

Non-Lethal Fishery Assessment for Rice Lake 2022— a brief summary for the Bissett Community Council

INTRODUCTION

Rice Lake was surveyed from October 21 to October of 2022 as part of the Eastern Region’s non-lethal fishery assessment program. Surveying was conducted by a private contractor using boat electrofishing along pre-defined transects (cumulative electrofishing time = 28 minutes) and with trap nets set at pre-defined coordinates (cumulative netting time = 87.32 hours). All captured fish were identified to species and measured for fork length (mm) and weight (g), and ageing structures (dorsal spine or fin ray) were collected from Walleye, Smallmouth Bass and Northern Pike. Ageing was performed by the private contractor.

RESULTS

A total of 101 fish comprising five species (Fig. 1 species and White Sucker) were captured during the Rice Lake fishery survey using electrofishing (n = 94) and trap netting (n = 7). Catch per unit effort (CPUE) on Rice Lake was ranked 7th out of 11 waterbodies sampled with the same methods in 2022 (Fig. 1). However, this ranking does not account for sampling variations associated with small sample sizes and should not be used as a measure of relative lake productivity.

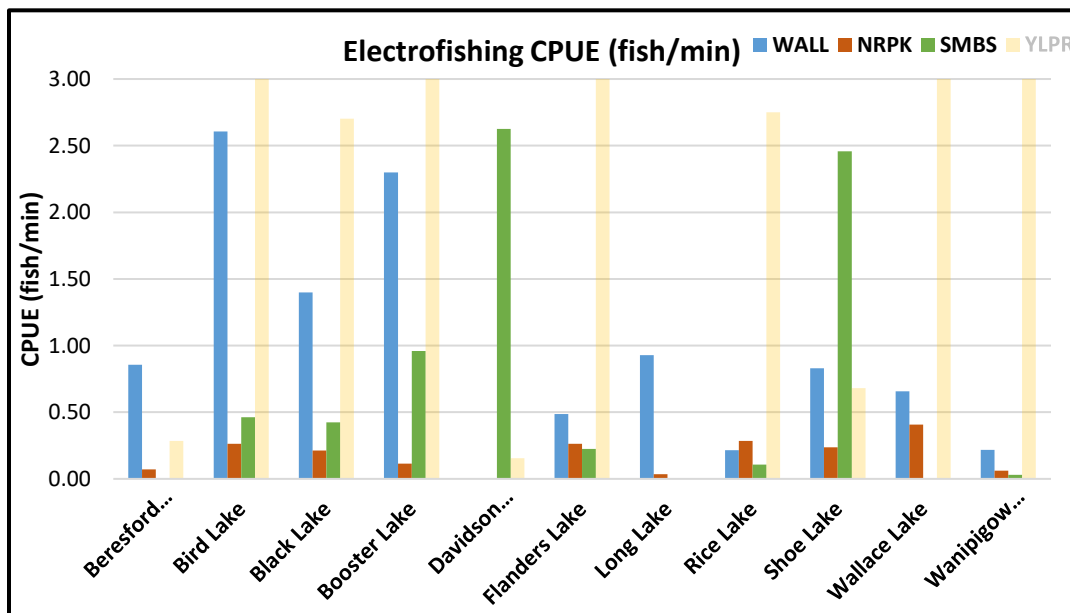


Figure 1. Electrofishing catch per unit effort of Walleye (WALL), Northern Pike (NRPK), Smallmouth Bass (SMBS) and Yellow Perch (YLPR) across 11 lakes sampled in and adjacent to Nopiming Provincial Park.

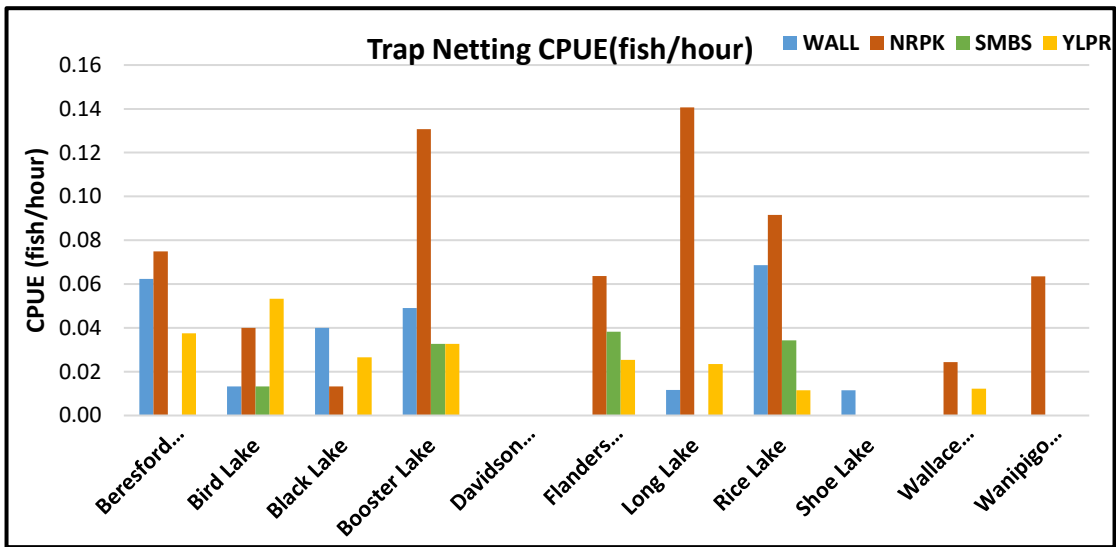


Figure 2. Trap netting catch per unit effort of Walleye (WALL), Northern Pike (NRPK), Smallmouth Bass (SMBS) and Yellow Perch (YLPR) across 11 lakes sampled in and adjacent to Nopiming Provincial Park.

Walleye growth appears to be above average compared to surrounding lakes, though this inference is only based on seven individuals and is therefore qualitative in nature (Fig. 3). Similarly, length-at-age and body condition of Northern Pike (n = 12) and Smallmouth Bass (n = 3) are consistent with other waterbodies in the vicinity of Rice Lake (Fig. 4, Fig. 5).

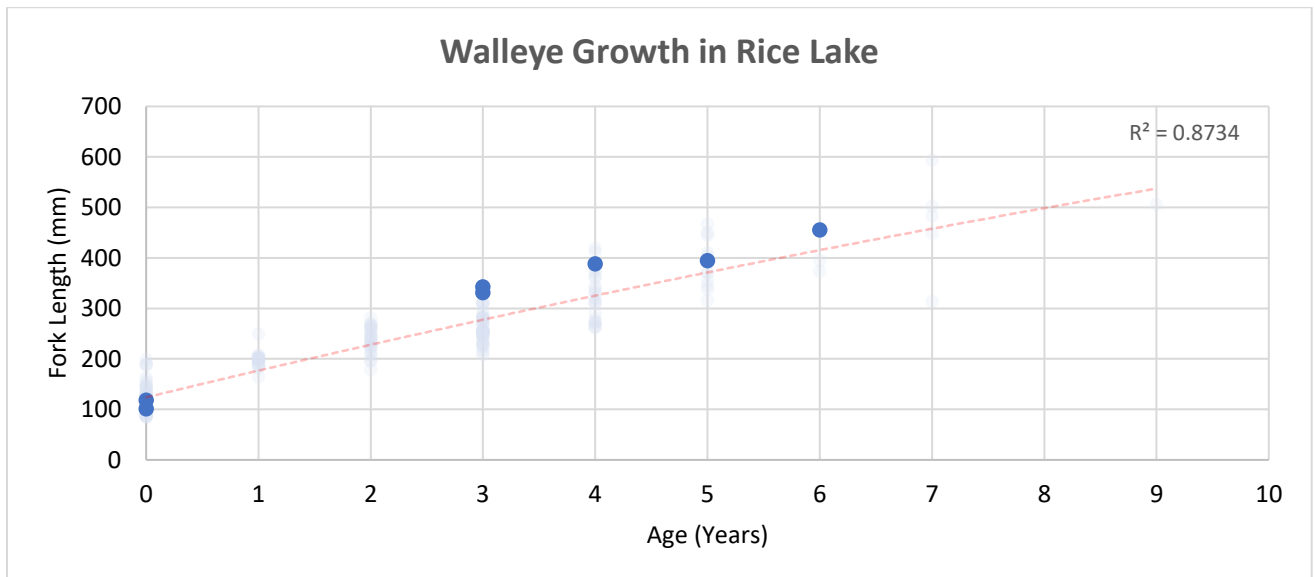


Figure 3a. Length at Age of Walleye sampled in Rice Lake (n = 7) compared to lakes in and around Nopiming Provincial Park. The red line represents the projected growth of Walleye averaged across all sampled waterbodies.

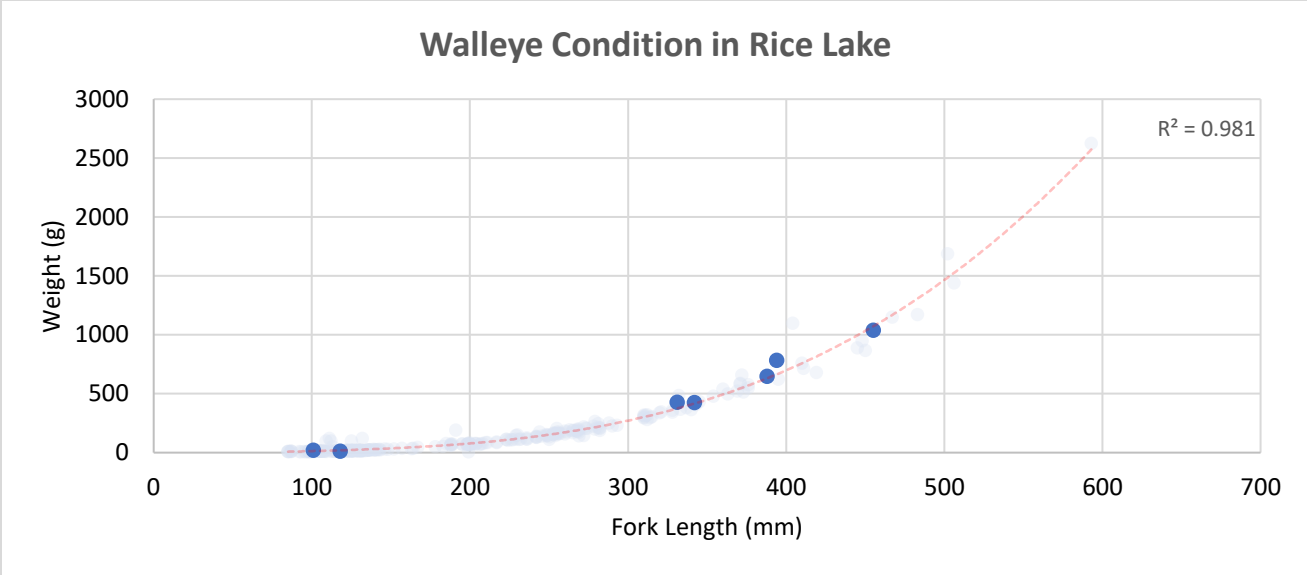


Figure 3b. Weight at Length of Walleye sampled in Rice Lake (n = 7) compared to lakes in and around Nopiming Provincial Park. The red line represents the projected body condition of Walleye averaged across all sampled waterbodies.

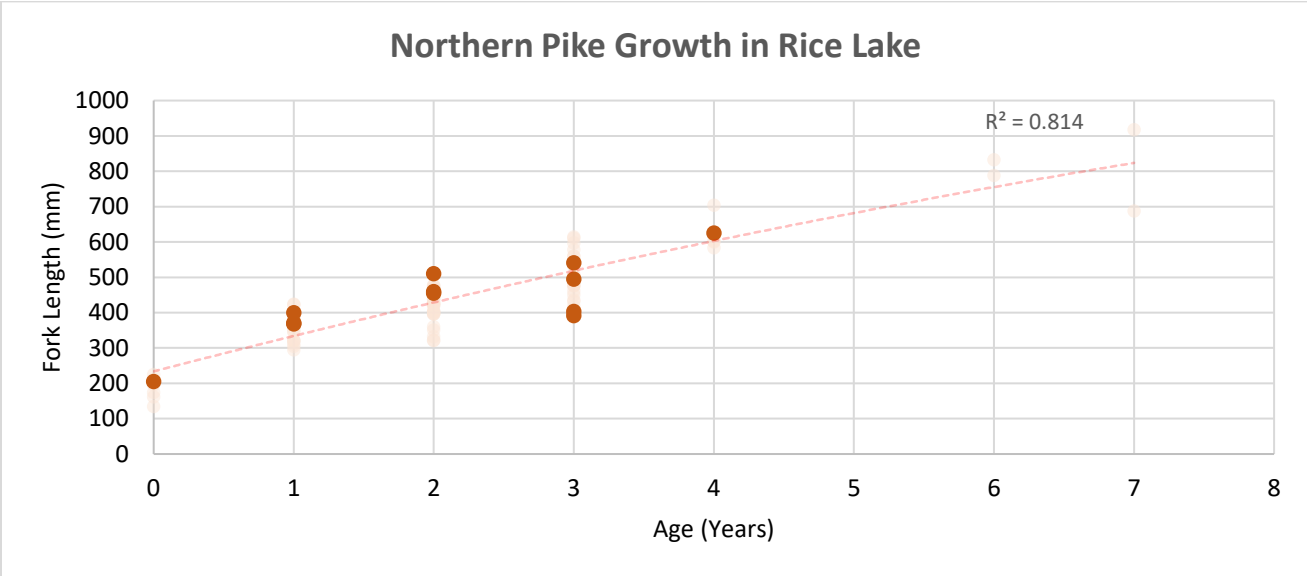


Figure 4a. Weight at Length of Northern Pike sampled in Rice Lake (n = 12) compared to lakes in and around Nopiming Provincial Park. The red line represents the projected body condition of Northern Pike averaged across all sampled waterbodies.

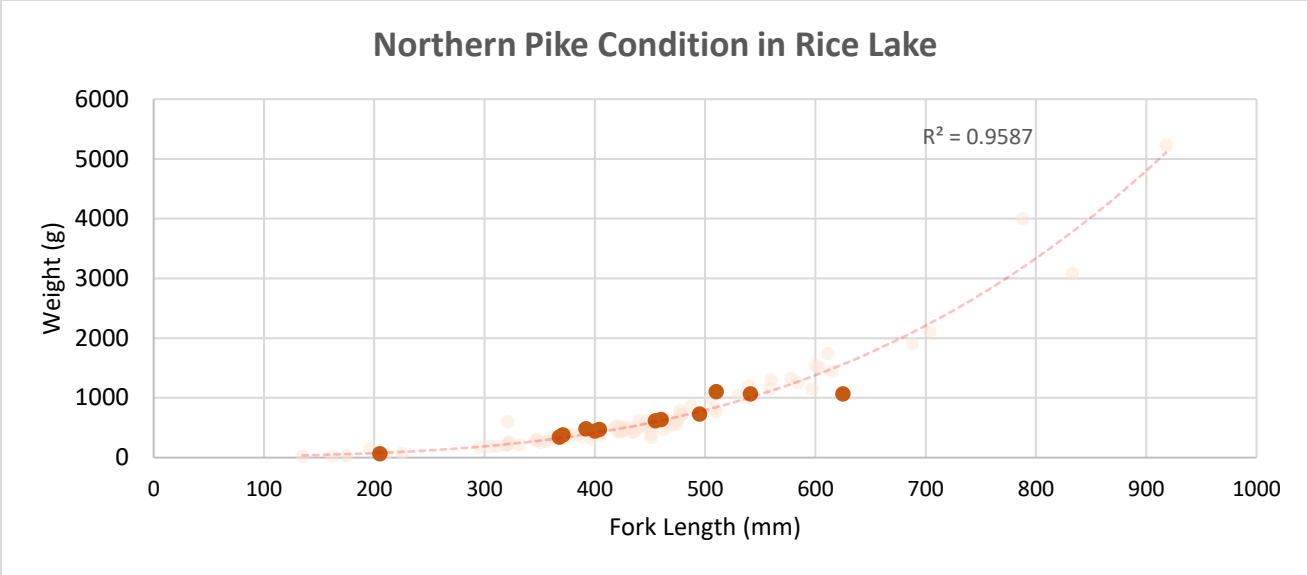


Figure 4b. Weight at Length of Northern Pike sampled in Rice Lake (n = 12) compared to lakes in and around Nopiming Provincial Park. The red line represents the projected body condition of Northern Pike averaged across all sampled waterbodies.

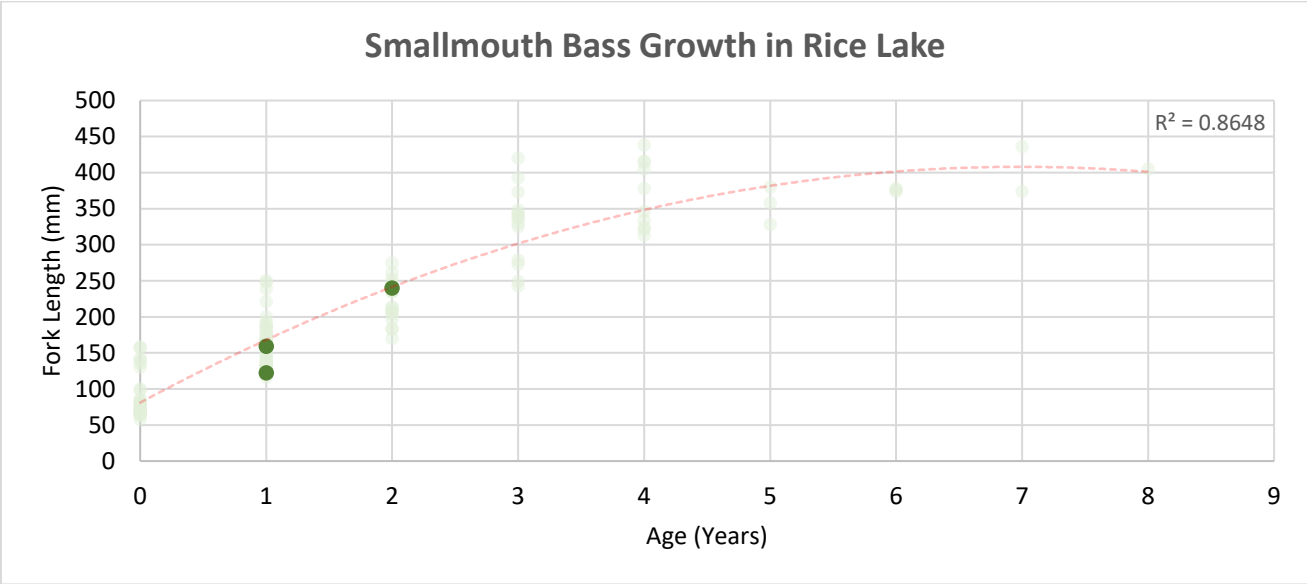


Figure 5a. Weight at Length of Smallmouth Bass sampled in Rice Lake (n = 3) compared to lakes in and around Nopiming Provincial Park. The red line represents the projected body condition of Smallmouth Bass averaged across all sampled waterbodies.

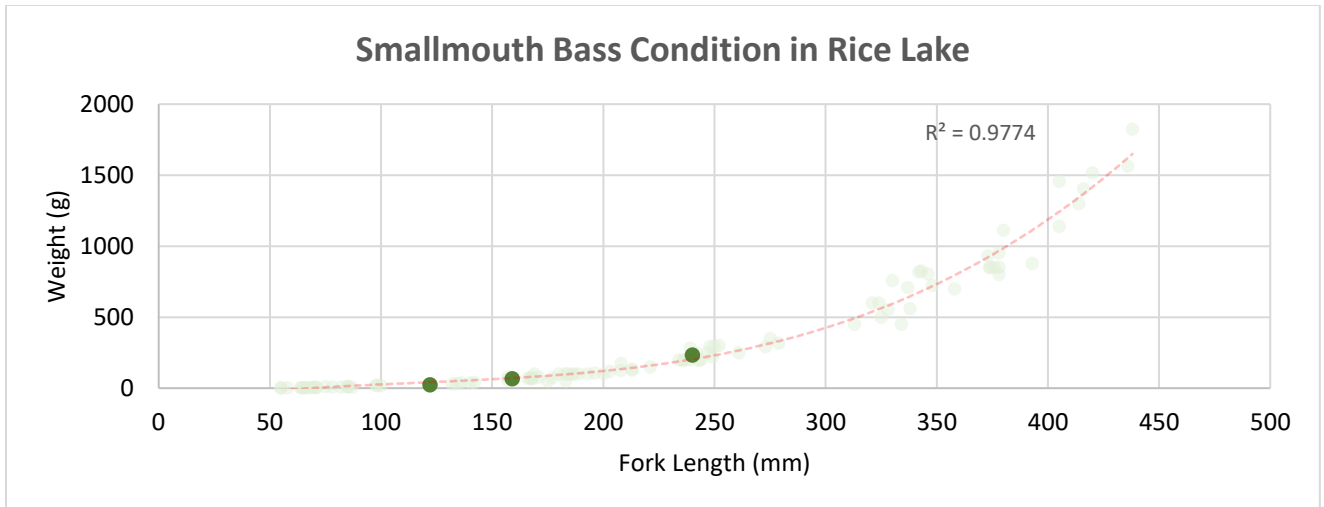


Figure 5b. Weight at Length of Smallmouth Bass sampled in Rice Lake (n = 3) compared to lakes in and around Nopiming Provincial Park. The red line represents the projected body condition of Smallmouth Bass averaged across all sampled waterbodies.

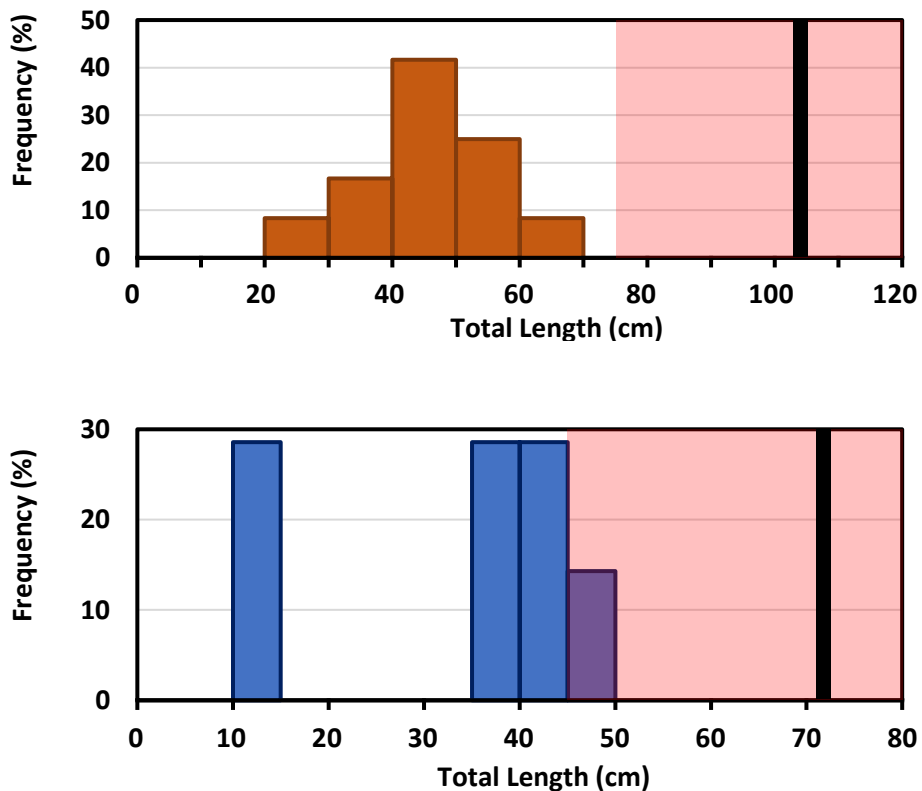


Figure 6. Total length frequencies of **a**) Northern Pike (n = 12) and **b**) Walleye (n = 7) sampled from Rice Lake. The red rectangles denotes fish that must be released under Manitoba’s recreational fishing regulations, and the black bar represents the beginning of the “trophy fish” size class as defined under Travel Manitoba’s Master Angler program.