-B	3-Jul-22	NSC	116574	-	900 226000327467	-	912	1005	7500	-	-

Table A2-2. Tagging and biological information for Lake Sturgeon recaptured in the Kelsey GS Area, spring 2022. A Floy tag that was lost and fish was retagged in 2022 is indicated by bold font (continued).

Location	Zone	Date	Prefix	Floy tag 1	Floy tag 2	PIT Tag 1	Pit tag 2	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Nelson River (CL-GR)	BR-D	6-Jun-21	NSC	117042	-	-	-	1026	1141	7348	-	-
Kelsey GS Area	KGS-B	23-Jun-22	NSC	117042	-	900 226000629115	-	1010	1171	6650	-	-
Split Lake	SPL-A	10-Sep-20	NSC	119937	-	900 226001031861	-	865	974	4350	-	-
Split Lake	SPL-A	2-Jul-22	NSC	119937	-	900 226001031861	-	902	1012	4700	-	-
Nelson River (CL-GR)	BR-D	10-Jun-21	NSC	120202	-	-	-	925	1015	8165	-	-
Kelsey GS Area	KGS-A	7-Jun-22	NSC	120202	-	900 226001226258	-	886	1015	6500	-	-
Split Lake	SPL-A	19-Jun-19	**NSC**	**114341**	-	900 226000327939	-	888	1000	5897	-	-
Kelsey GS Area	KGS-A	4-Jul-22	NSC	122371	-	900 226000327939	-	925	1041	5400	-	-
Nelson River (BR-GR)	GL-B	2-Jul-14	**NSC**	**105125**	-	900 226000629110	-	849	947	5443	-	-
Kelsey GS Area	KGS-A	30-May-22	NSC	122389	-	900 226000629110	-	1025	1160	8300	-	-
Kelsey GS Area	KGS-A	31-May-22	NSC	122389	-	900 226000629110	-	-	-	-	-	-
Kelsey GS Area	KGS-A	1-Jun-22	NSC	122389	-	900 226000629110	-	-	-	-	-	-
Kelsey GS Area	KGS-C	28-May-22	NSC	122394	-	900 226001226221	-	878	983	4200	-	-
Kelsey GS Area	KGS-C	2-Jun-22	NSC	122394	-	900 226001226221	-	-	-	-	-	-
Kelsey GS Area	KGS-A	28-May-22	NSC	122395	-	900 226001227855	-	1193	1315	10886	-	-
Kelsey GS Area	KGS-A	2-Jul-22	NSC	122395	-	900 226001227855	-	-	-	-	-	-
Kelsey GS Area	KGS-C	10-Jun-19	**NSC**	**114327**	-	900 226000327659	-	808	930	4000	-	-
Kelsey GS Area	KGS-A	28-May-22	**NSC**	**122396**	-	900 226000327659	-	882	1010	5700	-	-
Kelsey GS Area	KGS-A	25-Jun-22	NSC	122402	-	900 226000327659	-	-	-	-	-	-
Split Lake	SPL-A	11-Jun-19	**NSC**	**114330**	-	900 226000327643	-	916	1050	5443	-	-
Kelsey GS Area	KGS-A	13-Jun-22	NSC	122608	-	900 226000327643	-	954	1000	6050	-	-
Kelsey GS Area	KGS-A	28-Jun-22	NSC	122608	-	900 226000327643	-	-	-	-	-	-
Kelsey GS Area	KGS-A	2-Jul-22	NSC	122608	-	900 226000327643	-	-	-	-	-	-
Kelsey GS Area	KGS-A	1-Jun-15	NSC	98619	-	900 226000548527	-	1036	1140	8391	-	-
Kelsey GS Area	KGS-A	14-Jun-15	NSC	98619	-	900 226000548527	-	-	-	-	-	-
Kelsey GS Area	KGS-A	5-Jun-17	**NSC**	**98619**	-	900 226000548527	-	1035	1143	10433	-	-
Kelsey GS Area	KGS-A	14-Jun-22	NSC	122610	-	900 226000548527	-	1040	1142	8450	-	-
Kelsey GS Area	KGS-A	15-Jun-22	NSC	122618	-	900 226001226225	-	910	1050	5500	-	-
Kelsey GS Area	KGS-A	17-Jun-22	NSC	122618	-	900 226001226225	-	-	-	-	-	-
Kelsey GS Area	KGS-A	16-Jun-22	NSC	122622	-	900 226001226257	-	885	974	4800	-	-
Kelsey GS Area	KGS-A	2-Jul-22	NSC	122622	-	900 226001226257	-	-	-	-	-	-
Kelsey GS Area	KGS-A	23-Jun-15	**NSC**	**98915**	-	900 226000548530	-	991	1103	9752	-	-
Kelsey GS Area	KGS-B	23-Jun-22	NSC	122630	-	900 226000548530	-	1069	1184	9210	-	-

Table A2-2. Tagging and biological information for Lake Sturgeon recaptured in the Kelsey GS Area, spring 2022. A Floy tag that was lost and fish was retagged in 2022 is indicated by bold font (continued).

Location	Zone	Date	Prefix	Floy tag 1	Floy tag 2	PIT Tag 1	Pit tag 2	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Nelson River (CL-GR)	GL-A	21-Sep-16	**NSC**	**111001**	-	900 226000893712	-	758	847	3700	-	-
Kelsey GS Area	KGS-A	19-Jun-22	NSC	122643	-	900 226000893712	-	846	950	4850	-	-
Kelsey GS Area	KGS-A	18-Jun-22	NSC	122645	-	900 226001226273	-	845	4000	4000	-	-
Kelsey GS Area	KGS-A	29-Jun-22	NSC	122645	-	900 226001226273	-	-	-	-	-	-
Kelsey GS Area	KGS-A	4-Jun-22	NSC	122876	-	900 226001226269	-	919	1050	5500	-	-
Kelsey GS Area	KGS-A	8-Jun-22	NSC	122876	-	900 226001226269	-	-	-	-	-	-
Kelsey GS Area	KGS-C	6-Jun-22	NSC	122882	-	900 226001226212	-	1350	1555	22680	-	-
Kelsey GS Area	KGS-B	9-Jun-22	NSC	122882	-	900 226001226212	-	-	-	-	-	-
Kelsey GS Area	KGS-A	7-Jun-22	NSC	122889	-	900 226001226285	-	758	861	3400	-	-
Kelsey GS Area	KGS-A	2-Jul-22	NSC	122889	-	900 226001226285	-	-	-	-	-	-
Kelsey GS Area	KGS-D	10-Jun-17	**NSC**	**110740**	-	900 226000768291	-	795	895	3629	-	-
Kelsey GS Area	KGS-A	7-Jun-22	NSC	122890	-	900 226000768291	-	947	1061	6100	-	-
Kelsey GS Area	KGS-B	7-Jun-22	NSC	122891	-	900 226001227890	-	978	1095	6900	-	-
Kelsey GS Area	KGS-A	28-Jun-22	NSC	122891	-	900 226001227890	-	-	-	-	-	-
Kelsey GS Area	KGS-A	8-Jun-22	NSC	122893	-	900 226001226256	-	976	1096	7400	-	-
Kelsey GS Area	KGS-A	14-Jun-22	NSC	122893	-	900 226001226256	-	-	-	-	-	-
Kelsey GS Area	KGS-A	8-Jun-19	**NSC**	**114296**	-	900 226000327645	-	845	960	4050	-	-
Kelsey GS Area	KGS-A	1-Jun-22	NSC	122903	-	900 226000327645	-	913	1037	5500	-	-
Kelsey GS Area	KGS-A	1-Jun-22	NSC	122906	-	900 226001226255	-	855	982	4600	-	-
Kelsey GS Area	KGS-A	29-Jun-22	NSC	122906	-	900 226001226255	-	-	-	-	-	-
Kelsey GS Area	KGS-A	1-Jun-22	NSC	122907	-	900 226001226204	-	995	1131	6100	-	-
Kelsey GS Area	KGS-A	25-Jun-22	NSC	122907	-	900 226001226204	-	-	-	-	-	-
Kelsey GS Area	KGS-A	1-Jun-22	NSC	122908	-	900 226001227619	-	968	1077	7400	-	-
Kelsey GS Area	KGS-A	18-Jun-22	NSC	122908	-	900 226001227619	-	-	-	-	-	-
Kelsey GS Area	KGS-A	1-Jun-22	NSC	122910	-	900 226001226245	-	890	1007	5000	-	-
Kelsey GS Area	KGS-A	10-Jun-22	NSC	122910	-	900 226001226245	-	-	-	-	-	-
Kelsey GS Area	KGS-C	4-Jun-22	NSC	122923	-	900 226001226299	-	980	1090	6950	-	-
Kelsey GS Area	KGS-A	30-Jun-22	NSC	122923	-	900 226001226299	-	-	-	-	-	-
Burntwood River	BWR-B	4-Jun-19	NSC	114182	-	900 226000327874	-	920	1023	5534	-	-
Burntwood River	BWR-A	8-Jun-22	NSC	114182	-	900 226000327874	-	952	1052	8165	M	8
Kelsey GS Area	KGS-A	25-Jun-22	NSC	114182	-	900 226000327874	-	-	-	-	-	-

Table A2-2. Tagging and biological information for Lake Sturgeon recaptured in the Kelsey GS Area, spring 2022. A Floy tag that was lost and fish was retagged in 2022 is indicated by bold font (continued).

Location	Zone	Date	Prefix	Floy tag 1	Floy tag 2	PIT Tag 1	Pit tag 2	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Burntwood River	BWR-A	11-Jun-22	NSC	123311	-	900 226001232276	-	889	1010	6350	M	7
Split Lake	SPL-A	3-Jul-22	NSC	123311	-	900 226001232276	-	-	-	-	-	-
GRH - BWR	-	31-May-14	-	-	-	900 043000119488	-	219	249	52	-	-
Split Lake	SPL-A	2-Jun-22	NSC	122912	-	900 043000119488	-	684	760	2200	-	-
GRH - BWR	-	7-Jun-18	-	-	-	900 067000110709	-	215	256	75	-	-
Split Lake	SPL-A	30-Jun-22	NSC	122432	-	900 067000110709	-	427	491	700	-	-

Table A2-3. Tagging and biological information for Lake Sturgeon recaptured in the Keeyask reservoir, spring 2022. A Floy tag that was lost and fish was retagged in 2022 is indicated by bold font.

Location	Zone	Date	Prefix	Floy tag 1	Floy tag 2	Acoustic Serial No.	Acoustic Tag Code	PIT tag	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Gull Lake	BR-D	5-Jul-02	NSC	48884	-	-	-	-	1415	1543	34020	-	-
Gull Lake	BR-D	19-Jun-04	NSC	48884	-	-	-	-	1458	1590	31298	-	-
Gull Lake	BR-D	14-Jun-06	NSC	48884	-	-	-	-	1440	1560	36287	-	-
Keeyask reservoir	BR-D	3-Jun-22	NSC	48884	-	-	-	900 226001224001	1495	1700	40000	-	-
Gull Lake	BR-D	2-Jul-08	NSC	75288	-	-	-	900 226001227573	869	951	6350	-	-
Keeyask reservoir	BR-D	24-Jun-22	NSC	75288	-	1520547	57507	900 226001227573	1081	1165	9950	-	-
Gull Lake	BR-D	17-Jun-06	NSC	76410	76411	-	-	-	758	859	3629	-	-
Gull Lake	GL-B	2-Jun-10	NSC	76410	76411	-	-	-	924	1001	7484	-	-
Keeyask reservoir	BR-D	14-Jun-21	NSC	76410	76411	-	-	900 226001225534	1120	1227	12150	-	-
Keeyask reservoir	BR-D	12-Jun-22	NSC	76410	76411	1520527	57487	900 226001225534	1100	1212	9600	-	-
Gull Lake	BR-D	2-Jun-06	NSC	80299	80300	-	-	-	1061	1150	8600	-	-
Gull Lake	GL-A	7-Jun-18	NSC	80299	80300	-	-	900 226000767098	1155	1253	14016	-	-
Keeyask reservoir	BR-D	8-Jun-21	NSC	80299	80300	-	-	900 226000767098	1141	1254	10000	-	-
Keeyask reservoir	BR-D	18-Jun-21	NSC	80299	80300	-	-	900 226000767098	-	-	-	-	-
Keeyask reservoir	BR-D	11-Jun-22	NSC	80299	80300	1520531	57491	900 226000767098	1125	1229	9700	-	-
Gull Lake	GL-B	27-Sep-08	NSC	86137	-	-	-	-	630	718	1870	-	-
Gull Lake	GL-C	25-May-19	NSC	86137	-	-	-	900 226000767264	923	1042	6400	-	-
Keeyask reservoir	BR-D	2-Jun-22	NSC	86137	-	1520520	57480	900 226000767264	928	1044	7400	-	-
Gull Lake	GL-A	21-Sep-17	NSC	88745	-	-	-	900 226000152927	719	811	2400	-	-
Keeyask reservoir	BR-D	14-Jun-22	NSC	88745	-	-	-	900 226000152927	785	880	3900	-	-
Gull Lake	BR-D	9-Sep-14	NSC	103474	-	-	-	900 043000103670	655	741	2500	-	-
Gull Lake	BR-D	2-Jun-18	NSC	103474	-	-	-	900 043000103670	791	883	3674	-	-
Keeyask reservoir	BR-D	10-Jun-22	NSC	103474	-	1520528	57488	900 043000103670	834	936	5300	M	6
Gull Lake	BR-D	15-Jun-14	NSC	105409	-	-	-	900 226000629201	956	1063	7257	-	-
Gull Lake	BR-D	1-Jun-18	NSC	105409	-	-	-	900 226000629201	999	1141	9163	M	7
Keeyask reservoir	BR-D	31-May-21	NSC	105409	-	-	-	900 226000629201	1010	1112	9500	-	-
Keeyask reservoir	BR-D	21-Jun-21	NSC	105409	-	-	-	900 226000629201	-	-	-	-	-
Keeyask reservoir	BR-D	9-Jun-22	NSC	105409	-	1520522	57482	900 226000629201	1021	1113	7960	-	-
Gull Lake	GL-A	15-Jun-16	NSC	107113	-	-	-	900 226000768436	970	-	7257	-	-
Gull Lake	BR-D	15-Jun-18	NSC	107113	-	-	-	900 226000768436	1025	1137	8210	-	-
Gull Lake	BR-D	28-May-19	NSC	107113	-	-	-	900 226000768436	1034	1145	8165	-	-
Keeyask reservoir	BR-D	18-Jun-21	NSC	107113	-	-	-	900 226000768436	1045	1160	7550	-	-
Keeyask reservoir	BR-D	20-Jun-21	NSC	107113	-	-	-	900 226000768436	-	-	-	-	-
Keeyask reservoir	BR-D	24-Jun-22	NSC	107113	-	-	-	900 226000768436	1041	1145	7100	-	-

Table A2-3. Tagging and biological information for Lake Sturgeon recaptured in the Keeyask reservoir, spring 2022. A Floy tag that was lost and fish was retagged in 2022 is indicated by bold font (continued).

Location	Zone	Date	Prefix	Floy tag 1	Floy tag 2	Acoustic Serial No.	Acoustic Tag Code	PIT tag	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Gull Lake	BR-D	22-May-16	NSC	110550	-	-	-	-	1430	1549	26082	-	-
Keeyask reservoir	BR-D	3-Jun-22	NSC	110550	-	-	-	900 226001227322	1430	1591	37000	-	-
Keeyask reservoir	BR-D	10-Jun-22	NSC	110550	-	-	-	900 226001227322	-	-	-	-	-
Gull Lake	BR-D	31-May-18	NSC	111766	-	-	-	900 226000767099	901	996	7167	-	-
Keeyask reservoir	BR-D	18-Jun-21	NSC	111766	-	-	-	900 226000767099	912	1016	4800	-	-
Keeyask reservoir	BR-D	12-Jun-22	NSC	111766	-	-	-	900 226000767099	923	1026	5000	-	-
Gull Lake	BR-D	31-May-18	NSC	111768	-	-	-	900 226000767046	740	824	4082	-	-
Keeyask reservoir	BR-D	13-Jun-22	NSC	111768	-	1520524	57484	900 226000767046	837	932	3950	-	-
Gull Lake	BR-D	8-Jun-18	NSC	111971	-	-	-	900 226000767079	1112	1192	9435	M	8
Keeyask reservoir	BR-D	2-Jun-22	NSC	111971	-	1520523	57483	900 226000767079	1081	1157	9500	-	-
Keeyask reservoir	BR-D	10-Jun-22	NSC	111971	-	-	-	900 226000767079	-	-	-	-	-
Gull Lake	BR-D	12-Jun-18	NSC	112000	-	-	-	900 226000153132	888	1011	7076	-	-
Keeyask reservoir	BR-D	28-May-22	NSC	112000	-	1520525	57485	900 226000153132	897	1033	5910	-	-
Gull Lake	BR-D	16-Sep-18	NSC	113813	-	-	-	900 226000327557	759	850	3200	-	-
Keeyask reservoir	BR-D	4-Jun-22	NSC	113813	-	-	-	900 226000327557	820	911	4900	-	-
Gull Lake	GL-A	29-May-19	NSC	114643	-	-	-	900 226000629150	1016	1128	7938	-	-
Keeyask reservoir	BR-D	10-Jun-22	NSC	114643	-	-	-	900 226000629150	1004	1105	6350	-	-
Split Lake	SPL-A	16-Sep-19	NSC	116621	-	-	-	900 067000121183	788	881	3410	-	-
Keeyask reservoir	BR-D	28-Jun-22	NSC	116621	-	1520545	57505	900 067000121183	841	933	4350	-	-
Keeyask reservoir	BR-D	3-Jun-21	NSC	117034	-	-	-	900 226000153821	891	987	6690	-	-
Keeyask reservoir	GL-B	2-Jul-22	NSC	117034	-	1520542	57502	900 226000153821	895	985	5000	-	-
Keeyask reservoir	BR-D	3-Jun-21	NSC	117039	-	-	-	900 226001225524	-	-	-	-	-
Keeyask reservoir	BR-D	24-Jun-22	NSC	117039	-	1520544	57504	900 226001225524	995	1099	6600	-	-
Keeyask reservoir	BR-D	25-Jun-21	NSC	119116	-	-	-	900 226001055388	892	995	6300	-	-
Keeyask reservoir	BR-D	24-Jun-22	NSC	119116	-	1520546	57506	900 226001055388	900	1000	4100	-	-
Keeyask reservoir	BR-D	20-Jun-21	NSC	119129	-	-	-	900 226001225546	1020	1126	6900	-	-
Keeyask reservoir	BR-D	9-Jun-22	NSC	119129	-	1520519	57479	900 226001225546	1030	1136	7050	-	-
Keeyask reservoir	GL-A	29-Jun-21	NSC	119258	-	-	-	900 226001055332	711	809	3550	-	-
Keeyask reservoir	BR-D	20-Jun-22	NSC	119258	-	-	-	900 226001055332	751	839	2150	-	-
Keeyask reservoir	BR-D	20-Jun-21	NSC	120437	-	-	-	900 226000767045	955	1060	8350	-	-
Keeyask reservoir	BR-D	29-May-22	NSC	120437	-	1520518	57478	900 226000767045	962	1062	6400	-	-

Table A2-3. Tagging and biological information for Lake Sturgeon recaptured in the Keeyask reservoir, spring 2022. A Floy tag that was lost and fish was retagged in 2022 is indicated by bold font (continued).

Location	Zone	Date	Prefix	Floy tag 1	Floy tag 2	Acoustic Serial No.	Acoustic Tag Code	PIT tag	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Gull Lake	GL-A	13-Sep-15	NSC	105036				900 226000548592	688	762	2480	-	-
Keeyask reservoir	BR-D	14-Jun-21	NSC	120811	-	-	-	900 226000548592	774	851	2900	-	-
Keeyask reservoir	BR-D	9-Jun-22	NSC	120811	-	-	-	900 226000548592	772	855	2750	-	-
Keeyask reservoir	BR-D	28-May-22	NSC	121678	-	-	-	-	770	860	2950	-	-
Keeyask reservoir	BR-D	17-Jun-22	NSC	121678	-	-	-	-	-	-	-	-	-
Keeyask reservoir	BR-D	2-Jun-22	NSC	121683	-	1520535	57495	900 226001227532	1108	1294	12600	-	-
Keeyask reservoir	BR-D	7-Jun-22	NSC	121683	-	1520535	57495	900 226001227532	-	-	-	-	-
Keeyask reservoir	BR-D	6-Jun-22	NSC	121693	-	1520532	57492	900 226001224073	911	1001	5050	-	-
Keeyask reservoir	BR-D	16-Jun-22	NSC	121693	-	1520532	57492	900 226001224073	-	-	-	M	8
Keeyask reservoir	BR-D	17-Jun-22	NSC	121693	-	1520532	57492	900 226001224073	-	-	-	-	-
Gull Lake	GL-B	5-Jul-14	**NSC**	**103650**	-	-	-	900 226000629200	875	974	5443	-	-
Keeyask reservoir	BR-D	8-Jun-22	NSC	121696	-	1520534	57494	900 226000629200	954	1100	5750	-	-
Gull Lake	GL-B	16-Jun-16	**NSC**	**107215**	-	-	-	900 226000768409	584	652	1132	-	-
Keeyask reservoir	BR-D	14-Jun-22	NSC	121918	-	-	-	900 226000768409	727	835	2600	-	-
Burntwood River	-	2-Oct-14	-	-	-	-	-	900 043000102993	260	293	95	-	-
Keeyask reservoir	BR-D	16-Jun-22	NSC	121917	-	-	-	900 043000102993	580	650	1350	-	-
Gull Lake	-	6-Jun-19	-	-	-	-	-	900 067000108605	235	285	77	-	-
Keeyask reservoir	GL-C	2-Jul-22	NSC	121904	-	-	-	900 067000108605	427	492	475	-	-

Table A2-4. Tagging and biological information for Lake Sturgeon recaptured in Stephens Lake, spring 2022. A Floy tag that was lost and fish was retagged in 2022 is indicated by bold font.

Location	Zone	Date	Prefix	Floy tag 1	Floy tag 2	PIT tag	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Stephens Lake	STL-A	6-Jun-22	AAE	371	-	989 001038119596	774	873	2268	-	-
Stephens Lake	STL-A	7-Jun-22	AAE	371	-	989 001038119596	-	-	-	-	-
Keeyask reservoir	BR-D	1-Jul-02	NSC	48878	-	-	1047	1159	11567	-	-
Keeyask reservoir	GL-A	27-Jun-18	NSC	48878	-	900 226000153400	1225	1332	15422	-	-
Stephens Lake	STL-A	20-Jun-22	NSC	48878	-	900 226000153400	-	-	-	-	-
Keeyask reservoir	GL-C	31-May-03	NSC	50916	-	-	908	1037	10000	-	-
Keeyask reservoir	GL-A	23-May-16	NSC	50916	-	-	1250	1385	18824	-	-
Stephens Lake	GR-A	19-Jun-22	NSC	50916	-	900 226001226076	-	-	-	-	-
Stephens Lake	STL-A	22-Jun-02	NSC	53159	-	-	1001	1100	9500	-	-
Stephens Lake	GR-A	1-Jun-18	NSC	53159	-	900 226000893307	1113	1234	11113	M	7
Stephens Lake	STL-A	4-Jun-22	NSC	53159	-	900 226000893307	1115	1236	9072	-	-
Stephens Lake	STL-A	1-Jun-03	NSC	56152	-	-	912	1012	6123	M	7
Stephens Lake	STL-A	4-Jun-03	NSC	56152	-	-	-	-	-	-	-
Stephens Lake	STL-A	12-Jun-11	NSC	56152	-	-	1004	1103	7711	-	-
Stephens Lake	GR-A	18-Jun-11	NSC	56152	-	-	-	-	-	-	-
Stephens Lake	STL-A	31-May-19	NSC	56152	-	900 226000767285	1090	1211	10886	-	-
Stephens Lake	GR-A	21-Jun-22	NSC	56152	-	900 226000767285	1095	1250	9979	-	-
Stephens Lake	STL-B	27-Sep-11	NSC	69864	-	-	756	861	4125	-	-
Stephens Lake	STL-A	4-Jun-16	NSC	69864	-	900 226000548931	927	1040	9525	-	-
Stephens Lake	GR-A	8-Jun-16	NSC	69864	-	900 226000548931	-	-	-	-	-
Stephens Lake	GR-A	9-Jun-16	NSC	69864	-	900 226000548931	-	-	-	-	-
Stephens Lake	STL-A	30-May-18	NSC	69864	-	900 226000548931	987	1111	8800	-	-
Stephens Lake	STL-A	29-Jun-21	NSC	69864	-	900 226000548931	1030	1154	10000	-	-
Stephens Lake	STL-A	8-Jun-22	NSC	69864	-	900 226000548931	1020	1160	9072	-	-
Keeyask reservoir	GL-C	23-Jun-08	NSC	75277	-	-	732	832	2948	-	-
Keeyask reservoir	GL-C	15-Sep-08	NSC	75277	-	-	-	-	-	-	-
Keeyask reservoir	GL-C	16-Sep-08	NSC	75277	-	-	-	-	-	-	-
Keeyask reservoir	GL-C	5-Jul-14	NSC	75277	-	900 226000629145	977	1086	7711	-	-
Keeyask reservoir	GL-C	12-Jun-18	NSC	75277	-	900 226000629145	1052	1180	7983	-	-
Stephens Lake	STL-A	17-Jun-22	NSC	75277	-	900 226000629145	1075	1201	9072	-	-

Table A2-4. Tagging and biological information for Lake Sturgeon recaptured in Stephens Lake, spring 2022. A Floy tag that was lost and fish was retagged in 2022 is indicated by bold font (continued).

Location	Zone	Date	Prefix	Floy tag 1	Floy tag 2	PIT tag	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Keeyask reservoir	GL-B	21-Sep-08	NSC	75304	-	-	562	646	1350	-	-
Stephens Lake	STL-A	8-Jun-22	NSC	75304	-	900 226001226037	900	1020	5443	-	-
Keeyask reservoir	GL-C	20-Sep-08	NSC	75316	-	-	575	663	-	-	-
Keeyask reservoir	BR-D	28-May-18	NSC	75316	-	900 226000767023	937	1052	8845	-	-
Keeyask reservoir	BR-D	1-Jun-18	NSC	75316	-	900 226000767023	-	-	-	M	7
Stephens Lake	GR-A	17-Jun-22	NSC	75316	-	900 226000767023	977	1092	7257	-	-
Stephens Lake	STL-A	30-Jun-22	NSC	75316	-	900 226000767023	-	-	-	-	-
Stephens Lake	STL-A	2-Jul-22	NSC	75316	-	900 226000767023	-	-	-	-	-
Keeyask reservoir	GL-B	18-Sep-08	NSC	75319	-	-	649	740	-	-	-
Keeyask reservoir	GL-C	21-Jun-16	NSC	75319	-	900 226000153817	849	954	6123	-	-
Stephens Lake	STL-B	8-Jun-22	NSC	75319	-	900 226000153817	915	1050	5897	-	-
Keeyask reservoir	BR-D	23-Jun-06	NSC	76446	-	-	1120	1270	17237	-	-
Keeyask reservoir	BR-D	22-Jun-08	NSC	76446	-	-	1247	1300	16783	-	-
Keeyask reservoir	BR-D	14-Jun-12	NSC	76446	-	-	1300	1400	19051	-	-
Stephens Lake	STL-A	25-Jun-22	NSC	76446	-	900 226001227496	1365	1445	21319	-	-
Stephens Lake	GR-A	26-Jun-22	NSC	76446	-	900 226001227496	-	-	-	-	-
Keeyask reservoir	GL-C	12-Jun-11	NSC	77512	-	-	1169	1284	15422	M	8
Stephens Lake	GR-A	22-Jun-22	NSC	77512	-	900 226001226095	1290	1450	17690	-	-
Keeyask reservoir	GL-C	18-Sep-15	NSC	79290	-	900 226000628520	578	658	1400	-	-
Stephens Lake	STL-A	9-Jun-22	NSC	79290	-	900 226000628520	739	834	2268	-	-
Kelsey GS Area	KGS-A	26-Jun-09	NSC	79711	-	-	1068	1185	10433	-	-
Keeyask reservoir	GL-A	8-Jun-19	NSC	79711	-	900 226000767252	1285	1413	17236	-	-
Stephens Lake	STL-A	7-Jun-22	NSC	79711	-	900 226000767252	1260	1402	14515	-	-
Keeyask reservoir	GL-B	19-Aug-06	NSC	80124	-	-	607	697	1588	-	-
Keeyask reservoir	GL-A	20-Jun-18	NSC	80124	80123	900 226000629581	986	1112	8029	-	-
Stephens Lake	STL-A	15-Jun-22	NSC	80124	80123	900 226000629581	1000	1150	6804	-	-
Keeyask reservoir	BR-D	3-Jun-06	NSC	80203	-	-	1150	1260	13154	-	-
Keeyask reservoir	BR-D	5-Jun-06	NSC	80203	-	-	-	-	-	-	-
Stephens Lake	GR-A	10-Jun-22	NSC	80203	80204	900 226001226067	1240	1350	11793	-	-

Table A2-4. Tagging and biological information for Lake Sturgeon recaptured in Stephens Lake, spring 2022. A Floy tag that was lost and fish was retagged in 2022 is indicated by bold font (continued).

Location	Zone	Date	Prefix	Floy tag 1	Floy tag 2	PIT tag	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Keeyask reservoir	BR-D	21-Jun-08	NSC	80374	-	-	1110	1210	9525	-	-
Stephens Lake	GR-A	15-Jun-12	NSC	80374	-	-	1120	1235	10433	-	-
Stephens Lake	GR-A	24-Jun-22	NSC	80374	-	900 226001226086	1143	1257	12701	-	-
Keeyask reservoir	GL-B	23-Aug-06	NSC	82646	-	-	563	643	726	-	-
Keeyask reservoir	GL-B	4-Jul-14	NSC	82646	82647	900 226000629140	827	911	4536	-	-
Stephens Lake	STL-A	30-Jun-22	NSC	82646	82647	900 226000629140	964	1061	7257	-	-
Keeyask reservoir	GL-B	2-Sep-06	NSC	82878	-	-	766	844	3402	-	-
Keeyask reservoir	BR-D	14-Jun-18	NSC	82878	82879	900 226000153196	990	1076	6622	-	-
Stephens Lake	STL-B	8-Jun-22	NSC	82878	82879	900 226000153196	995	1050	6350	-	-
Stephens Lake	STL-A	17-Jun-22	NSC	82878	82879	900 226000153196	-	-	-	-	-
Stephens Lake	GR-A	26-Jun-22	NSC	82878	82879	900 226000153196	-	-	-	-	-
Stephens Lake	STL-A	27-Jun-22	**NSC**	**unknown**	-	900 226001225607	905	1130	8618	-	-
Stephens Lake	STL-A	22-Sep-14	NSC	88494	-	900 226000629287	418	482	575	-	-
Stephens Lake	STL-A	30-Jun-22	NSC	88494	-	900 226000629287	-	-	-	-	-
Stephens Lake	STL-A	22-Sep-14	NSC	88496	-	900 226000629304	588	671	1525	-	-
Stephens Lake	STL-A	2-Jun-22	NSC	88496	-	900 226000629304	810	920	4082	-	-
Keeyask reservoir	GL-A	21-Sep-17	NSC	88743	-	900 226000152970	671	765	2250	-	-
Stephens Lake	STL-A	24-Jun-22	NSC	88743	-	900 226000152970	702	800	3629	-	-
Stephens Lake	STL-B	26-Sep-10	NSC	88769	-	-	554	615	1250	-	-
Stephens Lake	STL-A	8-Jun-22	NSC	88769	-	900 226001226060	928	1000	4990	-	-
Stephens Lake	GR-A	16-Jun-22	NSC	88769	-	900 226001226060	-	-	-	-	-
Keeyask reservoir	GL-C	23-Sep-10	NSC	89657	-	-	572	643	1550	-	-
Stephens Lake	STL-A	8-Jun-22	NSC	89657	-	900 226001226089	848	945	4536	-	-
Keeyask reservoir	GL-B	23-Sep-10	NSC	89668	-	-	659	740	2050	-	-
Keeyask reservoir	GL-B	8-Jun-12	NSC	89668	-	-	695	761	2400	-	-
Keeyask reservoir	GL-B	14-Jun-12	NSC	89668	-	-	-	-	-	-	-
Stephens Lake	STL-A	6-Jun-22	NSC	89668	-	900 226001226063	956	1080	4990	-	-
Keeyask reservoir	GL-C	23-Sep-11	NSC	89817	-	-	390	437	400	-	-
Stephens Lake	STL-A	31-May-22	NSC	89817	-	900 226001226058	782	875	3175	-	-

Table A2-4. Tagging and biological information for Lake Sturgeon recaptured in Stephens Lake, spring 2022. A Floy tag that was lost and fish was retagged in 2022 is indicated by bold font (continued).

Location	Zone	Date	Prefix	Floy tag 1	Floy tag 2	PIT tag	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Stephens Lake	STL-A	18-Sep-09	-	-	-	-	579	660	-	-	-
Stephens Lake	STL-A	1-Jun-18	NSC	89858	-	896 226000893435	926	1036	6985	M	8
Stephens Lake	STL-A	6-Jun-18	NSC	89858	-	897 226000893435	-	-	-	-	-
Stephens Lake	STL-A	30-Jun-18	NSC	89858	-	898 226000893435	-	-	-	-	-
Stephens Lake	GR-A	24-Jun-21	NSC	89858	-	899 226000893435	958	1071	7900	-	-
Stephens Lake	STL-A	16-Jun-22	NSC	89858	-	900 226000893435	980	1093	5443	-	-
Keeyask reservoir	GL-C	21-Sep-11	NSC	93873	-	-	462	527	600	-	-
Stephens Lake	STL-A	5-Jun-22	NSC	93873	-	900 226001226038	913	1020	5670	-	-
Keeyask reservoir	GL-C	17-Jun-10	NSC	94023	-	-	760	850	4082	-	-
Keeyask reservoir	GL-A	28-May-18	NSC	94023	-	900 226000893930	934	1018	7666	M	6
Keeyask reservoir	BR-D	3-Jun-21	NSC	94023	-	900 226000893930	941	1042	6800	-	-
Keeyask reservoir	BR-D	6-Jun-21	NSC	94023	-	900 226000893930	-	-	-	-	-
Stephens Lake	STL-A	29-Jun-22	NSC	94023	-	900 226000893930	928	1128	6350	-	-
Stephens Lake	STL-B	28-Sep-10	NSC	94230	-	-	332	389	260	-	-
Stephens Lake	STL-A	17-Sep-12	NSC	94230	-	-	468	545	850	-	-
Stephens Lake	STL-A	16-Sep-16	NSC	94230	-	900 226000767130	721	829	3450	-	-
Stephens Lake	STL-A	11-Jun-22	NSC	94230	-	900 226000767130	832	945	5897	-	-
Stephens Lake	STL-A	21-Sep-12	NSC	94954	-	-	481	542	850	-	-
Stephens Lake	STL-A	2-Jul-22	NSC	94954	-	900 226001225627	809	902	3629	-	-
Stephens Lake	STL-B	18-Sep-12	NSC	94966	-	-	804	900	4000	-	-
Stephens Lake	STL-A	29-Jun-22	NSC	94966	-	900 226001224635	1035	1150	9525	-	-
Stephens Lake	STL-B	18-Sep-12	NSC	94971	-	-	648	670	2100	-	-
Stephens Lake	STL-A	2-Jun-22	NSC	94971	-	900 226001226013	941	974	6350	-	-
Stephens Lake	STL-A	27-Jun-16	NSC	101002	-	900 226000548853	669	721	2722	-	-
Stephens Lake	STL-A	18-Sep-17	NSC	101002	-	900 226000548853	755	862	3650	-	-
Stephens Lake	STL-A	4-Jun-22	NSC	101002	-	900 226000548853	815	933	4536	-	-
Stephens Lake	STL-B	26-Sep-15	NSC	101477	-	900 226000703416	658	732	2000	-	-
Stephens Lake	GR-A	27-Jun-22	NSC	101477	-	900 226000703416	850	958	5100	-	-

Table A2-4. Tagging and biological information for Lake Sturgeon recaptured in Stephens Lake, spring 2022. A Floy tag that was lost and fish was retagged in 2022 is indicated by bold font (continued).

Location	Zone	Date	Prefix	Floy tag 1	Floy tag 2	PIT tag	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Stephens Lake	STL-B	26-Sep-15	NSC	101482	-	900 226000703493	703	772	2450	-	-
Stephens Lake	STL-B	24-Jun-18	NSC	101482	-	900 226000703493	827	931	4400	-	-
Stephens Lake	STL-B	18-Sep-19	NSC	101482	-	900 226000703493	871	975	5000	-	-
Stephens Lake	STL-A	17-Jun-22	NSC	101482	-	900 226000703493	895	1000	4082	-	-
Stephens Lake	STL-A	22-Sep-13	NSC	103250	-	-	450	510	600	-	-
Stephens Lake	STL-B	14-Jun-22	NSC	103250	-	900 226001226049	825	922	4082	-	-
Keeyask reservoir	BR-D	10-Sep-14	NSC	103470	-	900 226000629484	629	725	2150	-	-
Stephens Lake	STL-A	10-Jun-22	NSC	103470	-	900 226000629484	800	904	4082	-	-
Stephens Lake	STL-B	15-Sep-12	NSC	103612	-	-	490	560	-	-	-
Stephens Lake	STL-B	17-Sep-12	NSC	103612	-	-	-	-	-	-	-
Stephens Lake	STL-B	22-Jun-16	NSC	103612	-	900 226000548839	683	772	2948	-	-
Stephens Lake	STL-A	10-Jun-22	NSC	103612	-	900 226000548839	948	1020	5897	-	-
Keeyask reservoir	GL-B	6-Jul-14	NSC	103639	-	900 226000629051	830	909	4200	-	-
Stephens Lake	STL-B	5-Jun-22	NSC	103639	-	900 226000629051	863	969	4309	-	-
Keeyask reservoir	GL-B	5-Jul-14	NSC	105116	-	900 226000629217	736	814	3550	-	-
Keeyask reservoir	BR-D	9-Jun-21	NSC	105116	-	900 226000629217	862	971	5890	-	-
Stephens Lake	STL-A	4-Jun-22	NSC	105116	-	900 226000629217	867	902	4536	-	-
Keeyask reservoir	GL-A	5-Jul-14	NSC	105117	-	900 226000629229	998	1092	9979	-	-
Keeyask reservoir	BR-D	8-Jun-18	NSC	105117	-	900 226000629229	1085	1210	12746	-	-
Keeyask reservoir	BR-D	14-Jun-18	NSC	105117	-	900 226000629229	-	-	-	-	-
Stephens Lake	STL-A	2-Jun-22	NSC	105117	-	900 226000629229	1100	1235	10433	-	-
Stephens Lake	STL-A	5-Jun-22	NSC	105117	-	900 226000629229	-	-	-	-	-
Keeyask reservoir	GL-B	14-Jun-14	NSC	105414	-	900 226000629141	643	742	2268	-	-
Stephens Lake	STL-B	31-May-22	NSC	105414	-	900 226000629141	832	954	4082	-	-

Table A2-4. Tagging and biological information for Lake Sturgeon recaptured in Stephens Lake, spring 2022. A Floy tag that was lost and fish was retagged in 2022 is indicated by bold font (continued).

Location	Zone	Date	Prefix	Floy tag 1	Floy tag 2	PIT tag	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Keeyask reservoir	BR-D	6-Jun-14	NSC	105424	-	-	970	1054	7711	-	-
Keeyask reservoir	BR-D	10-Jun-14	NSC	105424	-	-	-	-	-	-	-
Keeyask reservoir	BR-D	12-Jun-14	NSC	105424	-	-	-	-	-	-	-
Keeyask reservoir	BR-D	14-Jun-14	NSC	105424	-	-	-	-	-	-	-
Stephens Lake	GR-A	2-Jun-18	NSC	105424	-	900 226000629084	1043	1146	8845	-	-
Stephens Lake	GR-A	4-Jun-18	NSC	105424	-	900 226000629084	-	-	-	-	-
Stephens Lake	STL-A	24-Jun-18	NSC	105424	-	900 226000629084	-	-	-	-	-
Stephens Lake	STL-A	26-Jun-22	NSC	105424	-	900 226000629084	1055	1151	8500	-	-
Keeyask reservoir	GL-B	3-Jul-14	NSC	105679	-	900 226000629030	830	908	4990	-	-
Keeyask reservoir	GL-C	27-Jun-16	NSC	105679	-	900 226000629030	870	962	6804	-	-
Stephens Lake	STL-A	30-Jun-22	NSC	105679	-	900 226000629030	915	1010	7711	-	-
Keeyask reservoir	GL-C	10-Sep-17	NSC	106459	-	900 226000767435	770	874	3600	-	-
Stephens Lake	STL-A	3-Jun-22	NSC	106459	-	900 226000767435	814	913	4082	-	-
Keeyask reservoir	GL-B	27-Jun-16	NSC	106988	-	900 226000768540	718	811	3175	-	-
Stephens Lake	STL-A	16-Jun-22	NSC	106988	-	900 226000768540	814	919	2722	M	7
Keeyask reservoir	GL-C	19-Jun-16	NSC	107101	-	900 226000153855	822	933	6123	-	-
Keeyask reservoir	GL-C	21-Jun-16	NSC	107101	-	900 226000153855	-	-	-	-	-
Stephens Lake	GR-A	30-Jun-22	NSC	107101	-	900 226000153855	890	990	6350	-	-
Keeyask reservoir	GL-B	16-Jun-16	NSC	107111	-	900 226000768495	602	676	2041	-	-
Stephens Lake	STL-A	3-Jun-22	NSC	107111	-	900 226000768495	768	863	2722	-	-
Keeyask reservoir	GL-C	6-Jun-16	NSC	107144	-	900 226000768442	620	695	2268	-	-
Stephens Lake	STL-A	4-Jun-22	NSC	107144	-	900 226000768442	773	862	4082	-	-
Keeyask reservoir	GL-B	5-Jun-16	NSC	107222	-	900 226000768481	628	709	1814	-	-
Stephens Lake	STL-A	10-Sep-17	NSC	107222	-	900 226000768481	642	723	1900	-	-
Stephens Lake	STL-B	31-May-22	NSC	107222	-	900 226000768481	730	822	2722	-	-
Keeyask reservoir	BR-D	26-May-16	NSC	107249	-	900 226000767831	1430	1486	33566	-	-
Stephens Lake	GR-A	9-Jun-22	NSC	107249	-	900 226000767831	1445	2000	23133	-	-
Stephens Lake	STL-A	17-Jun-22	NSC	107249	-	900 226000767831	-	-	-	-	-
Keeyask reservoir	GL-C	14-Sep-17	NSC	109630	-	900 226000893949	715	815	2650	-	-
Stephens Lake	STL-A	7-Jun-22	NSC	109630	-	900 226000893949	771	878	2722	-	-

Table A2-4. Tagging and biological information for Lake Sturgeon recaptured in Stephens Lake, spring 2022. A Floy tag that was lost and fish was retagged in 2022 is indicated by bold font (continued).

Location	Zone	Date	Prefix	Floy tag 1	Floy tag 2	PIT tag	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Stephens Lake	STL-A	23-Sep-16	NSC	109996	-	900 226000768847	791	870	4360	-	-
Stephens Lake	STL-A	2-Jun-22	NSC	109996	-	900 226000768847	900	980	5443	-	-
Stephens Lake	STL-A	26-May-16	NSC	110401	-	900 226000548793	880	1010	6804	M	7
Stephens Lake	STL-A	29-May-16	NSC	110401	-	900 226000548793	-	-	-	M	7
Stephens Lake	STL-A	5-Jun-16	NSC	110401	-	900 226000548793	-	-	-	-	-
Stephens Lake	STL-A	30-May-18	NSC	110401	-	900 226000548793	942	1072	6650	M	7
Stephens Lake	GR-A	14-Jun-18	NSC	110401	-	900 226000548793	-	-	-	-	-
Stephens Lake	STL-A	16-Jun-22	NSC	110401	-	900 226000548793	978	1104	4536	-	-
Stephens Lake	STL-A	29-May-16	NSC	110414	-	900 226000548755	851	954	4763	-	-
Stephens Lake	STL-A	4-Jun-18	NSC	110414	-	900 226000548755	905	1016	6550	-	-
Stephens Lake	STL-A	28-Jun-22	NSC	110414	-	900 226000548755	930	1145	7257	-	-
Stephens Lake	STL-A	29-Jun-22	NSC	110414	-	900 226000548755	-	-	-	-	-
Stephens Lake	GR-A	30-May-16	NSC	110416	-	900 226000548891	861	962	4990	-	-
Stephens Lake	-	31-May-16	NSC	110416	-	900 226000548891	-	-	-	-	-
Stephens Lake	-	2-Jun-16	NSC	110416	-	900 226000548891	-	-	-	-	-
Stephens Lake	STL-A	29-May-22	NSC	110416	-	900 226000548891	948	1055	5897	-	-
Stephens Lake	STL-A	17-Sep-16	NSC	110577	-	900 226000767180	700	802	2360	-	-
Stephens Lake	STL-A	5-Jun-22	NSC	110577	-	900 226000767180	882	995	4536	-	-
Stephens Lake	STL-A	25-Jun-18	NSC	110704	-	900 226000768510	952	1054	6622	-	-
Stephens Lake	STL-A	27-Jun-22	NSC	110704	-	900 226000768510	1010	1120	9072	-	-
Stephens Lake	STL-A	20-Jun-18	NSC	110715	-	900 226000154055	822	920	4050	-	-
Stephens Lake	STL-A	2-Jun-22	NSC	110715	-	900 226000154055	910	1011	5897	-	-
Stephens Lake	STL-A	4-Jun-16	NSC	110976	-	900 226000548981	868	955	7257	-	-
Stephens Lake	STL-B	31-May-22	NSC	110976	-	900 226000548981	975	1076	6804	-	-
Stephens Lake	STL-A	28-Jun-22	NSC	110976	-	900 226000548981	-	-	-	-	-
Stephens Lake	STL-A	10-Jun-16	NSC	110986	-	900 226000548912	886	998	6350	-	-
Stephens Lake	STL-A	29-May-18	NSC	110986	-	900 226000548912	-	-	-	-	-
Stephens Lake	STL-A	16-Jun-18	NSC	110986	-	900 226000548912	942	1061	7620	-	-
Stephens Lake	STL-A	12-Jun-22	NSC	110986	-	900 226000548912	985	1105	9525	-	-

Table A2-4. Tagging and biological information for Lake Sturgeon recaptured in Stephens Lake, spring 2022. A Floy tag that was lost and fish was retagged in 2022 is indicated by bold font (continued).

Location	Zone	Date	Prefix	Floy tag 1	Floy tag 2	PIT tag	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Stephens Lake	STL-A	10-Jun-16	NSC	110988	-	900 226000548990	920	1022	7257	-	-
Stephens Lake	STL-A	17-Jun-22	NSC	110988	-	900 226000548990	956	1061	6350	-	-
Stephens Lake	STL-A	11-Jun-16	NSC	110993	-	900 226000548802	945	1060	7257	-	-
Stephens Lake	STL-A	4-Jun-18	NSC	110993	-	900 226000548802	778	1095	7200	-	-
Stephens Lake	GR-A	31-May-21	NSC	110993	-	900 226000548802	990	1025	7500	-	-
Stephens Lake	STL-A	8-Jun-22	NSC	110993	-	900 226000548802	994	1112	6804	-	-
Stephens Lake	STL-A	12-Sep-17	NSC	111057	-	900 226000154230	851	946	5425	-	-
Stephens Lake	STL-B	9-Jun-22	NSC	111057	-	900 226000154230	905	1000	4536	-	-
Keeyask reservoir	GL-C	19-Jun-18	NSC	111904	-	900 226000767059	759	862	3765	-	-
Stephens Lake	STL-A	2-Jun-22	NSC	111904	-	900 226000767059	800	912	4082	-	-
Stephens Lake	GR-A	15-Jun-22	NSC	111904	-	900 226000767059	-	-	-	-	-
Keeyask reservoir	BR-D	15-Jun-18	NSC	111936	-	900 226000893790	714	797	3130	-	-
Stephens Lake	STL-A	2-Jun-22	NSC	111936	-	900 226000893790	-	-	-	-	-
Keeyask reservoir	GL-B	29-Jun-14	NSC	91398	-	900 226000629068	655	720	2150	-	-
Keeyask reservoir	GL-B	10-Jun-18	NSC	111979	-	900 226000629068	790	868	3992	-	-
Stephens Lake	STL-B	13-Jun-22	NSC	111979	-	900 226000629068	840	922	6804	-	-
Keeyask reservoir	GL-C	30-Aug-12	NSC	100475	-	-	480	562	800	-	-
Keeyask reservoir	GL-C	18-Sep-15	NSC	100475	-	900 226000548726	585	675	1500	-	-
Keeyask reservoir	GL-C	12-Jun-18	NSC	111994	-	900 226000548726	724	826	2585	-	-
Stephens Lake	STL-A	10-Jun-22	NSC	111994	-	900 226000548726	798	916	4082	-	-
Stephens Lake	GR-A	23-Jun-18	NSC	112281	-	900 226000154289	1120	1238	12565	-	-
Stephens Lake	STL-A	14-Jun-21	NSC	112281	-	900 226000154289	1060	1290	13000	-	-
Stephens Lake	GR-A	17-Jun-22	NSC	112281	-	900 226000154289	1175	1296	13608	-	-
Stephens Lake	GR-A	1-Jun-18	NSC	115727	-	900 226000893375	1000	1125	7212	-	-
Stephens Lake	STL-A	31-May-22	NSC	115727	-	900 226000893375	1035	1165	7257	-	-
Stephens Lake	STL-A	30-May-18	NSC	115740	-	900 226000767151	1132	1265	13608	-	-
Stephens Lake	STL-A	4-Jun-19	NSC	115740	-	900 226000767151	1135	1277	14515	-	-
Stephens Lake	STL-A	8-Jun-22	NSC	115740	-	900 226000767151	1180	1220	12247	-	-

Table A2-4. Tagging and biological information for Lake Sturgeon recaptured in Stephens Lake, spring 2022. A Floy tag that was lost and fish was retagged in 2022 is indicated by bold font (continued).

Location	Zone	Date	Prefix	Floy tag 1	Floy tag 2	PIT tag	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Stephens Lake	GR-A	30-May-18	NSC	115749	-	900 226000893277	1218	1342	16375	-	-
Stephens Lake	STL-A	15-Jun-18	NSC	115749	-	900 226000893277	-	-	-	-	-
Stephens Lake	STL-A	14-Jun-22	NSC	115749	-	900 226000893277	1230	1350	14969	-	-
Stephens Lake	GR-A	30-May-18	NSC	115750	-	900 226000893377	1146	1270	18733	-	-
Stephens Lake	STL-A	27-Jun-22	NSC	115750	-	900 226000893377	1170	1285	14515	-	-
Stephens Lake	GR-A	1-Jun-18	NSC	115753	-	900 226000893258	1153	1262	16511	M	8
Stephens Lake	STL-A	5-Jun-18	NSC	115753	-	900 226000893258	-	-	-	-	-
Stephens Lake	STL-A	27-Jun-22	NSC	115753	-	900 226000893258	1164	1270	15876	-	-
Stephens Lake	STL-A	29-Jun-22	NSC	115753	-	900 226000893258	-	-	-	-	-
Stephens Lake	GR-A	30-Jun-22	NSC	115753	-	900 226000893258	-	-	-	-	-
Stephens Lake	STL-A	1-Jun-18	NSC	115760	-	900 226000893498	803	911	4853	-	-
Stephens Lake	STL-A	2-Jun-22	NSC	115760	-	900 226000893498	870	982	4990	-	-
Stephens Lake	STL-A	4-Jun-18	NSC	115791	-	900 226000152949	976	1086	7620	-	-
Stephens Lake	STL-A	11-Jun-22	NSC	115791	-	900 226000152949	1030	1180	10433	-	-
Stephens Lake	STL-A	7-Jun-18	NSC	115799	-	900 226000152982	1390	1530	21183	-	-
Stephens Lake	STL-A	31-May-22	NSC	115799	-	900 226000152982	1388	1540	20865	-	-
Stephens Lake	STL-A	30-Sep-11	NSC	91714	-	-	734	823	3450	-	-
Stephens Lake	STL-B	18-Sep-12	**NSC**	**91714**	-	-	767	860	3800	-	-
Stephens Lake	STL-A	14-Sep-19	NSC	116036	-	900 226001030356	950	1100	-	-	-
Stephens Lake	-	19-Sep-19	NSC	116036	-	900 226001030356	-	-	-	-	-
Stephens Lake	STL-A	15-Jun-21	NSC	116036	-	900 226001030356	980	1100	9000	-	-
Stephens Lake	STL-A	8-Jun-22	NSC	116036	-	900 226001030356	971	1090	5897	-	-
Stephens Lake	STL-A	9-Jun-21	NSC	117280	-	900 226001225400	960	1085	9500	-	-
Stephens Lake	GR-A	15-Jun-22	NSC	117280	-	900 226001225400	965	1040	6804	-	-
Stephens Lake	STL-B	4-Jun-18	NSC	115790	-	899 226000152913	955	1061	6078	-	-
Stephens Lake	STL-A	4-Jun-21	NSC	117624	-	900 226000152913	995	1100	5443	-	-
Stephens Lake	STL-A	29-May-22	NSC	117624	-	900 226000152913	982	1105	7257	-	-
Stephens Lake	STL-B	19-Sep-19	NSC	117680	-	900 226000767276	945	1050	6500	-	-
Stephens Lake	GR-A	29-Jun-22	NSC	117680	-	900 226000767276	945	1054	6350	-	-

Table A2-4. Tagging and biological information for Lake Sturgeon recaptured in Stephens Lake, spring 2022. A Floy tag that was lost and fish was retagged in 2022 is indicated by bold font (continued).

Location	Zone	Date	Prefix	Floy tag 1	Floy tag 2	PIT tag	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Keeyask reservoir	GL-C	22-Sep-20	NSC	118305	-	900 226001658856	770	867	3350	-	-
Keeyask reservoir	BR-D	25-Jun-21	NSC	118305	-	900 226001658856	-	-	-	-	-
Stephens Lake	STL-A	31-May-22	NSC	118305	-	900 226001658856	772	860	3629	-	-
Keeyask reservoir	GL-C	24-Sep-20	NSC	118343	-	900 226001658778	811	882	3524	-	-
Stephens Lake	STL-A	27-Jun-22	NSC	118343	-	900 226001658778	825	900	6804	-	-
Keeyask reservoir	BR-D	20-Jun-21	NSC	119123	-	900 226001055337	830	940	4300	-	-
Stephens Lake	STL-A	21-Jun-22	NSC	119123	-	900 226001055337	-	-	-	-	-
Keeyask reservoir	GL-C	3-Jul-21	NSC	119273	-	900 226001055386	735	831	3500	-	-
Stephens Lake	STL-A	8-Jun-22	NSC	119273	-	900 226001055386	640	747	1814	-	-
Stephens Lake	STL-B	23-Sep-12	NSC	100162	-	-	488	544	800	-	-
Stephens Lake	GR-A	31-May-19	NSC	100162	-	-	830	917	4536	-	-
Stephens Lake	STL-A	6-Jun-21	NSC	119410	-	900 226000327713	875	967	6000	-	-
Stephens Lake	STL-B	14-Jun-22	NSC	119410	-	900 226000327713	898	975	6804	-	-
Stephens Lake	STL-A	4-Jun-21	NSC	119418	-	900 226001225280	900	1005	8000	-	-
Stephens Lake	STL-A	7-Jun-22	NSC	119418	-	900 226001225280	929	1060	6350	-	-
Stephens Lake	STL-A	19-Jun-21	NSC	120051	-	900 226001225283	897	1010	4900	-	-
Stephens Lake	STL-A	31-May-22	NSC	120051	-	900 226001225283	890	997	4082	-	-
Stephens Lake	STL-B	23-Jun-21	NSC	120055	-	900 226001225290	955	1070	7400	-	-
Stephens Lake	STL-A	29-May-22	NSC	120055	-	900 226001225290	958	1073	6804	-	-
Stephens Lake	STL-A	18-Jun-21	**NSC**	**110712**	-	900 226000154057	1251	1390	16057	-	-
Stephens Lake	STL-A	24-Jun-21	NSC	120057	-	900 226000154057	1250	1388	14000	-	-
Stephens Lake	STL-A	29-May-22	NSC	120057	-	900 226000154057	1250	1395	12020	-	-
Stephens Lake	STL-B	4-Jun-18	NSC	115781	-	900 226000152931	784	880	3650	-	-
Stephens Lake	STL-A	12-Jun-18	**NSC**	**115781**	-	900 226000152931	-	-	-	-	-
Stephens Lake	STL-A	25-Jun-21	NSC	120059	-	900 226000152931	837	942	4350	-	-
Stephens Lake	STL-A	3-Jun-22	NSC	120059	-	900 226000152931	843	946	4082	-	-
Keeyask reservoir	BR-D	7-Jun-18	**NSC**	**111961**	-	900 226000767000	935	1036	8981	-	-
Stephens Lake	STL-A	18-Jun-22	NSC	121782	-	900 226000767000	974	1075	6350	-	-
Stephens Lake	STL-A	15-Jun-22	NSC	121789	-	900 226001226015	899	1003	4082	-	-
Stephens Lake	STL-A	17-Jun-22	-	121789	-	900 226001226015	-	-	-	-	-

Table A2-4. Tagging and biological information for Lake Sturgeon recaptured in Stephens Lake, spring 2022. A Floy tag that was lost and fish was retagged in 2022 is indicated by bold font (continued).

Location	Zone	Date	Prefix	Floy tag 1	Floy tag 2	PIT tag	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Stephens Lake	GR-A	12-Jun-18	**NSC**	**115838**	-	900 226000768985	746	834	3500	-	-
Stephens Lake	STL-A	15-Jun-22	NSC	121790	-	900 226000768985	855	956	4082	-	-
Stephens Lake	STL-B	25-Sep-11	NSC	69875	-	-	395	456	500	-	-
Stephens Lake	STL-B	21-Sep-17	NSC	69875	-	900 226000577003	760	865	4050	-	-
Stephens Lake	STL-B	20-Sep-19	**NSC**	**69875**	-	900 226000577003	829	932	5000	-	-
Stephens Lake	STL-A	11-Jun-22	NSC	121794	-	900 226000577003	875	985	6804	-	-
Stephens Lake	STL-A	10-Jun-16	**NSC**	**110985**	-	900 226000628618	737	839	3175	-	-
Stephens Lake	STL-B	10-Jun-22	NSC	121795	-	900 226000628618	868	989	4536	-	-
Stephens Lake	STL-A	28-May-16	NSC	110409	-	900 226000548770	909	1033	6350	-	-
Stephens Lake	STL-A	5-Jun-16	NSC	110409	-	900 226000548770	-	-	-	-	-
Stephens Lake	GR-A	1-Jun-18	NSC	110409	-	900 226000548770	964	1087	8664	-	-
Stephens Lake	STL-A	8-Jun-18	NSC	110409	-	900 226000548770	-	-	-	-	-
Stephens Lake	STL-A	30-Jun-18	**NSC**	**110409**	-	900 226000548770	-	-	-	-	-
Stephens Lake	STL-A	9-Jun-22	NSC	121799	-	900 226000548770	1040	1130	6350	-	-
Stephens Lake	STL-A	4-Jun-22	NSC	121976	-	900 226001226053	1460	1560	19504	-	-
Stephens Lake	STL-A	29-Jun-22	NSC	121976	-	900 226001226053	-	-	-	-	-
Stephens Lake	STL-A	4-Jun-22	NSC	121978	-	900 226001226034	820	917	4309	-	-
Stephens Lake	STL-A	11-Jun-22	NSC	121978	-	900 226001226034	-	-	-	-	-
Keeyask reservoir	GL-A	16-Jun-16	**NSC**	**107112**	-	900 226000153815	705	810	3402	-	-
Stephens Lake	STL-B	7-Jun-22	NSC	121992	-	900 226000153815	755	858	4082	-	-
Stephens Lake	STL-A	12-Jun-16	NSC	110995	-	900 226000548564	970	1068	7257	-	-
Stephens Lake	STL-A	1-Jun-18	NSC	110995	-	900 226000548564	1037	1134	8255	-	-
Stephens Lake	STL-A	11-Jun-18	**NSC**	**110995**	-	900 226000548564	-	-	-	-	-
Stephens Lake	STL-A	8-Jun-22	NSC	122000	-	900 226000548564	1080	1130	8165	-	-
Keeyask reservoir	GL-B	21-Sep-16	NSC	111005	-	900 226000893729	809	920	4560	-	-
Keeyask reservoir	GL-B	19-Sep-17	**NSC**	**111005**	-	900 226000893729	833	942	4850	-	-
Stephens Lake	STL-A	28-May-22	NSC	122926	-	900 226000893729	865	977	4309	-	-
Stephens Lake	STL-A	23-Jun-16	NSC	110461	-	900 226000548858	950	1070	9072	-	-
Stephens Lake	STL-A	29-May-18	**NSC**	**110461**	-	900 226000548858	1010	1132	8800	-	-
Stephens Lake	STL-A	29-May-22	NSC	122928	-	900 226000548858	1018	1135	7711	-	-

Table A2-4. Tagging and biological information for Lake Sturgeon recaptured in Stephens Lake, spring 2022. A Floy tag that was lost and fish was retagged in 2022 is indicated by bold font (continued).

Location	Zone	Date	Prefix	Floy tag 1	Floy tag 2	PIT tag	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Keeyask reservoir	BR-D	1-Jul-21	**NSC**	**119262**	-	900 226001055412	828	934	5000	-	-
Stephens Lake	STL-A	29-May-22	NSC	122930	-	900 226001055412	828	928	4536	-	-
Stephens Lake	STL-A	31-May-22	NSC	122931	-	900 226001226061	940	1055	5897	-	-
Stephens Lake	STL-A	5-Jun-22	NSC	122931	-	900 226001226061	-	-	-	-	-
Stephens Lake	STL-A	6-Jun-22	NSC	122931	-	900 226001226061	-	-	-	-	-
Stephens Lake	STL-B	20-Sep-20	**NSC**	**118856**	-	900 226001055042	897	1000	5725	-	-
Stephens Lake	STL-A	31-May-22	NSC	122936	-	900 226001055042	915	1022	4990	-	-
Stephens Lake	STL-A	1-Jun-22	NSC	122938	-	900 226001226007	805	900	3629	-	-
Stephens Lake	STL-A	2-Jun-22	NSC	122938	-	900 226001226007	-	-	-	-	-
Keeyask reservoir	BR-D	7-Jun-18	**NSC**	**111962**	-	900 226000767049	1235	1350	19232	-	-
Stephens Lake	STL-A	3-Jun-22	NSC	122945	-	900 226000767049	1242	1350	15422	-	-
Stephens Lake	STL-A	28-May-16	NSC	110408	-	900 226000548954	891	992	4763	-	-
Stephens Lake	STL-A	30-May-18	**NSC**	**110408**	-	900 226000548954	915	1020	5987	-	-
Stephens Lake	STL-A	4-Jun-22	NSC	122948	-	900 226000548954	940	1043	6350	-	-
Stephens Lake	STL-A	11-Jun-22	NSC	122948	-	900 226000548954	-	-	-	-	-
Stephens Lake	GR-A	28-Jun-22	NSC	122948	-	900 226000548954	-	-	-	-	-
Stephens Lake	STL-A	10-Jun-16	**NSC**	**110987**	-	900 226000548762	890	1000	7257	-	-
Stephens Lake	GR-A	29-May-18	NSC	115232	-	900 226000548762	930	1036	6396	-	-
Stephens Lake	STL-A	1-Jun-18	**NSC**	**115232**	-	900 226000548762	-	-	-	-	-
Stephens Lake	STL-B	4-Jun-22	NSC	122949	-	900 226000548762	963	1078	5897	-	-
Stephens Lake	GR-A	23-Jun-22	NSC	122953	-	900 226001226091	867	976	7257	-	-
Stephens Lake	STL-A	24-Jun-22	NSC	122953	-	900 226001226091	-	-	-	-	-
Keeyask reservoir	BR-D	8-Jun-21	**NSC**	**120802**	-	900 226001225640	1292	1409	17400	-	-
Stephens Lake	STL-A	23-Jun-22	NSC	122955	-	900 226001225640	-	-	-	-	-
Kelsey GS Area	BR-U	31-May-10	NSC	94085	-	-	950	999	4989	M	7
Stephens Lake	GR-A	1-Jun-18	NSC	94085	-	900 226000893423	999	1092	7394	M	8
Stephens Lake	GR-A	26-Jun-22	NSC	94085	-	900 226000893423	985	1044	7257	-	-
Keeyask reservoir	-	6-Jun-19	-	-	-	900 067000109660	231	270	70	-	-
Stephens Lake	STL-A	27-Jun-22	NSC	122963	-	900 067000109660	419	468	450	-	-

Table A2-4. Tagging and biological information for Lake Sturgeon recaptured in Stephens Lake, spring 2022. A Floy tag that was lost and fish was retagged in 2022 is indicated by bold font (continued).

Location	Zone	Date	Prefix	Floy tag 1	Floy tag 2	PIT tag	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex	Maturity
Stephens Lake	-	13-Jun-19	-	-	-	900 067000109322	214	254	-	-	-
Stephens Lake	-	17-Sep-21	NSC	121394	-	900 067000109322	414	484	-	-	-
Stephens Lake	GR-A	21-Jun-22	NSC	121394	-	900 067000109322	410	480	-	-	-
Stephens Lake	-	23-May-19	-	-	-	900 067000109308	238	281	-	-	-
Stephens Lake	-	13-Sep-19	NSC	116016	-	900 067000109308	309	358	-	-	-
Stephens Lake	STL-A	29-May-22	NSC	116016	-	900 067000109308	420	480	-	-	-

APPENDIX 3: POPULATION ESTIMATE INFORMATION

Mark-recapture population estimates have been calculated for the Burntwood River during the spring of twelve different years (2005-2007, 2009-2013, 2015, 2017, 2019, 2022), for the Kelsey GS area during the spring of ten different years (2005-2007, 2009, 2011, 2013, 2015, 2017, 2019, 2022), for the Keeyask reservoir during the spring of 14 different years (1995, 2001-2004, 2006, 2008, 2010, 2012, 2014, 2016, 2018, and 2021-2022) and for Stephens Lake during the spring of 14 different years (2001–2006, 2008, 2010, 2012, 2014, 2016, 2018, and 2021-2022). Lake Sturgeon were tagged in 1995 in Gull Lake by Manitoba Fisheries Branch and the Split Lake Resource Management Board. All data for the period 2001–2012 were collected annually as part of environmental studies related to the pre-Project environment, while data from 2014 until 2044 will be collected biennially as part of monitoring studies related to the Keeyask Project.

Only Lake Sturgeon classified as adults (*i.e.*, fork length equal to or greater than 800 mm) were included in the population estimate. Floy tag returns from local fishers were also included in the data set to provide information on harvested Lake Sturgeon and to ensure that individuals harvested were removed from the tagged population. Between 2001 and 2012, 29 tags from Lake Sturgeon harvested in the future Keeyask reservoir reach were returned to North/South Consultants (Nelson and Barth 2012). Between 2012 and 2018, there were no reported tag returns from this section of the Nelson River, although field crews have observed resource harvesters in this reach. In 2018, two tags were harvested in Stephens Lake and returned to North/South Consultants. In 2021, one tag was harvested in Stephens Lake and returned to North/South Consultants. In 2022, no harvested tags were returned to NSC from the Keeyask study area including the Burntwood River and the Kelsey GS Area.

Data were analysed using the program MARK (White and Burnham 1999), which is an industry standard for the analysis of data from marked populations. Program MARK uses binary numbers to represent the encounter history of individuals, and then uses the cumulative pattern of 1's (encountered live capture) and 0's (not encountered) to generate a probability distribution of tag recaptures which form the basis of population estimation. Re-encounters can also be from dead recoveries (*e.g.*, the animal is harvested) in which case the model uses a value of -1. For example, the history "101 -1;" indicates than an animal was captured for the first time at sampling occasion 1, not encountered at sampling occasion 2, and recovered dead at sampling occasion 3, and an animal that was released alive would have the history "101 1;", where the -1 tells the model the animal is dead, and 1 indicates alive.

Several different population model variants exist, most of which can be classified as either closed or open models. Closed models assume there are no births, deaths, immigration, or emigration between sample periods (i.e., marking and recapture periods), while open models assume these processes occur. Prior to 2014, a Robust Design (Kendall 2001) model was used to estimate the annual abundance of adult Lake Sturgeon (outlined in the AEMP). This model incorporates both open (i.e., between sampling years) and closed (i.e., pre- and post-spawning periods within a single year) population models. However, this model requires numerous assumptions, for example that the population is closed between the pre- and post- spawn sampling periods. Estimates may be confounded by variables such as spawning periodicity, inter-annual variation in environmental conditions, the timing of spawning (which was estimated based on water

temperature), and harvest during the spawning period. Thus, after 2014, the Jolly-Seber model (POPAN formulation; Arnason and Schwarz 2002), as implemented within MARK, was used to estimate the annual abundance of adult Lake Sturgeon. This is an open model that requires fewer assumptions and modeled variables, and thus likely provides a more reliable estimate of abundance.

Using first-time capture and recapture information, POPAN estimates the survival (i.e., the probability that a fish will survive from one capture to the next), the probability of recapture (p; i.e., the probability that a fish will be recaptured given that the animal is alive and in the study area), and abundance (N; i.e., the number of adult Lake Sturgeon in the area during each capture period) (Tables A3-1 and A3-3).

The model recommends how best to split the data for survival estimates.

- Model fit for survival in the Burntwood River was best using three time periods of fish capture corresponding to i) 2001-2007 (98% survival); ii) 2008-2013 (82% survival); and iii) 2014-2022 (88% survival). Survival rate within each time period was constant.
- Model fit for survival in the Kelsey GS Area was best using two time periods of fish capture corresponding to i) 2001-2013 (79% survival); and ii) 2014-2022 (86% survival. Survival rate within each time period was constant.
- Due to a high number of fish emigrating out of the Keeyask reservoir in both 2021 and 2022, the best-fit model indicated a marked decrease in adult Lake Sturgeon survival in the Keeyask reservoir. The model interprets fish that move from the Keeyask reservoir to Stephens or upstream into Clark Lake as mortalities as they are not able to return and are lost from the upstream population. Therefore, the marked decrease in survival reflects the large downstream migration observed in 2021 and 2022 rather than fish mortality.
    - Although these fish moved downstream after sampling in 2021, the model assumes the event happened over time, impacting the survival rates between 2018 and 2022 (instead of for 2022 alone). This leads to falsely low estimates for 2018 and 2021. To account for this, abundance estimates generated for the Keeyask reservoir in 2021 were used for the years between 1995–2021 and the 2022 estimate was only generated for the current study year.
    - Model fit for survival in the Keeyask reservoir was best using four time periods of fish capture corresponding to i) 1995–2001 (93% survival); ii) 2001–2004 (76% survival); iii) 2004–2021 (91% survival); and iv) 2021–2022 (78% survival).
    - The 2004–2001 period was further split into pre- (2004–2013; 90% survival) and post-construction (2014–2021; 96% survival) periods.
- Model fit for survival in Stephens Lake was best using two time periods of fish capture: 2001–2013 (83% survival) and 2014–2022 (97% survival). Survival rate within each time period was constant.
    - Between 2001 and 2014, fish were sampled opportunistically (*e.g.*, for acoustic tagging), while 2014–2021 marked the beginning of biennial studies.

- As more data is added to each model, the best fit for survival may change, and additional time periods may be added (even if sampling methods remain consistent). For example, should survival be very different in one year, the model may recommend that the data be divided.

The probability of recapture varied among years and locations.

- Recapture rates for the Burntwood River varied annually with a mean of 0.16 ± 0.07 (Range: 0.02 and 0.26). Recapture rates have remained consistently high since 2013 between 0.19 and 0.25.
- Recapture rates for the Kelsey GS Area varied annually with a mean of 0.20 ± 0.10 (Range: 0.06 and 0.33). Recapture rates have remained consistently high since 2013 between 0.25 and 0.33.
- Recapture rates for the Keeyask reservoir varied annually with a mean of 0.20 ± 0.12 (Range: 0.08 and 0.58). Recapture rates have varied since 2014 between 0.13 and 0.24.
- Recapture rates for Stephens Lake varied annually with a mean of 0.16 ± 0.15 (Range: 0.02 and 0.57). Recapture rates have varied since 2014 between 0.04 and 0.57.

An abundance estimate is provided for each year sampling was conducted for both the Keeyask reservoir and Stephens Lake. As sampling continues (*i.e.*, year to year) and data is added to the model, the parameters are recalculated. Thus, although survival rates and abundance estimates are calculated for the same time periods, they may differ among reporting periods. This allows the estimates to become more refined and precise over time.

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Table A3-1. Results of POPAN analysis of adult Lake Sturgeon from the Burntwood River. Best model was constant survival and variable recapture. Confidence intervals are rounded.

Period	Mean	SE	95% Confidence Interval	
			Low	High
2001 to 2007 Survival Constant	0.98	0.04	0.56	1.00
2008 to 2013 Survival Constant	0.82	0.02	0.77	0.86
2014 to 2022 Survival Constant	0.88	0.02	0.83	0.92
2005 Recapture	0.06	0.02	0.03	0.13
2006 Recapture	0.16	0.06	0.08	0.30
2007 Recapture	0.18	0.03	0.13	0.25
2009 Recapture	0.28	0.05	0.20	0.38
2010 Recapture	0.07	0.02	0.03	0.13
2011 Recapture	0.16	0.03	0.11	0.22
2012 Recapture	0.07	0.02	0.05	0.12
2013 Recapture	0.27	0.04	0.20	0.37
2015 Recapture	0.25	0.04	0.19	0.33
2017 Recapture	0.31	0.04	0.24	0.40
2019 Recapture	0.29	0.04	0.22	0.38
2022 Recapture	0.33	0.06	0.24	0.45
2005 Abundance	293	89	164	525
2006 Abundance	287	91	157	526
2007 Abundance	448	63	341	589
2009 Abundance	303	42	231	397
2010 Abundance	475	143	266	847
2011 Abundance	457	73	335	625
2012 Abundance	376	64	270	523
2013 Abundance	434	65	325	580
2015 Abundance	508	64	397	651
2017 Abundance	546	63	435	685
2019 Abundance	708	91	550	910
2022 Abundance	707	111	520	961

Table A3-2. Results of POPAN analysis of adult Lake Sturgeon from the Kelsey GS Area. Best model was variable survival and variable recapture. Confidence intervals are rounded.

Period	Mean	SE	95% Confidence Interval	
			Low	High
2001 to 2013 Survival Constant	0.79	0.03	0.74	0.84
2014 to 2022 Survival Constant	0.86	0.03	0.78	0.92
2005 Recapture	0.02	0.01	0.01	0.04
2006 Recapture	0.09	0.02	0.06	0.14
2007 Recapture	0.12	0.03	0.07	0.18
2009 Recapture	0.15	0.04	0.09	0.24
2011 Recapture	0.15	0.04	0.08	0.26
2013 Recapture	0.25	0.06	0.15	0.39
2015 Recapture	0.24	0.04	0.16	0.33
2017 Recapture	0.21	0.04	0.15	0.30
2019 Recapture	0.19	0.04	0.13	0.28
2022 Recapture	0.21	0.06	0.12	0.34
2005 Abundance	884	181	594	1,315
2006 Abundance	703	137	481	1,027
2007 Abundance	558	110	381	819
2009 Abundance	353	77	231	538
2011 Abundance	332	91	196	564
2013 Abundance	509	118	325	797
2015 Abundance	628	102	458	861
2017 Abundance	709	121	508	989
2019 Abundance	691	131	479	998
2022 Abundance	957	243	586	1,563

Table A3-3. Results of POPAN analysis of adult Lake Sturgeon from the Keeyask reservoir. Best model was variable survival and variable recapture. Confidence intervals are rounded. A different model was used from 1995–2021 and 2022 to account for a large number of fish that moved downstream through the Keeyask GS after sampling in 2021.

Period	Mean	SE	95% Confidence Interval	
			Low	High
1995 to 2001 Survival Constant	0.93	0.03	0.83	0.97
2001 to 2004 Survival Constant	0.76	0.04	0.67	0.83
2004 to 2021 Survival Constant	0.91	0.01	0.89	0.94
2021 to 2022 Survival Constant	0.78	0.04	0.70	0.85
1995 Recapture	0.58	6.84	0.00	1.00
2001 Recapture	0.17	0.04	0.11	0.26
2002 Recapture	0.17	0.04	0.11	0.25
2003 Recapture	0.26	0.03	0.20	0.33
2004 Recapture	0.20	0.03	0.14	0.27
2006 Recapture	0.25	0.03	0.20	0.32
2008 Recapture	0.11	0.02	0.08	0.15
2010 Recapture	0.08	0.02	0.05	0.13
2012 Recapture	0.08	0.01	0.06	0.11
2014 Recapture	0.18	0.03	0.14	0.24
2016 Recapture	0.24	0.03	0.19	0.31
2018 Recapture	0.15	0.02	0.11	0.20
2021 Recapture	0.13	0.02	0.09	0.19
2022 Recapture	0.16	0.04	0.09	0.26
1995 Abundance	106	1249	1	8268
2001 Abundance	579	112	397	844
2002 Abundance	440	84	303	638
2003 Abundance	481	54	387	598
2004 Abundance	364	52	276	480
2006 Abundance	722	80	581	896
2008 Abundance	599	68	479	748
2010 Abundance	851	168	581	1248
2012 Abundance	927	106	742	1160
2014 Abundance	776	99	605	994
2016 Abundance	767	89	611	962
2018 Abundance	909	122	700	1180
2021 Abundance	913	143	673	1239
2022 Abundance	345	79	221	537

Table A3-4. Results of POPAN analysis of adult Lake Sturgeon from Stephens Lake. Best model was variable survival and variable recapture. Confidence intervals are rounded.

Period	Mean	SE	95% Confidence Interval	
			Low	High
2001 to 2013 Survival Constant	0.83	0.03	0.77	0.88
2014 to 2022 Survival Constant	0.97	0.02	0.88	0.99
2001 Recapture	0.06	0.00	0.06	0.06
2002 Recapture	0.04	0.02	0.01	0.12
2003 Recapture	0.27	0.11	0.11	0.53
2004 Recapture	0.07	0.04	0.02	0.19
2005 Recapture	0.04	0.02	0.02	0.08
2006 Recapture	0.23	0.06	0.14	0.36
2008 Recapture	0.02	0.01	0.00	0.08
2010 Recapture	0.32	0.10	0.16	0.53
2012 Recapture	0.11	0.06	0.03	0.30
2014 Recapture	0.04	0.01	0.02	0.06
2016 Recapture	0.16	0.02	0.12	0.20
2018 Recapture	0.57	0.06	0.45	0.69
2021 Recapture	0.16	0.03	0.11	0.22
2022 Recapture	0.12	0.02	0.08	0.17
2001 Abundance	123	0	123	123
2002 Abundance	104	40	50	214
2003 Abundance	86	33	42	177
2004 Abundance	71	27	34	147
2005 Abundance	187	39	125	282
2006 Abundance	155	33	103	233
2008 Abundance	107	24	69	165
2010 Abundance	73	19	44	121
2012 Abundance	373	202	138	1,009
2014 Abundance	481	39	411	563
2016 Abundance	455	38	386	537
2018 Abundance	430	47	348	532
2021 Abundance	764	116	569	1,026
2022 Abundance	1,164	186	853	1,589