



In part of reporting for FES Project 20-040
SVSFE Recreational Angling Initiatives 2021

Project Summary

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FES-20-040

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 2020, a funding application to FWEF entitled "SVSFE Recreational Angling Initiatives for 2021" was submitted to FWEF and ultimately approved. The following is a summary and evaluation of the project components completed in 2021.

- 1. Early Zebra Mussel Detection Program:** Since 2016, SVSFE has been assisting Manitoba Fisheries 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 prior to lab analysis. In 2021, SVSFE deployed 15 samplers in the Duck Mountains, and 3 in the Porcupines Mountains which have been retrieved and are pending analysis. SVSFE is grateful to assist the Provincial AIS program and helping aid in early detection to prevent further spread of these invaders.
- 2. Glad Lake Maintenance & Trout Assessment:** In recent years, SVSFE has been actively removing pike from Glad Lake each spring to benefit the Glad Lake trout stocking program. In 2021, SVSFE removed 73 northern pike from Glad Lake for an accumulative total of 1,402 pike removed since 2015. In addition, to monitor char stock response SVSFE conducted a SLIN netting program simultaneously with pike removals. The netting program was used to monitor stock response of recently planted char, lake trout populations, and pike abundance. SVSFE is eager to report findings from this survey, as results will assist Fisheries and SVSFE with future management and development of Glad Lake. SVSFE plans to continually monitor the success of this program along with annual pike removals into the future.

- 3. Wellman Lake Recruitment Surveys:** Wellman Lake has a rich history and has been of special interest since the walleye fishery collapsed in the late 1980's. Over the past three decades, SVSFE in collaboration with Manitoba Fisheries have initiated many different management techniques and have been closely monitoring walleye populations, harvest, and natural recruitment success. In 2021, research included a post-spawn survey by egg-guzzling and a recruitment assessment for year-three of a four-year OTC study. Guzzling results found a CPUE of 5.9 eggs/minute on the enhanced spawning reef. At the time of writing this summary the OTC lab analysis had not yet been received. SVSFE is happy to present 2021 results to Fisheries with development of a long-term strategy to help manage and monitor Wellman Lake for future generations.
- 4. Whitefish Lake Tributary Assessment:** 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 barrier issues. Since 2010, SVSFE has been actively removing beaver dams prior to spring migrations and monitoring success. After each removal, technicians monitor the effectiveness of the program by documenting walleye movements and areas of utilization in both spawning tributaries. In 2021, SVSFE staff monitored walleye movement and utilization, adding to the database which aids in the effectiveness of the program for years to come.
- 5. Cross Lake Tributary Assessment:** Cross Lake is a popular back-country walleye fishery with poor walleye recruitment. The waterbody is difficult to stock due to its remote nature and difficulty to access in the spring. As a result, SVSFE began investigating Leclair Creek for potential of habitat enhancement opportunities to ultimately increase walleye recruitment success long term. Since 2020 SVSFE has been monitoring Leclair Creek for walleye utilization and enhancement potential. SVSFE is eager to report results to Fisheries, as we believe the creek to have potential for enhancement, however additional data is required at this time.
- 6. 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 each spring. Over the

years multiple upgrades have occurred as an effort to make the fishway operate efficiently on an annual basis. One upgrade was the installation of a water control structure in the upstream section of the fishway in 2017. In 2021, 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 non-existent in 2021 due to low runoff associated with drought conditions. Results from 2021, and previous years have found the requirement for future improvements to the system itself. Currently SVSFE, and the Swan Lake Watershed District are beginning the process of planning to install a low-flow culvert as we have found it to be a necessary upgrade associated with recent low snowfall accumulations and subsequent drought conditions. SVSFE is happy to report on 2021 Honoway Fishway Monitoring and upgrade plans.

- 7. Spray Lake Stock Assessment:** Spray Lake is a smaller (50ha) put-and-take walleye fishery in the Duck Mountains. The lake also attracts pike and perch anglers. Spray Lake has been a recipient waterbody of the Beautiful Lake Walleye Transfer since 2009. In spring of 2021, SVSFE set out to conduct a stock assessment on the waterbody to monitor the effectiveness of the stocking regime. The method used was a variation of the End of Spring Trap Netting (ESTN) walleye survey. Results found a healthy and abundant walleye population with multiple ages classes correlating with Beautiful Lake walleye plantings. SVSFE is happy to report findings from the 2021 Spray Lake survey and are eager to further promote this underutilized fishery. SVSFE also plans work with regional fisheries staff using the data collected to ensure Spray Lake is managed effectively for years to come.
- 8. Beaver Lake Stock Assessment:** Beaver Lake is also a smaller put-and-take walleye fishery and recipient of the Beautiful Lake walleye transfer. Both Spray Lake, Beaver Lake were assessed simultaneously using the same methods and objectives. Results found a healthy walleye population with many recaptures from previous surveys providing valuable information on fish growth and condition. Beaver Lake lacks littoral areas ideal for trap-netting, and for this reason a complimentary electrofishing survey was scheduled for early September. Unfortunately, due to mechanical issues and with the electrofishing boat we were unable to complete this portion of the survey. In addition to the netting survey egg-guzzling was completed on May 20th to quantify natural recruitment success on the artificial spawning shoal (enhancement completed in 2019). For the first time - walleye eggs were found on the reef. SVSFE is happy to report the results from Beaver Lake.

- 9. 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 a few days of data analysis each fall. Over the past few years, SVSFE has partnered with other organizations in the Parkland Area to provide incentive prizes for participation. 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. The final summary of data acquired through Voluntary Angler Surveys will be presented to regional Fisheries staff and the SVSFE board of directors.
- 10. Clearwater Spawn Camp:** Clearwater Spawn Camp was once an annual fish culture project Manitoba Fisheries completed annually. The project provided lake trout milt and eggs for the Provincial Stocking program of lake trout and splake. In 2021, SVSFE technicians were asked to aid the camp as a part of the fish capture and egg collection crew. The camp went very well and currently the Whiteshell Fish Hatchery is raising stock from the camp's efforts. These fish will be available for the provincial stocking program in 2023.
- 11. West Watjask Lake Stock Assessment:** The West Watjask Muskie Introduction project has been in the works since 2015. The first experimental stocking occurred in 2017 (n=35) and the second occurring in 2019 (n=450). The muskie stock was acquired from Minnesota Muskie Farms in Alexandria Minnesota and the fish were ~10" spotted muskellunge of the Leech Lake strain. In 2021, SVSFE set out to assess stock response, growth, condition, and abundance of muskie stock. Two methods were used to assess the fishery (1) a spring trap netting program, and (2) through a voluntary creel program. Results were very encouraging, with 2 muskie caught in netting process, and 2 by rod-n-reel with multiple sighting of fish from both plantings. SVSFE is happy to report the 2021 results and are excited to watch this fishery develop as a top sport fishing destination in Manitoba.
- 12. Beautiful Lake Walleye Transfer:** Beautiful Lake has been used to rear walleye for supplemental stocking programs since 2009. In recent years, the program is scheduled to occur biennially and used to supplement walleye stocks of most of the walleye fisheries within the Duck Mountains. In 2021, fry stocking was effective, however limited gear and issues with our primary capture method (DFO's SR20 electro-fisher) made reaching our target numbers more difficult. In summary, SVSFE and partners were able to achieve

target numbers in the smaller put-and-take fisheries that required it most. The larger waterbodies, unfortunately did not receive the target numbers. In total, 1,742 advanced fingerling/adult walleye were transferred successfully to Verrall Lake, Beaver Lake, Spray Lake, Marge Lake, Singush Lake, and Childs Lake. SVSFE is happy to report the results of the Beautiful Lake walleye transfer and are working with Manitoba Fisheries to ensure lakes understocked are supplemented in the near future.

In summary, SVSFE is happy to report the work completed and the steps taken to ensure the success of each project component in 2021. 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 anglers' 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:

2021 Honoway Fishway Monitoring
2021 Glad Lake Transfer and SLIN Assessment
2021 West Watjask Lake Stock Assessment
2021 Spray Lake Stock Assessment
2021 Beaver Lake Stock Assessment
2021 Wellman Lake Walleye Recruitment Surveys
2021 Beautiful Lake Walleye Transfer
2021 Clearwater Lake Spawn Camp
2021 SVSFE's Early Zebra Mussel Detection Program
2021 SVSFE's Voluntary Angler Surveys Summary
2021 Whitefish Lake Recruitment Surveys
2021 Cross Lake Habitat Investigations