



Pelican Lake Index Netting Report 2022

In part of reporting for FES 22-010 SVSFE
Initiatives and Monitoring of Recreational
Fisheries in the Swan Valley Area

Executive Summary

SVSFE applied to the Fish and Wildlife Enhancement Fund to complete an index netting assessment on Pelican Lake, a secluded backcountry lake located approximately 75 km northeast of Swan River. The lake itself is quite large at about 24 kilometers long and 9 kilometers wide with a surface area of ~15,500 hectares. The lake is connected to Lake Winnipegosis via the Pelican River and is home to several species including walleye, northern pike, whitefish, cisco, suckers, bullhead and common carp.

Pelican Lake was first biologically assessed in 1998 and again in 2003. Results indicated a high frequency of young walleye. Yake 1998, stated "Looking at the number of 1+ walleye and lack of other age classes, I would assume most fish migrate downstream making Pelican Lake a large spawning/rearing area for Lake Winnipegosis". Mulletts (white suckers) made up a significant portion of the catches. Commercial production on the lake is limited to eleven licences and the primary species contributing to catches over the years were mullet and northern pike.

Recreational activities on the lake have been very minimal in recent years. With a significant gap in scientific data collection and limited angling information, managers and SVSFE were both interested in the current status of the fishery and whether it could be one of the next upcoming popular angling destinations. This report is an overview of findings from the index netting survey completed in June of 2022.

Table of Contents

Executive Summary.....	2
Table of Contents.....	3
List of Figures	4
List of Tables	4
Study Area.....	5
Background Information.....	7
Stocking History	7
1998 & 2003 Index Netting Surveys	7
Commercial Fishing	7
Recreational Use	8
Objectives.....	9
Methods.....	9
Results.....	12
Walleye	14
Northern Pike	16
Other game species	18
1998 - 2003 - 2022 Comparison	19
Discussion.....	22
2022 Index Netting	22
Pelican Lake as a Recreational Fishery	24
Appendices.....	26
1. Stocking History	26
2. 1998 Stats	27
3. 2003 stats	29
4. 1998 & 2003 Gill Net Sites	31
5. 2023 Site Photos	32
6. Pelican Lake - Landmark Map & Access Map	32
7. 2022 Netting Pictures	35
8. Commercial Production Charts	37
References.....	39

List of Figures

Figure 1: Pelican Lake overview map.....	4
Figure 2: Pelican Lake access route via PR 268.....	6
Figure 3: 2022 Index netting sites.....	11
Figure 4: Species composition by weight - Pelican Lake 2022.....	12
Figure 5: Walleye length frequencies.....	14
Figure 6: Walleye age frequencies.....	15
Figure 7: Mature walleye caught during 2022 survey.....	15
Figure 8: Northern pike length frequencies.....	16
Figure 9: Northern pike age frequencies.....	17
Figure 10: Mature northern pike caught during 2022 survey.....	17
Figure 11: Mature bullhead sampled in 2022 survey.....	18
Figure 12: Example of yellow perch caught during survey.....	18
Figure 13: Species catch per unit effort Comparison - 1998, 2003, 2022	20

List of Tables

Table 1: Total catch by gang location - Pelican Lake 2022.....	12
Table 2: Catch and CUE by mesh size - Pelican Lake 2022.....	13
Table 3: Walleye metrics - Pelican Lake 2022.....	14
Table 4: Northern pike metrics - Pelican Lake 2022.....	16
Table 5: Length weight parameters of suckers, perch and bullhead....	18
Table 6: Total catch by gang location - Pelican Lake 1998, 2003, 2022	19
Table 7: Species total biomass and percent comparison - 1998, 2003, 2022	21

Study Area

Pelican Lake is located approximately 75 km northeast of Swan River (Figure 1). This lake would be considered a backcountry lake as the current access requires the use of ATVs, off-road type vehicles or snowmobiles. This main access route is off PR 268 (Lenswood highway) and then heads east via municipal roads, treaty land entitlement and crown lands. This trail is also the same route to the Kettle Hills, and unique Kettle Stones Provincial Park (Figure 2). Visitors are encouraged to contact the local lands manager of Wuskwi Sipihk First Nation prior to accessing through WSFN Treaty Land Entitlement.

The lake itself is quite large at about 24 kilometers long and 9 kilometers wide and a surface area of approximately 15,500 hectares. The lake is primarily shallow with a max known depth of 12-14 feet. There are a few barren rocky islands and has a water clarity of 2m on average. Tributaries include a few unnamed creeks, Cutbank Creek and the Pelican River. The main outflow is Pelican River which runs north from the lake for about 6 km into Pelican Bay of Lake Winnipegosis.

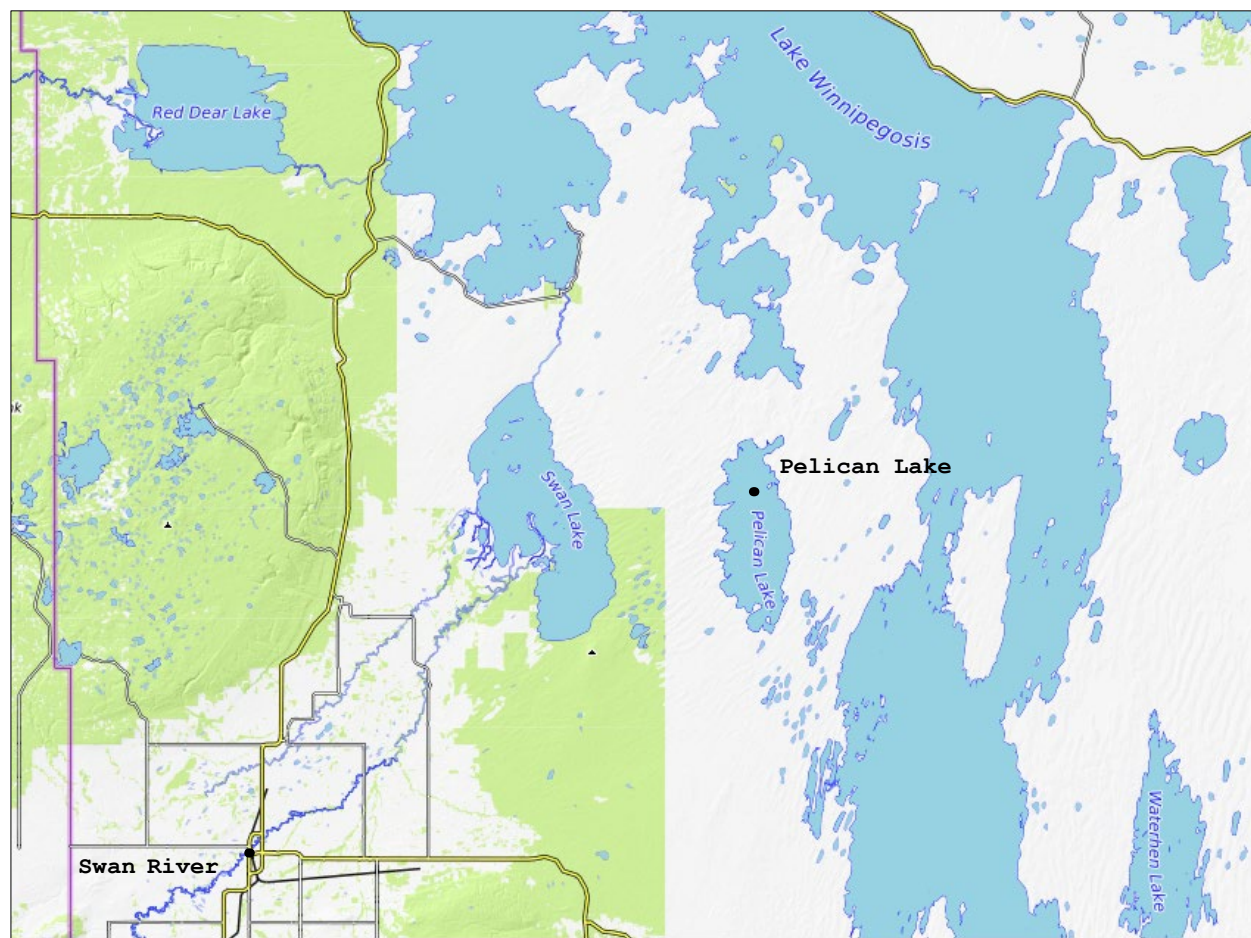


Figure 1: Pelican Lake overview map

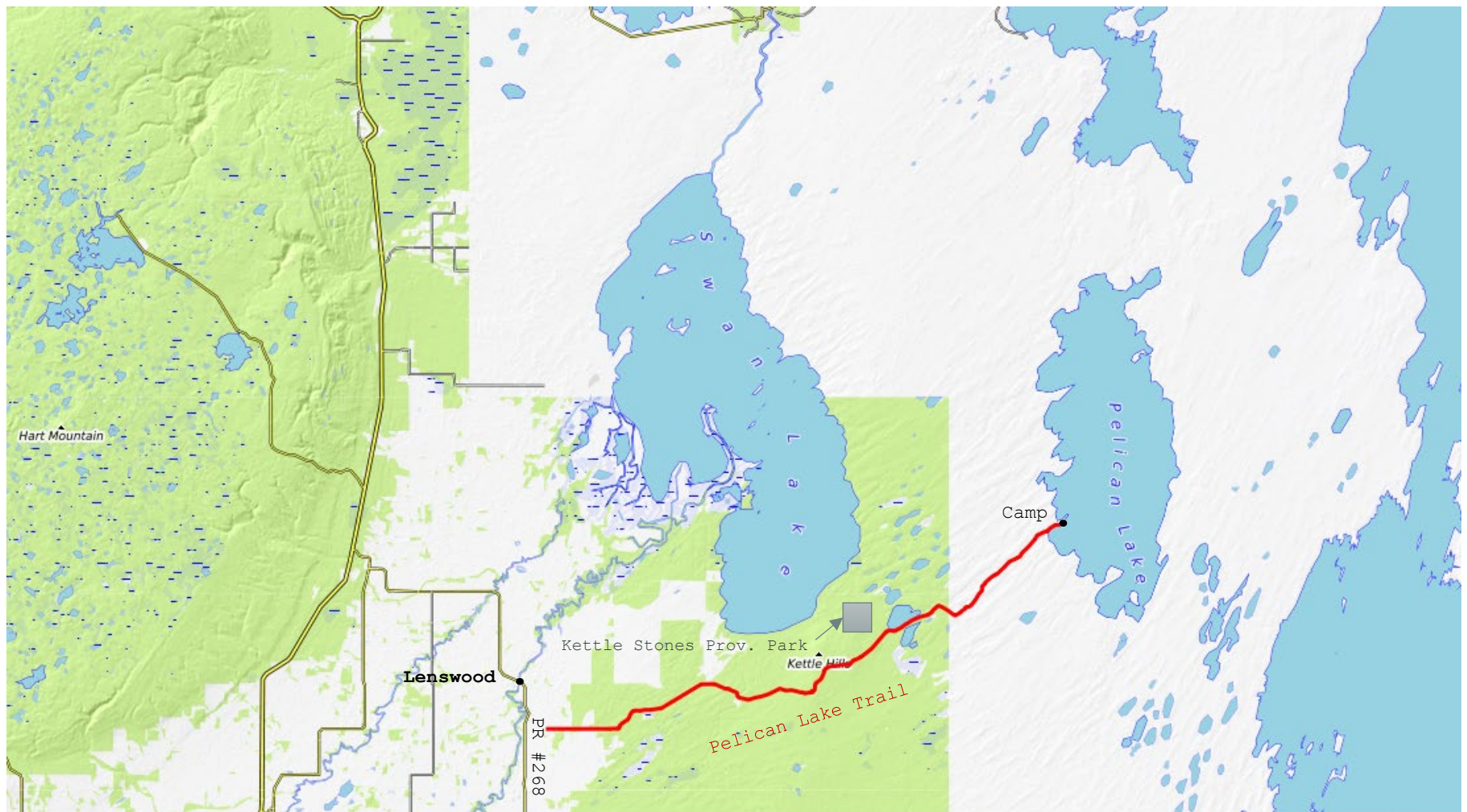


Figure 2: Pelican Lake access route via PR 268

Background Information

Stocking History

The stocking of Pelican Lake has been limited to lake whitefish. The first planting was in 1974 of 1,000,000 fry. This was later followed by multiple plantings in May of 1982 at various locations with a total planting of 20,000,000 fry. The last stocking occurred in 1986, with 6,000,000 whitefish fry stocked. These plantings were a surprise as there was little documentation of the events, and simply limited to a single stocking document (Appendix 1).

1998 & 2003 Index Netting Surveys

Pelican Lake was first assessed in 1998 between June 16th and 18th. At that time, biologist Brian Yake found a high frequency of young walleye. Over 85% of the walleye were age 1+ with other age classes lacking. Walleye made up 14.76% of total catch by weight. Yake 1998, stated "Looking at the number of 1+ walleye and lack of other age classes, I would assume most fish migrate downstream making Pelican Lake a large spawning/rearing area for Lake Winnipegosis". Mulletts (white suckers) made up a significant portion of the catches in 1998 with over 75% of the total biomass caught. At that time mullets were the bulk of commercial catches. The remaining species found during the survey included northern pike, yellow perch, and carp. Each making up only 3% of the total biomass.

Yake concluded that there was no need to implement any changes on quotas, seasons, limits, or particular management practices of any kind. Access to stock walleye was not ideal and the lake appeared to have the greatest potential as a spawning/rearing area.

Fiver years later the index netting program was replicated between June 9th and 11th in 2003. All sites were replicated with the exception of site #6 being moved from Camp Point to Cereal's Point on the south end of the lake (Appendix 4). In 2003 there was no report made on the findings but just a comparison of data between the two years. Walleye catches were slightly lower, but the composition was similar with high frequencies of smaller walleye. Seventy-four percent of walleye caught were between 1+ and 2+ years of age with few in older age classes. White suckers still dominated the total weight with 75% of the catch. Pike and yellow perch remained similar with minimal catches at 3% composition each. Carp were not present in the 2003 catches though tullibee/cisco appeared in several nets making up 6% of the catch. At that time, it appeared the fishery was comparable to the 1998 survey.

Commercial Fishing

Pelican Lake's commercial operational and management plan is managed as a winter fishery. The maximum number of winter licences is eleven. The season is from November 1st to March 31st. Mesh size for gill nets are

restricted to 4" or larger and 5700 meters of net/licence. The lake quota remains at 75,000 pounds for walleye and pike. Currently there are six active commercial licences though netting has been minimal. Production records from 1996 to 2022 indicate northern pike and mullet are the primary production (Appendix 8). The late 90s and early 2000s display high productions upwards of 21,000 and 25,000 kg for northern pike and mullet, respectively. At current, commercial harvested species include mullet, northern pike, walleye, whitefish, and a few carp.

Recreational Use

Recreational activities on the lake are minimal. Hunting is a popular activity in this area and Pelican Lake has been home to a handful of outfitters over the years. Dedication from these outfitters is underestimated as this area today is very isolated but offers a unique experience for those who visit.

This is much different compared to lake use/access in the past. There was a time when the province maintained designated routes in the area. In addition, the occurrence of a significant forest fire in the 60s created improvements to the main access road. The main road, known as designated route D at the time, provided vehicle access to the southwest side of Pelican Lake. Anglers could easily access the lake during open and closed water seasons. Winter angling was more common back in those days with most anglers frequenting the south end of the lake as there were multiple access points.

Unfortunately, access has deteriorated over the years due to lack of maintenance and few people visiting the lake. There are various trapping and fishing camps scattered around the lake, but they can be difficult to find as most structures have collapsed over time. Trapper Don McCrea's old lodge is located on the southeast shoreline but has been vacant and is currently for sale. Orin Carlson's bear camp operated under Pelican River Outfitters, is located on the southwest shore plus he has a winter camp located south of trapper Don's. This is currently the only active camp and offers over 600 miles² of remote bear hunting area. Visitors are also given angling opportunities during their stay which is likely the most angling pressure the fishery experiences. Other winter access options are available but typically only used by commercial, domestic fishers and the few rec anglers on years the lake is fished.

Objectives

Pelican Lake was identified with the potential to be an up-and-coming sport fishery. Many of the larger waterbodies in the Valley are overlooked as sport fishing destination, although many possess exceptional angling opportunities for those who are up for the challenge. With the last stock assessment completed back in 2003, managers felt collecting current stock information would help determine the next steps to developing/promoting Pelican Lake as a sport fishery.

Methods

The stock assessment completed on Pelican Lake was a replication of the 1998 & 2003 index netting surveys. Past surveys consisted of setting six overnight standard gang nets with the addition of a small mesh gill. Each gang was made up of six nylon mesh panels - 1.5", 2", 3", 3.75", 4.25" and 5" mesh with each panel 25 yards in length (apart from the 1.5" mesh panels at 15m) and six feet deep. Nets were set in predetermined sites from the 1998 survey perpendicular to shore (Figure 3: 2022 Index netting sites). When setting gill nets, two of the sites (Site #2 & #3) were set with the large mesh inshore while the other remaining sites were set with the small mesh inshore.

At set time several parameters were recorded including: date, set time, weather, secchi, water temperature, water velocity (none/low/medium/high), net orientation, mesh closest to shore, coordinates of net start and end, water depth, bottom type(hard/soft), vegetation (low/medium/high), and site photos collected.

Nets were fished overnight, and parameters collected at pull included, date, set time, weather, secchi, water temperature, debris in net (quantity and type). For efficiency, one crew member picked fish while two crew members immediately started sampling fish. Once the net was pulled, the picker would begin slowly driving to the next site while the others finished sampling. This was beneficial as net sites were generally far apart. Catches from each net were sorted by mesh size.

Fish sampling methods were in accordance with the Coordinated Aquatic Monitoring Program (CAMP) fish sampling protocols. This protocol is followed today by Fisheries Branch, and is a long-term, systematic and system wide aquatic monitoring program developed and implemented between Manitoba Hydro and the Government of Manitoba. Fish sampling involved collecting individual metrics from all specimens of selected game species including walleye, northern pike, bullhead, and white suckers. Metrics included fork length to 2mm, total length, weight to 10g, sex and maturity, ageing structures, DELTs and identification of stomach

contents. DELT is an acronym for deformities, erosion, lesions, and tumors that must be identified at sampling. Bullhead and white sucker metrics only included length and weight. All other species, specifically yellow perch were counted, and bulk weighed to the nearest 10g. Two types of age structures were collected for both walleye and pike. Scales and otoliths for walleye and scales and cleithrums for pike. Scale samples were sent to Aqua-Tech Services in Ontario for analysis, while otolith and cleithrum samples were sent for analysis by provincial agers.

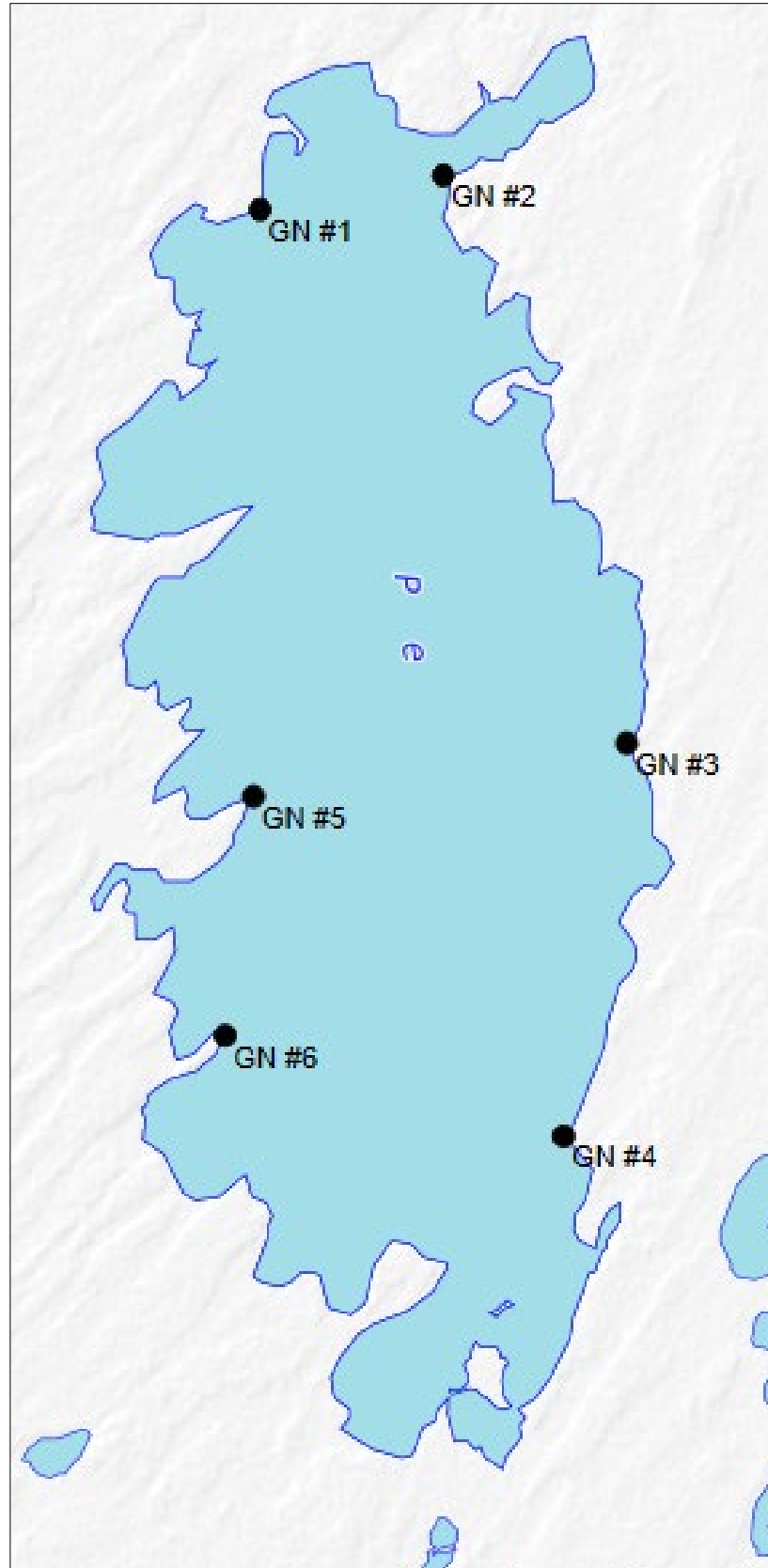


Figure 3: 2022 Index netting sites

Results

The Pelican Lake index netting survey was conducted between June 25th and 27th, 2022. A total of 194 fish were caught with a total netting effort of 87.22 hours. The total catch was comprised of 23 walleye, 51 northern pike, 74 yellow perch, 22 white suckers, and 24 bullhead. No carp or cisco/tullibee were in catches. The following is the results from the 2022 index netting followed with a comparison to the 1998 and 2003 surveys.

Table 1: Total catch by gang location - Pelican Lake 2022

Species	Gang Number						Totals
	1	2	3	4	5	6	
Walleye	15	3	1	1	0	3	23
Northern Pike	9	18	3	5	5	11	51
Yellow Perch	27	43	0	0	3	1	74
White Sucker	4	5	3	5	1	4	22
Bullhead	9	4	0	0	2	9	24
Totals	64	73	7	11	11	28	194

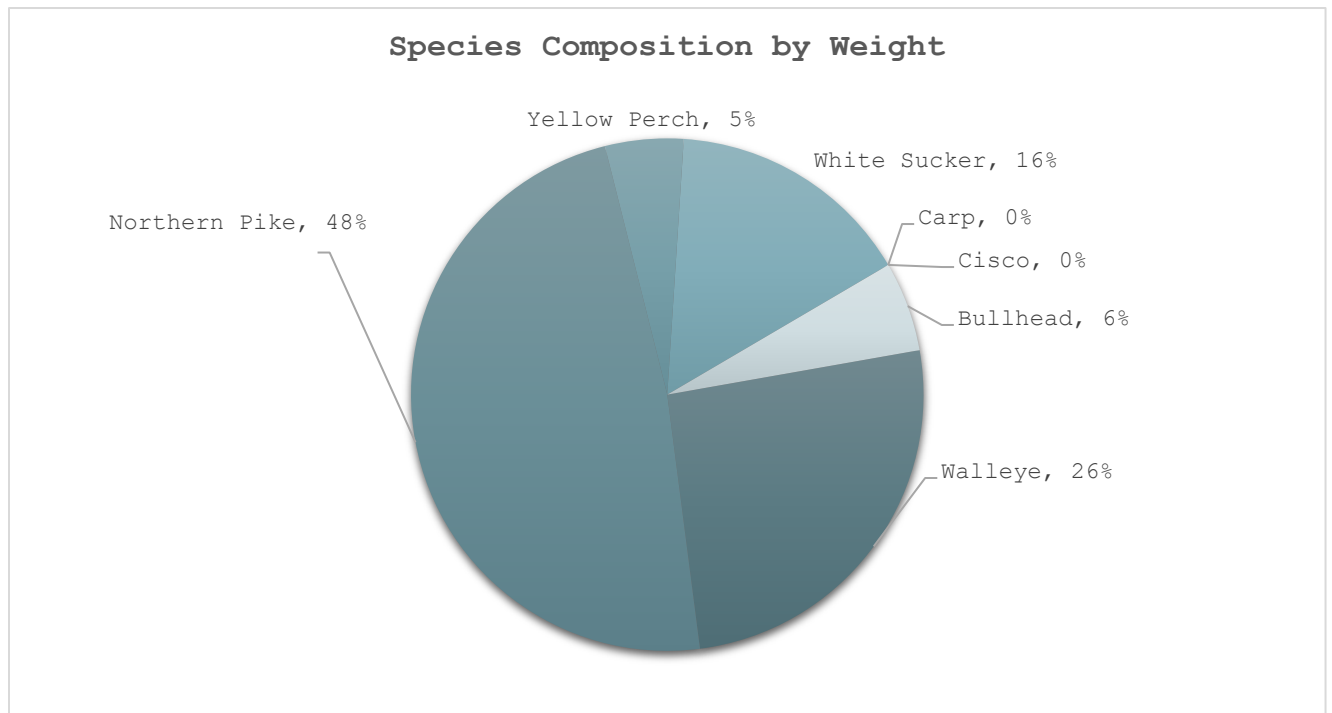


Figure 4: Species composition by weight - Pelican Lake 2022

Table 2: Catch and CUE by mesh size - Pelican Lake 2022

Species	Mesh Size						Total
	1.5"	2.0"	3.0"	3.75"	4.25"	5.0"	
WALLEYE Number	2	3	2	5	6	5	23
Total Weight kg	1.575	2.38	3.14	11.14	12.57	11.8	42.605
C.U.E. kg/100 yds	1.75	1.59	2.09	7.43	8.38	7.87	29.10
NORTHERN PIKE Number	8	14	13	14	2	0	51
Total Weight kg	7.48	19.12	22.13	26.23	4.7	0	79.66
C.U.E. kg/100 yds	8.31	12.75	14.75	17.49	3.13	0	56.43
YELLOW PERCH Number	71	3	0	0	0	0	74
Total Weight kg	7.885	0.3	0	0	0	0	8.185
C.U.E. kg/100 yds	8.76	0.2	0	0	0	0	8.96
WHITE SUCKER Number	1	5	3	5	4	4	22
Total Weight kg	2.2	0.9	1.42	5.8	7.3	8.08	25.7
C.U.E. kg/100 yds	2.44	0.6	0.95	3.8667	4.87	5.39	18.11
BULLHEAD Number	1	5	10	5	1	2	24
Total Weight kg	0.39	0.975	3.395	2.105	1	1.52	9.385
C.U.E. kg/100 yds	0.43	0.65	2.263	1.4033	0.67	1.01	6.43
TOTALS Number	83	30	28	29	13	11	194
Total Weight kg	19.53	23.675	30.09	45.275	25.57	21.4	165.54

*Total effort for 1.5" mesh = 90 yards

*Total effort for all other mesh sizes = 150 yards

Walleye

Table 3: Walleye metrics - Pelican Lake 2022

Pelican Lake Index Walleye 2022						
Age	No.	Frequency %	Mean Length	SD (L)	Mean Weight	SD (W)
1	2	9%	213.5	1.5	102.5	22.5
2	2	9%	287.5	27.5	300.0	100.0
3	0	0%	0.0	0.0	0.0	0.0
4	1	4%	532.0	0.0	1740.0	0.0
5	3	13%	525.0	17.8	1780.0	24.5
6	4	17%	554.3	23.3	2085.0	220.1
7	3	13%	591.7	15.5	2466.7	184.1
8	5	22%	567.6	25.3	2198.0	186.6
9	2	9%	602.5	7.5	2685.0	45.0
10	1	4%	600.0	0.0	2600.0	0.0

Total No. fish = 23

Total Weight of all fish = 41,235 grams

Mean Length = 504.3 Min Length = 212 Max Length = 610 (mm)

Mean Weight = 1792.8 Min Weight = 80 Max Weight = 2730 (grams)

Mean Age = 5.78 years

Mean Condition Factor = 1.19

No. Immature Males = 3 No. Mature Males = 6

No. Immature Females = 1 No. Mature Females = 13

Immature Sex Ratio = 0.3333 females/male

Mature Sex Ratio= 2.1666 females/male

Overall Sex Ratio= 1.5556 females/male

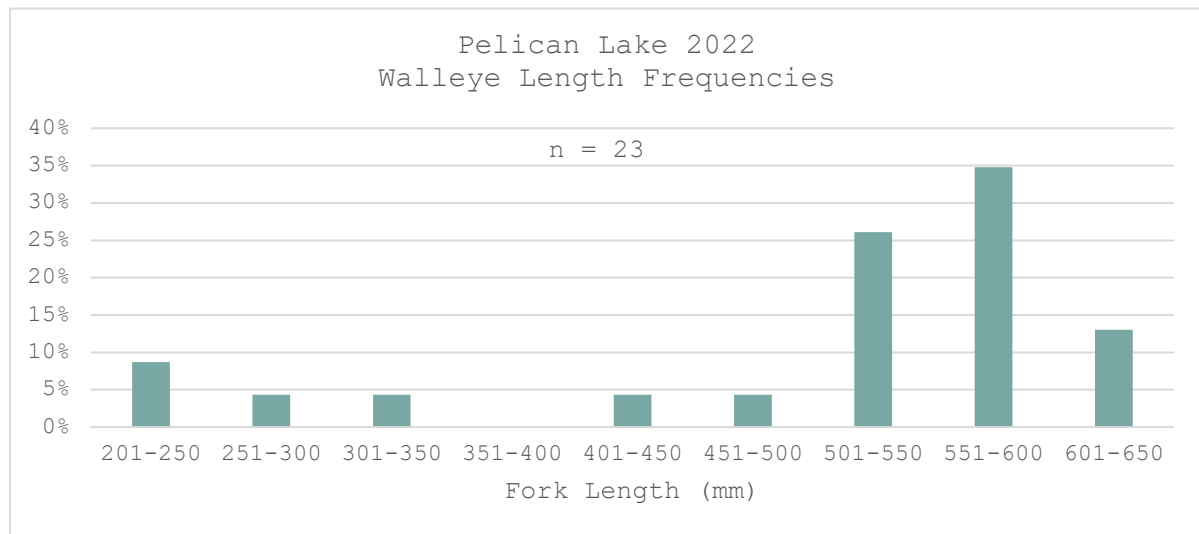


Figure 5: Walleye length frequencies

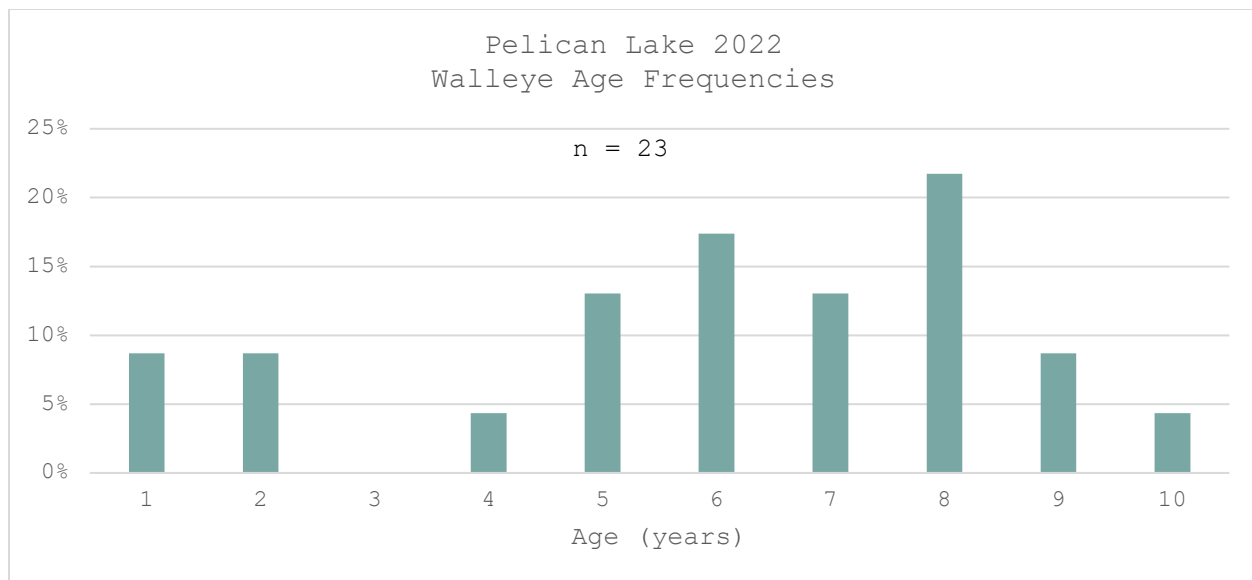


Figure 6: Walleye age frequencies



Figure 7: Mature walleye caught during 2022 survey.

Northern Pike

Table 4: Northern pike metrics - Pelican Lake 2022

Age	No.	Frequency %	Mean Length	SD (L)	Mean Weight	SD (W)
1	4	8%	334.0	50.5	322.5	133.3
2	5	10%	406.8	32.1	546.0	169.3
3	21	41%	588.6	77.8	1600.5	538.4
4	17	33%	641.4	73.4	1955.3	474.4
5	3	6%	735.0	62.8	3066.7	695.6
6	0	0%	0.0	0.0	0.0	0.0
7	0	0%	0.0	0.0	0.0	0.0
8	0	0%	0.0	0.0	0.0	0.0
9	1	2%	945.0	0.0	7600.0	0.0

Total No. fish = 51

Total Weight of all fish = 87,670 (g)

Mean Length = 584 Min Length = 270 Max Length = 945 (mm)

Mean Weight = 1719 Min Weight = 150 Max Weight = 7600 (g)

Mean Age = 3.3 years

Mean Condition Factor = 0.759543

No. Immature Males = 2 No. Mature Males = 21

No. Immature Females = 2 No. Mature Females = 26

Immature Sex Ratio = 1 females/male

Mature Sex Ratio= 1.24 females/male

Overall Sex Ratio= 1.217 females/male

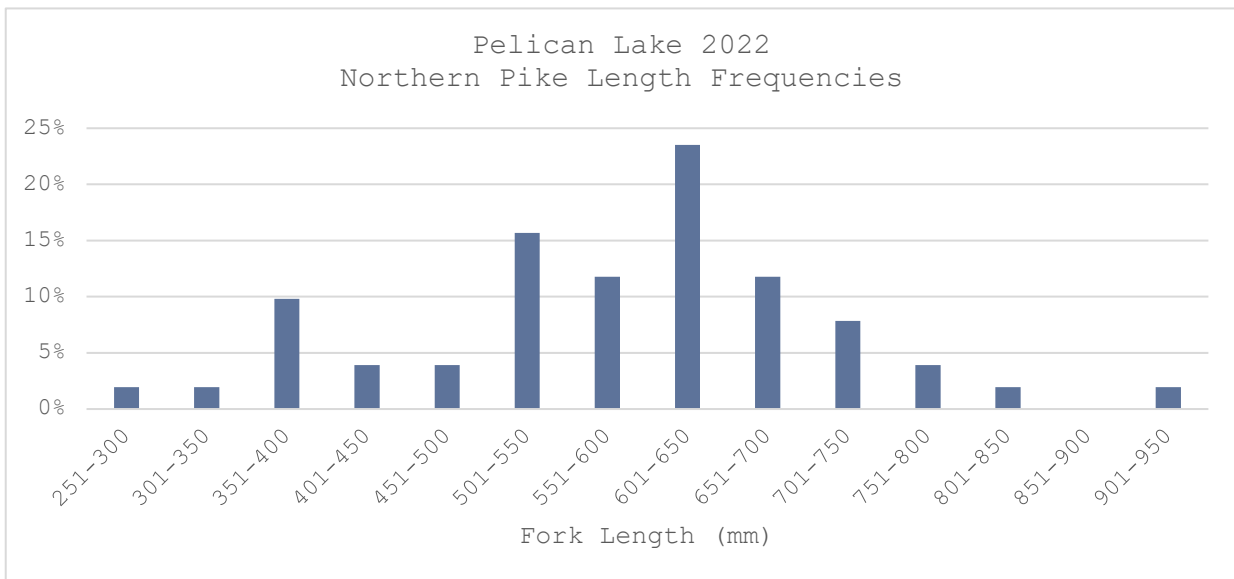


Figure 8: Northern pike length frequencies

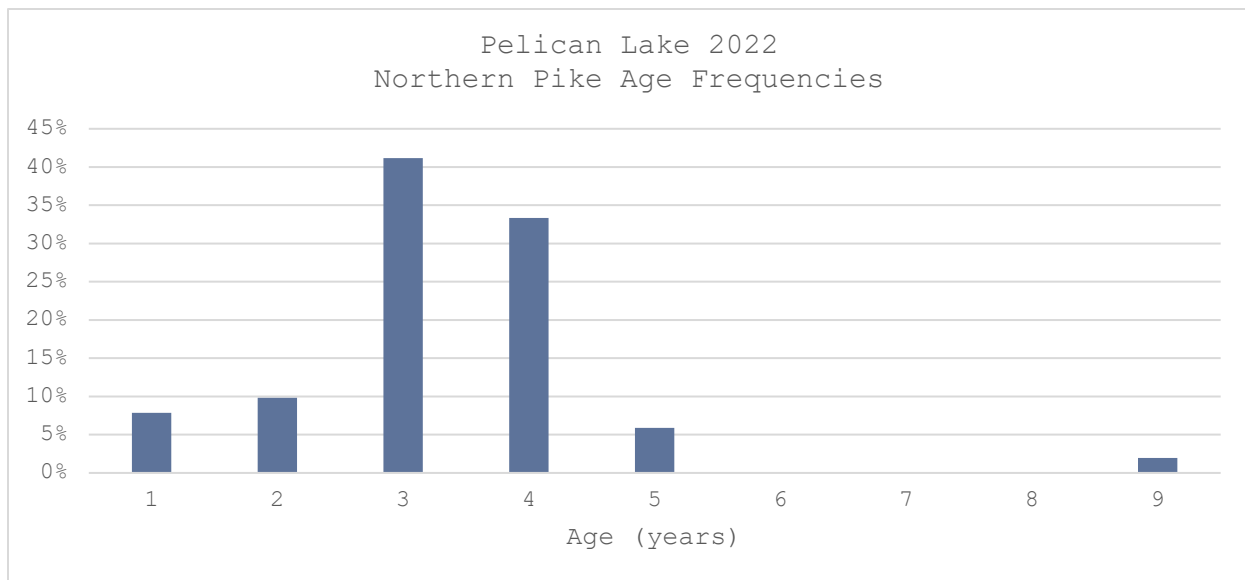


Figure 9: Northern pike age frequencies



Figure 10: Mature northern pike caught during 2022 survey.

Other game species

Table 5: Length weight parameters of suckers, perch, and bullhead

Species	Min FL (mm)	Max FL (mm)	Average FL (mm)	Min WT (g)	Max WT (g)	Average WT (g)	Total Weight (kg)
White Suckers	214	515	381.27	100	2330	1094.32	24.075
Yellow Perch							3.475
Bullhead	195	382	258.458	85	1240	378.958	9.095



Figure 11: Mature bullhead sampled in 2022 survey.



Figure 12: Example of yellow perch caught during survey.

1998 - 2003 - 2022 Comparison

Table 6: Total catch by gang location - Pelican Lake 1998, 2003, 2022

Species	Year	Gang Number						Totals
		1	2	3	4	5	6	
Walleye	1998	51	36	7	22	6	3	125
	2003	17	24	8	5	22	11	87
	2022	15	3	1	1	0	3	23
Northern Pike	1998	1	1	1	1	3	1	8
	2003	4	1	0	1	0	0	6
	2022	9	18	3	5	5	11	51
Yellow Perch	1998	25	3	15	1	19	62	125
	2003	71	10	7	1	26	26	141
	2022	27	43	0	0	3	1	74
White Sucker	1998	25	101	14	30	26	35	231
	2003	18	8	3	18	42	66	155
	2022	4	5	3	5	1	4	22
Carp	1998	1	0	0	0	0	2	3
	2003	0	0	0	0	0	0	0
	2022	0	0	0	0	0	0	0
Cisco	1998	0	0	0	0	0	0	0
	2003	35	35	48	24	4	26	172
	2022	0	0	0	0	0	0	0
Bullhead	1998	0	0	0	0	0	0	0
	2003	0	0	0	0	0	0	0
	2022	9	4	0	0	2	9	24
Totals	1998	103	141	37	54	54	103	492
	2003	145	78	66	49	94	129	561
	2022	64	73	7	11	11	28	194

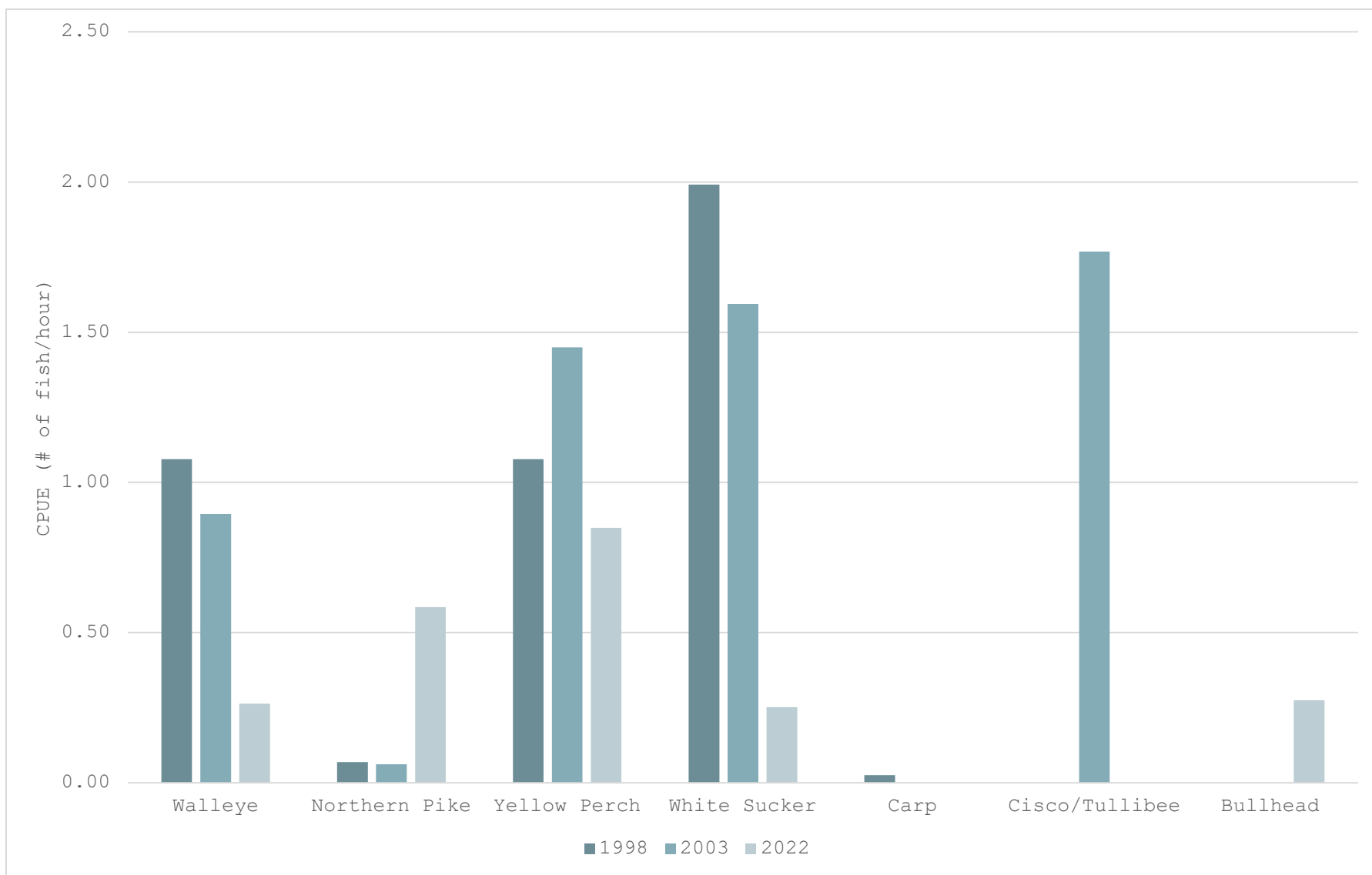


Figure 13: Species catch per unit effort Comparison - 1998, 2003, 2022

Table 7: Species total biomass and percent comparison - 1998, 2003, 2022

Species	Year	Total Weight in Grams	Percent
Walleye	1998	29640	15%
	2003	25840	13%
	2022	42605	26%
Northern Pike	1998	6800	3%
	2003	5230	3%
	2022	79660	48%
Yellow Perch	1998	6540	3%
	2003	6220	3%
	2022	8185	5%
White Sucker	1998	151970	75%
	2003	146530	75%
	2022	25700	16%
Carp	1998	6340	3%
	2003	0	0%
	2022	0	0%
Cisco	1998	0	0%
	2003	10940	6%
	2022	0	0%
Bullhead	1998	0	0%
	2003	0	0%
	2022	9385	6%
Totals	1998	201290	100%
	2003	194760	100%
	2022	165535	100%

Discussion

2022 Index Netting

At current, the Pelican Lake fishery appears to be healthy and would offer great angling opportunities for those up for the challenge. It appears over the last two decades, things have made a shift from what was once a mullet dominated fishery that provided nursery habitat for other species, to a now established walleye/pike fishery.

Although numbers are down, walleye catches display a well distributed mature population with walleye distributed between age classes one through ten. There appears to be a decrease in recent recruitment. It is uncertain why the significant drop in age one or two walleye but assumed the increase in larger predator numbers may be a partial cause. Furthermore, pike numbers have increased both in quantity and size distribution. In both the 1998 and 2003 survey the average pike caught was approximately 450 mm and two years old. In 2022, it was found the average pike was 580 mm and three years of age.

There are a few interesting observations from the 2022 survey worth mentioning. First noted, was sites #1 and #2 on the north end of the lake still appear to provide suitable/preferred habitat for walleye during spring/early summer. In all survey years higher frequencies of walleye are found at these locations. It appears this area of the lake is suitable for walleye of all age classes today and a probable spawning area.



Secondly, no cisco/tullibee were caught in nets. In 2003, small tullibee were found in every gang and possibly a main forage species that comprised 6% of the sample. The cisco is an important prey species for large piscivores including lake trout, walleye, northern, burbot, and channel catfish (Stewart 2004). There is a significant gap in the data set so it's not surprising to see changes in the population compositions. Commercial fisher, Orin Carlson, noted there were times when they would have high catches of tullibee at first ice (spawning period) but haven't seen them in recent years. It is believed the species remain present although prospectively in much lower numbers.

A recent addition to the species composition is the brown bullhead. This species has become more prevalent in the last 10 years. The bullheads are native to Manitoba but not to these northern waterbodies. The species has

slowly encroached north into surrounding waters including Lake Winnipegosis, Dauphin Lake, Swan Lake, and Pelican Lake from distant connectivity to Lake Winnipeg, the Red and Assiniboine Rivers over time. Alterations to watersheds is believed to be the cause of increased distribution over recent years. The concern with bullheads is that they are highly adaptable species. They are omnivorous, tolerant of a wide range of environmental conditions, and capable of widespread dispersal (Kerr 2000). Perhaps the most well documented impact is their predation on the eggs and fry of other fish species including walleye (*Stizostedion vitreum*) (Colby et al. 1979, Fox 1991). What makes this introduction especially interesting is during sampling, juvenile bullheads were found in a handful of walleye stomachs. It is believed the spiny characteristics of this species would not be a preferred bait fish but possibly might indicate a high abundance of juveniles in the system. Other common bait fish found in walleye and pike in order of frequency included yellow perch, fathead minnows, crayfish, sculpins, stickleback and unidentifiable fish remains.

One species not found in any of the netting surveys is the lake whitefish. Whitefish were introduced back in the 80s and the only fish stocked in Pelican Lake's history. The whitefish are present as they are found in commercial catches. Net locations and survey time of year are likely a contributing factor to the lack of whitefish catches. These fish would be suspended and distributed throughout deeper water at the time of the 2022 sampling.

When comparing recent commercial catches, production illustrates fair walleye and pike numbers. Walleye production from 2017 to 2022 has increased from 470 to 1500 kg. Northern pike production remains fairly steady around 6000 to 10,000 kg. Mullet remains one of the higher production species, but numbers are significantly lower than historical levels with only 2500 kg on average over the last few years compared to >20,000 kg. The number of active fisherman varies year to year, and many factors influence the commercial production, therefore not too many conclusions should be drawn from these numbers.

Pelican Lake as a Recreational Fishery

During the planning of the netting program, SVSFE technicians met local bear outfitter (Pelican River Outfitters) and commercial fisherman, Orin Carlson. Orin has spent his whole life working on or around Pelican Lake. His family has a rich history to the area dating back to the 1920s and many generations have been actively involved in the fishery itself and the development of the operating and management plan for Pelican Lake. Orin assisted in the 2022 index netting and was a valuable asset to the survey. His knowledge of the fishery, work ethic, and available equipment enabled SVSFE to complete the survey and gather other beneficial information. Orin was generous in sharing angling tips and stories of his experiences which may be valuable to new anglers visiting the area.

Orin spoke of how winter angling was popular, and most people would set up near the south end. He also listed some interesting notes that would help the current day angler explore this vast fishery.

Pelican Lake Notes (Orin Carlson):

- 1) Fish for walleye on the west shore and pike on the east.
- 2) Deep holes are usually found at the end of points.
- 3) There is a mudbank that borders the east shoreline and extends out about a third of the lake's width. Find this transition from 4 - 8 feet to find the fish.
- 4) Pike fishing is best at the mouth of the inflow. There is a significant drop adjacent to the shoreline where pike angling can be good spring and fall.
- 5) Find carp in the north end.
- 6) Angling opportunities on the northeast end include deep holes behind shallow stretches/reefs (See Figure)
- 7) Hazards:
 - a. Mystery reef on the north end - Orin observed a rocky reef through the ice one winter. The general area is marked on the Landmark's Map (pg. 33). Orin had no way of marking the point and has still yet to find it again.
 - b. Reefs north of Portage Point near Abe's Cabin. Stay wide.
 - c. Turn Around Point- when travelling from the north this is the point where you lose protection from northwest winds. Here is where you decide to turn around or persevere.
 - d. The area that never freezes - This is north of Cereal's Point and stays open all year. Believed to be an underwater spring, as the water is known to bubble throughout the winter.

Although the lake is well off the beaten path, angling opportunities still exist for those looking for an adventure.

Access options - Summer/Winter:

Trail #1 - Main Pelican Lake Trail from Lenswood (originally designated route D) to west point (Pelican River Outfitters Camp)

Access options - Winter Only:

Trail #2 - Main Pelican Lake Trail from Lenswood with detour via lowland marshes/wetlands to Big Bay

Trail #3 - Eleventh Baseline Trail (cutline) from Swan Lake to Big Line Bay

Trail #4 - North Trail from Shoal River via Pelican Bay Winnipegosis to northwest corner of Pelican Lake (near Eagle Nest point)

Trail #5 - Trail from Lake Winnipegosis to west shore of Pelican Lake near Don McCrea's old outfitting lodge.

Trail #6 - Duck Bay to south end of Pelican Lake near the mouth of Pelican River (previously Route L)

With increased access opportunities during the winter - Pelican Lake is promoted as a recreational winter fishery. Open water angling is an option but access with a boat would be difficult and lake conditions are unpredictable when dealing with a lake of this size. It is recommended to contact local lake users before planning an open water trip. As more and more anglers explore this fishery, Pelican Lake will become a backcountry fishing destination on the map.



1. Stocking History

YEAR	NUMBER	AGE	SPECIES	REMARKS
1974	1,000,000	Fry	Walleye	West side
1982	3,000,000	Fry	Whitefish	May 21/82 West side
1982	4,000,000	Fry	Whitefish	May 21/82 Central
1982	3,000,000	Fry	Whitefish	May 20/82 Central
1982	3,000,000	Fry	Whitefish	May 20/82 N. end
1982	3,000,000	Fry	Whitefish	May 20/82 N-E corner
1982	4,000,000	Fry	Whitefish	May 21/82 West side
1986	6,000,000	Fry	Whitefish	May 13-15 - G. Larval

2. 1998 Stats

Pelican Lake Index Walleye 1998

Age	No.	Frequency %	Mean Length	SD (L)	Mean Weight	SD (W)
1	107	88%	185.3	10.4	59.3	11.4
2	4	3%	261.0	98.9	282.5	129.3
3	1	1%	470.0	0.0	1800.0	0.0
4	3	2%	473.3	16.0	1193.3	79.3
5	1	1%	560.0	0.0	1800.0	0.0
6	2	2%	522.0	2.0	1720.0	20.0
7	0	0%	-	-	-	-
8	0	0%	-	-	-	-
9	1	1%	540.0	0.0	1650.0	0.0
10	0	0%	-	-	-	-
11	0	0%	-	-	-	-
12	0	0%	-	-	-	-
13	1	1%	670.0	0.0	3300.0	0.0
16	1	1%	710.0	0.0	4000.0	0.0
23	1	1%	658.0	0.0	3050.0	0.0

Total No. fish = 125

Total Weight of all fish = 29,640 g

Mean Length = 220.08 Min Length = 90 Max Length = 710 (mm)

Mean Weight = 237.12 Min Weight = 40 Max Weight = 4000 (g)

Mean Age = 1.7 years

Mean Condition Factor = 1.0

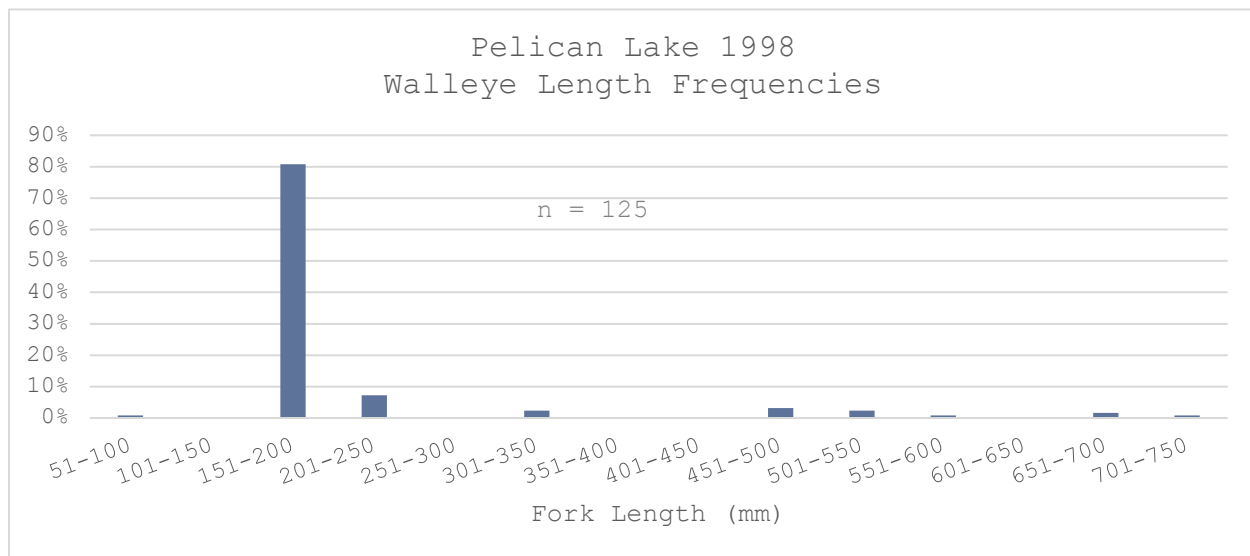
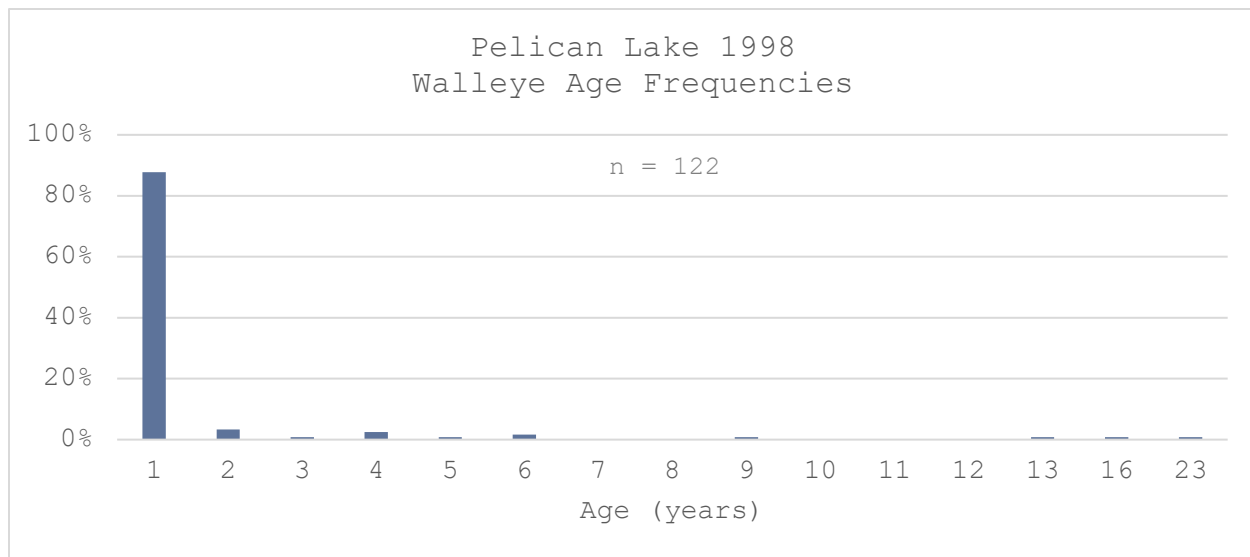
No. Immature Males = 74 No. Mature Males = 4

No. Immature Females = 41 No. Mature Females = 6

Immature Sex Ratio = 0.554 females/male

Mature Sex Ratio= 1.5 females/male

Overall Sex Ratio= 0.60256 females/male



Project Site Code	Mesh	Fish #	Species	Fork Length	Weight	Sex	Age
PL-98-GI-001	1.5	PL-98-001	NRPK	580	1500	MF	3
PL-98-GI-002	3	PL-98-089	NRPK	434	620	MM	2
PL-98-GI-003	3	PL-98-091	NRPK	484	960	MF	3
PL-98-GI-004	3.75	PL-98-098	NRPK	528	1110	MM	4
PL-98-GI-005	3.75	PL-98-125	NRPK	500	970	MM	3
PL-98-GI-005	3	PL-98-126	NRPK	430	570	MM	2
PL-98-GI-005	3	PL-98-127	NRPK	482	850	MM	2
PL-98-GI-006	2	PL-98-132	NRPK	320	220	IM	1

3. 2003 Stats

Pelican Lake Index Walleye 2003						
Age	No.	Frequency %	Mean Length	SD (L)	Mean Weight	SD (W)
1	56	243%	169.6	48.3	65.2	13.6
2	23	100%	301.5	37.2	305.7	90.9
3	1	4%	320.0	0.0	360.0	0.0
4	1	4%	472.0	0.0	870.0	0.0
5	1	4%	452.0	0.0	1070.0	0.0
6	2	9%	554.0	7.0	1985.0	155.0
7	0	0%	0.0	0.0	0.0	0.0
8	1	4%	600.0	0.0	2200.0	0.0
9	0	0%	0.0	0.0	0.0	0.0
10	1	4%	690.0	0.0	3480.0	0.0
11	0	0%	0.0	0.0	0.0	0.0
12	0	0%	0.0	0.0	0.0	0.0
13	1	4%	704.0	0.0	3210.0	0.0

Total No. fish = 87

Total Weight of all fish = 25,840 grams

Mean Length = 238.8 Min Length = 80 Max Length = 704 (mm)

Mean Weight = 297 Min Weight = 50 Max Weight = 3480 (grams)

Mean Age = 1.8 years

Mean Condition Factor = 2.2

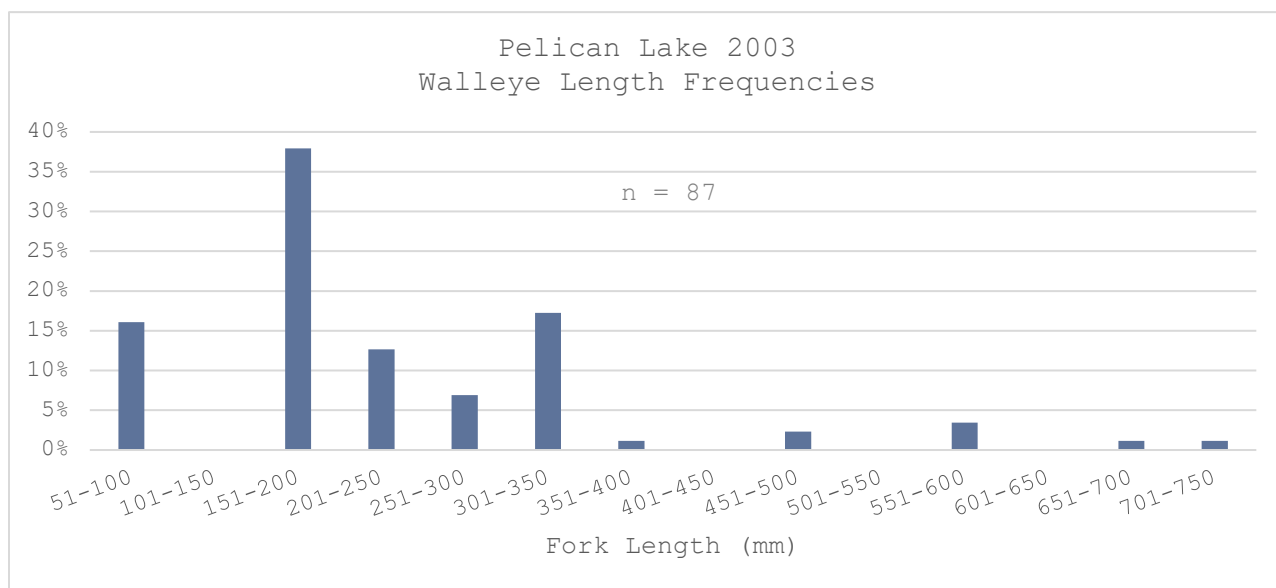
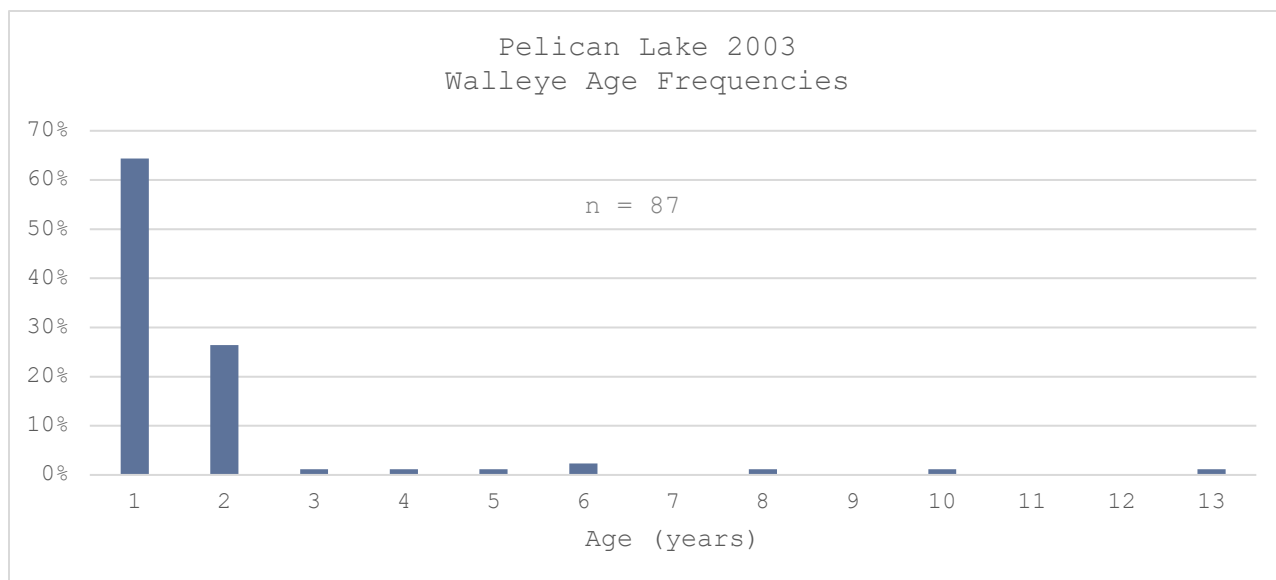
No. Immature Males = 43 No. Mature Males = 4

No. Immature Females = 36 No. Mature Females = 2

Immature Sex Ratio = 0.8372 females/male

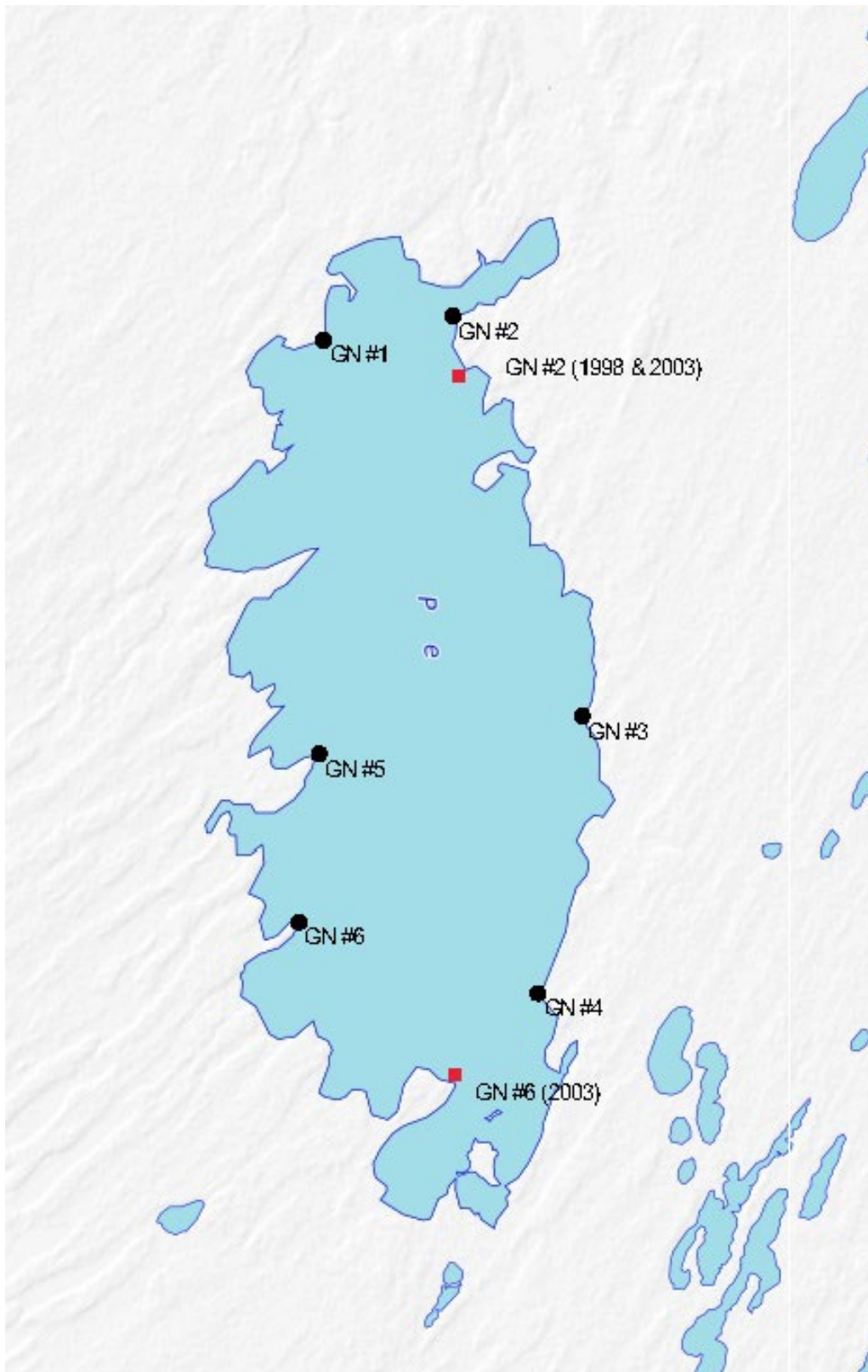
Mature Sex Ratio= 0.5 females/male

Overall Sex Ratio= 0.80851 females/male

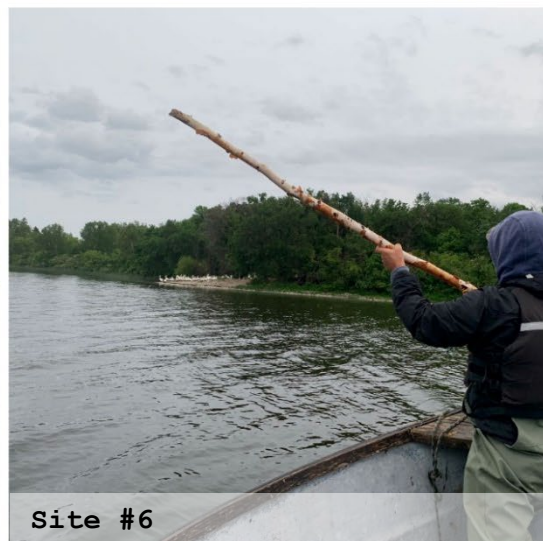
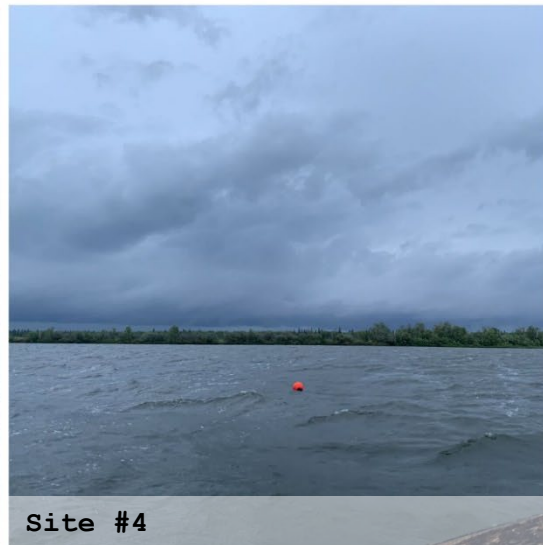


Project Site Code	Mesh	Fish #	Species	Fork Length	Weight	Sex	Age
PL-03-GI-004	3	PL-03-010	NRPK	426	630	IF	2
PL-03-GI-002	2	PL-03-038	NRPK	324	260	IF	1
PL-03-GI-001	1.5	PL-03-040	NRPK	630	2050	MF	3
PL-03-GI-001	1.5	PL-03-041	NRPK	390	520	MM	2
PL-03-GI-001	2	PL-03-059	NRPK	390	470	IF	2
PL-03-GI-001	3	PL-03-060	NRPK	530	1300	MF	2

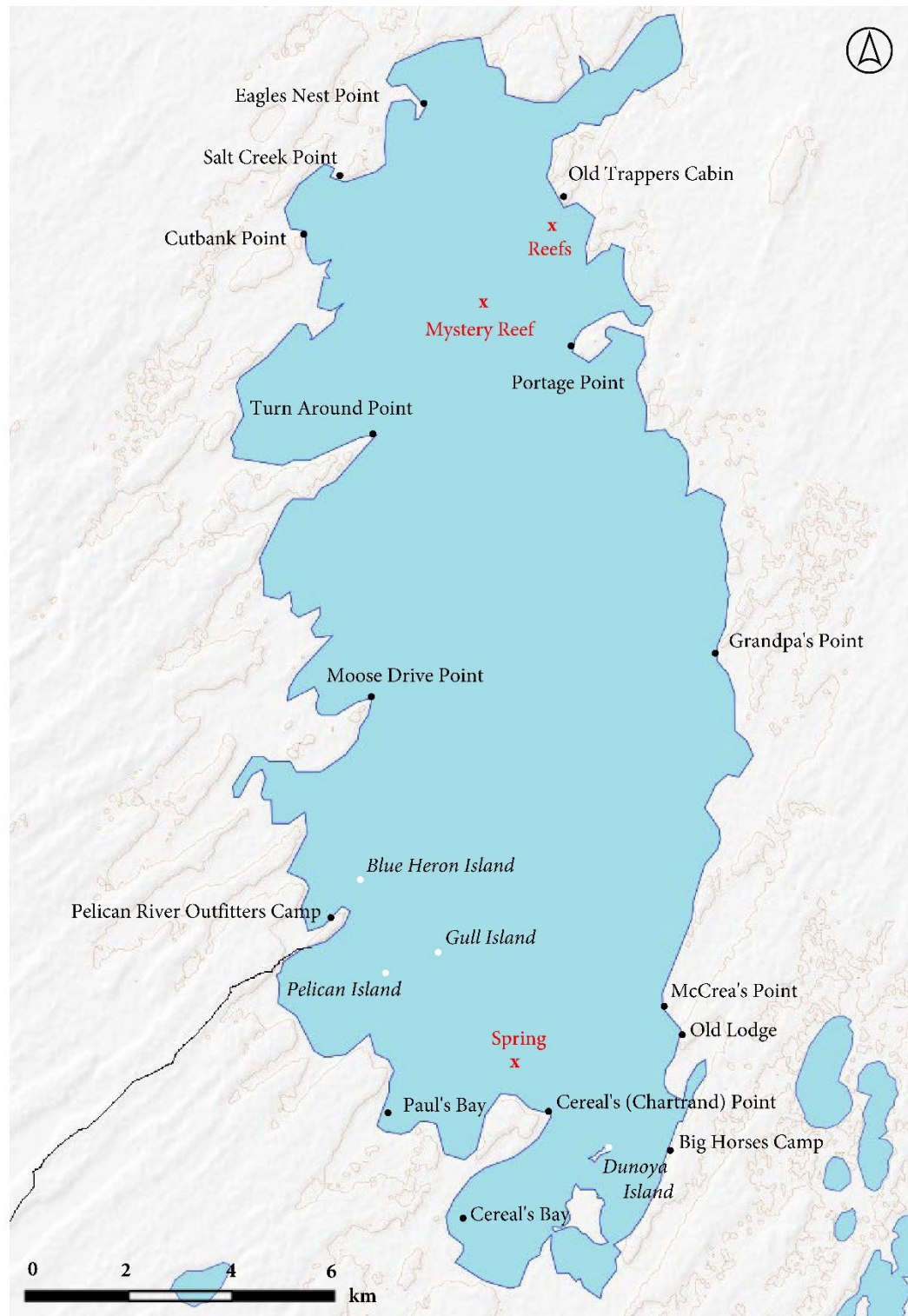
4. 1998 & 2003 Gill Net Sites

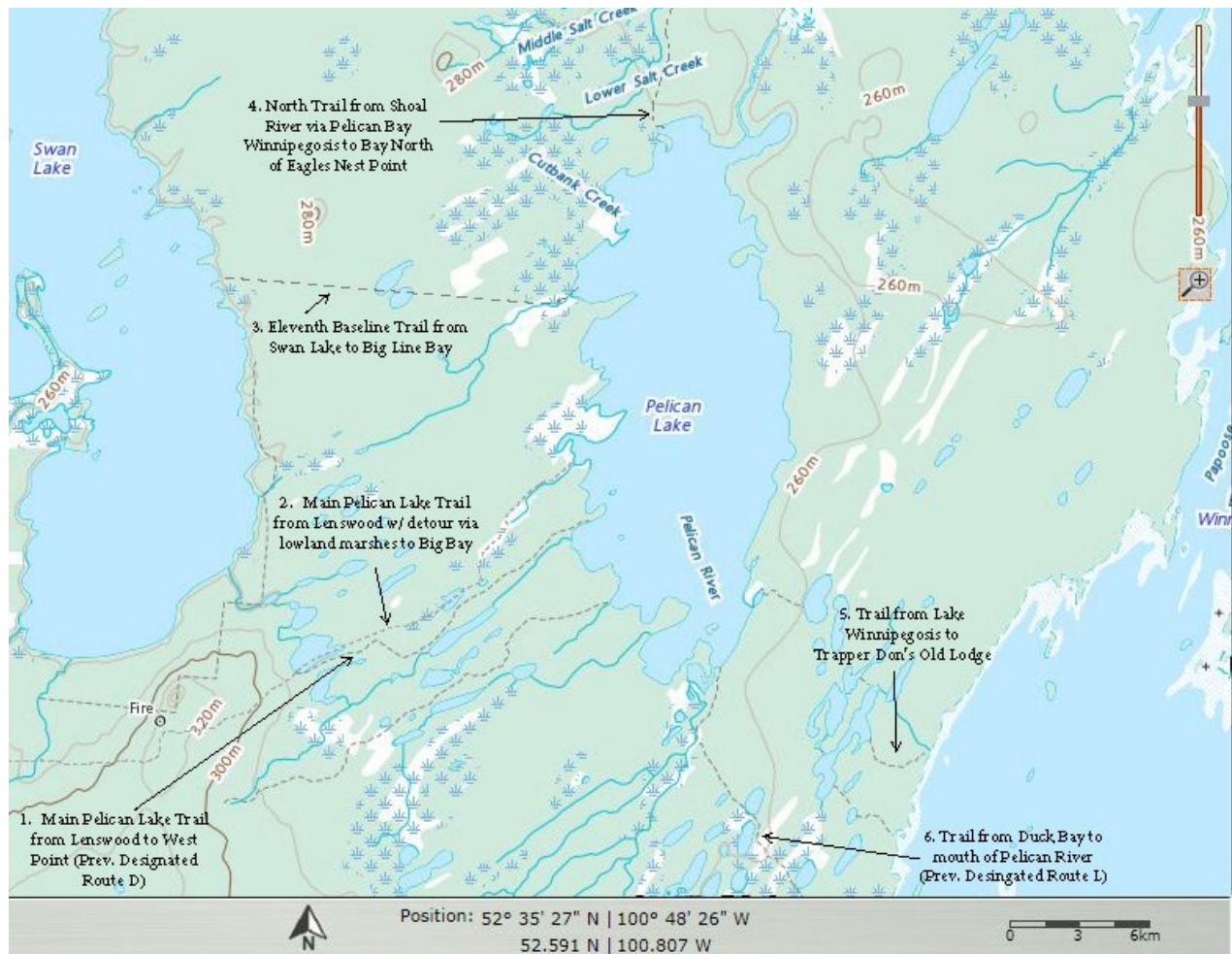


5. 2023 Site Photos

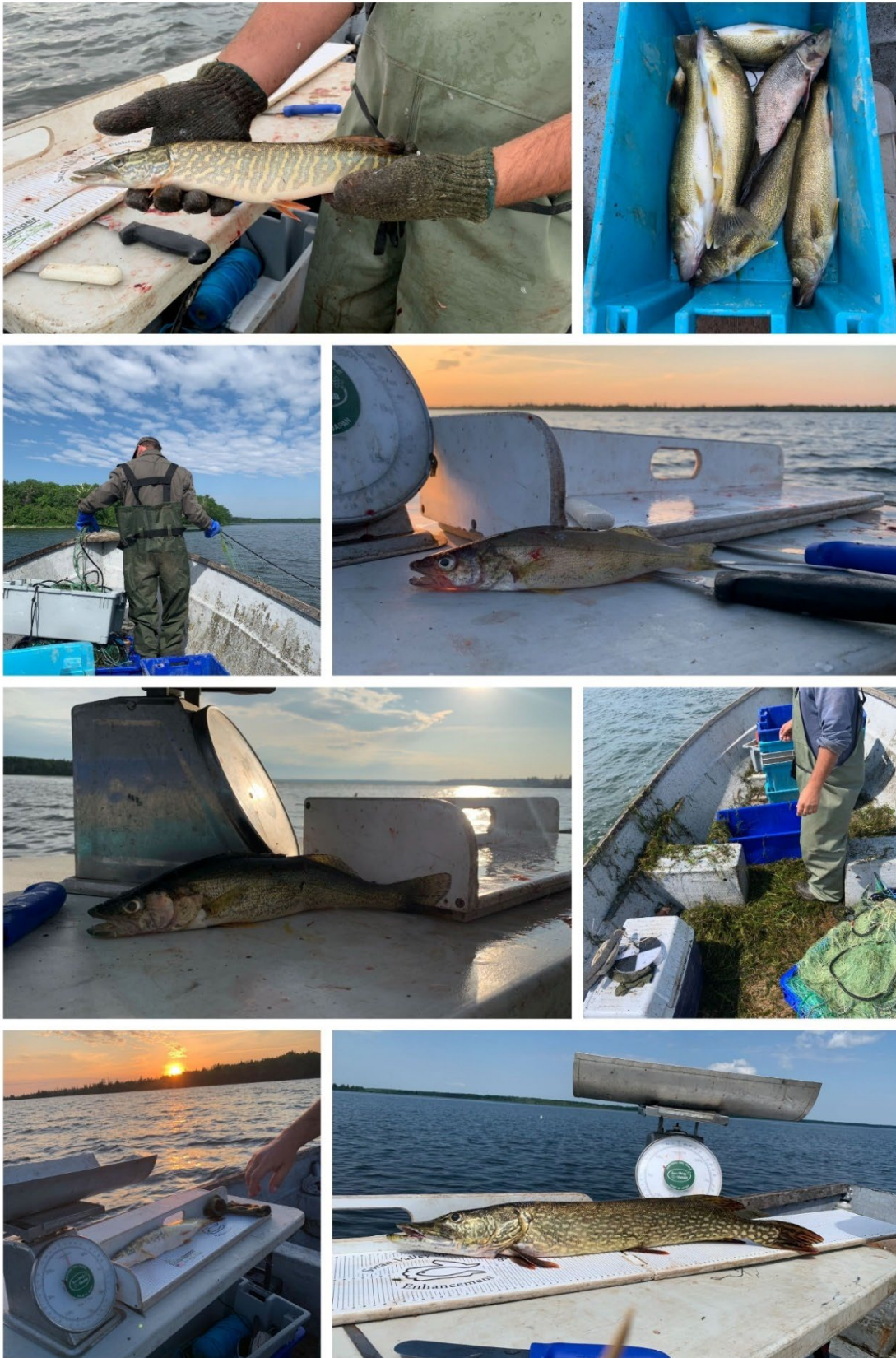


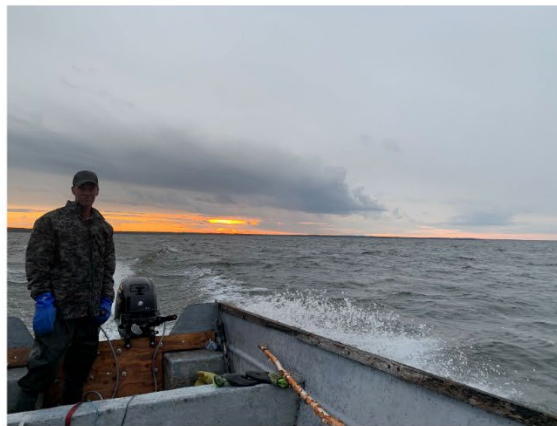
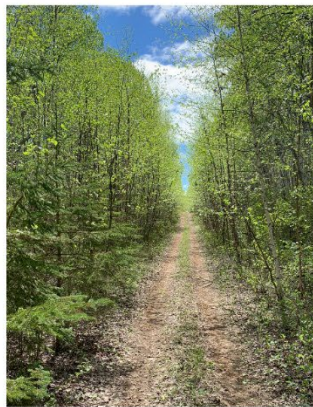
6. Pelican Lake - Landmark Map & Access Map





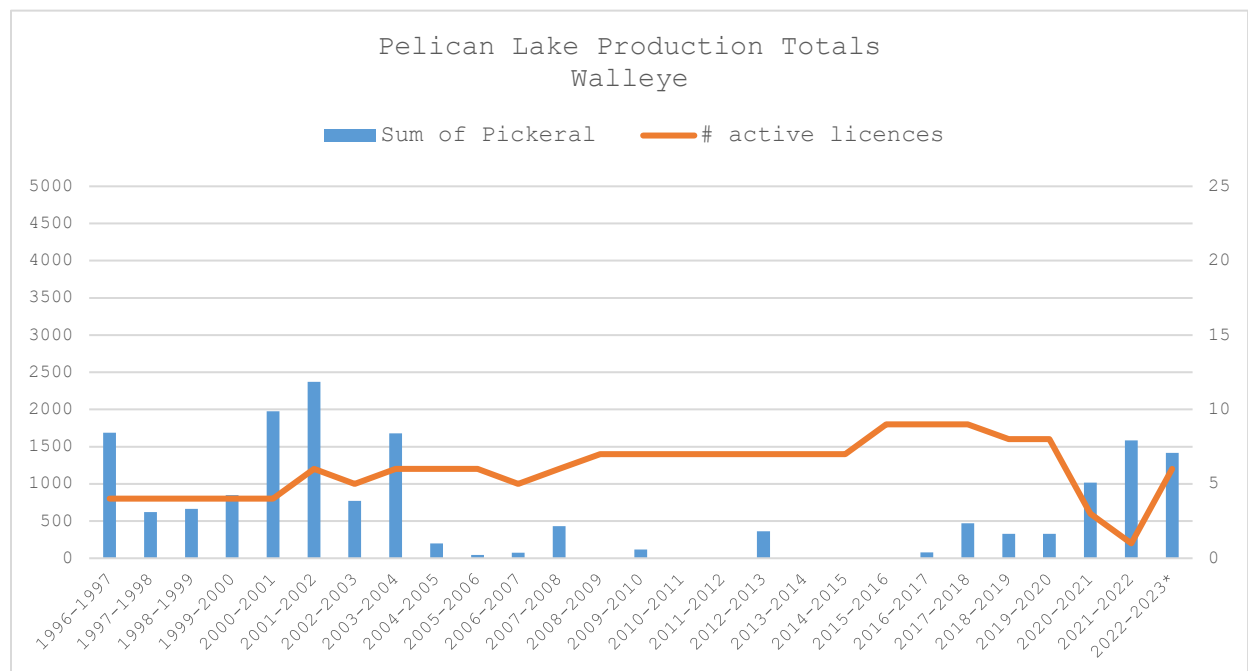
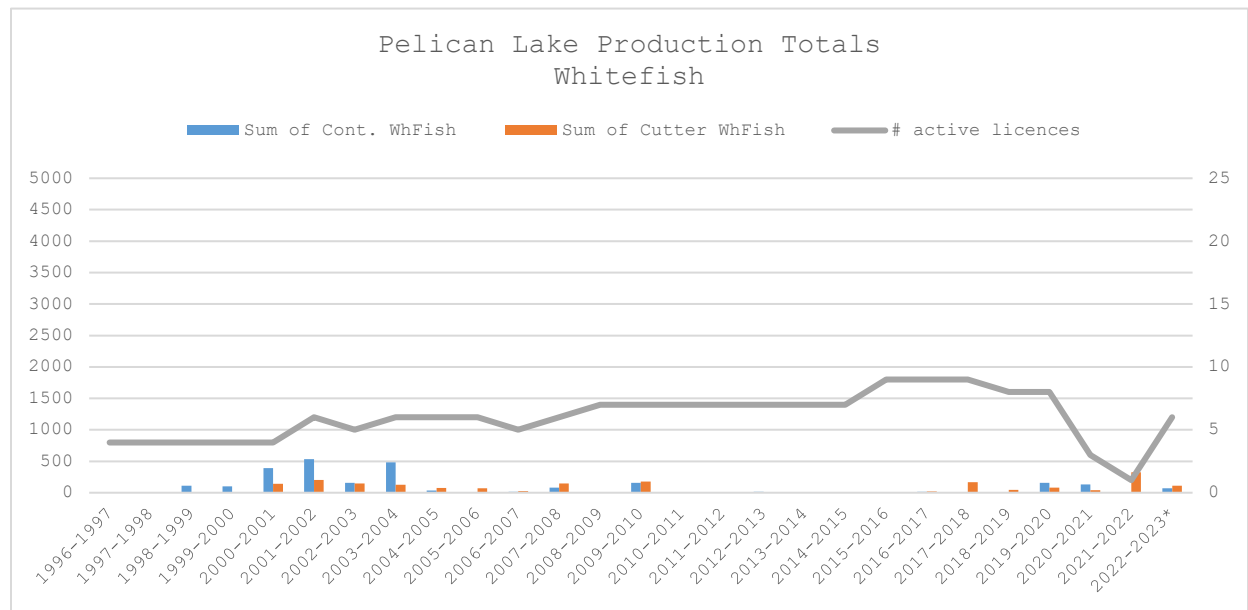
7. 2022 Netting Pictures

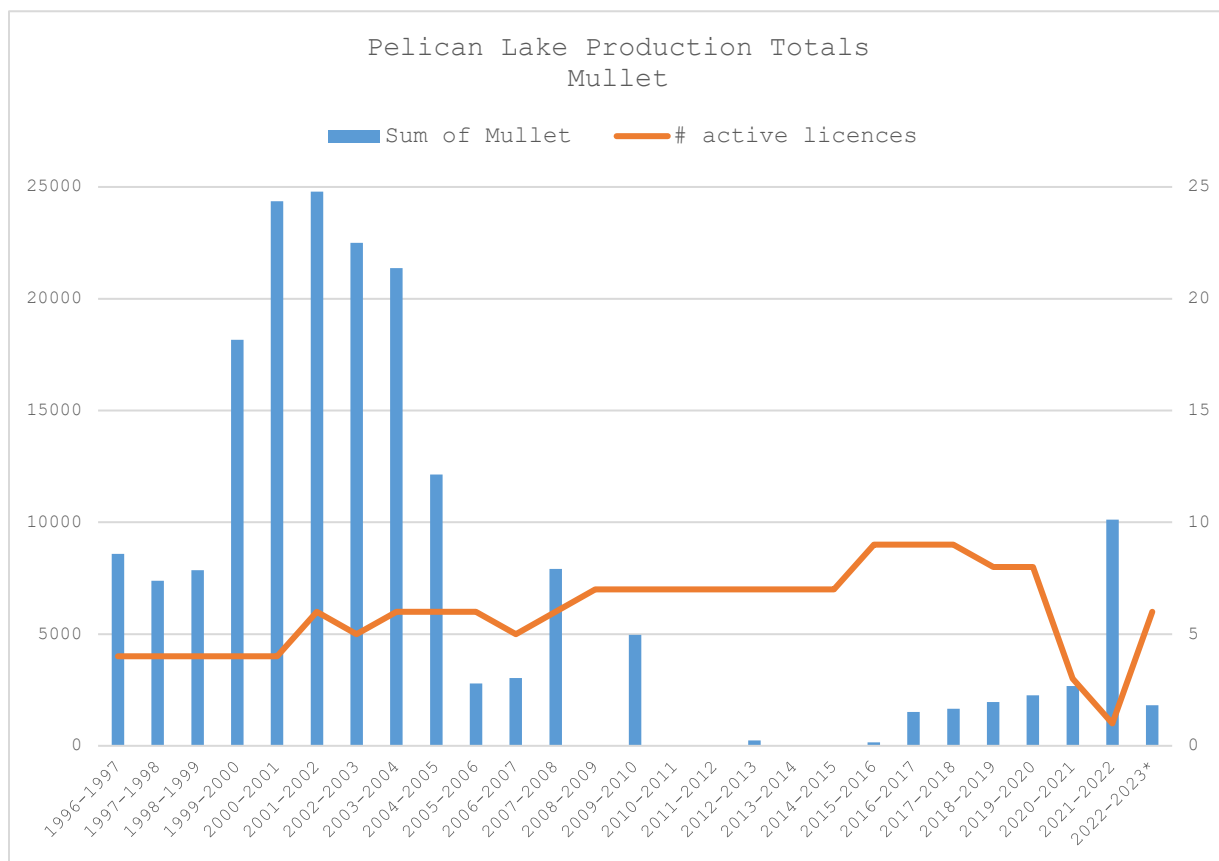
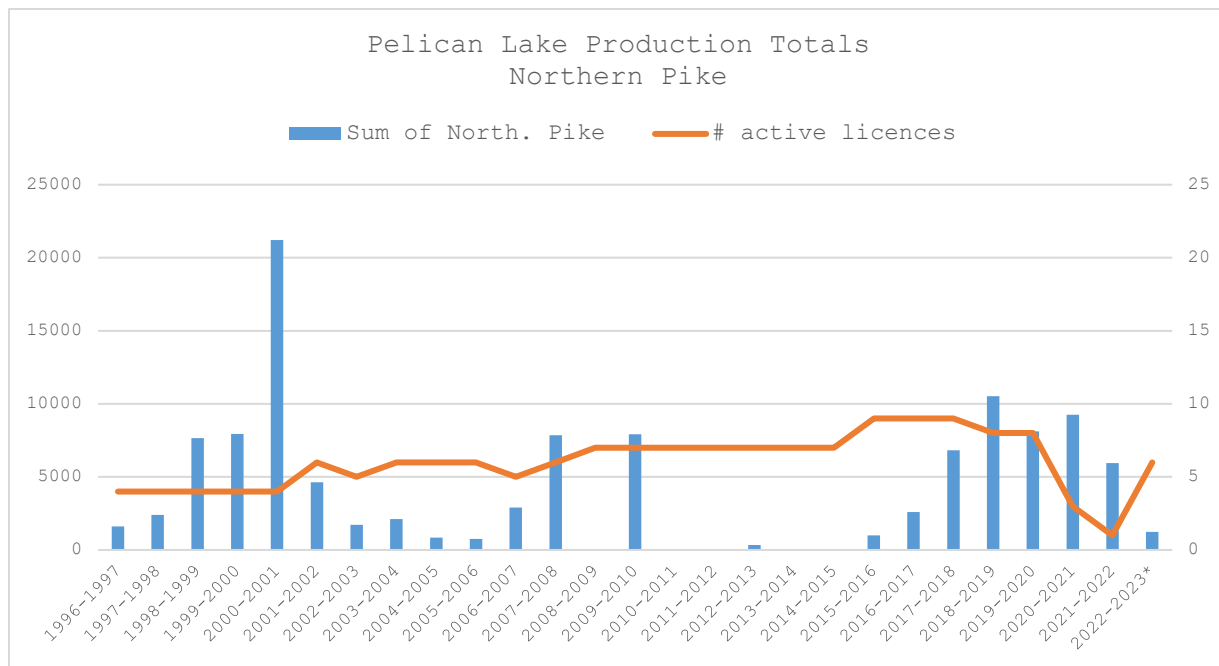




8. Commercial Production Charts

*2022/23 production year in progress





References

Kerr, S. J. and R. E. Grant. 2000. Ecological Impacts of Fish Introductions: Evaluating the Risk. Fish and Wildlife Branch, Ontario Ministry of Natural Resources, Peterborough, Ontario. 473 p.

Colby, P. J., R. E. Mcnicol, and R. A. Ryder. 1979. Synopsis of biological information on walleye (*Stizostedion vitreum*). Fisheries Synopsis No. 119, Food and Agriculture Organization, Rome, Italy. 139 p.

Fox, M. G. 1991. Shawanaga River walleye early life history study. Part 1 : Egg Incubation Study. Report prepared for the Ontario Ministry of Natural Resources, Trent University, Peterborough, Ontario. 13 p.

Yake, B. 1998. Pelican Lake Index Netting Report. Manitoba Natural Resources. Fisheries Branch