



2022 Wellman Lake Walleye Recruitment Survey

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

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Summary

SVSFE applied to the Fish and Wildlife Enhancement Fund to continue annual walleye recruitment assessments in Wellman Lake. This report is an overview of 2022 findings along with recommendations for future research, development, and management of Wellman Lake.

History

The Wellman Lake spawning reef was enhanced in 2017 as an effort to increase walleye recruitment success. Monitoring recruitment success through reef guzzling and a multi-year OTC study quantifies walleye usage, egg survival, and overall natural recruitment success. Reef guzzling began back in 1993, and the OTC study began in 2019. For a full history, research, and results please see: *FES PRJ 20-040 SVSFE Recreational Angling Initiatives 2021 - Wellman Lake Recruitment Surveys*

Methods

Guzzling the reef to determine walleye utilization has been the selected method since 1992. The guzzling equipment used from 1992-1995 was an electric pump, while eggs collected from 2011 to 2022 used a manual hand pump. The number of sites varied over the years with a minimum being 6, and a maximum being 10. Sites were randomly chosen each year and one square meter plots were guzzled for durations of 1 minute to 5 minutes. Since 2016, 10 random sites were guzzled for 60 seconds with a 30 second flush. Live egg CPUES are counted and released back onto the reef following identification. In 2022, reef guzzling occurred on May 25th and surface temperatures averaged 12°C. The OTC study was not completed in 2022 for logistical reasons. It is anticipated that the OTC study will continue in 2023 and will be the final year of the study.

Results

Reef guzzling in 2022 had the highest abundance of walleye eggs in the history of Wellman Lake guzzling with a CPUE of 89.7 live eggs per minute (Figure 1). This result may have been slightly influenced by the new guzzler used in 2022. The guzzler purchased was the same as used in previous years, however in 2021 it was recognized that a cracked diaphragm likely influenced results. This is notable, as the new guzzler likely had better suction than 2021, however comparing to years prior to 2021 can be considered negligible. For past results from OTC study please see: *FES PRJ 20-040 SVSFE Recreational Angling Initiatives 2021 - Wellman Lake Recruitment Surveys*

Discussion

SVSFE and Manitoba Fisheries intend to continue with reef guzzling and year 4 of the OTC study in 2023. It is anticipated that 2023 will mark the final year of the OTC study, and therefore provide the next steps in managing the walleye fishery. SVSFE is eager to complete this research and assist in development of an effective long-term walleye stocking strategy for Wellman Lake.

Wellman Lake Reef Guzzling Comparison by Year

