



Keeyask Generation Project Terrestrial Effects Monitoring Plan

Beaver Habitat Effects Monitoring Report

TEMP-2023-09



KEYYASK GENERATION PROJECT

TERRESTRIAL EFFECTS MONITORING PLAN

REPORT #TEMP-2023-09

BEAVER HABITAT EFFECTS YEAR 1 OPERATION 2022

Prepared for

Manitoba Hydro

By

Wildlife Resource Consulting Services MB, Inc.

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SUMMARY

Background

Construction of the Keeyask Generation Project (the Project) at the former Gull Rapids began in July 2014. The reservoir was impounded in early September 2020, and the generating station was fully operational in March 2022. The Keeyask Hydropower Limited Partnership (KHLP) was required to prepare a plan to monitor the effects of construction and operation of the generating station on the terrestrial environment. Monitoring results will help the KHLP, government regulators, members of local First Nation communities, and the general public understand how construction and operation of the generating station will affect the environment, and whether more needs to be done to reduce harmful effects.

This report describes the results of beaver habitat effects monitoring conducted during the fall of 2022, the first year of Project operation monitoring.

Why is the study being done?

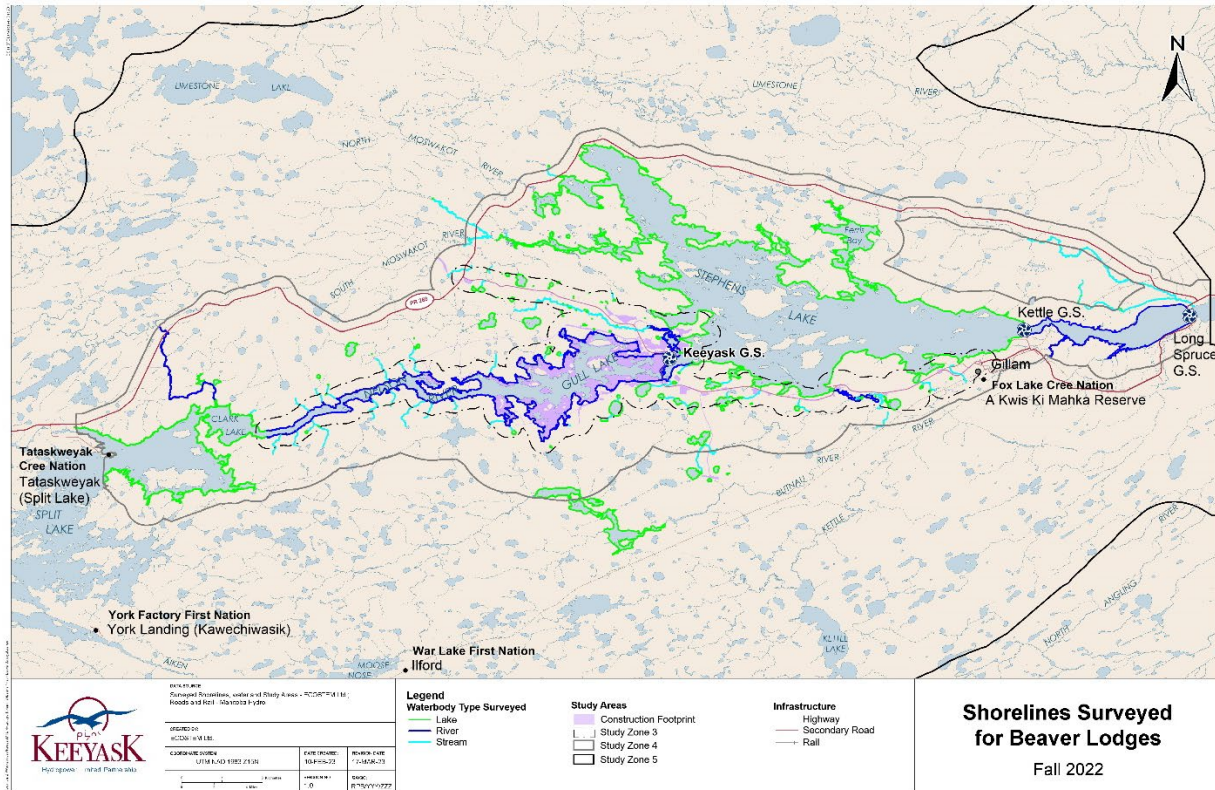
Predicted Project effects on beavers during operation were mainly habitat loss and alteration. Reservoir impoundment has resulted in a permanent loss of local beaver habitat because creeks, tributaries, and small ponds and lakes were flooded. The objective of beaver monitoring is to measure how much of their habitat is lost or altered due to the Project by observing their use of the reservoir and nearby areas during Project operation.



Active Beaver Lodge in the Keeyask Region

What was done?

Aerial surveys along the shorelines of water bodies in the Regional Study Area (Study Zone 4; see map below) were conducted from October 8 to 11, 2022 to determine the number and location of active and inactive beaver lodges near the reservoir and within the larger region.



What was found?

A total of 358 beaver lodges were observed along the survey route in the Regional Study Area. Thirteen active lodges were counted in the Construction Footprint (Study Zone 1, see map above), nine of which were on the Keyask reservoir shoreline. There was an increase in the density of active lodges in the Construction Footprint from the previous two years, when density was reduced following reservoir impoundment. The density of active lodges also increased in the Regional Study Area.

What does it mean?

Nine active lodges were observed along the reservoir shoreline in 2022, indicating that there was suitable beaver habitat in the area after impoundment. Reservoir formation was expected to cause a short-term increase in the number of beavers in the area, as floating peatlands resulting from impoundment would provide temporary habitat and then break down over time.

What will be done next?

A study of lodge characteristics and nearby habitat attributes will be conducted in fall 2023 and beaver habitat effects monitoring will continue in 2025, when the local population has had more time to adjust to the new conditions in the reservoir.

STUDY TEAM

We would like to thank Sherrie Mason and Rachel Boone of Manitoba Hydro and Ron Bretecher of North/South Consultants Inc. for logistical assistance in the field. We would also like to thank Dr. James Ehnes of ECOSTEM Ltd. for GIS cartographic services. Biologists and other personnel who contributed to the study included:

- Robert Berger, Wildlife Resource Consulting Services MB Inc. (WRCS) – Design and reporting
- Andrea Ambrose, WRCS – Data analysis and reporting
- Levi Warkentine, WRCS – Data collection
- Thomas Wood, WRCS – Data collection

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1.0 INTRODUCTION

The Keeyask Generation Project (the Project) is a 695-megawatt hydroelectric generating station (GS) located at the former Gull Rapids on the lower Nelson River in northern Manitoba where Gull Lake flows into Stephens Lake. Project construction began in July 2014, the reservoir was impounded in early September 2020, and the GS was fully operational in March 2022.

The *Keeyask Generation Project Response to EIS Guidelines* (the EIS), completed in June 2012, provides a summary of predicted effects and planned mitigation for the Project. Technical supporting information for the terrestrial 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 Terrestrial Supporting Volume* (TE SV). The *Terrestrial Effects Monitoring Plan* (TEMP) was developed as part of the licensing process for the Project. Monitoring activities for various components of the terrestrial environment were described, including the focus of this report, beaver (*Castor canadensis*), during the operation phase.

The beaver is a medium-sized aquatic furbearer that inhabits waterbodies in forested areas. Beavers are common in the Keeyask region and are an important furbearer species, having cultural, economic, and ecological value (Keeyask Hydropower Limited Partnership [KHLP] 2012). By building dams and through their feeding activities, beavers alter aquatic ecosystems, increase the diversity of species and habitat on a landscape, and create habitat for other species that use wetlands (e.g., Naiman et al. 1988; Wright et al. 2002). Beavers do not typically inhabit the main channel of the Nelson River due to strong currents (KHLP 2012); however, the nearby creeks, ponds, and lakes provide suitable habitat.

Predicted Project effects on beavers during operation were mainly habitat loss and alteration. Reservoir impoundment has resulted in a permanent loss of local beaver habitat because creeks, tributaries, small ponds, and lakes were flooded. Additional, long-term habitat loss due to shoreline erosion and peatland disintegration is anticipated. Water level fluctuations in the reservoir could make any potential habitat along the shorelines unsuitable. However, the expected formation of floating peatlands in the reservoir could attract beavers to these habitats and temporarily increase their abundance. Once these peatlands break down, beavers will most likely abandon the reservoir and seek habitat in the surrounding area. The objective of beaver monitoring is to quantify how much of their habitat is lost or altered due to the Project by characterizing their use of the reservoir and nearby areas during operation.

2.0 METHODS

Aerial surveys for Project construction-phase beaver monitoring began in 2016 and continued in 2017. The survey was expanded in 2018 and repeated in 2019 and 2020 along shorelines in waterbodies and waterways in the Regional Study Area (Study Zones 1–4; Map 1). In 2020, the survey was conducted shortly after reservoir impoundment was complete and included the newly expanded Gull Lake shoreline. In 2021, the survey focused mainly on the reservoir and the Nelson River upstream to Clark Lake. The density of beaver lodges along the survey route (lodges/km) was compared among study zones to explore potential Project effects in the reservoir area. Direct Project effects (habitat loss and alteration) were anticipated in Study Zone 1 (the Construction Footprint), while direct and indirect (e.g., sensory disturbance) Project effects were expected in Study Zones 2 and 3 which, along with Study Zone 1, composed the Local Study Area. Study Zones 1–4 were the regional reference area for the beaver population.

Operation monitoring for beaver began in fall 2022. From October 8 to 11, a survey along pre-selected shorelines in waterbodies and waterways in the Regional Study Area (Map 1) was conducted in a Bell 206 Jet Ranger helicopter, at a speed of approximately 100 km/hr and approximately 50 m above ground level. The route was similar to surveys from 2018 to 2020. Observers stationed on the left side of the helicopter recorded beaver lodge locations with a handheld Global Positioning System (GPS) unit. The presence of food caches and whether lodges were active or inactive was recorded. Beaver lodges were classified as either standard lodges or bank burrows. Standard lodges (Photo 1, Photo 2) are commonly freestanding conical mounds of branches and logs plastered with mud with one or more underwater openings to tunnels that meet at a cavity in the center of the mound (Novak 1999). Bank burrows (Photo 3) are dug into shoreline banks where the water is deep or fast, are often covered with sticks and mud, and are occasionally connected to an extensive underground network of tunnels (Novak 1999). Active beaver lodges were characterized by signs of lodge maintenance (fresh mud and vegetation), nearby recent foraging, and the presence and condition of a food cache (see Photo 1). Lodges lacking these characteristics were considered inactive (see Photo 2).



Photo 1: Active Standard Beaver Lodge with Food Cache



Photo 2: Inactive Standard Beaver Lodge

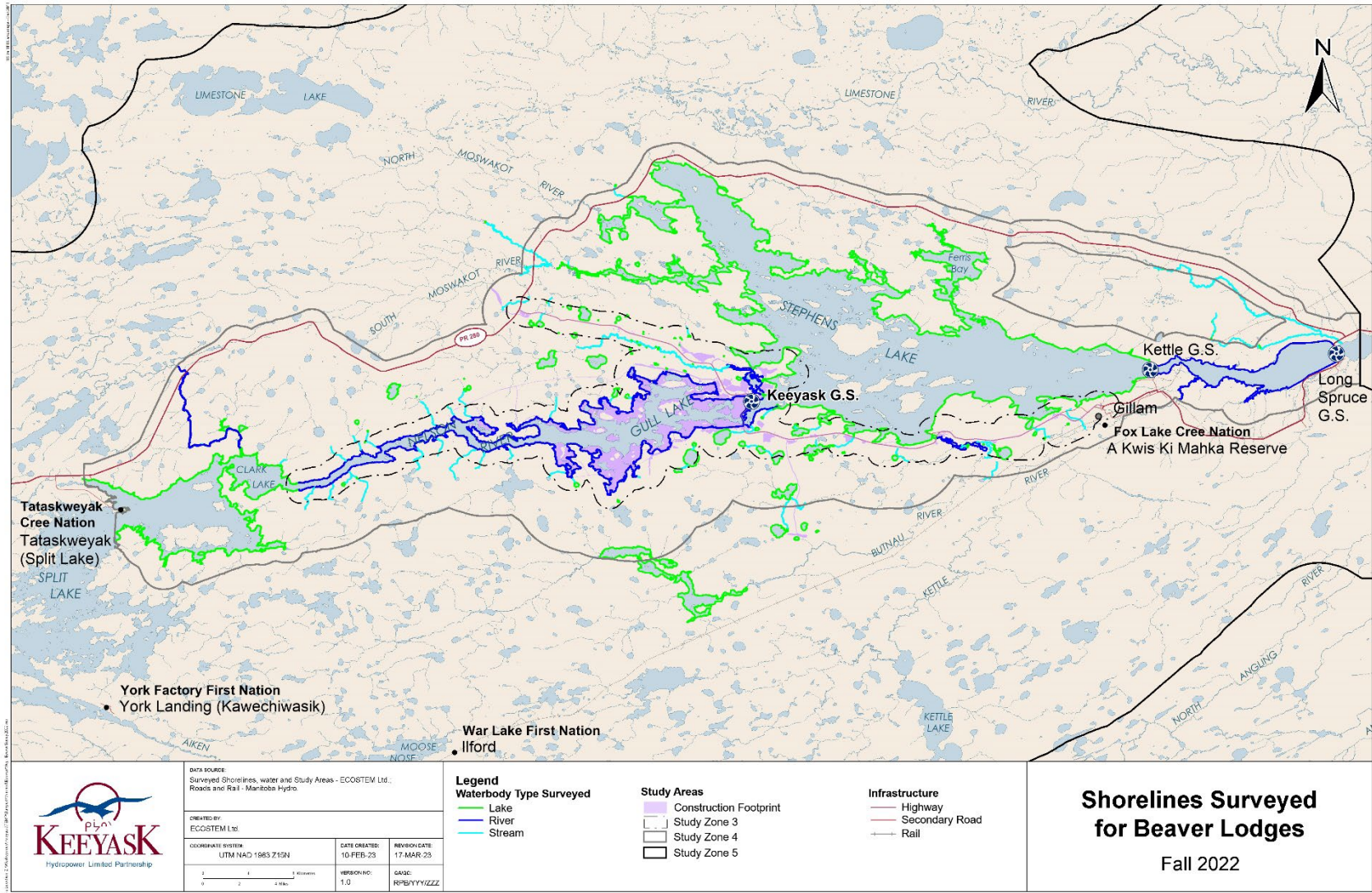


Photo 3: Active Beaver Bank Burrow with Food Cache

An intensive survey for beaver lodges was conducted along shorelines within the Local Study Area (Study Zones 1–3), while a sample of waterbodies and watercourses was surveyed in Study Zone 4. A small portion of Study Zone 5 was also included, for a total of 1,532 km of shoreline surveyed (Table 1). A total of 506 km was surveyed in the Local Study Area and 1,436 km was surveyed in the Regional Study Area (Study Zones 1–4). As described in Section 6.4.2.3.6 of the TEMP, the study area for operation monitoring is the reservoir and waterbodies within one kilometre of it, to evaluate the Project-related change in habitat quality for beaver. For the purposes of annual reporting, the density of active and inactive beaver lodges in the Local and Regional study areas was examined for consistency with construction monitoring. A few lodges that were first observed during the construction monitoring period were re-classified into study zones based on updated mapping information.

Table 1: Length of Shorelines Surveyed for Beaver Lodges, Fall 2022

| Study Zone | Length (km) |
|----------------------------|--------------------|
| 1 (Construction Footprint) | 257 |
| 2 | 41 |
| 3 | 208 |
| 1–3 (Local Study Area) | 506 |
| 4 | 930 |
| 1–4 (Regional Study Area) | 1,436 |
| 5 | 96 |
| 1–5 Total | 1,532 |



Map 1: Shorelines Surveyed for Beaver Lodges, Fall 2022



3.0 RESULTS

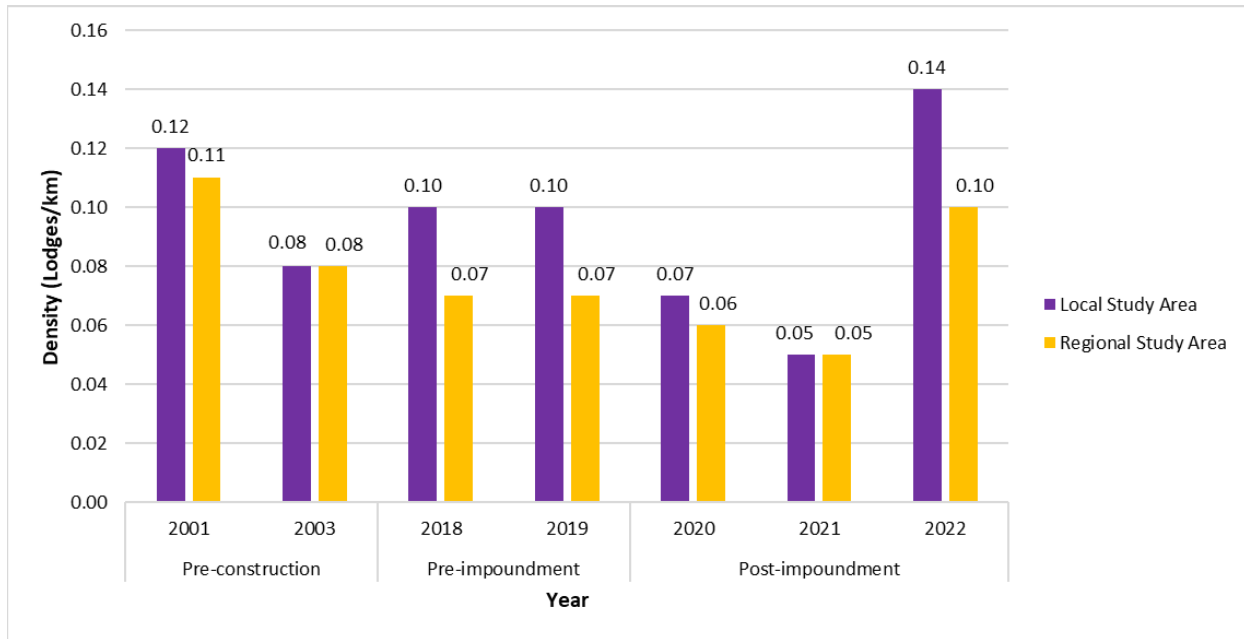
A total of 358 beaver lodges, including 314 standard lodges and 44 bank burrows, were observed on the survey route in the Regional Study Area (Study Zones 1–4) during the fall 2022 aerial survey. One hundred and forty-one lodges were active and 217 were inactive (Map 2 to Map 5). Other lodges (n = 218) were observed off the survey route and were recorded as incidental; all beaver lodges observed during the fall aerial survey are listed in Appendix 1, Table 1-1. Of the lodges observed on-route in the Regional Study Area, 102 had not been observed during previous surveys, including five active lodges along the reservoir shoreline in the Construction Footprint (Study Zone 1). Four active lodges that had been identified during previous survey years were also observed along the reservoir shoreline.

In 2022, the density of active lodges on the survey route in the Local Study Area (Study Zones 1–3) was 0.14 lodges/km and the density of inactive lodges was 0.22 lodges/km. The density of active beaver lodges was greater in 2022 than in previous study years (Figure 1). A decline in active lodge density in the Construction Footprint had been observed from 2019 to 2020 due mainly to the removal of beaver from the reservoir area prior to reservoir impoundment and the submergence of four lodges as a result of flooding. However, the density of active lodges increased in the Construction Footprint from 2020 to 2021 and again in 2022. Thirteen active lodges were observed in 2022, four more than the previous year. The density of active lodges in the Regional Study Area also increased in 2022.

Table 2: Number and Density (lodges/km) of Beaver Lodges in Study Zones 1–5, 2018 to 2022

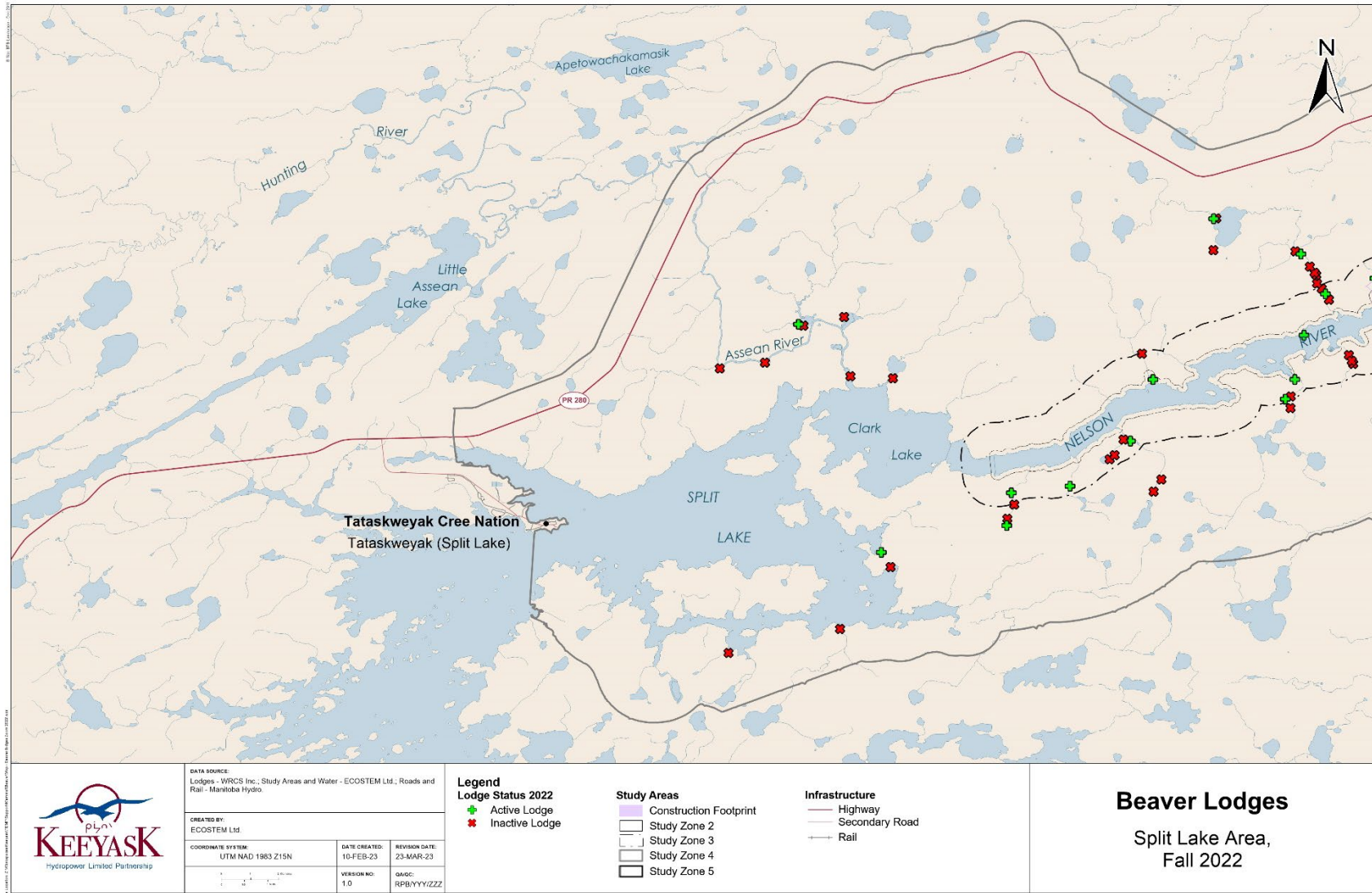
| Study Zone | Lodge Status | 2018 | | 2019 | | 2020 | | 2021 | | 2022 | |
|------------|--------------|------|---------|------|---------|------|---------|------|-------------------|------|---------|
| | | No. | Density | No. | Density | No. | Density | No. | Density | No. | Density |
| 1 | Active | 4 | 0.02 | 7 | 0.03 | 3 | 0.01 | 9 | 0.03 | 13 | 0.05 |
| | Inactive | 26 | 0.11 | 34 | 0.14 | 16 | 0.07 | 3 | 0.01 | 10 | 0.04 |
| 2 | Active | 4 | 0.05 | 7 | 0.10 | 2 | 0.03 | 2 | 0.15 | 11 | 0.27 |
| | Inactive | 6 | 0.08 | 8 | 0.11 | 11 | 0.15 | 1 | 0.08 | 8 | 0.20 |
| 3 | Active | 46 | 0.21 | 37 | 0.17 | 32 | 0.14 | 7 | 0.13 | 46 | 0.22 |
| | Inactive | 41 | 0.19 | 71 | 0.32 | 72 | 0.33 | 22 | 0.42 | 94 | 0.45 |
| 1–3 | Active | 54 | 0.10 | 51 | 0.10 | 37 | 0.07 | 18 | 0.05 | 70 | 0.14 |
| | Inactive | 73 | 0.14 | 113 | 0.21 | 99 | 0.20 | 26 | 0.08 | 112 | 0.22 |
| 4 | Active | 58 | 0.06 | 49 | 0.05 | 51 | 0.05 | 1 | 0.03 ¹ | 71 | 0.08 |
| | Inactive | 60 | 0.06 | 90 | 0.09 | 78 | 0.08 | 3 | 0.09 ¹ | 105 | 0.11 |
| 1–4 | Active | 112 | 0.07 | 100 | 0.07 | 88 | 0.06 | 19 | 0.05 ¹ | 141 | 0.10 |
| | Inactive | 133 | 0.09 | 203 | 0.13 | 177 | 0.12 | 29 | 0.08 ¹ | 217 | 0.15 |
| 5 | Active | 29 | 0.29 | 27 | 0.27 | 18 | 0.18 | – | – | 36 | 0.38 |
| | Inactive | 33 | 0.33 | 52 | 0.52 | 44 | 0.44 | – | – | 53 | 0.55 |
| 1–5 | Active | 141 | 0.09 | 127 | 0.08 | 106 | 0.07 | – | – | 177 | 0.12 |
| | Inactive | 166 | 0.10 | 255 | 0.16 | 221 | 0.14 | – | – | 270 | 0.18 |

1. Note that a limited area of Study Zone 4 was surveyed in 2021.

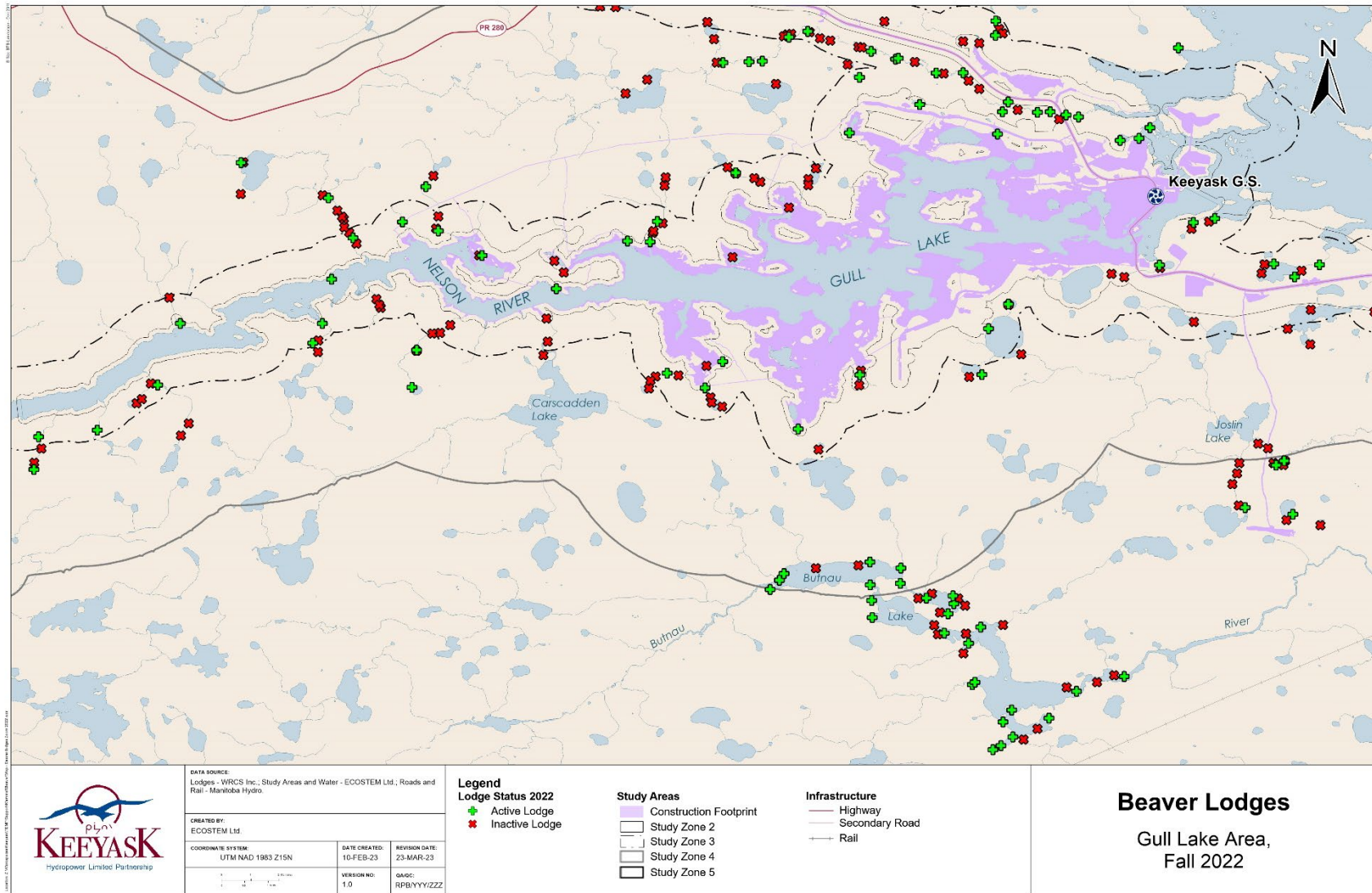


Note that a limited area of Study Zone 4 was surveyed in 2021.

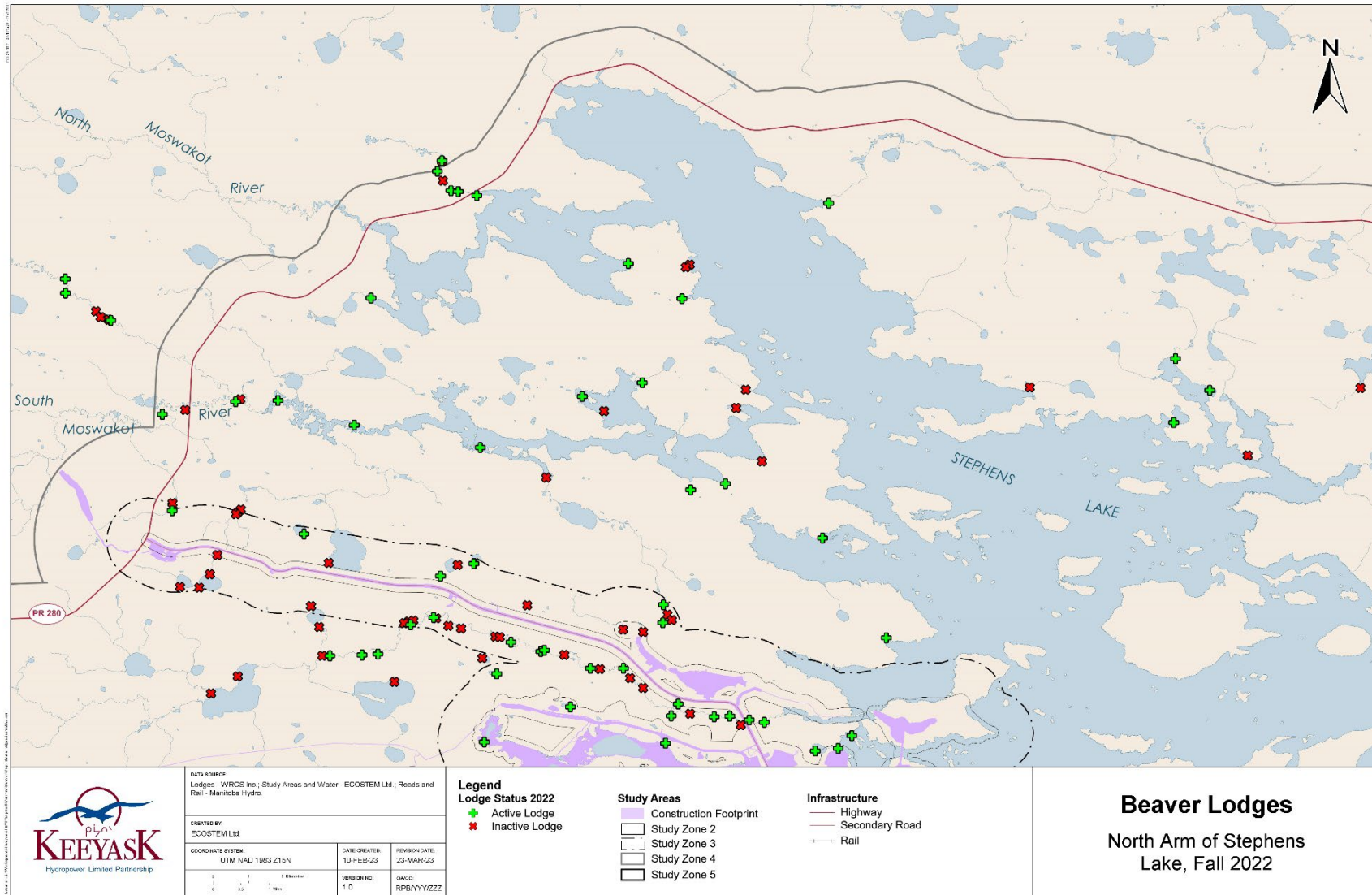
Figure 1: Density of Active Beaver Lodges in the Local and Regional Study Areas before and after Reservoir Impoundment



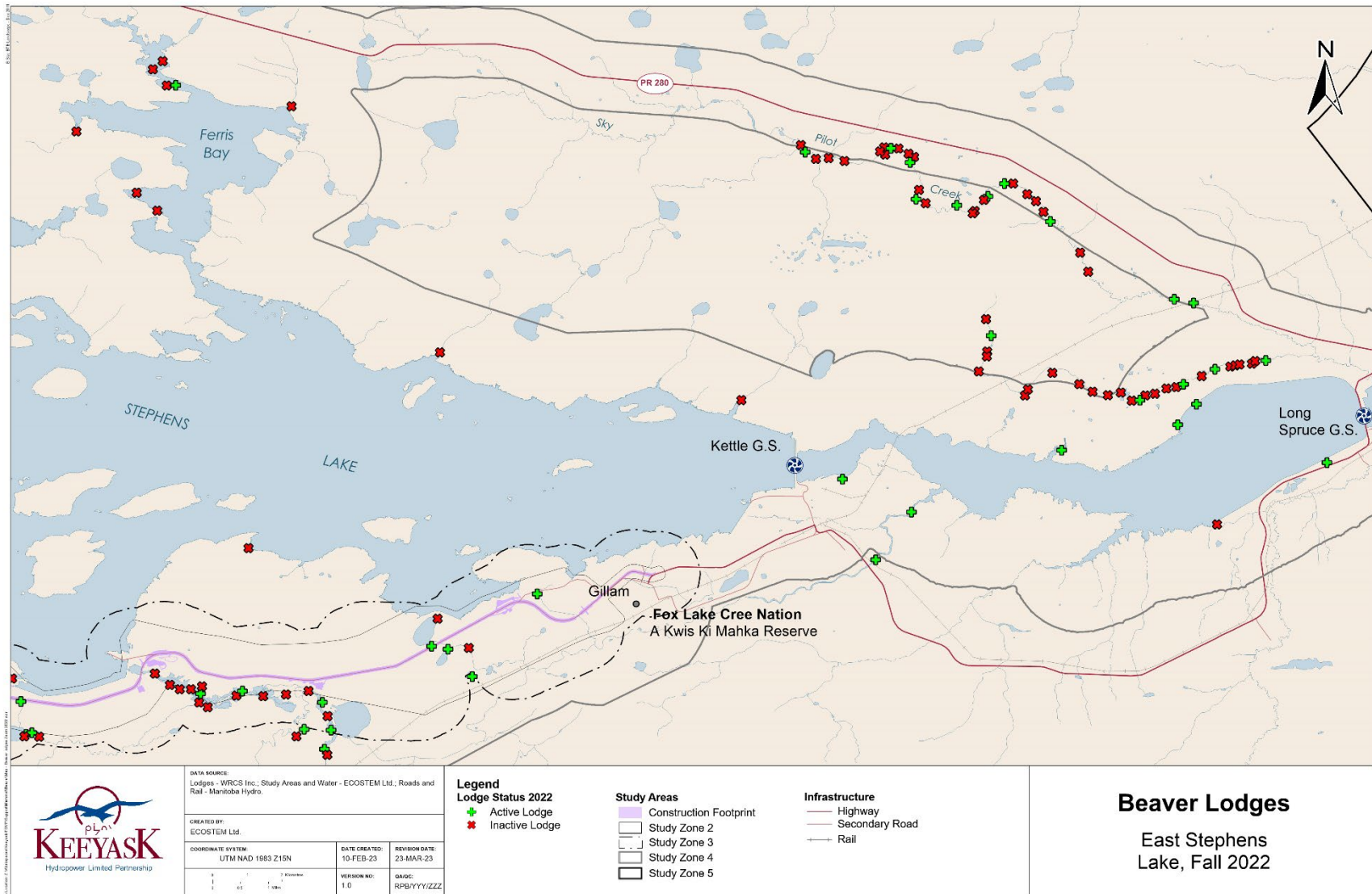
Map 2: Locations of Beaver Lodges Split Lake Area, Fall 2022



Map 3: Locations of Beaver Lodges Gull Lake Area, Fall 2022



Map 4: Locations of Beaver Lodges North Arm of Stephens Lake, Fall 2022



Map 5: Locations of Beaver Lodges East Stephens Lake, Fall 2022

4.0 DISCUSSION

The number of active beaver lodges observed in the Construction Footprint (Study Zone 1) during fall aerial surveys declined during construction, from 34 in 2016 (Wildlife Resource Consulting Services MB Inc. 2018) to three in 2020, due to the removal of beavers from lodges in the future reservoir area as part of the Project's pre-impoundment trapping program; tree clearing and noise disturbance in the future reservoir area, which likely reduced the quality of habitat nearby; the inundation of four lodges in the reservoir during impoundment; and another two lodges in the reservoir becoming inactive following impoundment. The local and regional beaver populations declined from the pre-construction through the construction periods, possibly due in part to a loss of habitat resulting from a large wildfire that occurred in 2013 (Hood et al. 2007).

The density of active beaver lodges increased in the Local and Regional study areas in 2022, the first year of operation monitoring, and the local and regional beaver populations returned to pre-construction period levels. The increase could be due to the cessation of construction activities and/or to the regeneration of vegetation burned throughout the region in 2013, which has begun to recover beaver habitat in some areas.

The number of active lodges in the Construction Footprint increased after the reservoir was impounded, to nine in 2021 and 13 in 2022. Nine of the 13 active lodges observed in 2022 were along the reservoir shoreline, indicating that there was some suitable beaver habitat in the reservoir area after impoundment. As described in the TEMP, reservoir formation was anticipated to result in a short-term increase in the abundance of beaver within, as the immobile floating peatlands resulting from impoundment were expected to provide temporary habitat and then to disintegrate over time. Water level fluctuations in the reservoir and adjacent waterways were also expected to reduce the quality of affected beaver habitat. A study of lodge characteristics and nearby habitat attributes will be conducted in fall 2023 and beaver habitat effects monitoring will continue in 2025, when the local population has had more time to adjust to the new conditions in the reservoir.

5.0 SUMMARY AND CONCLUSIONS

The density of active beaver lodges increased in the Local and Regional study areas in 2022, the first year of operation monitoring. Nine active lodges were located on the periphery of the reservoir, including five that had not been previously observed, suggesting that suitable habitat was at least temporarily available along the shoreline and that beavers had continued to re-colonize the area.

A study of lodge characteristics and nearby habitat attributes will be conducted in fall 2023 and beaver habitat effects monitoring will continue in 2025, when the local population has had more time to adjust to the new conditions in the reservoir.

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APPENDIX 1: AERIAL SURVEY OBSERVATIONS 2022

Table 1-1: Location and Status of Beaver Lodges, Fall 2022

| Study Zone | Survey Route | Waterbody Type | Lodge Status | Lodge | Observed Previously | UTM | |
|-------------------------------|--------------|----------------|--------------|---------------------|---------------------|---------------------|---------------------|
| 1 (Construction Footprint) | On | Lake | Active | 305 | ✓ | 15 V 355593 6250487 | |
| | | | Inactive | 294 | ✓ | 15 V 357113 6252729 | |
| | | River | Active | 20 | ✓ | 15 V 353486 6240991 | |
| | | | | 27 | ✓ | 15 V 348053 6240534 | |
| | | | | 27.1 | | 15 V 348053 6240534 | |
| | | | | 46 | ✓ | 15 V 353122 6249484 | |
| | | | | 480 | ✓ | 15 V 351325 6239087 | |
| | | | | 665 | ✓ | 15 V 346126 6245654 | |
| | | | | 718 | | 15 V 348679 6241452 | |
| | | | | 719 | | 15 V 342837 6244008 | |
| | | 722 | | 15 V 358324 6249449 | | | |
| | | 774 | | 15 V 334943 6244353 | | | |
| | | 783 | | 15 V 340225 6245183 | | | |
| | | Inactive | | 19 | ✓ | 15 V 353529 6241161 | |
| | | | 33 | ✓ | 15 V 342489 6242996 | | |
| | | | 40 | ✓ | 15 V 342769 6245016 | | |
| | | | 51.1 | ✓ | 15 V 348102 6241330 | | |
| | | | 211 | ✓ | 15 V 353468 6240653 | | |
| | | Off | Stream | Active | 667 | | 15 V 391596 6246322 |
| | Inactive | | | 458 | ✓ | 15 V 365747 6246397 | |
| Unknown | River | | Inactive | 315 | ✓ | 15 V 360221 6244857 | |
| | Unknown | | Active | 725 | | 15 V 362676 6248134 | |
| | | | Inactive | 723 | | 15 V 363254 6248133 | |
| | | | | 724 | | 15 V 362732 6248130 | |
| 2 | On | | Lake | Active | 318 | ✓ | 15 V 388542 6244813 |

| Study Zone | Survey Route | Waterbody Type | Lodge Status | Lodge | Observed Previously | UTM |
|------------|--------------|----------------|--------------|---------------------|---------------------|---------------------|
| 2 | On | Lake | Active | 514 | ✓ | 15 V 363288 6249298 |
| | | | | 715 | | 15 V 365947 6246483 |
| | | | | 717 | | 15 V 358012 6242612 |
| | | Inactive | 295 | ✓ | 15 V 357687 6252666 | |
| | | | 373 | ✓ | 15 V 367593 6244584 | |
| | | | 456 | ✓ | 15 V 367697 6244900 | |
| | | River | Active | 307 | ✓ | 15 V 364015 6244850 |
| | | | | 666 | ✓ | 15 V 345332 6245690 |
| | | | | 771 | | 15 V 329631 6242792 |
| | | Inactive | 65 | ✓ | 15 V 343104 6244610 | |
| | Stream | | Active | 353 | ✓ | 15 V 376700 6243224 |
| | | | | 441 | ✓ | 15 V 389022 6244733 |
| | | 834 | | | 15 V 360732 6250119 | |
| | Inactive | 836 | | 15 V 358695 6250575 | | |
| | | 360 | ✓ | 15 V 372670 6243769 | | |
| | | 453 | ✓ | 15 V 372564 6243698 | | |
| | Off | Lake | Active | 553 | ✓ | 15 V 345449 6254876 |
| | | | | 565 | ✓ | 15 V 360491 6249991 |
| | | | | 729 | | 15 V 363778 6248395 |
| | River | Active | 784 | | 15 V 339930 6244377 | |
| Stream | | | Active | 2 | ✓ | 15 V 360253 6244291 |
| | | | | 2.1 | | 15 V 360253 6244291 |
| Unknown | Inactive | 306 | ✓ | 15 V 355212 6250778 | | |
| | | 359 | ✓ | 15 V 374056 6243541 | | |
| 3 | On | Lake | Active | 287 | ✓ | 15 V 351858 6254251 |
| | | | | 288 | ✓ | 15 V 352815 6254604 |
| | | | | 288.1 | ✓ | 15 V 352815 6254604 |
| | | | | 308.1 | | 15 V 358705 6243474 |
| | | | | 356 | ✓ | 15 V 376851 6242273 |
| | | | | 374 | ✓ | 15 V 368019 6244891 |

| Study Zone | Survey Route | Waterbody Type | Lodge Status | Lodge | Observed Previously | UTM | |
|------------|--------------|----------------|--------------|----------|---------------------|---------------------|---------------------|
| 3 | On | Lake | Active | 446 | ✓ | 15 V 385394 6243203 | |
| | | | | 512 | ✓ | 15 V 362628 6249222 | |
| | | | | 671 | | 15 V 377016 6242322 | |
| | | | | 730 | | 15 V 363680 6249669 | |
| | | | | 809 | | 15 V 358252 6252909 | |
| | | | | 812 | | 15 V 347941 6255456 | |
| | | | | 826 | | 15 V 353479 6251442 | |
| | | | | 826.1 | | 15 V 353479 6251442 | |
| | | | | 841 | | 15 V 368749 6244425 | |
| | | | | Inactive | 28 | ✓ | 15 V 348651 6239895 |
| | | | | | 37 | ✓ | 15 V 342531 6242185 |
| | | | | | 60 | ✓ | 15 V 348846 6248305 |
| | | | | | 274 | ✓ | 15 V 348137 6253403 |
| | | | | | 274.1 | | 15 V 348137 6253403 |
| | | | | | 274.2 | | 15 V 348137 6253403 |
| | | | | | 282 | ✓ | 15 V 348647 6254648 |
| | | | 297 | | ✓ | 15 V 358384 6253168 | |
| | | | 308 | | ✓ | 15 V 358705 6243474 | |
| | | | 317 | | ✓ | 15 V 388721 6245630 | |
| | | | 333 | | ✓ | 15 V 382911 6243420 | |
| | | | 340 | | ✓ | 15 V 385550 6242826 | |
| | | | 342 | | ✓ | 15 V 385001 6243549 | |
| | | | 354 | | ✓ | 15 V 376260 6242455 | |
| | | | 355 | | ✓ | 15 V 376202 6242220 | |
| | | | 355.1 | | | 15 V 376202 6242220 | |
| | | | 357 | ✓ | 15 V 377230 6242231 | | |
| | | | 358 | ✓ | 15 V 376445 6243911 | | |
| | | | 368 | ✓ | 15 V 369321 6243305 | | |
| | | | 372 | ✓ | 15 V 369000 6244670 | | |
| | | | 452 | ✓ | 15 V 384348 6243452 | | |

| Study Zone | Survey Route | Waterbody Type | Lodge Status | Lodge | Observed Previously | UTM | | |
|------------|--------------|----------------|--------------|---------------------|---------------------|---------------------|---|---------------------|
| 3 | On | Lake | Inactive | 481 | ✓ | 15 V 352037 6238394 | | |
| | | | | 484 | ✓ | 15 V 348250 6240220 | | |
| | | | | 541 | ✓ | 15 V 351681 6247888 | | |
| | | | | 542 | ✓ | 15 V 351943 6248268 | | |
| | | | | 552 | ✓ | 15 V 345232 6254321 | | |
| | | | | 552.1 | | 15 V 345232 6254321 | | |
| | | | | 554 | ✓ | 15 V 344922 6253935 | | |
| | | | | 555 | ✓ | 15 V 344370 6253959 | | |
| | | | | 569 | ✓ | 15 V 358508 6253007 | | |
| | | | | 573 | ✓ | 15 V 352353 6254587 | | |
| | | | | 577 | ✓ | 15 V 345980 6256049 | | |
| | | | | 619 | ✓ | 15 V 348288 6240042 | | |
| | | | | 622 | ✓ | 15 V 328103 6240022 | | |
| | | | | 641 | ✓ | 15 V 351684 6247677 | | |
| | | | | 657 | ✓ | 15 V 354349 6253427 | | |
| | | 672 | | 15 V 376800 6242238 | | | | |
| | | 714 | | 15 V 365224 6242873 | | | | |
| | | River | | | Active | 331 | ✓ | 15 V 381884 6243449 |
| | | | | | | 334 | ✓ | 15 V 383089 6243526 |
| | | | | | Inactive | 327 | ✓ | 15 V 380564 6244053 |
| | | | | | | 327.1 | | 15 V 380564 6244053 |
| | | | | | | 328 | ✓ | 15 V 380998 6243723 |
| | | | | | | 329 | ✓ | 15 V 381283 6243596 |
| | | | | | | 330 | ✓ | 15 V 381604 6243597 |
| | | | | | | 443 | ✓ | 15 V 383688 6243397 |
| 603 | ✓ | | | | | 15 V 381839 6243213 | | |
| 670 | | | | | | 15 V 382088 6243087 | | |
| Stream | | | Active | 39 | ✓ | 15 V 338688 6246045 | | |
| | | | | 59.4 | ✓ | 15 V 349133 6248087 | | |
| | | | | 250 | ✓ | 15 V 358494 6250228 | | |



| Study Zone | Survey Route | Waterbody Type | Lodge Status | Lodge | Observed Previously | UTM | | | | | |
|------------|--------------|----------------|--------------|----------|---------------------|---------------------|---|---|---------------------|---|---------------------|
| 3 | On | Stream | Active | 298 | ✓ | 15 V 358267 6253420 | | | | | |
| | | | | 361 | ✓ | 15 V 372383 6243641 | | | | | |
| | | | | 371 | ✓ | 15 V 369628 6244855 | | | | | |
| | | | | 486 | ✓ | 15 V 346726 6241046 | | | | | |
| | | | | 496 | ✓ | 15 V 328835 6240626 | | | | | |
| | | | | 496.1 | | 15 V 328835 6240626 | | | | | |
| | | | | 563 | ✓ | 15 V 356171 6251594 | | | | | |
| | | | | 564 | ✓ | 15 V 359721 6250210 | | | | | |
| | | | | 602 | ✓ | 15 V 365195 6246335 | | | | | |
| | | | | 624 | ✓ | 15 V 324658 6238808 | | | | | |
| | | | | 673 | | 15 V 371873 6243327 | | | | | |
| | | | | 721 | | 15 V 346383 6246383 | | | | | |
| | | | | 747 | | 15 V 334285 6242106 | | | | | |
| | | | | 748 | | 15 V 334614 6242799 | | | | | |
| | | | | 751 | | 15 V 326719 6239050 | | | | | |
| | | | | 775 | | 15 V 335695 6245799 | | | | | |
| | | | | 796 | | 15 V 361169 6250048 | | | | | |
| | | | | 817 | | 15 V 344144 6256125 | | | | | |
| | | | | 823 | | 15 V 350999 6252851 | | | | | |
| | | | | 824 | | 15 V 351662 6253054 | | | | | |
| | | | | 827 | | 15 V 353882 6252350 | | | | | |
| | | | | 828 | | 15 V 354744 6252081 | | | | | |
| | | | | 829 | | 15 V 354841 6252112 | | | | | |
| | | | | 835 | | 15 V 360177 6250226 | | | | | |
| | | | | 838 | | 15 V 357116 6251595 | | | | | |
| | | | | 847 | | 15 V 337432 6246354 | | | | | |
| | | | | Inactive | | | 1 | ✓ | 15 V 364033 6244770 | | |
| | | | | | | | | | 3 | ✓ | 15 V 362328 6244562 |
| | | | | | | | | | 4 | ✓ | 15 V 362770 6244449 |
| | | | | | | | | | 38 | ✓ | 15 V 338752 6242490 |

| Study Zone | Survey Route | Waterbody Type | Lodge Status | Lodge | Observed Previously | UTM |
|------------|--------------|----------------|--------------|-------|---------------------|---------------------|
| 3 | On | Stream | Inactive | 45 | ✓ | 15 V 346215 6246002 |
| | | | | 54 | ✓ | 15 V 338612 6246151 |
| | | | | 56 | ✓ | 15 V 350000 6247789 |
| | | | | 57 | ✓ | 15 V 349786 6247923 |
| | | | | 59.2 | ✓ | 15 V 349133 6248087 |
| | | | | 59.3 | ✓ | 15 V 349133 6248087 |
| | | | | 62 | ✓ | 15 V 346564 6246337 |
| | | | | 67 | ✓ | 15 V 338695 6246581 |
| | | | | 70 | ✓ | 15 V 335821 6245626 |
| | | | | 70.1 | | 15 V 335821 6245626 |
| | | | | 71 | ✓ | 15 V 335559 6246013 |
| | | | | 81 | ✓ | 15 V 329249 6243728 |
| | | | | 226 | ✓ | 15 V 347120 6240994 |
| | | | | 228 | ✓ | 15 V 346321 6240955 |
| | | | | 229 | ✓ | 15 V 346132 6240818 |
| | | | | 232 | ✓ | 15 V 338480 6242468 |
| | | | | 235 | ✓ | 15 V 336517 6243676 |
| | | | | 252 | ✓ | 15 V 357683 6251058 |
| | | | | 253 | ✓ | 15 V 357311 6251341 |
| | | | | 254 | ✓ | 15 V 356439 6251595 |
| | | | | 255 | ✓ | 15 V 355414 6252004 |
| | | | | 258 | ✓ | 15 V 353435 6252533 |
| | | | | 259 | ✓ | 15 V 352084 6252841 |
| | | | | 262 | ✓ | 15 V 350942 6252967 |
| | | | | 320 | ✓ | 15 V 389621 6244789 |
| | | | | 362 | ✓ | 15 V 372312 6243568 |
| | | | | 363 | ✓ | 15 V 371557 6243233 |
| | | | | 457 | ✓ | 15 V 365138 6246141 |
| | | | | 489 | ✓ | 15 V 339106 6242764 |
| | | | | 490 | ✓ | 15 V 336667 6243375 |

| Study Zone | Survey Route | Waterbody Type | Lodge Status | Lodge | Observed Previously | UTM | |
|------------|--------------|----------------|--------------|----------|---------------------|---------------------|---------------------|
| 3 | On | Stream | Inactive | 491 | ✓ | 15 V 336623 6243472 | |
| | | | | 493 | ✓ | 15 V 334479 6242221 | |
| | | | | 495 | ✓ | 15 V 334464 6241818 | |
| | | | | 500 | ✓ | 15 V 324758 6238427 | |
| | | | | 538 | ✓ | 15 V 346244 6246061 | |
| | | | | 559 | ✓ | 15 V 350815 6252911 | |
| | | | | 560 | ✓ | 15 V 351736 6253055 | |
| | | | | 561 | ✓ | 15 V 352451 6252761 | |
| | | | | 601 | ✓ | 15 V 353562 6252511 | |
| | | | | 623 | ✓ | 15 V 328281 6240165 | |
| | | | | 645 | ✓ | 15 V 359033 6250315 | |
| | | | | 652 | ✓ | 15 V 351081 6252986 | |
| | | | | 749 | | 15 V 328596 6240711 | |
| | | | | Unknown | Inactive | 669 | |
| | Off | Lake | Active | 465.1 | ✓ | 15 V 365072 6242911 | |
| | | | | 728 | | 15 V 363820 6248585 | |
| | | | | 731 | | 15 V 361563 6251994 | |
| | | | | Inactive | 463 | ✓ | 15 V 364205 6243313 |
| | | | | 464 | ✓ | 15 V 364329 6243277 | |
| | | | | 464.1 | | 15 V 364329 6243277 | |
| 465 | | | | ✓ | 15 V 365072 6242911 | | |
| 467 | | | | ✓ | 15 V 365556 6242519 | | |
| 468 | | | | ✓ | 15 V 365644 6242427 | | |
| 469 | | | | ✓ | 15 V 366533 6242798 | | |
| 572 | | | | ✓ | 15 V 355693 6253486 | | |
| Stream | | | | Active | 650 | ✓ | 15 V 354247 6252437 |
| 814 | | | | | 15 V 345668 6255542 | | |
| Inactive | | | | 230 | ✓ | 15 V 343041 6242407 | |
| 459 | | | | ✓ | 15 V 359675 6244274 | | |
| 462 | | | | ✓ | 15 V 363881 6243301 | | |

| Study Zone | Survey Route | Waterbody Type | Lodge Status | Lodge | Observed Previously | UTM | | |
|------------|--------------|----------------|--------------|---------------------|---------------------|---------------------|--------|---------------------|
| 3 | Off | Stream | Inactive | 462.1 | ✓ | 15 V 363881 6243301 | | |
| | | | | 466 | ✓ | 15 V 365450 6242611 | | |
| | | | | 499 | ✓ | 15 V 324842 6239008 | | |
| | | | | 647 | ✓ | 15 V 354975 6252210 | | |
| | | | | 648 | ✓ | 15 V 354834 6251901 | | |
| | | | | 649 | ✓ | 15 V 354391 6252354 | | |
| | | | | 815 | | 15 V 345617 6255524 | | |
| | | | | 816 | | 15 V 345714 6255378 | | |
| | | | | Unknown | Active | 231 | ✓ | 15 V 343319 6242337 |
| | | | | | | 275 | ✓ | 15 V 343918 6254337 |
| | | 303 | ✓ | | | 15 V 356322 6250445 | | |
| | | 312 | ✓ | | | 15 V 357538 6242074 | | |
| | | 571 | ✓ | | | 15 V 355926 6253095 | | |
| | | 658 | ✓ | | | 15 V 356666 6252781 | | |
| | | 818 | | | | 15 V 346978 6253755 | | |
| | | 830 | | | | 15 V 355607 6251186 | | |
| | | 831 | | | | 15 V 356225 6250415 | | |
| | | 833 | | | | 15 V 356451 6250964 | | |
| | | | | | Inactive | 286 | ✓ | 15 V 351856 6254693 |
| | | | | | | 290 | ✓ | 15 V 355819 6253396 |
| 293 | ✓ | | | | | 15 V 356225 6253023 | | |
| 296 | ✓ | | | | | 15 V 358001 6252608 | | |
| 304 | ✓ | | | | | 15 V 355996 6250444 | | |
| 313 | ✓ | | | | | 15 V 357294 6242176 | | |
| 792 | | | | | | 15 V 355687 6253235 | | |
| 811 | | | | | | 15 V 347810 6255037 | | |
| 832 | | | | | | 15 V 356691 6251092 | | |
| 4 | On | | | | | Lake | Active | 107 |
| | | 107.1 | | 15 V 350663 6233779 | | | | |
| | | 109 | ✓ | 15 V 354907 6233666 | | | | |

| Study Zone | Survey Route | Waterbody Type | Lodge Status | Lodge | Observed Previously | UTM |
|------------|--------------|----------------|--------------|-------|---------------------|---------------------|
| 4 | On | Lake | Active | 116 | ✓ | 15 V 353858 6233616 |
| | | | | 240 | ✓ | 15 V 320082 6236718 |
| | | | | 314 | ✓ | 15 V 357771 6240998 |
| | | | | 324 | ✓ | 15 V 389720 6243940 |
| | | | | 396 | ✓ | 15 V 355931 6259402 |
| | | | | 398 | ✓ | 15 V 357656 6259799 |
| | | | | 404 | ✓ | 15 V 358799 6262214 |
| | | | | 407 | ✓ | 15 V 349859 6262224 |
| | | | | 419 | ✓ | 15 V 372940 6258651 |
| | | | | 421 | ✓ | 15 V 372990 6260488 |
| | | | | 537 | ✓ | 15 V 331760 6248439 |
| | | | | 586 | ✓ | 15 V 354927 6234206 |
| | | | | 674 | | 15 V 357261 6263220 |
| | | | | 680 | | 15 V 352902 6265169 |
| | | | | 688 | | 15 V 363017 6264951 |
| | | | | 696 | | 15 V 385650 6242401 |
| | | | | 705 | | 15 V 350833 6234012 |
| | | | | 705.1 | | 15 V 350833 6234012 |
| | | | | 706 | | 15 V 353848 6234416 |
| | | | | 732 | | 15 V 364669 6252474 |
| | | | | 734 | | 15 V 362843 6255337 |
| | | | | 735 | | 15 V 373971 6259579 |
| | | | | 739 | | 15 V 381166 6260975 |
| | | | | 763 | | 14 V 681753 6235443 |
| | | | | 768 | | 15 V 317164 6244730 |
| | | | | 798 | | 15 V 360048 6256895 |
| | | | | 799 | | 15 V 359050 6256718 |
| | | | | 801 | | 15 V 353003 6257934 |
| | | | | 802 | | 15 V 347191 6259285 |
| | | | | 805 | | 15 V 349381 6258575 |

| Study Zone | Survey Route | Waterbody Type | Lodge Status | Lodge | Observed Previously | UTM |
|------------|--------------|----------------|--------------|-------|---------------------|---------------------|
| 4 | On | Lake | Inactive | 53 | ✓ | 15 V 342379 6241708 |
| | | | | 63 | ✓ | 15 V 346635 6247656 |
| | | | | 64 | ✓ | 15 V 346671 6247952 |
| | | | | 69 | ✓ | 15 V 338523 6248008 |
| | | | | 83 | ✓ | 15 V 331850 6248481 |
| | | | | 95 | ✓ | 15 V 318768 6245020 |
| | | | | 100 | ✓ | 15 V 317343 6244714 |
| | | | | 100.1 | | 15 V 317343 6244714 |
| | | | | 105 | ✓ | 15 V 320484 6242870 |
| | | | | 108 | ✓ | 15 V 351944 6234227 |
| | | | | 160 | ✓ | 15 V 367477 6238600 |
| | | | | 165 | ✓ | 15 V 388786 6253300 |
| | | | | 166 | ✓ | 15 V 397483 6251929 |
| | | | | 244 | ✓ | 15 V 318626 6234056 |
| | | | | 245 | ✓ | 15 V 314706 6233214 |
| | | | | 272 | ✓ | 15 V 345266 6250902 |
| | | | | 273 | ✓ | 15 V 348371 6252808 |
| | | | | 276 | ✓ | 15 V 346020 6256084 |
| | | | | 310 | ✓ | 15 V 359157 6241737 |
| | | | | 325 | ✓ | 15 V 383265 6247667 |
| | | | | 364 | ✓ | 15 V 368505 6242635 |
| | | | | 376 | ✓ | 15 V 354899 6257097 |
| | | | | 395 | ✓ | 15 V 356558 6259006 |
| | | | | 395.1 | | 15 V 356558 6259006 |
| | | | | 402 | ✓ | 15 V 360636 6259620 |
| | | | | 406 | ✓ | 15 V 359029 6263207 |
| | | | | 417 | ✓ | 15 V 368795 6259685 |
| | | | | 424 | ✓ | 15 V 378303 6259666 |
| | | | | 429 | ✓ | 15 V 384505 6260387 |
| | | | | 430 | ✓ | 15 V 375058 6257731 |

| Study Zone | Survey Route | Waterbody Type | Lodge Status | Lodge | Observed Previously | UTM | | |
|------------|--------------|----------------|--------------|---------------------|---------------------|---------------------|---|---------------------|
| 4 | On | Lake | Inactive | 454 | ✓ | 15 V 369304 6242081 | | |
| | | | | 460 | ✓ | 15 V 357329 6240948 | | |
| | | | | 517 | ✓ | 15 V 358909 6263134 | | |
| | | | | 536 | ✓ | 15 V 331754 6247369 | | |
| | | | | 556 | ✓ | 15 V 346026 6251387 | | |
| | | | | 585 | ✓ | 15 V 353435 6234320 | | |
| | | | | 613 | ✓ | 15 V 372121 6242671 | | |
| | | | | 629 | ✓ | 15 V 320408 6236231 | | |
| | | | | 635 | ✓ | 15 V 318997 6242932 | | |
| | | | | 736 | | 15 V 380629 6257388 | | |
| | | | | 737 | | 15 V 380039 6257902 | | |
| | | | | 740 | | 15 V 380909 6260992 | | |
| | | | | 741 | | 15 V 380511 6261460 | | |
| | | | | 744 | | 15 V 380794 6261692 | | |
| | | | | 764 | | 14 V 680384 6235542 | | |
| | | 797 | | 15 V 361098 6257560 | | | | |
| | | 808 | | 15 V 360360 6259097 | | | | |
| | | 821 | | 15 V 350539 6251234 | | | | |
| | | 825 | | 15 V 353060 6251911 | | | | |
| | | | | River | Active | 106 | ✓ | 15 V 350339 6233453 |
| | | | | | | 168 | ✓ | 15 V 410064 6251192 |
| | | | | | | 436 | ✓ | 15 V 414373 6250102 |
| | | | | | | 508 | ✓ | 14 V 685450 6245999 |
| | | | | | | 510 | ✓ | 14 V 684087 6249964 |
| | | | | | | 785 | | 15 V 406718 6250459 |
| | | | | 786 | | 15 V 410610 6251786 | | |
| | | | | 788 | | 15 V 402386 6248681 | | |
| | | | | 790 | | 15 V 400399 6249631 | | |
| | | | Inactive | 101 | ✓ | 15 V 314400 6243206 | | |
| | | | | 102 | ✓ | 14 V 684774 6246428 | | |



| Study Zone | Survey Route | Waterbody Type | Lodge Status | Lodge | Observed Previously | UTM |
|------------|--------------|---------------------|--------------|---------------------|---------------------|---------------------|
| 4 | On | River | Inactive | 103 | ✓ | 14 V 684396 6248627 |
| | | | | 438 | ✓ | 15 V 411202 6248343 |
| | | | | 509 | ✓ | 14 V 684896 6247209 |
| | | | | 636 | ✓ | 15 V 315987 6243409 |
| | | | | 637 | ✓ | 14 V 684635 6249117 |
| | | | | 767 | | 14 V 685491 6244724 |
| | | | | 68 | ✓ | 15 V 338254 6247593 |
| | | | | 169 | ✓ | 15 V 411141 6252791 |
| | | | | 170 | ✓ | 15 V 410528 6254700 |
| | | | | 179.1 | ✓ | 15 V 405067 6258143 |
| | | | | 215 | ✓ | 15 V 410236 6252358 |
| | | | | 233.1 | | 15 V 337932 6241861 |
| | | | | 263 | ✓ | 15 V 349603 6251982 |
| | | | | 263.1 | | 15 V 349603 6251982 |
| | | 264 | ✓ | 15 V 348683 6251958 | | |
| | | 338 | ✓ | 15 V 385454 6241850 | | |
| | | 411 | ✓ | 15 V 351766 6265871 | | |
| | | 412 | ✓ | 15 V 352159 6265309 | | |
| | | 413 | ✓ | 15 V 352367 6265284 | | |
| | | 413.1 | | 15 V 352367 6265284 | | |
| | | 413.2 | | 15 V 352367 6265284 | | |
| | | 413.3 | | 15 V 352367 6265284 | | |
| | | 448 | ✓ | 15 V 384875 6242427 | | |
| | | 529 | ✓ | 15 V 406392 6257051 | | |
| | | 626 | ✓ | 15 V 401801 6259154 | | |
| | | 746 | | 15 V 337768 6240550 | | |
| | | 753 | | 15 V 324488 6237663 | | |
| | | 776 | | 15 V 334832 6247204 | | |
| 803 | | 15 V 345973 6259254 | | | | |
| 804 | | 15 V 343866 6258885 | | | | |
| | | Stream | Active | | | |

| Study Zone | Survey Route | Waterbody Type | Lodge Status | Lodge | Observed Previously | UTM |
|------------|--------------|---------------------|--------------|-------|---------------------|---------------------|
| 4 | On | Stream | Active | 820 | | 15 V 350064 6252010 |
| | | | | 839 | | 15 V 412608 6253048 |
| | | | | 840 | | 15 V 409967 6254807 |
| | | | | 842 | | 15 V 402350 6258747 |
| | | | | 2111 | ✓ | 15 V 408973 6251902 |
| | | | Inactive | 73 | ✓ | 15 V 335395 6246195 |
| | | | | 74 | ✓ | 15 V 335368 6246488 |
| | | | | 74.1 | | 15 V 335368 6246488 |
| | | | | 75 | ✓ | 15 V 335308 6246576 |
| | | | | 76 | ✓ | 15 V 334634 6247326 |
| | | | | 161 | ✓ | 15 V 367824 6238440 |
| | | | | 174 | ✓ | 15 V 406198 6257347 |
| | | | | 176 | ✓ | 15 V 405980 6257658 |
| | | | | 177 | ✓ | 15 V 405729 6257862 |
| | | | | 178 | ✓ | 15 V 405317 6258170 |
| | | | | 189 | ✓ | 15 V 402460 6258937 |
| | | | | 190.1 | ✓ | 15 V 402306 6259023 |
| | | | | 191 | ✓ | 15 V 401598 6259211 |
| | | | | 193 | ✓ | 15 V 401632 6258996 |
| | | | | 198 | ✓ | 15 V 399197 6259275 |
| | | | | 203 | ✓ | 15 V 405665 6252061 |
| | | | | 204 | ✓ | 15 V 405747 6252236 |
| | | | | 209 | ✓ | 15 V 408745 6251908 |
| | | | | 209.1 | ✓ | 15 V 408745 6251908 |
| | | | | 209.2 | | 15 V 408745 6251908 |
| | | | | 212 | ✓ | 15 V 409413 6252110 |
| | | | | 214 | ✓ | 15 V 410027 6252301 |
| | | | | 217 | ✓ | 15 V 411581 6252892 |
| 218 | ✓ | 15 V 411723 6252931 | | | | |
| 219.1 | ✓ | 15 V 411850 6252957 | | | | |

| Study Zone | Survey Route | Waterbody Type | Lodge Status | Lodge | Observed Previously | UTM |
|------------|--------------|----------------|--------------|-------|---------------------|---------------------|
| 4 | On | Stream | Inactive | 220 | ✓ | 15 V 412208 6252982 |
| | | | | 221 | ✓ | 15 V 412298 6253056 |
| | | | | 233 | ✓ | 15 V 337932 6241861 |
| | | | | 238 | ✓ | 15 V 329654 6238879 |
| | | | | 265 | ✓ | 15 V 348465 6251982 |
| | | | | 279 | ✓ | 15 V 344158 6256363 |
| | | | | 339 | ✓ | 15 V 385537 6241707 |
| | | | | 409 | ✓ | 15 V 351927 6265620 |
| | | | | 449 | ✓ | 15 V 384647 6242241 |
| | | | | 521 | ✓ | 15 V 401484 6259091 |
| | | | | 522 | ✓ | 15 V 402017 6259176 |
| | | | | 535 | ✓ | 15 V 335151 6246783 |
| | | | | 550 | ✓ | 15 V 344518 6259036 |
| | | | | 576 | ✓ | 15 V 346120 6256178 |
| | | | | 589 | ✓ | 15 V 410760 6252620 |
| | | | | 590 | ✓ | 15 V 409747 6252258 |
| | | | | 591 | ✓ | 15 V 409134 6252065 |
| | | | | 592 | ✓ | 15 V 408425 6252141 |
| | | | | 611 | ✓ | 15 V 385189 6241052 |
| | | | | 620 | ✓ | 15 V 346089 6240542 |
| | | | | 661 | ✓ | 15 V 346104 6259344 |
| | | | | 750 | | 15 V 329924 6239315 |
| | | | | 752 | | 15 V 324508 6237925 |
| | Off | Lake | Active | 377 | ✓ | 15 V 354867 6256548 |
| 400 | | | | ✓ | 15 V 358263 6260084 | |
| 400.1 | | | | ✓ | 15 V 358263 6260084 | |
| 400.2 | | | | | 15 V 358263 6260084 | |
| 408 | | | | ✓ | 15 V 349416 6262235 | |
| 426 | | | | ✓ | 15 V 379185 6262756 | |
| 503 | | | | ✓ | 14 V 685166 6231310 | |

| Study Zone | Survey Route | Waterbody Type | Lodge Status | Lodge | Observed Previously | UTM |
|------------|--------------|---------------------|--------------|-------|---------------------|---------------------|
| 4 | Off | Lake | Active | 632 | ✓ | 14 V 682031 6233671 |
| | | | | 675 | | 15 V 355007 6260334 |
| | | | | 677 | | 15 V 354390 6259636 |
| | | | | 684 | | 15 V 354521 6267067 |
| | | | | 693 | | 15 V 373141 6261988 |
| | | | | 695 | | 15 V 385783 6242134 |
| | | | | 720 | | 15 V 345895 6248042 |
| | | | | 733 | | 15 V 362593 6255695 |
| | | | | 738 | | 15 V 377974 6261211 |
| | | | | 759 | | 15 V 322526 6233922 |
| | | | | 760 | | 15 V 318646 6233905 |
| | | | | 762 | | 15 V 314488 6233125 |
| | | | | 769 | | 15 V 320376 6242808 |
| | | | | 770 | | 15 V 320378 6243253 |
| | | | | 806 | | 15 V 351667 6259577 |
| | | | Inactive | 55 | ✓ | 15 V 375905 6258560 |
| | | | | 98 | ✓ | 15 V 317446 6246574 |
| | | | | 99 | ✓ | 15 V 317555 6246892 |
| | | | | 247 | ✓ | 14 V 684858 6232160 |
| | | | | 277 | ✓ | 15 V 346242 6256599 |
| | | | | 302 | ✓ | 15 V 359417 6253828 |
| | | | | 337 | ✓ | 15 V 385369 6242066 |
| | | | | 420 | ✓ | 15 V 372476 6259929 |
| | | | | 431 | ✓ | 15 V 378696 6260849 |
| | | | | 431.1 | ✓ | 15 V 378696 6260849 |
| | | | | 497 | ✓ | 15 V 329512 6238532 |
| | | | | 498 | ✓ | 15 V 326940 6238566 |
| 501 | ✓ | 14 V 685032 6232067 | | | | |
| 504 | ✓ | 14 V 683790 6231832 | | | | |
| 505 | ✓ | 14 V 683552 6231416 | | | | |

| Study Zone | Survey Route | Waterbody Type | Lodge Status | Lodge | Observed Previously | UTM | | |
|------------|--------------|---------------------|--------------|---------------------|---------------------|---------------------|---|---------------------|
| 4 | Off | Lake | Inactive | 507 | ✓ | 15 V 317609 6246401 | | |
| | | | | 516 | ✓ | 15 V 358978 6262204 | | |
| | | | | 532 | ✓ | 15 V 320710 6243381 | | |
| | | | | 615 | ✓ | 15 V 365917 6241786 | | |
| | | | | 631 | ✓ | 14 V 685142 6231150 | | |
| | | | | 633 | ✓ | 14 V 681620 6233319 | | |
| | | | | 639 | ✓ | 15 V 320918 6243197 | | |
| | | | | 659 | ✓ | 15 V 359127 6253844 | | |
| | | | | 690 | | 15 V 366078 6258744 | | |
| | | | | 694 | | 15 V 372669 6262419 | | |
| | | River | Active | 800 | | 15 V 354708 6256578 | | |
| | | | | 704 | | 15 V 350089 6233542 | | |
| | | | | 704.1 | | 15 V 350089 6233542 | | |
| | | | | 765 | | 15 V 318641 6243925 | | |
| | | | | 765.1 | | 15 V 318641 6243925 | | |
| | | | | 765.2 | | 15 V 318641 6243925 | | |
| | | | | Stream | Active | 86 | ✓ | 15 V 333218 6248544 |
| | | | | | | 271 | ✓ | 15 V 347272 6251607 |
| | | 323 | ✓ | | | 15 V 391001 6244274 | | |
| | | 350 | ✓ | | | 15 V 380624 6242509 | | |
| | | 450 | ✓ | | | 15 V 384216 6242222 | | |
| | | 568 | ✓ | | | 15 V 358681 6254049 | | |
| | | 668 | | | | 15 V 392294 6244355 | | |
| | | 687 | | | | 15 V 363949 6265537 | | |
| | | 745 | | | | 15 V 384601 6261233 | | |
| | | 756 | | | | 15 V 324473 6234415 | | |
| | | 773 | | 15 V 328725 6244224 | | | | |
| | | 777 | | 15 V 334757 6248017 | | | | |
| 778 | | 15 V 334677 6248746 | | | | | | |
| 780 | | 15 V 334454 6248813 | | | | | | |

| Study Zone | Survey Route | Waterbody Type | Lodge Status | Lodge | Observed Previously | UTM |
|------------|--------------|---------------------|--------------|---------|---------------------|---------------------|
| 4 | Off | Stream | Active | 794 | | 15 V 344290 6256584 |
| | | | | 810 | | 15 V 351834 6256550 |
| | | | Inactive | 77 | ✓ | 15 V 334604 6247391 |
| | | | | 78 | ✓ | 15 V 334662 6247613 |
| | | | | 87 | ✓ | 15 V 333473 6248591 |
| | | | | 267 | ✓ | 15 V 348281 6251752 |
| | | | | 267.1 | ✓ | 15 V 348281 6251752 |
| | | | | 269 | ✓ | 15 V 347864 6251700 |
| | | | | 270 | ✓ | 15 V 347438 6251575 |
| | | | | 299 | ✓ | 15 V 358064 6254030 |
| | | | | 300 | ✓ | 15 V 358023 6254454 |
| | | | | 322.1 | ✓ | 15 V 390597 6244233 |
| | | | | 348 | ✓ | 15 V 381214 6242950 |
| | | | | 349 | ✓ | 15 V 380959 6242768 |
| | | | | 380 | ✓ | 15 V 351216 6256796 |
| | | | | 382 | ✓ | 15 V 351923 6256187 |
| | | | | 428 | ✓ | 15 V 378498 6263009 |
| | | | | 432 | ✓ | 15 V 378472 6263221 |
| | | | | 432.1 | | 15 V 378472 6263221 |
| | | | | 434 | ✓ | 15 V 377992 6263748 |
| | | | | 434.1 | | 15 V 377992 6263748 |
| | | | | 435 | ✓ | 15 V 384560 6260987 |
| | | | | 686 | | 15 V 363520 6265221 |
| | | | | 757 | | 15 V 324351 6234434 |
| | | | | 779 | | 15 V 334562 6248851 |
| | | | | 781 | | 15 V 334033 6248730 |
| | | | | Unknown | Active | 268 |
| 285 | ✓ | 15 V 351217 6255396 | | | | |
| 391.1 | ✓ | 15 V 352751 6259386 | | | | |
| 391.2 | ✓ | 15 V 352751 6259386 | | | | |

| Study Zone | Survey Route | Waterbody Type | Lodge Status | Lodge | Observed Previously | UTM |
|------------|--------------|---------------------|--------------|-------|---------------------|---------------------|
| 4 | Off | Unknown | Active | 393 | ✓ | 15 V 353385 6259114 |
| | | | | 418 | ✓ | 15 V 368231 6259980 |
| | | | | 422 | ✓ | 15 V 373520 6261035 |
| | | | | 437 | ✓ | 15 V 411853 6248487 |
| | | | | 676 | | 15 V 356361 6260548 |
| | | | | 682 | | 15 V 355484 6265144 |
| | | | | 685 | | 15 V 356812 6269166 |
| | | | | 691 | | 15 V 369685 6259649 |
| | | | | 716 | | 15 V 359504 6241574 |
| | | | | 742 | | 15 V 380015 6263132 |
| | | | | 754 | | 15 V 320497 6237885 |
| | | | | 787 | | 15 V 409050 6247570 |
| | | | | 789 | | 15 V 400885 6248278 |
| | | | | 813 | | 15 V 348652 6256169 |
| | | | 819 | | 15 V 348419 6252648 | |
| | | | Inactive | 97 | ✓ | 15 V 317743 6246038 |
| | | | | 284 | ✓ | 15 V 351238 6255170 |
| | | | | 291 | ✓ | 15 V 355490 6254124 |
| | | | | 321.1 | ✓ | 15 V 390407 6244015 |
| | | | | 336 | ✓ | 15 V 386631 6241905 |
| | | | | 366 | ✓ | 15 V 368288 6242609 |
| | | | | 381 | ✓ | 15 V 351713 6256097 |
| | | | | 392 | ✓ | 15 V 353052 6259275 |
| | | | | 394 | ✓ | 15 V 354613 6258714 |
| | | | | 397 | ✓ | 15 V 354978 6259757 |
| | | | | 399 | ✓ | 15 V 357923 6259887 |
| | | | | 414 | ✓ | 15 V 356974 6269524 |
| | | | | 414.1 | | 15 V 356974 6269524 |
| 683 | | 15 V 354360 6267046 | | | | |
| 689 | | 15 V 369290 6259802 | | | | |

| Study Zone | Survey Route | Waterbody Type | Lodge Status | Lodge | Observed Previously | UTM |
|------------|--------------|---------------------|--------------|-------|---------------------|---------------------|
| 4 | Off | Unknown | Inactive | 692 | | 15 V 369077 6259850 |
| | | | | 743 | | 15 V 379818 6263316 |
| | | | | 755 | | 15 V 321136 6237902 |
| | | | | 758 | | 15 V 325006 6234726 |
| | | | | 761 | | 15 V 318829 6233636 |
| | | | | 782 | | 15 V 338278 6248995 |
| | | | | 793 | | 15 V 351632 6255156 |
| | | | | 795 | | 15 V 348465 6252384 |
| | | | | 822 | | 15 V 351297 6251175 |
| 5 | On | Lake | Active | 94 | ✓ | 14 V 674416 6238974 |
| | | | | 110 | ✓ | 15 V 355828 6233141 |
| | | | | 118 | ✓ | 15 V 357310 6231563 |
| | | | | 122 | ✓ | 15 V 361099 6229879 |
| | | | | 128 | ✓ | 15 V 362773 6230389 |
| | | | | 133 | ✓ | 15 V 360130 6228927 |
| | | | | 137 | ✓ | 15 V 358444 6227961 |
| | | | | 138 | ✓ | 15 V 358520 6228794 |
| | | | | 139 | ✓ | 15 V 357444 6230110 |
| | | | | 139.1 | ✓ | 15 V 357444 6230110 |
| | | | | 141 | ✓ | 15 V 357528 6230195 |
| | | | | 144 | ✓ | 15 V 356453 6231917 |
| | | | | 145 | ✓ | 15 V 353924 6232462 |
| | | | | 146 | ✓ | 15 V 353903 6233064 |
| | | | | 579 | ✓ | 15 V 368697 6236093 |
| | | | | 587 | ✓ | 15 V 356788 6232955 |
| | | | | 700 | | 15 V 358819 6229216 |
| 701 | | 15 V 358156 6227821 | | | | |
| 702 | | 15 V 358863 6228273 | | | | |
| 708 | | 15 V 356758 6233232 | | | | |
| 709 | | 15 V 356587 6232597 | | | | |

| Study Zone | Survey Route | Waterbody Type | Lodge Status | Lodge | Observed Previously | UTM | |
|------------|--------------|---------------------|--------------|---------------------|---------------------|---------------------|---------------------|
| 5 | On | Lake | Active | 710 | | 15 V 357737 6232135 | |
| | | | | 791 | | 14 V 676658 6239228 | |
| | | | Inactive | 93 | ✓ | 14 V 675300 6239201 | |
| | | | | 111 | ✓ | 15 V 356018 6233333 | |
| | | | | 113 | ✓ | 15 V 356939 6233167 | |
| | | | | 114 | ✓ | 15 V 357181 6232917 | |
| | | | | 115 | ✓ | 15 V 356307 6232668 | |
| | | | | 117 | ✓ | 15 V 357220 6231926 | |
| | | | | 117.1 | | 15 V 357220 6231926 | |
| | | | | 121 | ✓ | 15 V 360748 6230038 | |
| | | | | 124 | ✓ | 15 V 361813 6230225 | |
| | | | | 125 | ✓ | 15 V 362412 6230461 | |
| | | | | 132 | ✓ | 15 V 359730 6228582 | |
| | | | | 134 | ✓ | 15 V 359238 6228214 | |
| | | | | 134.1 | | 15 V 359238 6228214 | |
| | | | | 143 | ✓ | 15 V 357125 6231239 | |
| | | | | 148 | ✓ | 15 V 368473 6235918 | |
| | | | | 150 | ✓ | 15 V 369659 6235734 | |
| | | | | 588 | ✓ | 15 V 356097 6232223 | |
| | | | | 703 | | 15 V 356229 6231902 | |
| | | | | 707 | | 15 V 355537 6233167 | |
| | | | | 711 | | 15 V 358519 6232227 | |
| | | | River | Active | 225 | ✓ | 15 V 401357 6247302 |
| | | | | Inactive | 638 | ✓ | 14 V 682922 6250134 |
| | | | Stream | Active | 154 | ✓ | 15 V 367018 6236327 |
| | | | | | 180 | ✓ | 15 V 404592 6257777 |
| | | | | | 200 | ✓ | 15 V 404685 6253764 |
| 385 | ✓ | 15 V 342382 6261586 | | | | | |
| 386 | ✓ | 15 V 341072 6262780 | | | | | |
| | | 410.1 | | 15 V 351905 6266166 | | | |

| Study Zone | Survey Route | Waterbody Type | Lodge Status | Lodge | Observed Previously | UTM | |
|------------|--------------|---------------------|--------------|----------|---------------------|---------------------|---------------------|
| 5 | On | Stream | Active | 470 | ✓ | 15 V 368393 6237965 | |
| | | | | 519 | ✓ | 15 V 399321 6259051 | |
| | | | | 523 | ✓ | 15 V 402525 6257690 | |
| | | | | 545 | ✓ | 15 V 341079 6262371 | |
| | | | | 578 | ✓ | 15 V 368106 6237822 | |
| | | | | 843 | | 15 V 403698 6257516 | |
| | | | | Inactive | 155 | ✓ | 15 V 366789 6236430 |
| | | | | | 156 | ✓ | 15 V 366574 6237173 |
| | | | 157 | | ✓ | 15 V 366732 6237551 | |
| | | | 162 | | ✓ | 15 V 368010 6237915 | |
| | | | 162.1 | | ✓ | 15 V 368010 6237915 | |
| | | | 164 | | ✓ | 15 V 368419 6237994 | |
| | | | 171 | | ✓ | 15 V 407483 6255627 | |
| | | | 181 | | ✓ | 15 V 404481 6257690 | |
| | | | 183 | | ✓ | 15 V 404216 6257373 | |
| | | | 186 | | ✓ | 15 V 402603 6257983 | |
| | | | 196 | | ✓ | 15 V 400460 6258814 | |
| | | | 197 | | ✓ | 15 V 399994 6258899 | |
| | | | 201 | | ✓ | 15 V 404571 6253331 | |
| | | | 202 | | ✓ | 15 V 404331 6252756 | |
| | | | 205 | | ✓ | 15 V 406449 6252708 | |
| | | | 207 | | ✓ | 15 V 407230 6252386 | |
| | | | 208 | | ✓ | 15 V 407613 6252174 | |
| | | | 388 | | ✓ | 15 V 341960 6261873 | |
| | | | 410 | | ✓ | 15 V 351905 6266166 | |
| | | | 447 | | ✓ | 15 V 384881 6240409 | |
| | | | 471 | ✓ | 15 V 366810 6237918 | | |
| | | | 520 | ✓ | 15 V 399630 6258871 | | |
| 524 | ✓ | 15 V 402793 6257599 | | | | | |
| 526 | ✓ | 15 V 404151 6257311 | | | | | |

| Study Zone | Survey Route | Waterbody Type | Lodge Status | Lodge | Observed Previously | UTM | | | | | |
|------------|--------------|----------------|---------------------|-------|---------------------|---------------------|-------|----------|---------------------|---|---------------------|
| 5 | On | Stream | Inactive | 530 | ✓ | 15 V 407254 6256176 | | | | | |
| | | | | 546 | ✓ | 15 V 342092 6261699 | | | | | |
| | | | | 547 | ✓ | 15 V 342319 6261628 | | | | | |
| | | | | 593 | ✓ | 15 V 408049 6252072 | | | | | |
| | | | | 596 | ✓ | 15 V 404565 6253187 | | | | | |
| | | | | 625 | ✓ | 15 V 404534 6254261 | | | | | |
| | | | | 625.1 | | 15 V 404534 6254261 | | | | | |
| | | | | 846 | | 15 V 368356 6237843 | | | | | |
| | | | | Off | Lake | Active | 712 | | 15 V 361814 6231553 | | |
| | | | | | | | 713 | | 15 V 361448 6231775 | | |
| | | | | | | | 766 | | 14 V 682768 6250571 | | |
| | | | | | | | | Inactive | 123 | ✓ | 15 V 361172 6230404 |
| | | | | | | | River | Active | 104 | ✓ | 14 V 683290 6250725 |
| | | | | | | | | | 130 | ✓ | 15 V 364068 6231392 |
| | | | | | 131 | ✓ | | | 15 V 363959 6231359 | | |
| | 582 | ✓ | 15 V 369158 6234017 | | | | | | | | |
| | 582.1 | | 15 V 369158 6234017 | | | | | | | | |
| | 599 | ✓ | 15 V 365146 6231497 | | | | | | | | |
| | 600 | ✓ | 15 V 365839 6231637 | | | | | | | | |
| | 600.1 | | 15 V 365839 6231637 | | | | | | | | |
| | 600.2 | | 15 V 365839 6231637 | | | | | | | | |
| | 697 | | 15 V 368257 6232833 | | | | | | | | |
| | 698 | | 15 V 365543 6231665 | | | | | | | | |
| | 699 | | 15 V 364550 6230608 | | | | | | | | |
| | 699.1 | | 15 V 364550 6230608 | | | | | | | | |
| | 699.2 | | 15 V 364550 6230608 | | | | | | | | |
| | | Inactive | 129 | ✓ | 15 V 363627 6231175 | | | | | | |
| | | | 511 | ✓ | 14 V 683362 6250271 | | | | | | |
| | | | 598 | ✓ | 15 V 364653 6231236 | | | | | | |
| | | Stream | Active | 584 | ✓ | 15 V 359665 6227902 | | | | | |

| Study Zone | Survey Route | Waterbody Type | Lodge Status | Lodge | Observed Previously | UTM |
|------------|--------------|----------------|--------------|-------|---------------------|---------------------|
| 5 | Off | Stream | Active | 678 | | 15 V 348127 6264460 |
| | | | Inactive | 135 | ✓ | 15 V 359505 6227901 |
| | | | | 136 | ✓ | 15 V 359744 6227871 |
| | | | | 518 | ✓ | 15 V 351628 6266303 |
| | | | | 679 | | 15 V 351180 6266412 |
| | | Unknown | Inactive | 126 | ✓ | 15 V 362538 6230843 |
| | | | | 140 | ✓ | 15 V 356909 6230030 |