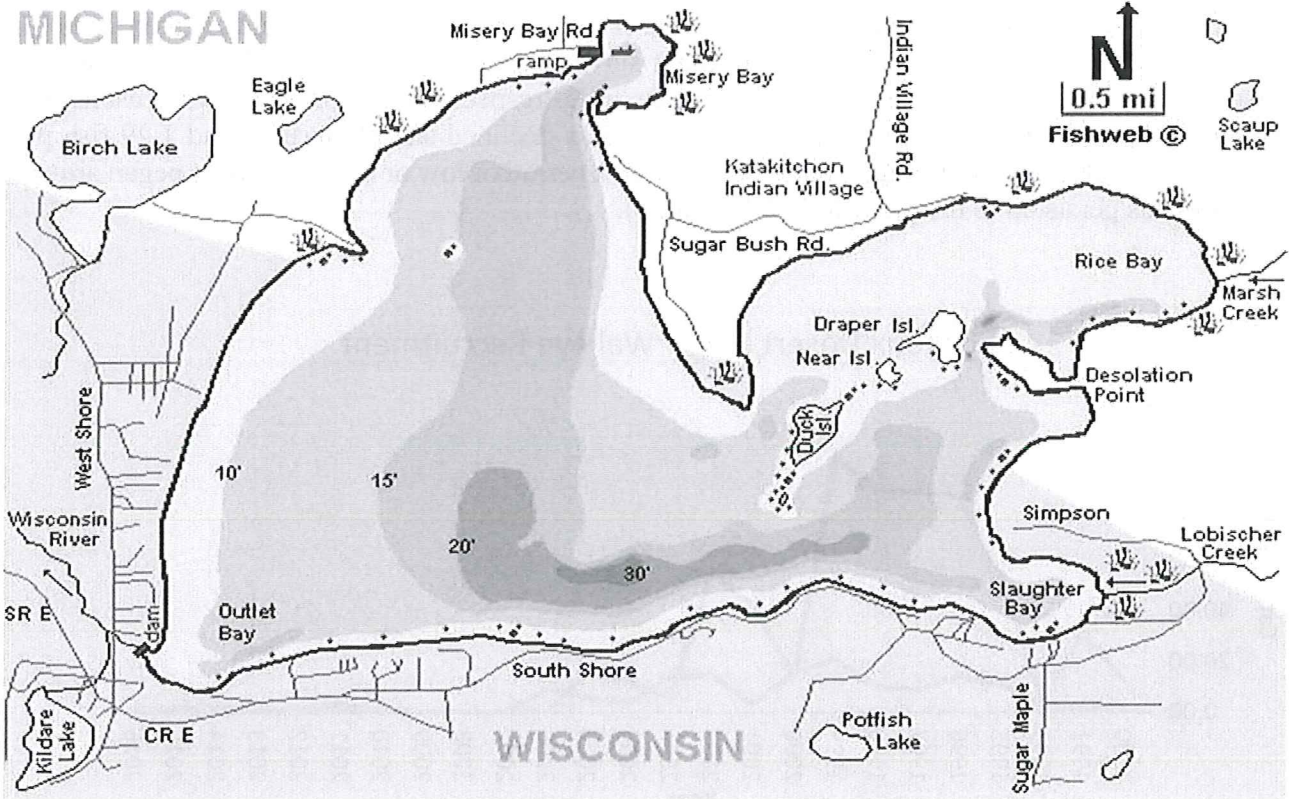


Final Draft Lac Vieux Desert Lake Walleye Rehabilitation Plan
September 19, 2017

1. Overview

This plan will provide the framework for a cooperative interagency walleye rehabilitation effort in Lac Vieux Desert Lake involving the Lac Vieux Desert tribe (LVD), Sokaogan tribe (MLK), Great Lakes Indian Fish and Wildlife Commission (GLIFWC), Wisconsin Department of Natural Resources (WDNR), and Michigan Department of Natural Resources (MiDNR).



Lac Vieux Desert Lake is a 4,300 acre flowage in the 1842 ceded territory that is located within the Wisconsin River basin on the border of Michigan (Gogebic Co.) and Wisconsin (Vilas Co.). The walleye population of Lac Vieux Desert Lake has experienced a well-documented decline in abundance and recruitment over the past decade.

Since little natural reproduction has occurred in the last ten years, adult walleye densities have been trending downward and are at the lowest observed level in a time series that goes back to 1990. Out of mutual concern for the walleye population in Lac Vieux Desert Lake, representatives of the Lac Vieux Desert Band, the Sokaogan (Mole Lake) Chippewa, the Michigan Department of Natural Resources (MiDNR), the Wisconsin Department of Natural Resources (WDNR), and the Great Lakes Indian Fish and Wildlife Commission (GLIFWC) have developed this interagency plan that seeks to restore natural reproduction and increase the density of adult walleye to at least 2.5 fish per acre.

Under this cooperative interagency plan, we propose a conservative harvest strategy for Lac Vieux Desert Lake from 2018 to 2022. In addition, this plan includes a coordinated population assessment component that will enable state and tribal fisheries managers to monitor progress towards these mutually accepted rehabilitation goals and provide the data necessary for them to collectively determine how the population should be managed in future years.

2. Summary of Available Data

Recruitment: Lac Vieux Desert Lake has a demonstrated historical capacity to produce young-of-year (YOY) walleye through natural reproduction. From 1990 to 2005, the average catch rates for Age 0 and Age 1 walleye in the fall recruitment surveys conducted by GLIFWC inland fisheries personnel and WDNR were 43.4 and 9.0 fish per mile, respectively. For unknown reasons, the average fall survey catch rates for Age 0 and Age 1 fish declined sharply to 0.66 and 1.29 fish per mile between 2006 and 2016. These data indicate that a period of low or no recruitment began around 2005 and has persisted to the present time (Figure 1).

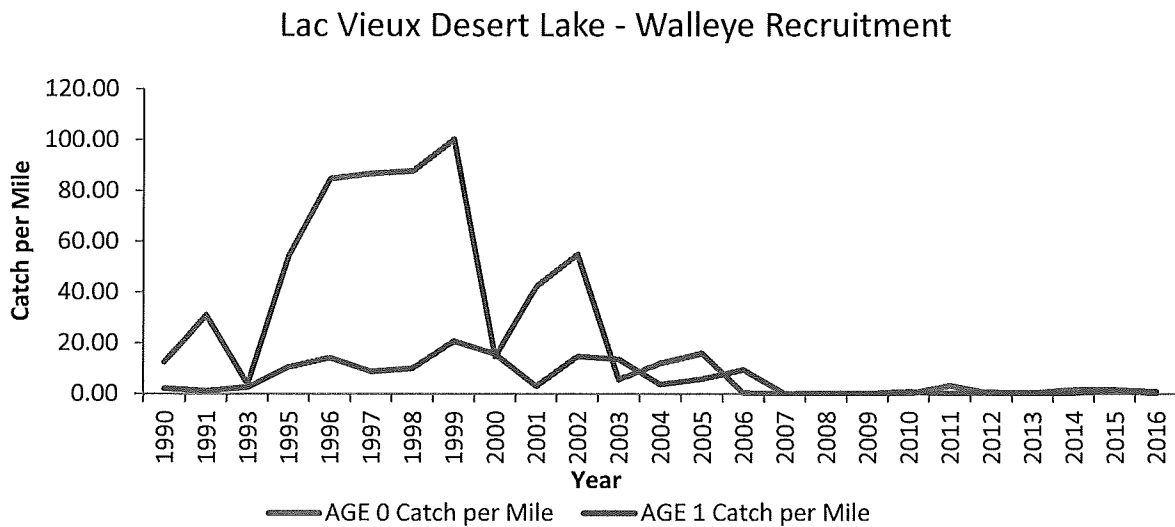


Figure 1. Catch Rates from 1990-2016 Fall Walleye Recruitment Surveys in Lac Vieux Desert Lake.

Adult Abundance: The population of adult walleye in Lac Vieux Desert Lake declined from an estimated abundance of 3.3 fish per acre in 1990 to 0.54 fish per acre in 2016 (Figure 2). This decline corresponds with a prolonged period of low or no recruitment that appeared to begin in 2005. This lack of recruitment resulted in an increase in the mean length of walleye captured during spring assessments from 15.7 inches in 2006 to 18.4 inches in 2016.

Lac Vieux Desert Lake - Estimated Adult Walleye Density

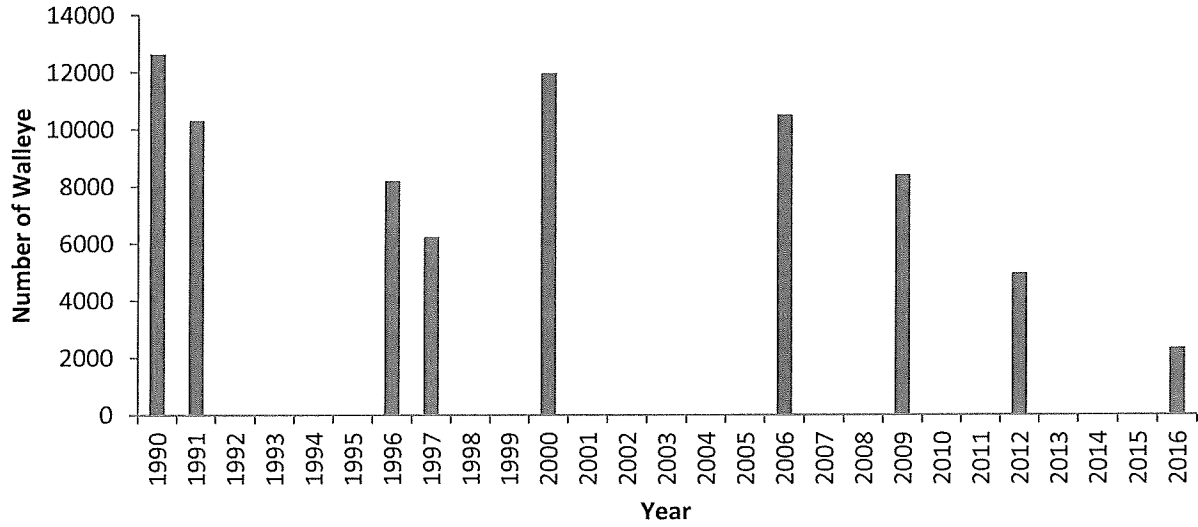
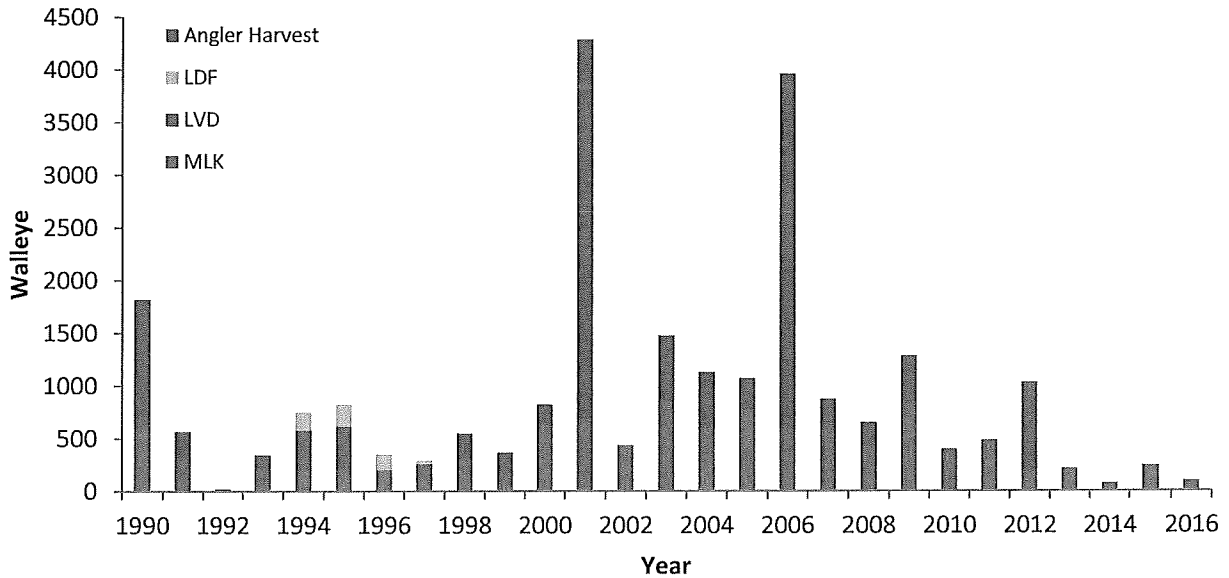


Figure 2. Estimated Adult Walleye Density from 1990-2016 in Lac Vieux Desert Lake.

Harvest History: An angling creel survey conducted during the 2001 fishing season estimated angler harvest at 3,341 walleye for Lake Lac Vieux Desert. Angling creel surveys were also conducted in 2006 and 2012, and estimated the angler harvest of walleye at 3,062 fish and 666 fish, respectively (Figure 3).

Lac Vieux Desert Lake - Walleye Harvest History



**Note: Angler Harvest shown only when measured.

Figure 3. State and tribal harvest in Lac Vieux Desert Lake from 1990-2016.

Between 1990 and 2009, the spring treaty harvest of walleye from Lac Vieux Desert Lake averaged 710 fish per year. Beginning in 2010, a voluntary self-imposed walleye harvest closure was implemented by the Lac Vieux Desert Band that reduced the overall spring treaty harvest to an average of 267 fish per year.

Stocking History: Throughout the 1980's and 1990's, Lac Vieux Desert Lake was used by the WDNR fish propagation program as a source of wild walleye gametes. While being used for this purpose, Lac Vieux Desert Lake received annual plant-back stockings, which is a commonly implemented practice on broodstock lakes. Since then, the Lac Vieux Desert Band, the Lac Vieux Desert Lake Association, and WDNR have continued to stock walleye fry and fingerlings into Lac Vieux Desert Lake with some regularity (Table 1).

Table 1. Walleye Stocking in Lac Vieux Desert Lake from 1980-2016. WDNR, Lac Vieux Desert Lake Association, and the Lac Vieux Desert Band have stocked fry, small fingerlings (usually in July), large fingerlings (July-September) and extended growth (September/October).

Year	Extended Growth	Large Fingerlings	Small Fingerlings	Fry
2016	51,754			850,000
2015	3,396			325,000
2014			105,373	
2013	10,000		24,980	
2012			25,000	
2011	10,000		24,994	
2010			1,600	290,000
2009	5,925			
2008				800,000
2007	12,300			
2006				900,000
2005				1,000,000
2004				2,500,000
2003				2,500,000
2002	8,000			
2001	8,300			1,300,000
2000	6,000	160		6,000,000
1999	6,560		25,043	2,510,000
1998	6,000		25,000	1,100,000
1997	6,300		25,000	1,500,000
1996	3,500		25,134	1,000,000
1995	3,320		25,100	1,000,000
1994	3,200		25,928	3,300,000
1993	4,000		25,012	2,000,000
1992	2,000			3,575,000
1991		25,137		9,200,000
1990			25,200	2,600,000
1989			25,200	4,000,000
1988			25,000	1,100,000
1987			25,000	4,700,000
1986			25,000	8,664,000
1985			22,000	12,818,000
1984			25,000	3,699,000
1983		25,000		3,488,000
1982		20,000		5,100,000
1981		50,625		9,800,000
1980				7,500,000

3. Stocking Plan

Lac Vieux Desert Lake has recently been added to a statewide study associated with the Wisconsin Walleye Initiative that examines the efficacy of fall fingerling stocking in restoring natural walleye recruitment in lakes where it has declined to a level that will not support a healthy adult population. Beginning in 2016, WDNR will stock Lac Vieux Desert Lake in even-numbered years at a rate of 15 fall fingerlings per acre, which equates to approximately 64,500 walleye. In 2016, 850,000 fry and 51,754 extended growth walleye fingerlings were stocked into Lac Vieux Desert Lake.

WDNR plans to stock Lac Vieux Desert Lake with 15 fall fingerlings/acre again in 2018 and in alternate years thereafter, provided that Wisconsin Walleye Initiative funding for the production and stocking of extended growth walleye fingerlings remains intact. It is noted that adherence to an alternate-year stocking plan is crucial to the success of the program. Stocking in interim years is strongly discouraged and potentially detrimental to the success of the project.

Each stocking event should be preceded by a fall electrofishing survey. If a catch rate of greater than 15 per mile of naturally reproduced young-of-year walleye is measured from the fall survey, the parties should meet to consider the possibility of foregoing that year's stocking, as stocking on top of a strong year natural class may interfere with or eliminate that cohort's ability to survive. Stocking should not occur if the natural year class is 25 young-of-year walleye per mile or greater.

4. Coordinated Population Assessments

Spring Adult Walleye Surveys: GLIFWC, WDNR, and MiDNR will coordinate their spring population monitoring plans for Lac Vieux Desert Lake. In 2016, GLIFWC conducted a spring mark-recapture estimate of adult walleye abundance that established baseline data for the proposed rehabilitation period. In 2017, GLIFWC conducted a post-spawning electrofishing survey to assess the overwinter survival of walleye fry and fingerlings that were stocked in 2016. As time and budget constraints allow, spring surveys to collect catch rate information from the adult population and/or post spawning surveys to monitor the juvenile population should be completed in 2018, 2019, 2020, and 2021. A spring mark-recapture estimate of adult walleye abundance will be conducted by WDNR in 2022.

Coordination with Hatchery Personnel: It is noted that the collection of wild walleye broodstock by state and tribal hatchery personnel provides an additional opportunity to collect walleye population data. When possible, state and tribal hatchery personnel should coordinate these efforts with state and/or tribal fisheries assessment crews to take full advantage of these opportunities. State and tribal fisheries managers should also explore the possibility of developing additional surveys to monitor the fish community.

Walleye Recruitment Surveys: GLIFWC and WDNR will continue to jointly conduct annual fall walleye recruitment surveys to determine whether natural reproduction is occurring on Lac Vieux Desert Lake. These surveys should take place prior to any stocking of extended growth walleye so that only natural reproduction is measured. Additional samples may be collected to determine the relative contribution of stocked fish to year class strength based on OTC marks (either as Age 0 fish in the fall survey or as Age 1 fish in a late spring survey).

5. Harvest Management

State Angling Harvest - The Wisconsin and Michigan Departments of Natural Resources will use their respective rule-making processes to enact a uniform 18” minimum size limit with a daily bag limit of 3 fish for state-licensed walleye anglers that will begin in 2018, and remain in effect through the 2022 fishing season. This regulation will protect sub-adult walleye until they enter the spawning population and any mature spawners that are less than 18” in length.

Tribal Harvest - The Lac Vieux Desert Band and the Sokaogan (Mole Lake) Chippewa, in coordination with other Bands with treaty reserved fishing rights in Lac Vieux Desert Lake, will not authorize open-water spearing and/or netting of walleye in Lac Vieux Desert Lake from 2018 through 2022. However, all remaining treaty harvest opportunities for walleye and other species of fish in Lac Vieux Desert Lake will continue to be available to the tribes throughout the duration of this plan.

6. Harvest Monitoring

Angling creel surveys will be conducted by MiDNR (in 2018) and by WDNR (in 2022) to generate estimates of angler effort, catch rates, and harvest for walleye and other species of fish from Lac Vieux Desert Lake in the first and final years of this rehabilitation plan. This will allow fisheries managers to evaluate the efficacy of the uniform state walleye angling regulations, and help inform decisions regarding sustainable angling regulations in future years.

GLIFWC, the Lac Vieux Desert Band, and the Sokaogan (Mole Lake) Chippewa will continue to fulfill the harvest monitoring requirements of the Voigt case.

7. Public Education

The States and Tribes will jointly develop informational materials for public dissemination to increase awareness about the current status of the walleye population of Lac Vieux Desert Lake, and the cooperative rehabilitation efforts that are being taken to restore natural reproduction and increase adult abundance.

8. Enforcement

State and Tribal Conservation Enforcement personnel will participate in the public education efforts implemented by the parties, and develop an interagency strategy to enforce the walleye harvest restrictions identified in this rehabilitation plan.