2023 Fish Community Assessment of Four Bass Lake, in the vicinity of the Matabitchuan GS intake

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1 Introduction

C. Portt and Associates was retained by Ontario Power Generation Inc. (OPG) to conduct a fish community assessment of Fourbass Lake, in the vicinity of the Matabitchuan Generating Station (GS) intake, for the purpose of evaluating the fish that could potentially be entrained into the GS. The Matabitchuan GS is located on the Matabitchuan River, 3.6 km upstream from Lake Timiskaming, and approximately 37 km south of Haileybury, Ontario (Figure 1-1). This document presents the results of sampling in August and November of 2023.

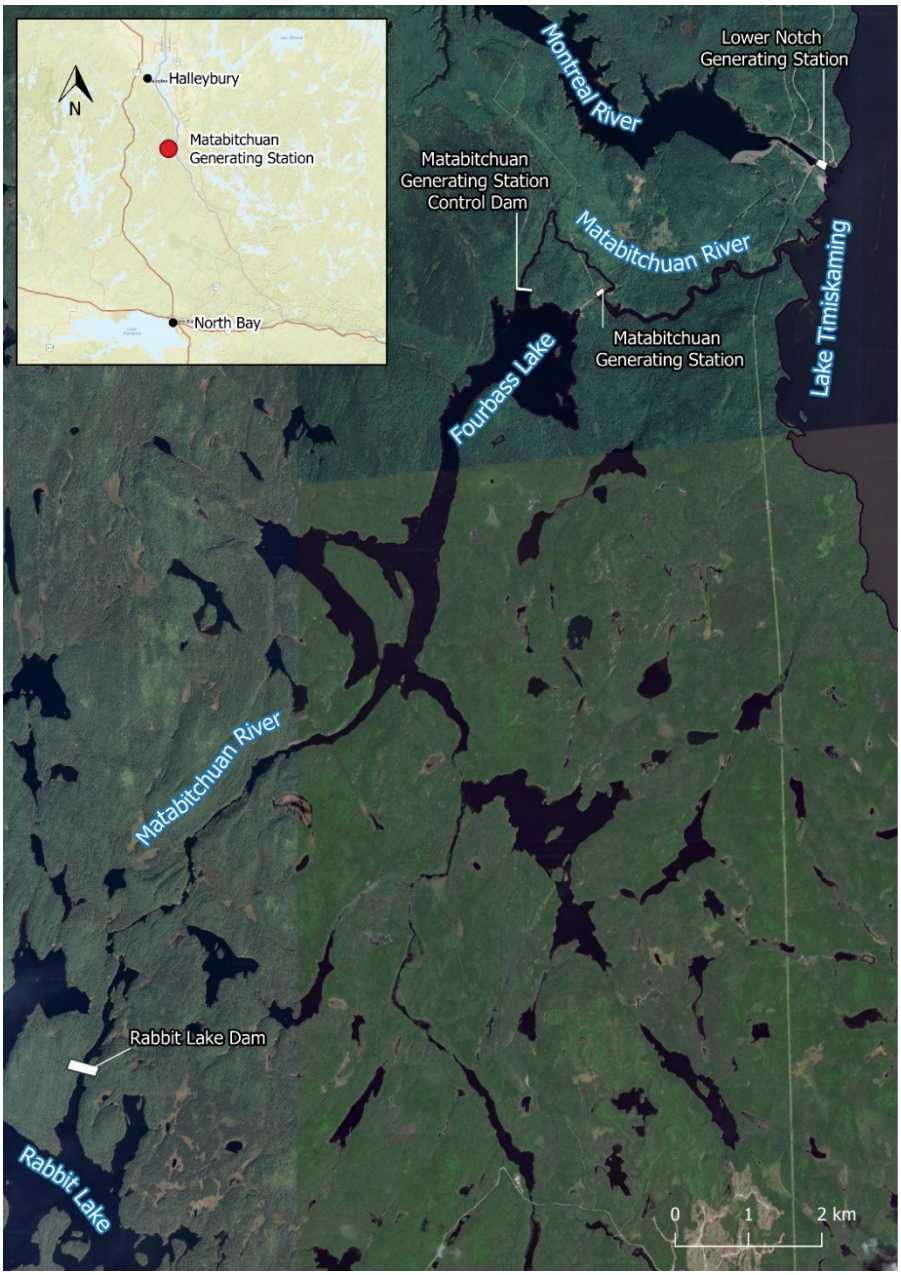

Figure 1-1. Location of the Matabitchuan Generating Station.

2 Background

The four unit generating station was constructed in 1910 and has a name plate capacity of 7.5 megawatts. Its installed capacity is approximately 10 megawatts, with a hydraulic head of 95 meters and a maximum flow of 14 m^3/s (OMNR and OPG, 2007; OPG 2020). It is located within the lower portion of the Matabitchuan River watershed, which flows into Lake Timiskaming.

Figure 2-1 identifies the GS infrastructure and illustrates the general layout in the vicinity of the GS. The Matabitchuan GS control dam (sluicegates) and intake structure are located on Fourbass Lake, approximately 800 m apart. The control dam and intake structure divert water to the powerhouse through penstocks, bypassing approximately 3 km of the Matabitchuan River that is now the spillway. Downstream from the GS the Matabitchuan River winds 3.6 km east to Lake Timiskaming (Figure 1-1; Figure 2-1).

Figure 2-1. Matabitchuan River in the vicinity of the Matabitchuan GS.

In the vicinity of the GS intake, Fourbass Lake generally drops off abruptly, becoming greater than 1 m deep a short distance from shore. The inshore area has occasional areas of steep bedrock slopes, but is otherwise dominated by boulders and cobble material, with an abundance of large wood debris. Sheltered areas along the shoreline locations tend to have finer substrates, but still with an abundance of wood debris, some of which is floating, as well as emergent and submergent

aquatic plants. Farther offshore the bottom is a patchwork of coarse rocky material and areas of finer substrates, with the proportion of finer and softer substrates increasing with distance from shore and increasing depth.

3 Field Investigations

3.1 Methods

Field investigations were conducted on two occasions. On August 14-18, 2023, C. Portt and Associates staff (G. Coker, S. Coker), accompanied by a member of the Temagami First nation (Chris Ricker) on August 16-18, captured fish using a seine, a backpack electrofisher, wire-mesh traps, and gillnets, and measured dissolved oxygen and temperature profiles in Fourbass Lake. On November 7 and 8, 2023, C. Portt and Associates staff (C. Portt, G. Coker) captured fish with fish traps only. A boat and motor were used during the August 14-18, 2023, field investigations, but on November 7 and 8, 2023, the work was conducted by wading from shore. A Garmin GPSmap 76CSx Global Positioning System (GPS) unit was used to determine the coordinates of sampling locations and observations, including the locations of digital photographs of habitat. Sampling locations are shown in Figure 3-1 (August) and Figure 3-2 (November). Photographs of representative nearshore habitat are provided in Appendix A.

Two types of fish traps, constructed of 6.25 mm (1/4 inch) steel wire mesh and manufactured by K-Traps LLC (www.ktraps.com) were used. One type, referred to as river traps, consisted of a rectangular box 91 cm long, 46 cm wide, and 30 cm high, with a slot opening at one end that was the full height of the trap and either 25 mm or 37.5 mm wide. The second type, referred to as cloverleaf traps, were 91 cm in diameter and 38 cm high and consisted of three lobes with slot openings between the lobes (i.e., three slot openings) that were the full height of the trap and either 25 mm or 37.5 mm wide. At each location where a trap was deployed the coordinates were determined using a handheld GPS and depth was measured with a weighted sounding line. Where substrate was visible the dominant and subdominant particle sizes, following the classification of Wentworth (1922), were recorded. The presence of aquatic vegetation and woody debris were recorded if observed. The date and time when each trap was set and lifted were recorded and used to calculate soak time.

Both trap types were used in August, set by wading or from a boat, at depths ranging from 0.6 to 5.5 metres (Figure 3-1). A total of 48 overnight sets were conducted. The mean, minimum and maximum depth of trap sets, by trap type and month, are presented in Table 3-1. In August the river traps were generally set in shallower water, closer to shore, than the cloverleaf traps because the cloverleaf traps were more difficult to deploy horizontally over the coarse substrate that dominated close to shore (Figure 3-3). In November, six overnight and six daytime sets were conducted using cloverleaf traps set by wading at shallow locations near shore (Figure 3-2).

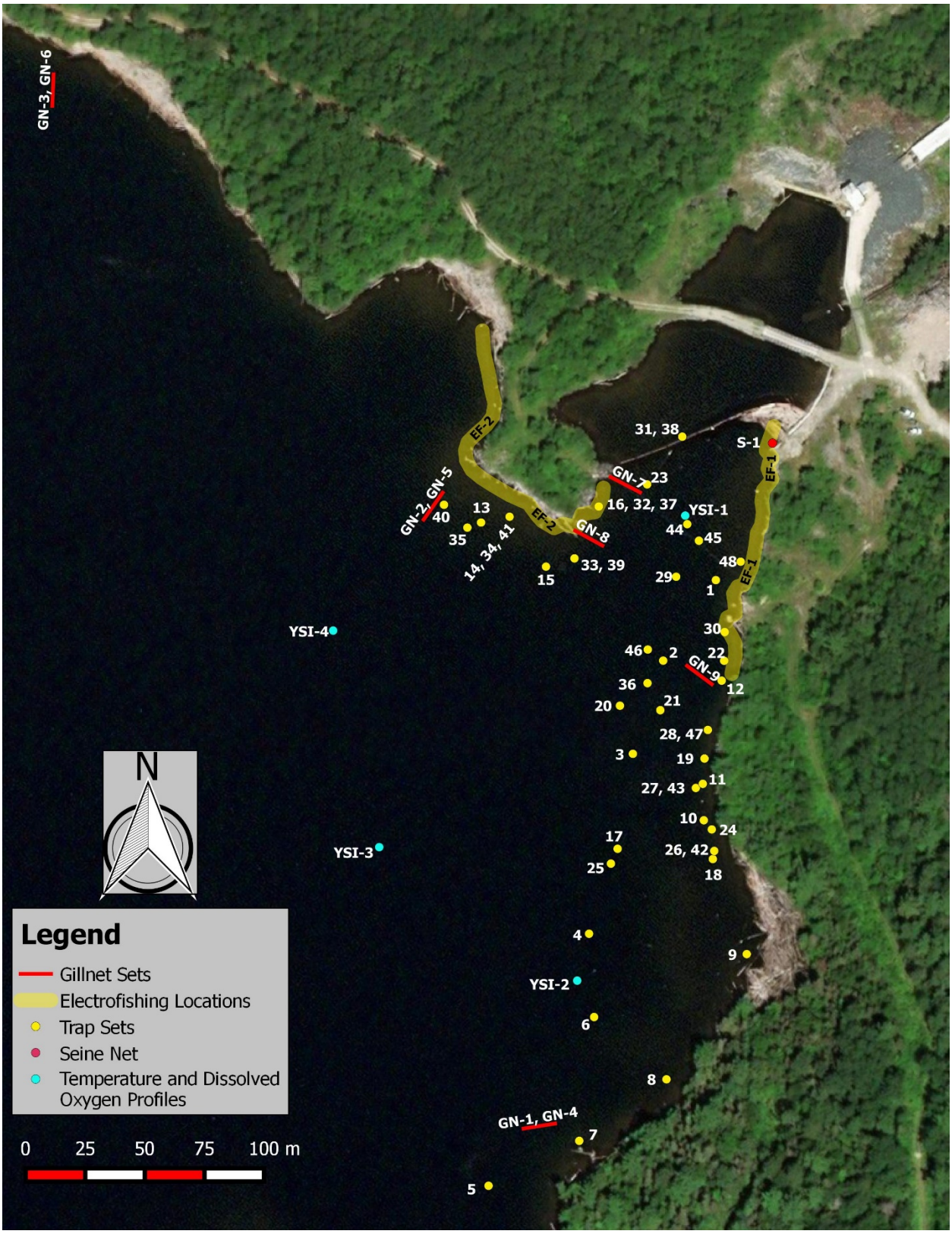

Figure 3-1. Fish sampling and water temperature and dissolved oxygen profiles locations during the period August 14 – 18, 2023.

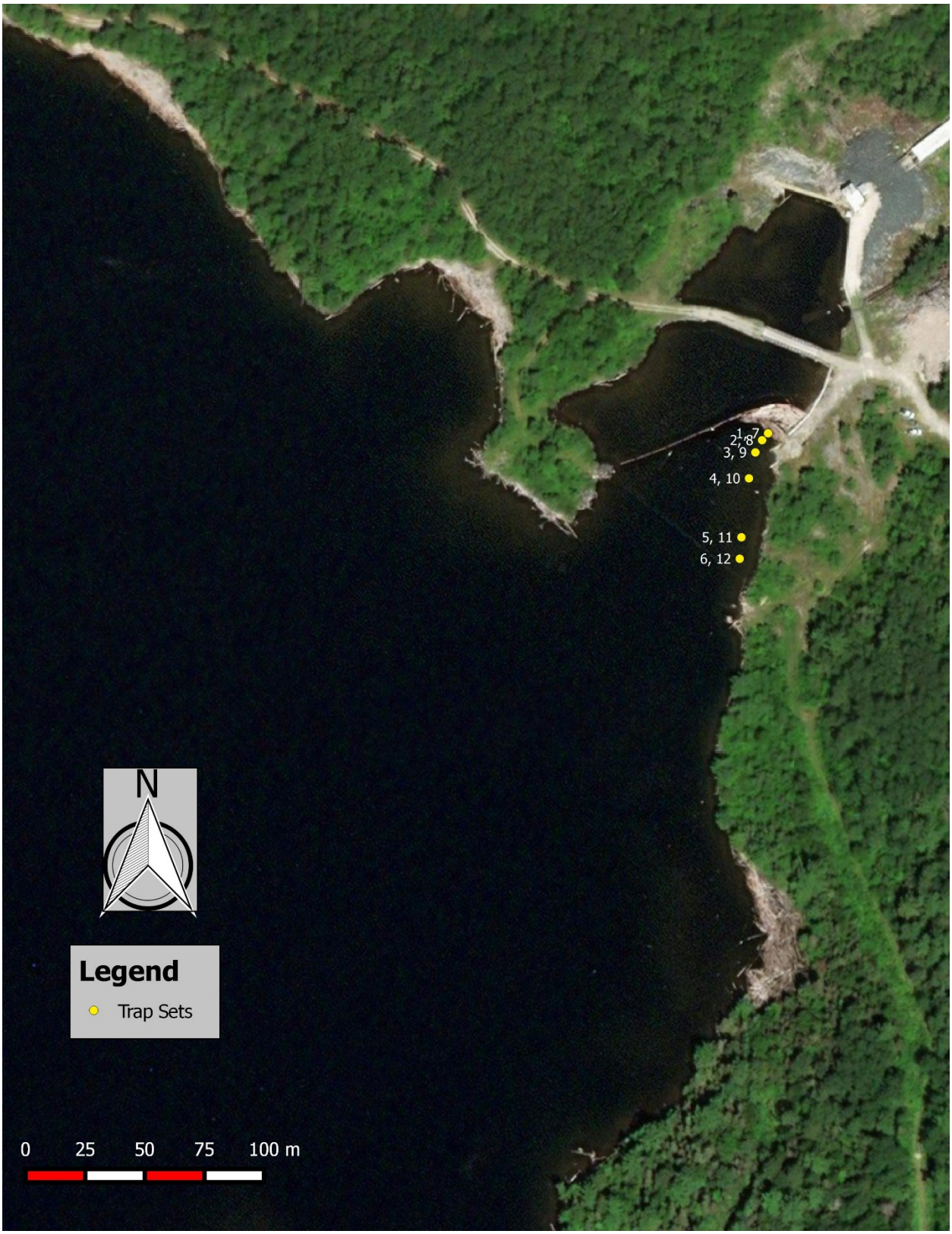

Figure 3-2. Locations where fish traps were set during the period November 7 – 8, 2023.

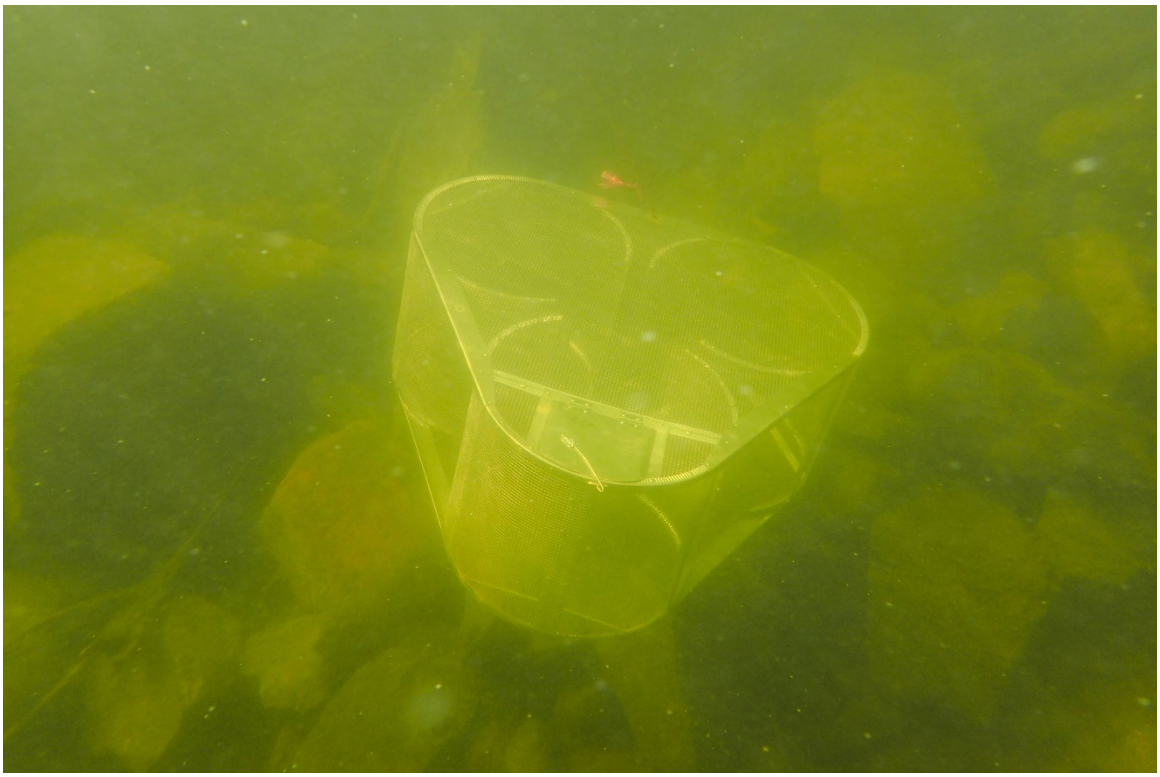

Figure 3-3. Cloverleaf fish trap set on coarse substrate.

Table 3-1. Mean, minimum and maximum depth of trap sets by trap type and month.

Month	Trap type	Number of sets	Depth (m)		
			Mean	Minimum	Maximum
August	cloverleaf	24	3.2	1.3	5.5
	river	24	1.0	0.6	1.5
November	cloverleaf	12	0.9	0.84	1.02

In August, small-mesh river index gillnets (Jones and Yunker, 2009) were deployed nine times (Figure 3-1). Each gillnet was 0.9 m deep and 12.5 m long, composed of five 2.5 m long panels of 38, 32, 25, 19, and 13 mm mesh size (stretch measurement). The gillnets were set roughly perpendicular to shore at depths of 0.5 m – 5 m. Three initial daytime gillnet sets were of approximately four hours duration and the remaining six sets were overnight and up to 24 hours in duration.

Electrofishing was conducted in August using a Halltech Model HT 2000B Mrk 5 backpack electrofisher, set at 350 volts and 60 Hz. Electrofishing was conducted along 113 m of shoreline on the east side of the GS intake (33 minutes, 1353 electro-seconds) and along 138 m of shoreline on the west side of the GS intake (54 minutes, 2520 electro-seconds) (Figure 3-1). A transect along the shore 3-4 m wide was electrofished to a maximum depth of approximately 0.8 m.

In August, a single haul was made with a 10 meter long by 1.5 meter deep seine net of 4.76 mm (3/16 inch) mesh. Only one location within the study area, relatively shallow and free of large rocks and wood debris, with a sloped bottom, could be effectively seined.

Each captured fish was identified to species. The fork length (of species with forked tails) or total length (of species with unforked tails) of each individual was determined to the nearest millimetre (mm) using a fish measuring board, and each was weighed to the nearest 0.1 grams (g) with an Ohaus Scout Pro Model SP6001 electronic balance. Fish captured in traps or by electrofishing were held in containers of ambient lake water prior to processing and released near the point of capture.

During the August field investigations, a temperature logger (HOBO Pendant® MX) deployed at a depth of approximately 2 m, logged water temperature at 15-minute intervals. Also during the August field investigations, a YSI ProODO handheld dissolved oxygen and temperature meter, was used to determine water temperature and dissolved oxygen at 1 m depth intervals from the water surface to the lake bottom, at four locations (Figure 3-1). During the November field investigations, a temperature logger (HOBO Tidbit MX Temp 5000) deployed in the tailrace of the GS logged water temperature at 1-hour intervals.

3.2 Results and Discussion

3.2.1 Water temperature and dissolved oxygen

The mean water temperature at 2 meters depth during the August 14-18, 2023, field investigations was 21°C (range=20.1°C - 21.9°C). Water temperature profiles taken on August 16, 2023, are shown in Figure 3-4; the profile locations are shown in Figure 3-1. The temperature profile at location 4, the deepest location, shows that the epilimnion extended down to approximately six meters, where the thermocline began. The surface temperature was higher at Location 1 which was farthest into the bay where the GS inlet is located and thus more sheltered. Otherwise, water temperature profiles were very similar at all four locations. Dissolved oxygen (DO) concentration (Figure 3-5) and DO saturation (Figure 3-6) were high in the epilimnion and similar at all four locations. At Location 4, DO decreased with depth below 6 meters.

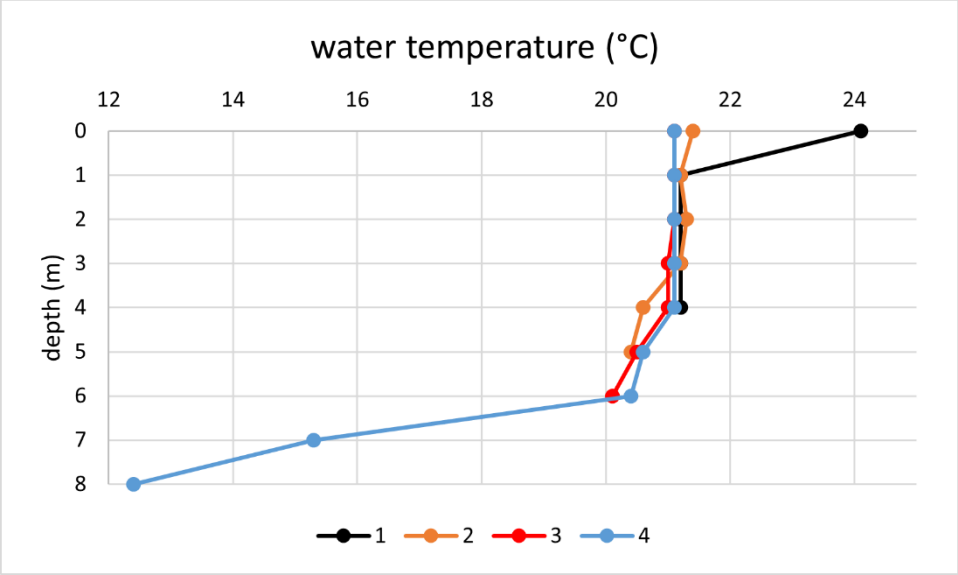

Figure 3-4. Water temperature profiles at 4 locations in the vicinity of the GS intake on August 16, 2023. See Figure 3-1 for the profile locations.

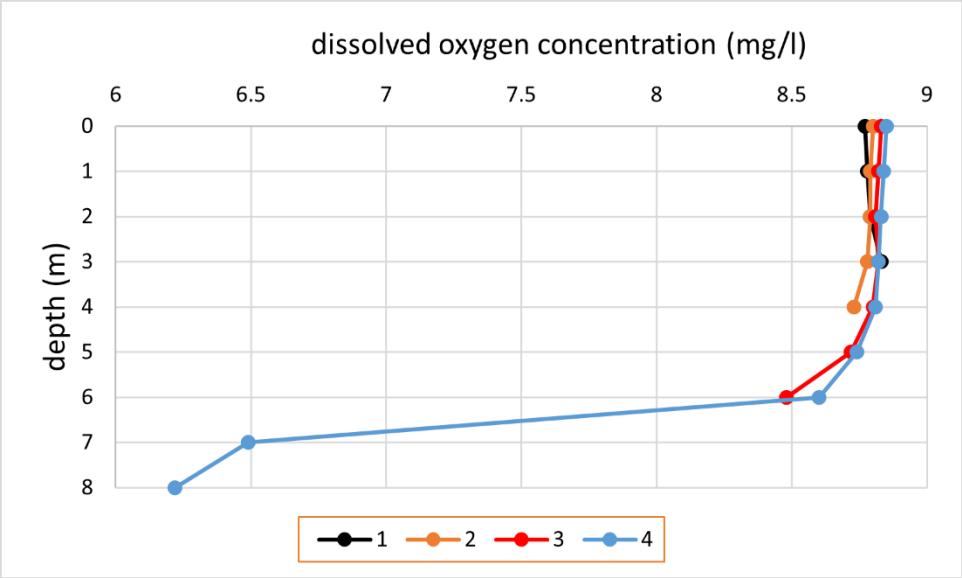

Figure 3-5. Dissolved oxygen concentration profiles at 4 locations in the vicinity of the GS intake on August 16, 2023. See Figure 3-1 for the profile locations.

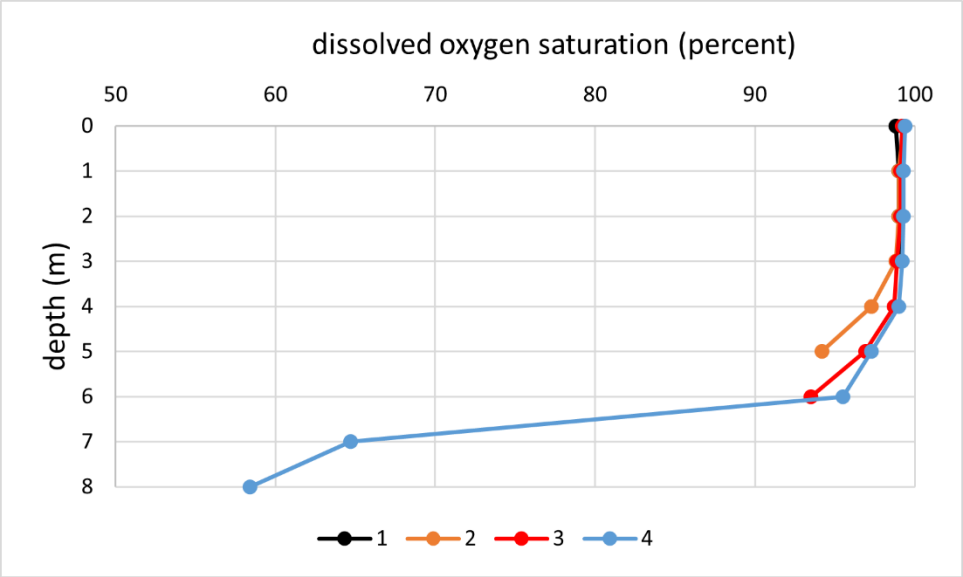

Figure 3-6. Dissolved oxygen saturation profiles at 4 locations in the vicinity of the GS intake on August 16, 2023. See Figure 3-1 for the profile locations.

On November 7 and 8, 2023, the water temperature in the GS tailrace, which would have been essentially the same as the water temperature at the intake in the headpond, was stable, ranging from 7.6°C – 8.3°C.

3.2.2 Catches

The total number of fish caught, and percentage of total catch accounted for by each species are presented in Table 3-2. In total, 253 individuals representing eight species were captured. Centrarchids accounted for 94% of the total catch and included, in decreasing order of abundance, Rock Bass, Smallmouth Bass, and Pumpkinseed. Fewer than ten individuals of each of the other five species were captured.

Table 3-2. Common and scientific names of the fish species captured and the percentage of the total catch accounted for by each.

Common name	Scientific name	Number captured	Percentage of total catch
Rock Bass	*Ambloplites rupestris*	172	68.0%
Smallmouth Bass	*Micropterus dolomieu*	49	19.4%
Pumpkinseed	*Lepomis gibbosus*	16	6.3%
Logperch	*Percina caprodes*	7	2.8%
Mottled Sculpin	*Cottus bairdii*	4	1.6%
Yellow Perch	*Perca flavescens*	3	1.2%
Bluntnose Minnow	*Pimephales notatus*	1	0.4%
Walleye	*Sander vitreus*	1	0.4%
Total		253	100.0

Summary statistics for length and weight and total biomass captured are presented, by species, in Table 3-5. Centrarchids accounted for most of the biomass captured. Based on size, catches of all three centrarchid species included both young-of-the-year (YOY) and older individuals.

Table 3-3. Mean, minimum and maximum lengths and weights of captured individual and total biomass captured by species.

Species	n	Length[1] (mm)			Weight (g)			Total biomass (g)
		mean	minimum	maximum	mean	minimum	maximum	
rock bass	171	99	40	169	24.2	1.2	97.3	4133
smallmouth bass	48	107	45	390	57.2	1.2	856	2745
pumpkinseed	16	109	47	147	33.5	1.8	79.5	536
logperch	7	85	55	96	6.0	1.4	8.1	42
mottled sculpin	4	47	31	61	1.4	0.5	2.4	6
yellow perch	3	109	91	120	14.1	9	16.7	42
walleye	1	228	228	228	105.6	105.6	105.6	106

1. fork length except for Logperch and Mottled Sculpin which are total length

The percentages of the catch within specified length ranges (corresponding to approximately two-inch intervals), by species, are presented in Table 3-4. The majority of the catch for all species consisted of fish less than 153 mm, except for Walleye. Only one Walleye was captured and it was 228 mm long (Table 3-3).

Table 3-4. Percentages of the total catch of each species that are within approximately 2-inch length ranges.

Length[1] range (mm)	Rock Bass	Smallmouth Bass	Pumpkin-seed	Logperch	Mottled Sculpin	Yellow Perch	Bluntnose Minnow	Walleye
0-50	2.3%	8.2%	12.5%	0.0%	50.0%	0.0%	0.0%	0.0%
51-101	51.7%	46.9%	12.5%	100.0%	50.0%	33.3%	100.0%	0.0%
102-152	44.2%	30.6%	75.0%	0.0%	0.0%	66.7%	0.0%	0.0%
153-203	1.7%	6.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
204-254	0.0%	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
254-305	0.0%	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
305-355	0.0%	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
356-406	0.0%	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

1. fork length except for Logperch and Mottled Sculpin which are total length

The fishing effort and number of individuals captured by species, month, and gear type are presented in Table 3-5. Data for individual sampling events are provided in Appendix B. Nearly all of the fish were captured during the August sampling; only three individuals were captured in November. In August, the traps were always set overnight. No fish were captured in 10 of the 48 trap sets. In November, six trap sets were overnight and six were for approximately six hours during the day; no fish were captured in nine of the sets. No fish were captured by three daytime gillnet sets that were each approximately 4 hours long. Fish were captured by all overnight gillnet sets.

The species composition of the catches for each gear type are summarized in Figure 3-7. Rock Bass and Smallmouth Bass dominated the catches in both of the trap types and in gillnets. Those two species accounted for smaller percentages of the electrofishing catch which also included two species – Logperch and Mottled Sculpin – that were not captured by the other gear.

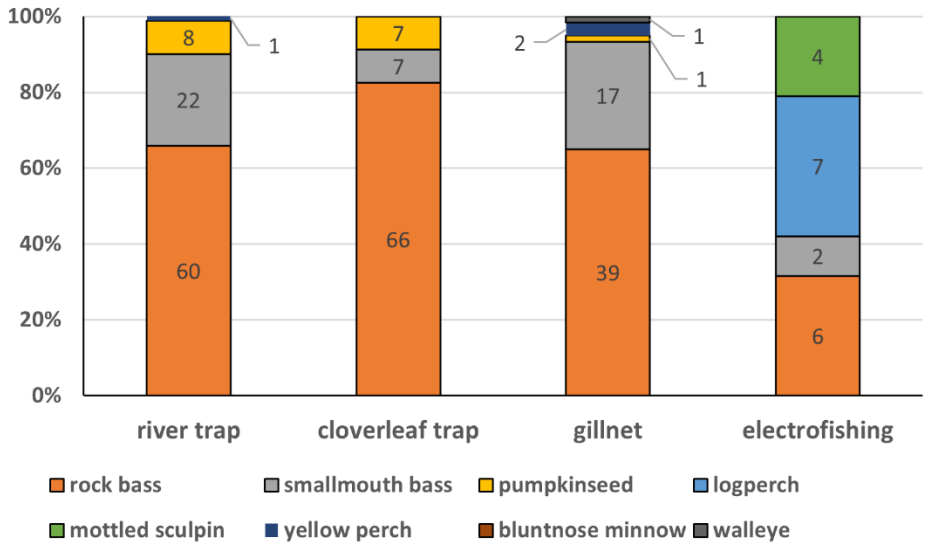

Figure 3-7. Species composition (%) of catches by gear type. Bar labels are number of individuals.

Table 3-5. Summary of effort and catches by month, gear type and, for traps, the width of the slot through which fish could enter.

Dates	August										November		Total
Gear Type	river trap			cloverleaf trap			gillnet	electrofishing	seine	total	cloverleaf		
Slot width (mm)	25	37.5	both	25	37.5	both	na	na	na		25	37.5	
Number of sets/passes	12	12	24	12	12	24	9	2	1		6	6	
Sum of soak time (days)	10.79	10.72	21.51	10.89	10.84	21.73	5.78	na	na		3.09	3.09	
Number of sets with no catch	1	3	4	3	3	6	3		1		5	4	
rock bass	47	13	60	25	41	66	39	6		171	1		172
smallmouth bass	12	10	22	6	1	7	17	2		48		1	49
pumpkinseed	8		8	2	5	7	1			16			16
logperch								7		7			7
mottled sculpin								4		4			4
yellow perch	1		1				2			3			3
bluntnose minnow												1	1
walleye							1			1			1
Total	68	23	91	33	47	80	60	19	0	250	1	2	253

The length-frequency distributions of Rock Bass and Smallmouth Bass, the two most abundant species in the catches, are presented by gear type in Figure 3-8 and Figure 3-9, respectively. The length-frequency distribution of Rock Bass differed among gear types; no individuals in the smallest length class were captured in gillnets and no individuals in the larger length classes were captured by electrofishing (but few Rock Bass of any size were captured by electrofishing). Most of the Smallmouth Bass captured in river traps were in the smallest length class, in contrast to the other gear types for which the catches were more evenly distributed among the size classes. The higher numbers of small individuals in the river traps might be because they were deployed at shallower locations than the cloverleaf traps and gillnets.

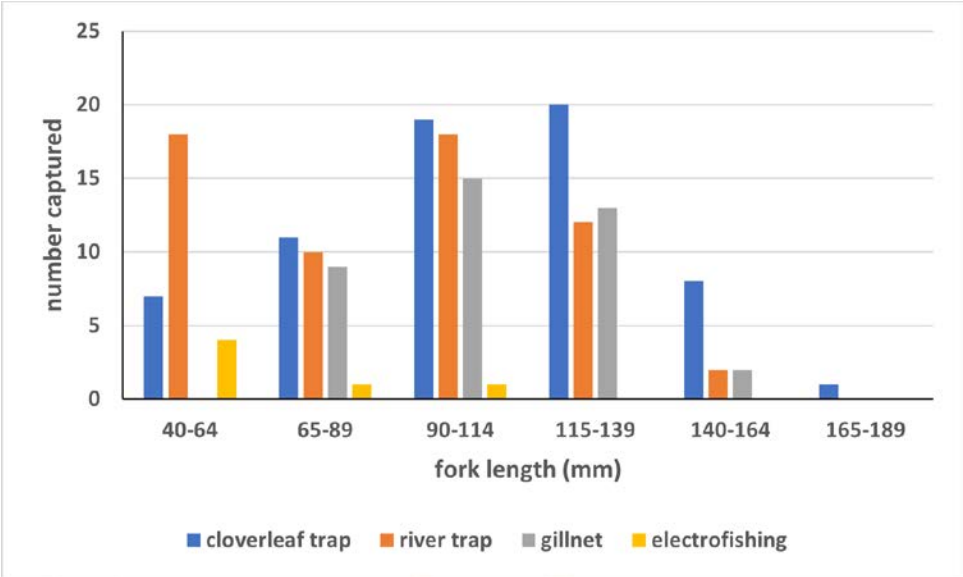

Figure 3-8. Length-frequency distribution of captured Rock Bass, by gear type.

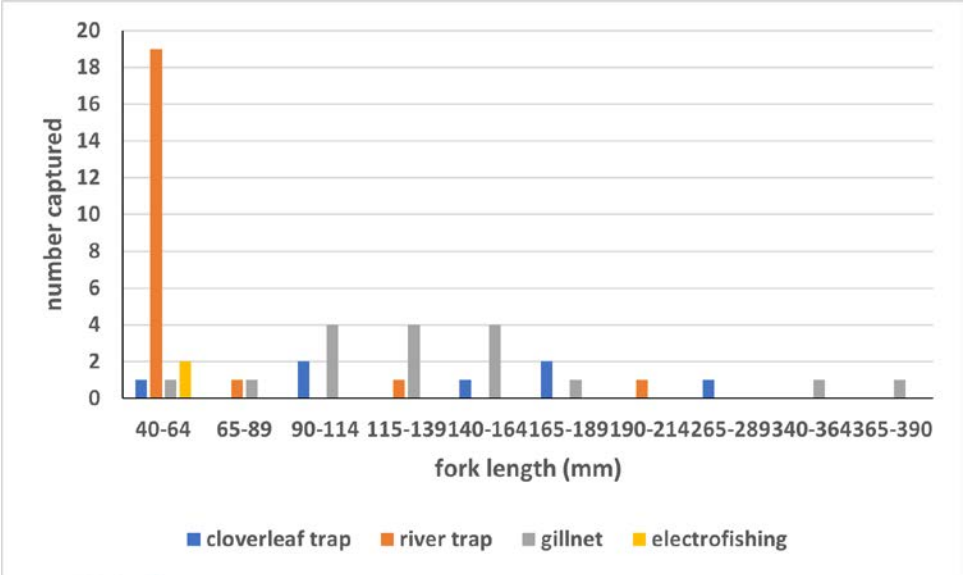

Figure 3-9. Length-frequency distribution of captured Smallmouth Bass, by gear type.

4 Conclusions

The purpose of the field investigations was to characterize the fish community in the vicinity of the GS intake to help predict the species composition of fish entrainment during GS operation. Two types of passive gear (wire-mesh traps and gillnets), which fish swim into, and two types of active gear (backpack electrofisher and seine), which move through the habitat, were used. This study targeted small fish; larger fish are able to swim against stronger currents and away from a GS intake.

The openings into the wire-mesh traps are the same shape as the openings between the bars in trash racks (i.e., vertical slots). It was felt that this might result in the trap catches more closely resembling the species and sizes of fish that would be entrained than conventional minnow traps, which have a round opening. The openings in the traps are, however, narrower than the trash rack openings at Matabitchuan, which are 74 mm wide.

Both seining and backpack electrofishing are confined to wadable depths (generally 1 m or less). In this study area, the seine proved to be impossible to use effectively in all but one location because it was constantly snagged by the uneven boulder/cobble substrate and abundant wood debris along the shoreline. The backpack electrofisher was effective but few fish were caught. The rough, boulder/cobble substrate and wood debris in the nearshore areas, combined with a layer of slippery biofilm covering the substrate, made wading with the electrofisher difficult and slow. The capture of Mottled Sculpin and Logperch by electrofishing and not by either the traps or the gillnets is consistent with the known biases of these gears. Mottled Sculpin and Logperch are benthic species and, compared to the centrarchids, sedentary, both characteristics that select against their capture in passive gear (Portt et al, 2006). It is, however, logical to expect that, other things being equal, sedentary benthic species are less susceptible to GS entrainment than actively swimming species.

Daytime gillnet sets of approximately four hours caught no fish. Both the overnight gillnet sets and the wire mesh traps, which were all set overnight, caught numerous fish. The catches were dominated by Rock Bass and Smallmouth Bass which, combined, accounted for more than 90% of the catch in river traps, cloverleaf traps, and gillnets. Walleye, represented by one individual, was the only species captured in the gill nets that was not captured in the traps.

5 References

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APPENDIX A
HABITAT PHOTOGRAPHS

Figure A- 1. South view along eastern shore of study area. August 18, 2023.

Figure A- 2. South view along eastern shore of study area. August 18, 2023.

Figure A- 3. North view along eastern shore of study area towards GS intake. August 18, 2023.

Figure A- 4. View of north shore, immediately west of the GS intake. August 18, 2023.

APPENDIX B

SET, CATCH, AND INDIVIDUAL FISH DATA

Table B 1. Locations, dates, times, and habitat characteristics for each sampling event, by gear type.

Gear type	Sample event	Trap type	Slot width (mm)	Set/start date	Set/start time (hh:mm)	Lift/end date	Lift/end time (hh:mm)	Soak time (days)	Start easting	Start northing	End easting	End northing	Set/start depth (m)	End Depth (m)	Dominant substrate	Subdominant substrate	Other cover
trap	1	cloverleaf	37.5	14-Aug	19:10	15-Aug	16:05	0.87	613869	5219598	na	na	2.0	na	cobble	boulder	na
trap	2	cloverleaf	25	14-Aug	19:17	15-Aug	15:49	0.86	613848	5219598	na	na	3.6	na	na	na	na
trap	3	cloverleaf	25	14-Aug	19:20	15-Aug	15:40	0.85	613836	5219598	na	na	4.8	na	na	na	na
trap	4	cloverleaf	37.5	14-Aug	19:25	15-Aug	14:50	0.81	613819	5219598	na	na	5.5	na	na	na	na
trap	5	cloverleaf	25	14-Aug	19:35	15-Aug	14:04	0.77	613779	5219598	na	na	4.0	na	na	na	na
trap	6	cloverleaf	37.5	14-Aug	19:42	15-Aug	14:30	0.78	613821	5219598	na	na	2.9	na	na	na	na
trap	7	river	37.5	14-Aug	20:01	15-Aug	14:25	0.77	613816	5219598	na	na	1.5	na	boulder	cobble	firm sediment
trap	8	river	25	14-Aug	20:03	15-Aug	14:36	0.77	613852	5219598	na	na	1.0	na	na	na	logs
trap	9	river	25	14-Aug	20:05	15-Aug	15:00	0.79	613885	5219598	na	na	1.3	na	boulder	na	logs
trap	10	river	37.5	14-Aug	20:06	15-Aug	15:29	0.81	613866	5219598	na	na	0.6	na	cobble	boulder	na
trap	11	river	25	14-Aug	20:07	15-Aug	16:29	0.85	613865	5219598	na	na	1.0	na	cobble	gravel	na
trap	12	river	37.5	14-Aug	20:09	15-Aug	15:56	0.82	613872	5219598	na	na	1.1	na	cobble	gravel	na
trap	13	cloverleaf	25	15-Aug	14:20	16-Aug	12:51	0.94	613770	5219598	na	na	1.5	na	boulder	cobble	na
trap	14	river	25	15-Aug	14:42	16-Aug	12:46	0.92	613782	5219598	na	na	0.7	na	cobble	boulder	na
trap	15	cloverleaf	37.5	15-Aug	14:45	16-Aug	12:34	0.91	613798	5219598	na	na	2.1	na	boulder	na	na
trap	16	river	37.5	15-Aug	14:49	16-Aug	12:30	0.9	613819	5219598	na	na	1.2	na	cobble	bed	na
trap	17	cloverleaf	37.5	15-Aug	14:57	16-Aug	11:46	0.87	613830	5219598	na	na	3.6	na	na	na	na
trap	18	river	25	15-Aug	15:23	16-Aug	11:52	0.85	613870	5219598	na	na	0.8	na	cobble	gravel	na
trap	19	river	37.5	15-Aug	15:36	16-Aug	12:04	0.85	613866	5219598	na	na	0.6	na	cobble	boulder	na
trap	20	cloverleaf	25	15-Aug	15:47	16-Aug	12:56	0.88	613830	5219598	na	na	4.1	na	na	na	na
trap	21	cloverleaf	25	15-Aug	15:53	16-Aug	12:09	0.84	613847	5219598	na	na	3.9	na	na	na	na
trap	22	river	37.5	15-Aug	16:01	16-Aug	12:17	0.84	613873	5219598	na	na	1.5	na	cobble	gravel	logs
trap	23	cloverleaf	37.5	15-Aug	16:17	16-Aug	12:24	0.84	613839	5219598	na	na	2.2	na	boulder	cobble	na
trap	24	river	25	15-Aug	16:36	16-Aug	11:57	0.81	613869	5219598	na	na	1.5	na	boulder	cobble	na
trap	25	cloverleaf	37.5	16-Aug	11:47	17-Aug	13:32	1.07	613827	5219598	na	na	3.6	na	na	na	na
trap	26	river	25	16-Aug	11:55	17-Aug	13:27	1.06	613870	5219598	na	na	0.8	na	cobble	gravel	na
trap	27	river	25	16-Aug	12:00	17-Aug	13:30	1.06	613862	5219598	na	na	0.8	na	boulder	cobble	logs
trap	28	river	37.5	16-Aug	12:07	17-Aug	14:08	1.08	613867	5219598	na	na	0.8	na	boulder	cobble	na
trap	29	cloverleaf	25	16-Aug	12:15	17-Aug	13:37	1.06	613852	5219598	na	na	3.4	na	na	na	na
trap	30	river	37.5	16-Aug	12:19	17-Aug	14:09	1.08	613873	5219598	na	na	0.8	na	boulder	gravel	logs, rock crib
trap	31	cloverleaf	37.5	16-Aug	12:27	17-Aug	12:52	1.02	613854	5219598	na	na	1.8	na	cobble	boulder	na
trap	32	river	37.5	16-Aug	12:32	17-Aug	12:50	1.01	613819	5219598	na	na	1.2	na	na	na	na
trap	33	cloverleaf	37.5	16-Aug	12:44	17-Aug	12:55	1.01	613810	5219598	na	na	3.8	na	boulder	cobble	na
trap	34	river	25	16-Aug	12:50	17-Aug	13:24	1.02	613782	5219598	na	na	0.7	na	cobble	boulder	na
trap	35	cloverleaf	25	16-Aug	12:53	17-Aug	13:20	1.02	613764	5219598	na	na	3.9	na	bedrock	boulder	log

Gear type	Sample event	Trap type	Slot width (mm)	Set/start date	Set/start time (hh:mm)	Lift/end date	Lift/end time (hh:mm)	Soak time (days)	Start easting	Start northing	End easting	End northing	Set/start depth (m)	End Depth (m)	Dominant substrate	Subdominant substrate	Other cover
trap	36	cloverleaf	25	16-Aug	12:58	17-Aug	14:05	1.05	613841	5219598	na	na	3.9	na	na	na	na
trap	37	river	37.5	17-Aug	12:51	18-Aug	10:32	0.9	613819	5219598	na	na	1.2	na	na	na	na
trap	38	cloverleaf	37.5	17-Aug	12:53	18-Aug	9:21	0.85	613854	5219598	na	na	1.8	na	cobble	boulder	na
trap	39	cloverleaf	37.5	17-Aug	12:56	18-Aug	10:52	0.91	613810	5219598	na	na	3.8	na	boulder	cobble	na
trap	40	cloverleaf	25	17-Aug	13:22	18-Aug	10:28	0.88	613754	5219598	na	na	1.3	na	cobble	boulder	na
trap	41	river	25	17-Aug	13:25	18-Aug	10:30	0.88	613782	5219598	na	na	0.7	na	cobble	boulder	na
trap	42	river	25	17-Aug	13:28	18-Aug	10:48	0.89	613870	5219598	na	na	0.8	na	cobble	gravel	na
trap	43	river	25	17-Aug	13:31	18-Aug	10:50	0.89	613862	5219598	na	na	0.8	na	boulder	cobble	na
trap	44	cloverleaf	37.5	17-Aug	13:35	18-Aug	11:18	0.9	613857	5219598	na	na	3.9	na	na	na	na
trap	45	cloverleaf	25	17-Aug	13:38	18-Aug	11:16	0.9	613862	5219598	na	na	2.6	na	na	na	na
trap	46	cloverleaf	25	17-Aug	14:06	18-Aug	10:10	0.84	613841	5219598	na	na	3.9	na	na	na	na
trap	47	river	37.5	17-Aug	14:08	18-Aug	10:08	0.83	613867	5219598	na	na	0.8	na	boulder	cobble	na
trap	48	river	37.5	17-Aug	14:11	18-Aug	10:06	0.83	613879	5219598	na	na	0.8	na	bedrock	cobble	na
trap	49	cloverleaf	37.5	7-Nov	15:45	8-Nov	10:40	0.79	613890	5219598	na	na	0.9	na	cobble	gravel	na
trap	50	cloverleaf	25	7-Nov	15:47	8-Nov	10:43	0.79	613887	5219598	na	na	1.0	na	cobble	gravel	na
trap	51	cloverleaf	37.5	7-Nov	15:50	8-Nov	10:45	0.79	613885	5219598	na	na	0.9	na	cobble	gravel	na
trap	52	cloverleaf	25	7-Nov	15:52	8-Nov	10:46	0.79	613882	5219598	na	na	1.0	na	cobble	gravel	na
trap	53	cloverleaf	37.5	7-Nov	15:56	8-Nov	10:48	0.79	613879	5219598	na	na	1.0	na	cobble	gravel	na
trap	54	cloverleaf	25	7-Nov	16:00	8-Nov	10:52	0.79	613879	5219598	na	na	0.8	na	bedrock	cobble	na
trap	55	cloverleaf	37.5	8-Nov	10:40	8-Nov	16:26	0.24	613890	5219598	na	na	0.9	na	cobble	gravel	na
trap	56	cloverleaf	25	8-Nov	10:43	8-Nov	16:28	0.24	613887	5219598	na	na	1.0	na	cobble	gravel	na
trap	57	cloverleaf	37.5	8-Nov	10:45	8-Nov	16:30	0.24	613885	5219598	na	na	0.9	na	cobble	gravel	na
trap	58	cloverleaf	25	8-Nov	10:46	8-Nov	16:32	0.24	613882	5219598	na	na	1.0	na	cobble	gravel	na
trap	59	cloverleaf	37.5	8-Nov	10:48	8-Nov	16:35	0.24	613879	5219598	na	na	1.0	na	cobble	gravel	na
trap	60	cloverleaf	25	8-Nov	10:52	8-Nov	16:40	0.24	613879	5219598	na	na	0.8	na	bedrock	cobble	na
gillnet	1	na	na	15-Aug	12:40	15-Aug	16:42	0.17	613807	5219598	613792	5219368	0.5	3.1	na	na	logs,rock, some rooted vegetation
gillnet	2	na	na	15-Aug	12:57	15-Aug	16:50	0.16	613754	5219598	613739	5219611	1.5	2.7	na	na	logs,rock, some rooted vegetation
gillnet	3	na	na	15-Aug	13:12	15-Aug	16:57	0.16	613587	5219598	613587	5219787	1.2	4.2	na	na	logs,rock, some rooted vegetation
gillnet	4	na	na	15-Aug	16:46	16-Aug	9:47	0.71	613807	5219598	613792	5219368	2.0	3.1	na	na	logs,rock, some rooted vegetation
gillnet	5	na	na	15-Aug	16:54	16-Aug	11:10	0.76	613754	5219598	613739	5219611	1.5	2.7	na	na	logs,rock, some rooted vegetation
gillnet	6	na	na	15-Aug	17:04	16-Aug	10:29	0.73	613587	5219598	613587	5219787	1.2	4.2	na	na	logs,rock, some rooted vegetation
gillnet	7	na	na	16-Aug	10:23	17-Aug	11:23	1.04	613822	5219598	613840	5219633	0.7	3.7	na	na	logs,rock, some rooted vegetation
gillnet	8	na	na	16-Aug	11:06	17-Aug	11:46	1.03	613806	5219598	613821	5219612	0.6	5.0	na	na	rock
gillnet	9	na	na	16-Aug	11:20	17-Aug	11:48	1.02	613868	5219598	613858	5219562	0.5	3.8	na	na	na
seine	1	na	na	17-Aug	11:03	17-Aug	11:04	0	613893	5219598	na	na	(blank)	0.9	na	na	na
electrofishing	1	na	na	16-Aug	15:07	16-Aug	15:40	0.02	613876	5219598	613892	5219663	(blank)	0.8	na	na	na
electrofishing	2	na	na	17-Aug	9:33	17-Aug	10:27	0.04	613769	5219598	613821	5219636	(blank)	0.8	na	na	na

Table B 2. Number of individuals of each species captured by each sampling event and totals by month and gear type. 1 in the no catch column indicates that no fish were captured.

Month	Gear type	Sample event	Trap type	Slot width (mm)	soak time (days)	no catch	Bluntnose Minnow	Logperch	Mottled Sculpin	Pumpkinseed	Rock Bass	Smallmouth Bass	Walleye	Yellow Perch	Total
August	**electrofishing**	1	na	na	0.02			3	1		4	1			9
August	**electrofishing**	2	na	na	0.04			4	3		2	1			10
August	**electrofishing Total**							**7**	**4**		**6**	**2**			**19**
August	**gillnet**	1	na	na	0.17	1									1
August	**gillnet**	2	na	na	0.16	1									1
August	**gillnet**	3	na	na	0.16	1									1
August	**gillnet**	4	na	na	0.71					1	17	4	1		23
August	**gillnet**	5	na	na	0.76						3	1			4
August	**gillnet**	6	na	na	0.73						8				8
August	**gillnet**	7	na	na	1.04						4	4		1	9
August	**gillnet**	8	na	na	1.03						5	2			7
August	**gillnet**	9	na	na	1.02						2	6		1	9
August	**gillnet Total**					**3**				**1**	**39**	**17**	**1**	**2**	**63**
August	**seine**	1	na	na	na	1									1
August	**seine Total**					**1**									**1**
August	**trap**	1	**cloverleaf**	37.5	0.87						8				8
August	**trap**	2	**cloverleaf**	25	0.86						3	1			4
August	**trap**	3	**cloverleaf**	25	0.85						1	4			5
August	**trap**	4	**cloverleaf**	37.5	0.81	1									1
August	**trap**	5	**cloverleaf**	25	0.77						3				3
August	**trap**	6	**cloverleaf**	37.5	0.78	1									1
August	**trap**	7	**river**	37.5	0.77						1				1
August	**trap**	8	**river**	25	0.77					1					1
August	**trap**	9	**river**	25	0.79					6	18				24
August	**trap**	10	**river**	37.5	0.81						2	1			3
August	**trap**	11	**river**	25	0.85						5	3			8
August	**trap**	12	**river**	37.5	0.82						3				3
August	**trap**	13	**cloverleaf**	25	0.94	1									1
August	**trap**	14	**river**	25	0.92						6				6
August	**trap**	15	**cloverleaf**	37.5	0.91					1	12				13
August	**trap**	16	**river**	37.5	0.9						1				1
August	**trap**	17	**cloverleaf**	37.5	0.87	1									1
August	**trap**	18	**river**	25	0.85						1	1			2
August	**trap**	19	**river**	37.5	0.85							2			2

Month	Gear type	Sample event	Trap type	Slot width (mm)	soak time (days)	no catch	Bluntnose Minnow	Logperch	Mottled Sculpin	Pumpkinseed	Rock Bass	Smallmouth Bass	Walleye	Yellow Perch	Total
August	**trap**	20	**cloverleaf**	25	0.88	1									1
August	**trap**	21	**cloverleaf**	25	0.84						5				5
August	**trap**	22	**river**	37.5	0.84						2				2
August	**trap**	23	**cloverleaf**	37.5	0.84						2				2
August	**trap**	24	**river**	25	0.81					1	5	1		1	8
August	**trap**	25	**cloverleaf**	37.5	1.07						2				2
August	**trap**	26	**river**	25	1.06							2			2
August	**trap**	27	**river**	25	1.06						6	1			7
August	**trap**	28	**river**	37.5	1.08	1									1
August	**trap**	29	**cloverleaf**	25	1.06						2				2
August	**trap**	30	**river**	37.5	1.08	1									1
August	**trap**	31	**cloverleaf**	37.5	1.02					1	1				2
August	**trap**	32	**river**	37.5	1.01							1			1
August	**trap**	33	**cloverleaf**	37.5	1.01						1				1
August	**trap**	34	**river**	25	1.02	1									1
August	**trap**	35	**cloverleaf**	25	1.02						1				1
August	**trap**	36	**cloverleaf**	25	1.05	1									1
August	**trap**	37	**river**	37.5	0.9	1									1
August	**trap**	38	**cloverleaf**	37.5	0.85					3	9	1			13
August	**trap**	39	**cloverleaf**	37.5	0.91						1				1
August	**trap**	40	**cloverleaf**	25	0.88						4				4
August	**trap**	41	**river**	25	0.88						5	2			7
August	**trap**	42	**river**	25	0.89						1				1
August	**trap**	43	**river**	25	0.89							2			2
August	**trap**	44	**cloverleaf**	37.5	0.9						5				5
August	**trap**	45	**cloverleaf**	25	0.9					1	3	1			5
August	**trap**	46	**cloverleaf**	25	0.84					1	3				4
August	**trap**	47	**river**	37.5	0.83						3	4			7
August	**trap**	48	**river**	37.5	0.83						1	2			3
August	**trap Total**					**10**				**15**	**126**	**29**		**1**	**181**
Aug. Total						**14**		**7**	**4**	**16**	**171**	**48**	**1**	**3**	**264**
November	**trap**	49	**cloverleaf**	37.5	0.79		1								1
November	**trap**	50	**cloverleaf**	25	0.79	1									1
November	**trap**	51	**cloverleaf**	37.5	0.79	1									1
November	**trap**	52	**cloverleaf**	25	0.79	1									1
November	**trap**	53	**cloverleaf**	37.5	0.79							1			1
November	**trap**	54	**cloverleaf**	25	0.79						1				1
November	**trap**	55	**cloverleaf**	37.5	0.24	1									1

Month	Gear type	Sample event	Trap type	Slot width (mm)	soak time (days)	no catch	Bluntnose Minnow	Logperch	Mottled Sculpin	Pumpkinseed	Rock Bass	Smallmouth Bass	Walleye	Yellow Perch	Total
November	**trap**	56	**cloverleaf**	25	0.24	1									1
November	**trap**	57	**cloverleaf**	37.5	0.24	1									1
November	**trap**	58	**cloverleaf**	25	0.24	1									1
November	**trap**	59	**cloverleaf**	37.5	0.24	1									1
November	**trap**	60	**cloverleaf**	25	0.24	1									1
November	**trap Total**					**9**	**1**				**1**	**1**			**12**
Nov Total						**9**	**1**				**1**	**1**			**12**
Grand Total						**23**	**1**	**7**	**4**	**16**	**172**	**49**	**1**	**3**	**276**

Table B 3. Sampling event, gear type, trap type and slot width where applicable, species, length and weight for each captured fish.

Sample event	Gear type	Trap type	Slot width (mm)	Species	Total length (mm)	Fork length (mm)	Weight (g)
1	trap	cloverleaf	1.5	rock bass		136	50.3
1	trap	cloverleaf	1.5	rock bass		120	28.6
1	trap	cloverleaf	1.5	Rock Bass		142	51.7
1	trap	cloverleaf	1.5	Rock Bass		123	34.2
1	trap	cloverleaf	1.5	Rock Bass		119	33.7
1	trap	cloverleaf	1.5	Rock Bass		106	23.5
1	trap	cloverleaf	1.5	Rock Bass		89	13.9
1	trap	cloverleaf	1.5	Rock Bass		103	12.8
2	trap	cloverleaf	1	Smallmouth Bass		180	84.2
2	trap	cloverleaf	1	Rock Bass		145	65.1
2	trap	cloverleaf	1	Rock Bass		109	27.4
2	trap	cloverleaf	1	Rock Bass		78	8.8
3	trap	cloverleaf	1	Rock Bass		70	6.4
3	trap	cloverleaf	1	Smallmouth Bass		174	72.5
3	trap	cloverleaf	1	Smallmouth Bass		142	39.9
3	trap	cloverleaf	1	Smallmouth Bass		112	18.7
3	trap	cloverleaf	1	Smallmouth Bass		111	16.5
5	trap	cloverleaf	1	Rock Bass		137	53.6
5	trap	cloverleaf	1	Rock Bass		97	19.1
5	trap	cloverleaf	1	Rock Bass		106	24.1
6	trap	cloverleaf	1.5	No Catch			
7	trap	river	1.5	Rock Bass		108	25.2
8	trap	river	1	Pumpkinseed		103	21.6
9	trap	river	1	Rock Bass		158	81.2

Sample event	Gear type	Trap type	Slot width (mm)	Species	Total length (mm)	Fork length (mm)	Weight (g)
9	trap	river	1	Rock Bass		128	42.1
9	trap	river	1	Rock Bass		140	51.2
9	trap	river	1	Rock Bass		127	42
9	trap	river	1	Rock Bass		95	16.6
9	trap	river	1	Pumpkinseed		105	25.3
9	trap	river	1	Pumpkinseed		123	40.6
9	trap	river	1	Rock Bass		138	51.7
9	trap	river	1	Rock Bass		136	54.2
9	trap	river	1	Rock Bass		108	23.1
9	trap	river	1	Rock Bass		120	33.5
9	trap	river	1	Rock Bass		100	20.8
9	trap	river	1	Pumpkinseed		106	23.9
9	trap	river	1	Pumpkinseed		147	69.4
9	trap	river	1	Rock Bass		138	51.2
9	trap	river	1	Rock Bass		139	52.5
9	trap	river	1	Rock Bass		121	35.2
9	trap	river	1	Rock Bass		100	18.6
9	trap	river	1	Pumpkinseed		85	11
9	trap	river	1	Rock Bass		137	51.2
9	trap	river	1	Rock Bass		132	45.4
9	trap	river	1	Rock Bass		123	39.2
9	trap	river	1	Rock Bass		106	24.2
9	trap	river	1	Pumpkinseed		98	18.6
10	trap	river	1.5	Rock Bass		95	11.1
10	trap	river	1.5	Rock Bass		50	2.8
10	trap	river	1.5	Smallmouth Bass		47	1.7
11	trap	river	1	Smallmouth Bass		205	119.8

Sample event	Gear type	Trap type	Slot width (mm)	Species	Total length (mm)	Fork length (mm)	Weight (g)
11	trap	river	1	Smallmouth Bass		53	2.6
11	trap	river	1	Smallmouth Bass		52	1.2
11	trap	river	1	Rock Bass		94	14.5
11	trap	river	1	Rock Bass		103	20.3
11	trap	river	1	Rock Bass		100	18.3
11	trap	river	1	Rock Bass		80	13
11	trap	river	1	Rock Bass		56	3.4
12	trap	river	1.5	Rock Bass		55	2.3
12	trap	river	1.5	Rock Bass		58	3.5
12	trap	river	1.5	Rock Bass		72	6.6
14	trap	river	1	Rock Bass		55	3.1
14	trap	river	1	Rock Bass		64	5.1
14	trap	river	1	Rock Bass		101	19.4
14	trap	river	1	Rock Bass		78	8.8
14	trap	river	1	Rock Bass		78	8.6
14	trap	river	1	Rock Bass		60	4.4
15	trap	cloverleaf	1.5	Rock Bass		156	75.8
15	trap	cloverleaf	1.5	Rock Bass		115	32.3
15	trap	cloverleaf	1.5	Rock Bass		106	22.1
15	trap	cloverleaf	1.5	Rock Bass		129	44.3
15	trap	cloverleaf	1.5	Rock Bass		125	36.3
15	trap	cloverleaf	1.5	Rock Bass		90	12
15	trap	cloverleaf	1.5	Rock Bass		133	46.2
15	trap	cloverleaf	1.5	Rock Bass		116	35.3
15	trap	cloverleaf	1.5	Rock Bass		86	11.3
15	trap	cloverleaf	1.5	Rock Bass		90	14.7
15	trap	cloverleaf	1.5	Rock Bass		122	36.1

Sample event	Gear type	Trap type	Slot width (mm)	Species	Total length (mm)	Fork length (mm)	Weight (g)
15	trap	cloverleaf	1.5	Rock Bass		72	6.8
15	trap	cloverleaf	1.5	Pumpkinseed		131	54.5
16	trap	river	1.5	Rock Bass		89	12.6
18	trap	river	1	Rock Bass		101	19.8
18	trap	river	1	Smallmouth Bass		52	2
19	trap	river	1.5	Smallmouth Bass		53	1.9
19	trap	river	1.5	Smallmouth Bass		62	3.3
21	trap	cloverleaf	1	Rock Bass		120	33.1
21	trap	cloverleaf	1	Rock Bass		50	3.2
21	trap	cloverleaf	1	Rock Bass		91	14
21	trap	cloverleaf	1	Rock Bass		78	9
21	trap	cloverleaf	1	Rock Bass		69	6.5
22	trap	river	1.5	Rock Bass		72	8.1
22	trap	river	1.5	Rock Bass		58	3.5
23	trap	cloverleaf	1.5	Rock Bass		124	36.3
23	trap	cloverleaf	1.5	Rock Bass		94	15.4
24	trap	river	1	Yellow Perch		115	16.7
24	trap	river	1	Pumpkinseed		122	42.6
24	trap	river	1	Smallmouth Bass		55	3
24	trap	river	1	Rock Bass		113	29.8
24	trap	river	1	Rock Bass		99	16.2
24	trap	river	1	Rock Bass		120	32.9
24	trap	river	1	Rock Bass		105	20.9
24	trap	river	1	Rock Bass		58	3.8
25	trap	cloverleaf	1.5	Rock Bass		95	16.7
25	trap	cloverleaf	1.5	Rock Bass		141	53.9
26	trap	river	1	Smallmouth Bass		55	1.9

Sample event	Gear type	Trap type	Slot width (mm)	Species	Total length (mm)	Fork length (mm)	Weight (g)
26	trap	river	1	Smallmouth Bass		72	4
27	trap	river	1	Rock Bass		100	20.4
27	trap	river	1	Rock Bass		57	3.7
27	trap	river	1	Rock Bass		79	8.3
27	trap	river	1	Rock Bass		53	3.7
27	trap	river	1	Rock Bass		82	10
27	trap	river	1	Rock Bass		58	3.4
27	trap	river	1	Smallmouth Bass		51	1.2
29	trap	cloverleaf	1	Rock Bass		78	8
29	trap	cloverleaf	1	Rock Bass		95	16.5
31	trap	cloverleaf	1.5	Rock Bass		92	14.4
31	trap	cloverleaf	1.5	Pumpkinseed		50	1.8
32	trap	river	1.5	Smallmouth Bass		58	2.5
33	trap	cloverleaf	1.5	Rock Bass		143	56
35	trap	cloverleaf	1	Rock Bass		56	3.2
38	trap	cloverleaf	1.5	Rock Bass		140	32
38	trap	cloverleaf	1.5	Rock Bass		120	32.9
38	trap	cloverleaf	1.5	Rock Bass		102	21.5
38	trap	cloverleaf	1.5	Rock Bass		130	44
38	trap	cloverleaf	1.5	Rock Bass		137	57.6
38	trap	cloverleaf	1.5	Rock Bass		141	56.9
38	trap	cloverleaf	1.5	Rock Bass		109	25.8
38	trap	cloverleaf	1.5	Rock Bass		141	60.2
38	trap	cloverleaf	1.5	Rock Bass		112	27.9
38	trap	cloverleaf	1.5	Pumpkinseed		120	35.5
38	trap	cloverleaf	1.5	Pumpkinseed		142	79.5
38	trap	cloverleaf	1.5	Pumpkinseed		118	33.9

Sample event	Gear type	Trap type	Slot width (mm)	Species	Total length (mm)	Fork length (mm)	Weight (g)
38	trap	cloverleaf	1.5	Smallmouth Bass		278	332.2
39	trap	cloverleaf	1.5	Rock Bass		78	8.2
40	trap	cloverleaf	1	Rock Bass		68	8.4
40	trap	cloverleaf	1	Rock Bass		56	2.8
40	trap	cloverleaf	1	Rock Bass		60	3.9
40	trap	cloverleaf	1	Rock Bass		51	2
41	trap	river	1	Rock Bass		92	15.5
41	trap	river	1	Rock Bass		41	1.2
41	trap	river	1	Rock Bass		75	8
41	trap	river	1	Rock Bass		56	3.6
41	trap	river	1	Rock Bass		56	3.4
41	trap	river	1	Smallmouth Bass		50	1.8
41	trap	river	1	Smallmouth Bass		52	1.6
42	trap	river	1	Rock Bass		53	2.4
43	trap	river	1	Smallmouth Bass		52	1.7
43	trap	river	1	Smallmouth Bass		54	2
44	trap	cloverleaf	1.5	Rock Bass		169	97.3
44	trap	cloverleaf	1.5	Rock Bass		120	30
44	trap	cloverleaf	1.5	Rock Bass		128	38.4
44	trap	cloverleaf	1.5	Rock Bass		121	40.2
44	trap	cloverleaf	1.5	Rock Bass		120	35.7
45	trap	cloverleaf	1	Rock Bass		90	13.6
45	trap	cloverleaf	1	Rock Bass		75	7.9
45	trap	cloverleaf	1	Rock Bass		59	3.7
45	trap	cloverleaf	1	Pumpkinseed		47	1.9
45	trap	cloverleaf	1	Smallmouth Bass		45	1.4
46	trap	cloverleaf	1	Rock Bass		103	21.6

Sample event	Gear type	Trap type	Slot width (mm)	Species	Total length (mm)	Fork length (mm)	Weight (g)
46	trap	cloverleaf	1	Rock Bass		100	17.2
46	trap	cloverleaf	1	Rock Bass		53	2.3
46	trap	cloverleaf	1	Pumpkinseed		121	34.9
47	trap	river	1.5	Rock Bass		79	9.2
47	trap	river	1.5	Rock Bass		55	3.2
47	trap	river	1.5	Rock Bass		40	1.7
47	trap	river	1.5	Smallmouth Bass		127	26.4
47	trap	river	1.5	Smallmouth Bass		62	3.3
47	trap	river	1.5	Smallmouth Bass		53	2.2
47	trap	river	1.5	Smallmouth Bass		63	3
48	trap	river	1.5	Rock Bass		96	16.6
48	trap	river	1.5	Smallmouth Bass		61	2.2
48	trap	river	1.5	Smallmouth Bass		54	2
1	electrofishing	electrofishing		Rock Bass		68	5.1
1	electrofishing	electrofishing		Rock Bass		55	2.7
1	electrofishing	electrofishing		Rock Bass		57	3.4
1	electrofishing	electrofishing		Rock Bass		60	4.4
1	electrofishing	electrofishing		Logperch	55		1.4
1	electrofishing	electrofishing		Logperch	96		8
1	electrofishing	electrofishing		Logperch	86		6.5
1	electrofishing	electrofishing		Smallmouth Bass		47	1.8
1	electrofishing	electrofishing		Mottled Sculpin	42		1.1
2	electrofishing	electrofishing		Rock Bass		51	3.1
2	electrofishing	electrofishing		Rock Bass		93	15.5
2	electrofishing	electrofishing		Smallmouth Bass		64	5
2	electrofishing	electrofishing		Logperch	96		8.1
2	electrofishing	electrofishing		Logperch	88		6.2

Sample event	Gear type	Trap type	Slot width (mm)	Species	Total length (mm)	Fork length (mm)	Weight (g)
2	electrofishing	electrofishing		Logperch	85		5.8
2	electrofishing	electrofishing		Logperch	87		6
2	electrofishing	electrofishing		Mottled Sculpin	55		1.7
2	electrofishing	electrofishing		Mottled Sculpin	61		2.4
2	electrofishing	electrofishing		Mottled Sculpin	31		0.5
4	gillnet	gillnet		Smallmouth Bass		355	
4	gillnet	gillnet		Smallmouth Bass		179	
4	gillnet	gillnet		Smallmouth Bass		95	
4	gillnet	gillnet		Smallmouth Bass		151	
4	gillnet	gillnet		Walleye		228	
4	gillnet	gillnet		Rock Bass		130	
4	gillnet	gillnet		Rock Bass		146	
4	gillnet	gillnet		Rock Bass		134	
4	gillnet	gillnet		Rock Bass		126	
4	gillnet	gillnet		Rock Bass		107	
4	gillnet	gillnet		Rock Bass		104	
4	gillnet	gillnet		Rock Bass		107	
4	gillnet	gillnet		Rock Bass		101	
4	gillnet	gillnet		Rock Bass		118	
4	gillnet	gillnet		Rock Bass		95	
4	gillnet	gillnet		Rock Bass		101	
4	gillnet	gillnet		Rock Bass		91	
4	gillnet	gillnet		Rock Bass		92	
4	gillnet	gillnet		Rock Bass		120	
4	gillnet	gillnet		Rock Bass		130	
4	gillnet	gillnet		Rock Bass		96	
4	gillnet	gillnet		Rock Bass		110	

Sample event	Gear type	Trap type	Slot width (mm)	Species	Total length (mm)	Fork length (mm)	Weight (g)
4	gillnet	gillnet		Pumpkinseed		122	
5	gillnet	gillnet		Rock Bass		80	
5	gillnet	gillnet		Rock Bass		88	
5	gillnet	gillnet		Rock Bass		89	
5	gillnet	gillnet		Smallmouth Bass		143	
6	gillnet	gillnet		Rock Bass		143	
6	gillnet	gillnet		Rock Bass		137	
6	gillnet	gillnet		Rock Bass		135	
6	gillnet	gillnet		Rock Bass		86	
6	gillnet	gillnet		Rock Bass		95	
6	gillnet	gillnet		Rock Bass		123	
6	gillnet	gillnet		Rock Bass		130	
6	gillnet	gillnet		Rock Bass		123	
7	gillnet	gillnet		Rock Bass		86	
7	gillnet	gillnet		Smallmouth Bass		390	
7	gillnet	gillnet		Smallmouth Bass		138	
7	gillnet	gillnet		Smallmouth Bass		103	
7	gillnet	gillnet		Smallmouth Bass		105	
7	gillnet	gillnet		Rock Bass		120	
7	gillnet	gillnet		Rock Bass		105	
7	gillnet	gillnet		Rock Bass		74	
7	gillnet	gillnet		Yellow Perch		91	
8	gillnet	gillnet		Rock Bass		100	
8	gillnet	gillnet		Rock Bass		110	
8	gillnet	gillnet		Rock Bass		100	
8	gillnet	gillnet		Rock Bass		120	
8	gillnet	gillnet		Rock Bass		83	

Sample event	Gear type	Trap type	Slot width (mm)	Species	Total length (mm)	Fork length (mm)	Weight (g)
8	gillnet	gillnet		Smallmouth Bass		130	
8	gillnet	gillnet		Smallmouth Bass		121	
9	gillnet	gillnet		Rock Bass		85	
9	gillnet	gillnet		Rock Bass		70	
9	gillnet	gillnet		Smallmouth Bass		143	
9	gillnet	gillnet		Smallmouth Bass		147	
9	gillnet	gillnet		Smallmouth Bass		135	
9	gillnet	gillnet		Smallmouth Bass		102	
9	gillnet	gillnet		Smallmouth Bass		74	
9	gillnet	gillnet		Smallmouth Bass		51	
9	gillnet	gillnet		Yellow Perch		120	
49	trap	cloverleaf	1.5	Bluntnose Minnow	60	54	
53	trap	cloverleaf	1.5	Smallmouth Bass	71	68	
54	trap	cloverleaf	1	Rock Bass	101	97	