



Summary of Activities

Date: November, 2016

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Subject: 2016 Marge Lake Walleye Recruitment

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. Marge Lake has a long management history with limited success regarding different fish species introductions. In 2010, a new management plan was initialized when lake managers decided to introduce adult walleye and closely monitor success. Since 2010, SVSFE and Fisheries Branch have stocked adult walleye on an annual basis via the Beautiful Walleye Transfer and initiated a "no-kill" regulation on the lake. Over the six 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).

In summary, 2014 results from SVSFE's Marge Lake assessments determined that populations closely resemble stocking rates suggesting low levels of mortality. Walleye growth is a little below average in comparison to other walleye lakes in the area, natural recruitment is apparent, and walleye were found to utilize Marge Creek for spawning. Angling quality was determined to be high based on recapture submissions. Suggestions following 2014 assessments were to continue monitoring recruitment success as the adult walleye grew and matured, and also to continue monitoring angling quality.



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. 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. It was anticipated to continue on this exponential trend, however 2016 exhibited high water levels making beach seining more difficult to conduct at replicated sites. Interestingly, the entire catch, including forage numbers, were significantly down in our most productive sites in 2016, and for this we hypothesize it can be directly related to the high water. Though it is important to note, walleye recruitment across the board in all of Manitoba was low in 2016.



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Figure: Marge Lake Seining Locations (2013 - 2016)

SVSFE suggests to continue stocking Marge Lake with sub-adult & adult walleye from Beautiful Lake on an annual or semi-annual basis as opportunities are available. Introduced walleye have done exceptionally well in Marge Lake alongside the prevalent northern pike population. The current objective is to continue monitoring Marge Lake with a focus on recruitment and establishment of a mature walleye population. As the population continues to stabilize, it becomes priority to re-evaluate the current population and response to supplemental stocking. For this reason it is suggested to replicate 2012/2014 Trap Netting Program in either 2017 or 2018 while also monitoring recruitment success on an annual basis. This will provide insight on suitable stocking rates for fingerling stocking, which could be utilized as a guideline for stocking other similar waterbodies. As for when the lake will be open to walleye harvests, is still unknown. The walleye population has not displayed a high degree of natural recruitment (but definite growth) 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) and ideal regulations specific to the lake's conditions be discussed and implemented prior to opening to harvest.