

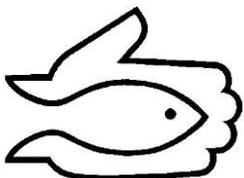
Integrated Fisheries Assessments, Maintenance, and Monitoring

FWEF PROJECT 15-036 IFAMM
2016 Summary of Activities



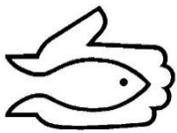
Swan Valley Sport Fishing Enhancement Inc.

Submitted by: Holly Urban, Brock Koutecky & Megan Paterson
December 2016



MANITOBA
FISH AND
WILDLIFE
ENHANCEMENT FUND

Manitoba 

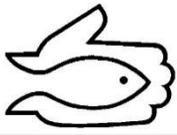


Summary of Activities

For decades, SVSFE has conducted meaningful work with the intention of enhancing the recreational angling experience. As the years pass by, we've developed relationships with many other user groups, government/non-government organizations, fisheries staff (throughout North America), and anglers to come up with proactive approaches to increase fishing quality in the North Parkland Area. The group has conducted research, initiated enhancement projects, introduced educational programs, aided in transfer programs, developed comprehensive management plans, the list goes on and on. As the field season of 2016 comes to an end and all of our reporting is nearing completion, we feel providing FWEF with a "summary of activities and ambitions" is absolutely necessary. Following is a short summary of our work from the 2016 season, focusing on some of the highlights (in chronological order). Please note, for a full comprehensive analysis on work completed, please refer to lake specific summaries.



1. Trout Maintenance Programs: In recent years, some very popular trout lakes including, Glad Lake, East Blue Lake, Two Mile Lake, Gull Lake, and Vini Lake have been invaded with non-salmonid (i.e. yellow perch, northern pike, white sucker) populations which have adversely affected the trout stocking program, and overall, trout angling quality. For this reason, SVSFE has worked tirelessly to restore these waterbodies in order to "bring them back" through battling these invasions using reactive, yet comprehensive solutions. As we know, each waterbody is very different, and therefore requires very specific attention. At this point, we strongly believe that through assessment work, removal programs, and extensive literature review that we have come up with both long and short term management objectives in order to restore historical trout angling quality. 2016 Highlight: Arctic Char stocking scheduled for the spring of 2017, as a result of two intense years of trout maintenance program conducted on Glad Lake.



Summary of Activities

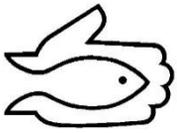
2. Walleye Recruitment Surveys: In the Swan Valley and arguably Manitoba; walleye are an extremely sought after game fish species, attracting local and non-resident anglers from far and wide to our many popular walleye fisheries. For this reason, SVSFE has always been very interested in managing the species through monitoring fish stock, growth and recruitment, spawning success, stocking success, and overall angling quality.



In two smaller Duck Mountain Lakes (Beaver and Marge Lake), SVSFE and Sustainable Development created two new walleye fisheries in 2010 and 2011 respectively, through candidacy of the Beautiful Lake Walleye Transfer. Since initial introductions, SVSFE has been closely monitoring stocking success in these two waterbodies. Regarding Beaver Lake, SVSFE has developed an efficient and long-term management objective for the waterbody, which will hopefully be fully justifiable and implemented within the next couple of years. In terms of Marge Lake, this lake is currently closed to harvest in order to establish the walleye population in this small waterbody. The group is working closely with fisheries branch on creating goals for long term management objectives and ideal regulations. This is to ensure when the lake is "open" to harvest, the proper framework is in place to sustain the fishery for years to come.

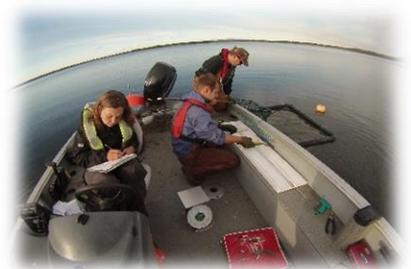
Regarding two larger walleye lakes which receive increased angling pressure; Wellman Lake and Whitefish Lake, SVSFE has closely been monitoring spawning/stocking success for decades. Whitefish Lake receives no supplemental stocking, and is largely associated with annual habitat improvement (beaver dam control) conducted by SVSFE. Each fall, recruitment success is monitored by SVSFE technical staff. Wellman Lake is stocked annually, and has historically shown limited recruitment success. In the winter of 2017, a walleye habitat enhancement project will be initiated on the "Wellman Lake Spawning Reef" (funded through RFCPP), with hopes of increasing natural recruitment, and "freeing-up" the limited walleye fry available to the province each spring.





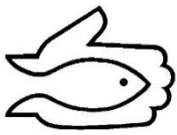
Summary of Activities

On the other side of the valley (Porcupine Mountains) a three year OTC study was concluded in 2016 on both North Steeprock and Bell Lake(s). These two larger popular walleye fisheries have received annual supplemental fry stocking with little to no evaluation on natural recruitment and stocking success for decades. Following the third and final year of this OTC study, it was determined that both lakes inhibit high rates of natural recruitment (>60%). Following full data analysis, it has been determined that annual stocking was excessive. From now on each lake will be stocked every two years at 1,000 fry per littoral hectare with follow up assessments in 4-5 years to determine success. Highlight: Every other year an additional 600,000 walleye fry can now be allocated to other walleye lakes requiring supplemental stocking.



3. Fish Surveys: Managing recreational waterbodies requires up-to-date fish surveys/assessments every so often. Over the years, SVSFE has acquired the gear necessary to effusively assess "small" recreational walleye lakes through non-lethal methods. Traditionally, fish inventory assessments used lethal methods, which on small waterbodies, can lead to adverse ecological effects including decreasing angling immediately following assessments as a result of lost fish stock. The non-lethal assessment program, combined fall electrofishing with "End of Spring Trap Netting" (ESTN) to determine relative abundance and health of current fish stock. In 2015/2016 this program was initiated on Singush Lake in order to further quantify a "up-to-date" fish inventory, which has resulted to proactive management objectives aimed at maintaining walleye, northern pike, yellow perch, and smallmouth bass angling quality.



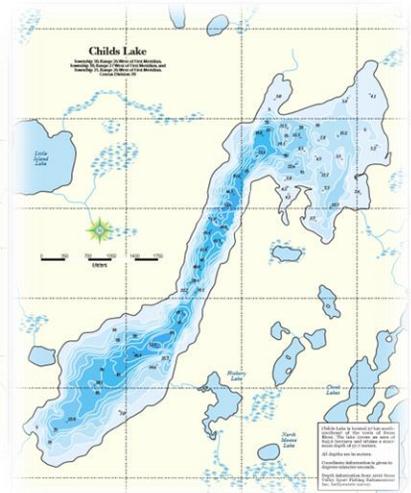
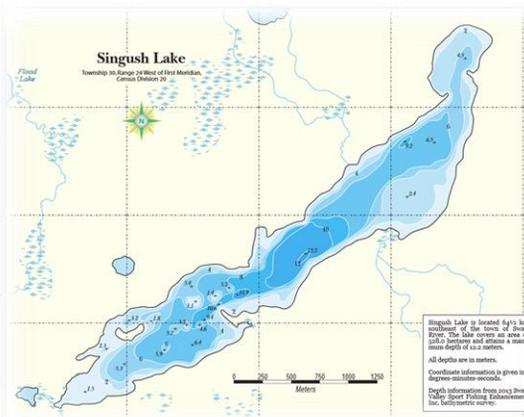


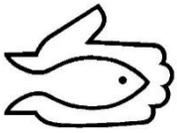
Summary of Activities

4. Assisted Stocking: SVSFE understands the importance of efficient stocking practices. For this reason; during the field season of 2016 technicians and volunteers aided fisheries branch with stocking whenever possible. This includes "scatter stocking" trout and young of the year walleye by using boats to stock in the deep areas void of large littoral predators, and stocking walleye fry in warmer bays and areas to aid in growth requirements. Highlight: In the spring of 2016, SVSFE initiated the "long overdue" stocking of Snail Lake with arctic char (through funds acquired from HAPF). This remote, winter access only waterbody is arguably the only "Master Angler" arctic char fishery in Manitoba today, attracting trophy fishers from far and wide.



5. Bathymetric Mapping: As we know, understanding the morphometry and structure within a waterbody can increase angling quality/success significantly. SVSFE recognizes public access to accurate depth maps will be extremely beneficial to the angling community and lake managers. During the summer of 2016 SVSFE mapped a total of five unmapped waterbodies using modern methods. To date, we have mapped over 40 "high-traffic", and "remote" lakes in our area. Highlight: At current all of these maps are accessible on our websites "Go Fishing Page". These maps are printable and downloadable for both stationary and mobile devices.





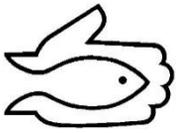
Summary of Activities

6. Lake Exploration for Sport Fish Introductions: SVSFE has a strong interest in creating and managing unique fisheries which will attract both local and non-resident anglers. In 2016 technicians set out to conduct surveys in order to find new lakes for sport fish introductions. In total, three lakes were assessed to determine introduction suitability. Highlight: Olsen Lake (remote Porcupine Mountain Lake) scheduled for brown trout stocking and West Watjask Lake (semi-remote Duck Mountain Lake) will re-introduce muskellunge to the Ducks in the spring of 2017.



7. 2017 Fish Camp: Since initialization, SVSFE has been strongly committed to youth educational programs. Providing children with the opportunity to acquire the necessary outdoor skills and ethical mentalities to be "stewards of the future" is of utmost importance to us. 2016 marked the 6th annual "SVSFE Fish Camp" which is held at Wellman Lake each August. In 2016, we had record registrations with 30 children. Fish Camp is designed to provide children with an opportunity to acquire a variety of outdoor skills including fire building, remote navigation, survival skills, shelter building, edible plant identification, boat safety, and primarily - all the aspects of sustainable recreational angling. Although this program requires a significant amount of time and energy in terms of planning and coordinating each year, this particular project is extremely rewarding to SVSFE staff, volunteers, and directors





Summary of Activities

8. Zebra Mussel Early Detection Program: In 2016, SVSFE initiated an "Early Zebra Mussel Detection Program" in efforts to closely monitor potential local zebra mussel invasions. As these extremely invasive species continue to creep in throughout the province, it becomes imperative that efforts to closely monitor the spread be of utmost importance. This program has been designed to be extremely effective while at the same time requiring little effort and money in terms of early detection. In spring samplers were supplied by the AIS program and installed in eleven of our largest and most accessible sport fishing lakes. In fall the samplers were removed, and sent to Winnipeg for lab analysis. This program is designed to closely monitor these invaders, and provide proactive managerial options if these invaders ever show up in our local waterbodies. Highlight: Upon preliminary examination; no mussels were found.



10. Angler Surveys: SVSFE understands the importance of qualitative data and incorporating angler's insight into potential management objectives. In 2015, a majority of the grunt work was completed. This included creating the survey questionnaires and developing the online submission form. In 2015, SVSFE had a hired summer student (through Service Canada) to prowl the Ducks and Porc's conducting these interviews. In 2016, this program was continued, and submissions were entirely online and voluntary. In 2016, a total of 26 questionnaires were completed and analyzed as opposed to 153 in 2015. Although submissions were relatively low, so were cost and time allocation. This program is intended to continue into the future with more advertisement and incentives for anglers to complete these surveys and provide us with this extremely valuable information

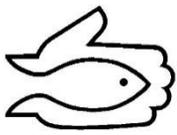


Swan Valley Sport Fishing Enhancement Inc.



2015 Angler Survey





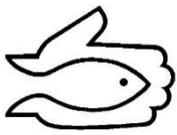
Summary of Activities

10. Rearing and Transfer Programs: Each year, SVSFE and Sustainable Development partner on the very popular project commonly referred as the "Beautiful Lake Walleye Transfer". This particular project rears walleye in Beautiful Lake at an exceptional rate and each fall we spend approximately two-weeks trapping and transferring walleye to respective walleye lakes. This project is very popular, as it's commonly explained as "creating instant walleye fisheries". Highlight: In the fall of 2016 we captured and transferred a record 15,184 sub-adult walleye. Below is the summary of the 2015 recipients.

Beautiful Lake Walleye Transfer									
	2009	2010	2011	2012	2013	2014	2015	2016	Total by Lake
Wellman Lake	48	522	222	153	144	360	1,005	2,680	5,134
Spray Lake	0	50	41	75	0	285	0	868	1,319
Verrall Lake	0	74	57	132	0	100	394	603	1,360
Child's Lake	230	0	0	0	0	368	1,000	3,086	4,684
Singush Lake	650	0	0	77	200	662	814	3,536	5,939
Line Lake	0	539	54	89	0	0	0	0	682
Chain Lake	0	40	0	0	0	0	0	0	40
Marge Lake	0	399	585	125	0	569	50	1,530	3,258
Vermillion Reservoir	0	20	300	200	324	200	195	363	1,602
Swan River	0	395	54	0	0	124	0	0	573
Beaver Lake	0	0	548	90	882	737	865	1,916	5,038
Cache Lake	0	0	0	0	0	0	0	602	602
West Blue Lake	0	50	0	0	0	0	0	0	50
Langan Lake	0	0	0	50	0	0	0	0	50
TOTALS:	928	2,089	1,861	991	1,550	3,405	4,323	15,184	30,331

Average size: 29cm 35cm 34.5cm 27.6cm 17.5cm 24.4 cm 32.2cm 17.0cm
 TRAP METHOD ES TR TR TR TR TR & ES TR & ES TR & ES



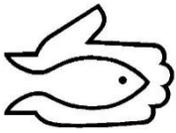


Summary of Activities

In summary, we are excited to report the findings and results of the 2016 open-water season. We would like to acknowledge the Fisheries and Wildlife Enhancement Fund (FWEF), for contributing funds to facilitate not only this particular project, but for the various other projects that SVSFE and partners have conducted over the years. The stamp is constant reminder that a portion of angling licenses goes towards creating, protecting, and enhancing fisheries for future generations. This invaluable opportunity would not be possible without the initiatives of the fund.



We would also like to thank our directors for their infinite determination and drive to enhance and sustain our local fisheries. Without our group's conviction and support these projects would never have been possible. A huge thank you to Branch Staff, including our local mentor Ian Kitch for your endless support and knowledge. A big thanks to branch staff in corresponding regions, as our work would not be possible without your endless direction regarding fisheries management and research. And also, a huge thank you to our supporters, project partners, and volunteers (you know who you are), as our this work would no be possible without your support and assistance. Partnerships truly are the key in success. We, as SVSFE technicians are extremely grateful for the continued support and drive of each and every one of you, and we look forward to continuing this important work into 2017 and years to come.



Summary of Activities

Following is a list of 2016 Reporting:

- Bathymetric Mapping 2016
- Beautiful Lake Walleye Transfer (2016)
- Beaver Lake Walleye Recruitment
- Bell and North Steeprock Lake(s) OTC Analysis (2013-2016) Final
- Chain Lake(s) Habitat Mapping and Tributary Assessments
- East Blue Lake Trout Maintenance
- Glad Lake Trout Maintenance
- Gull Lake Trout Maintenance, Literature Review and Management Objectives
- Marge Lake Walleye Recruitment
- Moosehorn Lake Investigations for Sport Fish Introductions
- Olsen Lake Mapping and Fish Inventory
- Singush Lake End-of-Spring-Trap-netting (2015-2016)
- Spider Lake Bathymetric and Habitat Mapping
- SVSFE's 2016 Fish Camp
- SVSFE Angler Survey's 2016
- SVSFE Early Zebra Mussel Detection Program 2016
- Two Mile Lake Trout Maintenance, Literature Review and Management Objectives
- Vini Lake Fish Inventory, Trout Maintenance, and Tributary Mapping
- Wellman Lake Walleye Recruitment
- West Watjask 2016 Forage Assessment
- Whitefish Lake Walleye Recruitment