

Summary of Activities

Date: November, 2017

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Subject: Marge Lake Walleye Recruitment Surveys 2017

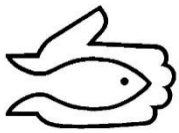
Location: Marge Lake, Duck Mountain Provincial Park, 14U 366860 5821867

Background Info: Marge Lake has been a project lake for SVSFE and Fisheries Branch's since initial walleye introductions in 2010. SVSFE and Fisheries Branch have stocked adult and juvenile walleye via the Beautiful Walleye Transfer and initiated a catch and release regulation for walleye on the lake. Over the seven years, SVSFE has conducted surveys to monitor walleye populations, survival, growth rates, natural recruitment success, angling quality, including a spawn assessment on Marge Creek in the spring of 2014 (See FEF Project 13-063).



Figure 1: Marge Lake Seining Locations (2013 - 2017)

Since 2013, SVSFE has allocated one night each late August/early September to assess natural recruitment through seining. Each year, SVSFE seines five beach sites from approximately 9pm to midnight (Figure 1). This quick and easy protocol was developed to assess recruitment success on a replicable basis. In 2013, SVSFE located one young of the year (YOY) walleye, two YOYs in 2014, four YOYs in 2015, and zero YOY's in 2016. In 2016, technicians noted high water levels making beach seining more difficult to conduct at replicated sites. Unfortunately, 2017 also found no walleye recruitment. Water levels had returned to normal, though the creek connecting Marge and Cache Lake, possessed several barriers during the open water season. In 2014, all species of fish were documented in the creek during the spawning season (Figure 2). These barriers could of influenced spawning conditions and therefore recruitment.



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Figure 2: Marge Creek

Currently, the lake is a semi secluded (no boat launch) walleye/pike/perch fishery. Anglers enjoy the short walk to the fishing dock and many canoeists and kayakers enjoy their time on the water. SVSFE suggests to continue stocking Marge Lake with juvenile/adult walleye from Beautiful Lake on an semi-annual basis or as opportunities are available. Introduced walleye have done exceptionally well in Marge Lake alongside the prevalent northern pike population and the catch and regulation has contributed to the success. The objective set out for Marge was to monitor the fishery with a focus on a sustainable long term management plan to open the fishery to walleye harvests.

At this time, it becomes priority to re-evaluate the current crop as it has been eight years since the first adult walleye introduction. SVSFE recommends replicating the 2014 trap netting program in 2018 (pending funding). This will provide insight on suitable stocking rates and aid in the regulation recommendations. To date, the walleye population has not displayed a high degree of natural recruitment and due to the location and size of the lake, angling pressure could significantly harm this valuable walleye fishery in a short period of time. For that reason, SVSFE and managers have agreed the lake remain closed to walleye harvests (not angling), until the trap netting program is completed and sustainable management strategies are in place.