



Fisheries Project within the North Parkland FES Project 18-043

Project Summary

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March 2020

Swan Valley Sport Fishing
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Swan Valley Sport Fishing Enhancement (SVSFE) is a recreational sport fishing group actively involved in fisheries management and education since the 1980s. Over the years, SVSFE has secured funding through The Fisheries Enhancement Initiative (FEI), The Fisheries Enhancement Fund (FEF), and most recently the Fish and Wildlife Enhancement Fund (FWEF). Through funded projects, SVSFE has worked closely with Fisheries Branch, neighbouring sport fish groups, natural resource-based associations and numerous other entities to enhance recreational fisheries and coordinate educational programs in the Swan Valley area. In 2018, a funding application to FWEF entitled "Fisheries Projects within the North Parkland" was submitted and ultimately approved. The following is a summary and evaluation of the project components completed in 2019.

- 1. Fish Camp:** SVSFE's 9th annual Fish Camp was hosted August 17th – 23rd, 2019 at the Wellman Lake United Church Camp. Two consecutive camps occurred to accommodate the high numbers of interested youth; facilitating a total of 50 campers aged 9-14. Educational topics included sustainable angling, catch and release tips, knot tying, fish behavior, lure selection, and lure presentation for targeting different species under different circumstances. Presentations were held by Swan Lake Watershed Staff and Park Patrol. Activities included catch-and-release fishing, boat safety, trip-planning, casting contests, fire building, geocaching, and shelter building, amongst other activities. In total, the campers successfully landed and released: 91 pike, 65 walleye, 7 smallmouth bass, and 1 yellow perch. SVSFE is very proud of this program and intends on continuing and educating young anglers for the years to come. Fish Camp would not be possible without the support of dozens of community businesses and the FWEF Fund.

- 2. Early Zebra Mussel Detection Program:** Since 2016, SVSFE has been actively assisting Fisheries Branch in the early detection of Zebra Mussels through an efficient and cost-effective system called the "Early Zebra Mussel Detection Program". Essentially, substrate samplers are deployed in select waterbodies each spring and retrieved each fall and sent to Winnipeg for analysis. In 2019, SVSFE deployed 16 samplers in the Duck Mountains, and 3 in the Porcupines Mountains which have all been retrieved and sent for analysis. SVSFE is passionate about monitoring potential zebra mussel presence and helping aid in early detection to prevent further spread.

3. Promotional Signage: SVSFE has always pursued enhancement programs - whether habitat enhancement, access improvements, fishing dock installations, or promotional signage; it all falls within the SVSFE mandate. In 2018, SVSFE recognized that promotional signage in the Porcupine Forest had become deteriorated over the years, and that many back-country fisheries had never received species and directional signage. The project began by creating an inventory, developing a deficiency list, and acquiring necessary permits. Step two involved the construction of the promotional signs to the Manitoba Park's standard. Step three involved the installation of the signs which included directional and species signs for 25 different fisheries in 32 different locations in the Porcupine Provincial Forest. SVSFE is happy to report the completion of this project component which will promote the many fisheries of the Porcupine Provincial Forest for years to come.

4. Bathymetric Mapping: Depth sounding and having readily accessible bathymetric data (or depth data) for the angling community has been a work in progress over the past decade. In recent years, SVSFE has sounded and distributed data online for almost all the popular fisheries in the Duck and Porcupine Mountains. In 2019, SVSFE sounded East Fish Lake, Elk Lake, Island Lake, Langan Lake, Long Lake, MacDonald Lake, North Angling Lake, South Angling Lake, and Whitemud Lake. At current, anglers can access all SVSFE's depth data online for 68 different high traffic and backcountry fisheries in multiple georeferenced and aesthetic formats.

5. Trout Maintenance: Over the past 5 years, SVSFE has taken on trout maintenance programs as an effort to increase trout stocking success through the manual removal of competitor/predator species. In Glad Lake and East Blue Lake, research determined that native species have been negatively affecting the provincial trout stocking regime. In 2019, SVSFE removed 74 northern pike from Glad Lake for an accumulative total of 1,157 removed since 2015. This program is intended to facilitate the successful introduction arctic char to the Duck Mountains. In 2019, SVSFE removed 2,219 white suckers from East Blue Lake for an accumulative total of 8,671 individuals since 2016. In 2015, investigations identified white sucker populations having a negative effect on rainbow trout survival/growth in East Blue Lake. Each of these programs are designed to be efficient and cost-effective through targeting unwanted species during spawning congregations. SVSFE continues to monitor the success of these programs and has ultimately decided to halt East Blue Lake removals and to continue with Glad Lake removals in the future.

- 6. Wellman Lake:** Wellman Lake has a rich history and has been of special interest since the walleye fishery collapsed in the 1980's. Over the past three decades, SVSFE in collaboration with Fisheries Branch have initiated many different management techniques and have been closely monitoring walleye populations, harvest, and natural recruitment success. In 2019, objectives included a population assessment through non-lethal trap-netting, spawning assessments through guzzling, harvest assessments through barrel counts, and recruitment assessments through year one of a three-year OTC study. SVSFE is happy to present 2019 results to Fisheries Branch and development of a long-term strategy to help manage and monitor Wellman Lake in future years.
- 7. Verrall Lake:** Verrall Lake is a popular backcountry walleye fishery in the Duck Mountain Provincial Park. In 2019, SVSFE conducted a population assessment to assess the walleye stocking regime through a non-lethal trap netting assessment. General growth and progression of walleye were found to be satisfactory. SVSFE is happy to report the results to Fisheries Branch, which has resulted in an updated stocking strategy for years to come.
- 8. Whitefish Lake:** Whitefish Lake is arguably the most popular walleye fishery in the Swan Valley area. This lake is reliant on natural reproduction and does not receive supplemental stocking. In 2009, AAE Tech Services documented spawning habitat in Whitefish Lake's two primary inflowing tributaries - North Creek, and Lagoon Creek. AAE's results found that much of the best walleye spawning habitat was inaccessible due to natural barriers (beaver dams) and recommended management strategies to deal with the beaver issue. Since 2010, SVSFE has been actively removing beaver dams prior to spring migrations and monitoring success. After each removal, SVSFE monitors the effectiveness of the program by documenting walleye movements and areas of utilization in both spawning tributaries. In 2019, SVSFE staff monitored walleye movement and utilization which adds to the database and essentially aids in the effectiveness of the program for years to come.
- 9. Honoway Fishway Monitoring:** In 2010, the Swan Lake Watershed District (SLWD) acquired funding through FEF to construct a fishway at the Honoway Ford Crossing along the Swan River, as it was determined to be a barrier to migrating fish. Monitoring has occurred since, and multiple upgrades have occurred as an effort to make the fishway operate efficiently on an annual basis. One such upgrade was the installation of a water control structure in the upstream section of the fishway in 2017. In 2019, SVSFE closely monitored weather parameters, water parameters, mechanical parameters and hydraulic parameters within the fishway to document conditions fish were faced with while passing through the fishway.

Fish utilization was monitored through live release trap netting upstream of the fishway. Results for 2019 monitoring has provided the SLWD with the necessary steps to jointly monitor, maintain and manage the fishway efficiently for years to come.

10. **West Watjask Lake:** SVSFE is passionate about economic development through the development of new fisheries. Research in 2014 ultimately resulted in the re-introduction of muskellunge to the Duck Mountains in 2017. In 2019, SVSFE conducted a stock response assessment of the 2017 muskie planted in West Watjask Lake which found exceptional growth and satisfying survival. 2019 research has resulted in future development of the fishery, and SVSFE is eager to monitor this unique fishery as it becomes a popular angling destination in the years to come.
11. **Laurie Lake:** Laurie Lake is one of the most popular stocked trout destinations in the province. The lake is known to grow the largest brown trout in Manitoba and is arguably the most popular trophy splake destination in the province. SVSFE and Fisheries Branch decided an assessment on Laurie Lake was long overdue, and SVSFE set out to assess the trout stocking regime in 2019 through non-lethal methods including Spring Littoral Index Netting (SLIN) and fall electrofishing. Data gathered provided valuable information on current salmonid populations and data summaries have been sent off to the regional fisheries manager. SVSFE is eager to work with regional fisheries staff using the data collected to ensure that Laurie Lake is managed effectively in the years to come.
12. **Mirror Lake:** In 2018, SVSFE set out to depth map and assess Mirror Lake's fish community as the lake had not been stocked since 2009. It was quickly determined that fish stocked in the past were able to naturally populate the waterbody, as the lake homed multiple age classes of both brook trout and lake whitefish. Understanding that a self-sustaining population of lake brook trout is extremely unique in Manitoba, SVSFE set out to further assess the fishery in 2019. Objectives were to gather information on the brook trout population dynamics and utilize the data to implement regulation proposals to protect this unique population. Valuable information on the brook trout population was collected which ultimately led to regulation proposals to Fisheries Branch. SVSFE is happy to announce results from 2019 research and excited that new regulations for Mirror Lake are in the works.
13. **Trout Steam Investigations:** The Parkland escarpments of Manitoba provide multiple cold-water stream habitats that are known to support stocked trout populations. Multiple systems also provide evidence of successful natural recruitment. As an effort to expand trout steam opportunities in the Parkland Region, SVSFE set out to

investigate two streams on the north slope of the Porcupine Hills for stocked trout introductions. Many streams were considered for habitat investigations, however only two assessed due to potential angler access; the Little Woody River, and Camp Seven Creek. In the fall of 2019, SVSFE conducted habitat inventories and species presence/absence surveys on these two creeks. Following data analysis; we determined that both these streams have the potential to facilitate stocked trout introductions and long-term angler access. SVSFE is proud to report that Fisheries Branch is in the process of acquiring permits to stock brook trout and create increased angling opportunities in the Little Woody River and Camp Seven Creek.

- 14. Beautiful Lake Walleye Transfer:** The Beautiful Lake walleye rearing program has been used to supplementally stock walleye fisheries in the Duck Mountains and area since 2009. The program has shown exceptional evidence of success in many walleye lakes and has even been instrumental in creating new walleye fisheries in the area. In 2019, walleye catch was low in comparison to previous years which SVSFE has attributed to low fry survival. In 2019, SVSFE successfully planted advanced fingerlings to Beaver Lake (67), Singush Lake (51), Childs Lake (20), and Verrall Lake (22). At current, it is not completely known why fry survival was poor in 2019, however solutions are in place to increase fry stocking success and therefore success of the rearing program for future years.
- 15. Clearwater Spawn Camp:** Fisheries Branch organized a spawn camp to take place at Clearwater Lake in September 2019 with the objective gathering lake trout eggs for the rearing of lake trout and splake at the Whiteshell Fish Hatchery. One SVSFE technician was sent to assist with the spawn camp as the Branch required additional help and gear to assist in catching brood stock for the program. As a result of this spawn camp, the Whiteshell Fish Hatchery currently has lake trout and splake stock slotted for the Duck Mountains in the spring of 2021.
- 16. Voluntary Angler Surveys:** Since 2015, SVSFE has been active in quantifying the opinion of the angling community and monitoring trends and opinions in the Parkland Area. The Voluntary Angler Surveys are cheap and cost effective as they only require online boosts monthly and one week of data analysis each fall. Over the past few years, SVSFE has partnered with other organizations in the Parkland Area to provide incentive prizes to fill out the angler surveys. Data collected is invaluable and SVSFE intends to continue with this inexpensive program to quantify angling quality, angler opinion, amongst many other valuable pieces of information into the future.

In summary, SVSFE is happy to report the work completed and the steps taken to ensure the success of each project component in 2019. Please refer to the individual reports written to learn more on results and recommendations. The organization values the continued support from the Fish and Wildlife Enhancement Fund and ensures at every opportunity that angers dollars are being spent efficiently. SVSFE thanks all volunteers, project partners, FWEF and Fisheries Branch for their continued support and intends to continue working together in enhancing Manitoba's fisheries for now and into the future.

Reports:

- 2019 - Honoway Fishway Monitoring
- 2019 - Laurie Lake Stock Assessment
- 2019 - East Blue Lake Maintenance Program - White Sucker Removal
- 2019 - Glad Lake Maintenance Program - Pike Transfer & Stocked Trout Assessment
- 2019 - Whitefish Lake Spawn Assessment
- 2019 - Early Detection Zebra Mussel Program
- 2019 - West Watjask Lake - Evaluation of the 2017 Muskellunge Stocking
- 2019 - Verrall Lake Walleye Survey
- 2019 - Promotional Signage for Recreational Fisheries in the Porcupine Provincial Forest
- 2019 - Bathymetric Surveys
- 2019 - SVSFE Fish Camp
- 2019 - Beautiful Lake Walleye Transfer
- 2019 - Wellman Lake Nearshore Community Index Netting & Walleye Recruitment Surveys
- 2019 - Stream Habitat Surveys in the Porcupine Mountains
- 2019 - Mirror Lake Brook Trout Assessment (2018-2019)
- 2019 - Online Angler Survey