

INTEGRATED FISHERIES ASSESSMENT PHASE TWO



*Swan Valley Sport Fishing
Enhancement Inc.*

*Submitted by: Holly Urban & Melissa Badger
May 2013*

As the local sport fishing group in the Swan Valley area, SVSFE's mandate includes working with the community and surrounding partners to sustain and help manage fish for the future. With better understanding of our local fishery and the strong public awareness and education within our projects, SVSFE feels this objective can be met.



INTEGRATED FISHERIES ASSESSMENT - Phase Two

The Integrated Fisheries Assessment - Phase Two encompass both new and additional phases of past and projected programs and research for the Swan Valley Region conducted during 2012. This project was primarily funded through the Manitoba Fisheries and Enhancement Fund (FEF) and with support from project partners. Project activities included; fisheries and aquatic assessments on the Swan River, Wellman Lake, Beaver Lake, Marge Lake, Line Lake, North Steeprock Lake, Bell Lake, Whitefish Lake, No Name Lake, Red Shack Lake, Hoodoo Lake, Schade Lake and stocked trout rivers in the Porcupine Mountains. Furthermore, the adult walleye transfer and education & public awareness were part of the project activities.


The full report of activities within the IFA #2 report is available, but for simplicity reasons, the report has been sectioned by location/activity to aid in sourcing material related to fisheries within the Swan Valley area. This document contains a overview of assessments completed on North Steeprock for 2012.

North Steeprock Lake - Fall Trap Netting (NSCIN) & Fishery Assessment

In 2009, SVSFE conducted their first FEF project at Steeprock Lake which included a walleye abundant study and creel survey. Results provided a baseline of walleye growth, total fish harvested and quality of fishing specific to Steeprock Lake. Trends from barrel counts and creel census indicate a current increase in fishing pressure. In 2011, 10% of walleye harvested were in the regulated slot, which brought additional concerns. Trap netting is an efficient practice in obtaining fish growth, species composition and population estimates through a live release method. Initiating a two year trap netting program at Steeprock Lake will enhance the collection of fisheries related data and management decisions. The trap netting program utilized the Near-Shore Community Index Netting protocol (NSCIN) and was conducted between September 4th - 14th, 2012.

8.1 North Steeprock Lake

Objective



Initiate a two year trap netting program to collect information on species diversity & composition to influence management decisions.

8.2 North Steeprock Lake Historical Data



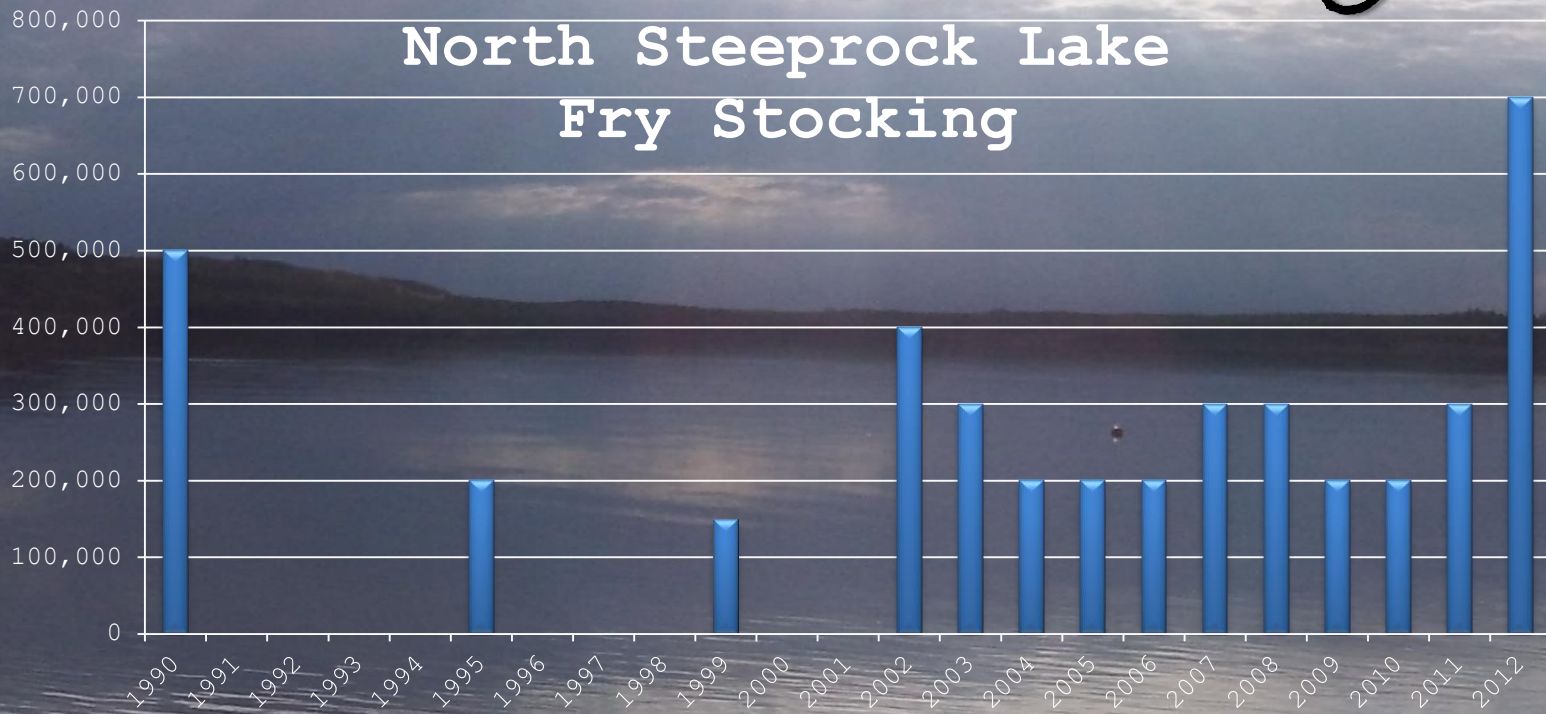
1997/1998 Telemetry Project

Objective: To identify spawning areas used by walleye. Previous telemetry projects identified an important spawning area one mile north of the lake on an inflowing river.

Recommendations: The area just downstream of the culverts (now known as the SPL bridge) at the mouth of the inflowing river could be enhanced with suitable material so the fish would be able to utilize the area for spawning in the event water flows did not allow fish passage through culverts. (Yake, 1998). Years later these culverts washed out and were replaced with a bridge by Spruce Products Ltd. This change was beneficial for fish accessing upstream reaches of the river to spawn.



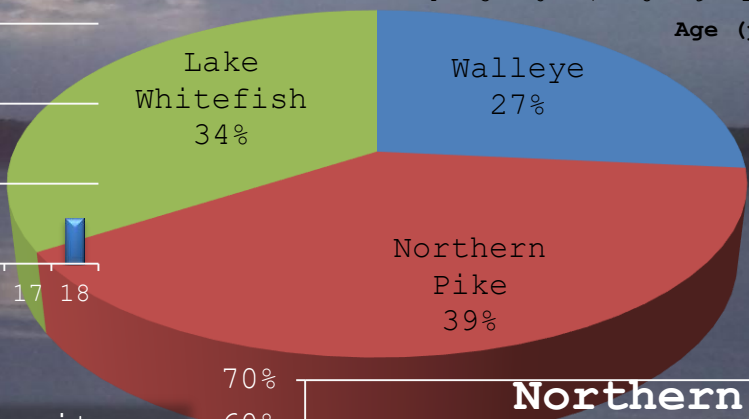
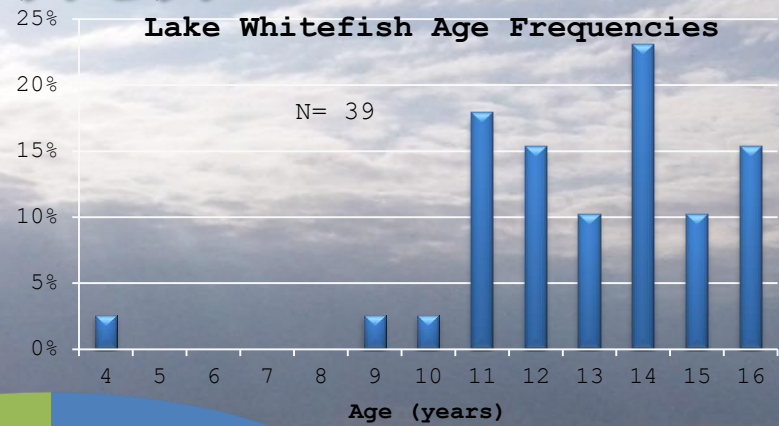
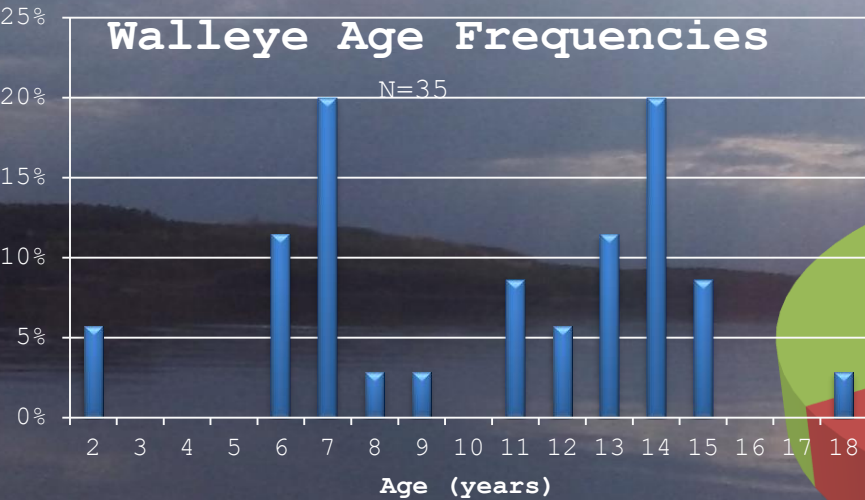
8.3 North Steeprock Lake- stocking History



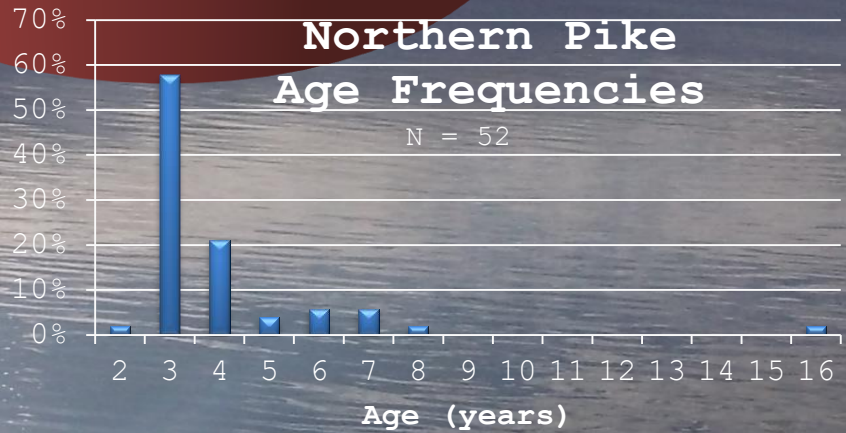
In addition to fry stocking, North Steeprock Lake was stocked with 123,967 fingerlings between 1994 and 1997 & 4,275 within 2008 & 2009 from fry reared and transferred from North Lake

8.4 Historical Data-

2008 Index Netting Results

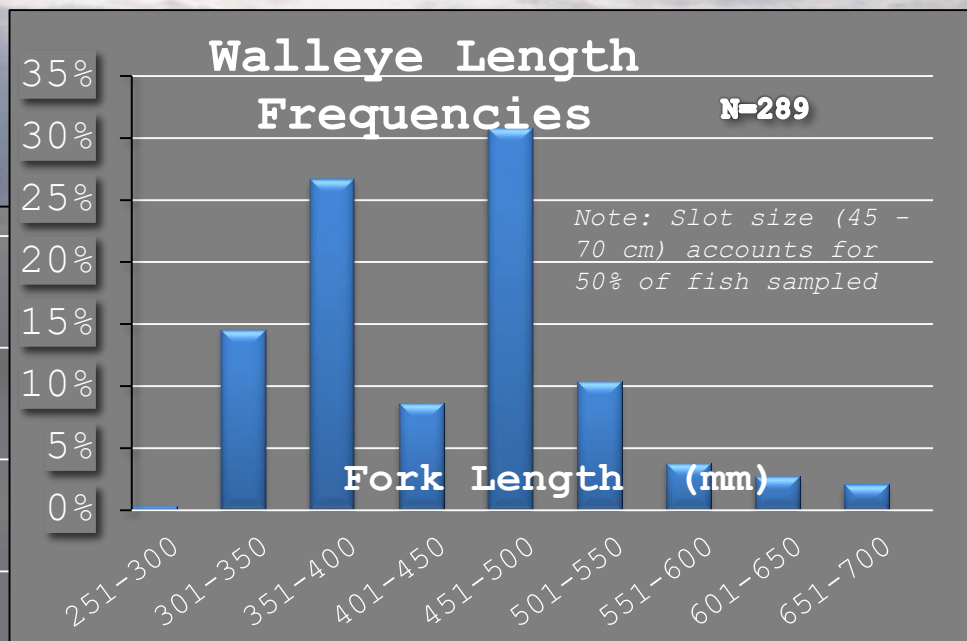
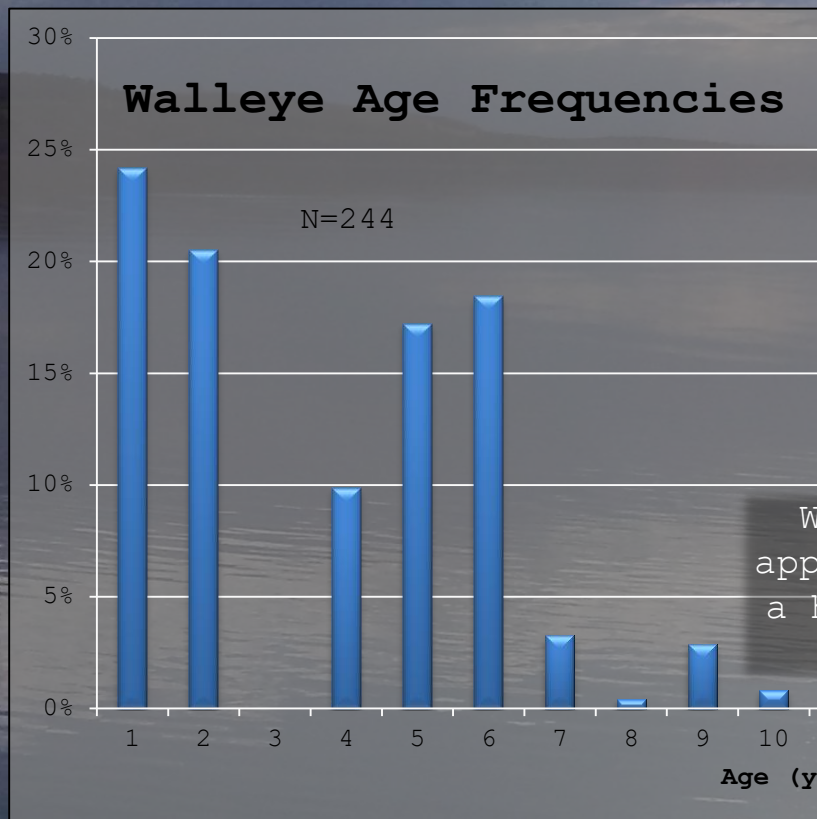


2008 results reveal species diversity. Ages frequencies reveal there were a few years where populations were affected. Factors which affect walleye populations include; weather & water temperature during spawning, number of mature fish, predation, competition, angling pressure, stocking efforts and the availability of suitable habitat.





8.5 Historical Data - 2009 Walleye Abundance Study



Walleye study found the slot limit protected approximately 50% of the walleye. This suggested a healthy spawning population and great angling opportunities.



8.5 Historical Data

2009 Creel Survey

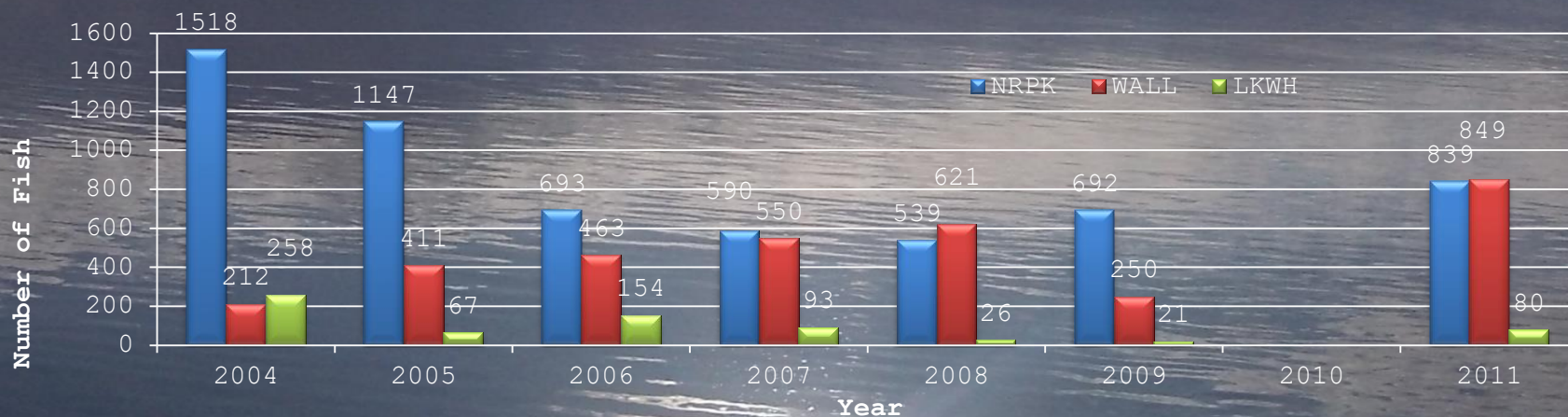
2009 Creel Data

"Fishing quality from May 9 to August 30 was 2.1 fish/hr. Recreational pressure was used to summarize total effort. Average effort was 4.8 anglers/day."

2009 Harvest Rates (Barrel Counts):

Even doubling the weight of harvested fish from barrel counts, the results are not beyond the maximum sustainable yield (1 kg/ha).

**North Steeprock Lake-Fish Barrel Count
2004-2011**



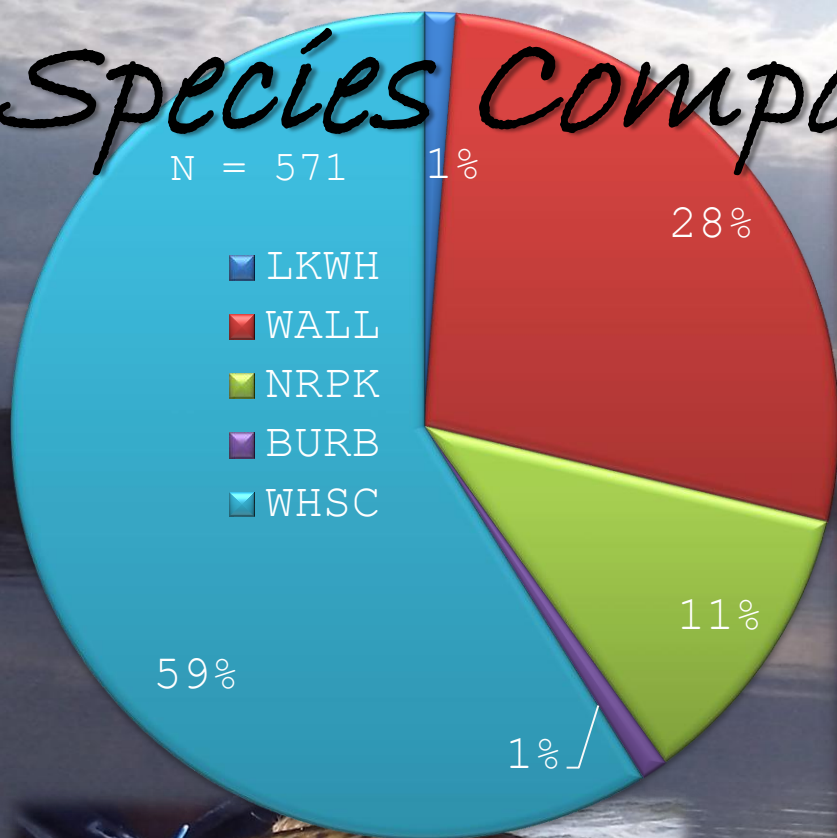
8. North Steeprock Lake Trap Netting

North Steeprock Lake 2013

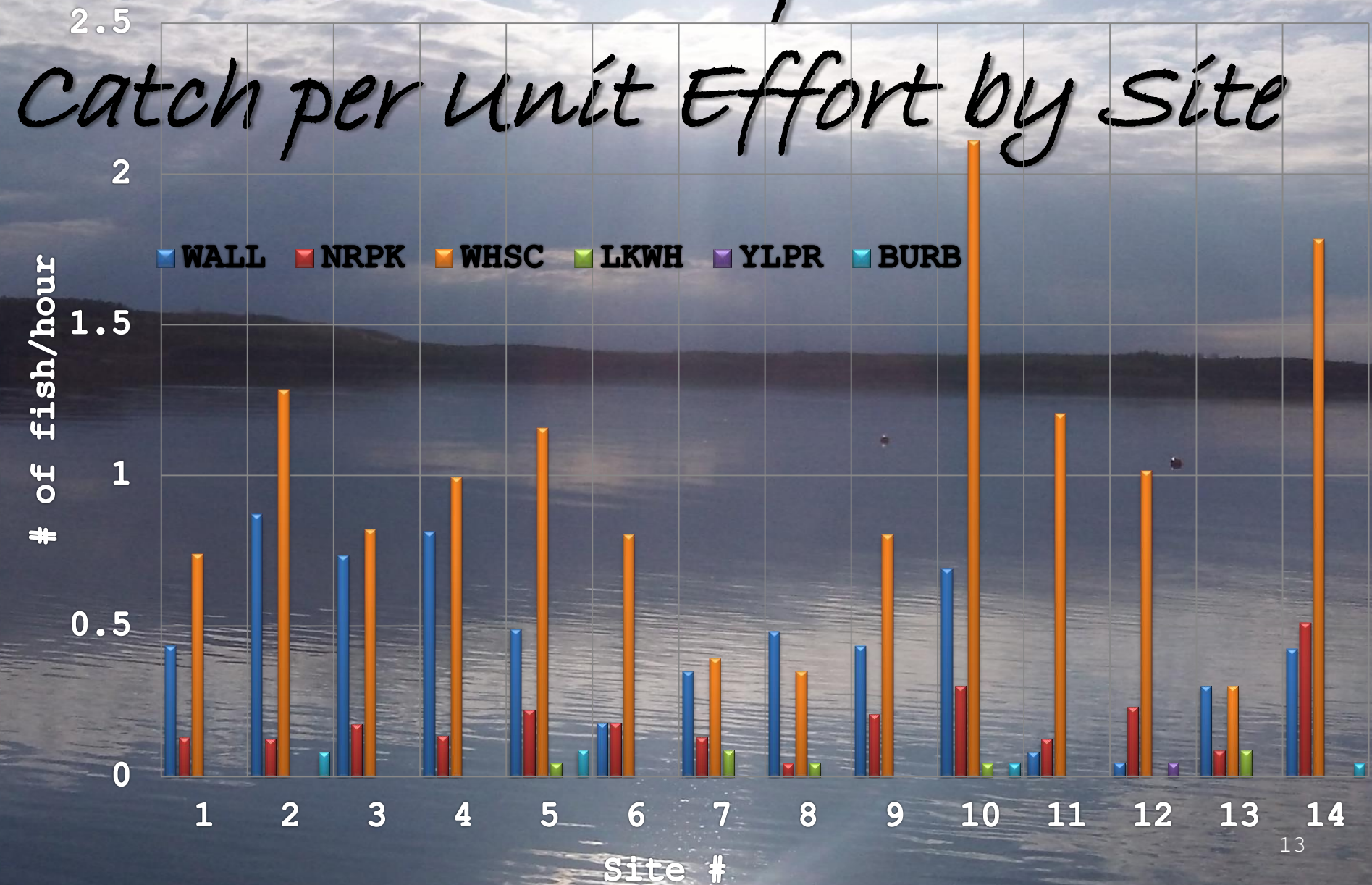
Located along PR #365 North Steeprock Lake is 991 hectares. Past depth maps indicate the deepest depth recorded around 10 meters.



8.7 North Steeprock Lake Species Composition



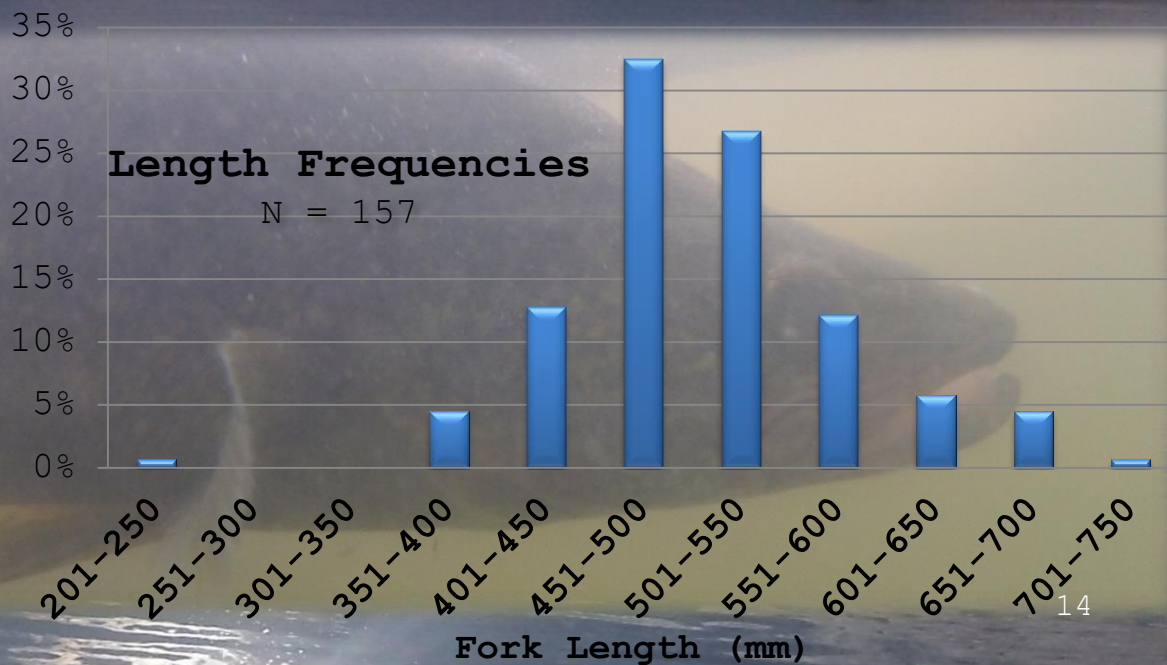
8.8 North Steeprock Lake



8.9 Walleye



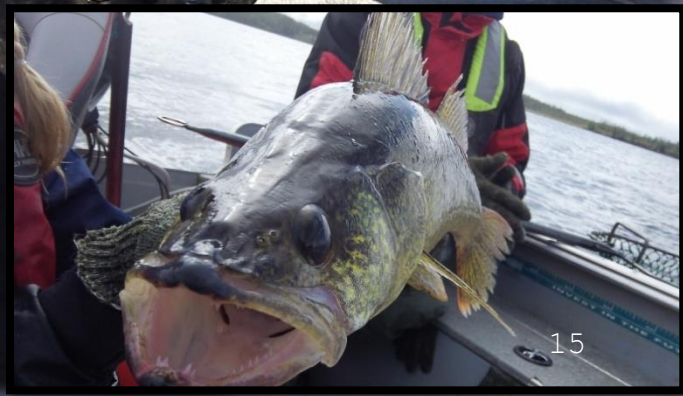
A total of 157 walleye were caught



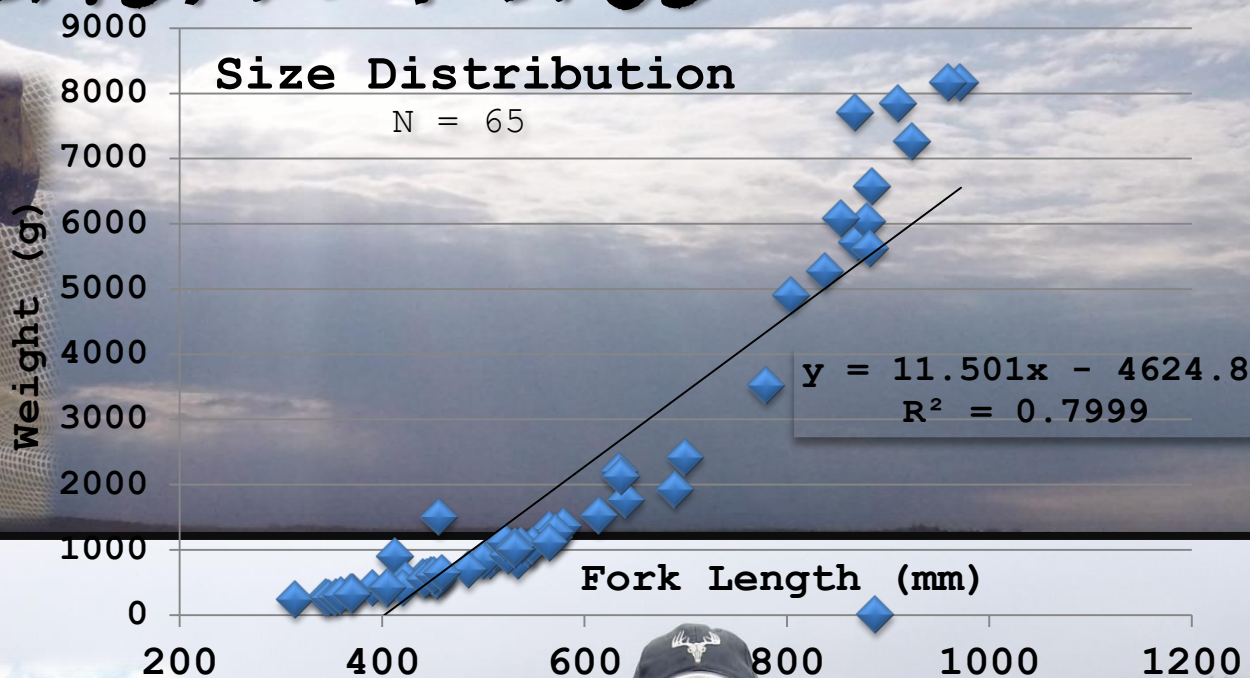
8. North Steeprock Lake Trap Netting



And More Walleye!

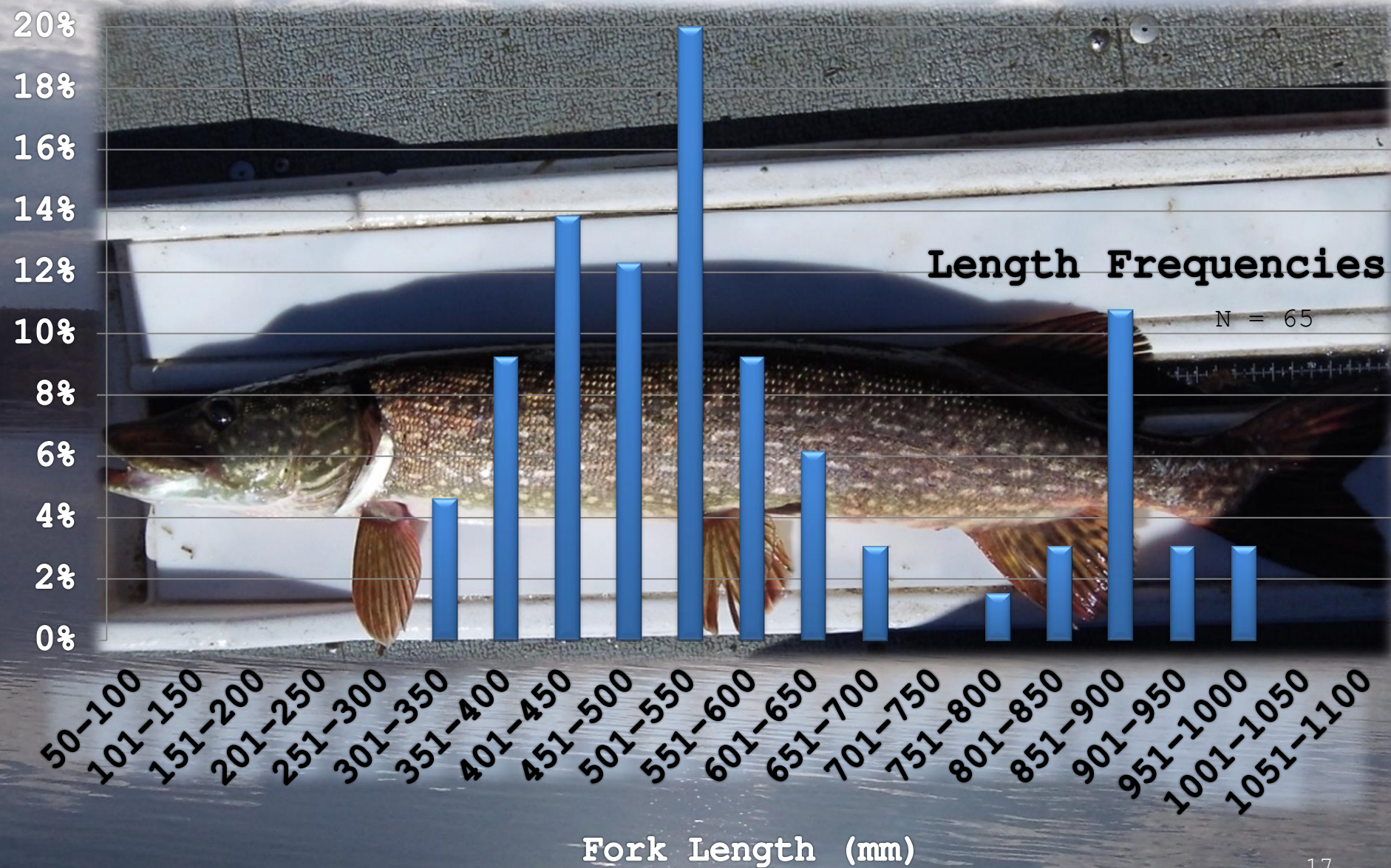


8.10 Northern Pike

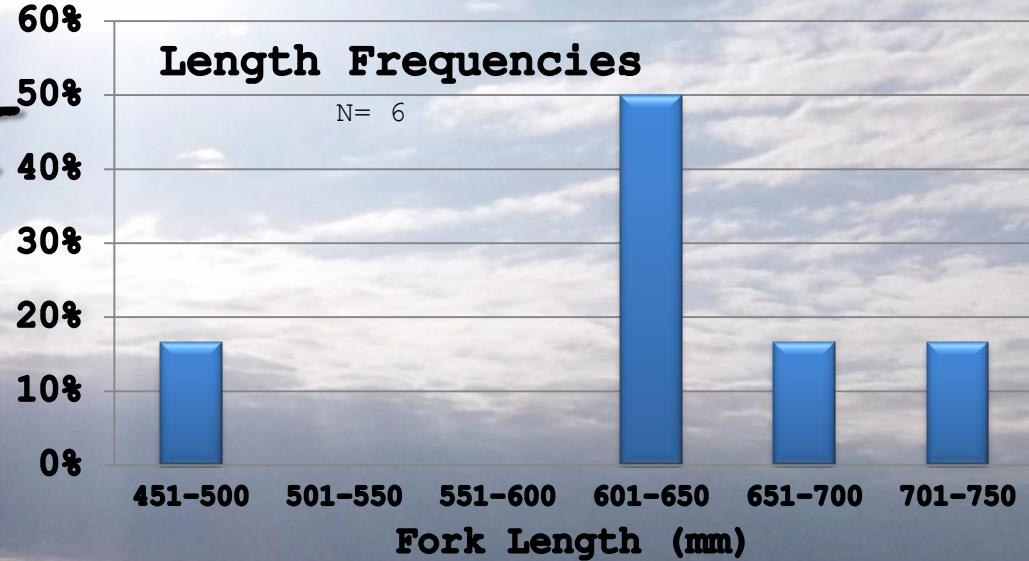


A total of 65 pike were caught

8.10 Northern Pike



8.11 Burbot



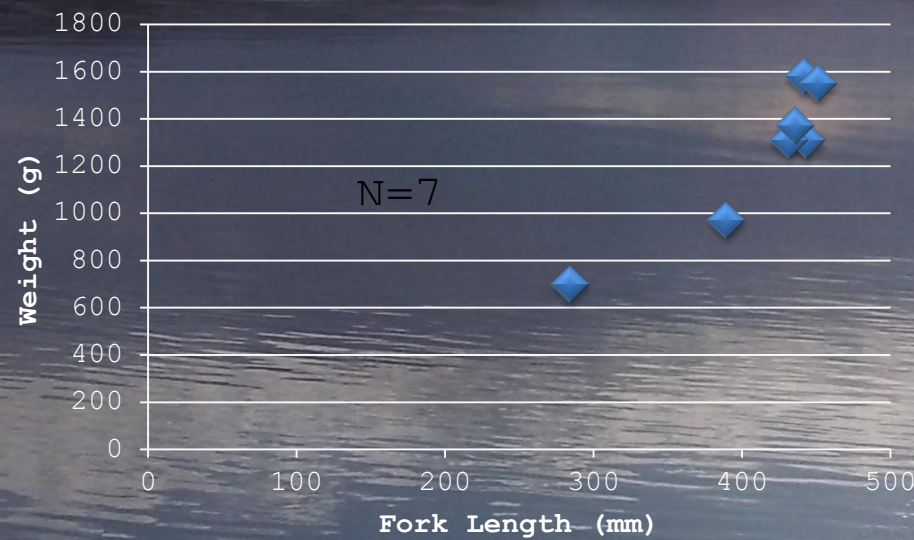
A total of six burbot were caught

8.12 Other Game Fish Species

White Sucker



A total of 231 white suckers were caught



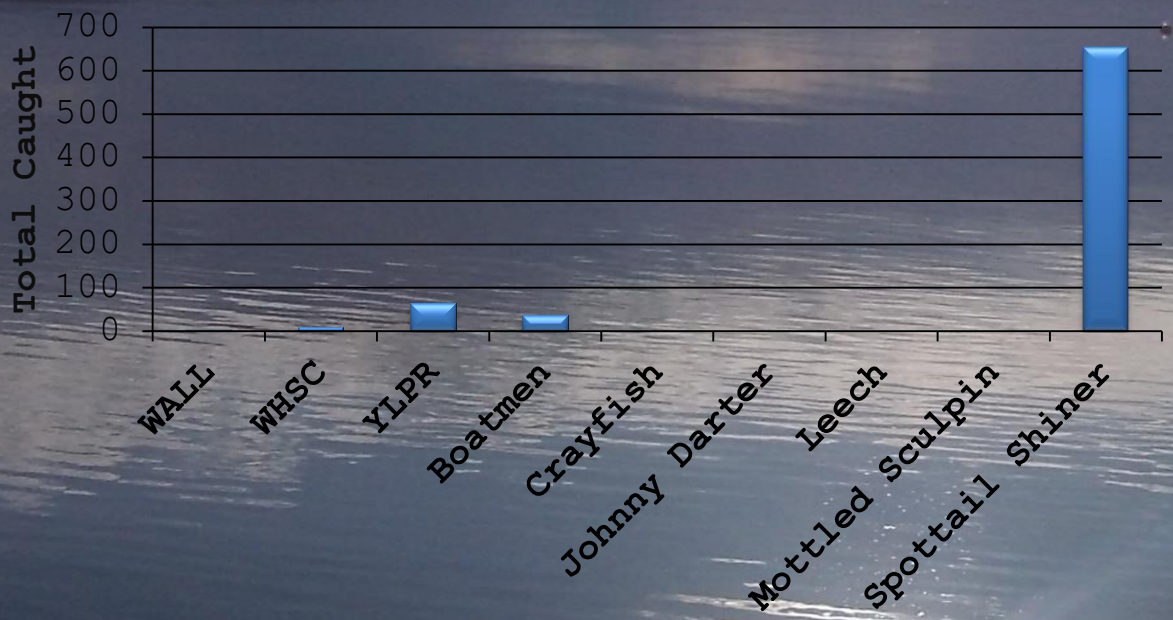
Lake Whitefish



A total of seven lake whitefish were caught

8.13 Seining Results

North Steeprock Lake has a very abundant forage population of spottail shiners, along with yellow perch. Young of the year walleye (n=3) and white suckers (n=10) were also present in seine hauls.



8.14 North Steeprock Lake

Final Note



Several studies/work completed on North Steeprock Lake indicate the lake possesses a mature walleye population, good forage base and diverse spawning habitat. Recent low catches of young of year walleye pose the question... are walleye naturally reproducing or are populations dependant on supplement stocking? North Steeprock Lake is a large lake, but recreational and domestic fishing has been increasing over the years. Due to the potential of heavy pressure, SVSFE recommends monitoring North Steeprock Lake on a 4 to 6 years rotation. SVSFE has been approved for 2013's Prj 12-042 "Evaluating the Success of Walleye Recruitment" and for Year Two - 12-024 "Bell and North Steeprock Lake Trap Netting" to continue this monitoring.

Acknowledgements



Provides SVSFE with funding to contribute to fisheries management in the Duck Mountains, Porcupine Mountains and the Swan Valley area. We would like to acknowledge the importance and benefits the FEF brings to our recreational fishery. The stamp is always a reminder that a portion of the license fee helps fund projects to educate the public and to ensure that future generations will enjoy fishing as much as the present population does!



Swan Lake Watershed
Conservation District

Provides SVSFE with the opportunity to use their ESRI software to produce maps.

Partnering with the Honoway Fishway Monitoring which has been successful in allowing fish to continue their migration upstream in the Swan River.



Water Stewardship
Fisheries Branch

SVSFE is very thankful towards the Fisheries Branch staff as they are the support which makes these projects possible. Special thank-you to Ian Kitch, Lloyd Rowe, Bruno Bruderlin, Ken Kansas and all the fisheries experts for their endless direction on fisheries management.



MB Conservation

Including Parks, Enforcement, Forestry & Wildlife staff. Each department continually supports SVSFE projects and provides in kind support. Special thanks to Allan Moore & A.J Sutherland

INTERMOUNTAIN
SPORT
FISHING
ENHANCEMENT

ISFE -
for their support
& partnerships in our
projects

Acknowledgements



Glad/Wellman Cottage
Owners Association

These cottage owners have supported every project completed on Glad & Wellman Lake financially or morally.

AND thank you
to all the
individuals we
may have
missed.



Assiniboine
Community
College

University College
of the North



Partnering on projects and
assisting in data analysis

Thank you to North Mountain Rider's Snowmobile Club who was available to groom trails for us this winter - otherwise we would not have been able to access several lakes due to heavy snowfall!

SVSFE greatly appreciates support from Tru Hardware, Qwik Stop, Rough Country and Swan Valley Co-op. Support our Community!



Service Canada

Provides the opportunity to access funding to provide education to youth. Education is a top priority for SVSFE and we have utilized this fund several times.



Swan Valley
School Division -
SVRSS Environment
Management Students &
Ecole - Student
volunteers for
Walleye Transfer



LP Woodlands

Has provided SVSFE with in-kind material on Stream Protocols, Invertebrate sampling and most recently (along with Daryll Hill) who provided us with a radio for safe travels on logging roads.

IFA Phase Two - Final

Note:

An integrated assessment of this type has strongly benefited the recreational fisheries in our area and promotes the importance of FEF to the highest degree. SVSFE hopes to continue and build on past FEF projects in the future. Results from other activities completed within this project can be found in additional "IFA#2" reports.